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Earth-Venus Trajectories, 1968-69 ,

- V. C. Clarke, Jr.
- R. Y. Roth
- W. E. Bollman
- T. W. Hamilton
- C. G. Pfeiffer

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(NASA contract NAS7700)

C. R. Gates  
C. R. Gates, Chief  
Systems Analysis Section

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JET PROPULSION LABORATORY  
CALIFORNIA INSTITUTE OF TECHNOLOGY-  
PASADENA, CALIFORNIA

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## FOREWORD

This volume is one of a set of five giving key characteristics of Earth-to-Venus trajectories during the period 1964-1970. This period is divided into five 120-day launch intervals spaced about 19.2 months apart. During each interval, trajectory characteristics are given for flight times of from 70 to 220 days in 2-day steps. Thus each volume contains 9,120 trajectories.

The applicability of these books may be extended by noting the 8-year cyclic recurrence of Earth-Venus trajectories. Thus trajectories in 1972 are very nearly identical to 1964 trajectories; 1973 trajectories are very nearly identical to 1965 trajectories, etc. Simply by updating the trajectories by 8 years, the results may be reapplied.

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

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

Companion volumes (Ref. 1) give the characteristics of Earth-Mars trajectories during the period 1964-1977.



## I. INTRODUCTION

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

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

### A. Heliocentric Conic Computation

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

### B. Planetocentric Conic Computation

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

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

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

### C. Differential Corrections

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

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

### D. Mid-Course Guidance

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

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

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

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

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

The approach guidance phase is not conveniently treated with this kind of analysis, and is not discussed further. Here, it can be assumed that the approach maneuvers are always negligibly small.

### E. Orbit Determination

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

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

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

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

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

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

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

### F. Accuracy of Computations

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

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

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

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

## II. ANALYTICAL MODEL FOR INTERPLANETARY TRAJECTORIES

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

### A. Heliocentric Motion

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

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

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

### 1. Determination of Planar Orientation

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

$$\mathbf{W} = \frac{\mathbf{R}_L \times \mathbf{R}_p}{R_L R_p \sin \psi} \quad (1)$$

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

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

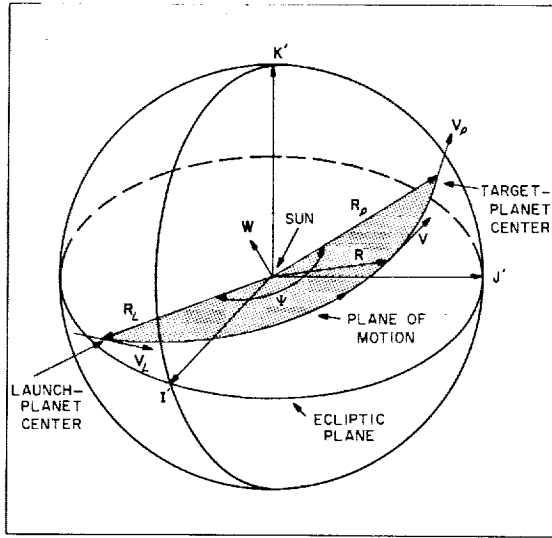


Fig. 1. Heliocentric transfer geometry

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

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

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

2. In-Plane Relations

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

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

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

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

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

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

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

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

and the path angle  $\Gamma$  is found from

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

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

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

3. Lambert's Theorem

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

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

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

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

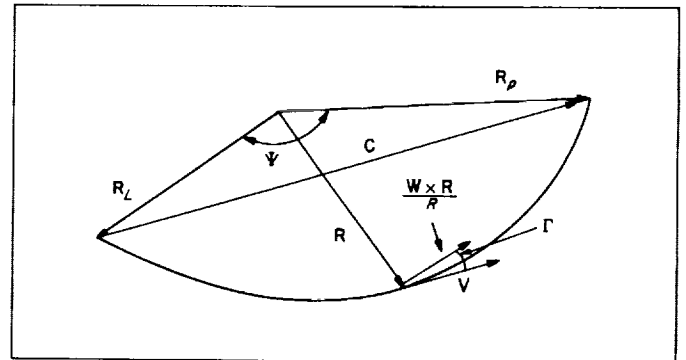


Fig. 2. In-plane transfer geometry

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



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

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

$$V_{hL} = V_L - V_1 \quad (11)$$

where  $V_1$  is the velocity of the launch planet at launch time.

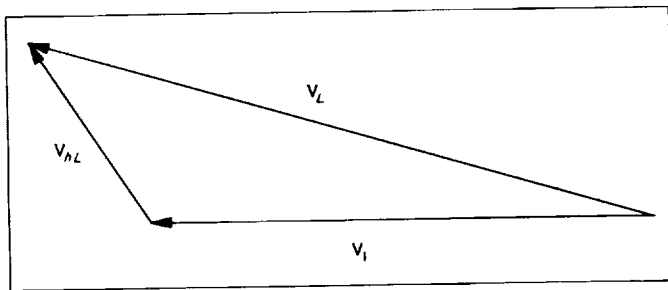


Fig. 3. Determination of the hyperbolic-excess velocity vector  $V_{hL}$ .

### B. Launch Planet Escape Hyperbola

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

#### I. Assumptions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$W = \frac{R_L^i \times S}{|R_L^i \times S|} \quad (15)$$

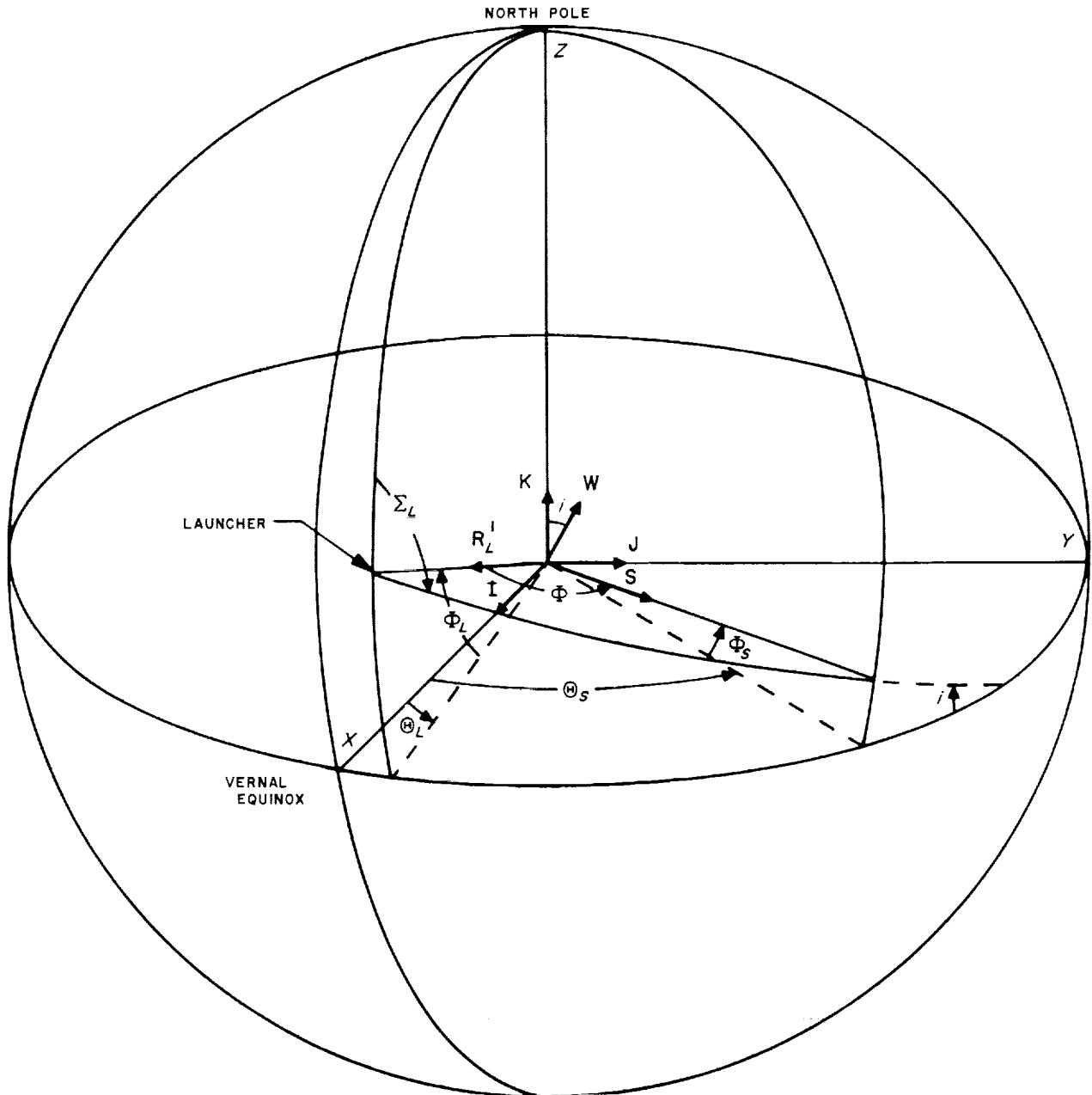


Fig. 4. Vehicle flight plane

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

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

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

**C. Differential Corrections**

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

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

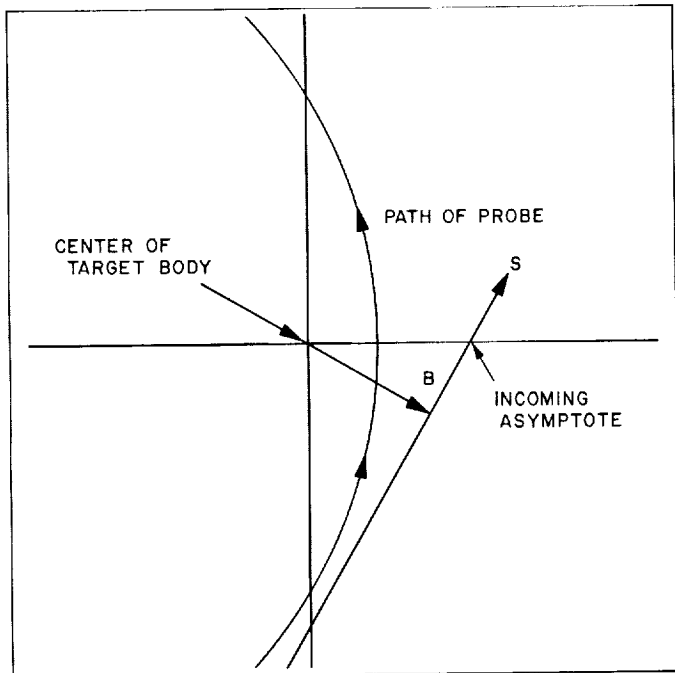


Fig. 5. Impact parameter B

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

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

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

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

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

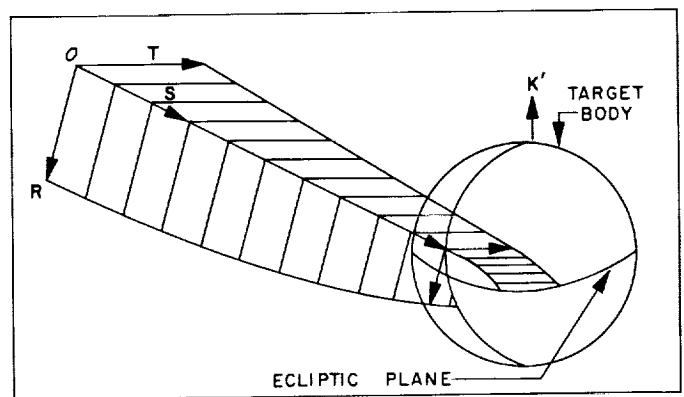


Fig. 6. The  $R, S, T$  target coordinate system

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

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

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

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

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

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

where

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

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

The semimajor axis  $a'$  is obtained from

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

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

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

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

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

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

The eccentric anomaly at launch  $E'_L$  is

$$\begin{aligned} \sin E'_L &= \frac{R_L \dot{R}'_L}{e' (a' GM_S)^{1/2}} \\ \cos E'_L &= \frac{1}{e'} \left(1 - \frac{R_L}{a'}\right) \end{aligned} \quad (24)$$

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

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

The mean orbital rate  $n'$  is

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

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

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

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

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

if

$$\cos E_p \geq 0$$

or

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

if

$$\cos E_p < 0$$

where

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

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

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

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

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

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

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

The heliocentric central angle  $\Psi'$  is

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

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

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

The heliocentric position vector at the target is

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

where

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

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

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

The heliocentric velocity at the target is

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

The hyperbolic-excess velocity at the target is

$$\mathbf{V}'_{hp} = \mathbf{V}'_p - \mathbf{V}_2 \quad (38)$$

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

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

The impact parameter  $\mathbf{B}$  is

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

The flight time error is

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

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

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

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

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

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

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

from whence

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

and

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

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

The effect of solar radiation pressure acting on the probe may also be evaluated as follows: In Eq. (19) let  $\Delta \mathbf{V}_{hL} = 0$ , but in Eq. (20), (22), (24), (26), (36), vary  $GM_S$  by adding an increment  $\Delta GM_S$ . This procedure gives rise to a varied trajectory from which the impact parameter  $\mathbf{B}$  and flight time error  $\Delta T_F$  may be obtained. The partials  $\partial B / \partial GM_S$  and  $\partial T_F / \partial GM_S$  may then be calculated. Since the acceleration caused by solar radiation pressure acts opposite to the gravitational attraction of the Sun, radiation pressure has the effect of decreasing the Sun's gravitational attraction, or decreasing  $GM_S$ . A decrease,  $\Delta GM_S = -2.4 \times 10^6 \text{ km}^3/\text{sec}^2$  corresponds to the solar radiation pressure acting on a 300-kg spacecraft having a perfectly reflecting area of 3.6 square meters. Thus the miss, always being a positive number, is obtained by  $\Delta B_{sp} = 2.4 \times 10^6 \partial B / \partial GM_S$ , and the corresponding flight time error is  $\Delta T_{Fsp} = -2.4 \times 10^6 \partial T_F / \partial GM_S$ , which is sign sensitive.

#### D. Mid-Course Execution Accuracy

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

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

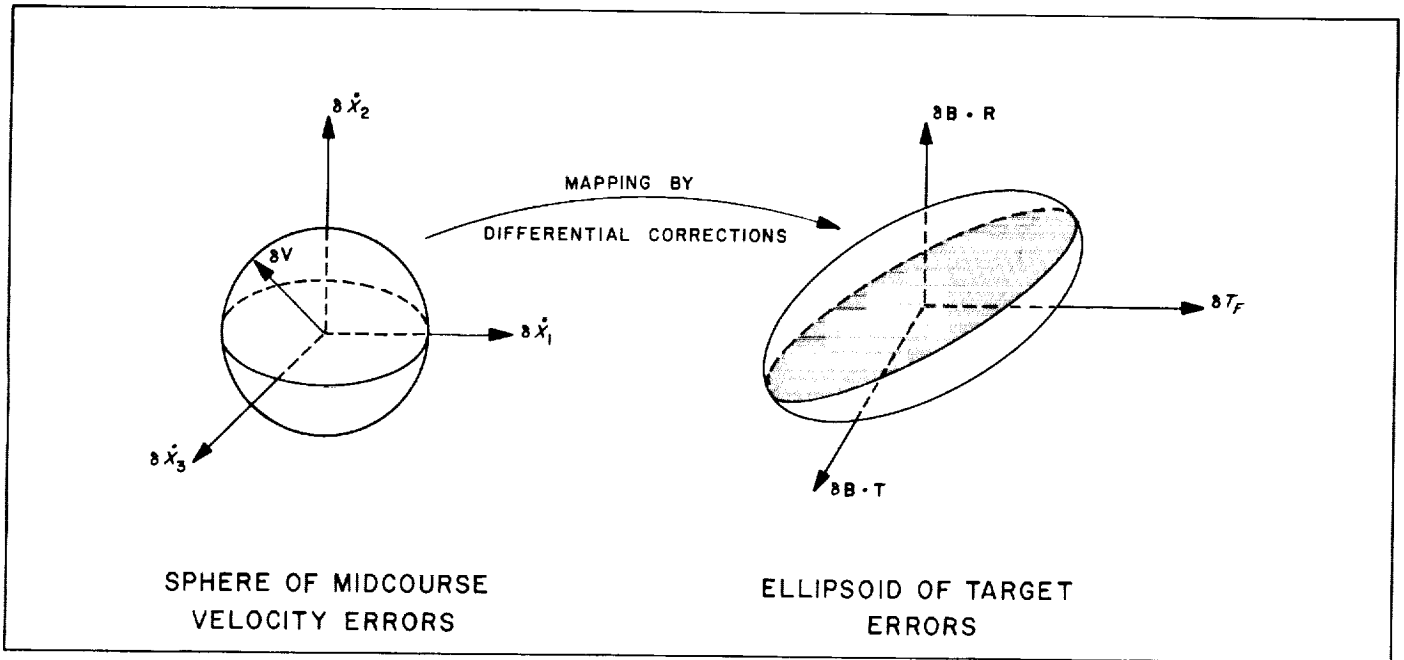


Fig. 7. The mapping of mid-course execution error

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

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

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

Then a new matrix  $F$  can be formed,

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

where

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

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

$$\delta\dot{X}_1^2 + \delta\dot{X}_2^2 + \delta\dot{X}_3^2 = \sigma_v^2 \quad (49)$$

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

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

where

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

and

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

The elements of the  $\Lambda$  matrix are:

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

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

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

Then the  $\Lambda$  matrix becomes

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

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

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

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

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

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

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

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

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

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

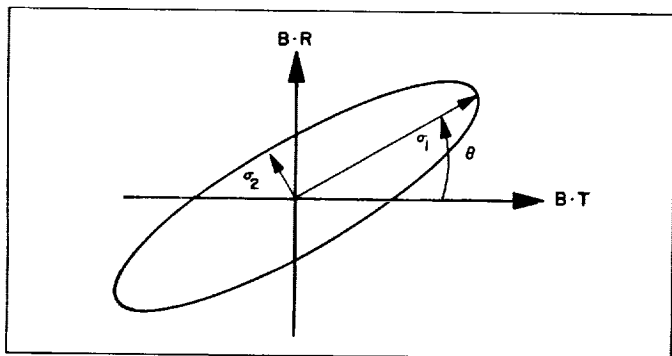


Fig. 8. Projection of three-dimensional error ellipsoid on the T-R plane

**E. Orbit Determination Accuracy**

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

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

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

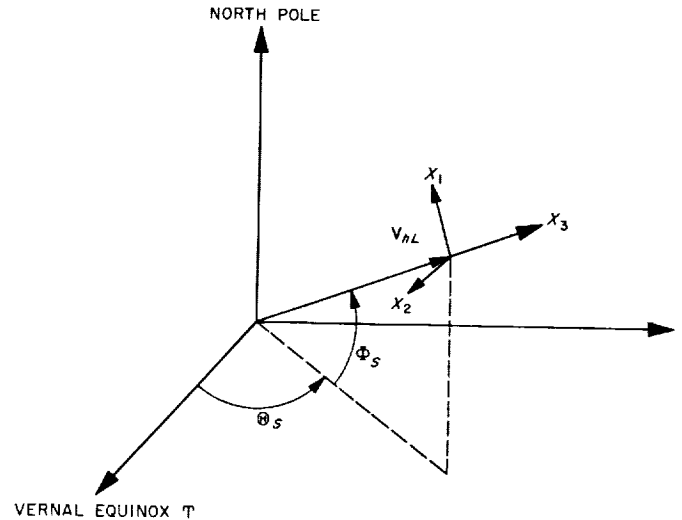


Fig. 9. Orientation of the  $X_i$  Cartesian coordinate system to describe uncertainties in the hyperbolic-excess velocity vector  $V_{hL}$

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

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

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



Note that

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

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

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

**2. Accuracy of Near-Earth Tracking**

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

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

1. Launch site	
2. Launch azimuth $\Sigma_L$ . . . . .	Depends on launch time.
3. Injection region . . . . .	Depends on time in parking orbit; short or long coast less than 1 revolution is current practice.
4. Declination of $V_{HL}$ , $\Phi_S$ . . . . .	Depends on target position at arrival date and injection energy, $C_3$ .
5. Magnitude of $V_{HL} = V_{HL} = (C_3)^{1/2}$	

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

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

The final source of tracking error is uncertainty in physical constants. The influence of GM-Earth errors is somewhat smaller than the above-mentioned errors and should be reduced to negligible contribution in the next two years. Sections IIC and IIIC describe how the uncertainty in the astronomical unit affects the target error; this error

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

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

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

The tracking accuracies reported here are representative of those available from tracking with the DSIF stations in South Africa, Australia, and the United States. Launch azimuths between 90 and 114 deg east of north were considered. Data accuracies of 0.02 m/sec in  $\dot{R}$  and 0.05 deg in angle sampled every 10 minutes were assumed; no range measurements were assumed. Station location errors were assumed to be uncorrelated with standard deviations of 0.001 deg in latitude, 0.0005 deg in longitude, and 30 meters in radius. Each station was allowed 10 minutes to acquire the spacecraft transponder, and tracking was simulated in the first 24 hours so that at least one pass was available to each station. The transfer of transmitting assignment from one station to another (simultaneous transmission was not allowed) followed a pattern which has been found to be near-optimum.

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

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

### 3. Calculation of Target Errors

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

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

The covariance of  $M_1$  is given by

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

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

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

By postmultiplying  $K$  by

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

the  $F$  matrix is obtained.

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

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

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

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

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

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

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

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

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

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

### III. EXPLANATION OF TRAJECTORY TABLES

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

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

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

#### A. Heliocentric Conic Group

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

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

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

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

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

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

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

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

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

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

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

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

V1,  $V_1 = |V_1|$  the heliocentric speed of the launch planet at 0 hours of the launch date.

Line 2

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

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

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

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

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

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

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

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

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

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

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

Line 3

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

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

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

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

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

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

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

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

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

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

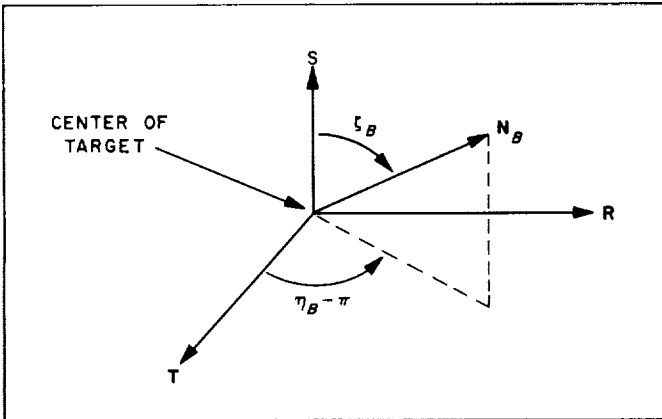


Fig. 10. Generalized geometry for aiming point angles

In this diagram, the reference coordinate system is the same target  $R, S, T$  system defined in Section IIC. A unit vector  $N_B$  (subscript  $B$  for body) is directed from the target center to another celestial body. The angular quantity  $\zeta_B$  is the angle subtended at the target center between the incoming asymptote  $S$  and the target-celestial body line  $N_B$ . Thus

$$\cos \zeta_B = \mathbf{S} \cdot \mathbf{N}_B = \frac{\mathbf{V}_{hp} \cdot \mathbf{N}_B}{V_{hp}} \quad 0 \leq \zeta_B \leq \pi$$

since

$$\mathbf{S} = \frac{\mathbf{V}_{hp}}{V_{hp}}$$

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

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

$$\cos \eta_B = \frac{-\mathbf{T} \cdot \mathbf{N}_B}{\sin \zeta_B}$$

These quantities are computed for three celestial bodies: the Sun ( $\zeta_S$  and  $\eta_S$ ), the Earth ( $\zeta_E$  and  $\eta_E$ ), and the star Canopus ( $\zeta_C$  and  $\eta_C$ ). Thus,

ZAP,  $\zeta_S$  (or  $\zeta_p$ ) the Sun-target-probe angle. Actually, this angle should be symbolized ZAS, but, for historical reasons, is not. This angle is useful in that it indicates the direction of the probe's approach to

the target. If  $\zeta_S < \pi/2$ , the probe approaches from the target planet's dark side. If  $\zeta_S > \pi/2$ , it approaches from the light side.

ETS,  $\eta_S$

defined as above.

ZAE,  $\zeta_E$

the Earth-target-probe angle. This angle is useful in locating the Earth as the probe approaches the target.

ETE,  $\eta_E$

defined as above.

ZAC,  $\zeta_C$

the Canopus-target-probe angle.

ETC,  $\eta_C$

defined as above.

CLP,  $\sigma_p$

the angle between the projection of the incoming asymptote  $S$  on the target planet's orbital plane and the target-Sun line at arrival time, defined by

$$\cos \sigma_p = -\mathbf{R}_p^1 \cdot \mathbf{S}_{pr} \quad -\pi \leq \sigma_p \leq \pi$$

$$\sin \sigma_p = -\mathbf{S}_{pr} \cdot (\mathbf{W}_2 \times \mathbf{R}_p^1)$$

where  $\mathbf{S}_{pr}$  is the projection of  $\mathbf{S}$  on the target's orbital plane given by

$$\mathbf{S}_{pr} = \frac{\mathbf{S} - \mathbf{W}_2 (\mathbf{S} \cdot \mathbf{W}_2)}{|\mathbf{S} - \mathbf{W}_2 (\mathbf{S} \cdot \mathbf{W}_2)|}$$

Recall that  $\mathbf{W}_2$  is the unit normal vector to the target's orbital plane. This angle is illustrated in Fig. 11.

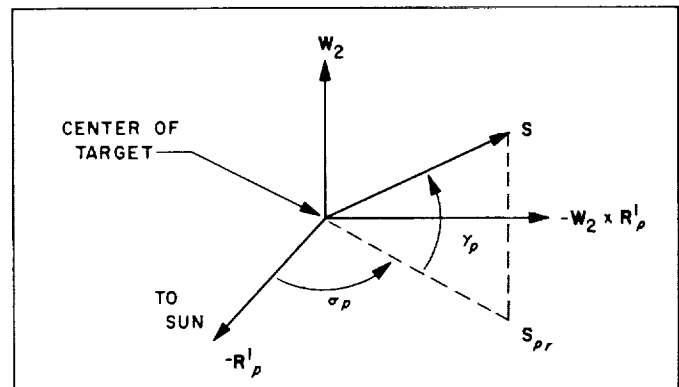


Fig. 11. Definition of  $\sigma_p$  and  $\gamma_p$

**B. Planetocentric Conic Group**

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

A special case may arise when the declination of the outgoing asymptote of the escape hyperbola is greater than the launch site latitude (Cape Canaveral). In this case, owing to geometrical restrictions, it may not be possible to fire in a symmetrical band of azimuths about due east, as explained in Ref. 6. This band of restricted azimuths may eliminate part or all of the selected launch azimuths, 90, 100, and 110 deg. When this happens, only those trajectories with permissible azimuths are printed, in addition to the limiting azimuths, or the most northerly and southerly azimuths, that are possible.

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

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

$\phi_L$  the longitude of the launch site.

$\theta_L$  the latitude of the launch site.

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

$\Phi_1 = 17 \text{ deg}$

$t_1 = 500 \text{ sec}$

$\Phi_2 = 8 \text{ deg}$

$t_2 = 100 \text{ sec}$

$k_{\dot{\Phi}} = 14.689 \text{ sec/deg}$

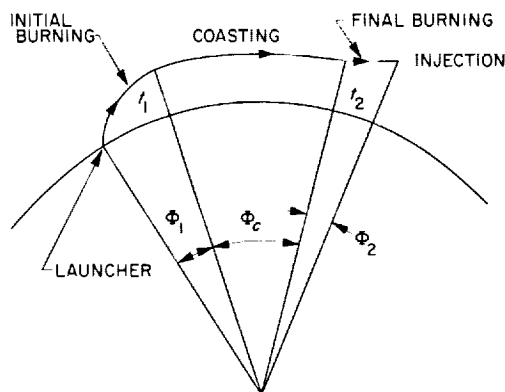
$v_1 = 3.7 \text{ deg}$

$R_p = 6560 \text{ km}$

$\phi_L = 28.317 \text{ deg}$

$\theta_L = 279.457 \text{ deg}$

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



**Fig. 12. Ascent trajectory profile**

The print array for the PLANETOCENTRIC CONIC group is:

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

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

Line 1

C3, $C_3$	the <i>vis viva</i> integral (Moulton), or twice the total energy per unit mass, expressed in $\text{km}^2/\text{sec}^2$ and defined by $C_3 = V_{hL}^2$ .
VHL, $V_{hL}$	the launch hyperbolic-excess speed.
DLA, $\Phi_s$	the declination of the outgoing asymptote of the escape hyperbola defined in Eq. (18).
RAL, $\Theta_s$	the right ascension of the outgoing asymptote of the escape hyperbola defined in Eq. (18).
RAD, $R =  \mathbf{R} $	the launch-planet-centered injection radius.
VEL, $V =  \mathbf{V} $	the inertial injection speed.
PTH, $\Gamma$	the injection path angle defined by $\sin \Gamma = \frac{\mathbf{V} \cdot \mathbf{R}}{VR} \quad -\frac{\pi}{2} \leq \Gamma \leq \frac{\pi}{2}$
VHP, $V_{hp}$	the hyperbolic-excess speed at the target.
DPA, $\Phi_{sp}$	the declination of the incoming asymptote at the target. The reference coordinate system here is vernal equinox, Earth equatorial, mean of <i>launch date</i>
RAP, $\Theta_{sp}$	the right ascension of the incoming asymptote at the target. Same reference coordinates as for $\Phi_{sp}$ .
ECC, $e$	the eccentricity of the escape hyperbola.

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

L-I TIME, $t_{L,I}$	the launch-to-injection time.
INJ LAT, $\phi$	the injection latitude (or declination $\Phi$ ).
INJ LONG, $\theta$	the injection longitude, measured positive east of Greenwich, $0 \leq \theta \leq 2\pi$ .
INJ RT ASC, $\Theta$	the injection right ascension.
INJ AZMTH, $\Sigma$	the injection azimuth, or angle between the projection of the velocity vector $\mathbf{V}$ , on the local horizontal plane and the projection of true north on this plane, measured positive east of true north.
INJ TIME, $T_I$	the injection time. The same comment applies to this quantity regarding launch date as applied to the launch time. However, both times must be consistent. For example, if launch time is on the previous day, injection time may fall on the launch date shown, or it may be on the following day.
PO CST TIM, $t_c$	the coast time in the parking orbit, in sec.
INJ 2 LAT, $\phi_2$	the latitude of the start of final burn out of the parking orbit.
INJ 2 LONG, $\theta_2$	the longitude of the start of final burn out of the parking orbit, $0 \leq \theta_2 \leq 2\pi$ .

Line 2

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

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

**C. Differential Corrections Group**

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

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

DIFFERENTIAL CORRECTIONS

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

The symbols are defined as follows:

Line 1

TDE,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Phi_s}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in megakilometers/deg.

TRA,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial \Theta_s}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in megakilometers/deg.

TC3,  $\frac{\partial \mathbf{B} \cdot \mathbf{T}}{\partial C_3}$  the partial derivative of the  $\mathbf{T}$  component of the impact parameter  $\mathbf{B}$ , with respect to the injection energy  $C_3$ , in megakilometers/km<sup>2</sup>/sec<sup>2</sup>.

BAU,  $\frac{\partial \mathbf{B}}{\partial au}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the astronomical unit-to-kilometer conversion factor. This derivative is dimensionless and indicates the target miss caused by an uncertainty in the value of the astronomical unit.

Line 2

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

RRA,  $\frac{\partial \mathbf{B} \cdot \mathbf{R}}{\partial \Theta_s}$  the partial derivative of the  $\mathbf{R}$  component of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch

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

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

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

Line 3

FDE,  $\frac{\partial T_F}{\partial \Phi_s}$  the partial derivative of flight time  $T_F$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in days/deg.

FRA,  $\frac{\partial T_F}{\partial \Theta_s}$  the partial derivative of flight time  $T_F$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in days/deg.

FC3,  $\frac{\partial T_F}{\partial C_3}$  the partial derivative of flight time  $T_F$ , with respect to the injection energy  $C_3$ , in days/km<sup>2</sup>/sec<sup>2</sup>.

BSP,  $\Delta B_{sp}$  the target miss (in km) caused by solar radiation pressure acting on a 300-kg spacecraft having an effective perfectly reflecting area of 3.6 square meters.

Line 4

BDE,  $\frac{\partial \mathbf{B}}{\partial \Phi_s}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the declination of the launch escape asymptote  $\Phi_s$ , in megakilometers/deg.

BRA,  $\frac{\partial \mathbf{B}}{\partial \Theta_s}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the right ascension of the launch escape asymptote  $\Theta_s$ , in megakilometers/deg.

BC3,  $\frac{\partial \mathbf{B}}{\partial C_3}$  the partial derivative of the magnitude of the impact parameter  $\mathbf{B}$ , with respect to the injection energy  $C_3$ , in megakilometers/km<sup>2</sup>/sec<sup>2</sup>.

FSP,  $\Delta T_{Fsp}$  the flight time error (in sec) caused by solar radiation pressure acting on a 300-kg spacecraft having an effective perfectly reflecting area of 3.6 square meters.



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

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

The print array for this group is:

MID-COURSE EXECUTION ACCURACY

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

The quantities are defined as follows:

Line 1

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

Line 2

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

Line 3

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

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

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

Line 4

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

**E. Orbit Determination Accuracy Group**

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

ORBIT DETERMINATION ACCURACY

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

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

Line 1

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

Line 2

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

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

Line 3

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

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

Line 4

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

EL2

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

ALF,  $\alpha$

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

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

$$\Lambda_{\dot{\mathbf{x}}} = \begin{pmatrix} 100 \times 10^{-10} & 0 & 0 \\ 0 & 9 \times 10^{-10} & 0 \\ 0 & 0 & .09 \times 10^{-10} \end{pmatrix} \left( \frac{\text{km}}{\text{sec}} \right)^2$$

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

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

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

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

## IV. CONSTANTS

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

### Gravitational Constants

1. Sun

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

2. Earth

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

### Astronomical Unit-to-Kilometer Conversion Factor

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

### Earth's Rotation Rate

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

## REFERENCES

1. Clarke, V. C., Jr., Roth, R. Y., Bollman, W. E., Hamilton, T. H., and Pfeiffer, C. G., *Earth-Mars Trajectories, 1964-77, Vols. I-VII*, Technical Memorandum No. 33-100, Jet Propulsion Laboratory, Pasadena, to be published.
2. Pfeiffer, C. G., *Simple Guidance for Deep-Space Booster Vehicles*, Technical Report No. 32-128, Jet Propulsion Laboratory, Pasadena, November 1961.
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5. Battin, R. H., "The Determination of Round-Trip Planetary Reconnaissance Trajectories," *Journal of the Aero/Space Sciences*, Volume 26, No. 9, September 1959.
6. Clarke, V. C., Jr., *Design of Lunar and Interplanetary Ascent Trajectories*, Technical Report No. 32-30, Rev. 1, Jet Propulsion Laboratory, Pasadena, March 15, 1962.
7. Clarke, V. C., Jr., *A Summary of the Characteristics of Ballistic Interplanetary Trajectories, 1962-1977*, Technical Report No. 32-209, Jet Propulsion Laboratory, Pasadena, January 15, 1962.
8. Clarke, V. C., Jr., Bollman, W. E., Roth, R. Y., and Scholey, W. J., *Design Parameters for Ballistic Interplanetary Trajectories—Part I, One-way Transfers to Mars and Venus*, Technical Report No. 32-77, Jet Propulsion Laboratory, Pasadena, January 16, 1963.
9. Clarke, V. C., Jr., *Constants and Related Data Used in Trajectory Calculations at the Jet Propulsion Laboratory*, Technical Report No. 32-273, Jet Propulsion Laboratory, Pasadena, May 1, 1962.



## **Earth-Venus Trajectories, 1968-69**

**Launch date interval: December 26, 1968 to February 3, 1969**

This data presentation has been photographically reproduced (enlarged 10½ times) from microfilm generated by computer magnetic tape.

LAUNCH DATE DEC 26 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 6 1969

MELIOCENTRIC CONIC

DISTANCE 142.579

RL 147.12 LAL .00 LOL 94.29 VL 19.216 GAL 15.35 AZL 85.89 MCA 49.88 SMA 92.49 ECC .62810 INC 4.1088 V1 30.282  
 RP 107.50 LAP 3.14 LOP 144.10 VP 32.161 GAP -37.95 AZP 87.35 TAL 170.42 TAP 220.30 RCA 34.40 APO 150.58 V2 35.253  
 RC 62.196 GL 5.89 GP 1.56 ZAL 66.52 ZAP 26.57 ETS 183.37 ZAE 145.96 ETE 192.50 ZAC 85.03 ETC 166.11 CLP 26.53

PLANETOCENTRIC CONIC

C3 167.579 VHL 12.945 DLA 16.22 RAL 23.72 RAD 6570.8 VEL 16.997 PTH 2.92 VHP 22.172 DPA -5.38 RAP 352.14 ECC 3.7579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 27 25 3234.31 -25.61 113.14 288.24 77.48 5 21 19 2634.3 -27.08 104.78  
 90.00 20 46 6 4818.62 18.58 207.92 274.99 68.24 22 6 25 4218.6 15.46 200.63  
 100.00 5 57 50 2942.74 -27.45 92.15 288.70 77.67 6 46 52 2342.7 -28.87 83.63  
 100.00 21 58 23 4585.42 20.32 190.02 274.24 67.60 23 14 48 3985.4 17.11 182.71  
 110.00 7 26 10 2666.32 -32.28 72.35 289.89 78.10 8 10 37 2066.3 -33.59 63.36  
 110.00 22 46 31 4434.61 24.87 176.46 272.11 65.75 24 0 26 3634.6 21.38 169.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6046 TRA -1.5911 TC3 -.1111 BAU .2536 SGT 832.0 SGR 444.0 SG3 32.3 ST 346.5 SR 411.9 SS 330.0  
 RDE -.9240 RRA .3545 RC3 -.0217 FAU .01367 RRT .0157 RRF -.0180 RTF -.6434 CRT .6912 CRS .7956 CST .9860  
 FDE .3356 FRA .6301 FC3 -.0706 BSP 2240 SGB 943.0 R23 -.0039 R13 -.6434 LSA 589.5 MSA 225.7 SSA 13.7  
 BDE 1.1043 BRA 1.6301 BC3 .1132 FSP -69 SG1 832.0 SG2 443.9 TMA .67 EL1 496.6 EL2 207.7 ALF 52.05

LAUNCH DATE DEC 26 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 8 1969

MELIOCENTRIC CONIC

DISTANCE 148.660

RL 147.12 LAL .00 LOL 94.29 VL 19.853 GAL 14.69 AZL 85.99 MCA 53.12 SMA 94.12 ECC .60081 INC 4.0123 V1 30.282  
 RP 107.51 LAP 3.21 LOP 147.35 VP 32.542 GAP -36.14 AZP 87.59 TAL 169.72 TAP 222.85 RCA 37.57 APO 150.68 V2 35.250  
 RC 60.278 GL 6.26 GP 1.61 ZAL 65.50 ZAP 25.04 ETS 183.80 ZAE 146.79 ETE 193.26 ZAC 86.67 ETC 166.19 CLP 24.99

PLANETOCENTRIC CONIC

C3 151.649 VHL 12.315 DLA 16.95 RAL 24.59 RAD 6570.6 VEL 16.522 PTH 2.88 VHP 21.255 DPA -4.65 RAP 353.69 ECC 3.4958  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 23 48 3244.00 -25.46 113.81 288.05 77.17 5 17 52 2644.0 -26.98 105.47  
 90.00 20 56 38 4773.98 17.43 205.15 274.67 67.32 22 16 12 4174.0 14.21 197.95  
 100.00 5 54 49 2950.45 -27.33 92.69 288.52 77.40 6 44 0 2350.5 -28.79 84.19  
 100.00 22 8 17 4542.76 19.20 187.36 273.88 66.64 23 24 0 3942.8 15.87 180.14  
 110.00 7 24 26 2670.11 -32.23 72.63 289.76 77.94 8 8 56 2070.1 -33.55 63.65  
 110.00 22 55 11 4395.87 23.76 174.00 271.66 64.67 24 8 26 3795.9 20.15 166.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6024 TRA -1.5896 TC3 -.1161 BAU .2404 SGT 870.7 SGR 448.3 SG3 35.1 ST 363.9 SR 416.6 SS 345.5  
 RDE -.8892 RRA .3331 RC3 -.0241 FAU .01394 RRT .0197 RRF -.0223 RTF -.6630 CRT .6907 CRS .7970 CST .9856  
 FDE .3486 FRA .6523 FC3 -.0796 BSP 2407 SGB 979.3 R23 -.0046 R13 -.6630 LSA 609.5 MSA 231.7 SSA 13.9  
 BDE 1.0741 BRA 1.6241 BC3 .1186 FSP -76 SG1 870.8 SG2 448.2 TMA .79 EL1 509.6 EL2 215.1 ALF 50.55

LAUNCH DATE DEC 26 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 10 1969

MELIOCENTRIC CONIC

DISTANCE 154.823

RL 147.12 LAL .00 LOL 94.29 VL 20.447 GAL 14.05 AZL 86.08 MCA 56.37 SMA 95.75 ECC .57432 INC 3.9237 V1 30.282  
 RP 107.52 LAP 3.27 LOP 150.60 VP 32.904 GAP -34.42 AZP 87.82 TAL 169.04 TAP 225.41 RCA 40.76 APO 150.74 V2 35.246  
 RC 58.412 GL 6.65 GP 1.67 ZAL 64.55 ZAP 23.52 ETS 184.29 ZAE 147.75 ETE 194.10 ZAC 88.33 ETC 166.27 CLP 23.47

PLANETOCENTRIC CONIC

C3 137.308 VHL 11.718 DLA 17.66 RAL 25.39 RAD 6570.5 VEL 16.082 PTH 2.83 VHP 20.373 DPA -3.90 RAP 355.25 ECC 3.2597  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 19 53 3252.89 -25.33 114.43 287.73 76.89 5 14 6 2652.9 -26.88 106.10  
 90.00 21 6 58 4728.58 16.22 202.37 274.29 66.46 22 25 46 4128.6 12.90 195.26  
 100.00 5 51 34 2957.28 -27.23 93.17 288.21 77.17 6 40 51 2357.3 -28.73 84.69  
 100.00 22 17 59 4499.43 18.00 184.69 273.46 65.73 23 32 58 3899.4 14.58 177.58  
 110.00 7 22 27 2672.89 -32.19 72.84 289.48 77.82 8 7 0 2072.9 -33.53 63.87  
 110.00 23 3 34 4356.58 22.60 171.54 271.14 63.64 24 16 11 3756.6 18.87 164.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6032 TRA -1.5900 TC3 -.1213 BAU .2280 SGT 913.0 SGR 451.8 SG3 38.2 ST 383.4 SR 420.6 SS 361.7  
 RDE -.8547 RRA .3119 RC3 -.0266 FAU .01422 RRT .0252 RRF -.0274 RTF -.6816 CRT .6915 CRS .7987 CST .9855  
 FDE .3624 FRA .6750 FC3 -.0896 BSP 2524 SGB 1018.7 R23 -.0047 R13 -.6817 LSA 631.1 MSA 237.3 SSA 14.1  
 BDE 1.0461 BRA 1.6203 BC3 .1242 FSP -84 SG1 913.1 SG2 451.6 TMA .95 EL1 523.9 EL2 222.4 ALF 48.83

LAUNCH DATE DEC 26 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 12 1969

MELIOCENTRIC CONIC

DISTANCE 161.062

RL 147.12 LAL .00 LOL 94.29 VL 21.002 GAL 13.43 AZL 86.16 MCA 59.61 SMA 97.36 ECC .54867 INC 3.8416 V1 30.282  
 RP 107.53 LAP 3.31 LOP 153.85 VP 33.246 GAP -32.79 AZP 88.05 TAL 168.39 TAP 228.00 RCA 43.94 APO 150.78 V2 35.241  
 RC 56.605 GL 7.05 GP 1.73 ZAL 63.66 ZAP 22.03 ETS 184.83 ZAE 148.85 ETE 195.02 ZAC 90.00 ETC 166.33 CLP 21.97

PLANETOCENTRIC CONIC

C3 124.383 VHL 11.153 DLA 18.36 RAL 26.14 RAD 6570.3 VEL 15.675 PTH 2.79 VHP 19.523 DPA -3.14 RAP 356.82 ECC 3.0470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 15 40 3261.04 -25.20 114.99 287.27 76.64 5 10 2 2661.0 -26.79 106.68  
 90.00 21 17 6 4682.42 14.94 199.58 273.85 65.66 22 35 9 4082.4 11.53 192.56  
 100.00 5 48 1 2963.27 -27.14 93.59 287.77 76.96 6 37 24 2363.3 -28.66 85.12  
 100.00 22 27 27 4455.43 16.75 182.03 272.98 64.88 23 41 42 3855.4 13.23 175.01  
 110.00 7 20 15 2674.71 -32.16 72.97 289.07 77.75 8 4 49 2074.7 -33.52 64.00  
 110.00 23 11 43 4316.75 21.37 169.10 270.57 62.66 24 23 39 3716.7 17.54 162.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6024 TRA -1.5873 TC3 -.1254 BAU .2141 SGT 955.1 SGR 454.7 SG3 41.5 ST 402.9 SR 424.1 SS 378.3  
 RDE -.8204 RRA .2912 RC3 -.0293 FAU .01454 RRT .0306 RRF -.0330 RTF -.6998 CRT .6922 CRS .8006 CST .9852  
 FDE .3765 FRA .6979 FC3 -.1012 BSP 2695 SGB 1057.8 R23 -.0053 R13 -.6998 LSA 653.0 MSA 242.3 SSA 14.3  
 BDE 1.0178 BRA 1.6138 BC3 .1288 FSP -93 SG1 955.3 SG2 454.4 TMA 1.08 EL1 538.2 EL2 229.1 ALF 47.12

LAUNCH DATE DEC 26 1968

FLIGHT TIME 78.00

ARRIVAL DATE MAR 14 1969

MELIOCENTRIC CONIC

DISTANCE 167.371

RL 147.12 LAL .00 LOL 94.29 VL 21.518 GAL 12.82 AZL 86.24 MCA 62.86 SMA 98.96 ECC .52390 INC 3.7647 V1 30.282  
 RP 107.55 LAP 3.35 LOP 157.10 VP 33.569 GAP -31.24 AZP 88.28 TAL 167.76 TAP 230.62 RCA 47.11 APO 150.80 V2 35.235  
 RC 54.864 GL 7.46 GP 1.80 ZAL 62.84 ZAP 20.55 ETS 185.46 ZAE 150.09 ETE 196.04 ZAC 91.69 ETC 166.37 CLP 20.48

PLANETOCENTRIC CONIC

C3 112.726 VML 10.617 DLA 19.05 RAL 26.82 RAD 6570.1 VEL 15.299 PTH 2.74 VMP 18.704 DPA -2.37 RAP 358.40 ECC 2.8552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 11 8 3268.53 -25.08 115.51 286.67 76.40 5 5 37 2668.5 -26.70 107.21  
 90.00 21 27 4 4635.48 13.60 196.78 273.35 64.92 22 44 20 4035.5 10.11 189.84  
 100.00 5 44 11 2968.47 -27.06 93.96 287.20 76.79 6 33 40 2368.5 -28.61 85.50  
 100.00 22 36 42 4410.76 15.44 179.36 272.45 64.08 23 50 13 3810.8 11.83 172.43  
 110.00 7 17 48 2675.60 -32.15 73.04 288.52 77.71 8 2 23 2075.6 -33.51 64.07  
 110.00 23 19 35 4276.40 20.09 166.67 269.95 61.74 24 30 51 3676.4 16.16 159.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6021 TRA-1.5836 TC3 -.1287 BAU .1999 SGT 998.8 SGR 456.8 SG3 45.2 ST 423.3 SR 427.0 SS 395.5  
 RDE -.7865 RRA .2708 RC3 -.0321 FAU .01491 RRT .0367 RRF -.0393 RTF -.7172 CRT .6935 CRS .8027 CST .9850  
 FDE .3913 FRA .7212 FC3 -.1145 BSP 2874 SGB 1098.3 R23 -.0060 R13 -.7173 LSA 675.9 MSA 246.8 SSA 14.5  
 BOE .9905 BRA 1.6066 BC3 .1326 FSP -103 SG1 999.0 SG2 456.5 THA 1.22 EL1 553.3 EL2 235.4 ALF 45.35

LAUNCH DATE DEC 26 1968

FLIGHT TIME 80.00

ARRIVAL DATE MAR 16 1969

MELIOCENTRIC CONIC

DISTANCE 173.745

RL 147.12 LAL .00 LOL 94.29 VL 22.000 GAL 12.23 AZL 86.31 MCA 66.10 SMA 100.53 ECC .50004 INC 3.6922 V1 30.282  
 RP 107.57 LAP 3.38 LOP 160.35 VP 33.873 GAP -29.76 AZP 88.50 TAL 167.16 TAP 233.26 RCA 50.26 APO 150.80 V2 35.229  
 RC 53.197 GL 7.87 GP 1.87 ZAL 62.09 ZAP 19.09 ETS 186.18 ZAE 151.48 ETE 197.19 ZAC 93.38 ETC 166.39 CLP 19.00

PLANETOCENTRIC CONIC

C3 102.207 VML 10.110 DLA 19.71 RAL 27.43 RAD 6570.0 VEL 14.952 PTH 2.70 VMP 17.913 DPA -1.58 RAP 359.98 ECC 2.6821  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 6 15 3275.43 -24.97 115.98 285.96 76.19 5 0 51 2675.4 -26.62 107.70  
 90.00 21 36 52 4587.75 12.21 193.97 272.80 64.25 22 53 20 3987.8 8.65 187.10  
 100.00 5 40 3 2972.96 -26.99 94.27 286.50 76.64 6 29 36 2373.0 -28.56 85.82  
 100.00 22 45 45 4365.46 14.08 176.69 271.85 63.35 23 58 30 3765.5 10.39 169.84  
 110.00 7 15 6 2675.61 -32.15 73.04 287.85 77.71 7 59 41 2075.6 -33.51 64.07  
 110.00 23 27 12 4235.58 18.76 164.26 269.27 60.88 24 37 47 3635.6 14.73 157.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6047 TRA-1.5812 TC3 -.1319 BAU .1865 SGT 1046.3 SGR 458.3 SG3 49.1 ST 446.2 SR 429.2 SS 413.8  
 RDE -.7531 RRA .2509 RC3 -.0351 FAU .01530 RRT .0446 RRF -.0466 RTF -.7335 CRT .6963 CRS .8053 CST .9850  
 FDE .4073 FRA .7453 FC3 -.1296 BSP 3001 SGB 1142.2 R23 -.0062 R13 -.7336 LSA 701.0 MSA 250.6 SSA 14.7  
 BOE .9658 BRA 1.6010 BC3 .1365 FSP -113 SG1 1046.5 SG2 457.7 THA 1.38 EL1 570.3 EL2 241.0 ALF 43.40

LAUNCH DATE DEC 26 1968

FLIGHT TIME 82.00

ARRIVAL DATE MAR 18 1969

MELIOCENTRIC CONIC

DISTANCE 180.177

RL 147.12 LAL .00 LOL 94.29 VL 22.450 GAL 11.66 AZL 86.38 MCA 69.34 SMA 102.08 ECC .47712 INC 3.6234 V1 30.282  
 RP 107.59 LAP 3.39 LOP 163.60 VP 34.160 GAP -28.34 AZP 88.72 TAL 166.60 TAP 235.94 RCA 53.37 APO 150.78 V2 35.222  
 RC 51.611 GL 8.30 GP 1.95 ZAL 61.41 ZAP 17.63 ETS 187.02 ZAE 153.02 ETE 198.51 ZAC 95.07 ETC 166.39 CLP 17.53

PLANETOCENTRIC CONIC

C3 92.709 VML 9.629 DLA 20.37 RAL 27.98 RAD 6569.8 VEL 14.631 PTH 2.65 VMP 17.151 DPA -.77 RAP 356.15 ECC 2.5258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 1 1 3281.85 -24.86 116.42 285.11 75.99 4 55 43 2681.8 -26.55 108.16  
 90.00 21 46 30 4539.27 10.76 191.14 272.18 63.65 23 2 9 3939.3 7.13 184.34  
 100.00 5 35 37 2976.80 -26.93 94.54 285.67 76.51 6 25 14 2376.8 -28.52 86.10  
 100.00 22 54 35 4319.54 12.66 174.01 271.21 62.69 24 6 35 3719.5 8.90 167.24  
 110.00 7 12 9 2674.79 -32.16 72.98 287.05 77.74 7 56 44 2074.8 -33.52 64.01  
 110.00 23 34 33 4194.32 17.37 161.86 268.54 60.09 24 44 27 3594.3 13.26 155.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6056 TRA-1.5753 TC3 -.1332 BAU .1717 SGT 1093.4 SGR 458.9 SG3 53.4 ST 468.9 SR 430.8 SS 432.5  
 RDE -.7201 RRA .2315 RC3 -.0381 FAU .01575 RRT .0525 RRF -.0546 RTF -.7494 CRT .6991 CRS .8082 CST .9849  
 FDE .4239 FRA .7697 FC3 -.1470 BSP 3188 SGB 1185.8 R23 -.0069 R13 -.7496 LSA 726.5 MSA 253.8 SSA 14.8  
 BOE .9409 BRA 1.5922 BC3 .1386 FSP -125 SG1 1093.7 SG2 458.2 THA 1.53 EL1 587.4 EL2 245.9 ALF 41.54

LAUNCH DATE DEC 26 1968

FLIGHT TIME 84.00

ARRIVAL DATE MAR 20 1969

MELIOCENTRIC CONIC

DISTANCE 186.662

RL 147.12 LAL .00 LOL 94.29 VL 22.869 GAL 11.10 AZL 86.44 MCA 72.58 SMA 103.59 ECC .45514 INC 3.5574 V1 30.282  
 RP 107.61 LAP 3.39 LOP 166.84 VP 34.429 GAP -26.99 AZP 88.93 TAL 166.07 TAP 238.65 RCA 56.44 APO 150.74 V2 35.215  
 RC 50.116 GL 8.73 GP 2.04 ZAL 60.80 ZAP 16.19 ETS 188.01 ZAE 154.70 ETE 200.02 ZAC 96.77 ETC 166.38 CLP 16.07

PLANETOCENTRIC CONIC

C3 84.132 VML 9.172 DLA 21.00 RAL 28.47 RAD 6569.6 VEL 14.335 PTH 2.61 VMP 16.415 DPA .04 RAP 356.15 ECC 2.3846  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 55 24 3287.88 -24.76 116.84 284.14 75.81 4 50 12 2687.9 -26.47 108.58  
 90.00 21 55 59 4490.03 9.26 188.31 271.52 63.12 23 10 49 3890.0 5.58 181.56  
 100.00 5 30 51 2980.08 -26.88 94.77 284.72 76.40 6 20 32 2380.1 -28.48 86.34  
 100.00 23 3 13 4273.06 11.19 171.34 270.50 62.10 24 14 26 3673.1 7.37 164.64  
 110.00 7 8 57 2673.21 -32.19 72.86 286.12 77.81 7 53 30 2073.2 -33.53 63.89  
 110.00 23 41 37 4152.70 15.94 159.48 267.76 59.35 24 50 50 3552.7 11.76 152.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6069 TRA-1.5680 TC3 -.1331 BAU .1567 SGT 1141.9 SGR 458.9 SG3 58.1 ST 492.8 SR 431.8 SS 452.1  
 RDE -.6878 RRA .2126 RC3 -.0412 FAU .01624 RRT .0613 RRF -.0637 RTF -.7646 CRT .7025 CRS .8114 CST .9849  
 FDE .4415 FRA .7947 FC3 -.1672 BSP 3382 SGB 1230.7 R23 -.0078 R13 -.7644 LSA 753.5 MSA 256.3 SSA 15.0  
 BOE .9173 BRA 1.5823 BC3 .1393 FSP -139 SG1 1142.4 SG2 457.8 THA 1.68 EL1 605.6 EL2 250.0 ALF 39.66

LAUNCH DATE DEC 26 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 22 1969

MELIOCENTRIC CONIC

DISTANCE 193.195

RL 147.12 LAL .00 LOL 94.29 VL 23.260 GAL 10.57 AZL 86.51 MCA 75.82 SMA 105.07 ECC .43411 INC 3.4937 V1 30.282  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.682 GAP -25.69 AZP 89.14 TAL 165.58 TAP 241.40 RCA 59.46 APO 150.68 V2 35.207  
 RC 48.721 GL 9.17 GP 2.14 ZAL 60.26 ZAP 14.76 ETS 189.21 ZAE 156.54 ETE 201.81 ZAC 98.47 ETC 166.34 CLP 14.61

PLANETOCENTRIC CONIC

C3 76.385 VHL 8.740 DLA 21.62 RAL 28.89 RAD 6569.5 VEL 14.062 PTH 2.56 VHP 15.704 DPA .87 RAP 4.73 ECC 2.2571  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 49 24 3293.62 -24.67 117.23 283.05 75.64 4 44 18 2693.6 -26.40 108.99  
 90.00 22 5 19 4440.09 7.71 185.46 270.80 62.67 23 19 20 3840.1 3.99 178.75  
 100.00 5 25 47 2982.87 -26.83 94.97 283.65 76.30 6 15 29 2382.9 -28.45 86.54  
 100.00 23 11 38 4226.07 9.68 168.67 269.75 61.58 24 22 4 3626.1 5.81 162.02  
 110.00 7 5 29 2670.92 -32.22 72.69 285.07 77.91 7 50 0 2070.9 -33.55 63.71  
 110.00 23 46 25 4110.79 14.47 157.12 266.93 58.69 24 56 56 3510.8 10.22 150.60

DIFFERENTIAL CORRECTIONS

TDE -.6091 TRA -1.5593 TC3 -.1313 BAU .1415  
 RDE -.6562 RRA .1942 RC3 -.0444 FAU .01680  
 FDE .4604 FRA .8206 FC3 -.1904 BSP 3577  
 BDE .8953 BRA 1.5714 BC3 .1386 FSP -153

MID-COURSE EXECUTION ACCURACY

SGT 1192.2 SGR 458.1 SG3 63.3  
 RRT .0714 RRF -.0739 RTF -.7791  
 SGB 1277.2 R23 -.0087 R13 -.7793  
 SG1 1192.7 SG2 456.7 TMA 1.84

ORBIT DETERMINATION ACCURACY

ST 518.0 SR 432.2 SS 472.7  
 CRT .7069 CRS .8150 CST .9850  
 LSA 782.1 MSA 258.0 SSA 15.1  
 EL1 625.3 EL2 253.2 ALF 37.77

LAUNCH DATE DEC 26 1968

FLIGHT TIME 88.00

ARRIVAL DATE MAR 24 1969

MELIOCENTRIC CONIC

DISTANCE 199.771

RL 147.12 LAL .00 LOL 94.29 VL 23.624 GAL 10.05 AZL 86.57 MCA 79.06 SMA 106.51 ECC .41403 INC 3.4319 V1 30.282  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.919 GAP -24.45 AZP 89.35 TAL 165.13 TAP 244.18 RCA 62.41 APO 150.61 V2 35.198  
 RC 47.437 GL 9.62 GP 2.25 ZAL 59.79 ZAP 13.35 ETS 190.68 ZAE 158.52 ETE 203.96 ZAC 100.17 ETC 166.28 CLP 13.16

PLANETOCENTRIC CONIC

C3 69.386 VHL 8.330 DLA 22.23 RAL 29.24 RAD 6569.3 VEL 13.811 PTH 2.52 VHP 15.018 DPA 1.70 RAP 6.31 ECC 2.1419  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 43 0 3299.20 -24.57 117.61 281.85 75.47 4 37 59 2699.2 -26.33 109.38  
 90.00 22 14 32 4389.48 6.12 182.59 270.03 62.30 23 27 41 3789.5 2.36 175.92  
 100.00 5 20 22 2985.25 -26.79 95.14 282.47 76.22 6 10 7 2385.3 -28.42 86.71  
 100.00 23 19 51 4178.66 8.13 166.00 268.94 61.14 24 29 30 3578.7 4.22 159.40  
 110.00 7 1 47 2867.97 -32.26 72.47 283.91 78.03 7 46 15 2068.0 -33.57 63.49  
 110.00 23 54 55 4068.70 12.97 154.78 266.05 58.09 25 2 44 3468.7 8.66 148.34

DIFFERENTIAL CORRECTIONS

TDE -.6116 TRA -1.5492 TC3 -.1275 BAU .1262  
 RDE -.6253 RRA .1763 RC3 -.0475 FAU .01742  
 FDE .4806 FRA .8473 FC3 -.2173 BSP 3778  
 BDE .8747 BRA 1.5592 BC3 .1360 FSP -169

MID-COURSE EXECUTION ACCURACY

SGT 1243.9 SGR 456.5 SG3 68.9  
 RRT .0827 RRF -.0854 RTF -.7928  
 SGB 1325.0 R23 -.0097 R13 -.7930  
 SG1 1244.5 SG2 454.7 TMA 2.01

ORBIT DETERMINATION ACCURACY

ST 544.3 SR 431.9 SS 494.2  
 CRT .7120 CRS .8191 CST .9851  
 LSA 812.3 MSA 258.9 SSA 15.3  
 EL1 646.2 EL2 255.5 ALF 35.93

LAUNCH DATE DEC 26 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 26 1969

MELIOCENTRIC CONIC

DISTANCE 206.384

RL 147.12 LAL .00 LOL 94.29 VL 23.963 GAL 9.55 AZL 86.63 MCA 82.29 SMA 107.91 ECC .39490 INC 3.3714 V1 30.282  
 RP 107.69 LAP 3.34 LOP 176.57 VP 35.140 GAP -23.26 AZP 89.55 TAL 164.71 TAP 247.01 RCA 65.29 APO 150.52 V2 35.189  
 RC 46.274 GL 10.08 GP 2.36 ZAL 59.38 ZAP 11.94 ETS 192.52 ZAE 160.62 ETE 206.61 ZAC 101.86 ETC 166.20 CLP 11.70

PLANETOCENTRIC CONIC

C3 63.065 VHL 7.941 DLA 22.81 RAL 29.52 RAD 6569.2 VEL 13.580 PTH 2.48 VHP 14.356 DPA 2.55 RAP 7.88 ECC 2.0379  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 36 11 3304.72 -24.48 117.99 280.54 75.30 4 31 16 2704.7 -26.26 109.77  
 90.00 22 23 36 4338.26 4.49 179.71 269.21 62.01 23 35 55 3738.3 .71 173.06  
 100.00 5 14 38 2987.30 -26.76 95.28 281.19 76.16 6 4 25 2387.3 -28.40 86.86  
 100.00 23 27 51 4130.92 6.55 163.34 268.08 60.77 24 36 42 3530.9 2.61 156.77  
 110.00 6 57 50 2664.43 -32.31 72.21 282.64 78.18 7 42 14 2064.4 -33.60 63.21  
 110.00 0 5 4 4026.55 11.44 152.47 265.12 57.57 1 12 11 3426.5 7.08 146.09

DIFFERENTIAL CORRECTIONS

TDE -.6147 TRA -1.5377 TC3 -.1214 BAU .1108  
 RDE -.5953 RRA .1589 RC3 -.0505 FAU .01810  
 FDE .5024 FRA .8750 FC3 -.2485 BSP 3985  
 BDE .8557 BRA 1.5459 BC3 .1315 FSP -187

MID-COURSE EXECUTION ACCURACY

SGT 1297.1 SGR 454.3 SG3 75.1  
 RRT .0955 RRF -.0984 RTF -.8058  
 SGB 1374.3 R23 -.0109 R13 -.8060  
 SG1 1297.9 SG2 451.9 TMA 2.18

ORBIT DETERMINATION ACCURACY

ST 571.9 SR 431.1 SS 517.0  
 CRT .7180 CRS .8235 CST .9853  
 LSA 844.4 MSA 259.0 SSA 15.4  
 EL1 668.6 EL2 256.7 ALF 34.13

LAUNCH DATE DEC 26 1968

FLIGHT TIME 92.00

ARRIVAL DATE MAR 28 1969

MELIOCENTRIC CONIC

DISTANCE 213.029

RL 147.12 LAL .00 LOL 94.29 VL 24.280 GAL 9.06 AZL 86.69 MCA 85.53 SMA 109.26 ECC .37670 INC 3.3119 V1 30.282  
 RP 107.72 LAP 3.30 LOP 179.81 VP 35.347 GAP -22.12 AZP 89.74 TAL 164.34 TAP 249.87 RCA 68.10 APO 150.42 V2 35.179  
 RC 45.244 GL 10.54 GP 2.50 ZAL 59.05 ZAP 10.54 ETS 194.90 ZAE 162.84 ETE 209.97 ZAC 103.54 ETC 166.08 CLP 10.25

PLANETOCENTRIC CONIC

C3 57.356 VHL 7.573 DLA 23.38 RAL 29.74 RAD 6569.0 VEL 13.368 PTH 2.44 VHP 13.717 DPA 3.40 RAP 9.44 ECC 1.9439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 56 3310.29 -24.38 118.37 279.13 75.14 4 24 7 2710.3 -26.19 110.16  
 90.00 22 32 34 4286.52 2.83 176.81 268.34 61.81 23 44 0 3686.5 -.96 170.18  
 100.00 5 8 34 2989.07 -26.73 95.40 279.80 76.10 5 58 23 2389.1 -28.38 86.99  
 100.00 23 35 37 4082.97 4.95 160.68 267.17 60.48 24 43 40 3483.0 .99 154.14  
 110.00 6 53 38 2660.34 -32.37 71.90 281.27 78.35 7 37 59 2060.3 -33.63 62.90  
 110.00 0 10 58 3984.46 9.90 150.20 264.15 57.11 1 17 23 3384.5 5.49 143.87

DIFFERENTIAL CORRECTIONS

TDE -.6185 TRA -1.5247 TC3 -.1127 BAU .0956  
 RDE -.5662 RRA .1421 RC3 -.0533 FAU .01886  
 FDE .5259 FRA .9039 FC3 -.2847 BSP 4191  
 BDE .8385 BRA 1.5313 BC3 .1247 FSP -207

MID-COURSE EXECUTION ACCURACY

SGT 1351.8 SGR 451.3 SG3 81.9  
 RRT .1099 RRF -.1131 RTF -.8181  
 SGB 1425.1 R23 -.0121 R13 -.8184  
 SG1 1352.8 SG2 448.2 TMA 2.36

ORBIT DETERMINATION ACCURACY

ST 600.9 SR 429.8 SS 541.1  
 CRT .7249 CRS .8284 CST .9855  
 LSA 878.4 MSA 258.2 SSA 15.5  
 EL1 692.7 EL2 256.8 ALF 32.39



LAUNCH DATE DEC 26 1968

FLIGHT TIME 94.00

ARRIVAL DATE MAR 30 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 24.574 GAL 8.60 AZL 86.75 MCA 88.76 SMA 110.57 ECC .35942 INC 3.2529 V1 30.282  
 RP 107.75 LAP 3.25 LOP 183.05 VP 35.539 GAP -21.02 AZP 89.93 TAL 164.02 TAP 252.78 RCA 70.83 APO 150.31 V2 35.169  
 RC 44.357 GL 11.00 GP 2.64 ZAL 58.79 ZAP 9.17 ETS 198.05 ZAE 165.13 ETE 214.41 ZAC 105.20 ETC 165.94 CLP 8.79

DISTANCE 219.703

PLANETOCENTRIC CONIC

C3 52.201 VHL 7.225 DLA 23.92 RAL 29.88 RAD 6568.9 VEL 13.174 PTH 2.41 VMP 13.100 DPA 4.27 RAP 11.00 ECC 1.8591  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 17 3316.01 -24.28 118.76 277.62 74.97 4 16 33 2716.0 -26.11 110.56  
 90.00 22 41 24 4234.33 1.15 173.89 267.42 61.70 23 51 58 3634.3 -2.64 167.27  
 100.00 5 2 12 2990.61 -26.71 95.51 278.32 76.05 5 52 2 2390.6 -28.36 87.10  
 100.00 23 43 10 4034.96 3.34 158.03 266.21 60.28 24 50 25 3435.0 -.64 151.51  
 110.00 6 49 14 2655.73 -32.43 71.56 279.80 78.55 7 33 30 2055.7 -33.67 62.54  
 110.00 0 16 33 3942.60 8.34 147.95 263.13 56.73 1 22 15 3342.6 3.91 141.67

DIFFERENTIAL CORRECTIONS

TDE -.6228 TRA-1.5101 TC3 -.1008 BAU .0804  
 RDE -.5380 RRA .1258 RC3 -.0558 FAU .01971  
 FDE .5514 FRA .9342 FC3 -.3268 BSP 4402  
 BDE .8230 BRA 1.5153 BC3 .1152 FSP -228

MID-COURSE EXECUTION ACCURACY

SGT 1407.6 SGR 447.7 SG3 89.4  
 RRT .1262 RRF -.1297 RTF -.8298  
 SGB 1477.1 R23 -.0135 R13 -.8301  
 SG1 1408.9 SG2 443.7 THA 2.55

ORBIT DETERMINATION ACCURACY

ST 631.2 SR 427.9 SS 566.5  
 CRT .7326 CRS .8338 CST .9859  
 LSA 914.5 MSA 256.6 SSA 15.7  
 EL1 718.4 EL2 255.9 ALF 30.73

LAUNCH DATE DEC 26 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 1 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 24.848 GAL 8.15 AZL 86.81 MCA 91.99 SMA 111.83 ECC .34305 INC 3.1941 V1 30.282  
 RP 107.79 LAP 3.19 LOP 186.28 VP 35.718 GAP -19.96 AZP 90.11 TAL 163.74 TAP 255.73 RCA 73.47 APO 150.20 V2 35.158  
 RC 43.625 GL 11.46 GP 2.80 ZAL 58.60 ZAP 7.83 ETS 202.38 ZAE 167.44 ETE 220.53 ZAC 106.85 ETC 165.77 CLP 7.31

DISTANCE 226.399

PLANETOCENTRIC CONIC

C3 47.548 VHL 6.896 DLA 24.44 RAL 29.96 RAD 6568.8 VEL 12.997 PTH 2.37 VMP 12.504 DPA 5.14 RAP 12.54 ECC 1.7825  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 12 3321.96 -24.18 119.16 276.03 74.79 4 8 33 2722.0 -26.03 110.98  
 90.00 22 50 7 4181.82 -.55 170.97 266.46 61.69 23 59 48 3581.8 -4.33 164.33  
 100.00 4 55 33 2991.96 -26.68 95.60 276.75 76.00 5 45 25 2392.0 -28.34 87.20  
 100.00 23 50 27 3987.05 1.72 155.40 265.20 60.15 24 56 54 3387.0 -2.27 148.88  
 110.00 6 44 39 2650.63 -32.50 71.18 278.25 78.76 7 28 49 2050.6 -33.70 62.15  
 110.00 0 21 46 3901.14 6.79 145.75 262.06 56.42 1 26 47 3301.1 2.33 139.50

DIFFERENTIAL CORRECTIONS

TDE -.6299 TRA-1.4962 TC3 -.0875 BAU .0667  
 RDE -.5110 RRA .1099 RC3 -.0579 FAU .02062  
 FDE .5795 FRA .9664 FC3 -.3755 BSP 4558  
 BDE .8111 BRA 1.5002 BC3 .1049 FSP -252

MID-COURSE EXECUTION ACCURACY

SGT 1467.4 SGR 443.5 SG3 97.7  
 RRT .1458 RRF -.1489 RTF -.8403  
 SGB 1533.0 R23 -.0145 R13 -.8406  
 SG1 1469.0 SG2 438.3 THA 2.77

ORBIT DETERMINATION ACCURACY

ST 664.6 SR 425.7 SS 593.9  
 CRT .7419 CRS .8396 CST .9864  
 LSA 954.4 MSA 254.1 SSA 15.8  
 EL1 747.3 EL2 253.8 ALF 29.09

LAUNCH DATE DEC 26 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 3 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 25.102 GAL 7.72 AZL 86.86 MCA 95.21 SMA 113.04 ECC .32756 INC 3.1352 V1 30.282  
 RP 107.82 LAP 3.12 LOP 189.52 VP 35.885 GAP -18.94 AZP 90.29 TAL 163.51 TAP 258.72 RCA 76.01 APO 150.07 V2 35.147  
 RC 43.055 GL 11.92 GP 2.98 ZAL 58.47 ZAP 6.55 ETS 208.60 ZAE 169.66 ETE 229.38 ZAC 108.48 ETC 165.57 CLP 5.83

DISTANCE 233.114

PLANETOCENTRIC CONIC

C3 43.348 VHL 6.584 DLA 24.94 RAL 29.97 RAD 6568.6 VEL 12.834 PTH 2.34 VMP 11.930 DPA 6.02 RAP 14.06 ECC 1.7134  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 4 42 3328.21 -24.06 119.58 274.35 74.61 4 0 10 2728.2 -25.94 111.42  
 90.00 22 58 42 4129.11 -2.25 168.03 265.45 61.77 24 7 31 3529.1 -6.01 161.36  
 100.00 4 48 38 2993.10 -26.66 95.68 275.10 75.96 5 38 32 2393.1 -28.33 87.28  
 100.00 0 1 22 3939.46 .10 152.79 264.14 60.11 1 7 2 3339.5 -3.87 146.26  
 110.00 6 39 54 2645.03 -32.57 70.76 276.61 79.00 7 23 59 2045.0 -33.74 61.72  
 110.00 0 26 36 3860.29 5.24 143.59 260.95 56.17 1 30 57 3260.3 .76 137.37

DIFFERENTIAL CORRECTIONS

TDE -.6352 TRA-1.4786 TC3 -.0685 BAU .0525  
 RDE -.4850 RRA .0945 RC3 -.0593 FAU .02167  
 FDE .6097 FRA 1.0000 FC3 -.4327 BSP 4775  
 BDE .7992 BRA 1.4816 BC3 .0906 FSP -278

MID-COURSE EXECUTION ACCURACY

SGT 1525.6 SGR 438.7 SG3 106.8  
 RRT .1668 RRF -.1704 RTF -.8507  
 SGB 1587.4 R23 -.0163 R13 -.8510  
 SG1 1527.5 SG2 432.1 THA 2.98

ORBIT DETERMINATION ACCURACY

ST 697.7 SR 423.0 SS 622.5  
 CRT .7514 CRS .8459 CST .9869  
 LSA 995.0 MSA 250.9 SSA 15.9  
 EL1 776.4 EL2 250.8 ALF 27.61

LAUNCH DATE DEC 26 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 5 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 25.339 GAL 7.31 AZL 86.92 MCA 98.44 SMA 114.20 ECC .31294 INC 3.0756 V1 30.282  
 RP 107.86 LAP 3.04 LOP 192.75 VP 36.040 GAP -17.97 AZP 90.45 TAL 163.32 TAP 261.76 RCA 78.46 APO 149.94 V2 35.135  
 RC 42.657 GL 12.38 GP 3.18 ZAL 58.42 ZAP 5.37 ETS 217.91 ZAE 171.60 ETE 242.69 ZAC 110.08 ETC 165.33 CLP 4.33

DISTANCE 239.844

PLANETOCENTRIC CONIC

C3 39.560 VHL 6.290 DLA 25.41 RAL 29.92 RAD 6568.5 VEL 12.686 PTH 2.30 VMP 11.375 DPA 6.91 RAP 15.56 ECC 1.6510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 55 50 3334.77 -23.94 120.03 272.59 74.41 3 51 25 2734.8 -25.85 111.88  
 90.00 23 7 7 4076.40 -3.94 169.08 264.40 61.94 24 15 4 3476.4 -7.67 158.38  
 100.00 4 41 32 2993.97 -26.65 95.74 273.39 75.93 5 31 26 2394.0 -28.32 87.34  
 100.00 0 8 2 3892.43 -1.49 150.21 263.04 60.14 1 12 54 3292.4 -5.45 143.66  
 110.00 6 35 2 2638.89 -32.65 70.29 274.90 79.26 7 19 1 2038.9 -33.79 61.24  
 110.00 0 31 2 3820.28 3.72 141.49 259.79 56.00 1 34 42 3220.3 -.77 135.29

DIFFERENTIAL CORRECTIONS

TDE -.6408 TRA-1.4598 TC3 -.0451 BAU .0397  
 RDE -.4603 RRA .0796 RC3 -.0600 FAU .02283  
 FDE .6426 FRA 1.0359 FC3 -.4995 BSP 4987  
 BDE .7890 BRA 1.4619 BC3 .0751 FSP -308

MID-COURSE EXECUTION ACCURACY

SGT 1584.7 SGR 433.5 SG3 116.8  
 RRT .1905 RRF -.1947 RTF -.8604  
 SGB 1642.9 R23 -.0185 R13 -.8608  
 SG1 1587.0 SG2 425.0 THA 3.21

ORBIT DETERMINATION ACCURACY

ST 732.0 SR 420.0 SS 652.9  
 CRT .7616 CRS .8526 CST .9874  
 LSA 1037.9 MSA 246.9 SSA 16.0  
 EL1 807.0 EL2 246.9 ALF 26.25

LAUNCH DATE DEC 26 1968 FLIGHT TIME 102.00 ARRIVAL DATE APR 7 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 94.29 VL 25.558 GAL 6.92 AZL 86.98 MCA 101.66 SMA 115.31 ECC .29916 INC 3.0151 V1 30.282  
 RP 107.89 LAP 2.95 LOP 195.97 VP 36.183 GAP -17.02 A7P 90.61 TAL 163.18 TAP 264.84 RCA 80.82 APO 149.81 V2 35.123  
 RC 42.436 GL 12.83 GP 3.40 ZAL 58.42 ZAP 4.41 ETS 232.14 ZAE 172.94 ETE 262.36 ZAC 111.65 ETC 165.05 CLP 2.81

Distance 246.585

Planetocentric Conic: C3 36.142 VML 6.012 DLA 25.84 RAL 29.80 RAD 6568.4 VEL 12.550 PTH 2.27 VMP 10.840 DPA 7.81 RAP 17.03 ECC 1.5948  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 46 38 3341.59 -23.82 120.49 270.78 74.22 3 42 20 2741.6 -25.76 112.35  
 90.00 23 15 22 4023.92 -5.62 162.13 263.30 62.20 24 22 26 3423.9 -9.29 155.38  
 100.00 4 34 18 2994.46 -26.64 95.78 271.61 75.92 5 24 13 2394.5 -28.32 87.38  
 100.00 0 14 15 3846.29 -3.05 147.67 261.88 60.25 1 18 25 3246.3 -6.99 141.10  
 110.00 6 30 6 2632.16 -32.73 69.79 273.13 79.55 7 13 58 2032.2 -33.83 60.72  
 110.00 0 35 0 3781.35 2.24 139.46 258.59 55.88 1 38 2 3181.3 -2.25 133.25

Differential Corrections: TOE -.6468 TRA -1.4391 TC3 -.0167 BAU .0299 SGT 1644.0 SGR 428.0 SG3 128.0 ST 767.5 SR 416.8 SS 685.0  
 RDE -.4368 RRA .0651 RC3 -.0596 FAU .02412 RRT .2176 RRF -.2224 RTF -.8696 CRT .7727 CRS .8597 CST .9880  
 FDE .6784 FRA 1.0739 FC3 -.5779 BSP 5206 SGB 1698.8 R23 -.0207 R13 -.8700 LSA 1083.1 MSA 242.2 SSA 16.1  
 BDE .7805 BRA 1.4406 BC3 .0619 FSP -341 SG1 1646.8 SG2 417.0 THA 3.46 EL1 839.2 EL2 242.0 ALF 24.98

LAUNCH DATE DEC 26 1968 FLIGHT TIME 104.00 ARRIVAL DATE APR 9 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 94.29 VL 25.762 GAL 6.54 AZL 87.05 MCA 104.89 SMA 116.37 ECC .28619 INC 2.9532 V1 30.282  
 RP 107.93 LAP 2.85 LOP 199.20 VP 36.315 GAP -16.12 A7P 90.76 TAL 163.09 TAP 267.97 RCA 83.07 APO 149.67 V2 35.111  
 RC 42.394 GL 13.26 GP 3.65 ZAL 58.50 ZAP 3.86 ETS 252.66 ZAE 173.25 ETE 286.99 ZAC 113.18 ETC 164.73 CLP 1.27

Distance 253.333

Planetocentric Conic: C3 33.061 VML 5.750 DLA 26.24 RAL 29.62 RAD 6568.3 VEL 12.427 PTH 2.25 VMP 10.324 DPA 8.72 RAP 18.48 ECC 1.5441  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 37 12 3348.53 -23.69 120.95 268.91 74.02 3 33 0 2748.5 -25.65 112.84  
 90.00 23 23 22 3971.99 -7.26 159.19 262.15 62.55 24 29 34 3372.0 -10.88 152.39  
 100.00 4 27 3 2994.37 -26.64 95.77 269.78 75.92 5 16 57 2394.4 -28.32 87.37  
 100.00 0 20 7 3801.39 -4.57 145.20 260.68 60.43 1 23 29 3201.4 -8.47 138.59  
 110.00 6 25 11 2624.73 -32.82 69.23 271.31 79.87 7 8 56 2024.7 -33.87 60.15  
 110.00 0 38 28 3743.79 .80 137.50 257.34 55.83 1 40 52 3143.8 -3.69 131.29

Differential Corrections: TOE -.6502 TRA -1.4148 TC3 .0189 BAU .0269 SGT 1700.3 SGR 422.2 SG3 140.3 ST 801.4 SR 413.4 SS 718.5  
 RDE -.4146 RRA .0509 RC3 -.0579 FAU .02560 RRT .2471 RRF -.2536 RTF -.8784 CRT .7837 CRS .8671 CST .9884  
 FDE .7169 FRA 1.1141 FC3 -.6703 BSP 5469 SGB 1751.9 R23 -.0240 R13 -.8789 LSA 1128.2 MSA 237.1 SSA 16.2  
 BDE .7711 BRA 1.4157 BC3 .0609 FSP -379 SG1 1703.7 SG2 408.3 THA 3.72 EL1 870.2 EL2 236.5 ALF 23.89

LAUNCH DATE DEC 26 1968 FLIGHT TIME 106.00 ARRIVAL DATE APR 11 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 94.29 VL 25.951 GAL 6.18 AZL 87.11 MCA 108.10 SMA 117.37 ECC .27402 INC 2.8895 V1 30.282  
 RP 107.97 LAP 2.75 LOP 202.42 VP 36.437 GAP -15.24 A7P 90.90 TAL 163.04 TAP 271.15 RCA 85.21 APO 149.54 V2 35.099  
 RC 42.534 GL 13.67 GP 3.93 ZAL 58.63 ZAP 3.94 ETS 276.35 ZAE 172.42 ETE 309.71 ZAC 114.67 ETC 164.37 CLP -1.30

Distance 260.085

Planetocentric Conic: C3 30.284 VML 5.503 DLA 26.60 RAL 29.38 RAD 6568.2 VEL 12.315 PTH 2.22 VMP 9.827 DPA 9.65 RAP 19.88 ECC 1.4984  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 27 39 3355.30 -23.56 121.41 267.00 73.82 3 23 34 2755.3 -25.56 113.31  
 90.00 23 31 0 3921.10 -8.84 156.30 260.95 62.99 24 36 21 3321.1 -12.40 149.42  
 100.00 4 19 54 2993.39 -26.66 95.70 267.92 75.95 5 9 48 2393.4 -28.33 87.30  
 100.00 0 23 21 3758.24 -6.01 142.81 259.42 60.66 1 28 0 3158.2 -9.88 136.15  
 110.00 6 20 22 2616.46 -32.92 68.60 269.44 80.23 7 3 58 2016.5 -33.92 59.50  
 110.00 0 41 23 3707.93 -.57 135.63 256.05 55.82 1 43 11 3107.9 -5.05 129.41

Differential Corrections: TOE -.6558 TRA -1.3916 TC3 .0601 BAU .0328 SGT 1759.6 SGR 416.6 SG3 154.0 ST 838.1 SR 410.2 SS 754.7  
 RDE -.3938 RRA .0369 RC3 -.0545 FAU .02721 RRT .2816 RRF -.2897 RTF -.8870 CRT .7960 CRS .8751 CST .9890  
 FDE .7597 FRA 1.1581 FC3 -.7778 BSP 5703 SGB 1808.3 R23 -.0275 R13 -.8875 LSA 1177.5 MSA 231.2 SSA 16.2  
 BDE .7649 BRA 1.3921 BC3 .0811 FSP -420 SG1 1763.7 SG2 398.8 THA 4.02 EL1 904.3 EL2 230.1 ALF 22.85

LAUNCH DATE DEC 26 1968 FLIGHT TIME 108.00 ARRIVAL DATE APR 13 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 94.29 VL 26.126 GAL 5.84 AZL 87.18 MCA 111.32 SMA 118.33 ECC .26262 INC 2.8234 V1 30.282  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.550 GAP -14.40 A7P 91.03 TAL 163.04 TAP 274.36 RCA 87.25 APO 149.40 V2 35.086  
 RC 42.853 GL 14.06 GP 4.24 ZAL 58.82 ZAP 4.65 ETS 296.27 ZAE 170.80 ETE 326.09 ZAC 116.10 ETC 163.95 CLP -1.90

Distance 266.837

Planetocentric Conic: C3 27.781 VML 5.271 DLA 26.92 RAL 29.08 RAD 6568.1 VEL 12.213 PTH 2.19 VMP 9.348 DPA 10.59 RAP 21.25 ECC 1.4572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 18 12 3361.34 -23.45 121.81 265.06 73.65 3 14 13 2761.3 -25.46 113.73  
 90.00 23 38 7 3871.92 -10.35 153.47 259.70 63.49 24 42 39 3271.9 -13.83 146.52  
 100.00 4 13 3 2991.09 -26.70 95.54 266.03 76.03 5 2 54 2391.1 -28.35 87.13  
 100.00 0 29 53 3717.40 -7.37 140.54 258.11 60.95 1 31 50 3117.4 -11.19 133.83  
 110.00 6 15 45 2607.14 -33.03 67.89 267.54 80.64 6 59 12 2007.1 -33.97 58.78  
 110.00 0 43 40 3674.12 -1.86 133.86 254.72 55.86 1 44 54 3074.1 -6.33 127.63

Differential Corrections: TOE -.6617 TRA -1.3672 TC3 .1048 BAU .0430 SGT 1818.7 SGR 411.3 SG3 169.3 ST 876.0 SR 407.2 SS 793.0  
 RDE -.3745 RRA .0230 RC3 -.0491 FAU .02900 RRT .3214 RRF -.3307 RTF -.8943 CRT .8091 CRS .8834 CST .9897  
 FDE .8065 FRA 1.2059 FC3 -.9038 BSP 5899 SGB 1864.7 R23 -.0312 R13 -.8949 LSA 1229.4 MSA 224.7 SSA 16.3  
 BDE .7603 BRA 1.3674 BC3 .1157 FSP -466 SG1 1823.8 SG2 388.4 THA 4.35 EL1 939.9 EL2 223.0 ALF 21.91

LAUNCH DATE DEC 26 1968

FLIGHT TIME 110.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 273.588

RL 147.12 LAL .00 LOL 94.29 VL 26.287 GAL 5.52 AZL 87.25 MCA 114.54 SMA 119.23 ECC .25195 INC 2.7544 V1 30.282  
 RP 108.05 LAP 2.51 LOP 208.85 VP 36.653 GAP -13.59 A7P 91.14 TAL 163.08 TAP 277.62 RCA 89.19 APO 149.27 V2 35.073  
 RC 43.347 GL 14.41 GP 4.60 ZAL 59.06 ZAP 5.80 ETS 309.86 ZAE 168.80 ETE 337.08 ZAC 117.48 ETC 163.49 CLP -3.55

PLANETOCENTRIC CONIC

C3 25.527 VML 5.052 DLA 27.18 RAL 28.74 RAD 6568.0 VEL 12.120 PTH 2.17 VHP 8.887 DPA 11.54 RAP 22.56 ECC 1.4201  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 9 10 3365.75 -23.36 122.11 263.11 73.53 3 5 16 2765.7 -25.40 114.03  
 90.00 23 44 24 3825.52 -11.75 150.78 258.39 64.05 24 48 10 3225.5 -15.14 143.75  
 100.00 4 6 42 2986.89 -26.77 95.25 264.13 76.17 4 56 28 2386.9 -28.40 86.83  
 100.00 0 33 30 3679.60 -8.61 138.42 256.75 61.26 1 34 50 3079.6 -12.38 131.66  
 110.00 6 11 27 2596.52 -33.14 67.09 265.61 81.10 6 54 43 1996.5 -34.02 57.96  
 110.00 0 45 14 3642.74 -3.06 132.22 253.34 55.94 1 45 57 3042.7 -7.51 125.96

DIFFERENTIAL CORRECTIONS

TDE -.6667 TRA-1.3416 TC3 .1572 BAU .0554  
 RDE -.3568 RRA .0091 RC3 -.0410 FAU .03102  
 FDE .8574 FRA 1.2578 FC3-1.0522 BSP 6108  
 BDE .7561 BRA 1.3416 BC3 .1624 FSP -517

MID-COURSE EXECUTION ACCURACY

SGT 1876.6 SGR 406.9 SG3 186.3  
 RRT .3660 RRF -.3771 RTF -.9013  
 SGB 1920.2 R23 -.0358 R13 -.9020  
 SG1 1882.8 SG2 377.4 THA 4.73

ORBIT DETERMINATION ACCURACY

ST 913.7 SR 404.6 SS 833.4  
 CRT .8226 CRS .8920 CST .9904  
 LSA 1282.7 MSA 217.9 SSA 16.3  
 EL1 975.8 EL2 215.5 ALF 21.09

LAUNCH DATE DEC 26 1968

FLIGHT TIME 112.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 280.333

RL 147.12 LAL .00 LOL 94.29 VL 26.436 GAL 5.21 AZL 87.32 MCA 117.75 SMA 120.08 ECC .24201 INC 2.6819 V1 30.282  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.748 GAP -12.80 A7P 91.25 TAL 163.17 TAP 280.92 RCA 91.02 APO 149.13 V2 35.060  
 RC 44.011 GL 14.72 GP 5.00 ZAL 59.35 ZAP 7.24 ETS 318.62 ZAE 166.68 ETE 344.71 ZAC 118.78 ETC 162.96 CLP -5.24

PLANETOCENTRIC CONIC

C3 23.495 VML 4.847 DLA 27.38 RAL 28.36 RAD 6568.0 VEL 12.036 PTH 2.15 VHP 8.444 DPA 12.53 RAP 23.82 ECC 1.3867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 1 5 3367.06 -23.34 122.20 261.18 73.49 2 57 12 2767.1 -25.38 114.12  
 90.00 23 49 26 3783.46 -12.99 148.31 257.01 64.61 24 52 30 3183.5 -16.30 141.20  
 100.00 4 1 8 2980.05 -26.88 94.77 262.23 76.40 4 50 48 2380.1 -28.48 86.34  
 100.00 0 36 0 3645.70 -9.72 136.51 255.32 61.59 1 36 46 3045.7 -13.44 129.69  
 110.00 6 7 36 2584.30 -33.27 66.15 263.66 81.64 6 50 40 1984.3 -34.06 57.00  
 110.00 0 46 2 3614.22 -4.15 130.73 251.93 56.04 1 46 16 3014.2 -8.58 124.45

DIFFERENTIAL CORRECTIONS

TDE -.6712 TRA-1.3152 TC3 .2150 BAU .0682  
 RDE -.3406 RRA -.0050 RC3 -.0298 FAU .03326  
 FDE .9130 FRA 1.3150 FC3-1.2255 BSP 6310  
 BDE .7527 BRA 1.3152 BC3 .2171 FSP -575

MID-COURSE EXECUTION ACCURACY

SGT 1933.5 SGR 403.8 SG3 205.2  
 RRT .4163 RRF -.4294 RTF -.9078  
 SGB 1975.2 R23 -.0412 R13 -.9087  
 SG1 1941.0 SG2 365.7 THA 5.15

ORBIT DETERMINATION ACCURACY

ST 951.5 SR 402.7 SS 876.0  
 CRT .8365 CRS .9009 CST .9910  
 LSA 1338.0 MSA 210.6 SSA 16.3  
 EL1 1012.2 EL2 207.4 ALF 20.39

LAUNCH DATE DEC 26 1968

FLIGHT TIME 114.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 287.071

RL 147.12 LAL .00 LOL 94.29 VL 26.574 GAL 4.92 AZL 87.40 MCA 120.96 SMA 120.87 ECC .23274 INC 2.6049 V1 30.282  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.834 GAP -12.04 A7P 91.34 TAL 163.29 TAP 284.25 RCA 92.74 APO 149.01 V2 35.047  
 RC 44.838 GL 14.98 GP 5.47 ZAL 59.68 ZAP 8.86 ETS 324.36 ZAE 164.58 ETE 350.33 ZAC 120.00 ETC 162.37 CLP -6.98

PLANETOCENTRIC CONIC

C3 21.664 VML 4.654 DLA 27.52 RAL 27.94 RAD 6567.9 VEL 11.960 PTH 2.13 VHP 8.018 DPA 13.54 RAP 25.01 ECC 1.3565  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 54 38 3363.14 -23.41 121.94 259.28 73.60 2 50 41 2763.1 -25.44 113.85  
 90.00 23 52 34 3747.97 -14.01 146.21 255.55 65.14 24 55 2 3148.0 -17.25 139.03  
 100.00 3 56 41 2969.67 -27.04 94.04 260.34 76.75 4 46 11 2369.7 -28.60 85.59  
 100.00 0 37 8 3616.68 -10.65 134.86 253.83 61.90 1 37 24 3016.7 -14.33 128.00  
 110.00 6 4 22 2570.09 -33.40 65.07 261.70 82.27 6 47 12 1970.1 -34.11 55.90  
 110.00 0 45 56 3589.02 -5.10 129.41 250.48 56.15 1 45 45 2989.0 -9.51 123.10

DIFFERENTIAL CORRECTIONS

TDE -.6742 TRA-1.2878 TC3 .2805 BAU .0814  
 RDE -.3262 RRA -.0194 RC3 -.0147 FAU .03578  
 FDE .9732 FRA 1.3779 FC3-1.4297 BSP 6505  
 BDE .7490 BRA 1.2880 BC3 .2809 FSP -639

MID-COURSE EXECUTION ACCURACY

SGT 1988.0 SGR 402.7 SG3 226.4  
 RRT .4719 RRF -.4874 RTF -.9140  
 SGB 2028.4 R23 -.0478 R13 -.9150  
 SG1 1997.4 SG2 353.4 THA 5.64

ORBIT DETERMINATION ACCURACY

ST 988.2 SR 401.7 SS 920.6  
 CRT .8506 CRS .9099 CST .9917  
 LSA 1394.2 MSA 203.1 SSA 16.3  
 EL1 1047.9 EL2 199.2 ALF 19.82

LAUNCH DATE DEC 26 1968

FLIGHT TIME 116.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 293.800

RL 147.12 LAL .00 LOL 94.29 VL 26.701 GAL 4.65 AZL 87.48 MCA 124.16 SMA 121.62 ECC .22414 INC 2.5227 V1 30.282  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.913 GAP -11.31 A7P 91.42 TAL 163.46 TAP 287.62 RCA 94.36 APO 148.88 V2 35.033  
 RC 45.818 GL 15.18 GP 6.00 ZAL 60.05 ZAP 10.62 ETS 328.22 ZAE 162.57 ETE 354.76 ZAC 121.13 ETC 161.71 CLP -8.78

PLANETOCENTRIC CONIC

C3 20.014 VML 4.474 DLA 27.58 RAL 27.50 RAD 6567.8 VEL 11.891 PTH 2.11 VHP 7.609 DPA 14.58 RAP 26.11 ECC 1.3294  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 41 3351.36 -23.64 121.15 257.45 73.93 2 46 32 2751.4 -25.61 113.03  
 90.00 23 53 1 3721.77 -14.76 144.64 253.98 65.56 24 55 2 3121.8 -17.93 137.41  
 100.00 3 53 42 2954.77 -27.27 92.99 258.48 77.25 4 42 57 2354.8 -28.75 84.51  
 100.00 0 36 36 3593.59 -11.39 133.54 252.29 62.17 1 36 30 2993.6 -15.02 126.64  
 110.00 6 1 56 2553.48 -33.55 63.79 259.75 83.01 6 44 30 1953.5 -34.15 54.60  
 110.00 0 44 52 3567.64 -5.91 128.28 248.99 56.27 1 44 20 2967.6 -10.30 121.94

DIFFERENTIAL CORRECTIONS

TDE -.6757 TRA-1.2597 TC3 .3518 BAU .0941  
 RDE -.3137 RRA -.0344 RC3 .0053 FAU .03859  
 FDE 1.0382 FRA 1.4477 FC3-1.6692 BSP 6688  
 BDE .7450 BRA 1.2602 BC3 .3519 FSP -710

MID-COURSE EXECUTION ACCURACY

SGT 2039.8 SGR 404.8 SG3 250.0  
 RRT .5323 RRF -.5507 RTF -.9196  
 SGB 2079.6 R23 -.0557 R13 -.9207  
 SG1 2051.5 SG2 340.7 THA 6.20

ORBIT DETERMINATION ACCURACY

ST 1023.3 SR 402.0 SS 967.1  
 CRT .8649 CRS .9191 CST .9924  
 LSA 1451.1 MSA 195.5 SSA 16.3  
 EL1 1082.8 EL2 190.7 ALF 19.39

LAUNCH DATE DEC 26 1968

FLIGHT TIME 118.00

ARRIVAL DATE APR 23 1969

MELIOCENTRIC CONIC

DISTANCE 300.516

RL 147.12 LAL .00 LOL 94.29 VL 26.817 GAL 4.39 AZL 87.57 MCA 127.37 SMA 122.32 ECC .21618 INC 2.4341 V1 30.282  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.985 GAP -10.61 AZP 91.48 TAL 163.65 TAP 291.02 RCA 95.88 APO 148.76 V2 35.020  
 RC 46.944 GL 15.30 GP 6.62 ZAL 60.44 ZAP 12.52 ETS 330.86 ZAE 160.70 ETE 358.49 ZAC 122.15 ETC 160.97 CLP -10.64

PLANETOCENTRIC CONIC

C3 18.525 VML 4.304 DLA 27.55 RAL 27.05 RAD 6567.8 VEL 11.828 PTH 2.09 VMP 7.217 DPA 15.67 RAP 27.13 ECC 1.3049  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 1 3329.36 -24.04 119.66 255.71 74.57 2 45 30 2729.4 -25.93 111.50  
 90.00 23 50 5 3707.23 -15.16 143.77 252.32 65.80 24 51 52 3107.2 -18.31 136.51  
 100.00 3 52 32 2934.40 -27.57 91.55 256.66 77.96 4 41 27 2334.4 -28.95 83.02  
 100.00 0 34 10 3577.43 -11.90 132.61 250.68 62.37 1 33 48 2977.4 -15.51 125.68  
 110.00 6 0 29 2533.99 -33.70 62.29 257.80 83.89 6 42 43 1934.0 -34.18 53.08  
 110.00 0 42 43 3550.60 -6.56 127.38 247.48 56.38 1 41 54 2950.6 -10.93 121.02

DIFFERENTIAL CORRECTIONS

TDE -.6749 TRA-1.2303 TC3 .4299 BAU .1068  
 RDE -.3030 RRA -.0503 RC3 .0313 FAU .04175  
 FDE 1.1076 FRA 1.5249 FC3-1.9509 BSP 6874  
 BDE .7398 BRA 1.2314 BC3 .4311 FSP -792

MID-COURSE EXECUTION ACCURACY

SGT 2087.2 SGR 411.2 SG3 276.4  
 RRT .5963 RRF -.6178 RTF -.9248  
 SGB 2127.3 R23 -.0653 R13 -.9262  
 SG1 2101.9 SG2 327.8 TMA 6.87

ORBIT DETERMINATION ACCURACY

ST 1055.6 SR 404.0 SS 1014.7  
 CRT .8792 CRS .9283 CST .9930  
 LSA 1507.2 MSA 187.6 SSA 16.3  
 EL1 1115.5 EL2 182.2 ALF 19.13

LAUNCH DATE DEC 26 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 25 1969

MELIOCENTRIC CONIC

DISTANCE 307.220

RL 147.12 LAL .00 LOL 94.29 VL 26.924 GAL 4.15 AZL 87.66 MCA 130.57 SMA 122.97 ECC .20882 INC 2.3377 V1 30.282  
 RP 108.25 LAP 1.78 LOP 224.89 VP 37.050 GAP -9.92 AZP 91.52 TAL 163.88 TAP 294.45 RCA 97.29 APO 148.65 V2 35.007  
 RC 48.205 GL 15.32 GP 7.34 ZAL 60.86 ZAP 14.54 ETS 332.68 ZAE 159.00 ETE 1.81 ZAC 123.04 ETC 160.15 CLP -12.59

PLANETOCENTRIC CONIC

C3 17.181 VML 4.145 DLA 27.41 RAL 26.60 RAD 6567.7 VEL 11.771 PTH 2.08 VMP 6.842 DPA 16.83 RAP 28.03 ECC 1.2828  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 59 3296.16 -24.62 117.40 254.05 75.56 2 47 55 2696.2 -26.37 109.17  
 90.00 23 43 31 3705.38 -15.22 143.66 250.55 65.83 24 45 17 3105.4 -18.35 136.39  
 100.00 3 53 29 2907.72 -27.93 89.66 254.89 78.89 4 41 57 2307.7 -29.18 81.07  
 100.00 0 29 38 3569.05 -12.16 132.13 249.03 62.48 1 29 8 2969.1 -15.75 125.18  
 110.00 6 0 13 2511.09 -33.85 60.52 255.87 84.93 6 42 4 1911.1 -34.18 51.29  
 110.00 0 39 23 3538.44 -7.01 126.74 245.95 56.46 1 38 22 2938.4 -11.37 120.36

DIFFERENTIAL CORRECTIONS

TDE -.6695 TRA-1.1989 TC3 .5187 BAU .1201  
 RDE -.2943 RRA -.0674 RC3 .0652 FAU .04535  
 FDE 1.1800 FRA 1.6105 FC3-2.2851 BSP 7084  
 BDE .7314 BRA 1.2008 BC3 .5228 FSP -885

MID-COURSE EXECUTION ACCURACY

SGT 2127.5 SGR 423.6 SG3 305.9  
 RRT .6610 RRF -.6862 RTF -.9307  
 SGB 2169.3 R23 -.0769 R13 -.9317  
 SG1 2146.3 SG2 315.1 TMA 7.66

ORBIT DETERMINATION ACCURACY

ST 1081.8 SR 408.0 SS 1062.4  
 CRT .8929 CRS .9373 CST .9935  
 LSA 1559.8 MSA 179.8 SSA 16.1  
 EL1 1143.1 EL2 173.8 ALF 19.07

LAUNCH DATE DEC 26 1968

FLIGHT TIME 122.00

ARRIVAL DATE APR 27 1969

MELIOCENTRIC CONIC

DISTANCE 313.908

RL 147.12 LAL .00 LOL 94.29 VL 27.022 GAL 3.92 AZL 87.77 MCA 133.77 SMA 123.58 ECC .20204 INC 2.2315 V1 30.282  
 RP 108.29 LAP 1.61 LOP 228.09 VP 37.109 GAP -9.27 AZP 91.54 TAL 164.13 TAP 297.90 RCA 98.61 APO 148.54 V2 34.994  
 RC 49.590 GL 15.23 GP 8.18 ZAL 61.29 ZAP 16.71 ETS 333.89 ZAE 157.48 ETE 4.95 ZAC 123.79 ETC 159.24 CLP -14.62

PLANETOCENTRIC CONIC

C3 15.967 VML 3.996 DLA 27.16 RAL 26.17 RAD 6567.6 VEL 11.720 PTH 2.06 VMP 6.484 DPA 18.05 RAP 28.80 ECC 1.2628  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 26 3252.38 -25.33 114.39 252.48 76.91 2 53 38 2652.4 -26.89 106.07  
 90.00 23 33 38 3715.58 -14.93 144.27 248.73 65.66 24 35 33 3115.6 -18.09 137.03  
 100.00 3 56 46 2874.14 -28.35 87.25 253.16 80.10 4 44 40 2274.1 -29.42 78.61  
 100.00 0 22 55 3569.05 -12.16 132.13 247.35 62.48 1 22 24 2969.1 -15.75 125.18  
 110.00 6 1 22 2484.20 -33.99 58.43 253.96 86.16 6 42 47 1884.2 -34.15 49.19  
 110.00 0 34 48 3531.76 -7.26 126.38 244.42 56.51 1 33 39 2931.8 -11.62 120.00

DIFFERENTIAL CORRECTIONS

TDE -.6634 TRA-1.1692 TC3 .6058 BAU .1314  
 RDE -.2879 RRA -.0865 RC3 .1081 FAU .04927  
 FDE 1.2572 FRA 1.7082 FC3-2.6717 BSP 7229  
 BDE .7232 BRA 1.1724 BC3 .6154 FSP -987

MID-COURSE EXECUTION ACCURACY

SGT 2165.6 SGR 444.3 SG3 338.9  
 RRT .7248 RRF -.7532 RTF -.9342  
 SGB 2210.7 R23 -.0909 R13 -.9363  
 SG1 2189.8 SG2 302.7 TMA 8.62

ORBIT DETERMINATION ACCURACY

ST 1106.6 SR 415.0 SS 1111.5  
 CRT .9068 CRS .9462 CST .9941  
 LSA 1613.2 MSA 171.7 SSA 16.1  
 EL1 1170.2 EL2 165.5 ALF 19.18

LAUNCH DATE DEC 26 1968

FLIGHT TIME 124.00

ARRIVAL DATE APR 29 1969

MELIOCENTRIC CONIC

DISTANCE 320.581

RL 147.12 LAL .00 LOL 94.29 VL 27.111 GAL 3.71 AZL 87.89 MCA 136.97 SMA 124.14 ECC .19581 INC 2.1135 V1 30.282  
 RP 108.33 LAP 1.44 LOP 231.28 VP 37.161 GAP -8.63 AZP 91.55 TAL 164.40 TAP 301.36 RCA 99.83 APO 148.44 V2 34.980  
 RC 51.091 GL 15.00 GP 9.17 ZAL 61.73 ZAP 19.03 ETS 334.64 ZAE 156.15 ETE 8.09 ZAC 124.35 ETC 158.22 CLP -16.75

PLANETOCENTRIC CONIC

C3 14.868 VML 3.856 DLA 26.77 RAL 25.78 RAD 6567.6 VEL 11.673 PTH 2.05 VMP 6.145 DPA 19.38 RAP 29.42 ECC 1.2447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 8 58 3199.37 -26.10 110.70 250.95 78.61 3 2 18 2599.4 -27.41 102.28  
 90.00 23 20 56 3736.46 -14.34 145.52 246.88 65.32 24 23 12 3136.5 -17.55 138.32  
 100.00 4 2 33 2833.25 -28.79 84.29 251.48 81.59 4 49 46 2233.2 -29.65 75.59  
 100.00 0 13 59 3577.82 -11.89 132.64 245.65 62.37 1 13 36 2977.8 -15.49 125.70  
 110.00 6 4 10 2452.67 -34.11 55.98 252.07 87.60 6 45 3 1852.7 -34.06 46.73  
 110.00 0 28 50 3531.16 -7.29 126.35 242.89 56.51 1 27 42 2931.2 -11.64 119.96

DIFFERENTIAL CORRECTIONS

TDE -.6529 TRA-1.1386 TC3 .6973 BAU .1423  
 RDE -.2840 RRA -.1082 RC3 .1630 FAU .05365  
 FDE 1.3359 FRA 1.8181 FC3-3.1239 BSP 7359  
 BDE .7120 BRA 1.1438 BC3 .7161 FSP -1100

MID-COURSE EXECUTION ACCURACY

SGT 2195.8 SGR 475.7 SG3 375.6  
 RRT .7834 RRF -.8150 RTF -.9381  
 SGB 2246.7 R23 -.1076 R13 -.9408  
 SG1 2227.8 SG2 291.4 TMA 9.80

ORBIT DETERMINATION ACCURACY

ST 1124.6 SR 425.4 SS 1159.5  
 CRT .9200 CRS .9546 CST .9947  
 LSA 1662.3 MSA 163.6 SSA 15.9  
 EL1 1192.0 EL2 157.3 ALF 19.54

LAUNCH DATE DEC 26 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 327.235

RL 147.12 LAL .00 LOL 94.29 VL 27.193 GAL 3.52 AZL 88.02 HCA 140.16 SMA 124.65 ECC .19011 INC 1.9806 V1 30.282  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.209 GAP -8.01 AZP 91.52 TAL 164.68 TAP 304.84 RCA 100.95 APO 148.35 V2 34.967  
 RC 52.697 GL 14.59 GP 10.35 ZAL 62.15 ZAP 21.54 ETS 335.02 ZAE 154.99 ETE 11.36 ZAC 124.71 ETC 157.10 CLP -18.99

PLANETOCENTRIC CONIC

C3 13.870 VHL 3.724 DLA 26.21 RAL 25.44 RAD 6567.5 VEL 11.630 PTH 2.04 VHP 5.824 DPA 20.83 RAP 29.85 ECC 1.2283  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 18 3138.21 -26.85 106.38 249.47 80.65 3 13 36 2538.2 -27.87 97.86  
 90.00 23 5 55 3766.89 -13.47 147.33 245.05 64.85 24 8 42 3166.9 -16.75 140.19  
 100.00 4 10 57 2784.70 -29.22 80.74 249.84 83.41 4 57 22 2184.7 -29.83 71.99  
 100.00 0 2 53 3595.63 -11.32 133.66 243.96 62.15 1 2 48 2995.6 -14.96 126.76  
 110.00 6 8 52 2415.72 -34.18 53.09 250.21 89.31 6 49 8 1815.7 -33.89 43.86  
 110.00 0 21 26 3537.37 -7.05 126.68 241.39 56.47 1 20 24 2937.4 -11.41 120.30

DIFFERENTIAL CORRECTIONS

TOE -.6352 TRA-1.1057 TC3 .7974 BAU .1541  
 ROE -.2822 RRA -.1331 RC3 .2341 FAU .05862  
 FOE 1.4103 FRA 1.9398 FC3-3.6588 BSP 7532  
 BOE .6950 BRA 1.1137 BC3 .8311 FSP -1232

MID-COURSE EXECUTION ACCURACY

SGT 2214.1 SGR 520.6 SG3 416.2  
 RRT .8334 RRF -.8680 RTF -.9420  
 SGB 2274.5 R23 -.1266 R13 -.9454  
 SGI 2256.9 SG2 282.3 THA 11.27

ORBIT DETERMINATION ACCURACY

ST 1130.8 SR 439.6 SS 1202.3  
 CRT .9321 CRS .9623 CST .9952  
 LSA 1700.9 MSA 155.5 SSA 15.8  
 EL1 1204.0 EL2 149.6 ALF 20.24

LAUNCH DATE DEC 26 1968

FLIGHT TIME 128.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 333.872

RL 147.12 LAL .00 LOL 94.29 VL 27.267 GAL 3.34 AZL 88.17 HCA 143.35 SMA 125.13 ECC .18491 INC 1.8288 V1 30.282  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.251 GAP -7.41 AZP 91.47 TAL 164.97 TAP 308.33 RCA 101.99 APO 148.26 V2 34.954  
 RC 54.398 GL 13.96 GP 11.77 ZAL 62.56 ZAP 24.25 ETS 335.09 ZAE 153.98 ETE 14.92 ZAC 124.82 ETC 155.85 CLP -21.35

PLANETOCENTRIC CONIC

C3 12.964 VHL 3.601 DLA 25.44 RAL 25.18 RAD 6567.5 VEL 11.591 PTH 2.03 VHP 5.522 DPA 22.45 RAP 30.06 ECC 1.2133  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 16 3069.35 -27.52 101.45 248.00 83.03 3 27 25 2469.3 -28.19 92.85  
 90.00 22 48 55 3806.37 -12.31 149.66 243.28 64.30 23 52 21 3206.4 -15.67 142.59  
 100.00 4 22 7 2728.08 -29.59 76.58 248.24 85.57 5 7 35 2128.1 -29.89 67.78  
 100.00 23 45 45 3622.87 -10.45 135.21 242.32 61.83 24 46 8 3022.9 -14.14 128.36  
 110.00 6 15 47 2372.45 -34.16 49.71 248.39 91.31 6 55 20 1772.4 -33.60 40.51  
 110.00 0 12 30 3551.26 -6.53 127.42 239.94 56.37 1 11 41 2951.3 -10.91 121.06

DIFFERENTIAL CORRECTIONS

TOE -.6151 TRA-1.0746 TC3 .8887 BAU .1640  
 ROE -.2835 RRA -.1631 RC3 .3243 FAU .06393  
 FOE 1.4824 FRA 2.0797 FC3-4.2694 BSP 7618  
 BOE .6773 BRA 1.0869 BC3 .9460 FSP -1372

MID-COURSE EXECUTION ACCURACY

SGT 2225.7 SGR 583.6 SG3 460.8  
 RRT .8739 RRF -.9108 RTF -.9449  
 SGB 2301.0 R23 -.1484 R13 -.9494  
 SGI 2284.3 SG2 276.4 THA 13.10

ORBIT DETERMINATION ACCURACY

ST 1131.9 SR 459.3 SS 1242.5  
 CRT .9437 CRS .9694 CST .9958  
 LSA 1736.1 MSA 146.8 SSA 15.7  
 EL1 1213.3 EL2 141.7 ALF 21.26

LAUNCH DATE DEC 26 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 340.488

RL 147.12 LAL .00 LOL 94.29 VL 27.334 GAL 3.18 AZL 88.35 HCA 146.54 SMA 125.56 ECC .18019 INC 1.6524 V1 30.282  
 RP 108.45 LAP .91 LOP 240.85 VP 37.288 GAP -6.84 AZP 91.38 TAL 165.27 TAP 311.81 RCA 102.94 APO 148.19 V2 34.942  
 RC 56.186 GL 13.06 GP 13.48 ZAL 62.94 ZAP 27.20 ETS 334.88 ZAE 153.06 ETE 18.93 ZAC 124.63 ETC 154.47 CLP -23.85

PLANETOCENTRIC CONIC

C3 12.137 VHL 3.484 DLA 24.42 RAL 25.04 RAD 6567.5 VEL 11.555 PTH 2.02 VHP 5.243 DPA 24.29 RAP 30.00 ECC 1.1998  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 54 1 2992.35 -28.03 95.87 246.56 85.78 3 43 53 2392.4 -28.32 87.22  
 90.00 22 30 3 3855.26 -10.85 152.51 241.61 63.69 23 34 18 3255.3 -14.30 145.53  
 100.00 4 36 17 2662.60 -29.84 71.72 246.67 88.12 5 20 40 2062.6 -29.78 62.92  
 100.00 23 30 28 3660.24 -9.24 137.33 240.76 61.45 24 31 28 3060.2 -12.99 130.54  
 110.00 6 25 17 2321.61 -34.01 45.75 246.59 93.65 7 3 58 1721.6 -33.13 36.62  
 110.00 0 1 54 3573.99 -5.67 128.62 238.58 56.23 1 1 28 2974.0 -10.07 122.29

DIFFERENTIAL CORRECTIONS

TOE -.5889 TRA-1.0438 TC3 .9746 BAU .1735  
 ROE -.2875 RRA -.1998 RC3 .4405 FAU .06962  
 FOE 1.5426 FRA 2.2383 FC3-4.9658 BSP 7681  
 BOE .6553 BRA 1.0628 BC3 1.0695 FSP -1522

MID-COURSE EXECUTION ACCURACY

SGT 2225.6 SGR 669.3 SG3 509.3  
 RRT .9041 RRF -.9429 RTF -.9473  
 SGB 2324.0 R23 -.1711 R13 -.9534  
 SGI 2307.6 SG2 275.9 THA 15.44

ORBIT DETERMINATION ACCURACY

ST 1121.7 SR 485.1 SS 1274.5  
 CRT .9543 CRS .9756 CST .9964  
 LSA 1760.3 MSA 137.7 SSA 15.7  
 EL1 1214.7 EL2 133.8 ALF 22.72

LAUNCH DATE DEC 26 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 347.085

RL 147.12 LAL .00 LOL 94.29 VL 27.395 GAL 3.03 AZL 88.56 HCA 149.73 SMA 125.96 ECC .17592 INC 1.4439 V1 30.282  
 RP 108.49 LAP .73 LOP 244.03 VP 37.321 GAP -6.28 AZP 91.25 TAL 165.56 TAP 315.29 RCA 103.80 APO 148.11 V2 34.929  
 RC 58.051 GL 11.79 GP 15.57 ZAL 63.29 ZAP 30.45 ETS 334.42 ZAE 152.15 ETE 23.55 ZAC 124.07 ETC 152.96 CLP -26.51

PLANETOCENTRIC CONIC

C3 11.384 VHL 3.374 DLA 23.06 RAL 25.06 RAD 6567.4 VEL 11.523 PTH 2.01 VHP 4.988 DPA 26.42 RAP 29.61 ECC 1.1873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 14 54 2905.92 -28.30 89.57 245.12 88.93 4 3 20 2305.9 -28.15 80.91  
 90.00 22 9 16 3914.83 -9.03 153.94 240.08 63.05 23 14 31 3314.8 -12.58 149.05  
 100.00 4 53 51 2586.90 -29.87 66.10 245.12 91.08 5 36 57 1986.9 -29.41 57.32  
 100.00 23 13 1 3709.08 -7.64 140.07 239.33 61.01 24 14 50 3109.1 -11.45 133.35  
 110.00 6 37 50 2261.55 -33.65 41.10 244.83 96.38 7 15 32 1661.5 -32.40 32.09  
 110.00 23 45 31 3607.20 -4.41 130.36 237.34 56.07 24 45 38 3007.2 -8.84 124.07

DIFFERENTIAL CORRECTIONS

TOE -.5545 TRA-1.0114 TC3 1.0559 BAU .1842  
 ROE -.2936 RRA -.2455 RC3 .5922 FAU .07570  
 FOE 1.5778 FRA 2.4127 FC3-5.7573 BSP 7749  
 BOE .6274 BRA 1.0408 BC3 1.2106 FSP -1686

MID-COURSE EXECUTION ACCURACY

SGT 2208.8 SGR 783.3 SG3 560.6  
 RRT .9248 RRF -.9653 RTF -.9492  
 SGB 2343.6 R23 -.1914 R13 -.9577  
 SGI 2326.4 SG2 283.0 THA 18.44

ORBIT DETERMINATION ACCURACY

ST 1095.8 SR 516.9 SS 1291.2  
 CRT .9637 CRS .9807 CST .9971  
 LSA 1765.9 MSA 127.6 SSA 15.8  
 EL1 1205.0 EL2 125.5 ALF 24.73

LAUNCH DATE DEC 26 1968

FLIGHT TIME 134.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 353.660

RL 147.12 LAL .00 LOL 94.29 VL 27.450 GAL 2.89 AZL 88.81 MCA 152.91 SMA 126.31 ECC .17208 INC 1.1913 V1 30.282  
 RP 108.53 LAP .54 LOP 247.21 VP 37.350 GAP -5.74 AZP 91.06 TAL 165.85 TAP 318.76 RCA 104.58 APO 148.05 V2 34.917  
 RC 59.985 GL 10.04 GP 18.17 ZAL 63.59 ZAP 34.06 ETS 333.73 ZAE 151.12 ETE 28.95 ZAC 123.05 ETC 151.30 CLP -29.32

PLANETOCENTRIC CONIC

C3 10.698 VHL 3.271 CLA 21.25 RAL 25.27 RAD 6567.4 VEL 11.493 PTH 2.00 VHP 4.763 DPA 28.93 RAP 28.79 ECC 1.1761  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 39 37 2807.65 -28.21 82.38 243.72 92.53 4 26 24 2207.6 -27.56 73.78  
 90.00 21 46 18 3987.57 -6.77 160.08 238.76 62.44 22 52 46 3387.6 -10.41 153.29  
 100.00 5 15 25 2498.70 -29.58 59.56 243.63 94.50 5 57 4 1898.7 -28.64 50.88  
 100.00 22 53 10 3771.75 -5.56 143.56 238.10 60.58 23 56 2 3171.8 -9.44 136.92  
 110.00 6 54 9 2189.82 -32.98 35.61 243.14 99.56 7 30 39 1589.8 -31.30 26.78  
 110.00 23 30 56 3653.40 -2.65 132.78 236.30 55.91 24 31 49 3053.4 -7.11 126.53

DIFFERENTIAL CORRECTIONS

TDE -.5109 TRA -.9777 TC3 1.1272 BAU .1970  
 RDE -.3007 RRA -.3042 RC3 .7912 FAU .08187  
 FDE 1.5728 FRA 2.6025 FC3-6.6252 BSP 7850  
 BOE .5929 BRA 1.0240 BC3 1.3772 FSP -1857

MID-COURSE EXECUTION ACCURACY

SGT 2175.0 SGR 934.0 SG3 612.8  
 RRT .9381 RRF -.9800 RTF -.9506  
 SGB 2365.3 R23 -.2044 R13 -.9627  
 SG1 2346.2 SG2 299.7 THA 22.34

ORBIT DETERMINATION ACCURACY

ST 1051.4 SR 554.2 SS 1285.8  
 CRT .9720 CRS .9847 CST .9978  
 LSA 1747.0 MSA 116.3 SSA 16.1  
 EL1 1182.9 EL2 115.8 ALF 27.41

LAUNCH DATE DEC 26 1968

FLIGHT TIME 136.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 360.215

RL 147.12 LAL .00 LOL 94.29 VL 27.498 GAL 2.77 AZL 89.12 MCA 156.09 SMA 126.64 ECC .16864 INC .8774 V1 30.282  
 RP 108.57 LAP .36 LOP 250.39 VP 37.375 GAP -5.21 AZP 90.80 TAL 166.12 TAP 322.21 RCA 105.28 APO 147.99 V2 34.906  
 RC 61.981 GL 7.61 GP 21.42 ZAL 63.86 ZAP 38.12 ETS 332.83 ZAE 149.73 ETE 35.23 ZAC 121.46 ETC 149.49 CLP -32.32

PLANETOCENTRIC CONIC

C3 10.082 VHL 3.175 CLA 18.83 RAL 25.77 RAD 6567.4 VEL 11.466 PTH 1.99 VHP 4.577 DPA 31.97 RAP 27.43 ECC 1.1659  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 9 15 2693.58 -27.59 74.10 242.39 96.64 4 54 8 2093.6 -26.38 65.64  
 90.00 21 20 35 4077.72 -3.90 165.15 237.77 61.93 22 28 33 3477.7 -7.62 158.45  
 100.00 5 42 4 2394.25 -28.78 51.90 242.21 98.46 6 21 58 1794.3 -27.31 43.41  
 100.00 22 30 27 3852.28 -2.85 148.00 237.19 60.23 23 34 39 3252.3 -6.79 141.43  
 110.00 7 15 14 2102.76 -31.80 29.09 241.54 103.25 7 50 17 1502.8 -29.65 20.54  
 110.00 23 13 46 3716.54 -.24 136.08 235.56 55.82 24 15 43 3116.5 -4.72 129.86

DIFFERENTIAL CORRECTIONS

TDE -.4604 TRA -.9442 TC3 1.1720 BAU .2122  
 RDE -.3070 RRA -.3817 RC3 1.0512 FAU .08747  
 FDE 1.5093 FRA 2.8029 FC3-7.5111 BSP 7934  
 BOE .5534 BRA 1.0184 BC3 1.5743 FSP -2015

MID-COURSE EXECUTION ACCURACY

SGT 2117.8 SGR 1132.3 SG3 662.1  
 RRT .9454 RRF -.9890 RTF -.9509  
 SGB 2401.5 R23 -.2076 R13 -.9682  
 SG1 2378.9 SG2 328.4 THA 27.38

ORBIT DETERMINATION ACCURACY

ST 991.2 SR 595.8 SS 1251.0  
 CRT .9798 CRS .9877 CST .9988  
 LSA 1700.5 MSA 102.7 SSA 17.0  
 EL1 1152.0 EL2 102.5 ALF 30.77

LAUNCH DATE DEC 26 1968

FLIGHT TIME 138.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 366.746

RL 147.12 LAL .00 LOL 94.29 VL 27.542 GAL 2.66 AZL 89.53 MCA 159.27 SMA 126.93 ECC .16558 INC .4733 V1 30.282  
 RP 108.60 LAP .17 LOP 253.57 VP 37.396 GAP -4.70 AZP 90.44 TAL 166.37 TAP 325.64 RCA 105.91 APO 147.94 V2 34.894  
 RC 64.032 GL 4.22 GP 25.54 ZAL 64.10 ZAP 42.72 ETS 331.74 ZAE 147.67 ETE 42.37 ZAC 119.14 ETC 147.58 CLP -35.49

PLANETOCENTRIC CONIC

C3 9.552 VHL 3.091 CLA 15.52 RAL 26.63 RAD 6567.3 VEL 11.443 PTH 1.98 VHP 4.444 DPA 35.70 RAP 25.31 ECC 1.1572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 45 36 2557.31 -26.14 64.39 241.23 101.29 5 28 13 1957.3 -24.32 56.20  
 90.00 20 51 7 4192.62 -.20 171.57 237.28 61.68 22 0 59 3592.6 -3.98 164.93  
 100.00 6 15 28 2267.51 -27.17 42.83 240.98 102.97 6 53 15 1667.5 -25.11 34.63  
 100.00 22 3 56 3957.65 .72 153.78 236.76 60.12 23 9 54 3357.6 -3.26 147.26  
 110.00 7 42 40 1994.67 -29.85 21.28 240.15 107.49 8 15 54 1394.7 -27.17 13.12  
 110.00 22 53 14 3803.25 3.07 140.60 235.30 55.94 23 56 37 3203.2 -1.42 134.40

DIFFERENTIAL CORRECTIONS

TDE -.4000 TRA -.9092 TC3 1.1918 BAU .2341  
 RDE -.3064 RRA -.4863 RC3 1.3926 FAU .09187  
 FDE 1.3525 FRA 2.9958 FC3-8.3258 BSP 8139  
 BOE .5039 BRA 1.0311 BC3 1.8330 FSP -2152

MID-COURSE EXECUTION ACCURACY

SGT 2037.7 SGR 1392.5 SG3 701.9  
 RRT .9487 RRF -.9943 RTF -.9504  
 SGB 2468.1 R23 -.1960 R13 -.9750  
 SG1 2440.5 SG2 367.6 THA 33.83

ORBIT DETERMINATION ACCURACY

ST 908.7 SR 634.1 SS 1170.9  
 CRT .9876 CRS .9895 CST .9996  
 LSA 1609.6 MSA 87.2 SSA 18.8  
 EL1 1105.0 EL2 81.8 ALF 34.79

LAUNCH DATE DEC 26 1968

FLIGHT TIME 140.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 373.255

RL 147.12 LAL .00 LOL 94.29 VL 27.580 GAL 2.57 AZL 90.07 MCA 162.45 SMA 127.19 ECC .16289 INC .0622 V1 30.282  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.414 GAP -4.21 AZP 89.94 TAL 166.59 TAP 329.04 RCA 106.47 APO 147.90 V2 34.883  
 RC 66.131 GL -.62 GP 30.85 ZAL 64.42 ZAP 48.02 ETS 330.52 ZAE 144.45 ETE 50.13 ZAC 115.88 ETC 145.59 CLP -38.82

PLANETOCENTRIC CONIC

C3 9.160 VHL 3.026 CLA 10.85 RAL 28.01 RAD 6567.3 VEL 11.426 PTH 1.98 VHP 4.390 DPA 40.37 RAP 22.10 ECC 1.1507  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 31 43 2388.32 -23.37 52.80 240.49 106.46 6 11 32 1788.3 -20.89 45.00  
 90.00 20 16 3 4345.23 4.71 180.10 237.65 62.05 21 28 28 3745.2 .93 173.45  
 100.00 6 58 29 2108.47 -24.27 31.91 240.18 108.01 7 33 38 1508.5 -21.58 24.14  
 100.00 21 31 58 4100.32 5.53 161.64 237.20 60.58 22 40 18 3500.3 1.57 155.09  
 110.00 8 19 3 1856.40 -26.64 11.81 239.22 112.26 8 49 59 1256.4 -23.38 4.16  
 110.00 22 27 54 3925.15 7.69 147.02 235.88 56.59 23 33 19 3325.2 3.24 140.76

DIFFERENTIAL CORRECTIONS

TDE -.3279 TRA -.8692 TC3 1.1785 BAU .2667  
 RDE -.2856 RRA -.6296 RC3 1.8311 FAU .09371  
 FDE 1.0611 FRA 3.1386 FC3-8.8569 BSP 8601  
 BOE .4348 BRA 1.0733 BC3 2.1776 FSP -2243

MID-COURSE EXECUTION ACCURACY

SGT 1924.0 SGR 1730.2 SG3 719.7  
 RRT .9492 RRF -.9971 RTF -.9490  
 SGB 2387.5 R23 -.1682 R13 -.9829  
 SG1 2554.8 SG2 410.1 THA 41.80

ORBIT DETERMINATION ACCURACY

ST 799.0 SR 652.7 SS 1028.7  
 CRT .9958 CRS .9899 CST .9980  
 LSA 1454.7 MSA 78.9 SSA 19.5  
 EL1 1030.7 EL2 46.1 ALF 39.22

LAUNCH DATE DEC 26 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 17 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.614 GAL 2.49 AZL 90.84 MCA 165.62 SMA 127.41 ECC .16053 INC .8384 V1 30.282  
 RP 108.67 LAP -.21 LOP 259.91 VP 37.429 GAP -3.72 AZP 89.19 TAL 166.79 TAP 332.40 RCA 106.96 APO 147.87 V2 34.873  
 RC 68.274 GL -7.72 GP 37.74 ZAL 65.03 ZAP 54.18 ETS 329.29 ZAE 139.49 ETE 57.98 ZAC 111.42 ETC 143.66 CLP -42.26

DISTANCE 379.739

PLANETOCENTRIC CONIC

C3 9.051 VHL 3.008 DLA 4.07 RAL 30.17 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 4.471 DPA 46.27 RAP 17.19 ECC 1.1490  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 33 12 2168.83 -18.43 38.61 240.79 111.88 7 9 21 1568.8 -15.30 31.33  
 90.00 19 31 46 4560.11 11.39 192.35 239.71 63.90 20 47 46 3960.1 7.79 185.52  
 100.00 7 56 27 1900.31 -19.24 18.50 240.44 113.33 8 28 8 1300.3 -15.92 11.28  
 100.00 20 51 12 4303.86 12.17 173.11 239.30 62.48 22 2 56 3703.9 8.39 166.36  
 110.00 9 9 4 1673.04 -21.38 .17 239.36 117.33 9 36 57 1073.0 -17.55 353.13  
 110.00 21 55 4 4103.90 14.23 156.74 238.11 58.59 23 3 28 3503.9 9.97 150.23

DIFFERENTIAL CORRECTIONS

TDE -.2487 TRA -.8261 TC3 1.1055 BAU .3131  
 RDE -.2205 RRA -.8322 RC3 2.3395 FAU .09058  
 FDE .6148 FRA 3.1715 FC3 -8.6642 BSP 9418  
 BDE .3324 BRA 1.1726 BC3 2.5876 FSP -2224

MID-COURSE EXECUTION ACCURACY

SGT 1776.0 SGR 2163.9 SG3 697.7  
 RRT .9475 RRF -.9987 RTF -.9463  
 SGB 2799.4 R23 -.1290 R13 -.9903  
 SG1 2763.9 SG2 444.8 THA 50.93

ORBIT DETERMINATION ACCURACY

ST 669.7 SR 636.7 SS 837.0  
 CRT .9973 CRS .9888 CST .9765  
 LSA 1241.1 MSA 118.5 SSA 12.1  
 EL1 923.5 EL2 33.8 ALF 43.55

LAUNCH DATE DEC 26 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 19 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.643 GAL 2.43 AZL 92.04 MCA 168.78 SMA 127.61 ECC .15852 INC 2.0350 V1 30.282  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.442 GAP -3.26 AZP 88.00 TAL 166.92 TAP 335.70 RCA 107.38 APO 147.84 V2 34.862  
 RC 70.456 GL -18.36 GP 46.69 ZAL 66.48 ZAP 61.31 ETS 328.22 ZAE 132.08 ETE 65.15 ZAC 105.49 ETC 141.96 CLP -45.59

DISTANCE 386.214

PLANETOCENTRIC CONIC

C3 9.693 VHL 3.113 DLA -6.03 RAL 33.55 RAD 6567.3 VEL 11.449 PTH 1.99 VHP 4.806 DPA 53.63 RAP 9.24 ECC 1.1595  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 2 3 1867.84 -9.93 20.61 243.81 116.66 8 33 11 1267.8 -6.27 13.84  
 90.00 18 29 52 4887.83 20.27 212.29 245.50 69.79 19 51 20 4287.8 17.33 204.85  
 100.00 9 20 32 1614.67 -10.73 1.57 243.39 118.07 9 47 27 1014.7 -6.89 354.88  
 100.00 19 54 4 4616.24 21.11 191.97 245.15 68.33 21 11 0 4016.2 17.98 184.58  
 110.00 10 22 14 1421.49 -12.86 345.66 242.13 121.95 10 45 55 821.5 -8.54 339.21  
 110.00 21 8 52 4382.17 23.36 173.14 244.09 64.30 22 21 54 3782.2 19.71 165.90

DIFFERENTIAL CORRECTIONS

TDE -.3025 TRA -.9095 TC3 .3649 BAU .2999  
 RDE -.1745 RRA -1.2479 RC3 2.2851 FAU .06555  
 FDE .3449 FRA 3.3100 FC3 -5.8547 BSP 6828  
 BDE .3492 BRA 1.5442 BC3 2.3141 FSP -1405

MID-COURSE EXECUTION ACCURACY

SGT 1787.3 SGR 2731.4 SG3 618.3  
 RRT .8990 RRF -.9995 RTF -.8984  
 SGB 3264.2 R23 -.1301 R13 -.9910  
 SG1 3194.9 SG2 669.1 THA 57.96

ORBIT DETERMINATION ACCURACY

ST 751.6 SR 764.8 SS 808.6  
 CRT .9201 CRS .9949 CST .8759  
 LSA 1312.3 MSA 285.7 SSA 5.0  
 EL1 1050.7 EL2 214.3 ALF 45.54

LAUNCH DATE DEC 26 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 21 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.669 GAL 2.38 AZL 94.15 MCA 171.94 SMA 127.78 ECC .15678 INC 4.1520 V1 30.282  
 RP 108.73 LAP -.58 LOP 266.25 VP 37.451 GAP -2.81 AZP 85.89 TAL 167.04 TAP 338.98 RCA 107.75 APO 147.82 V2 34.853  
 RC 72.672 GL -33.97 GP 58.26 ZAL 70.13 ZAP 69.46 ETS 327.50 ZAE 121.57 ETE 70.91 ZAC 97.87 ETC 140.76 CLP -48.17

DISTANCE 392.628

PLANETOCENTRIC CONIC

C3 12.832 VHL 3.582 DLA -20.81 RAL 38.76 RAD 6567.5 VEL 11.585 PTH 2.03 VHP 5.708 DPA 62.33 RAP 354.69 ECC 1.2112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 36 43 1401.09 4.94 354.37 254.40 117.92 11 0 5 801.1 8.64 347.64  
 90.00 16 36 48 5470.22 28.26 252.69 259.99 88.15 18 7 58 4870.2 27.70 244.07  
 100.00 11 44 13 1183.27 3.69 337.67 253.71 119.68 12 3 56 583.3 7.62 331.08  
 100.00 18 11 59 5163.28 29.68 230.03 259.91 86.29 19 38 3 4563.3 28.85 221.33  
 110.00 12 23 6 1061.42 .66 326.54 251.82 124.18 12 40 47 461.4 5.14 320.32  
 110.00 19 49 36 4857.90 33.23 206.39 259.46 81.49 21 10 34 4257.9 31.70 197.50

DIFFERENTIAL CORRECTIONS

TDE -.1603 TRA -.7954 TC3 .4707 BAU .4115  
 RDE .2259 RRA -1.6497 RC3 2.3520 FAU .05355  
 FDE -.4059 FRA 2.6179 FC3 -3.6127 BSP 11171  
 BDE .2770 BRA 1.8315 BC3 2.3986 FSP -1396

MID-COURSE EXECUTION ACCURACY

SGT 1425.4 SGR 3307.4 SG3 450.5  
 RRT .9158 RRF -.9998 RTF -.9153  
 SGB 3601.5 R23 -.0611 R13 -.9979  
 SG1 3562.1 SG2 531.5 THA 67.94

ORBIT DETERMINATION ACCURACY

ST 482.2 SR 922.1 SS 737.0  
 CRT .5704 CRS .9989 CST .5315  
 LSA 1213.8 MSA 390.8 SSA 1.9  
 EL1 970.1 EL2 376.5 ALF 70.30

LAUNCH DATE DEC 26 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 23 1969

MELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.690 GAL 2.34 AZL 98.94 MCA 175.07 SMA 127.93 ECC .15537 INC 8.9451 V1 30.282  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.459 GAP -2.38 AZP 81.09 TAL 167.08 TAP 342.15 RCA 108.05 APO 147.81 V2 34.844  
 RC 74.919 GL -53.46 GP 72.90 ZAL 77.01 ZAP 78.09 ETS 325.48 ZAE 107.20 ETE 72.70 ZAC 88.80 ETC 138.62 CLP -45.40

DISTANCE 399.006

PLANETOCENTRIC CONIC

C3 28.665 VHL 5.354 DLA -39.17 RAL 46.58 RAD 6568.2 VEL 12.249 PTH 2.20 VHP 8.288 DPA 70.54 RAP 323.00 ECC 1.4717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.72 10 54 3 1587.53 23.47 19.21 284.36 122.30 11 20 31 987.5 27.56 12.00  
 118.28 17 21 50 5661.35 23.48 264.99 284.37 122.30 18 56 11 5061.3 27.57 257.78  
 61.72 10 54 3 1587.53 23.47 19.21 284.36 122.30 11 20 31 987.5 27.56 12.00  
 118.28 17 21 50 5661.35 23.48 264.99 284.37 122.30 18 56 11 5061.3 27.57 257.78  
 61.72 10 54 3 1587.53 23.47 19.21 284.36 122.30 11 20 31 987.5 27.56 12.00  
 118.28 17 21 50 5661.35 23.48 264.99 284.37 122.30 18 56 11 5061.3 27.57 257.78

DIFFERENTIAL CORRECTIONS

TDE -.1896 TRA -.9252 TC3 .1609 BAU .4093  
 RDE .8689 RRA -2.5777 RC3 1.0559 FAU .02401  
 FDE -.6185 FRA 1.8933 FC3 -.7250 BSP 12772  
 BDE .8894 BRA 2.7387 BC3 1.0681 FSP -776

MID-COURSE EXECUTION ACCURACY

SGT 1304.5 SGR 3847.4 SG3 242.4  
 RRT .9065 RRF -.9998 RTF -.9118  
 SGB 4062.6 R23 -.0280 R13 -.9995  
 SG1 4028.4 SG2 525.9 THA 72.61

ORBIT DETERMINATION ACCURACY

ST 433.5 SR 1416.1 SS 734.9  
 CRT .3591 CRS .9999 CST .3735  
 LSA 1603.6 MSA 402.2 SSA .9  
 EL1 1425.3 EL2 402.0 ALF 83.18

LAUNCH DATE DEC 26 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 25 1969

MELIOCENTRIC CONIC

DISTANCE 405.195

RL 147.12 LAL .00 LOL 94.29 VL 27.708 GAL 2.36 AZL 119.06 MCA 178.05 SMA 128.05 ECC .15437 INC29.0628 V1 30.282  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.464 GAP -2.00 AZP 60.95 TAL 166.91 TAP 344.96 RCA 108.29 APO 147.82 V2 34.835  
 RC 77.194 GL -65.24 GP 80.06 ZAL 85.31 ZAP 85.90 ETS 208.43 ZAE 84.15 ETE 316.94 ZAC 78.91 ETC 23.66 CLP 65.51

PLANETOCENTRIC CONIC

C3 219.341 VHL 14.810 DLA -52.04 RAL 49.00 RAD 6571.3 VEL 18.457 PTH 3.04 VHP 20.317 DPA 68.67 RAP 253.53 ECC 4.6098  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.32 9 57 41 2203.98 6.94 59.94 313.54 141.71 10 34 25 1604.0 13.19 55.28  
 135.68 18 37 33 646.22 6.96 296.15 313.56 141.71 18 48 19 46.2 13.20 291.48  
 44.32 9 57 41 2203.98 6.94 59.94 313.54 141.71 10 34 25 1604.0 13.19 55.28  
 135.68 18 37 33 646.22 6.96 296.15 313.56 141.71 18 48 19 46.2 13.20 291.48  
 44.32 9 57 41 2203.98 6.94 59.94 313.54 141.71 10 34 25 1604.0 13.19 55.28  
 135.68 18 37 33 646.22 6.96 296.15 313.56 141.71 18 48 19 46.2 13.20 291.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2968 TRA -3.6431 TC3 -.1096 BAU .4819 SGT 2642.5 SGR 3390.7 SG3 89.2 ST 1448.9 SR 1051.2 SS 714.6  
 RDE -.7763 RRA 5.3385 RC3 .1224 FAU -.01097 RRT -.9146 RRF .9825 RTF -.9738 CRT -.7062 CRS -.8922 CST .9498  
 FDE -.7235 FRA 1.5662 FC3 .0433 BSP 12309 SGB 4298.9 R23 .0327 R13 .9994 LSA 1815.3 MSA 647.8 SSA .5  
 BDE 3.3869 BRA 6.4631 BC3 .1643 FSP -264 SG1 4212.0 SG2 860.0 THA 127.30 EL1 1669.5 EL2 646.0 ALF 147.40

LAUNCH DATE DEC 26 1968

FLIGHT TIME 152.00

ARRIVAL DATE MAY 27 1969

MELIOCENTRIC CONIC

DISTANCE 412.289

RL 147.12 LAL .00 LOL 94.29 VL 27.723 GAL 2.21 AZL 52.35 MCA 181.84 SMA 128.15 ECC .15285 INC37.6521 V1 30.282  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.467 GAP -1.39 AZP 127.64 TAL 167.60 TAP 349.45 RCA 108.57 APO 147.74 V2 34.827  
 RC 79.493 GL 63.53 GP -79.12 ZAL 86.55 ZAP 87.21 ETS 164.26 ZAE 79.48 ETE 57.24 ZAC 104.82 ETC 357.21 CLP 75.07

PLANETOCENTRIC CONIC

C3 357.384 VHL 18.905 DLA 59.13 RAL 328.16 RAD 6572.0 VEL 21.879 PTH 3.23 VHP 21.569 DPA -60.67 RAP 119.68 ECC 6.8816  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.65 16 9 9 4959.53 -4.00 237.55 235.78 30.96 17 31 49 4359.5 -10.84 233.79  
 144.35 1 41 6 3301.31 -3.99 102.07 235.76 30.95 2 36 7 2701.3 -10.83 98.30  
 35.65 16 9 9 4959.53 -4.00 237.55 235.78 30.96 17 31 49 4359.5 -10.84 233.79  
 144.35 1 41 6 3301.31 -3.99 102.07 235.76 30.95 2 36 7 2701.3 -10.83 98.30  
 35.65 16 9 9 4959.53 -4.00 237.55 235.78 30.96 17 31 49 4359.5 -10.84 233.79  
 144.35 1 41 6 3301.31 -3.99 102.07 235.76 30.95 2 36 7 2701.3 -10.83 98.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -4.9923 TRA 2.0314 TC3 -.1287 BAU 1.1530 SGT 1991.4 SGR 3903.9 SG3 85.6 ST 1555.4 SR 3755.4 SS 1731.4  
 RD -12.3671 RRA 1.3071 RC3 -.2041 FAU -.02238 RRT .8969 RRF -.9950 RTF -.9364 CRT .9853 CRS -.9995 CST .9903  
 FDE 3.0520 FRA -1.4920 FC3 .0542 BSP 12793 SGB 4382.5 R23 .0113 R13 -.9999 LSA 4411.3 MSA 246.5 SSA .5  
 BDE 13.3367 BRA 2.4156 BC3 .2413 FSP -263 SG1 4309.3 SG2 797.7 THA 64.48 EL1 4057.3 EL2 246.2 ALF 67.71

LAUNCH DATE DEC 26 1968

FLIGHT TIME 154.00

ARRIVAL DATE MAY 29 1969

MELIOCENTRIC CONIC

DISTANCE 418.417

RL 147.12 LAL .00 LOL 94.29 VL 27.734 GAL 2.25 AZL 74.26 MCA 184.80 SMA 128.23 ECC .15235 INC15.7361 V1 30.282  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.469 GAP -1.04 AZP 105.68 TAL 167.31 TAP 352.12 RCA 108.70 APO 147.77 V2 34.820  
 RC 81.813 GL 63.24 GP -76.69 ZAL 82.08 ZAP 84.47 ETS 37.03 ZAE 102.12 ETE 293.37 ZAC 112.18 ETC 227.65 CLP -65.23

PLANETOCENTRIC CONIC

C3 70.856 VHL 8.418 DLA 62.45 RAL 334.40 RAD 6569.4 VEL 13.864 PTH 2.53 VHP 8.364 DPA -57.51 RAP 75.42 ECC 2.1661  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.69 16 24 12 4696.13 -20.96 231.98 232.89 29.69 17 42 29 4096.1 -27.85 227.93  
 148.31 2 15 51 3002.46 -20.96 91.71 232.87 29.69 3 5 54 2402.5 -27.84 87.66  
 31.69 16 24 12 4696.13 -20.96 231.98 232.89 29.69 17 42 29 4096.1 -27.85 227.93  
 148.31 2 15 51 3002.46 -20.96 91.71 232.87 29.69 3 5 54 2402.5 -27.84 87.66  
 31.69 16 24 12 4696.13 -20.96 231.98 232.89 29.69 17 42 29 4096.1 -27.85 227.93  
 148.31 2 15 51 3002.46 -20.96 91.71 232.87 29.69 3 5 54 2402.5 -27.84 87.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.3598 TRA -.1280 TC3 .0283 BAU .2340 SGT 945.8 SGR 4339.0 SG3 238.0 ST 927.3 SR 4209.9 SS 1942.7  
 RDE 6.1687 RRA -.6881 RC3 -.2453 FAU .01484 RRT -.9054 RRF .9992 RTF -.9201 CRT -.9911 CRS -.9999 CST .9927  
 FDE 3.9423 FRA -.3665 FC3 -.1814 BSP 13460 SGB 4440.8 R23 .0188 R13 .9996 LSA 4726.8 MSA 120.8 SSA 1.1  
 BDE 6.3168 BRA .6999 BC3 .2470 FSP -762 SG1 4423.3 SG2 393.9 THA 101.25 EL1 4309.1 EL2 120.3 ALF 102.33

LAUNCH DATE DEC 26 1968

FLIGHT TIME 156.00

ARRIVAL DATE MAY 31 1969

MELIOCENTRIC CONIC

DISTANCE 424.708

RL 147.12 LAL .00 LOL 94.29 VL 27.743 GAL 2.27 AZL 79.26 MCA 187.92 SMA 128.29 ECC .15192 INC10.7419 V1 30.282  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.469 GAP -.65 AZP 100.64 TAL 167.16 TAP 355.08 RCA 108.80 APO 147.78 V2 34.813  
 RC 84.153 GL 57.72 GP -64.22 ZAL 78.97 ZAP 84.37 ETS 17.18 ZAE 115.03 ETE 275.61 ZAC 115.51 ETC 206.61 CLP -76.95

PLANETOCENTRIC CONIC

C3 37.346 VHL 6.111 DLA 60.05 RAL 345.25 RAD 6568.5 VEL 12.598 PTH 2.29 VHP 5.490 DPA -49.86 RAP 58.04 ECC 1.6146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.55 17 14 32 4523.39 -29.45 223.47 236.28 34.99 18 29 57 3925.4 -35.89 218.24  
 145.45 2 52 6 2856.68 -29.44 86.63 236.26 34.98 3 39 42 2256.7 -35.88 81.40  
 34.55 17 14 32 4523.39 -29.45 223.47 236.28 34.99 18 29 57 3925.4 -35.89 218.24  
 145.45 2 52 6 2856.68 -29.44 86.63 236.26 34.98 3 39 42 2256.7 -35.88 81.40  
 34.55 17 14 32 4523.39 -29.45 223.47 236.28 34.99 18 29 57 3925.4 -35.89 218.24  
 145.45 2 52 6 2856.68 -29.44 86.63 236.26 34.98 3 39 42 2256.7 -35.88 81.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3363 TRA -.2954 TC3 -.0977 BAU .3827 SGT 649.2 SGR 4177.8 SG3 478.5 ST 356.6 SR 4072.0 SS 2545.6  
 RDE 4.3429 RRA -.0565 RC3 -.7603 FAU .04826 RRT .5360 RRF .9993 RTF .5143 CRT .8880 CRS -1.0000 CST -.8841  
 FDE 5.7235 FRA .0060 FC3 -1.1187 BSP 13193 SGB 4227.9 R23 .0362 R13 .9990 LSA 4812.6 MSA 165.4 SSA 1.9  
 BDE 4.3559 BRA .3008 BC3 .7665 FSP -1577 SG1 4192.5 SG2 546.2 THA 85.16 EL1 4084.3 EL2 163.5 ALF 85.55



LAUNCH DATE DEC 26 1968

FLIGHT TIME 158.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.749 GAL 2.30 AZL 81.43 MCA 191.07 SMA 128.33 ECC .15170 INC 8.5668 V1 30.282
RP 108.87 LAP -1.64 LOP 285.24 VP 37.468 GAP -.26 AZP 98.41 TAL 166.98 TAP 358.05 RCA 108.86 APO 147.80 V2 34.807
RC 86.508 GL 53.11 GP -54.77 ZAL 76.76 ZAP 86.42 ETS 8.72 ZAE 124.54 ETE 267.49 ZAC 116.54 ETC 196.99 CLP -83.78

DISTANCE 431.007

PLANETOCENTRIC CONIC

C3 26.665 VHL 5.164 DLA 57.26 RAL 352.50 RAD 6568.1 VEL 12.167 PTH 2.18 VHP 4.346 DPA -43.24 RAP 47.85 ECC 1.4388
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.90 17 52 7 4424.09 -32.99 216.04 237.85 40.14 19 5 51 3824.1 -38.93 209.84
142.10 3 12 16 2788.77 -32.98 83.42 237.83 40.14 3 58 45 2188.8 -38.92 77.22
37.90 17 52 7 4424.09 -32.99 216.04 237.85 40.14 19 5 51 3824.1 -38.93 209.84
142.10 3 12 16 2788.77 -32.98 83.42 237.83 40.14 3 58 45 2188.8 -38.92 77.22
37.90 17 52 7 4424.09 -32.99 216.04 237.85 40.14 19 5 51 3824.1 -38.93 209.84
142.10 3 12 16 2788.77 -32.98 83.42 237.83 40.14 3 58 45 2188.8 -38.92 77.22

DIFFERENTIAL CORRECTIONS

TDE .8008 TRA -.2376 TC3 -.3280 BAU .4059
RDE 3.2708 RRA .2099 RC3-1.0904 FAU .08133
FDE 7.1577 FRA .5690 FC3-2.6406 BSP 12312
BOE 3.3674 BRA .3170 BC3 1.1387 FSP -2414

MID-COURSE EXECUTION ACCURACY

SGT 1068.7 SGR 3824.2 SG3 732.5
RRT .8311 RRF .9992 RTF .8181
SG8 3970.7 R23 .0572 R13 .9979
SG1 3928.3 SG2 578.6 THA 76.63

ORBIT DETERMINATION ACCURACY

ST 900.6 SR 3631.6 SS 2984.9
CRT .9803 CRS-1.0000 CST -.9786
LSA 4783.0 MSA 178.8 SSA 2.5
EL1 3737.6 EL2 172.7 ALF 76.31

LAUNCH DATE DEC 26 1968

FLIGHT TIME 160.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.752 GAL 2.33 AZL 82.65 MCA 194.22 SMA 128.35 ECC .15167 INC 7.3469 V1 30.282
RP 108.89 LAP -1.80 LOP 288.41 VP 37.465 GAP .13 AZP 97.12 TAL 166.76 TAP .98 RCA 108.89 APO 147.82 V2 -34.802
RC 88.877 GL 49.50 GP -47.28 ZAL 75.08 ZAP 89.89 ETS 2.94 ZAE 131.66 ETE 259.93 ZAC 116.09 ETC 190.11 CLP -89.84

DISTANCE 437.296

PLANETOCENTRIC CONIC

C3 21.747 VHL 4.663 DLA 54.83 RAL 357.41 RAD 6567.9 VEL 11.964 PTH 2.13 VHP 3.775 DPA -37.86 RAP 40.58 ECC 1.3579
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
40.86 18 19 53 4357.36 -34.41 210.08 238.57 44.28 19 32 30 3757.4 -39.93 203.22
139.14 3 23 43 2755.60 -34.40 81.41 238.55 44.27 4 9 39 2155.6 -39.92 74.55
40.86 18 19 53 4357.36 -34.41 210.08 238.57 44.28 19 32 30 3757.4 -39.93 203.22
139.14 3 23 43 2755.60 -34.40 81.41 238.55 44.27 4 9 39 2155.6 -39.92 74.55
40.86 18 19 53 4357.36 -34.41 210.08 238.57 44.28 19 32 30 3757.4 -39.93 203.22
139.14 3 23 43 2755.60 -34.40 81.41 238.55 44.27 4 9 39 2155.6 -39.92 74.55

DIFFERENTIAL CORRECTIONS

TDE 1.0845 TRA -.1478 TC3 -.6184 BAU .4052
RDE 2.5732 RRA .3307 RC3-1.2491 FAU .10948
FDE 8.0853 FRA 1.1890 FC3-4.3583 BSP 11443
BOE 2.7924 BRA .3622 BC3 1.3938 FSP -3133

MID-COURSE EXECUTION ACCURACY

SGT 1485.8 SGR 3442.4 SG3 952.9
RRT .9115 RRF .9991 RTF .9020
SG8 3749.4 R23 .0828 R13 .9959
SG1 3706.2 SG2 567.6 THA 67.98

ORBIT DETERMINATION ACCURACY

ST 1335.9 SR 3168.8 SS 3249.8
CRT .9905 CRS-1.0000 CST -.9892
LSA 4727.9 MSA 183.6 SSA 3.0
EL1 3434.7 EL2 169.2 ALF 67.28

LAUNCH DATE DEC 26 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.753 GAL 2.38 AZL 83.44 MCA 197.38 SMA 128.36 ECC .15184 INC 6.5630 V1 30.282
RP 108.90 LAP -1.96 LOP 291.57 VP 37.462 GAP .51 AZP 96.27 TAL 166.49 TAP 3.87 RCA 108.87 APO 147.85 V2 34.797
RC 91.256 GL 46.61 GP -41.19 ZAL 73.70 ZAP 94.21 ETS 358.64 ZAE 136.81 ETE 251.84 ZAC 114.76 ETC 184.86 CLP -95.60

DISTANCE 443.569

PLANETOCENTRIC CONIC

C3 19.023 VHL 4.361 DLA 52.82 RAL 1.02 RAD 6567.8 VEL 11.849 PTH 2.10 VHP 3.463 DPA -33.53 RAP 34.83 ECC 1.3131
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.35 18 41 30 4309.69 -34.91 205.37 239.07 47.47 19 53 20 3709.7 -40.08 198.08
136.65 3 30 54 2739.36 -34.90 80.19 239.06 47.46 4 16 33 2139.4 -40.07 72.91
43.35 18 41 30 4309.69 -34.91 205.37 239.07 47.47 19 53 20 3709.7 -40.08 198.08
136.65 3 30 54 2739.36 -34.90 80.19 239.06 47.46 4 16 33 2139.4 -40.07 72.91
43.35 18 41 30 4309.69 -34.91 205.37 239.07 47.47 19 53 20 3709.7 -40.08 198.08
136.65 3 30 54 2739.36 -34.90 80.19 239.06 47.46 4 16 33 2139.4 -40.07 72.91

DIFFERENTIAL CORRECTIONS

TDE 1.3034 TRA -.0461 TC3 -.9435 BAU .4068
RDE 2.0746 RRA .3784 RC3-1.2917 FAU .13144
FDE 8.5430 FRA 1.7620 FC3-5.9822 BSP 10890
BOE 2.4500 BRA .3812 BC3 1.5996 FSP -3708

MID-COURSE EXECUTION ACCURACY

SGT 1902.4 SGR 3061.6 SG3 1119.4
RRT .9462 RRF .9987 RTF .9383
SG8 3604.5 R23 .1100 R13 .9929
SG1 3565.6 SG2 528.5 THA 58.78

ORBIT DETERMINATION ACCURACY

ST 1712.7 SR 2736.6 SS 3376.2
CRT .9942 CRS -.9999 CST -.9929
LSA 4667.6 MSA 184.6 SSA 3.5
EL1 3224.6 EL2 156.5 ALF 58.03

LAUNCH DATE DEC 26 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 94.29 VL 27.752 GAL 2.44 AZL 83.99 MCA 200.54 SMA 128.35 ECC .15219 INC 6.0142 V1 30.282
RP 108.92 LAP -2.11 LOP 294.73 VP 37.457 GAP .89 AZP 95.63 TAL 166.17 TAP 6.71 RCA 108.82 APO 147.89 V2 34.793
RC 93.644 GL 44.23 GP -36.14 ZAL 72.48 ZAP 98.94 ETS 355.41 ZAE 140.26 ETE 243.21 ZAC 112.98 ETC 180.81 CLP -101.10

DISTANCE 449.824

PLANETOCENTRIC CONIC

C3 17.345 VHL 4.165 DLA 51.15 RAL 3.89 RAD 6567.7 VEL 11.778 PTH 2.08 VHP 3.293 DPA -29.98 RAP 30.08 ECC 1.2855
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.45 18 59 20 4273.63 -34.96 201.59 239.62 49.95 20 10 34 3673.6 -39.86 194.03
134.55 3 35 57 2732.30 -34.95 79.50 239.61 49.94 4 21 29 2132.3 -39.85 71.94
45.45 18 59 20 4273.63 -34.96 201.59 239.62 49.95 20 10 34 3673.6 -39.86 194.03
134.55 3 35 57 2732.30 -34.95 79.50 239.61 49.94 4 21 29 2132.3 -39.85 71.94
45.45 18 59 20 4273.63 -34.96 201.59 239.62 49.95 20 10 34 3673.6 -39.86 194.03
134.55 3 35 57 2732.30 -34.95 79.50 239.61 49.94 4 21 29 2132.3 -39.85 71.94

DIFFERENTIAL CORRECTIONS

TDE 1.4864 TRA .0616 TC3-1.2860 BAU .4164
RDE 1.6999 RRA .3889 RC3-1.2533 FAU .14647
FDE 8.6298 FRA 2.2486 FC3-7.3105 BSP 10648
BOE 2.2581 BRA .3938 BC3 1.7958 FSP -4108

MID-COURSE EXECUTION ACCURACY

SGT 2312.4 SGR 2699.3 SG3 1229.0
RRT .9637 RRF .9982 RTF .9566
SG8 3554.3 R23 .1334 R13 .9894
SG1 3522.7 SG2 472.8 THA 49.58

ORBIT DETERMINATION ACCURACY

ST 2045.5 SR 2352.7 SS 3403.8
CRT .9960 CRS -.9999 CST -.9946
LSA 4612.1 MSA 184.2 SSA 4.1
EL1 3114.5 EL2 137.6 ALF 49.01

LAUNCH DATE DEC 26 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 456.061

RL 147.12 LAL .00 LOL 94.29 VL 27.749 GAL 2.52 AZL 84.39 MCA 203.70 SMA 128.33 ECC .15274 INC 5.6064 V1 30.282  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.451 GAP 1.26 AZP 95.14 TAL 165.81 TAP 9.50 RCA 108.73 APO 147.93 V2 34.789  
 RC 96.038 GL 42.21 GP -31.88 ZAL 71.35 ZAP 103.82 ETS 352.96 ZAE 142.26 ETE 234.46 ZAC 111.07 ETC 177.72 CLP-106.34

PLANETOCENTRIC CONIC

C3 16.248 VHL 4.031 DLA 49.75 RAL 6.32 RAD 6567.7 VEL 11.732 PTH 2.07 VHP 3.209 DPA -27.03 RAP 26.08 ECC 1.2674  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.22 19 14 41 4245.36 -34.80 198.53 240.28 51.90 20 25 27 3645.4 -39.47 190.79  
 132.78 3 40 0 2730.54 -34.79 79.16 240.27 51.89 4 25 31 2130.5 -39.46 71.42  
 47.22 19 14 41 4245.36 -34.80 198.53 240.28 51.90 20 25 27 3645.4 -39.47 190.79  
 132.78 3 40 0 2730.54 -34.79 79.16 240.27 51.89 4 25 31 2130.5 -39.46 71.42  
 47.22 19 14 41 4245.36 -34.80 198.53 240.28 51.90 20 25 27 3645.4 -39.47 190.79  
 132.78 3 40 0 2730.54 -34.79 79.16 240.27 51.89 4 25 31 2130.5 -39.46 71.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6440 TRA .1734 TC3-1.6300 BAU .4351 SGT 2708.0 SGR 2366.5 SG3 1288.3 ST 2340.0 SR 2021.3 SS 3365.5  
 RDE 1.4109 RRA .3796 RC3-1.1645 FAU .15506 RRT .9735 RRF .9972 RTF .9668 CRT .9972 CRS -.9998 CST -.9955  
 FDE 8.4516 FRA 2.6369 FC3-8.2618 BSP 10723 SGB 3596.4 R23 .1476 R13 .9864 LSA 4566.6 MSA 183.4 SSA 4.7  
 BDE 2.1664 BRA .4173 BC3 2.0033 FSP -4342 SG1 3572.9 SG2 410.4 THA 41.05 EL1 3090.0 EL2 115.3 ALF 40.81

LAUNCH DATE DEC 26 1968

FLIGHT TIME 168.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 462.279

RL 147.12 LAL .00 LOL 94.29 VL 27.743 GAL 2.60 AZL 84.71 MCA 206.86 SMA 128.30 ECC .15347 INC 5.2898 V1 30.282  
 RP 108.94 LAP -2.39 LOP 301.03 VP 37.445 GAP 1.62 AZP 94.72 TAL 165.39 TAP 12.25 RCA 108.61 APO 147.98 V2 34.787  
 RC 98.436 GL 40.45 GP -28.25 ZAL 70.26 ZAP 108.65 ETS 351.13 ZAE 143.06 ETE 226.11 ZAC 109.20 ETC 175.36 CLP-111.29

PLANETOCENTRIC CONIC

C3 15.509 VHL 3.938 DLA 48.55 RAL 8.49 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 3.184 DPA -24.52 RAP 22.70 ECC 1.2552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.76 19 28 25 4222.60 -34.52 196.00 241.10 53.46 20 38 47 3622.6 -39.01 188.14  
 131.24 3 43 36 2732.18 -34.51 79.07 241.09 53.45 4 29 8 2132.2 -39.00 71.21  
 48.76 19 28 25 4222.60 -34.52 196.00 241.10 53.46 20 38 47 3622.6 -39.01 188.14  
 131.24 3 43 36 2732.18 -34.51 79.07 241.09 53.45 4 29 8 2132.2 -39.00 71.21  
 48.76 19 28 25 4222.60 -34.52 196.00 241.10 53.46 20 38 47 3622.6 -39.01 188.14  
 131.24 3 43 36 2732.18 -34.51 79.07 241.09 53.45 4 29 8 2132.2 -39.00 71.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7804 TRA .2879 TC3-1.9633 BAU .4614 SGT 3082.4 SGR 2066.2 SG3 1305.3 ST 2597.6 SR 1738.3 SS 3281.1  
 RDE 1.1835 RRA .3594 RC3-1.0473 FAU .15816 RRT .9791 RRF .9957 RTF .9730 CRT .9980 CRS -.9997 CST -.9960  
 FDE 8.0896 FRA 2.9264 FC3-8.8286 BSP 11073 SGB 3710.9 R23 .1501 R13 .9844 LSA 4527.8 MSA 182.4 SSA 5.4  
 BDE 2.1379 BRA .4605 BC3 2.2251 FSP -4433 SG1 3694.2 SG2 350.9 THA 33.62 EL1 3124.2 EL2 92.0 ALF 33.77

LAUNCH DATE DEC 26 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 468.477

RL 147.12 LAL .00 LOL 94.29 VL 27.737 GAL 2.70 AZL 84.96 MCA 210.02 SMA 128.25 ECC .15438 INC 5.0354 V1 30.282  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.438 GAP 1.98 AZP 94.36 TAL 164.93 TAP 14.94 RCA 108.45 APO 148.05 V2 34.785  
 RC 100.837 GL 38.88 GP -25.14 ZAL 69.17 ZAP 113.33 ETS 349.76 ZAE 142.97 ETE 218.59 ZAC 107.50 ETC 173.59 CLP-115.94

PLANETOCENTRIC CONIC

C3 15.011 VHL 3.874 DLA 47.52 RAL 10.50 RAD 6567.6 VEL 11.679 PTH 2.05 VHP 3.201 DPA -22.34 RAP 19.88 ECC 1.2470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.10 19 41 3 4203.94 -34.18 193.87 242.07 54.72 20 51 7 3603.9 -38.52 185.94  
 129.90 3 47 2 2736.18 -34.17 79.15 242.06 54.71 4 32 38 2136.2 -38.51 71.22  
 50.10 19 41 3 4203.94 -34.18 193.87 242.07 54.72 20 51 7 3603.9 -38.52 185.94  
 129.90 3 47 2 2736.18 -34.17 79.15 242.06 54.71 4 32 38 2136.2 -38.51 71.22  
 50.10 19 41 3 4203.94 -34.18 193.87 242.07 54.72 20 51 7 3603.9 -38.52 185.94  
 129.90 3 47 2 2736.18 -34.17 79.15 242.06 54.71 4 32 38 2136.2 -38.51 71.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8981 TRA .4046 TC3-2.2764 BAU .4926 SGT 3431.5 SGR 1799.9 SG3 1289.7 ST 2820.0 SR 1499.6 SS 3166.0  
 RDE 1.0031 RRA .3334 RC3 -.9183 FAU .15699 RRT .9821 RRF .9934 RTF .9769 CRT .9986 CRS -.9994 CST -.9963  
 FDE 7.6131 FRA 3.1256 FC3-9.0541 BSP 11629 SGB 3875.0 R23 .1404 R13 .9834 LSA 4493.6 MSA 181.1 SSA 6.1  
 BDE 2.1468 BRA .5243 BC3 2.4546 FSP -4418 SG1 3863.2 SG2 301.4 THA 27.43 EL1 3193.2 EL2 69.3 ALF 27.98

LAUNCH DATE DEC 26 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 474.657

RL 147.12 LAL .00 LOL 94.29 VL 27.728 GAL 2.81 AZL 85.17 MCA 213.17 SMA 128.19 ECC .15547 INC 4.8254 V1 30.282  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.431 GAP 2.34 AZP 94.04 TAL 164.41 TAP 17.59 RCA 108.26 APO 148.12 V2 34.784  
 RC 103.240 GL 37.44 GP -22.47 ZAL 68.08 ZAP 117.77 ETS 348.75 ZAE 142.25 ETE 212.13 ZAC 106.04 ETC 172.26 CLP-120.28

PLANETOCENTRIC CONIC

C3 14.687 VHL 3.832 DLA 46.61 RAL 12.43 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 3.252 DPA -20.43 RAP 17.57 ECC 1.2417  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.29 19 52 57 4188.50 -33.80 192.08 243.18 55.76 21 2 45 3588.5 -38.02 184.10  
 128.71 3 50 29 2741.89 -33.79 79.38 243.18 55.75 4 36 11 2141.9 -38.01 71.40  
 51.29 19 52 57 4188.50 -33.80 192.08 243.18 55.76 21 2 45 3588.5 -38.02 184.10  
 128.71 3 50 29 2741.89 -33.79 79.38 243.18 55.75 4 36 11 2141.9 -38.01 71.40  
 51.29 19 52 57 4188.50 -33.80 192.08 243.18 55.76 21 2 45 3588.5 -38.02 184.10  
 128.71 3 50 29 2741.89 -33.79 79.38 243.18 55.75 4 36 11 2141.9 -38.01 71.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0020 TRA .5252 TC3-2.5587 BAU .5255 SGT 3756.5 SGR 1569.6 SG3 1252.1 ST 3013.2 SR 1302.7 SS 3038.8  
 RDE .8609 RRA .3067 RC3 -.7842 FAU .15205 RRT .9827 RRF .9898 RTF .9795 CRT .9992 CRS -.9990 CST -.9965  
 FDE 7.0914 FRA 3.2628 FC3-8.9623 BSP 12252 SGB 4071.2 R23 .1207 R13 .9831 LSA 4469.7 MSA 180.1 SSA 6.8  
 BDE 2.1793 BRA .6082 BC3 2.6762 FSP -4290 SG1 4062.3 SG2 268.6 THA 22.43 EL1 3282.4 EL2 48.6 ALF 23.37

LAUNCH DATE DEC 26 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 18 1969

MELIOCENTRIC CONIC

DISTANCE 480.817

RL 147.12 LAL .00 LOL 94.29 VL 27.718 GAL 2.94 AZL 85.35 MCA 216.33 SMA 128.12 ECC .15673 INC 4.6481 VI 30.282  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.423 GAP 2.70 AZP 93.75 TAL 163.86 TAP 20.19 RCA 108.04 APO 148.20 V2 34.783  
 RC 105.643 GL 36.10 GP -20.17 ZAL 66.96 ZAP 121.94 ETS 348.02 ZAE 141.15 ETE 206.75 ZAC 104.86 ETC 171.27 CLP-124.31

PLANETOCENTRIC CONIC

C3 14.498 VHL 3.808 DLA 45.79 RAL 14.30 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 3.328 DPA -18.71 RAP 15.72 ECC 1.2386  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.37 20 4 22 4175.56 -33.39 190.53 244.45 56.62 21 13 57 3575.6 -37.51 182.52  
 127.63 3 54 2 2749.06 -33.38 79.73 244.44 56.61 4 39 51 2149.1 -37.50 71.72  
 52.37 20 4 22 4175.56 -33.39 190.53 244.45 56.62 21 13 57 3575.6 -37.51 182.52  
 127.63 3 54 2 2749.06 -33.38 79.73 244.44 56.61 4 39 51 2149.1 -37.50 71.72  
 52.37 20 4 22 4175.56 -33.39 190.53 244.45 56.62 21 13 57 3575.6 -37.51 182.52  
 127.63 3 54 2 2749.06 -33.38 79.73 244.44 56.61 4 39 51 2149.1 -37.50 71.72

DIFFERENTIAL CORRECTIONS

TDE 2.0897 TRA .6463 TC3-2.8138 BAU .5602  
 RDE .7471 RRA .2787 RC3 -.6594 FAU .14545  
 FDE 6.5410 FRA 3.3302 FC3-8.6856 BSP 12992  
 BOE 2.2192 BRA .7038 BC3 2.8901 FSP -4132

MID-COURSE EXECUTION ACCURACY

SGT 4052.8 SGR 1370.3 SG3 1198.1  
 RRT .9814 RRF .9846 RTF .9813  
 SGB 4278.2 R23 .0933 R13 .9833  
 SGI 4270.9 SG2 249.9 THA 18.42

ORBIT DETERMINATION ACCURACY

ST 3172.8 SR 1138.7 SS 2897.8  
 CRT .9996 CRS -.9984 CST -.9965  
 LSA 4441.7 MSA 178.7 SSA 7.5  
 EL1 3370.9 EL2 29.7 ALF 19.74

LAUNCH DATE DEC 26 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 20 1969

MELIOCENTRIC CONIC

DISTANCE 486.957

RL 147.12 LAL .00 LOL 94.29 VL 27.706 GAL 3.07 AZL 85.50 MCA 219.49 SMA 128.04 ECC .15818 INC 4.4955 VI 30.282  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.415 GAP 3.06 AZP 93.47 TAL 163.26 TAP 22.75 RCA 107.79 APO 148.29 V2 34.783  
 RC 108.045 GL 34.83 GP -18.17 ZAL 65.81 ZAP 125.84 ETS 347.49 ZAE 139.83 ETE 202.33 ZAC 103.97 ETC 170.55 CLP-128.04

PLANETOCENTRIC CONIC

C3 14.418 VHL 3.797 DLA 45.05 RAL 16.16 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 3.425 DPA -17.15 RAP 14.30 ECC 1.2373  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.37 20 15 27 4164.77 -32.96 189.19 245.84 57.35 21 24 52 3564.8 -36.99 181.17  
 126.63 3 57 43 2757.39 -32.95 80.17 245.83 57.34 4 43 40 2157.4 -36.98 72.15  
 53.37 20 15 27 4164.77 -32.96 189.19 245.84 57.35 21 24 52 3564.8 -36.99 181.17  
 126.63 3 57 43 2757.39 -32.95 80.17 245.83 57.34 4 43 40 2157.4 -36.98 72.15  
 53.37 20 15 27 4164.77 -32.96 189.19 245.84 57.35 21 24 52 3564.8 -36.99 181.17  
 126.63 3 57 43 2757.39 -32.95 80.17 245.83 57.34 4 43 40 2157.4 -36.98 72.15

DIFFERENTIAL CORRECTIONS

TDE 2.1646 TRA .7699 TC3-3.0362 BAU .5946  
 RDE .6568 RRA .2519 RC3 -.5449 FAU .13756  
 FDE 5.9969 FRA 3.3535 FC3-8.2602 BSP 13752  
 BOE 2.2621 BRA .8101 BC3 3.0847 FSP -3938

MID-COURSE EXECUTION ACCURACY

SGT 4323.2 SGR 1201.3 SG3 1134.9  
 RRT .9775 RRF .9826  
 SGB 4487.0 R23 .0643 R13 .9837  
 SGI 4480.3 SG2 244.7 THA 15.24

ORBIT DETERMINATION ACCURACY

ST 3304.1 SR 1004.2 SS 2752.6  
 CRT .9999 CRS -.9974 CST -.9965  
 LSA 4412.6 MSA 177.3 SSA 8.2  
 EL1 3453.3 EL2 15.8 ALF 16.90

LAUNCH DATE DEC 26 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 22 1969

MELIOCENTRIC CONIC

DISTANCE 493.078

RL 147.12 LAL .00 LOL 94.29 VL 27.694 GAL 3.23 AZL 85.64 MCA 222.65 SMA 127.95 ECC .15980 INC 4.3621 VI 30.282  
 RP 108.94 LAP -2.95 LOP 316.86 VP 37.406 GAP 3.41 AZP 93.21 TAL 162.61 TAP 25.26 RCA 107.51 APO 148.40 V2 34.784  
 RC 110.446 GL 33.61 GP -16.45 ZAL 64.62 ZAP 129.46 ETS 347.11 ZAE 138.44 ETE 198.75 ZAC 103.37 ETC 170.03 CLP-131.50

PLANETOCENTRIC CONIC

C3 14.431 VHL 3.799 DLA 44.36 RAL 18.00 RAD 6567.6 VEL 11.654 PTH 2.05 VHP 3.539 DPA -15.72 RAP 13.25 ECC 1.2375  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.30 20 26 23 4155.63 -32.50 188.01 247.37 57.96 21 35 39 3555.6 -36.47 179.99  
 125.70 4 1 31 2766.95 -32.49 80.70 247.36 57.95 4 47 38 2167.0 -36.46 72.68  
 54.30 20 26 23 4155.63 -32.50 188.01 247.37 57.96 21 35 39 3555.6 -36.47 179.99  
 125.70 4 1 31 2766.95 -32.49 80.70 247.36 57.95 4 47 38 2167.0 -36.46 72.68  
 54.30 20 26 23 4155.63 -32.50 188.01 247.37 57.96 21 35 39 3555.6 -36.47 179.99  
 125.70 4 1 31 2766.95 -32.49 80.70 247.36 57.95 4 47 38 2167.0 -36.46 72.68

DIFFERENTIAL CORRECTIONS

TDE 2.2294 TRA .8975 TC3-3.2216 BAU .6274  
 RDE .5859 RRA .2274 RC3 -.4411 FAU .12873  
 FDE 5.4797 FRA 3.3482 FC3-7.7224 BSP 14486  
 BOE 2.3051 BRA .9258 BC3 3.2517 FSP -3720

MID-COURSE EXECUTION ACCURACY

SGT 4569.7 SGR 1059.8 SG3 1067.4  
 RRT .9704 RRF .9667 RTF .9835  
 SGB 4691.0 R23 .0392 R13 .9841  
 SGI 4684.4 SG2 249.7 THA 12.72

ORBIT DETERMINATION ACCURACY

ST 3410.9 SR 895.3 SS 2609.3  
 CRT .9999 CRS -.9959 CST -.9965  
 LSA 4383.3 MSA 176.2 SSA 8.9  
 EL1 3526.5 EL2 10.3 ALF 14.71

LAUNCH DATE DEC 26 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 24 1969

MELIOCENTRIC CONIC

DISTANCE 499.180

RL 147.12 LAL .00 LOL 94.29 VL 27.680 GAL 3.39 AZL 85.76 MCA 225.81 SMA 127.86 ECC .16161 INC 4.2438 VI 30.282  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.397 GAP 3.77 AZP 92.96 TAL 161.93 TAP 27.74 RCA 107.20 APO 148.52 V2 34.786  
 RC 112.844 GL 32.44 GP -14.95 ZAL 63.39 ZAP 132.82 ETS 346.84 ZAE 137.04 ETE 195.85 ZAC 103.03 ETC 169.67 CLP-134.71

PLANETOCENTRIC CONIC

C3 14.530 VHL 3.812 DLA 43.72 RAL 19.85 RAD 6567.6 VEL 11.658 PTH 2.05 VHP 3.668 DPA -14.38 RAP 12.55 ECC 1.2391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.18 20 37 13 4148.03 -32.03 186.98 249.01 58.48 21 46 21 3548.0 -35.93 178.97  
 124.82 4 5 27 2777.57 -32.02 81.31 249.01 58.47 4 51 45 2177.6 -35.93 73.31  
 55.18 20 37 13 4148.03 -32.03 186.98 249.01 58.48 21 46 21 3548.0 -35.93 178.97  
 124.82 4 5 27 2777.57 -32.02 81.31 249.01 58.47 4 51 45 2177.6 -35.93 73.31  
 55.18 20 37 13 4148.03 -32.03 186.98 249.01 58.48 21 46 21 3548.0 -35.93 178.97  
 124.82 4 5 27 2777.57 -32.02 81.31 249.01 58.47 4 51 45 2177.6 -35.93 73.31

DIFFERENTIAL CORRECTIONS

TDE 2.2850 TRA 1.0288 TC3-3.3725 BAU .6586  
 RDE .5304 RRA .2050 RC3 -.3502 FAU .11966  
 FDE 4.9967 FRA 3.3206 FC3-7.1299 BSP 15187  
 BOE 2.3457 BRA 1.0490 BC3 3.3906 FSP -3492

MID-COURSE EXECUTION ACCURACY

SGT 4794.2 SGR 942.8 SG3 998.8  
 RRT .9596 RRF .9528 RTF .9842  
 SGB 4886.0 R23 .0198 R13 .9844  
 SGI 4879.1 SG2 260.7 THA 10.72

ORBIT DETERMINATION ACCURACY

ST 3494.9 SR 807.6 SS 2469.4  
 CRT .9996 CRS -.9939 CST -.9964  
 LSA 4351.3 MSA 175.4 SSA 9.6  
 EL1 3586.9 EL2 22.3 ALF 13.01

LAUNCH DATE DEC 26 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC DISTANCE 505.261  
 RL 147.12 LAL .00 LOL 94.29 VL 27.665 GAL 3.57 AZL 85.86 MCA 228.97 SMA 127.76 ECC .16361 INC 4.1375 V1 30.282  
 RP 108.93 LAP -3.12 LOP 323.19 VP 37.388 GAP 4.12 AZP 92.72 TAL 161.20 TAP 30.18 RCA 106.85 APO 148.66 V2 34.789  
 RC 115.239 GL 31.30 GP -13.65 ZAL 62.13 ZAP 135.93 ETS 346.64 ZAE 135.68 ETE 193.49 ZAC 102.95 ETC 169.41 CLP-137.67

PLANETOCENTRIC CONIC  
 C3 14.707 VML 3.835 DLA 43.11 RAL 21.72 RAD 6567.6 VEL 11.666 PTH 2.05 VMP 3.809 DPA -13.12 RAP 12.15 ECC 1.2420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.03 20 48 3 4141.60 -31.53 186.04 250.77 58.93 21 57 5 3541.6 -35.39 178.05  
 123.97 4 9 28 2789.40 -31.52 82.01 250.76 58.92 4 55 58 2189.4 -35.38 74.03  
 56.03 20 48 3 4141.60 -31.53 186.04 250.77 58.93 21 57 5 3541.6 -35.39 178.05  
 123.97 4 9 28 2789.40 -31.52 82.01 250.76 58.92 4 55 58 2189.4 -35.38 74.03  
 56.03 20 48 3 4141.60 -31.53 186.04 250.77 58.93 21 57 5 3541.6 -35.39 178.05  
 123.97 4 9 28 2789.40 -31.52 82.01 250.76 58.92 4 55 58 2189.4 -35.38 74.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3344 TRA 1.1672 TC3-3.4837 BAU .6870 SGT 5000.8 SGR 847.9 SG3 932.1 ST 3561.4 SR 738.0 SS 2337.4  
 RDE .4880 RRA .1856 RC3 -.2706 FAU .11036 RRT .9444 RRF .9349 RTF .9846 CRT .9988 CRS -.9911 CST -.9964  
 FDE 4.5572 FRA 3.2855 FC3-6.4960 BSP 15805 SGB 5072.1 R23 -.0067 R13 .9847 LSA 4319.8 MSA 175.0 SSA 10.3  
 BOE 2.3849 BRA 1.1818 BC3 3.4942 FSP -3253 SGI 5064.7 SG2 275.2 TMA 9.12 EL1 3636.9 EL2 35.8 ALF 11.69

LAUNCH DATE DEC 26 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC DISTANCE 511.321  
 RL 147.12 LAL .00 LOL 94.29 VL 27.649 GAL 3.76 AZL 85.96 MCA 232.14 SMA 127.65 ECC .16580 INC 4.0410 V1 30.282  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.379 GAP 4.48 AZP 92.48 TAL 160.44 TAP 32.58 RCA 106.48 APO 148.81 V2 34.792  
 RC 117.630 GL 30.17 GP -12.51 ZAL 60.83 ZAP 138.81 ETS 346.49 ZAE 134.40 ETE 191.56 ZAC 103.11 ETC 169.25 CLP-140.43

PLANETOCENTRIC CONIC  
 C3 14.962 VML 3.868 DLA 42.51 RAL 23.59 RAD 6567.6 VEL 11.677 PTH 2.05 VMP 3.962 DPA -11.93 RAP 12.03 ECC 1.2462  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.86 20 58 55 4136.27 -31.01 185.21 252.64 59.32 22 7 51 3536.3 -34.82 177.24  
 123.14 4 13 33 2802.38 -31.00 82.80 252.63 59.31 5 0 15 2202.4 -34.81 74.84  
 56.86 20 58 55 4136.27 -31.01 185.21 252.64 59.32 22 7 51 3536.3 -34.82 177.24  
 123.14 4 13 33 2802.38 -31.00 82.80 252.63 59.31 5 0 15 2202.4 -34.81 74.84  
 56.86 20 58 55 4136.27 -31.01 185.21 252.64 59.32 22 7 51 3536.3 -34.82 177.24  
 123.14 4 13 33 2802.38 -31.00 82.80 252.63 59.31 5 0 15 2202.4 -34.81 74.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3744 TRA 1.3087 TC3-3.5671 BAU .7147 SGT 5186.7 SGR 770.7 SG3 867.2 ST 3605.5 SR 682.0 SS 2207.6  
 RDE .4553 RRA .1680 RC3 -.2046 FAU .10168 RRT .9249 RRF .9128 RTF .9849 CRT .9973 CRS -.9874 CST -.9963  
 FDE 4.1493 FRA 3.2347 FC3-5.8838 BSP 16437 SGB 5243.6 R23 -.0025 R13 .9849 LSA 4278.7 MSA 175.0 SSA 10.9  
 BOE 2.4177 BRA 1.3194 BC3 3.5730 FSP -3038 SGI 5235.6 SG2 290.3 TMA 7.85 EL1 3669.1 EL2 49.1 ALF 10.69

LAUNCH DATE DEC 26 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC DISTANCE 517.360  
 RL 147.12 LAL .00 LOL 94.29 VL 27.631 GAL 3.97 AZL 86.05 MCA 235.30 SMA 127.53 ECC .16819 INC 3.9524 V1 30.282  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.370 GAP 4.84 AZP 92.25 TAL 159.64 TAP 34.94 RCA 106.08 APO 148.98 V2 34.796  
 RC 120.015 GL 29.07 GP -11.52 ZAL 59.50 ZAP 141.49 ETS 346.37 ZAE 133.20 ETE 189.99 ZAC 103.47 ETC 169.14 CLP-143.00

PLANETOCENTRIC CONIC  
 C3 15.293 VML 3.911 DLA 41.94 RAL 25.47 RAD 6567.6 VEL 11.691 PTH 2.06 VMP 4.125 DPA -10.78 RAP 12.14 ECC 1.2517  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.67 21 9 50 4131.86 -30.46 184.45 254.59 59.66 22 18 42 3531.9 -34.24 176.51  
 122.33 4 17 39 2816.59 -30.45 83.67 254.59 59.64 5 4 36 2216.6 -34.23 75.74  
 57.67 21 9 50 4131.86 -30.46 184.45 254.59 59.66 22 18 42 3531.9 -34.24 176.51  
 122.33 4 17 39 2816.59 -30.45 83.67 254.59 59.64 5 4 36 2216.6 -34.23 75.74  
 57.67 21 9 50 4131.86 -30.46 184.45 254.59 59.66 22 18 42 3531.9 -34.24 176.51  
 122.33 4 17 39 2816.59 -30.45 83.67 254.59 59.64 5 4 36 2216.6 -34.23 75.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4074 TRA 1.4556 TC3-3.6207 BAU .7409 SGT 5355.3 SGR 709.1 SG3 805.7 ST 3631.5 SR 637.8 SS 2083.7  
 RDE .4309 RRA .1527 RC3 -.1498 FAU .09348 RRT .9009 RRF .8867 RTF .9851 CRT .9951 CRS -.9828 CST -.9961  
 FDE 3.7784 FRA 3.1777 FC3-5.2923 BSP 17035 SGB 5402.1 R23 -.0085 R13 .9850 LSA 4231.5 MSA 175.4 SSA 11.5  
 BOE 2.4457 BRA 1.4636 BC3 3.6238 FSP -2833 SGI 5393.4 SG2 305.6 TMA 6.82 EL1 3686.6 EL2 62.0 ALF 9.92

LAUNCH DATE DEC 26 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 523.377  
 RL 147.12 LAL .00 LOL 94.29 VL 27.614 GAL 4.20 AZL 86.13 MCA 238.46 SMA 127.41 ECC .17079 INC 3.8703 V1 30.282  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.361 GAP 5.20 AZP 92.03 TAL 158.82 TAP 37.28 RCA 105.65 APO 149.17 V2 34.800  
 RC 122.394 GL 27.98 GP -10.64 ZAL 58.14 ZAP 143.99 ETS 346.27 ZAE 132.10 ETE 188.69 ZAC 104.03 ETC 169.08 CLP-145.39

PLANETOCENTRIC CONIC  
 C3 15.702 VML 3.963 DLA 41.37 RAL 27.37 RAD 6567.6 VEL 11.708 PTH 2.06 VMP 4.297 DPA -9.67 RAP 12.46 ECC 1.2584  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.48 21 20 52 4128.26 -29.89 183.75 256.64 59.95 22 29 40 3528.3 -33.63 175.84  
 121.52 4 21 44 2832.12 -29.87 84.63 256.63 59.94 5 8 56 2232.1 -33.62 76.73  
 58.48 21 20 52 4128.26 -29.89 183.75 256.64 59.95 22 29 40 3528.3 -33.63 175.84  
 121.52 4 21 44 2832.12 -29.87 84.63 256.63 59.94 5 8 56 2232.1 -33.62 76.73  
 58.48 21 20 52 4128.26 -29.89 183.75 256.64 59.95 22 29 40 3528.3 -33.63 175.84  
 121.52 4 21 44 2832.12 -29.87 84.63 256.63 59.94 5 8 56 2232.1 -33.62 76.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4352 TRA 1.6099 TC3-3.6419 BAU .7648 SGT 5509.1 SGR 660.8 SG3 748.0 ST 3643.0 SR 603.3 SS 1966.4  
 RDE .4135 RRA .1397 RC3 -.1046 FAU .08568 RRT .8732 RRF .8574 RTF .9851 CRT .9921 CRS -.9772 CST -.9960  
 FDE 3.4431 FRA 3.1203 FC3-4.7237 BSP 17581 SGB 5548.6 R23 -.0119 R13 .9851 LSA 4179.8 MSA 176.5 SSA 12.0  
 BOE 2.4701 BRA 1.6160 BC3 3.6434 FSP -2639 SGI 5539.4 SG2 320.3 TMA 6.00 EL1 3691.9 EL2 74.6 ALF 9.33

LAUNCH DATE DEC 26 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 4 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 94.29 VL 27.595 GAL 4.44 AZL 86.21 MCA 241.62 SMA 127.28 ECC .17362 INC 3.7935 V1 30.282  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.352 GAP 5.57 AZP 91.80 TAL 157.96 TAP 39.58 RCA 105.18 APO 149.38 V2 34.805  
 RC 124.766 GL 26.89 GP -9.87 ZAL 56.75 ZAP 146.31 ETS 346.16 ZAE 131.09 ETE 187.61 ZAC 104.76 ETC 169.05 CLP-147.63

DISTANCE 529.371

PLANETOCENTRIC CONIC  
 C3 16.194 VML 4.024 OLA 40.80 RAL 29.27 RAD 6567.6 VEL 11.729 PTH 2.07 VMP 4.479 DPA -8.59 RAP 12.97 ECC 1.2665  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.30 21 32 2 4125.32 -29.28 183.09 258.78 60.21 22 40 47 3525.3 -33.00 175.23  
 120.70 4 25 44 2849.06 -29.27 85.69 258.77 60.19 5 13 13 2249.1 -32.99 77.83  
 59.30 21 32 2 4125.32 -29.28 183.09 258.78 60.21 22 40 47 3525.3 -33.00 175.23  
 120.70 4 25 44 2849.06 -29.27 85.69 258.77 60.19 5 13 13 2249.1 -32.99 77.83  
 59.30 21 32 2 4125.32 -29.28 183.09 258.78 60.21 22 40 47 3525.3 -33.00 175.23  
 120.70 4 25 44 2849.06 -29.27 85.69 258.77 60.19 5 13 13 2249.1 -32.99 77.83

MID-COURSE EXECUTION ACCURACY  
 SGT 5652.6 SGR 624.3 SG3 694.9  
 RRT .8431 RRF .8264 RTF .9851  
 SGB 5687.0 R23 -.0131 R13 .9850  
 SGI 5677.2 SG2 334.2 THA 5.34

ORBIT DETERMINATION ACCURACY  
 ST 3645.4 SR 577.1 SS 1859.1  
 CRT .9883 CRS -.9707 CST -.9959  
 LSA 4128.7 MSA 178.3 SSA 12.4  
 EL1 3689.8 EL2 87.0 ALF 8.90

DIFFERENTIAL CORRECTIONS  
 TDE 2.4610 TRA 1.7750 TC3-3.6281 BAU .7856  
 RDE .4021 RRA .1293 RC3 -.0671 FAU .07809  
 FDE 3.1466 FRA 3.0692 FC3-4.1749 BSP 18019  
 BDE 2.4937 BRA 1.7797 BC3 3.6288 FSP -2444

LAUNCH DATE DEC 26 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 6 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 94.29 VL 27.575 GAL 4.70 AZL 86.28 MCA 244.79 SMA 127.15 ECC .17668 INC 3.7212 V1 30.282  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.344 GAP 5.95 AZP 91.59 TAL 157.07 TAP 41.86 RCA 104.69 APO 149.62 V2 34.811  
 RC 127.128 GL 25.82 GP -9.20 ZAL 55.33 ZAP 148.49 ETS 346.04 ZAE 130.17 ETE 186.72 ZAC 105.64 ETC 169.04 CLP-149.73

DISTANCE 535.341

PLANETOCENTRIC CONIC  
 C3 16.773 VML 4.096 OLA 40.24 RAL 31.17 RAD 6567.7 VEL 11.754 PTH 2.07 VMP 4.670 DPA -7.53 RAP 13.65 ECC 1.2760  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.12 21 43 17 4123.05 -28.65 182.48 260.98 60.44 22 52 0 3523.0 -32.34 174.66  
 119.88 4 29 37 2867.41 -28.63 86.85 260.97 60.42 5 17 25 2267.4 -32.33 79.03  
 60.12 21 43 17 4123.05 -28.65 182.48 260.98 60.44 22 52 0 3523.0 -32.34 174.66  
 119.88 4 29 37 2867.41 -28.63 86.85 260.97 60.42 5 17 25 2267.4 -32.33 79.03  
 60.12 21 43 17 4123.05 -28.65 182.48 260.98 60.44 22 52 0 3523.0 -32.34 174.66  
 119.88 4 29 37 2867.41 -28.63 86.85 260.97 60.42 5 17 25 2267.4 -32.33 79.03

MID-COURSE EXECUTION ACCURACY  
 SGT 5780.2 SGR 595.9 SG3 645.1  
 RRT .8118 RRF .7945 RTF .9850  
 SGB 5810.8 R23 -.0136 R13 .9849  
 SGI 5800.5 SG2 346.7 THA 4.80

ORBIT DETERMINATION ACCURACY  
 ST 3630.2 SR 556.5 SS 1754.4  
 CRT .9836 CRS -.9631 CST -.9958  
 LSA 4066.2 MSA 180.8 SSA 12.8  
 EL1 3671.3 EL2 99.2 ALF 8.58

DIFFERENTIAL CORRECTIONS  
 TDE 2.4789 TRA 1.9452 TC3-3.5956 BAU .8063  
 RDE .3950 RRA .1204 RC3 -.0384 FAU .07134  
 FDE 2.8730 FRA 3.0133 FC3-3.6819 BSP 18497  
 BDE 2.5102 BRA 1.9489 BC3 3.5958 FSP -2277

LAUNCH DATE DEC 26 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 8 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 94.29 VL 27.555 GAL 4.98 AZL 86.35 MCA 247.96 SMA 127.02 ECC .17998 INC 3.6525 V1 30.282  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.335 GAP 6.33 AZP 91.37 TAL 156.16 TAP 44.12 RCA 104.16 APO 149.88 V2 34.818  
 RC 129.481 GL 24.75 GP -8.59 ZAL 53.90 ZAP 150.53 ETS 345.90 ZAE 129.33 ETE 185.97 ZAC 106.66 ETC 169.05 CLP-151.71

DISTANCE 541.286

PLANETOCENTRIC CONIC  
 C3 17.446 VML 4.177 OLA 39.68 RAL 33.06 RAD 6567.7 VEL 11.783 PTH 2.08 VMP 4.870 DPA -6.50 RAP 14.47 ECC 1.2871  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.96 21 54 42 4121.26 -27.98 181.90 263.26 60.64 23 3 24 3521.3 -31.66 174.13  
 119.04 4 33 20 2887.35 -27.97 88.10 263.25 60.63 5 21 28 2287.4 -31.65 80.33  
 60.96 21 54 42 4121.26 -27.98 181.90 263.26 60.64 23 3 24 3521.3 -31.66 174.13  
 119.04 4 33 20 2887.35 -27.97 88.10 263.25 60.63 5 21 28 2287.4 -31.65 80.33  
 60.96 21 54 42 4121.26 -27.98 181.90 263.26 60.64 23 3 24 3521.3 -31.66 174.13  
 119.04 4 33 20 2887.35 -27.97 88.10 263.25 60.63 5 21 28 2287.4 -31.65 80.33

MID-COURSE EXECUTION ACCURACY  
 SGT 5896.6 SGR 574.6 SG3 599.2  
 RRT .7807 RRF .7634 RTF .9848  
 SGB 5924.6 R23 -.0133 R13 .9848  
 SGI 5913.7 SG2 358.0 THA 4.37

ORBIT DETERMINATION ACCURACY  
 ST 3604.5 SR 540.9 SS 1656.3  
 CRT .9781 CRS -.9548 CST -.9957  
 LSA 3999.3 MSA 184.0 SSA 13.1  
 EL1 3643.2 EL2 111.3 ALF 8.36

DIFFERENTIAL CORRECTIONS  
 TDE 2.4930 TRA 2.1247 TC3-3.5383 BAU .8253  
 RDE .3919 RRA .1136 RC3 -.0163 FAU .06505  
 FDE 2.6270 FRA 2.9604 FC3-3.2279 BSP 18936  
 BDE 2.5236 BRA 2.1277 BC3 3.5383 FSP -2121

LAUNCH DATE DEC 26 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 10 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 94.29 VL 27.534 GAL 5.27 AZL 86.41 MCA 251.12 SMA 126.88 ECC .18355 INC 3.5869 V1 30.282  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.326 GAP 6.72 AZP 91.16 TAL 155.22 TAP 46.35 RCA 103.59 APO 150.17 V2 34.825  
 RC 131.823 GL 23.69 GP -8.06 ZAL 52.46 ZAP 152.46 ETS 345.73 ZAE 128.56 ETE 185.34 ZAC 107.80 ETC 169.06 CLP-153.57

DISTANCE 547.204

PLANETOCENTRIC CONIC  
 C3 18.222 VML 4.269 OLA 39.11 RAL 34.95 RAD 6567.7 VEL 11.815 PTH 2.09 VMP 5.079 DPA -5.48 RAP 15.43 ECC 1.2999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.82 22 6 16 4119.91 -27.28 181.35 265.59 60.82 23 14 56 3519.9 -30.94 173.62  
 118.18 4 36 50 2908.95 -27.27 89.47 265.58 60.81 5 25 19 2308.9 -30.93 81.75  
 61.82 22 6 16 4119.91 -27.28 181.35 265.59 60.82 23 14 56 3519.9 -30.94 173.62  
 118.18 4 36 50 2908.95 -27.27 89.47 265.58 60.81 5 25 19 2308.9 -30.93 81.75  
 61.82 22 6 16 4119.91 -27.28 181.35 265.59 60.82 23 14 56 3519.9 -30.94 173.62  
 118.18 4 36 50 2908.95 -27.27 89.47 265.58 60.81 5 25 19 2308.9 -30.93 81.75

MID-COURSE EXECUTION ACCURACY  
 SGT 6001.8 SGR 558.7 SG3 556.8  
 RRT .7512 RRF .7343 RTF .9846  
 SGB 6027.7 R23 -.0123 R13 .9846  
 SGI 6016.5 SG2 367.9 THA 4.02

ORBIT DETERMINATION ACCURACY  
 ST 3568.9 SR 529.2 SS 1564.1  
 CRT .9719 CRS -.9456 CST -.9955  
 LSA 3927.8 MSA 187.9 SSA 13.3  
 EL1 3605.8 EL2 123.3 ALF 8.21

DIFFERENTIAL CORRECTIONS  
 TDE 2.5031 TRA 2.3135 TC3-3.4588 BAU .8426  
 RDE .3920 RRA .1087 RC3 .0004 FAU .05922  
 FDE 2.4049 FRA 2.9099 FC3-2.8137 BSP 19350  
 BDE 2.5336 BRA 2.3161 BC3 3.4588 FSP -1978

LAUNCH DATE DEC 26 1968

FLIGHT TIME 198.00

ARRIVAL DATE JUL 12 1969

Heliocentric Conic

DISTANCE 553.093

RL 147.12 LAL .00 LOL 94.29 VL 27.513 GAL 5.59 AZL 86.48 MCA 254.29 SMA 126.74 ECC .18740 INC 3.5236 V1 30.282  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.318 GAP 7.12 AZP 90.96 TAL 154.27 TAP 48.56 RCA 102.99 APO 150.49 V2 34.833  
 RC 134.153 GL 22.64 GP -7.58 ZAL 51.01 ZAP 154.28 ETS 345.51 ZAE 127.87 ETE 184.81 ZAC 109.05 ETC 169.07 CLP-155.35

Planetocentric Conic

C3 19.110 VML 4.371 OLA 38.53 RAL 36.82 RAD 6567.8 VEL 11.853 PTH 2.10 VHP 5.298 DPA -4.47 RAP 16.50 ECC 1.3145  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.70 22 17 59 4118.92 -26.55 180.81 267.98 60.98 23 26 38 3518.9 -30.20 173.13  
 117.30 4 40 5 2932.29 -26.53 90.96 267.98 60.97 5 28 57 2332.3 -30.18 83.28  
 62.70 22 17 59 4118.92 -26.55 180.81 267.98 60.98 23 26 38 3518.9 -30.20 173.13  
 117.30 4 40 5 2932.29 -26.53 90.96 267.98 60.97 5 28 57 2332.3 -30.18 83.28  
 62.70 22 17 59 4118.92 -26.55 180.81 267.98 60.98 23 26 38 3518.9 -30.20 173.13  
 117.30 4 40 5 2932.29 -26.53 90.96 267.98 60.97 5 28 57 2332.3 -30.18 83.28

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.5102 TRA 2.5134 TC3-3.3596 BAU .8583 SGT 6098.0 SGR 547.1 SG3 517.8 ST 3525.4 SR 520.3 SS 1478.2  
 RDE .3949 RRA .1056 RC3 .0124 FAU .05383 RRT .7242 RRF .7081 RTF .9844 CRT .9649 CRS -.9357 CST -.9954  
 FDE 2.2053 FRA 2.8630 FC3-2.4385 BSP 19726 SGB 6122.5 R23 -.0109 R13 .9843 LSA 3853.2 MSA 192.5 SSA 13.5  
 BOE 2.5411 BRA 2.5156 BC3 3.3596 FSP -1845 SGI 6110.9 SG2 376.5 THA 3.73 EL1 3561.0 EL2 135.2 ALF 8.12

LAUNCH DATE DEC 26 1968

FLIGHT TIME 200.00

ARRIVAL DATE JUL 14 1969

Heliocentric Conic

DISTANCE 558.952

RL 147.12 LAL .00 LOL 94.29 VL 27.491 GAL 5.93 AZL 86.54 MCA 257.46 SMA 126.59 ECC .19155 INC 3.4622 V1 30.282  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.310 GAP 7.54 AZP 90.75 TAL 153.30 TAP 50.76 RCA 102.34 APO 150.84 V2 34.841  
 RC 136.471 GL 21.60 GP -7.16 ZAL 49.55 ZAP 156.00 ETS 345.25 ZAE 127.24 ETE 184.36 ZAC 110.39 ETC 169.07 CLP-157.03

Planetocentric Conic

C3 20.122 VML 4.486 OLA 37.95 RAL 38.68 RAD 6567.8 VEL 11.895 PTH 2.11 VHP 5.527 DPA -3.48 RAP 17.67 ECC 1.3312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.60 22 29 50 4118.26 -25.78 180.28 270.43 61.13 23 38 29 3518.3 -29.42 172.66  
 116.40 4 43 1 2957.44 -25.77 92.56 270.42 61.12 5 32 18 2357.4 -29.41 84.94  
 63.60 22 29 50 4118.26 -25.78 180.28 270.43 61.13 23 38 29 3518.3 -29.42 172.66  
 116.40 4 43 1 2957.44 -25.77 92.56 270.42 61.12 5 32 18 2357.4 -29.41 84.94  
 63.60 22 29 50 4118.26 -25.78 180.28 270.43 61.13 23 38 29 3518.3 -29.42 172.66  
 116.40 4 43 1 2957.44 -25.77 92.56 270.42 61.12 5 32 18 2357.4 -29.41 84.94

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.5177 TRA 2.7280 TC3-3.2353 BAU .8704 SGT 6187.9 SGR 539.1 SG3 482.4 ST 3479.4 SR 514.0 SS 1400.3  
 RDE .4004 RRA .1046 RC3 .0211 FAU .04862 RRT .7010 RRF .6860 RTF .9841 CRT .9574 CRS -.9254 CST -.9954  
 FDE 2.0285 FRA 2.8248 FC3-2.0920 BSP 19994 SGB 6211.4 R23 -.0090 R13 .9840 LSA 3780.4 MSA 197.7 SSA 13.6  
 BOE 2.5493 BRA 2.7300 BC3 3.2354 FSP -1713 SGI 6199.5 SG2 383.8 THA 3.51 EL1 3514.0 EL2 147.0 ALF 8.06

LAUNCH DATE DEC 26 1968

FLIGHT TIME 202.00

ARRIVAL DATE JUL 16 1969

Heliocentric Conic

DISTANCE 564.776

RL 147.12 LAL .00 LOL 94.29 VL 27.469 GAL 6.29 AZL 86.60 MCA 260.63 SMA 126.44 ECC .19604 INC 3.4024 V1 30.282  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.302 GAP 7.96 AZP 90.55 TAL 152.31 TAP 52.94 RCA 101.66 APO 151.23 V2 34.850  
 RC 138.775 GL 20.57 GP -6.78 ZAL 48.10 ZAP 157.64 ETS 344.92 ZAE 126.67 ETE 183.98 ZAC 111.82 ETC 169.07 CLP-158.64

Planetocentric Conic

C3 21.273 VML 4.612 OLA 37.36 RAL 40.51 RAD 6567.9 VEL 11.944 PTH 2.13 VHP 5.766 DPA -2.49 RAP 18.93 ECC 1.3501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.54 22 41 53 4117.76 -24.98 179.75 272.92 61.27 23 50 31 3517.8 -28.61 172.18  
 115.46 4 45 34 2984.59 -24.97 94.30 272.91 61.26 5 35 19 2384.6 -28.60 86.72  
 64.54 22 41 53 4117.76 -24.98 179.75 272.92 61.27 23 50 31 3517.8 -28.61 172.18  
 115.46 4 45 34 2984.59 -24.97 94.30 272.91 61.26 5 35 19 2384.6 -28.60 86.72  
 64.54 22 41 53 4117.76 -24.98 179.75 272.92 61.27 23 50 31 3517.8 -28.61 172.18  
 115.46 4 45 34 2984.59 -24.97 94.30 272.91 61.26 5 35 19 2384.6 -28.60 86.72

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.5191 TRA 2.9513 TC3-3.1036 BAU .8827 SGT 6266.1 SGR 532.8 SG3 449.4 ST 3422.7 SR 508.7 SS 1325.4  
 RDE .4076 RRA .1051 RC3 .0260 FAU .04401 RRT .6809 RRF .6670 RTF .9838 CRT .9491 CRS -.9144 CST -.9953  
 FDE 1.8653 FRA 2.7856 FC3-1.7909 BSP 20317 SGB 6288.8 R23 -.0073 R13 .9837 LSA 3699.9 MSA 203.4 SSA 13.6  
 BOE 2.5519 BRA 2.9532 BC3 3.1037 FSP -1601 SGI 6276.7 SG2 389.6 THA 3.33 EL1 3456.7 EL2 158.6 ALF 8.05

LAUNCH DATE DEC 26 1968

FLIGHT TIME 204.00

ARRIVAL DATE JUL 18 1969

Heliocentric Conic

DISTANCE 570.564

RL 147.12 LAL .00 LOL 94.29 VL 27.447 GAL 6.68 AZL 86.66 MCA 263.81 SMA 126.29 ECC .20087 INC 3.3435 V1 30.282  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.294 GAP 8.41 AZP 90.36 TAL 151.31 TAP 55.11 RCA 100.93 APO 151.66 V2 34.860  
 RC 141.067 GL 19.55 GP -6.44 ZAL 46.65 ZAP 159.20 ETS 344.52 ZAE 126.14 ETE 183.66 ZAC 113.33 ETC 169.05 CLP-160.18

Planetocentric Conic

C3 22.581 VML 4.752 OLA 36.76 RAL 42.31 RAD 6567.9 VEL 11.998 PTH 2.14 VHP 6.018 DPA -1.52 RAP 20.27 ECC 1.3716  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.51 22 54 6 4117.33 -24.15 179.22 275.45 61.40 24 2 44 3517.3 -27.77 171.70  
 114.49 4 47 42 3013.84 -24.14 96.17 275.44 61.38 5 37 55 2413.8 -27.76 88.65  
 65.51 22 54 6 4117.33 -24.15 179.22 275.45 61.40 24 2 44 3517.3 -27.77 171.70  
 114.49 4 47 42 3013.84 -24.14 96.17 275.44 61.38 5 37 55 2413.8 -27.76 88.65  
 65.51 22 54 6 4117.33 -24.15 179.22 275.45 61.40 24 2 44 3517.3 -27.77 171.70  
 114.49 4 47 42 3013.84 -24.14 96.17 275.44 61.38 5 37 55 2413.8 -27.76 88.65

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.5183 TRA 3.1876 TC3-2.9586 BAU .8932 SGT 6335.8 SGR 528.1 SG3 419.0 ST 3361.3 SR 504.4 SS 1255.9  
 RDE .4164 RRA .1073 RC3 .0285 FAU .03973 RRT .6645 RRF .6518 RTF .9835 CRT .9403 CRS -.9029 CST -.9952  
 FDE 1.7179 FRA 2.7501 FC3-1.5233 BSP 20620 SGB 6357.8 R23 -.0056 R13 .9834 LSA 3617.4 MSA 209.5 SSA 13.6  
 BOE 2.5525 BRA 3.1894 BC3 2.9588 FSP -1497 SGI 6345.6 SG2 394.1 THA 3.18 EL1 3394.7 EL2 170.0 ALF 8.05

LAUNCH DATE DEC 26 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 576.310

RL 147.12 LAL .00 LOL 94.29 VL 27.424 GAL 7.09 AZL 86.71 MCA 266.98 SMA 126.14 ECC .20609 INC 3.2853 V1 30.282  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.286 GAP 8.87 AZP 90.17 TAL 150.30 TAP 57.28 RCA 100.15 APO 152.14 V2 34.870  
 RC 143.344 GL 18.54 GP -6.13 ZAL 45.22 ZAP 160.70 ETS 344.03 ZAE 125.66 ETE 183.39 ZAC 114.90 ETC 169.02 CLP-161.66

PLANETOCENTRIC CONIC

C3 24.063 VHL 4.905 CLA 36.16 RAL 44.07 RAD 6568.0 VEL 12.060 PTH 2.16 VHP 6.283 DPA -.55 RAP 21.68 ECC 1.3960  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.51 23 6 30 4116.97 -23.29 178.68 278.01 61.52 24 15 7 3517.0 -26.90 171.21  
 113.49 4 49 22 3045.25 -23.27 98.18 278.00 61.51 5 40 7 2445.2 -26.89 90.72  
 66.51 23 6 30 4116.97 -23.29 178.68 278.01 61.52 24 15 7 3517.0 -26.90 171.21  
 113.49 4 49 22 3045.25 -23.27 98.18 278.00 61.51 5 40 7 2445.2 -26.89 90.72  
 66.51 23 6 30 4116.97 -23.29 178.68 278.01 61.52 24 15 7 3517.0 -26.90 171.21  
 113.49 4 49 22 3045.25 -23.27 98.18 278.00 61.51 5 40 7 2445.2 -26.89 90.72

DIFFERENTIAL CORRECTIONS

TOE 2.5160 TRA 3.4384 TC3-2.8023 BAU .9016  
 RDE .4266 RRA .1114 RC3 .0291 FAU .03575  
 FDE 1.5850 FRA 2.7187 FC3-1.2860 BSP 20886  
 BOE 2.5519 BRA 3.4402 BC3 2.8025 FSP -1400

MID-COURSE EXECUTION ACCURACY

SGT 6398.3 SGR 524.5 SG3 391.1  
 RRT .6518 RRF .6403 RTF .9832  
 SGB 6419.8 R23 -.0039 R13 .9832  
 SG1 6407.5 SG2 397.2 THA 3.07

ORBIT DETERMINATION ACCURACY

ST 3296.9 SR 500.6 SS 1191.8  
 CRT .9308 CRS -.8911 CST -.9952  
 LSA 3534.7 MSA 215.9 SSA 13.5  
 EL1 3329.8 EL2 181.1 ALF 8.07

LAUNCH DATE DEC 26 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 582.012

RL 147.12 LAL .00 LOL 94.29 VL 27.400 GAL 7.53 AZL 86.77 MCA 270.16 SMA 125.99 ECC .21174 INC 3.2275 V1 30.282  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.279 GAP 9.35 AZP 89.99 TAL 149.28 TAP 59.44 RCA 99.31 APO 152.67 V2 34.880  
 RC 145.608 GL 17.54 GP -5.85 ZAL 43.80 ZAP 162.14 ETS 343.43 ZAE 125.22 ETE 183.16 ZAC 116.54 ETC 168.97 CLP-163.09

PLANETOCENTRIC CONIC

C3 25.746 VHL 5.074 DLA 35.55 RAL 45.80 RAD 6568.0 VEL 12.129 PTH 2.17 VHP 6.561 DPA .40 RAP 23.16 ECC 1.4237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.55 23 19 7 4116.51 -22.39 178.12 280.61 61.64 24 27 43 3516.5 -26.00 170.70  
 112.45 4 50 31 3078.98 -22.38 100.35 280.60 61.62 5 41 50 2479.0 -25.99 92.94  
 67.55 23 19 7 4116.51 -22.39 178.12 280.61 61.64 24 27 43 3516.5 -26.00 170.70  
 112.45 4 50 31 3078.98 -22.38 100.35 280.60 61.62 5 41 50 2479.0 -25.99 92.94  
 67.55 23 19 7 4116.51 -22.39 178.12 280.61 61.64 24 27 43 3516.5 -26.00 170.70  
 112.45 4 50 31 3078.98 -22.38 100.35 280.60 61.62 5 41 50 2479.0 -25.99 92.94

DIFFERENTIAL CORRECTIONS

TOE 2.5158 TRA 3.7083 TC3-2.6322 BAU .9060  
 RDE .4382 RRA .1174 RC3 .0288 FAU .03188  
 FDE 1.4678 FRA 2.6942 FC3-1.0722 BSP 21050  
 BOE 2.5537 BRA 3.7101 BC3 2.6323 FSP -1304

MID-COURSE EXECUTION ACCURACY

SGT 6457.1 SGR 521.8 SG3 365.7  
 RRT .6430 RRF .6328 RTF .9828  
 SGB 6478.2 R23 -.0020 R13 .9828  
 SG1 6465.9 SG2 399.1 THA 2.99

ORBIT DETERMINATION ACCURACY

ST 3234.3 SR 497.2 SS 1134.8  
 CRT .9210 CRS -.8791 CST -.9953  
 LSA 3456.3 MSA 222.3 SSA 13.4  
 EL1 3266.7 EL2 191.8 ALF 8.09

LAUNCH DATE DEC 26 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 587.662

RL 147.12 LAL .00 LOL 94.29 VL 27.377 GAL 8.01 AZL 86.83 MCA 273.34 SMA 125.84 ECC .21784 INC 3.1696 V1 30.282  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.272 GAP 9.85 AZP 89.82 TAL 148.26 TAP 61.60 RCA 98.42 APO 153.25 V2 34.891  
 RC 147.857 GL 16.56 GP -5.60 ZAL 42.40 ZAP 163.52 ETS 342.70 ZAE 124.81 ETE 182.96 ZAC 118.22 ETC 168.89 CLP-164.48

PLANETOCENTRIC CONIC

C3 27.655 VHL 5.259 DLA 34.94 RAL 47.48 RAD 6568.1 VEL 12.208 PTH 2.19 VHP 6.856 DPA 1.35 RAP 24.70 ECC 1.4551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.62 23 31 57 4115.82 -21.47 177.53 283.23 61.75 24 40 33 3515.8 -25.07 170.16  
 111.38 4 51 6 3115.18 -21.46 102.68 283.22 61.74 5 43 1 2515.2 -25.06 95.32  
 68.62 23 31 57 4115.82 -21.47 177.53 283.23 61.75 24 40 33 3515.8 -25.07 170.16  
 111.38 4 51 6 3115.18 -21.46 102.68 283.22 61.74 5 43 1 2515.2 -25.06 95.32  
 68.62 23 31 57 4115.82 -21.47 177.53 283.23 61.75 24 40 33 3515.8 -25.07 170.16  
 111.38 4 51 6 3115.18 -21.46 102.68 283.22 61.74 5 43 1 2515.2 -25.06 95.32

DIFFERENTIAL CORRECTIONS

TOE 2.5104 TRA 3.9903 TC3-2.4621 BAU .9103  
 RDE .4505 RRA .1249 RC3 .0269 FAU .02846  
 FDE 1.3586 FRA 2.6702 FC3 -.8909 BSP 21287  
 BOE 2.5505 BRA 3.9923 BC3 2.4622 FSP -1222

MID-COURSE EXECUTION ACCURACY

SGT 6504.7 SGR 518.9 SG3 341.9  
 RRT .6368 RRF .6277 RTF .9826  
 SGB 6525.4 R23 -.0005 R13 .9826  
 SG1 6513.1 SG2 399.6 THA 2.92

ORBIT DETERMINATION ACCURACY

ST 3165.2 SR 493.3 SS 1080.2  
 CRT .9104 CRS -.8665 CST -.9953  
 LSA 3372.8 MSA 228.9 SSA 13.2  
 EL1 3197.0 EL2 202.1 ALF 8.11

LAUNCH DATE DEC 26 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 593.254

RL 147.12 LAL .00 LOL 94.29 VL 27.353 GAL 8.51 AZL 86.89 MCA 276.52 SMA 125.68 ECC .22446 INC 3.1112 V1 30.282  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.265 GAP 10.38 AZP 89.65 TAL 147.24 TAP 63.76 RCA 97.47 APO 153.89 V2 34.902  
 RC 150.092 GL 15.60 GP -5.37 ZAL 41.02 ZAP 164.86 ETS 341.81 ZAE 124.43 ETE 182.80 ZAC 119.94 ETC 168.80 CLP-165.82

PLANETOCENTRIC CONIC

C3 29.825 VHL 5.461 DLA 34.32 RAL 49.11 RAD 6568.2 VEL 12.296 PTH 2.21 VHP 7.167 DPA 2.28 RAP 26.28 ECC 1.4909  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.75 23 45 4 4114.72 -20.52 176.89 285.88 61.87 24 53 39 3514.7 -24.11 169.58  
 110.25 4 51 2 3154.03 -20.50 105.18 285.87 61.86 5 43 36 2554.0 -24.10 97.88  
 69.75 23 45 4 4114.72 -20.52 176.89 285.88 61.87 24 53 39 3514.7 -24.11 169.58  
 110.25 4 51 2 3154.03 -20.50 105.18 285.87 61.86 5 43 36 2554.0 -24.10 97.88  
 69.75 23 45 4 4114.72 -20.52 176.89 285.88 61.87 24 53 39 3514.7 -24.11 169.58  
 110.25 4 51 2 3154.03 -20.50 105.18 285.87 61.86 5 43 36 2554.0 -24.10 97.88

DIFFERENTIAL CORRECTIONS

TOE 2.5042 TRA 4.2904 TC3-2.2876 BAU .9122  
 RDE .4635 RRA .1342 RC3 .0245 FAU .02525  
 FDE 1.2600 FRA 2.6503 FC3 -.7330 BSP 21504  
 BOE 2.5468 BRA 4.2925 BC3 2.2877 FSP -1146

MID-COURSE EXECUTION ACCURACY

SGT 6545.8 SGR 516.0 SG3 320.1  
 RRT .6335 RRF .6253 RTF .9824  
 SGB 6566.1 R23 -.0008 R13 .9824  
 SG1 6553.9 SG2 398.8 THA 2.87

ORBIT DETERMINATION ACCURACY

ST 3095.3 SR 489.0 SS 1030.3  
 CRT .8993 CRS -.8536 CST -.9954  
 LSA 3290.3 MSA 235.2 SSA 13.0  
 EL1 3126.6 EL2 211.7 ALF 8.12

LAUNCH DATE DEC 26 1968

FLIGHT TIME 214.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 598.780

RL 147.12 LAL .00 LOL 94.29 VL 27.329 GAL 9.06 AZL 86.95 MCA 279.70 SMA 125.53 ECC .23163 INC 3.0521 V1 30.282
RP 108.54 LAP -3.01 LOP 14.01 VP 37.259 GAP 10.94 AZP 89.49 TAL 146.23 TAP 65.93 RCA 96.45 APO 154.60 V2 34.914
RC 152.312 GL 14.65 GP -5.16 ZAL 39.68 ZAP 166.16 ETS 340.71 ZAE 124.07 ETE 182.66 ZAC 121.71 ETC 168.68 CLP-167.14

PLANETOCENTRIC CONIC

C3 32.296 VHL 5.683 DLA 33.70 RAL 50.69 RAD 6568.3 VEL 12.396 PTH 2.24 VHP 7.498 DPA 3.20 RAP 27.91 ECC 1.5315
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.92 0 2 26 4112.99 -19.54 176.20 288.55 61.99 1 10 59 3513.0 -23.13 168.94
109.08 4 50 14 3195.74 -19.53 107.88 288.54 61.98 5 43 29 2595.7 -23.12 100.62
70.92 0 2 26 4112.99 -19.54 176.20 288.55 61.99 1 10 59 3513.0 -23.13 168.94
109.08 4 50 14 3195.74 -19.53 107.88 288.54 61.98 5 43 29 2595.7 -23.12 100.62
110.00 5 39 35 3044.81 -23.90 98.50 290.90 64.81 6 30 20 2444.8 -27.09 90.78
110.00 4 12 14 3311.92 -15.28 114.40 286.03 59.04 5 7 26 2711.9 -19.27 107.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4981 TRA 4.6101 TC3-2.1102 BAU .9112 SGT 6580.6 SGR 512.9 SG3 299.9 ST 3026.1 SR 484.0 SS 985.0
ROE .4772 RRA .1453 RC3 .0218 FAU .02225 RRT .6328 RRF .6253 RTF .9823 CRT .8877 CRS -.8406 CST -.9955
FOE 1.1709 FRA 2.6346 FC3 -.5965 BSP 21700 SGB 6600.6 R23 .0019 R13 .9823 LSA 3209.9 MSA 241.3 SSA 12.8
BOE 2.5433 BRA 4.6124 BC3 2.1103 FSP -1076 SG1 6588.6 SG2 396.7 THA 2.83 EL1 3056.6 EL2 220.6 ALF 8.12

LAUNCH DATE DEC 26 1968

FLIGHT TIME 216.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 604.232

RL 147.12 LAL .00 LOL 94.29 VL 27.306 GAL 9.65 AZL 87.01 MCA 282.89 SMA 125.37 ECC .23943 INC 2.9918 V1 30.282
RP 108.50 LAP -2.92 LOP 17.20 VP 37.252 GAP 11.53 AZP 89.33 TAL 145.23 TAP 68.12 RCA 95.36 APO 155.39 V2 34.926
RC 154.516 GL 13.72 GP -4.97 ZAL 38.37 ZAP 167.42 ETS 339.35 ZAE 123.73 ETE 182.54 ZAC 123.50 ETC 168.53 CLP-168.43

PLANETOCENTRIC CONIC

C3 35.115 VHL 5.926 DLA 33.07 RAL 52.22 RAD 6568.4 VEL 12.509 PTH 2.26 VHP 7.851 DPA 4.11 RAP 29.59 ECC 1.5779
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.16 0 16 15 4110.36 -18.54 175.44 291.24 62.11 1 24 45 3510.4 -22.12 168.23
107.84 4 48 36 3240.58 -18.53 110.79 291.23 62.10 5 42 37 2640.6 -22.11 103.58
72.16 0 16 15 4110.36 -18.54 175.44 291.24 62.11 1 24 45 3510.4 -22.12 168.23
107.84 4 48 36 3240.58 -18.53 110.79 291.23 62.10 5 42 37 2640.6 -22.11 103.58
110.00 6 7 54 2997.03 -25.26 95.44 294.75 66.16 6 57 51 2397.0 -28.25 87.55
110.00 3 56 8 3401.91 -12.07 119.40 287.36 57.77 4 52 50 2801.9 -16.24 112.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4927 TRA 4.9518 TC3-1.9311 BAU .9066 SGT 6609.9 SGR 509.6 SG3 281.3 ST 2958.3 SR 478.3 SS 944.3
ROE .4915 RRA .1582 RC3 .0190 FAU .01941 RRT .6344 RRF .6276 RTF .9822 CRT .8757 CRS -.8275 CST -.9957
FOE 1.0911 FRA 2.6237 FC3 -.4787 BSP 21858 SGB 6629.5 R23 .0029 R13 .9823 LSA 3132.3 MSA 246.8 SSA 12.6
BOE 2.5407 BRA 4.9543 BC3 1.9312 FSP -1009 SG1 6617.8 SG2 393.4 THA 2.81 EL1 2988.0 EL2 228.7 ALF 8.11

LAUNCH DATE DEC 26 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 609.596

RL 147.12 LAL .00 LOL 94.29 VL 27.282 GAL 10.28 AZL 87.07 MCA 286.08 SMA 125.22 ECC .24793 INC 2.9300 V1 30.282
RP 108.47 LAP -2.82 LOP 20.39 VP 37.246 GAP 12.16 AZP 89.19 TAL 144.24 TAP 70.32 RCA 94.17 APO 156.26 V2 34.938
RC 156.704 GL 12.80 GP -4.80 ZAL 37.10 ZAP 168.64 ETS 337.66 ZAE 123.39 ETE 182.44 ZAC 125.31 ETC 168.34 CLP-169.70

PLANETOCENTRIC CONIC

C3 38.339 VHL 6.192 DLA 32.44 RAL 53.69 RAD 6568.5 VEL 12.638 PTH 2.29 VHP 8.228 DPA 5.00 RAP 31.29 ECC 1.6310
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.46 0 30 33 4106.42 -17.52 174.57 293.94 62.25 1 38 59 3506.4 -21.09 167.40
106.54 4 46 2 3288.91 -17.50 113.93 293.93 62.24 5 40 51 2688.9 -21.08 106.76
73.46 0 30 33 4106.42 -17.52 174.57 293.94 62.25 1 38 59 3506.4 -21.09 167.40
106.54 4 46 2 3288.91 -17.50 113.93 293.93 62.24 5 40 51 2688.9 -21.08 106.76
110.00 6 30 8 2967.71 -26.05 93.53 298.29 67.04 7 19 35 2367.7 -28.92 85.53
110.00 3 45 38 3475.62 -9.36 123.39 289.03 56.97 4 43 33 2875.6 -13.65 116.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4914 TRA 5.3202 TC3-1.7495 BAU .8967 SGT 6636.1 SGR 505.9 SG3 264.3 ST 2895.1 SR 471.9 SS 909.1
ROE .5063 RRA .1732 RC3 .0166 FAU .01665 RRT .6384 RRF .6323 RTF .9823 CRT .8634 CRS -.8148 CST -.9959
FOE 1.0211 FRA 2.6192 FC3 -.3759 BSP 21922 SGB 6655.3 R23 .0039 R13 .9823 LSA 3060.6 MSA 251.5 SSA 12.3
BOE 2.5423 BRA 5.3230 BC3 1.7495 FSP -943 SG1 6644.0 SG2 388.9 THA 2.80 EL1 2923.9 EL2 235.7 ALF 8.06

LAUNCH DATE DEC 26 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 614.859

RL 147.12 LAL .00 LOL 94.29 VL 27.258 GAL 10.96 AZL 87.13 MCA 289.26 SMA 125.06 ECC .25720 INC 2.8660 V1 30.282
RP 108.43 LAP -2.71 LOP 23.58 VP 37.241 GAP 12.83 AZP 89.05 TAL 143.28 TAP 72.54 RCA 92.90 APO 157.23 V2 34.951
RC 158.875 GL 11.91 GP -4.65 ZAL 35.87 ZAP 169.83 ETS 335.51 ZAE 123.07 ETE 182.36 ZAC 127.15 ETC 168.12 CLP-170.95

PLANETOCENTRIC CONIC

C3 42.038 VHL 6.484 DLA 31.81 RAL 55.10 RAD 6568.6 VEL 12.783 PTH 2.33 VHP 8.633 DPA 5.88 RAP 33.03 ECC 1.6918
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.86 0 45 30 4100.61 -16.48 173.56 296.65 62.39 1 53 50 3500.6 -20.04 166.43
105.14 4 42 20 3341.25 -16.46 117.35 296.64 62.38 5 38 1 2741.2 -20.03 110.22
74.86 0 45 30 4100.61 -16.48 173.56 296.65 62.39 1 53 50 3500.6 -20.04 166.43
105.14 4 42 20 3341.25 -16.46 117.35 296.64 62.38 5 38 1 2741.2 -20.03 110.22
110.00 6 49 18 2947.70 -26.57 92.21 301.69 67.66 7 38 26 2347.7 -29.36 84.14
110.00 3 37 41 3542.16 -6.87 126.94 290.86 56.43 4 36 44 2942.2 -11.24 120.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4877 TRA 5.7102 TC3-1.5743 BAU .8848 SGT 6653.0 SGR 501.4 SG3 248.4 ST 2830.2 SR 464.3 SS 876.4
ROE .5212 RRA .1898 RC3 .0141 FAU .01414 RRT .6437 RRF .6379 RTF .9825 CRT .8507 CRS -.8018 CST -.9961
FOE .9562 FRA 2.6171 FC3 -.2911 BSP 22059 SGB 6671.9 R23 .0045 R13 .9825 LSA 2988.0 MSA 255.5 SSA 12.0
BOE 2.5417 BRA 5.7134 BC3 1.5744 FSP -887 SG1 6660.9 SG2 383.3 THA 2.79 EL1 2857.8 EL2 241.8 ALF 8.00



LAUNCH DATE DEC 27 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 7 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 19.363 GAL 14.83 AZL 85.88 MCA 50.48 SMA 92.85 ECC .62018 INC 4.1183 VI 30.284
RP 107.50 LAP 3.18 LOP 145.73 VP 32.246 GAP -37.40 AZP 87.38 TAL 170.46 TAP 220.94 RCA 35.27 APO 150.44 V2 35.251
RC 61.231 GL 6.07 GP 1.67 ZAL 66.78 ZAP 26.19 ETS 183.72 ZAE 146.76 ETE 192.89 ZAC 86.20 ETC 166.18 CLP 26.14

DISTANCE 143.221

PLANETOCENTRIC CONIC

C3 161.839 VML 12.722 OLA 16.67 RAL 24.40 RAD 6570.8 VEL 16.828 PTH 2.91 VMP 21.894 DPA -4.79 RAP 353.24 ECC 3.6635
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 21 53 3244.87 -25.45 113.87 288.62 77.14 5 15 58 2644.9 -26.97 105.53
90.00 20 49 11 4796.07 18.00 206.51 275.24 67.77 22 9 7 4196.1 14.83 199.27
100.00 5 52 40 2952.10 -27.31 92.81 289.09 77.35 6 41 52 2352.1 -28.78 84.31
100.00 22 1 5 4564.07 19.76 188.69 274.47 67.11 23 17 9 3964.1 16.49 181.42
110.00 7 21 46 2673.30 -32.18 72.87 290.33 77.81 8 6 20 2073.3 -33.53 63.90
110.00 22 48 28 4415.63 24.33 175.25 272.29 65.21 24 2 3 3815.6 20.78 167.90

DIFFERENTIAL CORRECTIONS

TDE -.5923 TRA-1.5653 TC3 -.1102 BAU .2434
RDE -.9089 RRA .3423 RC3 -.0224 FAU .01380
FDE .3330 FRA .6242 FC3 -.0738 BSP 2256
BOE 1.0848 BRA 1.6023 BC3 .1125 FSP -70

MID-COURSE EXECUTION ACCURACY

SGT 831.5 SGR 443.5 SG3 32.8
RRT .0182 RRF -.0207 RTF -.6445
SG8 942.4 R23 -.0042 R13 -.6445
SG1 831.5 SG2 443.4 THA .78

ORBIT DETERMINATION ACCURACY

ST 346.4 SR 412.2 SS 329.2
CRT .6903 CRS .7966 CST .9855
LSA 589.1 MSA 225.8 SSA 13.7
EL1 496.6 EL2 208.0 ALF 52.11

LAUNCH DATE DEC 27 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 9 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 19.993 GAL 14.19 AZL 85.98 MCA 53.73 SMA 94.49 ECC .59297 INC 4.0182 VI 30.284
RP 107.51 LAP 3.24 LOP 148.98 VP 32.624 GAP -35.61 AZP 87.62 TAL 169.77 TAP 223.50 RCA 38.46 APO 150.52 V2 35.248
RC 59.338 GL 6.45 GP 1.72 ZAL 65.78 ZAP 24.66 ETS 184.18 ZAE 147.64 ETE 193.69 ZAC 87.84 ETC 166.25 CLP 24.60

DISTANCE 149.324

PLANETOCENTRIC CONIC

C3 146.348 VML 12.097 OLA 17.39 RAL 25.25 RAD 6570.6 VEL 16.361 PTH 2.86 VMP 20.984 DPA -4.05 RAP 354.78 ECC 3.4085
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 18 8 3254.23 -25.31 114.52 288.37 76.85 5 12 22 2654.2 -26.87 106.20
90.00 20 59 42 4750.87 16.82 203.73 274.90 66.88 22 18 53 4150.9 13.54 196.58
100.00 5 49 33 2959.43 -27.20 93.32 288.86 77.10 6 38 52 2359.4 -28.70 84.84
100.00 22 10 58 4520.91 18.60 186.01 274.09 66.17 23 26 19 3920.9 15.22 178.85
110.00 7 19 56 2676.61 -32.14 73.12 290.13 77.67 8 4 33 2076.6 -33.50 64.15
110.00 22 57 4 4376.48 23.19 172.78 271.82 64.15 24 10 0 3776.5 19.52 165.56

DIFFERENTIAL CORRECTIONS

TDE -.5924 TRA-1.5654 TC3 -.1156 BAU .2313
RDE -.8742 RRA .3211 RC3 -.0248 FAU .01407
FDE .3462 FRA .6464 FC3 -.0832 BSP 2369
BOE 1.0561 BRA 1.5980 BC3 .1182 FSP -77

MID-COURSE EXECUTION ACCURACY

SGT 872.1 SGR 447.7 SG3 35.7
RRT .0233 RRF -.0254 RTF -.6638
SG8 980.3 R23 -.0044 R13 -.6639
SG1 872.2 SG2 447.5 THA .93

ORBIT DETERMINATION ACCURACY

ST 364.9 SR 416.8 SS 344.9
CRT .6907 CRS .7981 CST .9853
LSA 609.8 MSA 231.7 SSA 13.9
EL1 510.3 EL2 215.5 ALF 50.47

LAUNCH DATE DEC 27 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 11 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 20.580 GAL 13.57 AZL 86.07 MCA 56.97 SMA 96.12 ECC .56658 INC 3.9262 VI 30.284
RP 107.52 LAP 3.29 LOP 152.23 VP 32.983 GAP -33.92 AZP 87.86 TAL 169.10 TAP 226.08 RCA 41.66 APO 150.58 V2 35.243
RC 57.501 GL 6.84 GP 1.78 ZAL 64.85 ZAP 23.15 ETS 184.71 ZAE 148.66 ETE 194.56 ZAC 89.50 ETC 166.31 CLP 23.08

DISTANCE 155.508

PLANETOCENTRIC CONIC

C3 132.410 VML 11.507 OLA 18.10 RAL 26.03 RAD 6570.4 VEL 15.929 PTH 2.81 VMP 20.107 DPA -3.30 RAP 356.34 ECC 3.1791
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 14 5 3262.79 -25.17 115.11 287.98 76.58 5 8 28 2662.8 -26.77 106.81
90.00 21 10 1 4704.91 15.57 200.93 274.50 66.04 22 28 26 4104.9 12.20 193.87
100.00 5 46 10 2965.86 -27.10 93.78 288.49 76.88 6 35 36 2365.9 -28.64 85.31
100.00 22 20 37 4477.08 17.37 183.33 273.65 65.29 23 35 14 3877.1 13.90 176.27
110.00 7 17 53 2678.91 -32.10 73.29 289.79 77.57 8 2 31 2078.9 -33.48 64.33
110.00 23 5 24 4336.79 21.99 170.33 271.28 63.15 24 17 40 3736.8 18.21 163.23

DIFFERENTIAL CORRECTIONS

TDE -.5910 TRA-1.5627 TC3 -.1199 BAU .2177
RDE -.8399 RRA .3002 RC3 -.0273 FAU .01438
FDE .3597 FRA .6686 FC3 -.0940 BSP 2535
BOE 1.0270 BRA 1.5913 BC3 .1230 FSP -86

MID-COURSE EXECUTION ACCURACY

SGT 912.6 SGR 451.2 SG3 38.8
RRT .0284 RRF -.0306 RTF -.6827
SG8 1018.1 R23 -.0050 R13 -.6828
SG1 912.8 SG2 451.0 THA 1.06

ORBIT DETERMINATION ACCURACY

ST 383.4 SR 420.9 SS 360.9
CRT .6910 CRS .7998 CST .9851
LSA 630.8 MSA 237.2 SSA 14.1
EL1 524.0 EL2 222.6 ALF 48.85

LAUNCH DATE DEC 27 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 13 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 21.127 GAL 12.97 AZL 86.16 MCA 60.22 SMA 97.74 ECC .54106 INC 3.8406 VI 30.284
RP 107.54 LAP 3.33 LOP 155.48 VP 33.321 GAP -32.30 AZP 88.09 TAL 168.46 TAP 228.68 RCA 44.86 APO 150.62 V2 35.238
RC 55.726 GL 7.24 GP 1.85 ZAL 63.98 ZAP 21.65 ETS 185.30 ZAE 149.82 ETE 195.53 ZAC 91.17 ETC 166.35 CLP 21.58

DISTANCE 161.766

PLANETOCENTRIC CONIC

C3 119.858 VML 10.948 OLA 18.79 RAL 26.76 RAD 6570.2 VEL 15.530 PTH 2.77 VMP 19.263 DPA -2.53 RAP 357.90 ECC 2.9726
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 9 43 3270.62 -25.05 115.65 287.46 76.34 5 4 13 2670.6 -26.68 107.36
90.00 21 20 9 4658.16 14.25 198.13 274.04 65.27 22 37 47 4058.2 10.80 191.15
100.00 5 42 29 2971.44 -27.01 94.17 287.98 76.69 6 32 1 2371.4 -28.58 85.71
100.00 22 30 3 4432.58 16.09 180.65 273.15 64.46 23 43 56 3832.6 12.52 173.68
110.00 7 15 34 2680.22 -32.08 73.38 289.32 77.52 8 0 15 2080.2 -33.47 64.43
110.00 23 13 28 4296.56 20.73 167.88 270.69 62.19 24 25 4 3696.6 16.85 160.91

DIFFERENTIAL CORRECTIONS

TDE -.5903 TRA-1.5591 TC3 -.1236 BAU .2038
RDE -.8059 RRA .2798 RC3 -.0300 FAU .01472
FDE .3738 FRA .6911 FC3 -.1063 BSP 2709
BOE .9989 BRA 1.5840 BC3 .1272 FSP -95

MID-COURSE EXECUTION ACCURACY

SGT 954.7 SGR 454.0 SG3 42.2
RRT .0341 RRF -.0366 RTF -.7009
SG8 1057.2 R23 -.0057 R13 -.7010
SG1 954.9 SG2 453.7 THA 1.20

ORBIT DETERMINATION ACCURACY

ST 402.9 SR 424.3 SS 377.5
CRT .6920 CRS .8018 CST .9848
LSA 652.7 MSA 242.2 SSA 14.3
EL1 538.4 EL2 223.3 ALF 47.14

LAUNCH DATE DEC 27 1968

FLIGHT TIME 78.00

ARRIVAL DATE MAR 15 1969

HELIOCENTRIC CONIC

DISTANCE 168.092

RL 147.12 LAL .00 LOL 95.31 VL 21.637 GAL 12.38 AZL 86.24 MCA 63.46 SMA 99.33 ECC .51643 INC 3.7605 V1 30.284  
 RP 107.56 LAP 3.36 LOP 158.73 VP 33.641 GAP -30.76 A7P 88.32 TAL 167.85 TAP 231.32 RCA 48.03 APO 150.63 V2 35.232  
 RC 54.021 GL 7.65 GP 1.93 ZAL 63.19 ZAP 20.17 ETS 185.98 ZAE 151.13 ETE 196.62 ZAC 92.84 ETC 166.38 CLP 20.08

PLANETOCENTRIC CONIC

C3 108.547 VML 10.419 CLA 19.47 RAL 27.41 RAD 6570.1 VEL 15.162 PTH 2.72 VHP 18.449 DPA -1.75 RAP 359.47 ECC 2.7864  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 5 1 3277.80 -24.93 116.14 286.80 76.12 4 59 39 2677.8 -26.60 107.87  
 90.00 21 30 6 4610.64 12.88 195.31 273.52 64.56 22 46 57 4010.6 9.35 188.41  
 100.00 5 38 32 2976.25 -26.94 94.51 287.35 76.53 6 28 8 2376.3 -28.52 86.06  
 100.00 22 39 16 4387.42 14.74 177.98 272.60 63.70 23 52 24 3787.4 11.09 171.09  
 110.00 7 13 2 2680.60 -32.08 73.41 288.71 77.50 7 57 42 2080.6 -33.46 64.46  
 110.00 23 21 16 4255.84 19.42 165.45 270.05 61.30 24 32 11 3655.8 15.44 158.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5898 TRA -1.5545 TC3 -.1263 BAU .1894 SGT 998.3 SGR 456.1 SG3 45.9 ST 423.4 SR 427.1 SS 394.8  
 RDE -.7723 RRA .2597 RC3 -.0329 FAU .01510 RRT .0405 RRF -.0432 RTF -.7184 CRT .6935 CRS .8041 CST .9846  
 FDE .3886 FRA .7141 FC3 -.1204 BSP 2890 SGB 1097.5 R23 -.0065 R13 -.7185 LSA 675.7 MSA 246.6 SSA 14.5  
 BDE .9718 BRA 1.5760 BC3 .1305 FSP -105 SG1 998.5 SG2 455.6 TMA 1.34 EL1 553.4 EL2 235.4 ALF 45.36

LAUNCH DATE DEC 27 1968

FLIGHT TIME 80.00

ARRIVAL DATE MAR 17 1969

HELIOCENTRIC CONIC

DISTANCE 174.481

RL 147.12 LAL .00 LOL 95.31 VL 22.113 GAL 11.80 AZL 86.32 MCA 66.70 SMA 100.90 ECC .49274 INC 3.6848 V1 30.284  
 RP 107.58 LAP 3.38 LOP 161.97 VP 33.942 GAP -29.30 A7P 88.54 TAL 167.28 TAP 233.98 RCA 51.18 APO 150.63 V2 35.226  
 RC 52.393 GL 8.06 GP 2.01 ZAL 62.46 ZAP 18.71 ETS 186.77 ZAE 152.58 ETE 197.85 ZAC 94.53 ETC 166.39 CLP 18.60

PLANETOCENTRIC CONIC

C3 98.347 VML 9.917 CLA 20.13 RAL 28.01 RAD 6569.9 VEL 14.822 PTH 2.68 VHP 17.665 DPA -.95 RAP 1.04 ECC 2.6186  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 59 58 3284.41 -24.82 116.60 286.02 75.92 4 54 42 2684.4 -26.52 108.34  
 90.00 21 39 53 4562.34 11.45 192.48 272.95 63.93 22 55 55 3962.3 7.86 185.65  
 100.00 5 34 16 2980.35 -26.87 94.79 286.58 76.39 6 23 56 2380.3 -28.48 86.36  
 100.00 22 48 16 4341.63 13.34 175.30 271.98 63.00 24 0 38 3741.6 9.62 168.49  
 110.00 7 10 14 2680.09 -32.09 73.38 287.97 77.52 7 54 54 2080.1 -33.47 64.42  
 110.00 23 28 47 4214.65 18.06 163.04 269.35 60.47 24 39 2 3614.7 13.99 156.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5926 TRA -1.5512 TC3 -.1290 BAU .1761 SGT 1045.8 SGR 457.5 SG3 49.9 ST 446.4 SR 429.4 SS 413.1  
 RDE -.7392 RRA .2402 RC3 -.0358 FAU .01551 RRT .0488 RRF -.0510 RTF -.7347 CRT .6967 CRS .8069 CST .9847  
 FDE .4045 FRA .7378 FC3 -.1365 BSP 3014 SGB 1141.5 R23 -.0067 R13 -.7348 LSA 701.0 MSA 250.4 SSA 14.7  
 BDE .9474 BRA 1.5697 BC3 .1339 FSP -116 SG1 1046.1 SG2 456.8 TMA 1.51 EL1 570.6 EL2 241.0 ALF 43.40

LAUNCH DATE DEC 27 1968

FLIGHT TIME 82.00

ARRIVAL DATE MAR 19 1969

HELIOCENTRIC CONIC

DISTANCE 180.928

RL 147.12 LAL .00 LOL 95.31 VL 22.556 GAL 11.25 AZL 86.39 MCA 69.94 SMA 102.45 ECC .47000 INC 3.6128 V1 30.284  
 RP 107.60 LAP 3.39 LOP 165.22 VP 34.225 GAP -27.90 A7P 88.76 TAL 166.73 TAP 236.68 RCA 54.30 APO 150.60 V2 35.219  
 RC 50.852 GL 8.49 GP 2.09 ZAL 61.81 ZAP 17.25 ETS 187.69 ZAE 154.19 ETE 199.27 ZAC 96.22 ETC 166.38 CLP 17.13

PLANETOCENTRIC CONIC

C3 89.146 VML 9.442 CLA 20.77 RAL 28.53 RAD 6569.7 VEL 14.508 PTH 2.63 VHP 16.908 DPA -.14 RAP 2.62 ECC 2.4671  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 54 33 3290.55 -24.72 117.02 285.11 75.73 4 49 23 2690.5 -26.44 108.77  
 90.00 21 49 30 4513.27 9.97 189.64 272.31 63.36 23 4 43 3913.3 6.32 182.87  
 100.00 5 29 41 2983.80 -26.82 95.03 285.69 76.27 6 19 24 2383.8 -28.44 86.61  
 100.00 22 57 3 4295.26 11.89 172.61 271.31 62.37 24 8 38 3695.3 8.10 165.88  
 110.00 7 7 11 2678.75 -32.11 73.28 287.10 77.58 7 51 50 2078.8 -33.48 64.32  
 110.00 23 36 2 4173.07 16.65 160.64 268.60 59.70 24 45 35 3573.1 12.50 153.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5934 TRA -1.5443 TC3 -.1295 BAU .1612 SGT 1092.7 SGR 458.1 SG3 54.3 ST 469.2 SR 431.0 SS 431.9  
 RDE -.7066 RRA .2211 RC3 -.0389 FAU .01598 RRT .0570 RRF -.0594 RTF -.7506 CRT .6997 CRS .8099 CST .9846  
 FDE .4211 FRA .7619 FC3 -.1552 BSP 3204 SGB 1184.9 R23 -.0075 R13 -.7508 LSA 726.6 MSA 253.5 SSA 14.8  
 BDE .9227 BRA 1.5601 BC3 .1352 FSP -128 SG1 1093.1 SG2 457.2 TMA 1.66 EL1 587.8 EL2 245.8 ALF 41.53

LAUNCH DATE DEC 27 1968

FLIGHT TIME 84.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC

DISTANCE 187.426

RL 147.12 LAL .00 LOL 95.31 VL 22.970 GAL 10.70 AZL 86.46 MCA 73.18 SMA 103.96 ECC .44822 INC 3.5437 V1 30.284  
 RP 107.62 LAP 3.39 LOP 168.47 VP 34.491 GAP -26.56 A7P 88.97 TAL 166.22 TAP 239.41 RCA 57.36 APO 150.55 V2 35.211  
 RC 49.405 GL 8.93 GP 2.19 ZAL 61.23 ZAP 15.81 ETS 188.79 ZAE 155.94 ETE 200.92 ZAC 97.91 ETC 166.34 CLP 15.67

PLANETOCENTRIC CONIC

C3 80.842 VML 8.991 CLA 21.40 RAL 28.99 RAD 6569.6 VEL 14.219 PTH 2.59 VHP 16.178 DPA .68 RAP 4.19 ECC 2.3305  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 48 45 3296.32 -24.62 117.41 284.07 75.55 4 43 41 2696.3 -26.37 109.18  
 90.00 21 58 57 4463.49 8.44 186.79 271.62 62.87 23 13 21 3863.5 4.73 180.07  
 100.00 5 24 47 2986.69 -26.77 95.24 284.67 76.18 6 14 33 2386.7 -28.41 86.82  
 100.00 23 5 37 4248.34 10.40 169.93 270.58 61.82 24 16 25 3648.3 6.55 163.26  
 110.00 7 3 53 2676.64 -32.14 73.12 286.10 77.67 7 48 29 2076.6 -33.50 64.15  
 110.00 23 43 0 4131.16 15.19 158.26 267.79 59.00 24 51 51 3531.2 10.97 151.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5949 TRA -1.5362 TC3 -.1286 BAU .1462 SGT 1141.3 SGR 458.0 SG3 59.2 ST 493.2 SR 431.9 SS 451.6  
 RDE -.6747 RRA .2025 RC3 -.0420 FAU .01650 RRT .0664 RRF -.0690 RTF -.7658 CRT .7036 CRS .8133 CST .9846  
 FDE .4388 FRA .7866 FC3 -.1767 BSP 3398 SGB 1229.8 R23 -.0084 R13 -.7660 LSA 753.7 MSA 255.8 SSA 15.0  
 BDE .8995 BRA 1.5495 BC3 .1353 FSP -141 SG1 1141.8 SG2 456.8 TMA 1.82 EL1 606.2 EL2 249.7 ALF 39.65

LAUNCH DATE DEC 27 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 23 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 23.355 GAL 10.18 AZL 86.52 MCA 76.42 SMA 105.43 ECC .42740 INC 3.4769 VI 30.284  
 RP 107.65 LAP 3.38 LOP 171.71 VP 34.741 GAP -25.28 AZP 89.18 TAL 165.75 TAP 242.17 RCA 60.37 APO 150.49 V2 35.202  
 RC 48.064 GL 9.37 GP 2.30 ZAL 60.71 ZAP 14.38 ETS 190.13 ZAE 157.85 ETE 202.89 ZAC 99.60 ETC 166.29 CLP 14.20

DISTANCE 193.970

PLANETOCENTRIC CONIC  
 C3 73.349 VHL 8.564 DLA 22.00 RAL 29.38 RAD 6569.4 VEL 13.953 PTH 2.55 VHP 15.473 DPA 1.51 RAP 5.77 ECC 2.2071  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 34 3301.82 -24.53 117.79 282.92 75.39 4 37 35 2701.8 -26.30 109.57  
 90.00 22 8 16 4413.01 6.86 183.92 270.87 62.46 23 21 49 3813.0 3.12 177.24  
 100.00 5 19 33 2989.08 -26.73 95.40 283.54 76.10 6 9 22 2389.1 -28.38 86.99  
 100.00 23 13 58 4200.98 8.86 167.26 269.79 61.34 24 23 59 3601.0 4.97 160.63  
 110.00 7 0 19 2673.81 -32.18 72.91 284.99 77.79 7 44 53 2073.8 -33.52 63.94  
 110.00 23 49 41 4089.02 13.70 155.91 266.93 58.37 24 57 50 3489.0 9.42 149.43

DIFFERENTIAL CORRECTIONS  
 TDE -.5970 TRA-1.5266 TC3 -.1258 BAU .1311 SGT 1191.4 SGR 457.1 SG3 64.4 ST 518.4 SR 432.3 SS 472.2  
 RDE -.6434 RRA .1845 RC3 -.0450 FAU .01708 RRT .0770 RRF -.0798 RTF -.7802 CRT .7083 CRS .8170 CST .9847  
 FDE .4577 FRA .8121 FC3 -.2016 BSP 3591 SGB 1276.1 R23 -.0094 R13 -.7804 LSA 782.4 MSA 257.4 SSA 15.1  
 BOE .8777 BRA 1.5377 BC3 .1337 FSP -156 SG1 1192.0 SG2 455.5 THA 1.98 EL1 625.9 EL2 252.8 ALF 37.77

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 27 1968

FLIGHT TIME 88.00

ARRIVAL DATE MAR 25 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 23.714 GAL 9.67 AZL 86.59 MCA 79.66 SMA 106.87 ECC .40753 INC 3.4120 VI 30.284  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.974 GAP -24.05 AZP 89.39 TAL 165.32 TAP 244.98 RCA 63.32 APO 150.42 V2 35.194  
 RC 46.839 GL 9.82 GP 2.41 ZAL 60.27 ZAP 12.97 ETS 191.77 ZAE 159.88 ETE 205.29 ZAC 101.29 ETC 166.21 CLP 12.74

DISTANCE 200.555

PLANETOCENTRIC CONIC  
 C3 66.586 VHL 8.160 DLA 22.60 RAL 29.71 RAD 6569.3 VEL 13.709 PTH 2.51 VHP 14.793 DPA 2.35 RAP 7.33 ECC 2.0958  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 35 58 3307.16 -24.44 118.15 281.65 75.23 4 31 5 2707.2 -26.23 109.94  
 90.00 22 17 26 4361.91 5.24 181.04 270.08 62.13 23 30 8 3761.9 1.47 174.38  
 100.00 5 14 0 2991.07 -26.70 95.54 282.29 76.03 6 3 51 2391.1 -28.36 87.13  
 100.00 23 22 5 4153.24 7.29 164.58 268.96 60.93 24 31 18 3553.2 3.36 158.00  
 110.00 6 56 31 2670.32 -32.23 72.65 283.76 77.93 7 41 2 2070.3 -33.55 63.67  
 110.00 23 56 3 4046.75 12.18 153.58 266.02 57.81 25 3 30 3446.8 7.84 147.17

DIFFERENTIAL CORRECTIONS  
 TDE -.5997 TRA-1.5157 TC3 -.1208 BAU .1157 SGT 1243.0 SGR 455.5 SG3 70.2 ST 544.9 SR 432.1 SS 494.0  
 RDE -.6130 RRA .1669 RC3 -.0480 FAU .01773 RRT .0889 RRF -.0919 RTF -.7940 CRT .7139 CRS .8213 CST .9849  
 FDE .4781 FRA .8384 FC3 -.2305 BSP 3792 SGB 1323.8 R23 -.0105 R13 -.7942 LSA 812.9 MSA 258.1 SSA 15.3  
 BOE .8576 BRA 1.5249 BC3 .1300 FSP -173 SG1 1243.7 SG2 453.5 THA 2.15 EL1 647.1 EL2 254.8 ALF 35.92

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 27 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 27 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 24.048 GAL 9.18 AZL 86.65 MCA 82.89 SMA 108.26 ECC .38862 INC 3.3484 VI 30.284  
 RP 107.71 LAP 3.32 LOP 178.19 VP 35.192 GAP -22.87 AZP 89.59 TAL 164.93 TAP 247.83 RCA 66.19 APO 150.33 V2 35.184  
 RC 45.742 GL 10.27 GP 2.54 ZAL 59.90 ZAP 11.56 ETS 193.86 ZAE 162.05 ETE 208.30 ZAC 102.97 ETC 166.10 CLP 11.28

DISTANCE 207.177

PLANETOCENTRIC CONIC  
 C3 60.482 VHL 7.777 DLA 23.17 RAL 29.96 RAD 6569.1 VEL 13.485 PTH 2.46 VHP 14.136 DPA 3.20 RAP 8.90 ECC 1.9954  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 57 3312.46 -24.34 118.51 280.28 75.07 4 24 10 2712.5 -26.16 110.32  
 90.00 22 26 28 4310.26 3.59 178.14 269.22 61.89 23 38 18 3710.3 -.20 171.50  
 100.00 5 8 7 2992.70 -26.67 95.66 280.94 75.98 5 58 0 2392.7 -28.34 87.25  
 100.00 23 29 59 4105.24 5.70 161.91 268.06 60.61 24 38 24 3505.2 1.74 155.36  
 110.00 6 52 29 2666.21 -32.29 72.34 282.43 78.10 7 36 55 2066.2 -33.59 63.35  
 110.00 0 6 2 4004.50 10.64 151.28 265.07 57.32 1 12 47 3404.5 6.25 144.93

DIFFERENTIAL CORRECTIONS  
 TDE -.6029 TRA-1.5034 TC3 -.1135 BAU .1005 SGT 1296.1 SGR 453.3 SG3 76.6 ST 572.7 SR 431.3 SS 516.9  
 RDE -.5834 RRA .1500 RC3 -.0509 FAU .01844 RRT .1023 RRF -.1056 RTF -.8070 CRT .7202 CRS .8259 CST .9851  
 FDE .4999 FRA .8658 FC3 -.2640 BSP 3995 SGB 1373.1 R23 -.0118 R13 -.8072 LSA 845.2 MSA 258.1 SSA 15.4  
 BOE .8390 BRA 1.5108 BC3 .1243 FSP -191 SG1 1297.0 SG2 450.6 THA 2.33 EL1 669.7 EL2 255.9 ALF 34.13

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 27 1968

FLIGHT TIME 92.00

ARRIVAL DATE MAR 29 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 24.360 GAL 8.71 AZL 86.71 MCA 86.12 SMA 109.61 ECC .37065 INC 3.2858 VI 30.284  
 RP 107.74 LAP 3.28 LOP 181.43 VP 35.395 GAP -21.73 AZP 89.78 TAL 164.59 TAP 250.71 RCA 68.98 APO 150.23 V2 35.174  
 RC 44.782 GL 10.73 GP 2.68 ZAL 59.60 ZAP 10.18 ETS 196.56 ZAE 164.30 ETE 212.22 ZAC 104.63 ETC 165.97 CLP 9.82

DISTANCE 213.829

PLANETOCENTRIC CONIC  
 C3 54.975 VHL 7.414 DLA 23.72 RAL 30.14 RAD 6569.0 VEL 13.279 PTH 2.43 VHP 13.502 DPA 4.06 RAP 10.45 ECC 1.9047  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 31 3317.81 -24.25 118.88 278.80 74.91 4 16 49 2717.8 -26.09 110.69  
 90.00 22 35 21 4258.14 1.91 175.22 268.32 61.74 23 46 20 3658.1 -1.88 168.60  
 100.00 5 1 56 2994.05 -26.65 95.75 279.49 75.93 5 51 50 2394.0 -28.32 87.35  
 100.00 23 37 38 4057.13 4.09 159.25 267.12 60.36 24 45 15 3457.1 .11 152.72  
 110.00 6 48 13 2661.53 -32.35 71.99 280.99 78.30 7 32 35 2061.5 -33.62 62.99  
 110.00 0 11 46 3962.41 9.08 149.01 264.06 56.90 1 17 48 3362.4 4.66 142.71

DIFFERENTIAL CORRECTIONS  
 TDE -.6092 TRA-1.4918 TC3 -.1049 BAU .0865 SGT 1353.3 SGR 450.3 SG3 83.6 ST 603.6 SR 430.1 SS 541.5  
 RDE -.5548 RRA .1335 RC3 -.0535 FAU .01922 RRT .1187 RRF -.1215 RTF -.8187 CRT .7284 CRS .8311 CST .9856  
 FDE .5240 FRA .8947 FC3 -.3026 BSP 4146 SGB 1426.2 R23 -.0126 R13 -.8190 LSA 881.1 MSA 257.0 SSA 15.6  
 BOE .8240 BRA 1.4978 BC3 .1177 FSP -211 SG1 1354.4 SG2 446.8 THA 2.54 EL1 695.6 EL2 255.7 ALF 32.31

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 27 1968

FLIGHT TIME 94.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 220.508

RL 147.12 LAL .00 LOL 95.31 VL 24.649 GAL 8.26 AZL 86.78 MCA 89.36 SMA 110.91 ECC .35360 INC 3.2237 V1 30.284  
 RP 107.77 LAP 3.22 LOP 184.67 VP 35.585 GAP -20.65 AZP 89.96 TAL 164.29 TAP 253.64 RCA 71.69 APO 150.12 V2 35.164  
 RC 43.971 GL 11.19 GP 2.84 ZAL 59.37 ZAP 8.82 ETS 200.17 ZAE 166.60 ETE 217.52 ZAC 106.28 ETC 165.81 CLP 8.35

PLANETOCENTRIC CONIC

C3 50.006 VHL 7.071 DLA 24.25 RAL 30.26 RAD 6568.8 VEL 13.091 PTH 2.39 VHP 12.891 DPA 4.94 RAP 11.99 ECC 1.8230  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 40 3323.30 -24.15 119.25 277.23 74.75 4 9 4 2723.3 -26.01 111.08  
 90.00 22 44 7 4205.66 .22 172.30 267.37 61.68 23 54 12 2395.7 -3.57 165.66  
 100.00 4 55 28 2995.12 -26.63 95.82 277.95 75.90 5 45 23 2395.1 -28.31 87.42  
 100.00 23 45 1 4009.07 2.46 156.61 266.13 60.20 24 51 50 3409.1 -1.52 150.08  
 110.00 6 43 45 2656.31 -32.42 71.60 279.46 78.52 7 28 2 2056.3 -33.66 62.59  
 110.00 0 17 8 3920.65 7.52 146.78 263.00 56.56 1 22 29 3320.7 3.07 140.52

DIFFERENTIAL CORRECTIONS

TDE -.6136 TRA -1.4765 TC3 -.0914 BAU .0716  
 RDE -.5272 RRA .1175 RC3 -.0557 FAU .02010  
 FDE .5497 FRA .9247 FC3 -.3480 BSP 4354  
 BOE .8090 BRA 1.4812 BC3 .1071 FSP -233

MID-COURSE EXECUTION ACCURACY

SGT 1409.1 SGR 446.7 SC3 91.3  
 RRT .1359 RRF -.1392 RTF -.8304  
 SGB 1478.2 R23 -.0141 R13 -.8307  
 SG1 1410.5 SG2 442.1 THA 2.74

ORBIT DETERMINATION ACCURACY

ST 634.1 SR 428.3 SS 567.2  
 CRT .7365 CRS .8367 CST .9859  
 LSA 917.6 MSA 255.2 SSA 15.7  
 EL1 721.7 EL2 254.6 ALF 30.67

LAUNCH DATE DEC 27 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 227.209

RL 147.12 LAL .00 LOL 95.31 VL 24.919 GAL 7.82 AZL 86.84 MCA 92.58 SMA 112.16 ECC .33746 INC 3.1617 V1 30.284  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.761 GAP -19.60 AZP 90.14 TAL 164.04 TAP 256.62 RCA 74.31 APO 150.01 V2 35.153  
 RC 43.319 GL 11.64 GP 3.01 ZAL 59.22 ZAP 7.50 ETS 205.19 ZAE 168.87 ETE 225.07 ZAC 107.92 ETC 165.61 CLP 6.87

PLANETOCENTRIC CONIC

C3 45.524 VHL 6.747 DLA 24.75 RAL 30.30 RAD 6568.7 VEL 12.919 PTH 2.35 VHP 12.301 DPA 5.82 RAP 13.52 ECC 1.7492  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 5 25 3328.99 -24.05 119.64 275.57 74.58 4 0 54 2729.0 -25.93 111.47  
 90.00 22 52 43 4152.97 -1.48 169.36 266.37 61.72 24 1 56 3553.0 -5.25 162.71  
 100.00 4 48 44 2995.94 -26.62 95.88 276.32 75.87 5 38 39 2395.9 -28.30 87.48  
 100.00 23 52 6 3961.26 .84 153.98 265.08 60.12 24 58 7 3361.3 -3.14 147.46  
 110.00 6 39 8 2650.53 -32.50 71.17 277.84 78.77 7 23 18 2050.5 -33.71 62.14  
 110.00 0 22 7 3879.43 5.97 144.60 261.90 56.28 1 26 47 3279.4 1.50 138.37

DIFFERENTIAL CORRECTIONS

TDE -.6184 TRA -1.4597 TC3 -.0742 BAU .0571  
 RDE -.5007 RRA .1020 RC3 -.0575 FAU .02108  
 FDE .5776 FRA .9561 FC3 -.4009 BSP 4566  
 BOE .7957 BRA 1.4633 BC3 .0939 FSP -258

MID-COURSE EXECUTION ACCURACY

SGT 1465.9 SGR 442.6 SC3 99.7  
 RRT .1534 RRF -.1591 RTF -.8414  
 SGB 1531.2 R23 -.0159 R13 -.8417  
 SG1 1467.7 SG2 436.7 THA 2.95

ORBIT DETERMINATION ACCURACY

ST 665.9 SR 426.1 SS 594.4  
 CRT .7455 CRS .8427 CST .9864  
 LSA 956.1 MSA 252.7 SSA 15.8  
 EL1 749.2 EL2 252.4 ALF 29.12

LAUNCH DATE DEC 27 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 233.927

RL 147.12 LAL .00 LOL 95.31 VL 25.169 GAL 7.40 AZL 86.90 MCA 95.81 SMA 113.36 ECC .32220 INC 3.0994 V1 30.284  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.925 GAP -18.60 AZP 90.31 TAL 163.83 TAP 259.64 RCA 76.83 APO 149.88 V2 35.141  
 RC 42.834 GL 12.09 GP 3.21 ZAL 59.13 ZAP 6.26 ETS 212.44 ZAE 170.96 ETE 236.32 ZAC 109.53 ETC 165.38 CLP 5.38

PLANETOCENTRIC CONIC

C3 41.483 VHL 6.441 DLA 25.22 RAL 30.28 RAD 6568.6 VEL 12.761 PTH 2.32 VHP 11.731 DPA 6.71 RAP 15.02 ECC 1.6827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 56 48 3334.90 -23.94 120.04 273.83 74.41 3 52 23 2734.9 -25.85 111.89  
 90.00 23 1 9 4100.25 -3.18 166.41 265.32 61.85 24 9 29 3500.2 -6.92 159.73  
 100.00 4 41 47 2996.45 -26.61 95.92 274.61 75.85 5 31 43 2396.4 -28.29 87.52  
 100.00 0 2 47 3913.93 -.76 151.39 263.98 60.12 1 8 1 3313.9 -4.73 144.85  
 110.00 6 34 22 2644.20 -32.58 70.69 276.14 79.04 7 18 26 2044.2 -33.75 61.65  
 110.00 0 26 42 3838.95 4.43 142.47 260.75 56.07 1 30 41 3238.9 -.05 136.26

DIFFERENTIAL CORRECTIONS

TDE -.6238 TRA -1.4415 TC3 -.0528 BAU .0437  
 RDE -.4753 RRA .0870 RC3 -.0585 FAU .02217  
 FDE .6080 FRA .9894 FC3 -.4628 BSP 4775  
 BOE .7842 BRA 1.4441 BC3 .0788 FSP -285

MID-COURSE EXECUTION ACCURACY

SGT 1523.7 SGR 437.9 SC3 109.1  
 RRT .1776 RRF -.1819 RTF -.8517  
 SGB 1585.4 R23 -.0178 R13 -.8521  
 SG1 1525.9 SG2 430.3 THA 3.17

ORBIT DETERMINATION ACCURACY

ST 699.1 SR 423.6 SS 623.2  
 CRT .7554 CRS .8491 CST .9869  
 LSA 997.1 MSA 249.3 SSA 15.9  
 EL1 778.5 EL2 249.3 ALF 27.67

LAUNCH DATE DEC 27 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 240.659

RL 147.12 LAL .00 LOL 95.31 VL 25.401 GAL 7.00 AZL 86.96 MCA 99.04 SMA 114.51 ECC .30781 INC 3.0364 V1 30.284  
 RP 107.87 LAP 3.00 LOP 194.36 VP 36.077 GAP -17.63 AZP 90.48 TAL 163.67 TAP 262.70 RCA 79.26 APO 149.75 V2 35.129  
 RC 42.524 GL 12.54 GP 3.42 ZAL 59.11 ZAP 5.16 ETS 223.26 ZAE 172.60 ETE 253.39 ZAC 111.11 ETC 165.11 CLP 3.86

PLANETOCENTRIC CONIC

C3 37.841 VHL 6.151 DLA 25.67 RAL 30.19 RAD 6568.5 VEL 12.618 PTH 2.29 VHP 11.182 DPA 7.61 RAP 16.51 ECC 1.6228  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 47 50 3341.00 -23.83 120.45 272.02 74.23 3 43 31 2741.0 -25.76 112.31  
 90.00 23 9 23 4047.72 -4.86 163.47 264.22 62.07 24 16 51 3447.7 -8.56 156.74  
 100.00 4 34 41 2996.56 -26.61 95.92 272.84 75.85 5 24 37 2396.6 -28.29 87.53  
 100.00 0 9 10 3867.40 -2.94 148.83 262.83 60.19 1 13 37 3267.4 -6.29 142.27  
 110.00 6 29 31 2637.25 -32.67 70.17 274.38 79.34 7 13 28 2037.3 -33.80 61.12  
 110.00 0 30 49 3799.47 2.93 140.40 259.55 55.93 1 34 8 3199.5 -1.56 134.20

DIFFERENTIAL CORRECTIONS

TDE -.6294 TRA -1.4217 TC3 -.0267 BAU .0326  
 RDE -.4512 RRA .0724 RC3 -.0585 FAU .02339  
 FDE .6412 FRA 1.0248 FC3 -.5351 BSP 4990  
 BOE .7744 BRA 1.4235 BC3 .0644 FSP -315

MID-COURSE EXECUTION ACCURACY

SGT 1582.1 SGR 432.8 SC3 119.5  
 RRT .2027 RRF -.2078 RTF -.8614  
 SGB 1640.3 R23 -.0201 R13 -.8614  
 SG1 1584.8 SG2 423.2 THA 3.42

ORBIT DETERMINATION ACCURACY

ST 733.4 SR 420.8 SS 653.8  
 CRT .7661 CRS .8560 CST .9874  
 LSA 1040.3 MSA 245.1 SSA 16.0  
 EL1 809.3 EL2 245.1 ALF 26.33

LAUNCH DATE DEC 27 1968

FLIGHT TIME 102.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 25.617 GAL 6.62 AZL 87.03 MCA 102.26 SMA 115.61 ECC .29427 INC 2.9723 VI 30.284
RP 107.91 LAP 2.90 LOP 197.59 VP 36.217 GAP -16.70 AZP 90.63 TAL 163.56 TAP 265.82 RCA 81.59 APO 149.62 V2 35.117
RC 42.392 GL 12.97 GP 3.67 ZAL 59.15 ZAP 4.34 ETS 239.36 ZAE 173.37 ETE 276.93 ZAC 112.65 ETC 164.80 CLP 2.33

DISTANCE 247.400

PLANETOCENTRIC CONIC

C3 34.558 VHL 5.879 CLA 26.08 RAL 30.03 RAD 6568.4 VEL 12.487 PTH 2.26 VHP 10.653 DPA 8.52 RAP 17.96 ECC 1.5687
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 38 38 3347.18 -23.71 120.86 270.16 74.05 3 34 25 2747.2 -25.67 112.74
90.00 23 17 22 3995.70 -6.51 160.54 263.07 62.38 24 23 57 3395.7 -10.16 153.76
100.00 4 27 32 2996.10 -26.61 95.89 271.02 75.86 5 17 28 2396.1 -28.30 87.49
100.00 0 15 5 3822.01 -3.87 146.33 261.62 60.34 1 18 47 3222.0 -7.79 139.74
110.00 6 24 40 2629.61 -32.77 69.59 272.55 79.66 7 8 29 2029.6 -33.84 60.52
110.00 0 34 26 3761.27 1.47 138.41 258.30 55.84 1 37 7 3161.3 -3.02 132.20

DIFFERENTIAL CORRECTIONS

TDE -.6353 TRA-1.4006 TC3 .0041 BAU .0266
RDE -.4283 RRA .0581 RC3 -.0574 FAU .02474
FDE .6774 FRA 1.0627 FC3 -.6197 BSP 5201
BDE .7662 BRA 1.4018 BC3 .0576 FSP -349

MID-COURSE EXECUTION ACCURACY

SGT 1641.1 SGR 427.5 SG3 130.9
RRT .2314 RRF -.2373 RTF -.8705
SG8 1695.9 R23 -.0227 R13 -.8710
SG1 1644.3 SG2 415.1 THA 3.68

ORBIT DETERMINATION ACCURACY

ST 768.9 SR 417.9 SS 686.3
CRT .7776 CRS .8633 CST .9880
LSA 1085.8 MSA 240.3 SSA 16.1
EL1 841.6 EL2 240.1 ALF 25.09

LAUNCH DATE DEC 27 1968

FLIGHT TIME 104.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 25.817 GAL 6.25 AZL 87.09 MCA 105.48 SMA 116.65 ECC .28153 INC 2.9068 VI 30.284
RP 107.95 LAP 2.80 LOP 200.81 VP 36.347 GAP -15.80 AZP 90.78 TAL 163.49 TAP 268.97 RCA 83.81 APO 149.49 V2 35.105
RC 42.442 GL 13.39 GP 3.94 ZAL 59.26 ZAP 4.01 ETS 260.80 ZAE 172.97 ETE 301.66 ZAC 114.16 ETC 164.45 CLP .78

DISTANCE 254.148

PLANETOCENTRIC CONIC

C3 31.601 VHL 5.622 OLA 26.45 RAL 29.81 RAD 6568.3 VEL 12.368 PTH 2.23 VHP 10.142 DPA 9.44 RAP 19.38 ECC 1.5201
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 29 17 3353.15 -23.60 121.27 268.24 73.88 3 25 10 2753.2 -25.59 113.16
90.00 23 24 58 3944.64 -8.11 157.64 261.87 62.78 24 30 43 3344.6 -11.70 150.80
100.00 4 20 26 2994.81 -26.64 95.80 269.14 75.91 5 10 21 2394.8 -28.31 87.40
100.00 0 20 26 3778.22 -5.34 143.92 260.36 60.55 1 23 24 3178.2 -9.23 137.28
110.00 6 19 52 2621.13 -32.87 68.95 270.67 80.03 7 3 33 2021.1 -33.89 59.87
110.00 0 37 30 3724.65 .07 136.50 257.00 55.82 1 39 35 3124.7 -4.41 130.29

DIFFERENTIAL CORRECTIONS

TDE -.6388 TRA-1.3764 TC3 .0435 BAU .0295
RDE -.4067 RRA .0442 RC3 -.0547 FAU .02628
FDE .7161 FRA 1.1025 FC3 -.7201 BSP 5467
BDE .7573 BRA 1.3771 BC3 .0699 FSP -389

MID-COURSE EXECUTION ACCURACY

SGT 1697.5 SGR 422.1 SG3 143.6
RRT .2626 RRF -.2704 RTF -.8794
SG8 1749.2 R23 -.0263 R13 -.8799
SG1 1701.3 SG2 406.4 THA 3.96

ORBIT DETERMINATION ACCURACY

ST 803.1 SR 414.8 SS 720.0
CRT .7890 CRS .8709 CST .9885
LSA 1131.3 MSA 235.1 SSA 16.2
EL1 872.9 EL2 234.5 ALF 24.02

LAUNCH DATE DEC 27 1968

FLIGHT TIME 106.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 26.002 GAL 5.90 AZL 87.16 MCA 108.70 SMA 117.64 ECC .26959 INC 2.8391 VI 30.284
RP 107.99 LAP 2.69 LOP 204.03 VP 36.467 GAP -14.93 AZP 90.91 TAL 163.48 TAP 272.17 RCA 85.93 APO 149.36 V2 35.092
RC 42.671 GL 13.78 GP 4.24 ZAL 59.43 ZAP 4.32 ETS 282.88 ZAE 171.58 ETE 320.82 ZAC 115.61 ETC 164.05 CLP -.81

DISTANCE 260.898

PLANETOCENTRIC CONIC

C3 28.938 VHL 5.379 CLA 26.77 RAL 29.54 RAD 6568.2 VEL 12.260 PTH 2.21 VHP 9.691 DPA 10.38 RAP 20.77 ECC 1.4763
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 20 0 3358.47 -23.50 121.62 266.29 73.73 3 15 58 2758.5 -25.51 113.53
90.00 23 32 4 3895.16 -9.64 154.81 260.61 63.25 24 36 59 3295.2 -13.16 147.89
100.00 4 13 35 2992.29 -26.68 95.63 267.24 75.99 5 3 27 2392.3 -28.34 87.22
100.00 0 25 6 3736.57 -6.73 141.60 259.05 60.81 1 27 22 3136.6 -10.57 134.92
110.00 6 15 13 2611.66 -32.98 68.24 268.75 80.44 6 58 45 2011.7 -33.94 59.13
110.00 0 39 57 3689.97 -1.26 134.69 255.66 55.84 1 41 27 3090.0 -5.73 128.46

DIFFERENTIAL CORRECTIONS

TDE -.6438 TRA-1.3517 TC3 .0877 BAU .0391
RDE -.3867 RRA .0304 RC3 -.0501 FAU .02798
FDE .7589 FRA 1.1461 FC3 -.8369 BSP 5688
BDE .7510 BRA 1.3521 BC3 .1010 FSP -431

MID-COURSE EXECUTION ACCURACY

SGT 1754.8 SGR 416.9 SG3 157.7
RRT .2991 RRF -.3084 RTF -.8877
SG8 1803.7 R23 -.0300 R13 -.8883
SG1 1759.5 SG2 396.8 THA 4.28

ORBIT DETERMINATION ACCURACY

ST 839.2 SR 412.0 SS 756.1
CRT .8016 CRS .8790 CST .9892
LSA 1180.2 MSA 229.0 SSA 16.2
EL1 906.6 EL2 228.0 ALF 23.02

LAUNCH DATE DEC 27 1968

FLIGHT TIME 108.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 95.31 VL 26.173 GAL 5.57 AZL 87.23 MCA 111.91 SMA 118.58 ECC .25842 INC 2.7689 VI 30.284
RP 108.03 LAP 2.57 LOP 207.25 VP 36.577 GAP -14.10 AZP 91.03 TAL 163.50 TAP 275.41 RCA 87.94 APO 149.23 V2 35.080
RC 43.078 GL 14.14 GP 4.59 ZAL 59.66 ZAP 5.19 ETS 300.12 ZAE 169.67 ETE 333.71 ZAC 117.01 ETC 163.59 CLP -2.43

DISTANCE 267.649

PLANETOCENTRIC CONIC

C3 26.541 VHL 5.152 OLA 27.05 RAL 29.21 RAD 6568.1 VEL 12.162 PTH 2.18 VHP 9.178 DPA 11.34 RAP 22.11 ECC 1.4368
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 11 3 3362.34 -23.43 121.88 264.32 73.62 3 7 5 2762.3 -25.45 113.80
90.00 23 38 24 3848.21 -11.07 152.10 259.29 63.77 24 42 32 3248.2 -14.50 145.11
100.00 4 7 9 2988.03 -26.75 95.33 265.31 76.13 4 56 58 2388.0 -28.39 86.91
100.00 0 28 55 3697.75 -8.02 139.44 257.67 61.11 1 30 32 3097.8 -11.81 132.70
110.00 6 10 52 2600.95 -33.09 67.42 266.80 80.91 6 54 12 2000.9 -34.00 58.30
110.00 0 41 42 3657.60 -2.49 133.00 254.28 55.90 1 42 39 3057.6 -6.95 126.75

DIFFERENTIAL CORRECTIONS

TDE -.6496 TRA-1.3274 TC3 .1370 BAU .0510
RDE -.3681 RRA .0166 RC3 -.0431 FAU .02986
FDE .8058 FRA 1.1937 FC3 -.9740 BSP 5894
BDE .7467 BRA 1.3275 BC3 .1436 FSP -479

MID-COURSE EXECUTION ACCURACY

SGT 1813.6 SGR 412.3 SG3 173.5
RRT .3411 RRF -.3519 RTF -.8951
SG8 1859.9 R23 -.0341 R13 -.8958
SG1 1819.3 SG2 386.4 THA 4.64

ORBIT DETERMINATION ACCURACY

ST 877.1 SR 409.5 SS 794.5
CRT .8150 CRS .8874 CST .9899
LSA 1232.3 MSA 222.4 SSA 16.3
EL1 942.4 EL2 220.8 ALF 22.11

LAUNCH DATE DEC 27 1968

FLIGHT TIME 110.00

ARRIVAL DATE APR 16 1969

MELIOCENTRIC CONIC

DISTANCE 274.396

RL 147.12 LAL .00 LOL 95.31 VL 26.332 GAL 5.26 AZL 87.30 MCA 115.12 SMA 119.47 ECC .24798 INC 2.6955 V1 30.284  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.678 GAP -13.29 AZP 91.15 TAL 163.58 TAP 278.70 RCA 89.84 APO 149.10 V2 35.067  
 RC 43.658 GL 14.46 GP 4.98 ZAL 59.93 ZAP 6.44 ETS 311.75 ZAE 167.54 ETE 342.44 ZAC 118.35 ETC 163.08 CLP -4.10

PLANETOCENTRIC CONIC

C3 24.382 VHL 4.938 CLA 27.27 RAL 28.84 RAD 6568.0 VEL 12.073 PTH 2.16 VHP 8.722 DPA 12.31 RAP 23.39 ECC 1.4013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 2 53 3363.51 -23.40 121.96 262.36 73.59 2 58 56 2763.5 -25.43 113.88  
 90.00 23 43 35 3805.16 -12.35 149.59 257.90 64.31 24 47 0 3205.2 -15.71 142.52  
 100.00 4 1 26 2981.35 -26.86 94.86 263.38 76.35 4 51 7 2381.3 -28.47 86.43  
 100.00 0 31 39 3662.56 -9.17 137.46 256.24 61.42 1 32 42 3062.6 -12.91 130.67  
 110.00 6 6 54 2588.71 -33.22 66.49 264.82 81.45 6 50 3 1988.7 -34.05 57.35  
 110.00 0 42 41 3627.96 -3.62 131.45 252.85 55.99 1 43 9 3028.0 -8.06 125.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6541 TRA-1.3017 TC3 .1932 BAU .0639 SGT 1870.8 SGR 408.8 SG3 191.0 ST 914.3 SR 407.4 SS 834.9  
 RDE -.3511 RRA .0028 RC3 -.0332 FAU .03197 RRT .3880 RRF -.4008 RTF -.9021 CRT .8286 CRS .8961 CST .9906  
 FDE .8568 FRA 1.2457 FC3-1.1351 BSP 6104 SGB 1915.0 R23 -.0392 R13 -.9029 LSA 1285.4 MSA 215.6 SSA 16.3  
 BDE .7424 BRA 1.3018 BC3 .1960 FSP -532 SGI 1877.8 SG2 375.3 THA 5.05 EL1 978.0 EL2 213.3 ALF 21.33

LAUNCH DATE DEC 27 1968

FLIGHT TIME 112.00

ARRIVAL DATE APR 18 1969

MELIOCENTRIC CONIC

DISTANCE 281.137

RL 147.12 LAL .00 LOL 95.31 VL 26.478 GAL 4.96 AZL 87.38 MCA 118.33 SMA 120.30 ECC .23826 INC 2.6182 V1 30.284  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.770 GAP -12.52 AZP 91.24 TAL 163.69 TAP 282.02 RCA 91.64 APO 148.97 V2 35.053  
 RC 44.405 GL 14.74 GP 5.42 ZAL 60.26 ZAP 7.94 ETS 319.38 ZAE 165.39 ETE 348.68 ZAC 119.61 ETC 162.50 CLP -5.81

PLANETOCENTRIC CONIC

C3 22.438 VHL 4.737 CLA 27.42 RAL 28.42 RAD 6567.9 VEL 11.992 PTH 2.14 VHP 8.284 DPA 13.32 RAP 24.61 ECC 1.3693  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 6 3360.14 -23.47 121.73 260.42 73.68 2 52 7 2760.1 -25.48 113.64  
 90.00 23 47 4 3767.97 -13.44 147.40 256.42 64.84 24 49 52 3168.0 -16.72 140.26  
 100.00 3 56 41 2971.42 -27.01 94.17 261.46 76.69 4 46 13 2371.4 -28.58 85.71  
 100.00 0 33 6 3631.92 -10.16 135.73 254.74 61.74 1 33 38 3031.9 -13.86 128.89  
 110.00 6 3 29 2574.62 -33.36 65.41 262.83 82.07 6 46 24 1974.6 -34.10 56.25  
 110.00 0 42 48 3601.48 -4.63 130.06 251.38 56.09 1 42 49 3001.5 -9.05 123.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6576 TRA-1.2747 TC3 .2562 BAU .0771 SGT 1925.7 SGR 406.9 SG3 210.6 ST 950.9 SR 406.2 SS 877.2  
 RDE -.3358 RRA -.0112 RC3 -.0197 FAU .03433 RRT .4404 RRF -.4555 RTF -.9085 CRT .8426 CRS .9050 CST .9913  
 FDE .9120 FRA 1.3025 FC3-1.3246 BSP 6298 SGB 1968.2 R23 -.0452 R13 -.9095 LSA 1339.8 MSA 208.3 SSA 16.4  
 BDE .7384 BRA 1.2747 BC3 .2570 FSP -591 SGI 1934.3 SG2 363.7 THA 5.51 EL1 1013.5 EL2 205.3 ALF 20.68

LAUNCH DATE DEC 27 1968

FLIGHT TIME 114.00

ARRIVAL DATE APR 20 1969

MELIOCENTRIC CONIC

DISTANCE 287.870

RL 147.12 LAL .00 LOL 95.31 VL 26.612 GAL 4.68 AZL 87.46 MCA 121.54 SMA 121.09 ECC .22922 INC 2.5362 V1 30.284  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.855 GAP -11.77 AZP 91.33 TAL 163.84 TAP 285.38 RCA 93.33 APO 148.84 V2 35.040  
 RC 45.309 GL 14.95 GP 5.93 ZAL 60.62 ZAP 9.61 ETS 324.48 ZAE 163.31 ETE 353.47 ZAC 120.78 ETC 161.86 CLP -7.58

PLANETOCENTRIC CONIC

C3 20.688 VHL 4.548 CLA 27.50 RAL 27.98 RAD 6567.8 VEL 11.919 PTH 2.12 VHP 7.864 DPA 14.35 RAP 25.76 ECC 1.3405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 51 30 3349.91 -23.66 121.05 258.54 73.98 2 47 20 2749.9 -25.63 112.93  
 90.00 23 48 8 3739.04 -14.27 145.68 254.85 65.28 24 50 27 3139.0 -17.48 138.48  
 100.00 3 53 17 2957.34 -27.23 93.18 259.55 77.17 4 42 34 2357.3 -28.72 84.69  
 100.00 0 32 59 3606.84 -10.97 134.30 253.18 62.02 1 33 6 3006.8 -14.62 127.42  
 110.00 6 0 48 2558.28 -33.51 64.16 260.84 82.80 6 43 26 1958.3 -34.14 54.98  
 110.00 0 41 57 3578.66 -5.49 128.86 249.87 56.21 1 41 36 2978.7 -9.90 122.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6601 TRA-1.2475 TC3 .3258 BAU .0901 SGT 1979.4 SGR 407.6 SG3 232.5 ST 986.9 SR 406.1 SS 921.4  
 RDE -.3222 RRA -.0257 RC3 -.0017 FAU .03697 RRT .4981 RRF -.5158 RTF -.9146 CRT .8568 CRS .9140 CST .9919  
 FDE .9718 FRA 1.3657 FC3-1.5470 BSP 6493 SGB 2020.9 R23 -.0524 R13 -.9157 LSA 1395.4 MSA 200.8 SSA 16.4  
 BDE .7345 BRA 1.2478 BC3 .3258 FSP -658 SGI 1990.1 SG2 351.5 THA 6.04 EL1 1048.8 EL2 197.0 ALF 20.16

LAUNCH DATE DEC 27 1968

FLIGHT TIME 116.00

ARRIVAL DATE APR 22 1969

MELIOCENTRIC CONIC

DISTANCE 294.593

RL 147.12 LAL .00 LOL 95.31 VL 26.736 GAL 4.41 AZL 87.55 MCA 124.75 SMA 121.82 ECC .22083 INC 2.4483 V1 30.284  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.931 GAP -11.05 AZP 91.40 TAL 164.03 TAP 288.78 RCA 94.92 APO 148.73 V2 35.027  
 RC 46.364 GL 15.10 GP 6.52 ZAL 61.02 ZAP 11.42 ETS 327.96 ZAE 161.34 ETE 357.39 ZAC 121.85 ETC 161.14 CLP -9.41

PLANETOCENTRIC CONIC

C3 19.111 VHL 4.372 CLA 27.49 RAL 27.52 RAD 6567.8 VEL 11.853 PTH 2.10 VHP 7.461 DPA 15.43 RAP 26.82 ECC 1.3145  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 50 3330.51 -24.02 119.74 256.73 74.54 2 45 20 2730.5 -25.91 111.58  
 90.00 23 46 8 3720.73 -14.78 144.58 253.18 65.57 24 48 9 3120.7 -17.96 137.35  
 100.00 3 51 32 2938.18 -27.51 91.82 257.68 77.83 4 40 30 2338.2 -28.91 83.30  
 100.00 0 31 3 3588.30 -11.56 133.24 251.56 62.24 1 30 51 2988.3 -15.18 126.33  
 110.00 5 59 1 2539.25 -33.66 62.70 258.85 83.65 6 41 20 1939.2 -34.17 53.49  
 110.00 0 40 3 3560.00 -6.20 127.88 248.34 56.32 1 39 23 2960.0 -10.58 121.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6605 TRA-1.2193 TC3 .4024 BAU .1030 SGT 2029.4 SGR 411.9 SG3 256.9 ST 1020.6 SR 407.4 SS 967.1  
 RDE -.3105 RRA -.0410 RC3 .0219 FAU .03992 RRT .5600 RRF -.5807 RTF -.9201 CRT .8710 CRS .9231 CST .9926  
 FDE 1.0360 FRA 1.4356 FC3-1.8083 BSP 6669 SGB 2070.8 R23 -.0612 R13 -.9215 LSA 1451.0 MSA 193.0 SSA 16.4  
 BDE .7299 BRA 1.2200 BC3 .4030 FSP -732 SGI 2042.9 SG2 339.0 THA 6.67 EL1 1082.6 EL2 188.7 ALF 19.80

LAUNCH DATE DEC 27 1968

FLIGHT TIME 118.00

ARRIVAL DATE APR 24 1969

MELIOCENTRIC CONIC DISTANCE 301.304

RL 147.12 LAL .00 LOL 95.31 VL 26.850 GAL 4.16 AZL 87.65 HCA 127.95 SMA 122.51 ECC .21307 INC 2.3534 V1 30.284  
 RP 108.23 LAP 1.86 LOP 223.29 VP 37.001 GAP -10.35 AZP 91.45 TAL 164.25 TAP 292.20 RCA 96.40 APO 148.61 V2 35.013  
 RC 47.558 GL 15.16 GP 7.19 ZAL 61.45 ZAP 13.37 ETS 330.37 ZAE 159.54 ETE .80 ZAC 122.81 ETC 160.34 CLP -11.31

PLANETOCENTRIC CONIC

C3 17.690 VML 4.206 CLA 27.39 RAL 27.05 RAD 6567.7 VEL 11.793 PTH 2.09 VHP 7.075 DPA 16.57 RAP 27.79 ECC 1.2911  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 51 32 3300.64 -24.55 117.71 255.00 75.42 2 46 33 2700.6 -26.31 109.48  
 90.00 23 40 42 3714.40 -14.96 144.20 251.41 65.68 24 42 36 3114.4 -18.12 136.95  
 100.00 3 51 45 2913.11 -27.86 90.04 255.85 78.70 4 40 18 2313.1 -29.14 81.47  
 100.00 0 27 6 3577.17 -11.91 132.60 249.88 62.38 1 26 43 2977.2 -15.51 125.67  
 110.00 5 58 19 2517.03 -33.81 60.98 256.86 84.66 6 40 16 1917.0 -34.18 51.75  
 110.00 0 37 1 3546.01 -6.73 127.14 246.78 56.41 1 36 7 2946.0 -11.10 120.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6585 TRA-1.1903 TC3 .4850 BAU .1154 SGT 2075.2 SGR 421.3 SG3 284.2 ST 1051.2 SR 410.5 SS 1013.7  
 RDE -.3007 RRA -.0573 RC3 .0524 FAU .04322 RRT .6244 RRF -.6484 RTF -.9252 CRT .8851 CRS .9321 CST .9932  
 FDE 1.1040 FRA 1.5135 FC3-2.1153 BSP 6848 SGB 2117.6 R23 -.0717 R13 -.9269 LSA 1505.5 MSA 185.2 SSA 16.3  
 BDE .7239 BRA 1.1917 BC3 .4879 FSP -.816 SG1 2092.3 SG2 326.4 TMA 7.41 EL1 1114.0 EL2 180.3 ALF 19.60

LAUNCH DATE DEC 27 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 26 1969

MELIOCENTRIC CONIC DISTANCE 308.001

RL 147.12 LAL .00 LOL 95.31 VL 26.954 GAL 3.93 AZL 87.75 HCA 131.15 SMA 123.15 ECC .20592 INC 2.2500 V1 30.284  
 RP 108.27 LAP 1.69 LOP 226.49 VP 37.064 GAP -9.67 AZP 91.48 TAL 164.50 TAP 295.65 RCA 97.79 APO 148.50 V2 35.000  
 RC 48.883 GL 15.11 GP 7.98 ZAL 61.90 ZAP 15.46 ETS 332.03 ZAE 157.91 ETE 3.94 ZAC 123.62 ETC 159.45 CLP -13.29

PLANETOCENTRIC CONIC

C3 16.407 VML 4.051 OLA 27.18 RAL 26.59 RAD 6567.7 VEL 11.738 PTH 2.07 VHP 6.707 DPA 17.77 RAP 28.63 ECC 1.2700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 38 3260.39 -25.21 114.95 253.35 76.66 2 50 59 2660.4 -26.80 106.64  
 90.00 23 31 56 3719.95 -14.81 144.54 249.57 65.58 24 33 56 3119.9 -17.98 137.30  
 100.00 3 54 10 2881.50 -28.26 87.78 254.06 79.83 4 42 12 2281.5 -29.37 79.15  
 100.00 0 21 1 3574.07 -12.01 132.42 248.17 62.42 1 20 35 2974.1 -15.61 125.48  
 110.00 5 58 56 2491.11 -33.96 58.97 254.90 85.84 6 40 27 1891.1 -34.16 49.73  
 110.00 0 32 45 3537.23 -7.06 126.67 245.21 56.47 1 31 42 2937.2 -11.42 120.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6516 TRA-1.1591 TC3 .5782 BAU .1284 SGT 2113.2 SGR 437.5 SG3 314.6 ST 1075.0 SR 415.9 SS 1059.7  
 RDE -.2929 RRA -.0750 RC3 .0919 FAU .04698 RRT .6884 RRF -.7161 RTF -.9303 CRT .8986 CRS .9409 CST .9938  
 FDE 1.1741 FRA 1.5996 FC3-2.4787 BSP 7053 SGB 2158.1 R23 -.0843 R13 -.9324 LSA 1555.5 MSA 177.4 SSA 16.2  
 BDE .7145 BRA 1.1615 BC3 .5854 FSP -.912 SG1 2135.1 SG2 314.1 TMA 8.29 EL1 1139.7 EL2 172.1 ALF 19.64

LAUNCH DATE DEC 27 1968

FLIGHT TIME 122.00

ARRIVAL DATE APR 28 1969

MELIOCENTRIC CONIC DISTANCE 314.682

RL 147.12 LAL .00 LOL 95.31 VL 27.049 GAL 3.71 AZL 87.86 HCA 134.35 SMA 123.74 ECC .19934 INC 2.1360 V1 30.284  
 RP 108.31 LAP 1.53 LOP 229.68 VP 37.121 GAP -9.02 AZP 91.49 TAL 164.77 TAP 299.12 RCA 99.07 APO 148.40 V2 34.987  
 RC 50.327 GL 14.93 GP 8.91 ZAL 62.35 ZAP 17.70 ETS 333.12 ZAE 156.47 ETE 7.00 ZAC 124.28 ETC 158.47 CLP -15.36

PLANETOCENTRIC CONIC

C3 15.248 VML 3.905 OLA 26.84 RAL 26.16 RAD 6567.6 VEL 11.689 PTH 2.06 VHP 6.356 DPA 19.05 RAP 29.33 ECC 1.2509  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 4 50 3210.86 -25.94 111.50 251.75 78.23 2 58 21 2610.9 -27.31 103.10  
 90.00 23 20 17 3736.29 -14.34 145.51 247.70 65.32 24 22 33 3136.3 -17.56 138.31  
 100.00 3 58 57 2842.95 -28.69 84.99 252.31 81.23 4 46 20 2243.0 -29.61 76.31  
 100.00 0 12 47 3579.43 -11.84 132.73 246.43 62.35 1 12 26 2979.4 -15.45 125.80  
 110.00 6 1 3 2460.89 -34.08 56.62 252.95 87.23 6 42 4 1860.9 -34.09 47.37  
 110.00 0 27 10 3534.25 -7.17 126.52 243.64 56.49 1 26 4 2934.3 -11.53 120.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6437 TRA-1.1294 TC3 .6701 BAU .1396 SGT 2148.2 SGR 463.2 SG3 348.6 ST 1096.7 SR 424.5 SS 1106.5  
 RDE -.2875 RRA -.0949 RC3 .1419 FAU .05108 RRT .7498 RRF -.7807 RTF -.9345 CRT .9121 CRS .9494 CST .9944  
 FDE 1.2481 FRA 1.6978 FC3-2.9000 BSP 7189 SGB 2197.6 R23 -.0994 R13 -.9371 LSA 1605.7 MSA 169.3 SSA 16.2  
 BDE .7050 BRA 1.1334 BC3 .6849 FSP -1017 SG1 2176.7 SG2 302.5 TMA 9.37 EL1 1164.5 EL2 163.9 ALF 19.85

LAUNCH DATE DEC 27 1968

FLIGHT TIME 124.00

ARRIVAL DATE APR 30 1969

MELIOCENTRIC CONIC DISTANCE 321.347

RL 147.12 LAL .00 LOL 95.31 VL 27.137 GAL 3.51 AZL 87.99 HCA 137.55 SMA 124.28 ECC .19330 INC 2.0090 V1 30.284  
 RP 108.36 LAP 1.36 LOP 232.88 VP 37.173 GAP -8.39 AZP 91.48 TAL 165.05 TAP 302.60 RCA 100.26 APO 148.31 V2 34.974  
 RC 51.881 GL 14.60 GP 10.00 ZAL 62.81 ZAP 20.10 ETS 333.79 ZAE 155.20 ETE 10.13 ZAC 124.74 ETC 157.38 CLP -17.53

PLANETOCENTRIC CONIC

C3 14.199 VML 3.768 OLA 26.34 RAL 25.77 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 6.023 DPA 20.45 RAP 29.87 ECC 1.2337  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 15 47 3153.18 -26.68 107.44 250.20 80.14 3 8 20 2553.2 -27.77 98.94  
 90.00 23 6 14 3762.24 -13.60 147.06 245.83 64.92 24 8 56 3162.2 -16.87 139.90  
 100.00 4 6 13 2797.16 -29.12 81.66 250.61 82.94 4 52 50 2197.2 -29.79 72.92  
 100.00 0 2 25 3593.49 -11.39 133.54 244.70 62.18 1 2 19 2993.5 -15.03 126.63  
 110.00 6 4 56 2425.71 -34.17 55.87 251.03 88.85 6 45 22 1825.7 -33.95 44.63  
 110.00 0 20 12 3537.70 -7.04 126.70 242.09 56.46 1 19 9 2937.7 -11.40 120.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6311 TRA-1.0996 TC3 .7654 BAU .1505 SGT 2175.8 SGR 500.9 SG3 386.3 ST 1111.0 SR 436.6 SS 1150.7  
 RDE -.2844 RRA -.1177 RC3 .2059 FAU .05565 RRT .8046 RRF -.8385 RTF -.9383 CRT .9248 CRS .9574 CST .9950  
 FDE 1.3212 FRA 1.8089 FC3-3.3930 BSP 7317 SGB 2232.7 R23 -.1174 R13 -.9415 LSA 1650.1 MSA 161.2 SSA 16.1  
 BDE .6922 BRA 1.1059 BC3 .7926 FSP -1135 SG1 2213.5 SG2 292.4 TMA 10.68 EL1 1183.5 EL2 156.0 ALF 20.34

LAUNCH DATE DEC 27 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 327.994

RL 147.12 LAL .00 LOL 95.31 VL 27.216 GAL 3.32 AZL 88.13 MCA 140.74 SMA 124.79 ECC .18779 INC 1.8655 VI 30.284  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.218 GAP -7.78 A7P 91.44 TAL 165.35 TAP 306.09 RCA 101.35 APO 148.22 V2 34.961  
 RC 53.536 GL 14.06 GP 11.29 ZAL 63.25 ZAP 22.70 ETS 334.10 ZAE 154.09 ETE 13.47 ZAC 124.98 ETC 156.17 CLP -19.82

PLANETOCENTRIC CONIC

C3 13.249 VML 3.640 DLA 25.65 RAL 25.45 RAD 6567.5 VEL 11.603 PTH 2.03 VHP 5.710 DPA 21.99 RAP 30.20 ECC 1.2180  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 19 3087.99 -27.35 102.79 248.67 82.38 3 20 47 2488.0 -28.13 94.21  
 90.00 22 50 10 3797.11 -12.59 149.11 244.00 64.42 23 53 27 3197.1 -15.93 142.03  
 100.00 4 16 5 2743.81 -29.50 77.74 248.94 84.97 5 1 49 2143.8 -29.89 68.95  
 100.00 23 46 5 3616.53 -10.66 134.85 243.00 61.91 24 46 22 3016.5 -14.33 127.99  
 110.00 6 10 50 2384.80 -34.18 50.60 249.14 90.74 6 50 34 1784.8 -33.70 41.47  
 110.00 0 11 46 3548.31 -6.64 127.26 240.58 56.39 1 10 54 2948.3 -11.01 120.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6136 TRA-1.0691 TC3 .8613 BAU .1608 SGT 2193.5 SGR 554.0 S63 427.9 ST 1116.7 SR 453.1 SS 1191.3  
 RDE -.2838 RRA -.1444 RC3 .2875 FAU .06067 RRT .8504 RRF -.8870 RTF -.9416 CRT .9367 CRS .9647 CST .9956  
 FDE 1.3913 FRA 1.9339 FC3-3.9642 BSP 7428 SGB 2262.4 R23 -.1378 R13 -.9458 LSA 1687.6 MSA 152.8 SSA 16.0  
 BDE .6761 BRA 1.0789 BC3 .9080 FSP -1265 SG1 2244.4 S62 284.9 TMA 12.32 EL1 1196.0 EL2 148.1 ALF 21.15

LAUNCH DATE DEC 27 1968

FLIGHT TIME 120.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 334.621

RL 147.12 LAL .00 LOL 95.31 VL 27.288 GAL 3.15 AZL 88.30 MCA 143.93 SMA 125.25 ECC .18277 INC 1.7012 VI 30.284  
 RP 108.43 LAP 1.00 LOP 239.25 VP 37.259 GAP -7.19 A7P 91.38 TAL 165.66 TAP 309.59 RCA 102.36 APO 148.14 V2 34.948  
 RC 55.282 GL 13.29 GP 12.85 ZAL 63.60 ZAP 25.52 ETS 334.12 ZAE 153.11 ETE 17.15 ZAC 124.94 ETC 154.84 CLP -22.24

PLANETOCENTRIC CONIC

C3 12.385 VML 3.519 DLA 24.73 RAL 25.23 RAD 6567.5 VEL 11.566 PTH 2.02 VHP 5.418 DPA 23.72 RAP 30.30 ECC 1.2038  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 45 27 3015.26 -27.90 97.54 247.15 84.96 3 35 42 2415.3 -28.31 88.90  
 90.00 22 32 16 3840.91 -11.29 151.67 242.25 63.86 23 36 16 3240.9 -14.71 144.67  
 100.00 4 28 42 2682.35 -29.79 73.19 247.30 87.35 5 13 25 2082.4 -29.84 64.39  
 100.00 23 31 41 3649.05 -9.61 136.70 241.37 61.56 24 32 30 3049.0 -13.33 129.89  
 110.00 6 19 3 2337.14 -34.07 46.96 247.29 92.94 6 58 0 1737.1 -33.29 37.81  
 110.00 0 1 46 3567.02 -5.94 128.25 239.14 56.27 1 1 13 2967.0 -10.33 121.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5881 TRA-1.0361 TC3 .9629 BAU .1722 SGT 2196.7 SGR 626.3 S63 473.2 ST 1108.0 SR 474.2 SS 1222.6  
 RDE -.2854 RRA -.1762 RC3 .3935 FAU .06627 RRT .8860 RRF -.9248 RTF -.9448 CRT .9474 CRS .9712 CST .9961  
 FDE 1.4497 FRA 2.0717 FC3-4.6327 BSP 7576 SGB 2284.2 R23 -.1589 R13 -.9504 LSA 1710.6 MSA 144.1 SSA 16.0  
 BDE .6537 BRA 1.0509 BC3 1.0402 FSP -1413 SG1 2266.8 S62 281.4 TMA 14.40 EL1 1197.0 EL2 140.5 ALF 22.40

LAUNCH DATE DEC 27 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 341.229

RL 147.12 LAL .00 LOL 95.31 VL 27.353 GAL 2.99 AZL 88.49 MCA 147.12 SMA 125.67 ECC .17822 INC 1.5097 VI 30.284  
 RP 108.47 LAP .82 LOP 242.44 VP 37.295 GAP -6.62 A7P 91.27 TAL 165.97 TAP 313.08 RCA 103.27 APO 148.07 V2 34.936  
 RC 57.109 GL 12.20 GP 14.74 ZAL 64.08 ZAP 28.60 ETS 333.87 ZAE 152.19 ETE 21.35 ZAC 124.57 ETC 153.38 CLP -24.80

PLANETOCENTRIC CONIC

C3 11.599 VML 3.406 DLA 23.53 RAL 25.14 RAD 6567.4 VEL 11.532 PTH 2.01 VHP 5.149 DPA 25.70 RAP 30.09 ECC 1.1909  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 4 24 2934.18 -28.25 91.63 245.66 87.90 3 53 18 2334.2 -28.24 82.97  
 90.00 22 12 35 3894.39 -9.66 154.76 240.63 63.25 23 17 29 3294.4 -13.18 147.85  
 100.00 4 44 23 2611.84 -29.89 67.95 245.69 90.10 5 27 55 2011.8 -29.56 59.16  
 100.00 23 15 17 3691.96 -8.21 139.11 239.86 61.16 24 16 49 3092.0 -11.99 132.37  
 110.00 6 29 59 2281.44 -33.79 42.63 245.47 95.48 7 8 1 1681.4 -32.67 33.58  
 110.00 23 46 10 3595.13 -4.87 129.73 237.81 56.12 24 46 5 2995.1 -9.29 123.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5588 TRA-1.0063 TC3 1.0491 BAU .1822 SGT 2191.7 SGR 723.8 S63 522.1 ST 1091.3 SR 501.6 SS 1245.8  
 RDE -.2896 RRA -.2159 RC3 .5284 FAU .07206 RRT .9120 RRF -.9526 RTF -.9471 CRT .9573 CRS .9768 CST .9968  
 FDE 1.4945 FRA 2.2316 FC3-5.3784 BSP 7637 SGB 2308.1 R23 -.1805 R13 -.9546 LSA 1725.1 MSA 134.8 SSA 16.0  
 BDE .6294 BRA 1.0292 BC3 1.1747 FSP -1565 SG1 2290.6 S62 284.1 TMA 17.03 EL1 1193.7 EL2 132.5 ALF 24.06

LAUNCH DATE DEC 27 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 347.817

RL 147.12 LAL .00 LOL 95.31 VL 27.411 GAL 2.85 AZL 88.72 MCA 150.30 SMA 126.05 ECC .17412 INC 1.2823 VI 30.284  
 RP 108.51 LAP .64 LOP 245.62 VP 37.326 GAP -6.07 A7P 91.11 TAL 166.27 TAP 316.57 RCA 104.11 APO 148.00 V2 34.923  
 RC 59.010 GL 10.70 GP 17.04 ZAL 64.44 ZAP 32.01 ETS 333.39 ZAE 151.23 ETE 26.20 ZAC 123.81 ETC 151.78 CLP -27.51

PLANETOCENTRIC CONIC

C3 10.886 VML 3.299 DLA 21.95 RAL 25.22 RAD 6567.4 VEL 11.501 PTH 2.00 VHP 4.906 DPA 27.99 RAP 29.53 ECC 1.1792  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 26 40 2843.04 -28.29 84.97 244.20 91.24 4 14 3 2243.0 -27.82 76.33  
 90.00 21 50 58 3959.28 -7.65 158.47 239.20 62.65 22 56 57 3359.3 -11.26 151.65  
 100.00 5 3 34 2530.60 -29.73 61.92 244.13 93.27 5 45 44 1930.6 -28.96 53.20  
 100.00 22 56 45 3746.96 -6.39 142.18 238.51 60.74 23 59 12 3147.0 -10.24 135.51  
 110.00 6 44 11 2215.80 -33.25 37.59 243.71 98.42 7 21 7 1615.8 -31.73 28.69  
 110.00 23 32 37 3634.52 -3.37 131.79 236.64 55.96 24 33 12 3034.5 -7.82 125.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5197 TRA -.9729 TC3 1.1342 BAU .1944 SGT 2166.3 SGR 851.9 S63 572.7 ST 1055.3 SR 533.5 SS 1248.9  
 RDE -.2949 RRA -.2653 RC3 .7055 FAU .07824 RRT .9296 RRF -.9715 RTF -.9491 CRT .9661 CRS .9813 CST .9975  
 FDE 1.5064 FRA 2.4027 FC3-6.2225 BSP 7755 SGB 2327.7 R23 -.1967 R13 -.9595 LSA 1715.3 MSA 124.5 SSA 16.3  
 BDE .5976 BRA 1.0084 BC3 1.3358 FSP -1734 SG1 2309.0 S62 294.7 TMA 20.43 EL1 1176.0 EL2 123.6 ALF 26.34



LAUNCH DATE DEC 27 1968 FLIGHT TIME 134.00 ARRIVAL DATE MAY 10 1969

MELIOCENTRIC CONIC DISTANCE 354.383  
 RL 147.12 LAL .00 LOL 95.31 VL 27.464 GAL 2.72 AZL 88.99 MCA 153.49 SMA 126.40 ECC .17043 INC 1.0060 V1 30.284  
 RP 108.55 LAP .45 LOP 248.80 VP 37.354 GAP -5.53 AZP 90.90 TAL 166.56 TAP 320.04 RCA 104.86 APO 147.94 V2 34.911  
 RC 60.976 GL 8.66 GP 19.90 ZAL 64.76 ZAP 35.80 ETS 332.69 ZAE 150.06 ETE 31.84 ZAC 122.54 ETC 150.06 CLP -30.40

PLANETOCENTRIC CONIC  
 C3 10.242 VML 3.200 DLA 19.87 RAL 25.53 RAD 6567.4 VEL 11.473 PTH 1.99 VMP 4.697 DPA 30.71 RAP 28.49 ECC 1.1686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 2 2738.99 -27.90 77.38 242.79 95.02 4 38 41 2139.0 -26.92 68.86  
 90.00 21 27 4 4038.62 -5.15 162.96 238.02 62.12 22 34 23 3438.6 -8.84 156.22  
 100.00 5 27 1 2435.94 -29.16 54.94 242.64 96.90 6 7 37 1835.9 -27.90 46.37  
 100.00 22 35 47 3816.91 -4.04 146.05 237.41 60.36 23 39 23 3216.9 -7.96 139.46  
 110.00 7 2 24 2137.52 -32.32 31.67 242.03 101.81 7 38 1 1537.5 -30.35 23.01  
 110.00 23 16 53 3688.09 -1.33 134.59 235.72 55.84 24 18 21 3088.1 -5.80 128.36

DIFFERENTIAL CORRECTIONS MIC-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.4749 TRA -.9413 TC3 1.1944 BAU .2077 SGT 2125.6 SGR 1020.4 SG3 623.1 ST 1006.2 SR 570.4 SS 1230.0  
 RDE -.3006 RRA -.3297 RC3 .9345 FAU .08413 RRT .9403 RRF -.9836 RTF -.9499 CRT .9743 CRS .9848 CST .9983  
 FDE 1.4753 FRA 2.5909 FC3-7.1110 BSP 7823 SGB 2357.8 R23 -.2060 R13 -.9646 LSA 1684.5 MSA 112.4 SSA 16.9  
 BDE .5620 BRA .9974 BC3 1.5165 FSP -1895 SG1 2336.5 SG2 316.1 THA 24.78 EL1 1151.2 EL2 112.4 ALF 29.22

LAUNCH DATE DEC 27 1968 FLIGHT TIME 136.00 ARRIVAL DATE MAY 12 1969

MELIOCENTRIC CONIC DISTANCE 360.927  
 RL 147.12 LAL .00 LOL 95.31 VL 27.511 GAL 2.60 AZL 89.34 MCA 156.67 SMA 126.71 ECC .16715 INC .6606 V1 30.284  
 RP 108.58 LAP .26 LOP 251.98 VP 37.378 GAP -5.01 AZP 90.61 TAL 166.83 TAP 323.49 RCA 105.53 APO 147.89 V2 34.900  
 RC 65.000 GL 5.85 GP 23.46 ZAL 65.06 ZAP 40.07 ETS 331.81 ZAE 148.43 ETE 38.33 ZAC 120.66 ETC 148.22 CLP -33.46

PLANETOCENTRIC CONIC  
 C3 9.676 VML 3.111 DLA 17.08 RAL 26.15 RAD 6567.3 VEL 11.448 PTH 1.99 VMP 4.532 DPA 34.00 RAP 26.84 ECC 1.1592  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 24 47 2617.47 -26.87 68.65 241.50 99.28 5 8 25 2017.5 -25.31 60.32  
 90.00 21 0 13 4137.50 -1.98 168.49 237.24 61.75 22 9 11 3537.5 -5.74 161.84  
 100.00 5 55 56 2323.55 -27.96 46.80 241.28 101.02 6 34 39 1723.6 -26.16 38.47  
 100.00 22 11 46 3906.65 -1.01 150.99 236.70 60.12 23 16 52 3306.7 -4.98 144.45  
 110.00 7 25 46 2042.48 -30.78 24.69 240.52 105.67 7 59 48 1442.5 -28.32 16.36  
 110.00 22 58 25 3760.49 1.44 138.37 235.17 55.84 24 1 5 3160.5 -3.05 132.16

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.4223 TRA -.9092 TC3 1.2272 BAU .2249 SGT 2063.4 SGR 1240.2 SG3 668.4 ST 939.1 SR 607.8 SS 1176.7  
 RDE -.3029 RRA -.4190 RC3 1.2319 FAU .08922 RRT .9457 RRF -.9910 RTF -.9497 CRT .9823 CRS .9872 CST .9993  
 FDE 1.3757 FRA 2.7835 FC3-7.9826 BSP 7938 SGB 2407.4 R23 -.2037 R13 -.9706 LSA 1620.5 MSA 98.2 SSA 18.2  
 BDE .5197 BRA .9994 BC3 1.7389 FSP -2041 SG1 2382.0 SG2 349.1 THA 30.34 EL1 1114.5 EL2 96.0 ALF 32.72

LAUNCH DATE DEC 27 1968 FLIGHT TIME 138.00 ARRIVAL DATE MAY 14 1969

MELIOCENTRIC CONIC DISTANCE 367.449  
 RL 147.12 LAL .00 LOL 95.31 VL 27.553 GAL 2.50 AZL 89.79 MCA 159.84 SMA 126.99 ECC .16423 INC .2132 V1 30.284  
 RP 108.62 LAP .07 LOP 255.16 VP 37.398 GAP -4.51 AZP 90.20 TAL 167.08 TAP 326.92 RCA 106.14 APO 147.85 V2 34.889  
 RC 65.076 GL 1.94 GP 27.98 ZAL 65.36 ZAP 44.92 ETS 330.79 ZAE 145.99 ETE 45.56 ZAC 117.98 ETC 146.30 CLP -36.70

PLANETOCENTRIC CONIC  
 C3 9.213 VML 3.035 DLA 13.28 RAL 27.18 RAD 6567.3 VEL 11.428 PTH 1.98 VMP 4.427 DPA 38.03 RAP 24.34 ECC 1.1516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 4 0 2471.19 -24.85 58.41 240.49 104.02 5 45 11 1871.2 -22.68 50.42  
 90.00 20 29 13 4264.62 2.12 175.59 237.09 61.76 21 40 18 3664.6 -1.67 168.96  
 100.00 6 32 16 2186.53 -25.81 37.20 240.21 105.63 7 8 43 1586.5 -23.41 29.22  
 100.00 21 43 38 4024.52 2.98 157.46 236.61 60.24 22 50 42 3424.5 -1.00 150.93  
 110.00 7 56 5 1924.25 -28.30 16.38 239.31 110.02 8 28 10 1324.3 -25.32 8.48  
 110.00 22 36 18 3859.55 5.21 143.56 235.23 56.17 23 40 38 3259.6 .74 137.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3595 TRA -.8744 TC3 1.2294 BAU .2500 SGT 1973.2 SGR 1524.8 SG3 700.3 ST 848.5 SR 634.8 SS 1073.5  
 RDE -.2935 RRA -.5300 RC3 1.6152 FAU .09262 RRT .9476 RRF -.9953 RTF -.9485 CRT .9907 CRS .9883 CST .9994  
 FDE 1.1718 FRA 2.9566 FC3-8.7036 BSP 8199 SGB 2493.7 R23 -.1863 R13 -.9779 LSA 1505.9 MSA 84.8 SSA 20.0  
 BDE .4641 BRA 1.0225 BC3 2.0299 FSP -2155 SG1 2463.0 SG2 390.4 THA 37.31 EL1 1057.4 EL2 69.4 ALF 36.73

LAUNCH DATE DEC 27 1968 FLIGHT TIME 140.00 ARRIVAL DATE MAY 16 1969

MELIOCENTRIC CONIC DISTANCE 373.948  
 RL 147.12 LAL .00 LOL 95.31 VL 27.590 GAL 2.42 AZL 90.39 MCA 163.02 SMA 127.24 ECC .16168 INC .3910 V1 30.284  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.415 GAP -4.02 AZP 89.63 TAL 167.29 TAP 330.31 RCA 106.67 APO 147.81 V2 34.878  
 RC 67.198 GL -3.62 GP 33.73 ZAL 65.79 ZAP 50.49 ETS 329.72 ZAE 142.25 ETE 53.20 ZAC 114.31 ETC 144.38 CLP -40.09

PLANETOCENTRIC CONIC  
 C3 8.929 VML 2.988 DLA 7.93 RAL 28.79 RAD 6567.3 VEL 11.416 PTH 1.98 VMP 4.416 DPA 43.04 RAP 20.58 ECC 1.1470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 54 14 2288.33 -21.29 46.21 240.11 109.13 6 32 22 1688.3 -18.48 38.66  
 90.00 19 51 51 4435.40 7.56 185.19 238.04 62.63 21 5 46 3835.4 3.84 178.49  
 100.00 7 19 24 2013.64 -22.13 25.68 239.78 110.63 7 52 58 1413.6 -19.12 18.17  
 100.00 21 9 22 4185.33 8.35 166.38 237.61 61.19 22 19 7 3585.3 4.44 159.77  
 110.00 8 36 23 1772.74 -24.36 6.37 238.77 114.75 9 5 55 1172.7 -20.82 359.02  
 110.00 22 8 53 3998.99 10.43 150.98 236.36 57.26 23 15 32 3399.0 6.04 144.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.2905 TRA -.8386 TC3 1.1731 BAU .2849 SGT 1854.0 SGR 1890.3 SG3 705.6 ST 740.2 SR 638.4 SS 920.1  
 RDE -.2585 RRA -.6900 RC3 2.0785 FAU .09240 RRT .9461 RRF -.9977 RTF -.9454 CRT .9988 CRS .9878 CST .9924  
 FDE .8410 FRA 3.0743 FC3-8.9584 BSP 8659 SGB 2647.7 R23 -.1558 R13 -.9854 LSA 1339.1 MSA 92.6 SSA 17.5  
 BDE .3889 BRA 1.0860 BC3 2.3867 FSP -2189 SG1 2611.8 SG2 434.7 THA 45.59 EL1 977.2 EL2 23.6 ALF 40.77

LAUNCH DATE DEC 27 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 18 1969

MELIOCENTRIC CONIC

DISTANCE 380.421

RL 147.12 LAL .00 LOL 95.31 VL 27.622 GAL 2.34 AZL 91.27 MCA 166.18 SMA 127.46 ECC .15945 INC 1.2655 VI 30.284  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.429 GAP -3.54 AZP 88.77 TAL 167.48 TAP 333.66 RCA 107.13 APO 147.78 V2 34.867  
 RC 69.360 GL -11.70 GP 41.12 ZAL 66.65 ZAP 56.91 ETS 328.74 ZAE 136.65 ETE 60.68 ZAC 109.41 ETC 142.62 CLP -43.55

PLANETOCENTRIC CONIC

C3 9.035 VML 3.006 DLA .22 RAL 31.26 RAD 6567.3 VEL 11.420 PTH 1.98 VHP 4.566 DPA 49.26 RAP 14.81 ECC 1.1487  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 2 13 2049.02 -15.24 31.26 241.21 114.16 7 36 22 1449.0 -11.85 24.23  
 90.00 19 3 33 4679.23 14.85 199.39 241.15 65.61 20 21 32 4079.2 11.44 192.37  
 100.00 8 23 40 1786.30 -16.02 11.57 240.83 115.58 8 53 26 1186.3 -12.45 4.60  
 100.00 20 24 47 4417.17 15.63 179.74 240.77 64.19 21 38 25 3817.2 12.03 172.79  
 110.00 9 32 9 1571.94 -18.10 354.16 239.70 119.50 9 58 20 971.9 -14.04 347.41  
 110.00 21 32 48 4204.30 17.71 162.44 239.63 60.27 22 42 52 3604.3 13.62 155.71

DIFFERENTIAL CORRECTIONS

TDE -.2119 TRA -.7946 TC3 1.0643 BAU .3362  
 RDE -.1635 RRA -.9127 RC3 2.5723 FAU .08694  
 FDE .3568 FRA 3.0483 FC3 -8.3311 BSP 9656  
 BDE .2675 BRA 1.2101 BC3 2.7838 FSP -2124

MID-COURSE EXECUTION ACCURACY

SGT 1693.1 SGR 2348.4 SG3 665.4  
 RRT .9432 RRF -.9989 RTF -.9418  
 SGB 2895.1 R23 -.1146 R13 -.9923  
 SG1 2858.0 SG2 462.2 THA 54.72

ORBIT DETERMINATION ACCURACY

ST 608.3 SR 609.5 SS 740.6  
 CRT .9812 CRS .9864 CST .9368  
 LSA 1123.3 MSA 167.4 SSA 9.0  
 EL1 857.0 EL2 83.4 ALF 45.06

LAUNCH DATE DEC 27 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 20 1969

MELIOCENTRIC CONIC

DISTANCE 386.885

RL 147.12 LAL .00 LOL 95.31 VL 27.650 GAL 2.29 AZL 92.65 MCA 169.35 SMA 127.65 ECC .15756 INC 2.6458 VI 30.284  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.441 GAP -3.09 AZP 87.40 TAL 167.60 TAP 336.94 RCA 107.53 APO 147.76 V2 34.858  
 RC 71.560 GL -23.54 GP 50.55 ZAL 68.57 ZAP 64.21 ETS 328.03 ZAE 128.57 ETE 67.27 ZAC 103.09 ETC 141.19 CLP -46.78

PLANETOCENTRIC CONIC

C3 10.198 VML 3.193 DLA -10.99 RAL 35.07 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.027 DPA 56.81 RAP 5.35 ECC 1.1678  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 43 24 1717.70 -5.24 12.07 246.00 117.87 9 12 1 1117.7 -1.47 5.42  
 90.00 17 52 49 5058.16 23.86 223.49 249.10 74.28 19 17 7 4458.2 21.47 215.63  
 100.00 9 59 14 1473.05 -6.09 353.61 245.53 119.32 10 23 47 873.1 -2.14 347.06  
 100.00 19 19 40 4778.05 24.79 202.58 248.80 72.75 20 39 18 4178.0 22.20 194.74  
 110.00 10 54 59 1298.45 -8.34 338.99 244.15 123.27 11 16 37 698.5 -3.90 332.71  
 110.00 20 40 24 4525.41 27.27 182.43 247.83 68.54 21 55 50 3925.4 24.11 174.69

DIFFERENTIAL CORRECTIONS

TDE -.2827 TRA -.8857 TC3 .2632 BAU .3155  
 RDE -.0887 RRA -1.3815 RC3 2.2995 FAU .05873  
 FDE .1078 FRA 3.1188 FC3 -4.9858 BSP 6779  
 BDE .2962 BRA 1.6410 BC3 2.3146 FSP -1230

MID-COURSE EXECUTION ACCURACY

SGT 1704.8 SGR 2925.4 SG3 564.4  
 RRT .8853 RRF -.9995 RTF -.8856  
 SGB 3385.9 R23 -.1135 R13 -.9931  
 SG1 3312.8 SG2 700.0 THA 61.31

ORBIT DETERMINATION ACCURACY

ST 702.2 SR 775.3 SS 748.6  
 CRT .8244 CRS .9956 CST .7676  
 LSA 1230.9 MSA 373.6 SSA 3.9  
 EL1 999.6 EL2 308.3 ALF 48.43

LAUNCH DATE DEC 27 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 22 1969

MELIOCENTRIC CONIC

DISTANCE 393.283

RL 147.12 LAL .00 LOL 95.31 VL 27.674 GAL 2.24 AZL 95.17 MCA 172.50 SMA 127.81 ECC .15594 INC 5.1681 VI 30.284  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.450 GAP -2.64 AZP 84.88 TAL 167.71 TAP 340.20 RCA 107.88 APO 147.74 V2 34.848  
 RC 73.792 GL -39.96 GP 62.48 ZAL 72.83 ZAP 72.29 ETS 327.65 ZAE 117.50 ETE 72.22 ZAC 95.23 ETC 140.23 CLP -48.82

PLANETOCENTRIC CONIC

C3 15.041 VML 3.878 DLA -26.50 RAL 40.84 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 6.199 DPA 65.22 RAP 347.62 ECC 1.2475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 12 12 21 1117.51 13.62 338.06 261.86 115.07 12 30 58 517.5 16.89 330.91  
 90.00 15 9 55 5823.50 26.36 278.25 266.23 100.74 16 46 58 5223.5 27.58 269.80  
 100.00 13 3 29 952.38 11.30 324.75 260.68 117.86 13 19 21 352.4 14.94 317.85  
 100.00 17 1 28 5463.87 28.92 252.27 266.70 97.91 18 32 32 4863.9 29.71 243.55  
 110.00 13 20 10 900.01 6.80 318.08 257.97 123.58 13 35 10 300.0 11.17 311.71  
 110.00 19 1 16 5089.00 34.13 224.33 267.23 92.04 20 26 5 4489.0 34.04 215.09

DIFFERENTIAL CORRECTIONS

TDE -.1513 TRA -.7729 TC3 .3656 BAU .4281  
 RDE .4046 RRA -1.8262 RC3 2.0972 FAU .04537  
 FDE -.5561 FRA 2.3645 FC3 -2.6117 BSP 11610  
 BDE .4320 BRA 1.9830 BC3 2.1289 FSP -1212

MID-COURSE EXECUTION ACCURACY

SGT 1326.0 SGR 3477.5 SG3 386.5  
 RRT .9053 RRF -.9998 RTF -.9054  
 SGB 3721.7 R23 -.0502 R13 -.9985  
 SG1 3683.5 SG2 531.9 THA 70.53

ORBIT DETERMINATION ACCURACY

ST 443.4 SR 1085.2 SS 766.9  
 CRT .4427 CRS .9996 CST .4176  
 LSA 1344.0 MSA 395.2 SSA 1.6  
 EL1 1105.4 EL2 390.3 ALF 78.27

LAUNCH DATE DEC 27 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 24 1969

MELIOCENTRIC CONIC

DISTANCE 399.634

RL 147.12 LAL .00 LOL 95.31 VL 27.694 GAL 2.22 AZL 101.26 MCA 175.61 SMA 127.95 ECC .15465 INC 11.2645 VI 30.284  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.456 GAP -2.21 AZP 78.77 TAL 167.71 TAP 343.32 RCA 108.16 APO 147.73 V2 34.839  
 RC 76.053 GL -58.27 GP 77.25 ZAL 79.72 ZAP 80.42 ETS 323.94 ZAE 102.60 ETE 71.26 ZAC 86.25 ETC 136.44 CLP -41.07

PLANETOCENTRIC CONIC

C3 40.389 VML 6.355 DLA -43.74 RAL 48.79 RAD 6568.6 VEL 12.718 PTH 2.31 VHP 9.619 DPA 71.76 RAP 309.22 ECC 1.6647  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.15 10 30 25 1752.70 22.25 32.56 293.46 128.69 10 59 38 1152.7 27.10 25.97  
 124.85 17 55 14 5668.95 22.27 264.70 293.48 128.68 19 29 43 5069.0 27.11 258.11  
 55.15 10 30 25 1752.70 22.25 32.56 293.46 128.69 10 59 38 1152.7 27.10 25.97  
 124.85 17 55 14 5668.95 22.27 264.70 293.48 128.68 19 29 43 5069.0 27.11 258.11  
 55.15 10 30 25 1752.70 22.25 32.56 293.46 128.69 10 59 38 1152.7 27.10 25.97  
 124.85 17 55 14 5668.95 22.27 264.70 293.48 128.68 19 29 43 5069.0 27.11 258.11

DIFFERENTIAL CORRECTIONS

TDE -.1801 TRA -1.0387 TC3 .1090 BAU .3732  
 RDE 1.1870 RRA -2.9437 RC3 .6825 FAU .01653  
 FDE -.6375 FRA 1.6901 FC3 -.3544 BSP 12998  
 BDE 1.2006 BRA 3.1216 BC3 .6912 FSP -620

MID-COURSE EXECUTION ACCURACY

SGT 1313.7 SGR 3923.3 SG3 192.8  
 RRT .9135 RRF -.9997 RTF -.9219  
 SGB 4137.4 R23 -.0173 R13 -.9997  
 SG1 4105.7 SG2 510.7 THA 72.72

ORBIT DETERMINATION ACCURACY

ST 421.4 SR 1536.4 SS 710.5  
 CRT .3938 CRS .9994 CST .4242  
 LSA 1701.3 MSA 385.0 SSA .8  
 EL1 1545.9 EL2 385.0 ALF 83.43

LAUNCH DATE DEC 27 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 26 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 27.711 GAL 2.27 AZL 132.27 MCA 178.46 SMA 128.06 ECC .15386 INC42.2636 V1 30.284  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.461 GAP -1.88 AZP 47.74 TAL 167.37 TAP 345.83 RCA 108.36 APO 147.76 V2 34.831  
 RC 78.340 GL -62.10 GP 71.97 ZAL 86.85 ZAP 87.20 ETS 186.60 ZAE 75.20 ETE 295.04 ZAC 76.57 ETC 2.70 CLP 80.93

DISTANCE 405.667

PLANETOCENTRIC CONIC  
 C3 444.036 VML 21.072 CLA -50.53 RAL 43.96 RAD 6572.2 VEL 23.777 PTH 3.30 VMP 28.078 DPA 63.20 RAP 235.84 ECC 8.3077  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.23 9 39 33 2272.81 2.47 61.58 311.90 140.48 10 17 26 1672.8 8.63 56.86  
 133.77 18 7 33 742.35 2.49 300.65 311.92 140.48 18 19 55 142.4 8.64 295.93  
 46.23 9 39 33 2272.81 2.47 61.58 311.90 140.48 10 17 26 1672.8 8.63 56.86  
 133.77 18 7 33 742.35 2.49 300.65 311.92 140.48 18 19 55 142.4 8.64 295.93  
 46.23 9 39 33 2272.81 2.47 61.58 311.90 140.48 10 17 26 1672.8 8.63 56.86  
 133.77 18 7 33 742.35 2.49 300.65 311.92 140.48 18 19 55 142.4 8.64 295.93

DIFFERENTIAL CORRECTIONS  
 TDE 4.2032 TRA-2.6384 TC3 -.1096 BAU 1.5128  
 RDE-3.7478 RRA 8.3577 RC3 .2301 FAU-.02781  
 FDE-1.0452 FRA 1.8443 FC3 .0542 BSP 10184  
 BDE 5.6315 BRA 8.7643 BC3 .2548 FSP -189

MID-COURSE EXECUTION ACCURACY  
 SGT 1671.2 SGR 3841.6 SG3 75.1  
 RRT -.8795 RRF .9978 RTF -.9092  
 SGB 4189.4 R23 -.0047 R13 1.0000  
 SG1 4123.4 SG2 740.9 THA 111.67

ORBIT DETERMINATION ACCURACY  
 ST 1192.0 SR 1479.7 SS 897.4  
 CRT -.8664 CRS -.9932 CST -.9186  
 LSA 2044.9 MSA 483.8 SSA .3  
 EL1 1838.7 EL2 479.1 ALF 127.94

LAUNCH DATE DEC 27 1968

FLIGHT TIME 152.00

ARRIVAL DATE MAY 28 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 27.724 GAL 2.10 AZL 99.02 MCA 182.36 SMA 128.15 ECC .15236 INC30.9805 V1 30.284  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.464 GAP -1.25 AZP 120.96 TAL 168.18 TAP 350.54 RCA 108.63 APO 147.68 V2 34.824  
 RC 80.651 GL 65.10 GP -83.67 ZAL 86.07 ZAP 86.91 ETS 153.77 ZAE 84.41 ETE 48.03 ZAC 106.02 ETC 347.23 CLP 60.69

DISTANCE 412.873

PLANETOCENTRIC CONIC  
 C3 247.201 VML 15.723 CLA 61.00 RAL 327.15 RAD 6571.4 VEL 19.197 PTH 3.09 VMP 17.569 DPA -61.94 RAP 109.79 ECC 5.0683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.41 15 55 32 4925.49 -6.72 237.76 233.42 29.22 17 17 38 4325.5 -13.68 234.17  
 146.59 1 38 46 3246.52 -6.71 99.53 233.40 29.22 2 32 52 2646.5 -13.67 95.94  
 33.41 15 55 32 4925.49 -6.72 237.76 233.42 29.22 17 17 38 4325.5 -13.68 234.17  
 146.59 1 38 46 3246.52 -6.71 99.53 233.40 29.22 2 32 52 2646.5 -13.67 95.94  
 33.41 15 55 32 4925.49 -6.72 237.76 233.42 29.22 17 17 38 4325.5 -13.68 234.17  
 146.59 1 38 46 3246.52 -6.71 99.53 233.40 29.22 2 32 52 2646.5 -13.67 95.94

DIFFERENTIAL CORRECTIONS  
 TDE-5.1891 TRA 1.9132 TC3 -.1220 BAU .6235  
 RDE-9.9680 RRA .8587 RC3 -.1439 FAU-.01340  
 FDE 2.9272 FRA -.5073 FC3 .0469 BSP 13131  
 BDE11.2378 BRA 2.0971 BC3 .1887 FSP -308

MID-COURSE EXECUTION ACCURACY  
 SGT 2406.6 SGR 3717.1 SG3 98.7  
 RRT .8911 RRF -.9862 RTF -.9538  
 SGB 4428.1 R23 .0332 R13 -.9994  
 SG1 4327.6 SG2 938.1 THA 58.36

ORBIT DETERMINATION ACCURACY  
 ST 1939.6 SR 3637.7 SS 1628.6  
 CRT .9854 CRS .9986 CST .9931  
 LSA 4422.8 MSA 293.1 SSA .7  
 EL1 4112.1 EL2 292.1 ALF 62.13

LAUNCH DATE DEC 27 1968

FLIGHT TIME 154.00

ARRIVAL DATE MAY 30 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 27.734 GAL 2.14 AZL 75.00 MCA 185.37 SMA 128.22 ECC .15190 INC14.9986 V1 30.284  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.465 GAP -.88 AZP 104.94 TAL 167.93 TAP 353.30 RCA 108.75 APO 147.70 V2 34.816  
 RC 82.981 GL 62.84 GP -75.59 ZAL 82.19 ZAP 84.95 ETS 31.46 ZAE 103.44 ETE 288.59 ZAC 112.29 ETC 223.23 CLP -69.30

DISTANCE 419.048

PLANETOCENTRIC CONIC  
 C3 64.983 VML 8.061 CLA 62.40 RAL 335.41 RAD 6569.2 VEL 13.651 PTH 2.49 VMP 7.934 DPA -57.12 RAP 73.21 ECC 2.0695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.76 16 24 26 4675.28 -22.17 231.26 233.12 30.02 17 42 22 4075.3 -29.03 227.11  
 148.24 2 15 47 2982.13 -22.16 91.07 233.11 30.02 3 5 29 2382.1 -29.02 86.92  
 31.76 16 24 26 4675.28 -22.17 231.26 233.12 30.02 17 42 22 4075.3 -29.03 227.11  
 148.24 2 15 47 2982.13 -22.16 91.07 233.11 30.02 3 5 29 2382.1 -29.02 86.92  
 31.76 16 24 26 4675.28 -22.17 231.26 233.12 30.02 17 42 22 4075.3 -29.03 227.11  
 148.24 2 15 47 2982.13 -22.16 91.07 233.11 30.02 3 5 29 2382.1 -29.02 86.92

DIFFERENTIAL CORRECTIONS  
 TDE -.7244 TRA -.1782 TC3 .0219 BAU .2813  
 RDE 5.9437 RRA -.6691 RC3 -.3231 FAU .01905  
 FDE 4.0393 FRA -.3901 FC3 -.2537 BSP 14046  
 BDE 5.9877 BRA .6924 BC3 .3238 FSP -860

MID-COURSE EXECUTION ACCURACY  
 SGT 584.0 SGR 4378.6 SG3 255.8  
 RRT -.7481 RRF .9993 RTF -.7686  
 SGB 4417.3 R23 .0228 R13 .9995  
 SG1 4400.5 SG2 385.6 THA 95.74

ORBIT DETERMINATION ACCURACY  
 ST 521.4 SR 4235.8 SS 1971.9  
 CRT -.9735 CRS -.9999 CST .9758  
 LSA 4699.8 MSA 119.0 SSA 1.2  
 EL1 4266.1 EL2 118.4 ALF 96.84

LAUNCH DATE DEC 27 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 1 1969

MELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 95.31 VL 27.742 GAL 2.16 AZL 79.40 MCA 188.49 SMA 128.27 ECC .15156 INC10.5979 V1 30.284  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.464 GAP -.49 AZP 100.48 TAL 167.75 TAP 356.25 RCA 108.83 APO 147.71 V2 34.810  
 RC 85.328 GL 57.64 GP -64.00 ZAL 79.43 ZAP 85.42 ETS 14.69 ZAE 115.36 ETE 273.50 ZAC 115.19 ETC 205.40 CLP -79.51

DISTANCE 425.334

PLANETOCENTRIC CONIC  
 C3 36.430 VML 6.036 CLA 60.02 RAL 345.43 RAD 6568.4 VEL 12.562 PTH 2.28 VMP 5.417 DPA -49.95 RAP 57.30 ECC 1.5995  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.58 17 11 23 4518.95 -29.79 223.18 236.16 35.15 18 26 41 3919.0 -36.21 217.90  
 145.42 2 48 46 2850.56 -29.78 86.38 236.14 35.15 3 36 17 2250.6 -36.20 81.10  
 34.58 17 11 23 4518.95 -29.79 223.18 236.16 35.15 18 26 41 3919.0 -36.21 217.90  
 145.42 2 48 46 2850.56 -29.78 86.38 236.14 35.15 3 36 17 2250.6 -36.20 81.10  
 34.58 17 11 23 4518.95 -29.79 223.18 236.16 35.15 18 26 41 3919.0 -36.21 217.90  
 145.42 2 48 46 2850.56 -29.78 86.38 236.14 35.15 3 36 17 2250.6 -36.20 81.10

DIFFERENTIAL CORRECTIONS  
 TDE .5474 TRA -.2937 TC3 -.1354 BAU .3937  
 RDE 4.2552 RRA -.0766 RC3 -.7970 FAU .05036  
 FDE 5.7185 FRA -.0270 FC3-1.1968 BSP 13200  
 BDE 4.2903 BRA .3035 BC3 .8084 FSP -1605

MID-COURSE EXECUTION ACCURACY  
 SGT 779.8 SGR 4155.0 SG3 485.4  
 RRT .7214 RRF .9993 RTF .7043  
 SGB 4227.5 R23 .0415 R13 .9987  
 SG1 4193.5 SG2 535.1 THA 82.16

ORBIT DETERMINATION ACCURACY  
 ST 545.9 SR 4039.8 SS 2540.8  
 CRT .9551 CRS-1.0000 CST -.9527  
 LSA 4800.7 MSA 162.9 SSA 2.0  
 EL1 4073.3 EL2 160.5 ALF 82.63

LAUNCH DATE DEC 27 1968

FLIGHT TIME 158.00

ARRIVAL DATE JUN 3 1969

Heliocentric Conic

DISTANCE 431.625

RL 147.12 LAL .00 LOL 95.31 VL 27.746 GAL 2.19 AZL 81.44 MCA 191.64 SMA 128.31 ECC .15141 INC 8.5594 VI 30.284  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.462 GAP -.11 AZP 98.39 TAL 167.55 TAP 359.19 RCA 108.88 APO 147.73 V2 34.804  
 RC 87.691 GL 53.28 GP -55.02 ZAL 77.40 ZAP 87.80 ETS 6.74 ZAE 124.29 ETE 265.51 ZAC 116.04 ETC 196.36 CLP -86.16

Planetocentric Conic

C3 26.505 VML 5.148 CLA 57.39 RAL 352.29 RAD 6568.1 VEL 12.161 PTH 2.18 VHP 4.350 DPA -43.69 RAP 47.52 ECC 1.4362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.75 17 46 59 4423.40 -33.12 216.14 237.64 40.05 19 0 42 3823.4 -39.07 209.93  
 142.25 3 7 56 2786.49 -33.10 83.33 237.62 40.05 3 54 22 2186.5 -39.06 77.12  
 37.75 17 46 59 4423.40 -33.12 216.14 237.64 40.05 19 0 42 3823.4 -39.07 209.93  
 142.25 3 7 56 2786.49 -33.10 83.33 237.62 40.05 3 54 22 2186.5 -39.06 77.12  
 37.75 17 46 59 4423.40 -33.12 216.14 237.64 40.05 19 0 42 3823.4 -39.07 209.93  
 142.25 3 7 56 2786.49 -33.10 83.33 237.62 40.05 3 54 22 2186.5 -39.06 77.12

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .9575 TRA -.2328 TC3 -.3826 BAU .4167 SGT 1233.6 SGR 3803.1 SG3 723.2 ST 1075.4 SR 3610.1 SS 2948.7  
 RDE 3.2423 RRA .1764 RC3-1.1119 FAU .08194 RRT .8784 RRF .9992 RTF .8674 CRT .9865 CRS-1.0000 CST -.9851  
 FDE 7.0443 FRA .4862 FC3-2.6763 BSP 12410 SGB 3998.1 R23 .0631 R13 .9975 LSA 4780.5 MSA 176.3 SSA 2.5  
 BDE 3.3807 BRA .2921 BC3 1.1758 FSP -2396 SG1 3957.8 SG2 566.5 TMA 73.75 EL1 3763.1 EL2 169.2 ALF 73.59

LAUNCH DATE DEC 27 1968

FLIGHT TIME 160.00

ARRIVAL DATE JUN 5 1969

Heliocentric Conic

DISTANCE 437.905

RL 147.12 LAL .00 LOL 95.31 VL 27.749 GAL 2.24 AZL 82.62 MCA 194.79 SMA 128.32 ECC .15145 INC 7.3805 VI 30.284  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.459 GAP .28 AZP 97.14 TAL 167.31 TAP 2.10 RCA 108.89 APO 147.76 V2 34.799  
 RC 90.065 GL 49.79 GP -47.77 ZAL 75.80 ZAP 91.43 ETS 1.21 ZAE 131.04 ETE 257.95 ZAC 115.55 ETC 189.77 CLP -92.13

Planetocentric Conic

C3 21.755 VML 4.664 CLA 55.06 RAL 357.09 RAD 6567.9 VEL 11.964 PTH 2.13 VHP 3.803 DPA -38.53 RAP 40.37 ECC 1.3580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.58 18 13 53 4359.12 -34.52 210.42 238.39 44.03 19 26 33 3759.1 -40.06 203.57  
 139.42 3 19 19 2754.01 -34.51 81.36 238.38 44.02 4 5 13 2154.0 -40.05 74.52  
 40.58 18 13 53 4359.12 -34.52 210.42 238.39 44.03 19 26 33 3759.1 -40.06 203.57  
 139.42 3 19 19 2754.01 -34.51 81.36 238.38 44.02 4 5 13 2154.0 -40.05 74.52  
 40.58 18 13 53 4359.12 -34.52 210.42 238.39 44.03 19 26 33 3759.1 -40.06 203.57  
 139.42 3 19 19 2754.01 -34.51 81.36 238.38 44.02 4 5 13 2154.0 -40.05 74.52

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 1.2185 TRA -.1433 TC3 -.6846 BAU .4185 SGT 1656.2 SGR 3425.5 SG3 928.9 ST 1499.8 SR 3157.9 SS 3195.8  
 RDE 2.5658 RRA .2968 RC3-1.2658 FAU .10889 RRT .9300 RRF .9991 RTF .9216 CRT .9926 CRS-1.0000 CST -.9914  
 FDE 7.8982 FRA 1.0540 FC3-4.3335 BSP 11654 SGB 3804.9 R23 .0883 R13 .9954 LSA 4733.1 MSA 181.2 SSA 3.0  
 BDE 2.8405 BRA .3296 BC3 1.4391 FSP -3079 SG1 3764.4 SG2 553.9 TMA 65.22 EL1 3492.1 EL2 165.2 ALF 64.70

LAUNCH DATE DEC 27 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 7 1969

Heliocentric Conic

DISTANCE 444.169

RL 147.12 LAL .00 LOL 95.31 VL 27.749 GAL 2.29 AZL 83.39 MCA 197.95 SMA 128.32 ECC .15169 INC 6.6092 VI 30.284  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.455 GAP .65 AZP 96.29 TAL 167.02 TAP 4.97 RCA 108.86 APO 147.79 V2 34.795  
 RC 92.449 GL 46.96 GP -41.79 ZAL 74.46 ZAP 95.81 ETS 357.10 ZAE 135.94 ETE 249.95 ZAC 114.27 ETC 184.69 CLP -97.80

Planetocentric Conic

C3 19.066 VML 4.367 CLA 53.11 RAL .70 RAD 6567.8 VEL 11.851 PTH 2.10 VHP 3.500 DPA -34.28 RAP 34.70 ECC 1.3138  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.99 18 35 15 4312.60 -35.04 205.83 238.97 47.15 19 47 7 3712.6 -40.24 198.57  
 137.01 3 26 46 2737.54 -35.02 80.14 238.95 47.14 4 12 24 2137.5 -40.23 72.88  
 42.99 18 35 15 4312.60 -35.04 205.83 238.97 47.15 19 47 7 3712.6 -40.24 198.57  
 137.01 3 26 46 2737.54 -35.02 80.14 238.95 47.14 4 12 24 2137.5 -40.23 72.88  
 42.99 18 35 15 4312.60 -35.04 205.83 238.97 47.15 19 47 7 3712.6 -40.24 198.57  
 137.01 3 26 46 2737.54 -35.02 80.14 238.95 47.14 4 12 24 2137.5 -40.23 72.88

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 1.4208 TRA -.0442 TC3-1.0207 BAU .4221 SGT 2068.8 SGR 3049.2 SG3 1084.5 ST 1864.8 SR 2733.2 SS 3314.8  
 RDE 2.0755 RRA .3498 RC3-1.3037 FAU .12960 RRT .9541 RRF .9987 RTF .9468 CRT .9950 CRS -.9999 CST -.9938  
 FDE 8.3147 FRA 1.5926 FC3-5.8846 BSP 11148 SGB 3684.7 R23 .1143 R13 .9924 LSA 4679.9 MSA 183.3 SSA 3.6  
 BDE 2.5152 BRA .3526 BC3 1.6557 FSP -3608 SG1 3648.1 SG2 518.0 TMA 56.31 EL1 3305.2 EL2 153.3 ALF 55.74

LAUNCH DATE DEC 27 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 9 1969

Heliocentric Conic

DISTANCE 450.415

RL 147.12 LAL .00 LOL 95.31 VL 27.747 GAL 2.36 AZL 83.94 MCA 201.10 SMA 128.31 ECC .15212 INC 6.0623 VI 30.284  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.450 GAP 1.03 AZP 95.66 TAL 166.68 TAP 7.78 RCA 108.79 APO 147.83 V2 34.791  
 RC 94.840 GL 44.60 GP -36.77 ZAL 73.25 ZAP 100.54 ETS 354.00 ZAE 139.24 ETE 241.52 ZAC 112.58 ETC 180.76 CLP -103.20

Planetocentric Conic

C3 17.390 VML 4.170 CLA 51.47 RAL 3.62 RAD 6567.7 VEL 11.780 PTH 2.08 VHP 3.334 DPA -30.73 RAP 30.00 ECC 1.2862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.03 18 53 3 4277.17 -35.12 202.13 239.58 49.60 20 4 20 3677.2 -40.05 194.58  
 134.97 3 32 13 2729.94 -35.11 79.42 239.56 49.59 4 17 43 2129.9 -40.04 71.88  
 45.03 18 53 3 4277.17 -35.12 202.13 239.58 49.60 20 4 20 3677.2 -40.05 194.58  
 134.97 3 32 13 2729.94 -35.11 79.42 239.56 49.59 4 17 43 2129.9 -40.04 71.88  
 45.03 18 53 3 4277.17 -35.12 202.13 239.58 49.60 20 4 20 3677.2 -40.05 194.58  
 134.97 3 32 13 2729.94 -35.11 79.42 239.56 49.59 4 17 43 2129.9 -40.04 71.88

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 1.5905 TRA .0614 TC3-1.3693 BAU .4331 SGT 2469.4 SGR 2690.2 SG3 1186.9 ST 2185.9 SR 2353.1 SS 3339.9  
 RDE 1.7034 RRA .3653 RC3-1.2632 FAU .14373 RRT .9674 RRF .9981 RTF .9607 CRT .9964 CRS -.9999 CST -.9951  
 FDE 8.3799 FRA 2.0548 FC3-7.1556 BSP 10962 SGB 3651.7 R23 .1357 R13 .9890 LSA 4630.0 MSA 183.4 SSA 4.1  
 BDE 2.3305 BRA .3705 BC3 1.8630 FSP -3979 SG1 3622.1 SG2 464.2 TMA 47.53 EL1 3208.9 EL2 135.0 ALF 47.12

LAUNCH DATE DEC 27 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 11 1969

MELIOCENTRIC CONIC DISTANCE 456.643  
 RL 147.12 LAL .00 LOL 95.31 VL 27.743 GAL 2.43 AZL 84.35 HCA 204.26 SMA 128.28 ECC .15273 INC 5.6524 V1 30.284  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.445 GAP 1.39 AZP 95.16 TAL 166.29 TAP 10.55 RCA 108.69 APO 147.87 V2 34.788  
 RC 97.236 GL 42.57 GP -32.50 ZAL 72.11 ZAP 105.37 ETS 351.66 ZAE 141.16 ETE 233.07 ZAC 110.77 ETC 177.74 CLP-108.32

PLANETOCENTRIC CONIC  
 CS 16.283 VHL 4.035 OLA 50.09 RAL 6.12 RAD 6567.7 VEL 11.733 PTH 2.07 VMP 3.253 DPA -27.74 RAP 26.06 ECC 1.2680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.79 19 8 33 4249.18 -34.98 199.09 240.31 51.54 20 19 22 3649.2 -39.69 191.37  
 133.21 3 36 40 2727.71 -34.97 79.04 240.30 51.53 4 22 7 2127.7 -39.68 71.32  
 46.79 19 8 33 4249.18 -34.98 199.09 240.31 51.54 20 19 22 3649.2 -39.69 191.37  
 133.21 3 36 40 2727.71 -34.97 79.04 240.30 51.53 4 22 7 2127.7 -39.68 71.32  
 46.79 19 8 33 4249.18 -34.98 199.09 240.31 51.54 20 19 22 3649.2 -39.69 191.37  
 133.21 3 36 40 2727.71 -34.97 79.04 240.30 51.53 4 22 7 2127.7 -39.68 71.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7355 TRA .1706 TC3-1.7170 BAU .4528 SGT 2852.2 SGR 2358.5 SG3 1241.1 ST 2467.1 SR 2022.2 SS 3299.1  
 RDE 1.4141 RRA .3597 RC3-1.1739 FAU .15180 RRT .9753 RRF .9971 RTF .9689 CRT .9974 CRS -.9998 CST -.9958  
 FDE 8.1873 FRA 2.4239 FC3-8.0709 BSP 11082 SGB 3701.0 R23 .1480 R13 .9862 LSA 4585.5 MSA 182.6 SSA 4.8  
 BDE 2.2386 BRA .3981 BC3 2.0800 FSP -4198 SG1 3678.9 SG2 403.6 THA 39.45 EL1 3187.9 EL2 113.3 ALF 39.33

LAUNCH DATE DEC 27 1968

FLIGHT TIME 168.00

ARRIVAL DATE JUN 13 1969

MELIOCENTRIC CONIC DISTANCE 462.852  
 RL 147.12 LAL .00 LOL 95.31 VL 27.737 GAL 2.52 AZL 84.67 HCA 207.42 SMA 128.24 ECC .15352 INC 5.3318 V1 30.284  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.438 GAP 1.76 AZP 94.74 TAL 165.85 TAP 13.27 RCA 108.55 APO 147.93 V2 34.786  
 RC 99.636 GL 40.79 GP -28.85 ZAL 71.00 ZAP 110.14 ETS 349.92 ZAE 141.96 ETE 225.07 ZAC 109.03 ETC 175.44 CLP-113.14

PLANETOCENTRIC CONIC  
 CS 15.533 VHL 3.941 OLA 48.90 RAL 8.36 RAD 6567.6 VEL 11.701 PTH 2.06 VMP 3.231 DPA -25.16 RAP 22.76 ECC 1.2556  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.31 19 22 29 4226.57 -34.72 196.57 241.19 53.11 20 32 56 3626.6 -39.25 188.72  
 131.69 3 40 39 2728.91 -34.71 78.92 241.18 53.10 4 26 8 2128.9 -39.24 71.07  
 48.31 19 22 29 4226.57 -34.72 196.57 241.19 53.11 20 32 56 3626.6 -39.25 188.72  
 131.69 3 40 39 2728.91 -34.71 78.92 241.18 53.10 4 26 8 2128.9 -39.24 71.07  
 48.31 19 22 29 4226.57 -34.72 196.57 241.19 53.11 20 32 56 3626.6 -39.25 188.72  
 131.69 3 40 39 2728.91 -34.71 78.92 241.18 53.10 4 26 8 2128.9 -39.24 71.07

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8602 TRA .2828 TC3-2.0517 BAU .4792 SGT 3212.5 SGR 2059.5 SG3 1255.6 ST 2711.2 SR 1739.4 SS 3213.9  
 RDE 1.1861 RRA .3429 RC3-1.0562 FAU .15458 RRT .9800 RRF .9956 RTF .9741 CRT .9981 CRS -.9997 CST -.9962  
 FDE 7.8214 FRA 2.7045 FC3-8.6157 BSP 11445 SGB 3815.9 R23 .1493 R13 .9843 LSA 4546.7 MSA 181.6 SSA 5.5  
 BDE 2.2062 BRA .4445 BC3 2.3077 FSP -4281 SG1 3800.2 SG2 346.4 THA 32.44 EL1 3219.9 EL2 90.8 ALF 32.66

LAUNCH DATE DEC 27 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 15 1969

MELIOCENTRIC CONIC DISTANCE 469.043  
 RL 147.12 LAL .00 LOL 95.31 VL 27.729 GAL 2.63 AZL 84.93 HCA 210.58 SMA 128.19 ECC .15448 INC 5.0730 V1 30.284  
 RP 108.94 LAP -2.58 LOP 305.79 VP 37.431 GAP 2.12 AZP 94.57 TAL 165.36 TAP 15.94 RCA 108.38 APO 147.99 V2 34.784  
 RC 102.038 GL 39.19 GP -25.71 ZAL 69.88 ZAP 114.72 ETS 348.53 ZAE 141.90 ETE 217.88 ZAC 107.45 ETC 173.71 CLP-117.66

PLANETOCENTRIC CONIC  
 CS 15.024 VHL 3.876 OLA 47.87 RAL 10.46 RAD 6567.6 VEL 11.679 PTH 2.05 VMP 3.251 DPA -22.91 RAP 20.03 ECC 1.2473  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.65 19 35 23 4207.99 -34.39 194.45 242.22 54.39 20 45 31 3608.0 -38.77 186.52  
 130.35 3 44 28 2732.52 -34.38 78.98 242.21 54.37 4 30 1 2132.5 -38.76 71.05  
 49.65 19 35 23 4207.99 -34.39 194.45 242.22 54.39 20 45 31 3608.0 -38.77 186.52  
 130.35 3 44 28 2732.52 -34.38 78.98 242.21 54.37 4 30 1 2132.5 -38.76 71.05  
 49.65 19 35 23 4207.99 -34.39 194.45 242.22 54.39 20 45 31 3608.0 -38.77 186.52  
 130.35 3 44 28 2732.52 -34.38 78.98 242.21 54.37 4 30 1 2132.5 -38.76 71.05

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.9675 TRA .3975 TC3-2.3644 BAU .5100 SGT 3547.5 SGR 1795.1 SG3 1239.7 ST 2920.7 SR 1501.4 SS 3100.6  
 RDE 1.0054 RRA .3206 RC3 -.9256 FAU .15311 RRT .9824 RRF .9932 RTF .9774 CRT .9987 CRS -.9994 CST -.9964  
 FDE 7.3519 FRA 2.9063 FC3-8.8224 BSP 11983 SGB 3975.8 R23 .1395 R13 .9834 LSA 4512.8 MSA 180.6 SSA 6.2  
 BDE 2.2095 BRA .5107 BC3 2.5391 FSP -4254 SG1 3964.5 SG2 300.2 THA 26.60 EL1 3283.2 EL2 69.0 ALF 27.19

LAUNCH DATE DEC 27 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 17 1969

MELIOCENTRIC CONIC DISTANCE 475.214  
 RL 147.12 LAL .00 LOL 95.31 VL 27.720 GAL 2.74 AZL 85.14 HCA 213.74 SMA 128.12 ECC .15563 INC 4.8584 V1 30.284  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.423 GAP 2.47 AZP 94.04 TAL 164.82 TAP 18.56 RCA 108.18 APO 148.06 V2 34.783  
 RC 104.441 GL 37.72 GP -23.01 ZAL 68.76 ZAP 119.07 ETS 347.68 ZAE 141.26 ETE 211.70 ZAC 106.12 ETC 172.41 CLP-121.87

PLANETOCENTRIC CONIC  
 CS 14.691 VHL 3.833 OLA 46.95 RAL 12.46 RAD 6567.6 VEL 11.665 PTH 2.05 VMP 3.304 DPA -20.91 RAP 17.82 ECC 1.2418  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.85 19 47 33 4192.58 -34.01 192.64 243.40 55.44 20 57 26 3592.6 -38.27 184.66  
 129.15 3 48 18 2737.92 -34.00 79.18 243.39 55.43 4 33 56 2137.9 -38.26 71.21  
 50.85 19 47 33 4192.58 -34.01 192.64 243.40 55.44 20 57 26 3592.6 -38.27 184.66  
 129.15 3 48 18 2737.92 -34.00 79.18 243.39 55.43 4 33 56 2137.9 -38.26 71.21  
 50.85 19 47 33 4192.58 -34.01 192.64 243.40 55.44 20 57 26 3592.6 -38.27 184.66  
 129.15 3 48 18 2737.92 -34.00 79.18 243.39 55.43 4 33 56 2137.9 -38.26 71.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.0620 TRA .5164 TC3-2.6445 BAU .5421 SGT 3858.6 SGR 1566.7 SG3 1203.2 ST 3101.6 SR 1305.3 SS 2975.8  
 RDE .8633 RRA .2966 RC3 -.7905 FAU .14811 RRT .9827 RRF .9895 RTF .9796 CRT .9992 CRS -.9990 CST -.9965  
 FDE 6.8426 FRA 3.0479 FC3-8.7277 BSP 12588 SGB 4164.6 R23 .1190 R13 .9830 LSA 4488.5 MSA 179.6 SSA 6.9  
 BDE 2.2354 BRA .5955 BC3 2.7602 FSP -4129 SG1 4155.9 SG2 269.4 THA 21.85 EL1 3364.7 EL2 48.9 ALF 22.81

LAUNCH DATE DEC 27 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 19 1969

MELIOCENTRIC CONIC

DISTANCE 481.366

RL 147.12 LAL .00 LOL 95.31 VL 27.709 GAL 2.87 AZL 85.32 MCA 216.90 SMA 128.05 ECC .15694 INC 4.6766 V1 30.284  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.415 GAP 2.83 AZP 93.74 TAL 164.24 TAP 21.14 RCA 107.95 APO 148.14 V2 34.783  
 RC 106.844 GL 36.35 GP -20.68 ZAL 67.60 ZAP 123.15 ETS 347.00 ZAE 140.25 ETE 206.52 ZAC 105.06 ETC 171.45 CLP-125.77

PLANETOCENTRIC CONIC

C3 14.494 VHL 3.807 OLA 46.12 RAL 14.42 RAD 6567.6 VEL 11.657 PTH 2.05 WHP 3.382 DPA -19.12 RAP 16.06 ECC 1.2385  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.94 19 59 17 4179.63 -33.60 191.08 244.72 56.32 21 8 56 3579.6 -37.76 183.07  
 128.06 3 52 10 2744.86 -33.59 79.50 244.72 56.31 4 37 55 2144.9 -37.75 71.50  
 51.94 19 59 17 4179.63 -33.60 191.08 244.72 56.32 21 8 56 3579.6 -37.76 183.07  
 128.06 3 52 10 2744.86 -33.59 79.50 244.72 56.31 4 37 55 2144.9 -37.75 71.50  
 51.94 19 59 17 4179.63 -33.60 191.08 244.72 56.32 21 8 56 3579.6 -37.76 183.07  
 128.06 3 52 10 2744.86 -33.59 79.50 244.72 56.31 4 37 55 2144.9 -37.75 71.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1407 TRA .6358 TC3-2.8982 BAU .5762 SGT 4141.8 SGR 1369.2 SG3 1151.3 ST 3248.9 SR 1141.5 SS 2836.3  
 RDE .7493 RRA .2709 RC3 -.6659 FAU .14168 RRT .9811 RRF .9842 RTF .9812 CRT .9996 CRS -.9984 CST -.9965  
 FDE 6.3052 FRA 3.1233 FC3-8.4628 BSP 13303 SGB 4362.2 R23 .0930 R13 .9831 LSA 4457.7 MSA 178.3 SSA 7.6  
 BOE 2.2680 BRA .6911 BC3 2.9737 FSP -39777 SG1 4355.0 SG2 251.9 THA 18.03 EL1 3443.4 EL2 30.5 ALF 19.35

LAUNCH DATE DEC 27 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 21 1969

MELIOCENTRIC CONIC

DISTANCE 487.498

RL 147.12 LAL .00 LOL 95.31 VL 27.697 GAL 3.02 AZL 85.48 MCA 220.06 SMA 127.97 ECC .15844 INC 4.5196 V1 30.284  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.407 GAP 3.18 AZP 93.46 TAL 163.62 TAP 23.68 RCA 107.69 APO 148.24 V2 34.784  
 RC 109.246 GL 35.04 GP -18.65 ZAL 66.41 ZAP 126.96 ETS 346.51 ZAE 139.04 ETE 202.26 ZAC 104.28 ETC 170.75 CLP-129.39

PLANETOCENTRIC CONIC

C3 14.407 VHL 3.796 OLA 45.37 RAL 16.35 RAD 6567.6 VEL 11.653 PTH 2.05 WHP 3.481 DPA -17.49 RAP 14.73 ECC 1.2371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.94 20 10 42 4168.76 -33.17 189.72 246.18 57.06 21 20 11 3568.8 -37.24 181.70  
 127.06 3 56 10 2753.09 -33.16 79.93 246.18 57.05 4 42 3 2153.1 -37.23 71.91  
 52.94 20 10 42 4168.76 -33.17 189.72 246.18 57.06 21 20 11 3568.8 -37.24 181.70  
 127.06 3 56 10 2753.09 -33.16 79.93 246.18 57.05 4 42 3 2153.1 -37.23 71.91  
 52.94 20 10 42 4168.76 -33.17 189.72 246.18 57.06 21 20 11 3568.8 -37.24 181.70  
 127.06 3 56 10 2753.09 -33.16 79.93 246.18 57.05 4 42 3 2153.1 -37.23 71.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2079 TRA .7585 TC3-3.1171 BAU .6097 SGT 4400.3 SGR 1202.0 SG3 1091.0 ST 3369.2 SR 1007.7 SS 2694.3  
 RDE .6592 RRA .2463 RC3 -.5505 FAU .13388 RRT .9770 RRF .9766 RTF .9824 CRT .9999 CRS -.9974 CST -.9965  
 FDE 5.7790 FRA 3.1587 FC3-8.0448 BSP 14026 SGB 4561.5 R23 .0648 R13 .9834 LSA 4426.6 MSA 177.0 SSA 8.3  
 BOE 2.3042 BRA .7975 BC3 3.1653 FSP -3788 SG1 4554.8 SG2 247.5 THA 14.99 EL1 3516.7 EL2 14.7 ALF 16.65

LAUNCH DATE DEC 27 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 23 1969

MELIOCENTRIC CONIC

DISTANCE 493.611

RL 147.12 LAL .00 LOL 95.31 VL 27.683 GAL 3.17 AZL 85.62 MCA 223.22 SMA 127.87 ECC .16011 INC 4.3820 V1 30.284  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.398 GAP 3.53 AZP 93.20 TAL 162.95 TAP 26.17 RCA 107.40 APO 148.35 V2 34.785  
 RC 111.645 GL 33.80 GP -16.90 ZAL 65.18 ZAP 130.49 ETS 346.16 ZAE 137.74 ETE 198.78 ZAC 103.78 ETC 170.25 CLP-132.74

PLANETOCENTRIC CONIC

C3 14.416 VHL 3.797 OLA 44.67 RAL 18.28 RAD 6567.6 VEL 11.653 PTH 2.05 WHP 3.596 DPA -15.99 RAP 13.77 ECC 1.2373  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.89 20 21 57 4159.59 -32.71 188.53 247.77 57.70 21 31 17 3559.6 -36.70 180.51  
 126.11 4 0 16 2762.52 -32.70 80.45 247.76 57.68 4 46 19 2162.5 -36.70 72.43  
 53.89 20 21 57 4159.59 -32.71 188.53 247.77 57.70 21 31 17 3559.6 -36.70 180.51  
 126.11 4 0 16 2762.52 -32.70 80.45 247.76 57.68 4 46 19 2162.5 -36.70 72.43  
 53.89 20 21 57 4159.59 -32.71 188.53 247.77 57.70 21 31 17 3559.6 -36.70 180.51  
 126.11 4 0 16 2762.52 -32.70 80.45 247.76 57.68 4 46 19 2162.5 -36.70 72.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2657 TRA .8853 TC3-3.3000 BAU .6418 SGT 4636.5 SGR 1062.2 SG3 1026.8 ST 3465.9 SR 899.3 SS 2553.7  
 RDE .5884 RRA .2234 RC3 -.4468 FAU .12534 RRT .9699 RRF .9662 RTF .9832 CRT .9999 CRS -.9960 CST -.9964  
 FDE 5.2792 FRA 3.1650 FC3-7.5270 BSP 14728 SGB 4756.6 R23 .0401 R13 .9837 LSA 4394.5 MSA 175.9 SSA 9.0  
 BOE 2.3408 BRA .9130 BC3 3.3301 FSP -3579 SG1 4749.9 SG2 252.6 THA 12.56 EL1 3580.7 EL2 9.9 ALF 14.55

LAUNCH DATE DEC 27 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 25 1969

MELIOCENTRIC CONIC

DISTANCE 499.705

RL 147.12 LAL .00 LOL 95.31 VL 27.669 GAL 3.34 AZL 85.74 MCA 226.38 SMA 127.77 ECC .16197 INC 4.2596 V1 30.284  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.389 GAP 3.89 AZP 92.94 TAL 162.24 TAP 28.62 RCA 107.08 APO 148.47 V2 34.787  
 RC 114.042 GL 32.99 GP -15.38 ZAL 63.92 ZAP 133.77 ETS 345.91 ZAE 136.43 ETE 195.95 ZAC 103.54 ETC 169.89 CLP-135.84

PLANETOCENTRIC CONIC

C3 14.511 VHL 3.809 OLA 44.01 RAL 20.20 RAD 6567.6 VEL 11.657 PTH 2.05 WHP 3.726 DPA -14.59 RAP 13.14 ECC 1.2388  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.79 20 33 7 4151.88 -32.23 187.47 249.48 58.24 21 42 19 3551.9 -36.16 179.46  
 125.21 4 4 29 2773.14 -32.22 81.06 249.47 58.23 4 50 42 2173.1 -36.15 73.05  
 54.79 20 33 7 4151.88 -32.23 187.47 249.48 58.24 21 42 19 3551.9 -36.16 179.46  
 125.21 4 4 29 2773.14 -32.22 81.06 249.47 58.23 4 50 42 2173.1 -36.15 73.05  
 54.79 20 33 7 4151.88 -32.23 187.47 249.48 58.24 21 42 19 3551.9 -36.16 179.46  
 125.21 4 4 29 2773.14 -32.22 81.06 249.47 58.23 4 50 42 2173.1 -36.15 73.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3146 TRA 1.0164 TC3-3.4477 BAU .6724 SGT 4851.5 SGR 946.5 SG3 961.6 ST 3540.1 SR 811.9 SS 2416.3  
 RDE .5531 RRA .2025 RC3 -.3559 FAU .11659 RRT .9591 RRF .9522 RTF .9838 CRT .9996 CRS -.9940 CST -.9964  
 FDE 4.8127 FRA 3.1498 FC3-6.9556 BSP 15409 SGB 4942.9 R23 .0209 R13 .9841 LSA 4358.8 MSA 175.0 SSA 9.7  
 BOE 2.3752 BRA 1.0363 BC3 3.4660 FSP -3365 SG1 4935.9 SG2 263.5 THA 10.63 EL1 3632.0 EL2 21.3 ALF 12.91

LAUNCH DATE DEC 27 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 505.778

RL 147.12 LAL .00 LOL 95.31 VL 27.653 GAL 3.53 AZL 85.85 MCA 229.54 SMA 127.67 ECC .16402 INC 4.1495 V1 30.284  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.580 GAP 4.24 A7P 92.70 TAL 161.50 TAP 31.04 RCA 106.73 APO 148.61 V2 34.790  
 RC 116.435 GL 31.41 GP -14.06 ZAL 62.62 ZAP 136.80 ETS 345.73 ZAE 135.17 ETE 193.64 ZAC 103.55 ETC 169.65 CLP-138.72

PLANETOCENTRIC CONIC

C3 14.686 VML 3.832 DLA 43.38 RAL 22.14 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 3.869 DPA -13.28 RAP 12.82 ECC 1.2417  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.65 20 44 16 4145.41 -31.72 186.52 251.30 58.70 21 53 22 3545.4 -35.60 178.53  
 124.35 4 8 46 2784.95 -31.71 81.75 251.29 58.69 4 55 11 2185.0 -35.59 73.76  
 55.65 20 44 16 4145.41 -31.72 186.52 251.30 58.70 21 53 22 3545.4 -35.60 178.53  
 124.35 4 8 46 2784.95 -31.71 81.75 251.29 58.69 4 55 11 2185.0 -35.59 73.76  
 55.65 20 44 16 4145.41 -31.72 186.52 251.30 58.70 21 53 22 3545.4 -35.60 178.53  
 124.35 4 8 46 2784.95 -31.71 81.75 251.29 58.69 4 55 11 2185.0 -35.59 73.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3583 TRA 1.1550 TC3-3.5544 BAU .7000 SGT 5049.6 SGR 852.8 SG3 898.1 ST 3598.2 SR 742.8 SS 2287.0  
 RDE .4909 RRA .1843 RC3 -.2759 FAU .10751 RRT .9440 RRF .9345 RTF .9841 CRT .9989 CRS -.9912 CST -.9963  
 FDE 4.3895 FRA 3.1273 FC3-6.3376 BSP 15991 SGB 5121.1 R23 -.0080 R13 .9843 LSA 4324.2 MSA 174.7 SSA 10.4  
 BOE 2.4089 BRA 1.1696 BC3 3.5651 FSP -3134 SG1 5113.5 SG2 277.9 THA 9.08 EL1 3673.9 EL2 34.8 ALF 11.65

LAUNCH DATE DEC 27 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 511.830

RL 147.12 LAL .00 LOL 95.31 VL 27.636 GAL 5.73 AZL 85.95 MCA 232.70 SMA 127.55 ECC .16626 INC 4.0493 V1 30.284  
 RP 108.91 LAP -3.22 LOP 327.94 VP 37.371 GAP 4.60 A7P 92.46 TAL 160.72 TAP 33.42 RCA 106.35 APO 148.76 V2 34.794  
 RC 118.823 GL 30.25 GP -12.90 ZAL 61.28 ZAP 139.62 ETS 345.59 ZAE 133.96 ETE 191.75 ZAC 103.78 ETC 169.48 CLP-141.39

PLANETOCENTRIC CONIC

C3 14.940 VML 3.865 DLA 42.77 RAL 24.08 RAD 6567.6 VEL 11.676 PTH 2.05 VHP 4.022 DPA -12.03 RAP 12.75 ECC 1.2459  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.50 20 55 28 4139.96 -31.19 185.66 253.22 59.11 22 4 28 3540.0 -35.03 177.69  
 123.50 4 13 5 2798.03 -31.18 82.54 253.22 59.09 4 59 43 2198.0 -35.02 74.58  
 56.50 20 55 28 4139.96 -31.19 185.66 253.22 59.11 22 4 28 3540.0 -35.03 177.69  
 123.50 4 13 5 2798.03 -31.18 82.54 253.22 59.09 4 59 43 2198.0 -35.02 74.58  
 56.50 20 55 28 4139.96 -31.19 185.66 253.22 59.11 22 4 28 3540.0 -35.03 177.69  
 123.50 4 13 5 2798.03 -31.18 82.54 253.22 59.09 4 59 43 2198.0 -35.02 74.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3923 TRA 1.2966 TC3-3.6349 BAU .7272 SGT 5227.5 SGR 776.3 SG3 836.3 ST 3633.2 SR 686.9 SS 2159.2  
 RDE .4583 RRA .1678 RC3 -.2100 FAU .09916 RRT .9247 RRF .9126 RTF .9844 CRT .9975 CRS -.9875 CST -.9961  
 FDE 3.9956 FRA 3.0879 FC3-5.7461 BSP 16607 SGB 5284.8 R23 -.0014 R13 .9844 LSA 4278.2 MSA 174.7 SSA 11.0  
 BOE 2.4358 BRA 1.3074 BC3 3.6410 FSP -2931 SG1 5276.7 SG2 292.8 THA 7.84 EL1 3697.2 EL2 48.1 ALF 10.68

LAUNCH DATE DEC 27 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 517.861

RL 147.12 LAL .00 LOL 95.31 VL 27.619 GAL 3.94 AZL 86.04 MCA 235.86 SMA 127.44 ECC .16870 INC 3.9571 V1 30.284  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.362 GAP 4.96 A7P 92.22 TAL 159.90 TAP 35.76 RCA 105.94 APO 148.93 V2 34.798  
 RC 121.206 GL 29.12 GP -11.89 ZAL 59.90 ZAP 142.23 ETS 345.48 ZAE 132.84 ETE 190.19 ZAC 104.21 ETC 169.38 CLP-143.88

PLANETOCENTRIC CONIC

C3 15.271 VML 3.908 DLA 42.18 RAL 26.04 RAD 6567.6 VEL 11.690 PTH 2.06 VHP 4.186 DPA -10.83 RAP 12.93 ECC 1.2513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.33 21 6 43 4135.90 -30.63 184.88 255.24 59.46 22 15 38 3535.5 -34.43 176.94  
 122.67 4 17 25 2812.33 -30.62 83.41 255.24 59.45 5 4 17 2212.3 -34.42 75.48  
 57.33 21 6 43 4135.90 -30.63 184.88 255.24 59.46 22 15 38 3535.5 -34.43 176.94  
 122.67 4 17 25 2812.33 -30.62 83.41 255.24 59.45 5 4 17 2212.3 -34.42 75.48  
 57.33 21 6 43 4135.90 -30.63 184.88 255.24 59.46 22 15 38 3535.5 -34.43 176.94  
 122.67 4 17 25 2812.33 -30.62 83.41 255.24 59.45 5 4 17 2212.3 -34.42 75.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4206 TRA 1.4450 TC3-3.6838 BAU .7528 SGT 5390.4 SGR 715.5 SG3 777.9 ST 3652.1 SR 642.9 SS 2037.8  
 RDE .4340 RRA .1535 RC3 -.1551 FAU .09121 RRT .9012 RRF .8870 RTF .9846 CRT .9953 CRS -.9829 CST -.9960  
 FDE 3.6386 FRA 3.0443 FC3-5.1706 BSP 17174 SGB 5437.7 R23 -.0074 R13 .9846 LSA 4227.7 MSA 175.3 SSA 11.6  
 BOE 2.4592 BRA 1.4531 BC3 3.6870 FSP -2734 SG1 5429.0 SG2 307.9 THA 6.84 EL1 3707.8 EL2 61.1 ALF 9.94

LAUNCH DATE DEC 27 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 523.870

RL 147.12 LAL .00 LOL 95.31 VL 27.600 GAL 4.17 AZL 86.13 MCA 239.03 SMA 127.31 ECC .17135 INC 3.8716 V1 30.284  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.353 GAP 5.32 A7P 91.99 TAL 159.05 TAP 38.08 RCA 108.50 APO 149.13 V2 34.803  
 RC 123.581 GL 27.99 GP -11.00 ZAL 58.50 ZAP 144.67 ETS 345.38 ZAE 131.80 ETE 188.91 ZAC 104.83 ETC 169.32 CLP-146.21

PLANETOCENTRIC CONIC

C3 15.683 VML 3.960 DLA 41.59 RAL 27.99 RAD 6567.6 VEL 11.708 PTH 2.06 VHP 4.360 DPA -9.68 RAP 13.30 ECC 1.2581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.17 21 18 4 4131.76 -30.04 184.15 257.35 59.77 22 26 56 3531.8 -33.81 176.25  
 121.83 4 21 41 2828.06 -30.03 84.39 257.34 59.75 5 8 49 2228.1 -33.80 76.48  
 58.17 21 18 4 4131.76 -30.04 184.15 257.35 59.77 22 26 56 3531.8 -33.81 176.25  
 121.83 4 21 41 2828.06 -30.03 84.39 257.34 59.75 5 8 49 2228.1 -33.80 76.48  
 58.17 21 18 4 4131.76 -30.04 184.15 257.35 59.77 22 26 56 3531.8 -33.81 176.25  
 121.83 4 21 41 2828.06 -30.03 84.39 257.34 59.75 5 8 49 2228.1 -33.80 76.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4435 TRA 1.6006 TC3-3.7007 BAU .7763 SGT 5538.6 SGR 667.6 SG3 723.0 ST 3656.3 SR 608.4 SS 1922.7  
 RDE .4167 RRA .1413 RC3 -.1098 FAU .08364 RRT .8742 RRF .8584 RTF .9847 CRT .9924 CRS -.9773 CST -.9959  
 FDE 3.3158 FRA 2.9978 FC3-4.6174 BSP 17703 SGB 5578.7 R23 -.0110 R13 .9846 LSA 4171.8 MSA 176.4 SSA 12.1  
 BOE 2.4788 BRA 1.6068 BC3 3.7024 FSP -2549 SG1 5569.4 SG2 322.4 THA 6.04 EL1 3705.8 EL2 73.8 ALF 9.38

LAUNCH DATE DEC 27 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 529.857

RL 147.12 LAL .00 LOL 95.31 VL 27.581 GAL 4.42 AZL 86.21 MCA 242.19 SMA 127.18 ECC .17423 INC 3.7915 V1 30.284
RP 108.87 LAP -3.35 LOP 337.45 VP 37.344 GAP 5.69 AZP 91.77 TAL 158.17 TAP 40.36 RCA 105.02 APO 149.34 V2 34.808
RC 125.948 GL 26.88 GP -10.22 ZAL 57.07 ZAP 146.94 ETS 345.27 ZAE 130.84 ETE 187.84 ZAC 105.62 ETC 169.29 CLP-148.39

PLANETOCENTRIC CONIC

C3 16.178 VHL 4.022 DLA 41.01 RAL 29.96 RAD 6567.6 VEL 11.729 PTH 2.07 VHP 4.542 DPA -8.56 RAP 13.86 ECC 1.2663
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.00 21 29 31 4128.79 -29.42 183.48 259.54 60.04 22 38 20 3528.8 -33.16 175.62
121.00 4 25 53 2845.14 -29.41 85.45 259.53 60.03 5 13 18 2245.1 -33.15 77.59
59.00 21 29 31 4128.79 -29.42 183.48 259.54 60.04 22 38 20 3528.8 -33.16 175.62
121.00 4 25 53 2845.14 -29.41 85.45 259.53 60.03 5 13 18 2245.1 -33.15 77.59
59.00 21 29 31 4128.79 -29.42 183.48 259.54 60.04 22 38 20 3528.8 -33.16 175.62
121.00 4 25 53 2845.14 -29.41 85.45 259.53 60.03 5 13 18 2245.1 -33.15 77.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4650 TRA 1.7675 TC3-3.6813 BAU .7964 SGT 5677.3 SGR 631.3 SG3 672.4 ST 3652.3 SR 582.2 SS 1817.4
RDE .4054 RRA .1316 RC3 -.0721 FAU .07626 RRT .8449 RRF .8283 RTF .9846 CRT .9886 CRS -.9708 CST -.9957
FDE 3.0300 FRA 2.9572 FC3-4.0808 BSP 18119 SGB 5712.3 R23 -.0122 R13 .9845 LSA 4116.9 MSA 178.4 SSA 12.6
BOE 2.4981 BRA 1.7724 BC3 3.6820 FSP -2362 SGI 5702.4 SG2 336.2 TMA 5.39 EL1 3697.4 EL2 86.4 ALF 8.96

LAUNCH DATE DEC 27 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 535.819

RL 147.12 LAL .00 LOL 95.31 VL 27.561 GAL 4.68 AZL 86.28 MCA 245.36 SMA 127.05 ECC .17734 INC 3.7160 V1 30.284
RP 108.85 LAP -3.38 LOP 340.62 VP 37.335 GAP 6.06 AZP 91.55 TAL 157.27 TAP 42.63 RCA 104.52 APO 149.58 V2 34.815
RC 128.306 GL 25.78 GP -9.52 ZAL 55.82 ZAP 149.07 ETS 345.14 ZAE 129.97 ETE 186.95 ZAC 106.55 ETC 169.28 CLP-150.44

PLANETOCENTRIC CONIC

C3 16.762 VHL 4.094 DLA 40.43 RAL 31.91 RAD 6567.7 VEL 11.754 PTH 2.07 VHP 4.734 DPA -7.47 RAP 14.58 ECC 1.2759
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.85 21 41 7 4126.35 -28.77 182.85 261.80 60.28 22 49 53 3526.3 -32.49 175.02
120.15 4 29 54 2863.82 -28.76 86.62 261.79 60.27 5 17 38 2263.8 -32.48 78.80
59.85 21 41 7 4126.35 -28.77 182.85 261.80 60.28 22 49 53 3526.3 -32.49 175.02
120.15 4 29 54 2863.82 -28.76 86.62 261.79 60.27 5 17 38 2263.8 -32.48 78.80
59.85 21 41 7 4126.35 -28.77 182.85 261.80 60.28 22 49 53 3526.3 -32.49 175.02
120.15 4 29 54 2863.82 -28.76 86.62 261.79 60.27 5 17 38 2263.8 -32.48 78.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4781 TRA 1.9390 TC3-3.6450 BAU .8169 SGT 5800.1 SGR 602.8 SG3 624.8 ST 3630.1 SR 561.5 SS 1714.2
RDE .3983 RRA .1234 RC3 -.0435 FAU .06975 RRT .8145 RRF .7973 RTF .9845 CRT .9840 CRS -.9632 CST -.9956
FDE 2.7657 FRA 2.9097 FC3-3.6025 BSP 18590 SGB 5831.3 R23 -.0129 R13 .9845 LSA 4049.6 MSA 181.0 SSA 12.9
BOE 2.5099 BRA 1.9429 BC3 3.6453 FSP -2204 SGI 5820.9 SG2 348.5 TMA 4.86 EL1 3672.0 EL2 98.9 ALF 8.66

LAUNCH DATE DEC 27 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 541.756

RL 147.12 LAL .00 LOL 95.31 VL 27.541 GAL 4.97 AZL 86.36 MCA 248.52 SMA 126.91 ECC .18070 INC 3.6441 V1 30.284
RP 108.83 LAP -3.39 LOP 343.80 VP 37.326 GAP 6.45 AZP 91.34 TAL 156.34 TAP 44.86 RCA 103.98 APO 149.84 V2 34.821
RC 130.653 GL 24.68 GP -8.91 ZAL 54.15 ZAP 151.07 ETS 344.99 ZAE 129.17 ETE 186.20 ZAC 107.62 ETC 169.28 CLP-152.37

PLANETOCENTRIC CONIC

C3 17.442 VHL 4.176 DLA 39.84 RAL 33.87 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 4.935 DPA -6.41 RAP 15.44 ECC 1.2871
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.71 21 52 49 4124.48 -28.09 182.24 264.12 60.49 23 1 34 3524.5 -31.78 174.47
119.29 4 33 46 2884.03 -28.08 87.89 264.12 60.48 5 21 50 2284.0 -31.77 80.12
60.71 21 52 49 4124.48 -28.09 182.24 264.12 60.49 23 1 34 3524.5 -31.78 174.47
119.29 4 33 46 2884.03 -28.08 87.89 264.12 60.48 5 21 50 2284.0 -31.77 80.12
60.71 21 52 49 4124.48 -28.09 182.24 264.12 60.49 23 1 34 3524.5 -31.78 174.47
119.29 4 33 46 2884.03 -28.08 87.89 264.12 60.48 5 21 50 2284.0 -31.77 80.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4880 TRA 2.1205 TC3-3.5825 BAU .8354 SGT 5912.7 SGR 581.4 SG3 580.9 ST 3598.6 SR 545.8 SS 1618.0
RDE .3952 RRA .1127 RC3 -.0211 FAU .06363 RRT .7843 RRF .7672 RTF .9844 CRT .9785 CRS -.9547 CST -.9955
FDE 2.5287 FRA 2.8655 FC3-3.1583 BSP 19014 SGB 5941.2 R23 -.0126 R13 .9843 LSA 3978.9 MSA 184.3 SSA 13.2
BOE 2.5192 BRA 2.1237 BC3 3.5826 FSP -2056 SGI 5930.3 SG2 359.6 TMA 4.43 EL1 3638.1 EL2 111.2 ALF 8.45

LAUNCH DATE DEC 27 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 547.666

RL 147.12 LAL .00 LOL 95.31 VL 27.520 GAL 5.27 AZL 86.42 MCA 251.69 SMA 126.77 ECC .18432 INC 3.5753 V1 30.284
RP 108.80 LAP -3.39 LOP 346.97 VP 37.318 GAP 6.84 AZP 91.12 TAL 155.39 TAP 47.08 RCA 103.40 APO 150.14 V2 34.829
RC 132.989 GL 23.60 GP -8.36 ZAL 52.67 ZAP 152.96 ETS 344.79 ZAE 128.45 ETE 185.57 ZAC 108.80 ETC 169.28 CLP-154.19

PLANETOCENTRIC CONIC

C3 18.227 VHL 4.269 DLA 39.25 RAL 35.80 RAD 6567.7 VEL 11.816 PTH 2.09 VHP 5.145 DPA -5.36 RAP 16.43 ECC 1.3000
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.60 22 4 41 4123.01 -27.37 181.66 266.51 60.69 23 13 24 3523.0 -31.05 173.94
118.40 4 37 23 2905.97 -27.36 89.28 266.50 60.68 5 25 49 2306.0 -31.04 81.56
61.60 22 4 41 4123.01 -27.37 181.66 266.51 60.69 23 13 24 3523.0 -31.05 173.94
118.40 4 37 23 2905.97 -27.36 89.28 266.50 60.68 5 25 49 2306.0 -31.04 81.56
61.60 22 4 41 4123.01 -27.37 181.66 266.51 60.69 23 13 24 3523.0 -31.05 173.94
118.40 4 37 23 2905.97 -27.36 89.28 266.50 60.68 5 25 49 2306.0 -31.04 81.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4937 TRA 2.3116 TC3-3.4984 BAU .8525 SGT 6014.4 SGR 565.3 SG3 540.3 ST 3557.0 SR 533.7 SS 1527.0
RDE .3953 RRA .1127 RC3 -.0045 FAU .05799 RRT .7557 RRF .7388 RTF .9842 CRT .9723 CRS -.9454 CST -.9955
FDE 2.3137 FRA 2.8228 FC3-2.7547 BSP 19411 SGB 6040.9 R23 -.0118 R13 .9841 LSA 3903.0 MSA 188.4 SSA 13.4
BOE 2.5248 BRA 2.3144 BC3 3.4984 FSP -1919 SGI 6029.6 SG2 369.3 TMA 4.08 EL1 3594.7 EL2 123.5 ALF 8.31



LAUNCH DATE DEC 27 1968

FLIGHT TIME 198.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 553.546

RL 147.12 LAL .00 LOL 95.31 VL 27.498 GAL 5.59 AZL 86.49 MCA 254.86 SMA 126.63 ECC .18823 INC 3.5090 V1 30.284
RP 108.78 LAP -3.39 LOP 350.15 VP 37.309 GAP 7.24 A7P 90.92 TAL 154.42 TAP 49.28 RCA 102.79 APO 150.46 V2 34.837
RC 135.313 GL 22.52 GP -7.88 ZAL 51.19 ZAP 154.74 ETS 344.56 ZAE 127.79 ETE 185.04 ZAC 110.08 ETC 169.28 CLP-155.93

PLANETOCENTRIC CONIC

C3 19.126 VHL 4.373 DLA 38.66 RAL 37.73 RAD 6567.8 VEL 11.854 PTH 2.10 VHP 5.365 DPA -4.33 RAP 17.53 ECC 1.3148
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.50 22 16 41 4121.89 -26.62 181.10 268.95 60.86 23 25 23 3521.9 -30.28 173.42
117.50 4 40 42 2929.72 -26.61 90.79 268.94 60.85 5 29 32 2329.7 -30.27 83.12
62.50 22 16 41 4121.89 -26.62 181.10 268.95 60.86 23 25 23 3521.9 -30.28 173.42
117.50 4 40 42 2929.72 -26.61 90.79 268.94 60.85 5 29 32 2329.7 -30.27 83.12
62.50 22 16 41 4121.89 -26.62 181.10 268.95 60.86 23 25 23 3521.9 -30.28 173.42
117.50 4 40 42 2929.72 -26.61 90.79 268.94 60.85 5 29 32 2329.7 -30.27 83.12

DIFFERENTIAL CORRECTIONS

TDE 2.4968 TRA 2.5141 TC3-3.3934 BAU .8677
RDE .3982 RRA .1102 RC3 .0077 FAU .05271
FDE 2.1210 FRA 2.7840 FC3-2.3861 BSP 19772
BOE 2.5284 BRA 2.5165 BC3 3.3935 FSP -1790

MID-COURSE EXECUTION ACCURACY

SGT 6107.5 SGR 553.5 SG3 503.0
RRT .7295 RRF .7135 RTF .9839
SGB 6132.5 R23 -.0104 R13 .9839
SGI 6120.9 SG2 377.7 TMA 3.80

ORBIT DETERMINATION ACCURACY

ST 3508.5 SR 524.6 SS 1442.8
CRT .9652 CRS -.9353 CST -.9952
LSA 3824.8 MSA 193.2 SSA 13.6
EL1 3544.9 EL2 135.7 ALF 8.22

LAUNCH DATE DEC 27 1968

FLIGHT TIME 200.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 559.396

RL 147.12 LAL .00 LOL 95.31 VL 27.476 GAL 5.94 AZL 86.56 MCA 258.03 SMA 126.48 ECC .19245 INC 3.4445 V1 30.284
RP 108.75 LAP -3.37 LOP 353.32 VP 37.301 GAP 7.66 A7P 90.72 TAL 153.43 TAP 51.46 RCA 102.14 APO 150.82 V2 34.846
RC 137.625 GL 21.45 GP -7.44 ZAL 49.70 ZAP 156.43 ETS 344.26 ZAE 127.19 ETE 184.59 ZAC 111.46 ETC 169.28 CLP-157.58

PLANETOCENTRIC CONIC

C3 20.152 VHL 4.489 DLA 38.06 RAL 39.62 RAD 6567.8 VEL 11.897 PTH 2.11 VHP 5.595 DPA -3.31 RAP 18.72 ECC 1.3317
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.44 22 28 52 4120.98 -25.84 180.54 271.44 61.03 23 37 33 3521.0 -29.49 172.92
116.56 4 43 40 2955.43 -25.82 92.43 271.43 61.01 5 32 55 2355.4 -29.47 84.81
63.44 22 28 52 4120.98 -25.84 180.54 271.44 61.03 23 37 33 3521.0 -29.49 172.92
116.56 4 43 40 2955.43 -25.82 92.43 271.43 61.01 5 32 55 2355.4 -29.47 84.81
63.44 22 28 52 4120.98 -25.84 180.54 271.44 61.03 23 37 33 3521.0 -29.49 172.92
116.56 4 43 40 2955.43 -25.82 92.43 271.43 61.01 5 32 55 2355.4 -29.47 84.81

DIFFERENTIAL CORRECTIONS

TDE 2.5000 TRA 2.7314 TC3-3.2645 BAU .8795
RDE .4036 RRA .1097 RC3 .0166 FAU .04765
FDE 1.9500 FRA 2.7516 FC3-2.0469 BSP 20030
BOE 2.5324 BRA 2.7336 BC3 3.2645 FSP -1664

MID-COURSE EXECUTION ACCURACY

SGT 6194.7 SGR 545.1 SG3 469.0
RRT .7069 RRF .6920 RTF .9836
SGB 6218.6 R23 -.0085 R13 .9836
SGI 6206.7 SG2 384.8 TMA 3.57

ORBIT DETERMINATION ACCURACY

ST 3457.4 SR 517.9 SS 1366.2
CRT .9576 CRS -.9247 CST -.9951
LSA 3748.1 MSA 198.6 SSA 13.7
EL1 3492.8 EL2 147.8 ALF 8.18

LAUNCH DATE DEC 27 1968

FLIGHT TIME 202.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 565.211

RL 147.12 LAL .00 LOL 95.31 VL 27.453 GAL 6.31 AZL 86.62 MCA 261.20 SMA 126.33 ECC .19700 INC 3.3816 V1 30.284
RP 108.72 LAP -3.34 LOP 356.50 VP 37.293 GAP 8.08 A7P 90.52 TAL 152.42 TAP 53.63 RCA 101.44 APO 151.22 V2 34.855
RC 139.923 GL 20.40 GP -7.05 ZAL 48.22 ZAP 158.04 ETS 343.90 ZAE 126.64 ETE 184.20 ZAC 112.92 ETC 169.27 CLP-159.15

PLANETOCENTRIC CONIC

C3 21.320 VHL 4.617 DLA 37.45 RAL 41.49 RAD 6567.9 VEL 11.946 PTH 2.13 VHP 5.836 DPA -2.31 RAP 20.01 ECC 1.3509
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.40 22 41 10 4120.35 -25.02 179.99 273.97 61.18 23 49 50 3520.4 -28.66 172.42
115.60 4 46 16 2983.06 -25.00 94.19 273.96 61.16 5 35 59 2383.1 -28.65 86.62
64.40 22 41 10 4120.35 -25.02 179.99 273.97 61.18 23 49 50 3520.4 -28.66 172.42
115.60 4 46 16 2983.06 -25.00 94.19 273.96 61.16 5 35 59 2383.1 -28.65 86.62
64.40 22 41 10 4120.35 -25.02 179.99 273.97 61.18 23 49 50 3520.4 -28.66 172.42
115.60 4 46 16 2983.06 -25.00 94.19 273.96 61.16 5 35 59 2383.1 -28.65 86.62

DIFFERENTIAL CORRECTIONS

TDE 2.4972 TRA 2.9573 TC3-3.1281 BAU .8916
RDE .4107 RRA .1106 RC3 .0217 FAU .04316
FDE 1.7920 FRA 2.7179 FC3-1.7526 BSP 20351
BOE 2.5308 BRA 2.9593 BC3 3.1281 FSP -1557

MID-COURSE EXECUTION ACCURACY

SGT 6269.8 SGR 538.5 SG3 437.2
RRT .6875 RRF .6735 RTF .9833
SGB 6292.9 R23 -.0069 R13 .9833
SGI 6280.8 SG2 390.5 TMA 3.39

ORBIT DETERMINATION ACCURACY

ST 3395.9 SR 512.2 SS 1292.6
CRT .9491 CRS -.9133 CST -.9950
LSA 3663.8 MSA 204.6 SSA 13.7
EL1 3430.6 EL2 159.7 ALF 8.16

LAUNCH DATE DEC 27 1968

FLIGHT TIME 204.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 570.988

RL 147.12 LAL .00 LOL 95.31 VL 27.430 GAL 6.70 AZL 86.68 MCA 264.38 SMA 126.18 ECC .20191 INC 3.3196 V1 30.284
RP 108.69 LAP -3.30 LOP 359.68 VP 37.285 GAP 8.53 A7P 90.33 TAL 151.41 TAP 55.79 RCA 100.70 APO 151.65 V2 34.865
RC 142.207 GL 19.36 GP -6.70 ZAL 46.74 ZAP 159.58 ETS 343.46 ZAE 126.14 ETE 183.88 ZAC 114.46 ETC 169.24 CLP-160.67

PLANETOCENTRIC CONIC

C3 22.648 VHL 4.759 DLA 36.83 RAL 43.33 RAD 6567.9 VEL 12.001 PTH 2.14 VHP 6.089 DPA -1.32 RAP 21.37 ECC 1.3727
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.39 22 53 38 4119.84 -24.17 179.43 276.54 61.32 24 2 18 3519.8 -27.80 171.92
114.61 4 48 26 3012.79 -24.15 96.09 276.53 61.31 5 38 39 2412.8 -27.79 88.58
65.39 22 53 38 4119.84 -24.17 179.43 276.54 61.32 24 2 18 3519.8 -27.80 171.92
114.61 4 48 26 3012.79 -24.15 96.09 276.53 61.31 5 38 39 2412.8 -27.79 88.58
65.39 22 53 38 4119.84 -24.17 179.43 276.54 61.32 24 2 18 3519.8 -27.80 171.92
114.61 4 48 26 3012.79 -24.15 96.09 276.53 61.31 5 38 39 2412.8 -27.79 88.58

DIFFERENTIAL CORRECTIONS

TDE 2.4923 TRA 3.1969 TC3-2.9783 BAU .9018
RDE .4194 RRA .1134 RC3 .0243 FAU .03898
FDE 1.6493 FRA 2.6882 FC3-1.4902 BSP 20647
BOE 2.5273 BRA 3.1989 BC3 2.9784 FSP -1457

MID-COURSE EXECUTION ACCURACY

SGT 6337.4 SGR 533.4 SG3 408.0
RRT .6713 RRF .6586 RTF .9830
SGB 6359.9 R23 -.0052 R13 .9830
SGI 6347.6 SG2 394.7 TMA 3.25

ORBIT DETERMINATION ACCURACY

ST 3330.5 SR 507.5 SS 1224.5
CRT .9400 CRS -.9014 CST -.9950
LSA 3578.3 MSA 211.0 SSA 13.6
EL1 3364.5 EL2 171.4 ALF 8.17

LAUNCH DATE DEC 27 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 21 1969

MELIOCENTRIC CONIC DISTANCE 576.724  
 RL 147.12 LAL .00 LOL 95.31 VL 27.407 GAL 7.12 AZL 86.74 MCA 267.55 SMA 126.03 ECC .20721 INC 3.2583 V1 30.284  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.278 GAP 8.99 AZP 90.14 TAL 150.39 TAP 57.94 RCA 99.91 APO 152.14 V2 34.875  
 RC 144.478 GL 18.33 GP -6.38 ZAL 45.28 ZAP 161.05 ETS 342.91 ZAE 125.68 ETE 183.60 ZAC 116.05 ETC 169.20 CLP-162.13

PLANETOCENTRIC CONIC  
 C3 24.155 VHL 4.915 DLA 36.21 RAL 45.12 RAD 6568.0 VEL 12.064 PTH 2.16 VHP 6.356 DPA -.34 RAP 22.81 ECC 1.3975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.42 23 6 19 4119.24 -23.29 178.86 279.14 61.45 24 14 58 3519.2 -26.91 171.40  
 113.58 4 50 5 3044.85 -23.27 98.15 279.13 61.44 5 40 50 2444.8 -26.90 90.69  
 66.42 23 6 19 4119.24 -23.29 178.86 279.14 61.45 24 14 58 3519.2 -26.91 171.40  
 113.58 4 50 5 3044.85 -23.27 98.15 279.13 61.44 5 40 50 2444.8 -26.90 90.69  
 66.42 23 6 19 4119.24 -23.29 178.86 279.14 61.45 24 14 58 3519.2 -26.91 171.40  
 113.58 4 50 5 3044.85 -23.27 98.15 279.13 61.44 5 40 50 2444.8 -26.90 90.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4860 TRA 3.4512 TC3-2.8172 BAU .9098 SGT 6397.9 SGR 529.4 SG3 381.2 ST 3262.6 SR 503.2 SS 1161.8  
 RDE .4295 RRA .1178 RC3 .0252 FAU .03507 RRT .6588 RRF .6473 RTF .9828 CRT .9302 CRS -.8890 CST -.9949  
 FDE 1.5208 FRA 2.6620 FC3-1.2570 BSP 20904 SGB 6419.8 R23 -.0035 R13 .9827 LSA 3492.8 MSA 217.6 SSA 13.5  
 BDE 2.5229 BRA 3.4532 BC3 2.8174 FSP -1364 SG1 6407.4 SG2 397.7 THA 3.13 EL1 3296.1 EL2 182.8 ALF 8.19

LAUNCH DATE DEC 27 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 23 1969

MELIOCENTRIC CONIC DISTANCE 582.414  
 RL 147.12 LAL .00 LOL 95.31 VL 27.384 GAL 7.57 AZL 86.80 MCA 270.73 SMA 125.87 ECC .21294 INC 3.1973 V1 30.284  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.270 GAP 9.47 AZP 89.96 TAL 149.36 TAP 60.09 RCA 99.07 APO 152.67 V2 34.885  
 RC 146.734 GL 17.32 GP -6.10 ZAL 43.84 ZAP 162.47 ETS 342.25 ZAE 125.26 ETE 183.37 ZAC 117.71 ETC 169.14 CLP-163.53

PLANETOCENTRIC CONIC  
 C3 25.867 VHL 5.086 DLA 35.58 RAL 46.88 RAD 6568.0 VEL 12.134 PTH 2.17 VHP 6.636 DPA .63 RAP 24.31 ECC 1.4257  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.49 23 19 12 4118.56 -22.37 178.27 281.77 61.58 24 27 50 3518.6 -25.99 170.86  
 112.51 4 51 12 3079.24 -22.36 100.36 281.77 61.57 5 42 31 2479.2 -25.98 92.95  
 67.49 23 19 12 4118.56 -22.37 178.27 281.77 61.58 24 27 50 3518.6 -25.99 170.86  
 112.51 4 51 12 3079.24 -22.36 100.36 281.77 61.57 5 42 31 2479.2 -25.98 92.95  
 67.49 23 19 12 4118.56 -22.37 178.27 281.77 61.58 24 27 50 3518.6 -25.99 170.86  
 112.51 4 51 12 3079.24 -22.36 100.36 281.77 61.57 5 42 31 2479.2 -25.98 92.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4816 TRA 3.7245 TC3-2.6424 BAU .9138 SGT 6454.3 SGR 526.3 SG3 356.7 ST 3196.6 SR 499.3 SS 1105.8  
 RDE .4409 RRA .1243 RC3 .0251 FAU .03129 RRT .6501 RRF .6399 RTF .9825 CRT .9199 CRS -.8764 CST -.9950  
 FDE 1.4070 FRA 2.6419 FC3-1.0473 BSP 21055 SGB 6475.7 R23 -.0016 R13 .9825 LSA 3411.7 MSA 224.4 SSA 13.4  
 BDE 2.5205 BRA 3.7266 BC3 2.6425 FSP -1271 SG1 6463.4 SG2 399.3 THA 3.05 EL1 3229.5 EL2 193.8 ALF 8.21

LAUNCH DATE DEC 27 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 25 1969

MELIOCENTRIC CONIC DISTANCE 588.052  
 RL 147.12 LAL .00 LOL 95.31 VL 27.360 GAL 8.05 AZL 86.86 MCA 273.91 SMA 125.72 ECC .21913 INC 3.1362 V1 30.284  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.263 GAP 9.98 AZP 89.79 TAL 148.33 TAP 62.24 RCA 98.17 APO 153.26 V2 34.897  
 RC 148.977 GL 16.32 GP -5.84 ZAL 42.42 ZAP 163.83 ETS 341.45 ZAE 124.87 ETE 183.17 ZAC 119.41 ETC 169.05 CLP-164.00

PLANETOCENTRIC CONIC  
 C3 27.811 VHL 5.274 DLA 34.95 RAL 48.58 RAD 6568.1 VEL 12.214 PTH 2.19 VHP 6.933 DPA 1.59 RAP 25.86 ECC 1.4577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.60 23 32 18 4117.62 -21.43 177.65 284.43 61.71 24 40 55 3517.6 -25.04 170.29  
 111.40 4 51 42 3116.18 -21.42 102.74 284.42 61.70 5 43 39 2516.2 -25.03 95.38  
 68.60 23 32 18 4117.62 -21.43 177.65 284.43 61.71 24 40 55 3517.6 -25.04 170.29  
 111.40 4 51 42 3116.18 -21.42 102.74 284.42 61.70 5 43 39 2516.2 -25.03 95.38  
 68.60 23 32 18 4117.62 -21.43 177.65 284.43 61.71 24 40 55 3517.6 -25.04 170.29  
 111.40 4 51 42 3116.18 -21.42 102.74 284.42 61.70 5 43 39 2516.2 -25.03 95.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4718 TRA 4.0103 TC3-2.4688 BAU .9180 SGT 6500.0 SGR 523.0 SG3 333.7 ST 3124.3 SR 494.9 SS 1052.2  
 RDE .4529 RRA .1322 RC3 .0235 FAU .02795 RRT .6439 RRF .6236 RTF .9822 CRT .9089 CRS -.8631 CST -.9950  
 FDE 1.3009 FRA 2.6221 FC3 -.8701 BSP 21293 SGB 6521.0 R23 -.0003 R13 .9822 LSA 3325.6 MSA 231.2 SSA 13.2  
 BDE 2.5129 BRA 4.0125 BC3 2.4690 FSP -1193 SG1 6508.7 SG2 399.6 THA 2.98 EL1 3156.6 EL2 204.3 ALF 8.23

LAUNCH DATE DEC 27 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 27 1969

MELIOCENTRIC CONIC DISTANCE 593.630  
 RL 147.12 LAL .00 LOL 95.31 VL 27.336 GAL 8.57 AZL 86.93 MCA 277.09 SMA 125.56 ECC .22585 INC 3.0745 V1 30.284  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.257 GAP 10.51 AZP 89.62 TAL 147.30 TAP 64.39 RCA 97.20 APO 153.92 V2 34.908  
 RC 151.204 GL 15.34 GP -5.61 ZAL 41.03 ZAP 165.15 ETS 340.46 ZAE 124.50 ETE 183.00 ZAC 121.15 ETC 168.94 CLP-166.23

PLANETOCENTRIC CONIC  
 C3 30.023 VHL 5.479 DLA 34.31 RAL 50.24 RAD 6568.2 VEL 12.304 PTH 2.22 VHP 7.247 DPA 2.53 RAP 27.46 ECC 1.4941  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.76 23 45 40 4116.22 -20.46 176.98 287.11 61.83 24 54 17 3516.2 -24.06 169.67  
 110.24 4 51 32 3155.83 -20.45 105.29 287.11 61.82 5 44 8 2555.8 -24.05 97.99  
 69.76 23 45 40 4116.22 -20.46 176.98 287.11 61.83 24 54 17 3516.2 -24.06 169.67  
 110.24 4 51 32 3155.83 -20.45 105.29 287.11 61.82 5 44 8 2555.8 -24.05 97.99  
 69.76 23 45 40 4116.22 -20.46 176.98 287.11 61.83 24 54 17 3516.2 -24.06 169.67  
 110.24 4 51 32 3155.83 -20.45 105.29 287.11 61.82 5 44 8 2555.8 -24.05 97.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4620 TRA 4.3147 TC3-2.2900 BAU .9192 SGT 6539.4 SGR 519.7 SG3 312.6 ST 3052.7 SR 490.1 SS 1003.8  
 RDE .4658 RRA .1419 RC3 .0213 FAU .02480 RRT .6405 RRF .6321 RTF .9821 CRT .8972 CRS -.8496 CST -.9951  
 FDE 1.2056 FRA 2.6063 FC3 -.7150 BSP 21496 SGB 6560.1 R23 -.0010 R13 .9821 LSA 3241.9 MSA 237.8 SSA 13.0  
 BDE 2.5057 BRA 4.3170 BC3 2.2901 FSP -1119 SG1 6547.9 SG2 398.6 THA 2.92 EL1 3084.4 EL2 214.2 ALF 8.24

LAUNCH DATE DEC 27 1968

FLIGHT TIME 214.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 599.142

RL 147.12 LAL .00 LOL 95.31 VL 27.312 GAL 9.12 AZL 86.99 MCA 280.28 SMA 125.40 ECC .23314 INC 3.0119 VI 30.284
RP 108.52 LAP -2.96 LOP 15.60 VP 37.250 GAP 11.07 A7P 69.46 TAL 146.28 TAP 66.56 RCA 96.17 APO 154.64 V2 34.920
RC 153.416 GL 14.38 GP -5.39 ZAL 39.67 ZAP 166.43 ETS 339.25 ZAE 124.15 ETE 182.86 ZAC 122.93 ETC 168.81 CLP-167.53

PLANETOCENTRIC CONIC

C3 32.543 VHL 5.705 DLA 33.67 RAL 51.84 RAD 6568.3 VEL 12.406 PTH 2.24 VHP 7.581 DPA 3.46 RAP 29.11 ECC 1.5356
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.96 0 3 18 4114.19 -19.47 176.26 289.81 61.97 1 11 52 3514.2 -23.06 169.00
109.04 4 50 37 3198.38 -19.46 108.05 289.81 61.96 5 43 56 2598.4 -23.05 100.79
70.96 0 3 18 4114.19 -19.47 176.26 289.81 61.97 1 11 52 3514.2 -23.06 169.00
109.04 4 50 37 3198.38 -19.46 108.05 289.81 61.96 5 43 56 2598.4 -23.05 100.79
110.00 5 41 9 3043.87 -23.93 98.44 292.22 64.83 6 31 53 2443.9 -27.12 90.72
110.00 4 11 57 3316.69 -15.11 114.67 287.23 58.97 5 7 13 2716.7 -19.11 107.84

DIFFERENTIAL CORRECTIONS

TDE 2.4520 TRA 4.6394 TC3-2.1088 BAU .9175
RDE .4793 RRA .1535 RC3 .0189 FAU .02183
FDE 1.1197 FRA 2.5948 FC3 -.5808 BSP 21677
BDE 2.4984 BRA 4.6419 BC3 2.1089 FSP -1090

MID-COURSE EXECUTION ACCURACY

SGT 6573.1 SGR 516.3 SG3 293.1
RRR .6397 RRF .6321 RTF .9820
SGB 6593.3 R23 .0021 R13 .9820
SGI 6581.4 SG2 396.3 THA 2.89

ORBIT DETERMINATION ACCURACY

ST 2981.9 SR 484.6 SS 960.0
CRT .8850 CRS -.8358 CST -.9952
LSA 3160.5 MSA 244.0 SSA 12.8
EL1 3012.8 EL2 223.3 ALF 8.23

LAUNCH DATE DEC 27 1968

FLIGHT TIME 216.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 604.576

RL 147.12 LAL .00 LOL 95.31 VL 27.288 GAL 9.72 AZL 87.05 MCA 283.46 SMA 125.25 ECC .24106 INC 2.9480 VI 30.284
RP 108.48 LAP -2.87 LOP 18.79 VP 37.244 GAP 11.67 A7P 89.31 TAL 145.27 TAP 68.73 RCA 95.06 APO 155.44 V2 34.932
RC 155.612 GL 13.44 GP -5.20 ZAL 38.34 ZAP 167.67 ETS 337.76 ZAE 123.82 ETE 182.73 ZAC 124.73 ETC 168.64 CLP-168.80

PLANETOCENTRIC CONIC

C3 35.420 VHL 5.952 DLA 33.03 RAL 53.38 RAD 6568.4 VEL 12.522 PTH 2.27 VHP 7.938 DPA 4.37 RAP 30.80 ECC 1.5829
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.23 0 17 24 4111.09 -18.45 175.45 292.53 62.10 1 25 56 3511.1 -22.04 168.24
107.77 4 48 49 3244.23 -18.44 111.02 292.52 62.09 5 42 54 2644.2 -22.02 103.81
72.23 0 17 24 4111.09 -18.45 175.45 292.53 62.10 1 25 56 3511.1 -22.04 168.24
107.77 4 48 49 3244.23 -18.44 111.02 292.52 62.09 5 42 54 2644.2 -22.02 103.81
110.00 6 9 39 2995.87 -25.29 95.37 296.09 66.19 6 59 35 2395.9 -28.28 87.47
110.00 3 55 45 3407.44 -11.87 119.70 288.58 57.71 4 52 32 2807.4 -16.05 113.09

DIFFERENTIAL CORRECTIONS

TDE 2.4426 TRA 4.9858 TC3-1.9269 BAU .9125
RDE .4933 RRA .1668 RC3 .0165 FAU .01904
FDE 1.0423 FRA 2.5873 FC3 -.4654 BSP 21830
BDE 2.4920 BRA 4.9886 BC3 1.9269 FSP -.986

MID-COURSE EXECUTION ACCURACY

SGT 6600.8 SGR 512.5 SG3 275.1
RRR .6411 RRF .6341 RTF .9819
SGB 6620.6 R23 .0030 R13 .9820
SGI 6609.0 SG2 392.8 THA 2.86

ORBIT DETERMINATION ACCURACY

ST 2912.9 SR 478.4 SS 920.5
CRT .8723 CRS -.8219 CST -.9954
LSA 3082.0 MSA 249.6 SSA 12.5
EL1 2942.8 EL2 231.6 ALF 8.20

LAUNCH DATE DEC 27 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 609.921

RL 147.12 LAL .00 LOL 95.31 VL 27.264 GAL 10.36 AZL 87.12 MCA 286.65 SMA 125.09 ECC .24963 INC 2.8824 VI 30.284
RP 108.45 LAP -2.76 LOP 21.98 VP 37.238 GAP 12.31 A7P 89.17 TAL 144.28 TAP 70.93 RCA 93.86 APO 156.33 V2 34.945
RC 157.792 GL 12.52 GP -5.02 ZAL 37.06 ZAP 168.87 ETS 335.90 ZAE 123.50 ETE 182.63 ZAC 126.56 ETC 168.44 CLP-170.06

PLANETOCENTRIC CONIC

C3 38.715 VHL 6.222 DLA 32.39 RAL 54.87 RAD 6568.5 VEL 12.652 PTH 2.30 VHP 8.319 DPA 5.27 RAP 32.52 ECC 1.6372
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.57 0 32 0 4106.67 -17.41 174.53 295.25 62.25 1 40 27 3506.7 -20.99 167.37
106.43 4 46 3 3293.60 -17.40 114.23 295.25 62.24 5 40 57 2693.6 -20.98 107.07
73.57 0 32 0 4106.67 -17.41 174.53 295.25 62.25 1 40 27 3506.7 -20.99 167.37
106.43 4 46 3 3293.60 -17.40 114.23 295.25 62.24 5 40 57 2693.6 -20.98 107.07
110.00 6 32 4 2966.38 -26.08 93.45 299.67 67.08 7 21 30 2366.4 -28.95 85.44
110.00 3 45 10 3481.88 -9.13 123.73 290.26 56.91 4 43 12 2881.9 -13.42 117.26

DIFFERENTIAL CORRECTIONS

TDE 2.4371 TRA 5.3589 TC3-1.7429 BAU .9022
RDE .5078 RRA .1821 RC3 .0143 FAU .01633
FDE .9744 FRA 2.5858 FC3 -.3651 BSP 21901
BDE 2.4894 BRA 5.3620 BC3 1.7430 FSP -.923

MID-COURSE EXECUTION ACCURACY

SGT 6625.1 SGR 508.4 SG3 258.7
RRR .6448 RRF .6384 RTF .9820
SGB 6644.6 R23 .0039 R13 .9820
SGI 6633.2 SG2 388.1 THA 2.84

ORBIT DETERMINATION ACCURACY

ST 2848.5 SR 471.4 SS 886.4
CRT .8593 CRS -.8084 CST -.9956
LSA 3009.5 MSA 254.5 SSA 12.3
EL1 2877.4 EL2 238.7 ALF 8.15

LAUNCH DATE DEC 27 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 615.161

RL 147.12 LAL .00 LOL 95.31 VL 27.239 GAL 11.06 AZL 87.19 MCA 289.84 SMA 124.94 ECC .25911 INC 2.8144 VI 30.284
RP 108.41 LAP -2.65 LOP 25.18 VP 37.232 GAP 12.99 A7P 89.04 TAL 143.31 TAP 73.15 RCA 92.56 APO 157.31 V2 34.957
RC 159.953 GL 11.62 GP -4.86 ZAL 35.82 ZAP 170.04 ETS 333.53 ZAE 123.18 ETE 182.54 ZAC 128.40 ETC 168.20 CLP-171.30

PLANETOCENTRIC CONIC

C3 42.500 VHL 6.519 DLA 31.75 RAL 56.28 RAD 6568.6 VEL 12.801 PTH 2.33 VHP 8.728 DPA 6.14 RAP 34.27 ECC 1.6994
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.01 0 47 17 4100.18 -16.36 173.46 297.98 62.40 1 55 37 3500.2 -19.92 166.34
104.99 4 42 6 3347.17 -16.34 117.73 297.98 62.40 5 37 53 2747.2 -19.91 110.61
75.01 0 47 17 4100.18 -16.36 173.46 297.98 62.40 1 55 37 3500.2 -19.92 166.34
104.99 4 42 6 3347.17 -16.34 117.73 297.98 62.40 5 37 53 2747.2 -19.91 110.61
110.00 6 51 23 2946.28 -26.61 92.12 303.10 67.71 7 40 29 2346.3 -29.39 84.04
110.00 3 37 10 3549.08 -6.61 127.30 292.11 56.39 4 36 19 2949.1 -10.99 120.94

DIFFERENTIAL CORRECTIONS

TDE 2.4290 TRA 5.7548 TC3-1.5655 BAU .8895
RDE .5224 RRA .1991 RC3 .0121 FAU .01385
FDE .9114 FRA 2.5870 FC3 -.2822 BSP 22034
BDE 2.4845 BRA 5.7583 BC3 1.5655 FSP -.868

MID-COURSE EXECUTION ACCURACY

SGT 6640.8 SGR 503.4 SG3 243.2
RRR .6497 RRF .6436 RTF .9822
SGB 6659.8 R23 .0044 R13 .9823
SGI 6648.9 SG2 382.2 THA 2.83

ORBIT DETERMINATION ACCURACY

ST 2783.0 SR 463.3 SS 854.9
CRT .8457 CRS -.7946 CST -.9959
LSA 2936.6 MSA 258.6 SSA 12.0
EL1 2810.6 EL2 244.8 ALF 8.07

LAUNCH DATE DEC 28 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 8 1969

HELIOCENTRIC CONIC

DISTANCE 143.868

RL 147.11 LAL .00 LOL 96.33 VL 19.510 GAL 14.31 AZL 85.88 MCA 51.09 SMA 93.22 ECC .61222 INC 4.1249 VI 30.285
RP 107.51 LAP 3.21 LOP 147.35 VP 32.332 GAP -36.86 AZP 87.41 TAL 170.50 TAP 221.99 RCA 36.15 APO 150.29 V2 35.250
RC 80.278 GL 6.25 GP 1.78 ZAL 67.05 ZAP 25.81 ETS 184.08 ZAE 147.58 ETE 193.30 ZAC 87.37 ETC 166.24 CLP 25.75

PLANETOCENTRIC CONIC

C3 156.217 VHL 12.499 OLA 17.11 RAL 25.06 RAD 6570.7 VEL 16.680 PTH 2.89 VHP 21.617 DPA -4.19 RAP 354.33 ECC 3.5709
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 16 17 3255.21 -25.29 114.99 288.96 76.82 5 10 32 2655.2 -26.86 106.27
90.00 20 52 13 4773.34 17.41 205.11 275.49 67.31 22 11 46 4173.3 14.19 197.91
100.00 5 47 27 2961.22 -27.17 93.45 289.45 77.03 6 36 48 2361.2 -28.68 84.97
100.00 22 3 44 4542.56 19.19 187.35 274.69 66.65 23 19 26 3942.6 15.86 180.13
110.00 7 17 89 2680.00 -32.09 73.57 290.72 77.55 8 1 59 2080.0 -33.47 64.41
-110.00 22 50 20 4396.94 23.76 174.04 272.46 64.69 24 3 37 3796.5 20.17 166.76

DIFFERENTIAL CORRECTIONS

TDE -.5823 TRA-1.5416 TC3 -.1098 BAW .2343
RDE -.8937 RRA .3303 RC3 -.0230 FAU .01393
FDE .3306 FRA .6185 FC3 -.0772 BSP 2220
BOE 1.0667 BRA 1.5766 BC3 .1122 FSP -71

MID-COURSE EXECUTION ACCURACY

SGT 832.7 SGR 443.0 SG3 33.3
RRT .0216 RRF -.0236 RTF -.6453
SG8 943.2 R23 -.0041 R13 -.6454
SG1 832.8 SGR 442.8 THA .92

ORBIT DETERMINATION ACCURACY

ST 347.2 SR 412.4 SS 328.5
CRT .6902 CRS .7977 CST .9852
LSA 589.3 MSA 225.8 SSA 13.7
EL1 497.2 EL2 208.4 ALF 52.04

LAUNCH DATE DEC 28 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 10 1969

HELIOCENTRIC CONIC

DISTANCE 149.995

RL 147.11 LAL .00 LOL 96.33 VL 20.133 GAL 13.70 AZL 85.88 MCA 54.34 SMA 94.87 ECC .58510 INC 4.0213 VI 30.285
RP 107.52 LAP 3.27 LOP 150.60 VP 32.707 GAP -35.09 AZP 87.65 TAL 169.83 TAP 224.16 RCA 39.36 APO 150.37 V2 35.246
RC 58.412 GL 6.63 GP 1.84 ZAL 66.07 ZAP 24.28 ETS 184.58 ZAE 148.52 ETE 194.13 ZAC 89.01 ETC 166.30 CLP 24.21

PLANETOCENTRIC CONIC

C3 141.158 VHL 11.881 OLA 17.82 RAL 25.89 RAD 6570.5 VEL 16.201 PTH 2.84 VHP 20.712 DPA -3.44 RAP 355.87 ECC 3.3231
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 12 23 3284.23 -25.15 119.21 288.65 76.54 5 6 47 2684.2 -26.75 106.91
90.00 21 2 43 4727.58 16.19 202.31 275.13 66.45 22 21 30 4127.6 12.87 195.20
100.00 5 44 12 2988.14 -27.06 93.94 289.15 76.80 6 33 40 2368.1 -28.61 85.48
100.00 22 13 35 4498.90 17.99 184.66 274.29 65.72 23 28 34 3898.9 14.56 177.55
110.00 7 15 24 2682.82 -32.05 73.58 290.46 77.41 8 0 7 2082.8 -33.45 64.63
110.00 22 58 52 4356.99 22.61 171.57 271.98 63.65 24 11 29 3757.0 18.88 164.41

DIFFERENTIAL CORRECTIONS

TDE -.5804 TRA-1.5389 TC3 -.1144 BAW .2211
RDE -.8593 RRA .3094 RC3 -.0254 FAU .01422
FDE .3435 FRA .6400 FC3 -.0872 BSP 2381
BOE 1.0389 BRA 1.5687 BC3 .1172 FSP -78

MID-COURSE EXECUTION ACCURACY

SGT 871.7 SGR 447.1 SG3 36.2
RRT .0263 RRF -.0289 RTF -.6649
SG8 979.7 R23 -.0047 R13 -.6650
SG1 871.8 SGR 446.9 THA 1.05

ORBIT DETERMINATION ACCURACY

ST 364.8 SR 417.1 SS 344.0
CRT .6901 CRS .7992 CST .9849
LSA 609.5 MSA 231.7 SSA 13.9
EL1 510.4 EL2 215.7 ALF 50.50

LAUNCH DATE DEC 28 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 12 1969

HELIOCENTRIC CONIC

DISTANCE 156.197

RL 147.11 LAL .00 LOL 96.33 VL 20.712 GAL 13.10 AZL 86.07 MCA 57.58 SMA 96.50 ECC .55882 INC 3.9259 VI 30.285
RP 107.53 LAP 3.31 LOP 153.85 VP 33.062 GAP -33.41 AZP 87.89 TAL 169.18 TAP 226.76 RCA 42.57 APO 150.42 V2 35.241
RC 56.805 GL 7.02 GP 1.91 ZAL 65.16 ZAP 22.77 ETS 185.14 ZAE 149.60 ETE 195.05 ZAC 90.66 ETC 166.34 CLP 22.69

PLANETOCENTRIC CONIC

C3 127.619 VHL 11.297 OLA 18.53 RAL 26.66 RAD 6570.4 VEL 15.778 PTH 2.80 VHP 19.842 DPA -2.69 RAP 357.42 ECC 3.1003
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 8 11 3272.46 -25.02 115.78 288.19 76.28 5 2 44 2672.5 -26.66 107.49
90.00 21 13 1 4681.03 14.90 199.49 274.71 65.64 22 31 2 4081.0 11.49 192.48
100.00 5 40 42 2974.16 -26.97 94.36 288.72 76.60 6 30 16 2374.2 -28.55 85.91
100.00 22 23 12 4454.57 16.73 181.97 273.83 64.86 23 37 27 3854.6 13.20 174.96
110.00 7 13 15 2684.60 -32.02 73.71 290.06 77.34 7 57 59 2084.6 -33.45 64.76
110.00 23 7 8 4316.89 21.38 169.11 271.41 62.67 24 19 5 3716.9 17.54 162.08

DIFFERENTIAL CORRECTIONS

TDE -.5787 TRA-1.5350 TC3 -.1182 BAW .2073
RDE -.8252 RRA .2888 RC3 -.0280 FAU .01454
FDE .3570 FRA .6619 FC3 -.0986 BSP 2553
BOE 1.0079 BRA 1.5620 BC3 .1215 FSP -87

MID-COURSE EXECUTION ACCURACY

SGT 912.0 SGR 450.8 SG3 39.4
RRT .0315 RRF -.0339 RTF -.6839
SG8 1017.2 R23 -.0055 R13 -.6840
SG1 912.1 SGR 450.3 THA 1.18

ORBIT DETERMINATION ACCURACY

ST 383.3 SR 421.1 SS 360.0
CRT .6905 CRS .8010 CST .9846
LSA 630.4 MSA 237.2 SSA 14.1
EL1 524.0 EL2 222.8 ALF 48.89

LAUNCH DATE DEC 28 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 14 1969

HELIOCENTRIC CONIC

DISTANCE 162.475

RL 147.11 LAL .00 LOL 96.33 VL 21.253 GAL 12.31 AZL 86.16 MCA 60.82 SMA 98.12 ECC .53343 INC 3.8371 VI 30.285
RP 107.55 LAP 3.35 LOP 157.10 VP 33.397 GAP -31.81 AZP 88.13 TAL 168.55 TAP 229.38 RCA 45.78 APO 150.45 V2 35.235
RC 54.864 GL 7.43 GP 1.98 ZAL 64.32 ZAP 21.27 ETS 185.79 ZAE 150.82 ETE 196.08 ZAC 92.33 ETC 166.37 CLP 21.18

PLANETOCENTRIC CONIC

C3 115.436 VHL 10.744 OLA 19.21 RAL 27.36 RAD 6570.2 VEL 15.387 PTH 2.75 VHP 19.004 DPA -1.91 RAP 358.97 ECC 2.8998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 3 40 3279.97 -24.89 116.29 287.81 76.05 4 58 20 2680.0 -26.57 108.03
90.00 21 23 8 4633.71 13.55 196.67 274.22 64.90 22 40 22 4033.7 10.06 189.74
100.00 5 36 53 2979.34 -26.89 94.72 288.15 76.42 6 26 33 2379.3 -28.49 86.28
100.00 22 32 36 4409.57 15.41 179.28 273.31 64.06 23 46 5 3809.6 11.79 172.36
110.00 7 10 51 2685.39 -32.01 73.77 289.52 77.30 7 55 36 2085.4 -33.42 64.82
110.00 23 15 8 4276.27 20.09 166.87 270.80 61.74 24 26 24 3676.3 16.15 159.75

DIFFERENTIAL CORRECTIONS

TDE -.5778 TRA-1.5305 TC3 -.1214 BAW .1932
RDE -.7915 RRA .2686 RC3 -.0308 FAU .01490
FDE .3710 FRA .6842 FC3 -.1117 BSP 2730
BOE .9800 BRA 1.5538 BC3 .1252 FSP -97

MID-COURSE EXECUTION ACCURACY

SGT 953.9 SGR 453.3 SG3 42.9
RRT .0375 RRF -.0402 RTF -.7022
SG8 1056.2 R23 -.0062 R13 -.7023
SG1 954.1 SGR 452.9 THA 1.32

ORBIT DETERMINATION ACCURACY

ST 402.8 SR 424.5 SS 376.7
CRT .6917 CRS .8031 CST .9844
LSA 652.3 MSA 242.1 SSA 14.3
EL1 538.4 EL2 229.4 ALF 47.17

LAUNCH DATE DEC 28 1968

FLIGHT TIME 78.00

ARRIVAL DATE MAR 16 1969

HELIOCENTRIC CONIC DISTANCE 168.817  
 RL 147.11 LAL .00 LOL 96.33 VL 21.756 GAL 11.93 AZL 86.25 HCA 64.07 SMA 99.71 ECC .50897 INC 3.7538 V1 30.285  
 RP 107.57 LAP 3.38 LOP 160.35 VP 33.713 GAP -30.29 AZP 88.36 TAL 167.96 TAP 232.03 RCA 48.96 APO 150.46 V2 35.229  
 RC 53.197 GL 7.84 GP 2.06 ZAL 63.55 ZAP 19.79 ETS 186.53 ZAE 152.19 ETE 197.24 ZAC 94.00 ETC 166.38 CLP 19.69

PLANETOCENTRIC CONIC  
 C3 104.466 VHL 10.221 OLA 19.88 RAL 27.99 RAD 6570.D VEL 15.027 PTH 2.71 VMP 18.196 DPA -1.12 RAP .53 ECC 2.7192  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 58 48 3286.83 -24.78 118.76 286.89 75.84 4 53 35 2686.8 -26.49 108.51  
 90.00 21 33 4 4585.59 12.15 193.84 273.68 64.22 22 49 30 3985.6 8.58 186.98  
 100.00 5 32 48 2983.74 -26.82 95.03 287.45 76.27 6 22 31 2383.7 -28.44 86.60  
 100.00 22 41 46 4363.92 14.03 176.60 272.73 63.33 23 54 30 3763.9 10.34 169.75  
 110.00 7 8 12 2665.25 -32.01 73.76 286.85 77.31 7 52 57 2085.2 -33.42 64.81  
 110.00 23 22 51 4235.17 18.74 164.23 270.13 60.88 24 33 26 3635.2 14.72 157.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5800 TRA-1.5275 TC3 -.1246 BAU .1802 SGT 999.8 SGR 455.4 SCS 46.7 ST 424.7 SR 427.3 SS 394.3  
 RDE -.7582 RRA .2489 RC3 -.0336 FAU .01528 RRT .0452 RRF -.0474 RTF -.7192 CRT .6945 CRS .8057 CST .9844  
 FDE .3861 FRA .7071 FC3 -.1267 BSP 2850 SGB 1098.7 R23 -.0064 R13 -.7193 LSA 676.4 HSA 246.4 SSA 14.5  
 BOE .9546 BRA 1.5477 BC3 .1290 FSP -106 SGI 1000.1 SGE 454.8 THA 1.49 EL1 554.6 EL2 235.5 ALF 45.25

LAUNCH DATE DEC 28 1968

FLIGHT TIME 80.00

ARRIVAL DATE MAR 18 1969

HELIOCENTRIC CONIC DISTANCE 175.221  
 RL 147.11 LAL .00 LOL 96.33 VL 22.225 GAL 11.38 AZL 86.33 HCA 67.31 SMA 101.28 ECC .48545 INC 3.6750 V1 30.285  
 RP 107.59 LAP 3.39 LOP 163.60 VP 34.011 GAP -28.84 AZP 88.58 TAL 167.40 TAP 234.71 RCA 52.12 APO 150.45 V2 35.222  
 RC 51.611 GL 8.26 GP 2.14 ZAL 62.86 ZAP 18.32 ETS 187.39 ZAE 153.72 ETE 198.56 ZAC 95.68 ETC 166.37 CLP 18.20

PLANETOCENTRIC CONIC  
 C3 94.581 VHL 9.725 OLA 20.53 RAL 28.58 RAD 6569.8 VEL 14.694 PTH 2.66 VMP 17.417 DPA -.32 RAP 2.10 ECC 2.5566  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 34 3293.14 -24.68 117.20 286.04 75.65 4 48 28 2693.1 -26.41 108.96  
 90.00 21 42 30 4536.71 10.68 191.00 273.08 63.62 22 58 26 3936.7 7.05 184.20  
 100.00 5 28 23 2987.42 -26.76 95.29 286.62 76.15 6 18 10 2387.4 -28.40 86.87  
 100.00 22 50 42 4317.66 12.60 173.91 272.09 62.67 24 2 40 3717.7 8.84 167.14  
 110.00 7 5 18 2684.21 -32.02 73.68 288.04 77.35 7 50 2 2084.2 -33.43 64.73  
 110.00 23 30 17 4193.64 17.35 161.82 269.40 60.07 24 40 10 3593.6 13.24 155.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5805 TRA-1.5211 TC3 -.1258 BAU .1656 SGT 1045.2 SGR 456.7 SCS 50.8 ST 446.6 SR 429.5 SS 412.4  
 RDE -.7254 RRA .2297 RC3 -.0368 FAU .01572 RRT .0530 RRF -.0554 RTF -.7358 CRT .6971 CRS .8085 CST .9843  
 FDE .4018 FRA .7302 FC3 -.1439 BSP 3028 SGB 1140.6 R23 -.0072 R13 -.7360 LSA 700.9 HSA 250.1 SSA 14.7  
 BOE .9291 BRA 1.5383 BC3 -.1310 FSP -118 SGI 1045.6 SGE 455.9 THA 1.64 EL1 570.9 EL2 240.9 ALF 43.40

LAUNCH DATE DEC 28 1968

FLIGHT TIME 82.00

ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC DISTANCE 181.681  
 RL 147.11 LAL .00 LOL 96.33 VL 22.663 GAL 10.83 AZL 86.40 HCA 70.55 SMA 102.82 ECC .46290 INC 3.5998 V1 30.285  
 RP 107.61 LAP 3.39 LOP 166.84 VP 34.291 GAP -27.45 AZP 88.80 TAL 168.88 TAP 237.42 RCA 55.23 APO 150.42 V2 35.215  
 RC 50.116 GL 8.68 GP 2.24 ZAL 62.23 ZAP 16.87 ETS 188.41 ZAE 155.39 ETE 200.10 ZAC 97.36 ETC 166.35 CLP 16.73

PLANETOCENTRIC CONIC  
 C3 85.671 VHL 9.256 OLA 21.16 RAL 29.06 RAD 6569.7 VEL 14.388 PTH 2.62 VMP 16.666 DPA .49 RAP 3.66 ECC 2.4099  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 59 3296.99 -24.58 117.60 285.06 75.47 4 42 58 2699.0 -26.33 109.37  
 90.00 21 52 25 4487.08 9.17 188.14 272.42 63.09 23 7 12 3887.1 5.49 181.39  
 100.00 5 23 40 2990.46 -26.71 95.50 285.66 76.05 6 13 30 2390.5 -28.36 87.09  
 100.00 22 59 25 4270.84 11.12 171.22 271.39 62.07 24 10 36 3670.8 7.30 164.51  
 110.00 7 2 9 2682.32 -32.05 73.54 287.10 77.43 7 46 51 2082.3 -33.45 64.59  
 110.00 23 37 25 4151.74 15.91 159.43 269.62 59.34 24 46 37 3551.7 11.72 152.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5816 TRA-1.5134 TC3 -.1258 BAU .1508 SGT 1092.1 SGR 457.3 SCS 55.3 ST 469.5 SR 431.1 SS 431.3  
 RDE -.6931 RRA .2109 RC3 -.0396 FAU .01622 RRT .0618 RRF -.0644 RTF -.7518 CRT .7006 CRS .8116 CST .9843  
 FDE .4184 FRA .7539 FC3 -.1639 BSP 3216 SGB 1184.0 R23 -.0081 R13 -.7520 LSA 726.7 HSA 253.0 SSA 14.8  
 BOE .9048 BRA 1.5280 BC3 .1316 FSP -130 SGI 1092.6 SGE 456.2 THA 1.79 EL1 588.3 EL2 245.6 ALF 41.52

LAUNCH DATE DEC 28 1968

FLIGHT TIME 84.00

ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC DISTANCE 188.192  
 RL 147.11 LAL .00 LOL 96.33 VL 23.070 GAL 10.31 AZL 86.47 HCA 73.79 SMA 104.33 ECC .44131 INC 3.5276 V1 30.285  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.553 GAP -26.13 AZP 89.01 TAL 168.39 TAP 240.17 RCA 58.29 APO 150.37 V2 35.207  
 RC 48.721 GL 9.12 GP 2.34 ZAL 61.68 ZAP 15.45 ETS 189.63 ZAE 157.21 ETE 201.91 ZAC 99.04 ETC 166.30 CLP 15.26

PLANETOCENTRIC CONIC  
 C3 77.637 VHL 8.811 OLA 21.78 RAL 29.49 RAD 6569.5 VEL 14.106 PTH 2.57 VMP 15.941 DPA 1.32 RAP 5.23 ECC 2.2777  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 0 3304.48 -24.48 117.97 283.96 75.31 4 37 4 2704.5 26.26 109.75  
 90.00 22 1 51 4436.75 7.80 185.27 271.70 62.64 23 15 48 3836.8 3.88 178.57  
 100.00 5 18 37 2992.94 -26.67 95.67 284.58 75.97 6 8 30 2392.9 -28.33 87.27  
 100.00 23 7 55 4223.52 9.80 168.53 270.63 61.55 24 18 18 3623.5 5.72 161.88  
 110.00 6 58 45 2679.66 -32.09 73.34 286.04 77.54 7 43 25 2079.7 -33.47 64.38  
 110.00 23 44 16 4109.57 14.43 157.05 267.79 58.67 24 52 46 3509.6 10.18 150.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5830 TRA-1.5044 TC3 -.1237 BAU .1358 SGT 1140.6 SGR 457.1 SCS 60.2 ST 493.6 SR 432.1 SS 451.1  
 RDE -.6616 RRA .1927 RC3 -.0426 FAU .01676 RRT .0716 RRF -.0744 RTF -.7670 CRT .7048 CRS .8152 CST .9843  
 FDE .4361 FRA .7783 FC3 -.1869 BSP 3407 SGB 1228.8 R23 -.0092 R13 -.7672 LSA 754.0 HSA 255.3 SSA 15.0  
 BOE .8818 BRA 1.5167 BC3 .1308 FSP -144 SGI 1141.1 SGE 455.7 THA 1.95 EL1 606.8 EL2 249.4 ALF 39.64

LAUNCH DATE DEC 28 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 24 1969

MELIOCENTRIC CONIC

DISTANCE 194.747

RL 147.11 LAL .00 LOL 96.33 VL 23.450 GAL 9.80 AZL 86.54 MCA 77.02 SMA 105.00 ECC .42070 INC 3.4578 V1 30.285  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.799 GAP -24.86 AZP 89.22 TAL 165.94 TAP 242.96 RCA 61.29 APO 150.31 V2 35.198  
 RC 47.437 GL 9.56 GP 2.46 ZAL 61.20 ZAP 14.00 ETS 191.11 ZAE 159.18 ETE 204.10 ZAC 100.72 ETC 166.22 CLP 15.79

PLANETOCENTRIC CONIC

C3 70.393 VHL 8.390 DLA 22.38 RAL 29.86 RAD 6569.4 VEL 13.847 PTH 2.53 WHP 15.242 DPA 2.16 RAP 6.80 ECC 2.1585  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 35 37 3309.72 -24.39 118.33 282.73 75.15 4 30 46 2709.7 -26.19 110.12  
 90.00 22 11 7 4385.77 6.00 182.38 270.92 62.27 23 24 13 3785.8 2.24 175.72  
 100.00 5 13 14 2994.93 -26.63 95.81 283.38 75.90 6 3 9 2394.9 -28.31 87.41  
 100.00 23 16 10 4175.80 8.04 165.84 268.81 61.11 24 25 46 3575.8 4.12 159.24  
 110.00 6 55 6 2676.27 -32.14 75.09 284.86 77.68 7 39 42 2076.3 -33.50 64.12  
 110.00 23 50 48 4067.22 12.92 154.70 266.90 58.07 24 58 36 3467.2 8.61 148.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5854 TRA-1.4941 TC3 -.1198 BAU .1207 SGT 1190.7 SGR 456.2 SCS 65.6 ST 519.0 SR 432.5 SS 471.9  
 RDE -.6308 RRA .1750 RC3 -.0456 FAU .01737 RRT .0828 RRF -.0899 RTF -.7814 CRT .7099 CRS .8192 CST .9845  
 FDE .4552 FRA .8034 FC3 -.2136 BSP 3603 SGB 1275.1 R23 -.0102 R13 -.7817 LSA 783.0 HSA 256.7 SSA 15.1  
 BOE .8606 BRA 1.5043 BC3 .1282 FSP -160 SGI 1191.4 SGE 454.4 THA 2.13 EL1 626.8 EL2 252.2 ALF 37.76

LAUNCH DATE DEC 28 1968

FLIGHT TIME 88.00

ARRIVAL DATE MAR 26 1969

MELIOCENTRIC CONIC

DISTANCE 201.342

RL 147.11 LAL .00 LOL 96.33 VL 23.804 GAL 9.30 AZL 86.61 MCA 80.26 SMA 107.23 ECC .40106 INC 3.3899 V1 30.285  
 RP 107.69 LAP 3.34 LOP 176.57 VP 35.029 GAP -23.64 AZP 89.43 TAL 165.53 TAP 245.79 RCA 64.22 APO 150.23 V2 35.189  
 RC 46.274 GL 10.01 GP 2.58 ZAL 60.79 ZAP 12.99 ETS 192.96 ZAE 161.28 ETE 206.81 ZAC 102.40 ETC 166.12 CLP 12.33

PLANETOCENTRIC CONIC

C3 63.862 VHL 7.991 DLA 22.95 RAL 30.15 RAD 6569.2 VEL 13.809 PTH 2.49 WHP 14.567 DPA 3.00 RAP 8.35 ECC 2.0510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 49 3314.83 -24.30 118.88 281.40 75.00 4 24 4 2714.8 -26.13 110.48  
 90.00 22 20 14 4334.21 4.36 179.48 270.09 61.99 23 32 28 3734.2 .58 172.84  
 100.00 5 7 33 2996.49 -26.61 95.92 282.06 75.85 5 57 38 2396.5 -28.29 87.52  
 100.00 23 24 12 4127.77 6.45 163.16 268.94 60.75 24 32 59 3527.8 2.50 156.80  
 110.00 6 51 12 2672.20 -32.20 72.79 283.56 77.95 7 35 45 2072.2 -33.54 63.81  
 110.00 0 0 58 4024.83 11.38 152.38 289.97 57.55 1 8 2 3424.8 7.02 146.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5904 TRA-1.4846 TC3 -.1151 BAU .1066 SGT 1244.7 SGR 454.6 SCS 71.6 ST 547.3 SR 432.3 SS 494.1  
 RDE -.6008 RRA .1579 RC3 -.0485 FAU .01803 RRT .0963 RRF -.0990 RTF -.7946 CRT .7167 CRS .8237 CST .9848  
 FDE .4759 FRA .8297 FC3 -.2444 BSP 3748 SGB 1325.1 R23 -.0108 R13 -.7949 LSA 815.0 HSA 257.2 SSA 15.3  
 BOE .8424 BRA 1.4930 BC3 .1249 FSP -176 SGI 1245.6 SGE 452.2 THA 2.32 EL1 649.5 EL2 254.0 ALF 35.82

LAUNCH DATE DEC 28 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 28 1969

MELIOCENTRIC CONIC

DISTANCE 207.971

RL 147.11 LAL .00 LOL 96.33 VL 24.133 GAL 8.83 AZL 86.68 MCA 83.49 SMA 108.61 ECC .38237 INC 3.3232 V1 30.285  
 RP 107.72 LAP 3.30 LOP 179.81 VP 35.244 GAP -22.48 AZP 89.62 TAL 165.17 TAP 248.66 RCA 67.08 APO 150.14 V2 35.179  
 RC 45.244 GL 10.46 GP 2.72 ZAL 60.45 ZAP 11.19 ETS 195.31 ZAE 163.49 ETE 210.29 ZAC 104.06 ETC 166.00 CLP 10.86

PLANETOCENTRIC CONIC

C3 57.972 VHL 7.814 DLA 23.51 RAL 30.37 RAD 6569.1 VEL 13.391 PTH 2.45 WHP 13.916 DPA 3.86 RAP 9.91 ECC 1.9541  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 37 3319.88 -24.21 119.02 279.96 74.85 4 16 57 2719.9 -26.06 110.84  
 90.00 22 29 12 4282.15 2.69 176.36 269.21 61.80 23 40 34 3682.2 -1.10 169.94  
 100.00 5 1 33 2997.69 -26.59 96.00 280.65 75.81 5 31 30 2397.7 -28.28 87.61  
 100.00 23 31 58 4079.58 4.84 160.49 268.02 60.47 24 39 57 3479.6 .87 153.95  
 110.00 6 47 5 2667.50 -32.27 72.44 282.16 78.05 7 31 33 2067.5 -33.58 63.45  
 110.00 0 6 51 3982.53 9.83 150.09 284.97 57.09 1 13 13 3382.5 5.42 143.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5939 TRA-1.4713 TC3 -.1084 BAU .0915 SGT 1297.6 SGR 452.3 SCS 78.1 ST 575.3 SR 431.6 SS 517.3  
 RDE -.5717 RRA .1413 RC3 -.0512 FAU .01877 RRT .1106 RRF -.1135 RTF -.8076 CRT .7236 CRS .8285 CST .9851  
 FDE .4980 FRA .8567 FC3 -.2804 BSP 3949 SGB 1374.2 R23 -.0121 R13 -.8079 LSA 847.7 HSA 256.9 SSA 15.4  
 BOE .8243 BRA 1.4781 BC3 .1181 FSP -195 SGI 1298.7 SGE 449.2 THA 2.51 EL1 672.5 EL2 254.8 ALF 34.04

LAUNCH DATE DEC 28 1968

FLIGHT TIME 92.00

ARRIVAL DATE MAR 30 1969

MELIOCENTRIC CONIC

DISTANCE 214.630

RL 147.11 LAL .00 LOL 96.33 VL 24.439 GAL 8.37 AZL 86.74 MCA 86.72 SMA 109.95 ECC .36463 INC 3.2575 V1 30.285  
 RP 107.75 LAP 3.25 LOP 183.05 VP 35.444 GAP -21.36 AZP 89.81 TAL 164.85 TAP 251.57 RCA 69.86 APO 150.04 V2 35.169  
 RC 44.357 GL 10.91 GP 2.88 ZAL 60.18 ZAP 9.81 ETS 198.38 ZAE 165.76 ETE 214.92 ZAC 105.72 ETC 165.84 CLP 9.39

PLANETOCENTRIC CONIC

C3 52.661 VHL 7.257 DLA 24.05 RAL 30.58 RAD 6568.9 VEL 13.192 PTH 2.41 WHP 13.288 DPA 4.73 RAP 11.45 ECC 1.8667  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 14 0 3324.98 -24.12 119.36 278.42 74.70 4 9 25 2725.0 -25.99 111.19  
 90.00 22 38 1 4229.71 1.00 173.64 268.27 61.70 23 48 31 3629.7 -2.79 167.01  
 100.00 4 55 11 2988.55 -26.57 96.08 279.13 75.78 5 45 10 2398.6 -28.27 87.68  
 100.00 23 39 27 4031.37 3.22 157.83 267.04 60.27 24 46 39 3431.4 -1.77 151.31  
 110.00 6 42 45 2662.20 -32.34 72.04 280.66 78.27 7 27 8 2062.2 -33.62 63.04  
 110.00 0 12 22 3940.49 8.26 147.84 283.93 56.71 1 18 3 3340.5 3.83 141.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5979 TRA-1.4588 TC3 -.0946 BAU .0786 SGT 1352.2 SGR 449.4 SCS 85.3 ST 604.7 SR 430.4 SS 541.7  
 RDE -.5436 RRA .1252 RC3 -.0538 FAU .01980 RRT .1267 RRF -.1300 RTF -.8198 CRT .7313 CRS .8338 CST .9855  
 FDE .5218 FRA .8849 FC3 -.3223 BSP 4153 SGB 1424.9 R23 -.0136 R13 -.8201 LSA 882.4 HSA 255.8 SSA 15.6  
 BOE .8081 BRA 1.4623 BC3 .1088 FSP -215 SGI 1353.5 SGE 445.3 THA 2.70 EL1 697.2 EL2 254.6 ALF 32.32

LAUNCH DATE DEC 28 1968

FLIGHT TIME 94.00

ARRIVAL DATE APR 1 1969

MELIOCENTRIC CONIC

DISTANCE 221.314

RL 147.11 LAL .00 LOL 96.33 VL 24.724 GAL 7.92 AZL 86.81 HCA 89.95 SMA 111.24 ECC .34781 INC 3.1922 V1 30.285
RP 107.79 LAP 3.19 LOP 186.28 VP 35.631 GAP -20.28 AZP 90.00 TAL 164.58 TAP 254.53 RCA 72.55 APO 149.94 V2 35.158
RC 43.625 GL 11.37 GP 3.05 ZAL 59.99 ZAP 6.47 ETS 202.53 ZAE 168.05 ETE 221.38 ZAC 107.35 ETC 165.65 CLP 7.91

PLANETOCENTRIC CONIC

C3 47.875 VHL 6.919 DLA 24.56 RAL 30.60 RAD 6568.8 VEL 13.009 PTH 2.37 VHP 12.682 DPA 5.61 RAP 12.98 ECC 1.7879
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 5 59 3330.18 -24.03 119.72 276.78 74.55 4 1 29 2730.2 -25.92 111.56
90.00 22 46 40 4177.02 -.70 170.70 267.28 61.69 23 56 17 3577.0 -4.48 164.06
100.00 4 48 41 2999.10 -26.57 96.10 277.53 75.76 5 38 40 2399.1 -28.26 87.71
100.00 23 46 39 3983.34 1.59 155.19 266.00 60.15 24 53 3 3383.3 -2.39 148.67
110.00 6 38 15 2656.30 -32.42 71.60 279.06 78.52 7 22 31 2056.3 -33.66 62.59
110.00 0 17 31 3898.91 6.70 145.63 262.84 56.40 1 22 29 3298.9 2.24 139.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6024 TRA-1.4407 TC3 -.0791 BAU .0619 SGT 1407.6 SGR 445.8 SG3 93.2 ST 635.3 SR 428.7 SS 567.6
RDE -.5165 RRA .0196 RC3 -.0555 FAU .02053 RRT .1448 RRF -.1486 RTF -.8315 CRT .7400 CRS .8396 CST .9859
FDE .5477 FRA .9145 FC3 -.3712 BSP 4360 SGB 1476.3 R23 -.0153 R13 -.8319 LSA 919.2 MSA 253.9 SSA 15.7
BOE .7935 BRA 1.4449 BC3 .0966 FSP -238 SG1 1409.2 SG2 440.6 THA 2.91 EL1 723.4 EL2 253.3 ALF 30.70

LAUNCH DATE DEC 28 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 3 1969

MELIOCENTRIC CONIC

DISTANCE 228.019

RL 147.11 LAL .00 LOL 96.33 VL 24.989 GAL 7.30 AZL 86.87 HCA 93.18 SMA 112.48 ECC .33191 INC 3.1270 V1 30.285
RP 107.82 LAP 3.12 LOP 189.52 VP 35.804 GAP -19.24 AZP 90.17 TAL 164.35 TAP 257.53 RCA 75.15 APO 149.82 V2 35.147
RC 43.055 GL 11.82 GP 3.24 ZAL 59.87 ZAP 7.18 ETS 208.33 ZAE 170.24 ETE 230.88 ZAC 108.97 ETC 165.43 CLP 6.42

PLANETOCENTRIC CONIC

C3 43.562 VHL 6.600 DLA 25.04 RAL 30.61 RAD 6568.7 VEL 12.842 PTH 2.34 VHP 12.098 DPA 6.50 RAP 14.49 ECC 1.7169
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 57 36 3335.53 -23.93 120.08 275.06 74.39 3 53 11 2735.5 -25.84 111.93
90.00 22 55 8 4124.27 -2.40 167.76 266.24 61.78 24 3 52 3524.3 -6.16 161.09
100.00 4 41 53 2999.30 -26.56 96.12 275.84 75.76 5 31 52 2399.3 -28.26 87.72
100.00 23 53 31 3935.73 -.02 152.58 264.91 60.11 24 59 7 3335.7 -4.00 146.05
110.00 6 33 35 2649.81 -32.51 71.11 277.38 78.80 7 17 45 2049.8 -33.71 62.09
110.00 0 22 14 3857.99 5.16 143.47 261.89 56.16 1 26 32 3258.0 .68 137.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6072 TRA-1.4231 TC3 -.0597 BAU .0480 SGT 1464.0 SGR 441.7 SG3 101.9 ST 667.2 SR 426.7 SS 594.9
RDE -.4905 RRA .0944 RC3 -.0568 FAU .02156 RRT .1654 RRF -.1698 RTF -.8424 CRT .7494 CRS .8458 CST .9864
FDE .3758 FRA .9455 FC3 -.4284 BSP 4573 SGB 1529.2 R23 -.0172 R13 -.8428 LSA 958.0 MSA 251.1 SSA 15.8
BOE .7806 BRA 1.4263 BC3 .0824 FSP -264 SG1 1466.0 SG2 435.0 THA 3.13 EL1 751.2 EL2 250.9 ALF 29.17

LAUNCH DATE DEC 28 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 5 1969

MELIOCENTRIC CONIC

DISTANCE 234.740

RL 147.11 LAL .00 LOL 96.33 VL 25.235 GAL 7.09 AZL 86.94 HCA 96.41 SMA 113.68 ECC .31689 INC 3.0614 V1 30.285
RP 107.86 LAP 3.04 LOP 192.75 VP 35.965 GAP -18.25 AZP 90.34 TAL 164.17 TAP 260.58 RCA 77.65 APO 149.70 V2 35.135
RC 42.657 GL 12.26 GP 3.45 ZAL 59.82 ZAP 6.00 ETS 216.73 ZAE 172.11 ETE 245.39 ZAC 110.56 ETC 165.17 CLP 4.91

PLANETOCENTRIC CONIC

C3 39.676 VHL 6.299 DLA 25.49 RAL 30.55 RAD 6568.5 VEL 12.690 PTH 2.31 VHP 11.534 DPA 7.39 RAP 15.98 ECC 1.6930
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 48 52 3341.00 -23.83 120.45 273.27 74.25 3 44 33 2741.0 -25.76 112.31
90.00 23 3 22 4071.66 -4.09 164.81 265.14 61.96 24 11 14 3471.7 -7.81 158.11
100.00 4 34 55 2999.08 -26.57 96.10 274.08 75.76 5 24 54 2399.1 -28.26 87.71
100.00 0 3 56 3888.81 -1.61 150.01 263.77 60.15 1 8 45 3288.8 -5.58 143.46
110.00 6 28 30 2642.68 -32.80 70.58 275.62 79.10 7 12 52 2042.7 -33.76 61.54
110.00 0 26 31 3817.98 3.63 141.37 260.30 55.99 1 30 9 3218.0 -.85 135.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6127 TRA-1.4043 TC3 -.0358 BAU .0358 SGT 1521.6 SGR 437.2 SG3 111.5 ST 700.6 SR 424.3 SS 624.0
RDE -.4857 RRA .0797 RC3 -.0573 FAU .02270 RRT .1889 RRF -.1939 RTF -.8527 CRT .7598 CRS .8525 CST .9869
FDE .6064 FRA .9785 FC3 -.4953 BSP 4783 SGB 1583.1 R23 -.0193 R13 -.8532 LSA 999.4 MSA 247.6 SSA 15.9
BOE .7696 BRA 1.4066 BC3 .0675 FSP -292 SG1 1524.0 SG2 428.6 THA 3.37 EL1 780.8 EL2 247.6 ALF 27.74

LAUNCH DATE DEC 28 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 7 1969

MELIOCENTRIC CONIC

DISTANCE 241.474

RL 147.11 LAL .00 LOL 96.33 VL 25.463 GAL 6.70 AZL 87.00 HCA 99.63 SMA 114.81 ECC .30274 INC 2.9950 V1 30.285
RP 107.89 LAP 2.95 LOP 195.97 VP 36.114 GAP -17.29 AZP 90.50 TAL 164.04 TAP 263.67 RCA 80.06 APO 149.57 V2 35.123
RC 42.436 GL 12.69 GP 3.68 ZAL 59.84 ZAP 5.00 ETS 229.16 ZAE 173.30 ETE 266.77 ZAC 112.12 ETC 164.87 CLP 3.39

PLANETOCENTRIC CONIC

C3 36.177 VHL 6.015 DLA 25.91 RAL 30.42 RAD 6568.4 VEL 12.552 PTH 2.27 VHP 10.990 DPA 8.30 RAP 17.44 ECC 1.5954
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 39 52 3346.49 -23.73 120.82 271.40 74.07 3 35 38 2746.5 -25.68 112.70
90.00 23 11 21 4019.51 -5.76 161.88 263.99 62.23 24 18 21 3419.5 -9.43 155.13
100.00 4 27 32 2998.30 -26.58 96.05 272.25 75.79 5 17 50 2398.3 -28.27 87.65
100.00 0 9 58 3842.93 -3.17 147.49 262.57 60.26 1 14 1 3242.9 -7.10 140.91
110.00 6 24 2 2634.85 -32.70 69.99 273.80 79.44 7 7 57 2034.9 -33.81 60.93
110.00 0 30 17 3779.15 2.15 139.34 259.25 55.88 1 33 17 3179.1 -2.34 133.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6183 TRA-1.3838 TC3 -.0070 BAU .0276 SGT 1579.4 SGR 432.3 SG3 122.2 ST 735.0 SR 421.7 SS 654.7
RDE -.4422 RRA .0854 RC3 -.0567 FAU .02397 RRT .2155 RRF -.2213 RTF -.8624 CRT .7709 CRS .8593 CST .9875
FDE .6397 FRA 1.0134 FC3 -.5736 BSP 4993 SGB 1637.5 R23 -.0218 R13 -.8629 LSA 1042.8 MSA 243.3 SSA 16.0
BOE .7602 BRA 1.3853 BC3 .0571 FSP -325 SG1 1582.4 SG2 421.4 THA 3.63 EL1 811.7 EL2 243.2 ALF 26.42

LAUNCH DATE DEC 28 1968 FLIGHT TIME 102.00 ARRIVAL DATE APR 9 1969

MELIOCENTRIC CONIC  
RL 147.11 LAL .00 LOL 96.33 VL 25.675 GAL 6.32 AZL 87.07 HCA 102.85 SMA 115.90 ECC .28943 INC 2.9274 V1 30.285  
RP 107.93 LAP 2.85 LOP 199.20 VP 36.252 GAP -16.37 AZP 90.65 TAL 163.96 TAP 266.81 RCA 82.35 APO 149.44 V2 35.111  
RC 42.394 GL 13.11 GP 3.94 ZAL 59.92 ZAP 4.35 ETS 246.86 ZAE 173.36 ETE 292.39 ZAC 113.64 ETC 164.53 CLP 1.84  
DISTANCE 248.216

PLANETOCENTRIC CONIC  
C3 33.027 VHL 5.747 DLA 26.29 RAL 30.22 RAD 6568.3 VEL 12.426 PTH 2.25 VWP 10.467 DPA 9.23 RAP 18.88 ECC 1.5435  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 30 45 3351.79 -23.63 121.17 269.49 73.92 3 26 34 2751.8 -25.61 113.06  
90.00 23 18 58 3968.22 -7.37 158.98 262.79 62.58 24 25 6 3368.2 -10.99 152.17  
100.00 4 20 51 2996.72 -26.60 95.94 270.37 75.84 5 10 48 2396.7 -26.29 87.54  
100.00 0 15 27 3798.52 -4.66 145.04 261.31 60.44 1 18 45 3198.5 -8.57 138.42  
110.00 6 19 16 2626.21 -32.81 69.34 271.91 79.81 7 3 2 2026.2 -33.86 60.26  
110.00 0 33 31 3741.80 .73 137.39 257.96 55.82 1 35 53 3141.8 -3.76 131.19

MID-COURSE EXECUTION ACCURACY  
SGT 1638.1 SGR 427.3 SG3 134.0  
RRT .2458 RRF -.2525 RTF -.8714  
SG8 1692.9 R23 -.0246 R13 -.8720  
SG1 1641.6 SG2 413.2 TMA 3.92

ORBIT DETERMINATION ACCURACY  
ST 770.6 SR 419.1 SS 687.4  
CRT .7828 CRS .8670 CST .9882  
LSA 1088.6 MSA 238.3 SSA 16.1  
EL1 844.3 EL2 238.0 ALF 25.20

LAUNCH DATE DEC 28 1968 FLIGHT TIME 104.00 ARRIVAL DATE APR 11 1969

MELIOCENTRIC CONIC  
RL 147.11 LAL .00 LOL 96.33 VL 25.871 GAL 5.97 AZL 87.14 HCA 106.07 SMA 116.93 ECC .27693 INC 2.8580 V1 30.285  
RP 107.97 LAP 2.75 LOP 202.42 VP 36.379 GAP -15.48 AZP 90.79 TAL 163.92 TAP 269.99 RCA 84.55 APO 149.31 V2 35.099  
RC 42.334 GL 13.90 GP 4.24 ZAL 60.07 ZAP 4.25 ETS 268.36 ZAE 172.29 ETE 314.44 ZAC 115.11 ETC 164.14 CLP .27  
DISTANCE 254.965

PLANETOCENTRIC CONIC  
C3 30.192 VHL 5.495 DLA 26.63 RAL 29.97 RAD 6568.2 VEL 12.311 PTH 2.22 VWP 9.962 DPA 10.16 RAP 20.28 ECC 1.4969  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 21 34 3356.47 -23.54 121.49 267.53 73.79 3 17 30 2756.5 -25.54 113.39  
90.00 23 26 5 3918.99 -8.92 156.14 261.52 63.02 24 31 23 3318.4 -12.47 149.26  
100.00 4 14 0 2994.01 -26.65 95.75 268.46 75.93 5 3 54 2394.0 -28.32 87.34  
100.00 0 20 16 3756.09 -6.08 142.89 259.99 60.68 1 22 52 3156.1 -9.95 136.03  
110.00 6 14 37 2616.58 -32.92 68.61 269.98 80.23 6 56 14 2016.6 -33.92 59.51  
110.00 0 36 8 3706.27 -.63 135.54 256.61 55.82 1 37 54 3106.3 -5.11 129.32

MID-COURSE EXECUTION ACCURACY  
SGT 1699.8 SGR 422.5 SG3 147.2  
RRT .2908 RRF -.2858 RTF -.8412  
SG8 1751.8 R23 -.0278 R13 -.8419  
SG1 1704.5 SG2 403.2 TMA 4.38

ORBIT DETERMINATION ACCURACY  
ST 809.1 SR 416.5 SS 721.9  
CRT .7954 CRS .8749 CST .9888  
LSA 1137.9 MSA 232.7 SSA 18.5  
EL1 879.9 EL2 232.1 ALF 24.04

LAUNCH DATE DEC 28 1968 FLIGHT TIME 106.00 ARRIVAL DATE APR 13 1969

MELIOCENTRIC CONIC  
RL 147.11 LAL .00 LOL 96.33 VL 26.053 GAL 5.63 AZL 87.21 HCA 109.29 SMA 117.91 ECC .26523 INC 2.7865 V1 30.285  
RP 108.01 LAP 2.63 LOP 205.64 VP 36.496 GAP -14.62 AZP 90.92 TAL 163.93 TAP 273.22 RCA 86.64 APO 149.18 V2 35.086  
RC 42.853 GL 13.87 GP 4.57 ZAL 60.27 ZAP 4.76 ETS 288.39 ZAE 170.52 ETE 329.67 ZAC 116.54 ETC 163.70 CLP -1.34  
DISTANCE 261.712

PLANETOCENTRIC CONIC  
C3 27.640 VHL 5.257 DLA 26.91 RAL 29.66 RAD 6568.1 VEL 12.207 PTH 2.19 VWP 9.476 DPA 11.12 RAP 21.64 ECC 1.4549  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 12 41 3359.86 -23.47 121.72 265.54 73.69 3 8 41 2759.9 -25.49 113.62  
90.00 23 32 29 3870.86 -10.38 153.41 260.20 63.51 24 37 0 3270.9 -13.86 146.46  
100.00 4 7 31 2989.68 -26.72 95.44 266.51 76.08 4 57 21 2389.7 -28.37 87.03  
100.00 0 24 16 3716.27 -7.40 140.47 258.61 60.96 1 26 12 3116.3 -11.22 133.76  
110.00 6 10 12 2605.78 -33.04 67.79 268.01 80.70 6 53 38 2005.8 -33.97 58.68  
110.00 0 38 4 3672.94 -1.51 133.80 255.22 55.86 1 39 17 3072.9 -6.37 127.56

MID-COURSE EXECUTION ACCURACY  
SGT 1753.8 SGR 417.7 SG3 161.7  
RRT .3186 RRF -.3285 RTF -.8888  
SG8 1802.9 R23 -.0321 R13 -.8888  
SG1 1759.1 SG2 394.7 TMA 4.57

ORBIT DETERMINATION ACCURACY  
ST 843.2 SR 414.0 SS 758.3  
CRT .8080 CRS .8830 CST .9895  
LSA 1185.7 MSA 226.6 SSA 16.3  
EL1 911.9 EL2 225.6 ALF 23.14

LAUNCH DATE DEC 28 1968 FLIGHT TIME 108.00 ARRIVAL DATE APR 15 1969

MELIOCENTRIC CONIC  
RL 147.11 LAL .00 LOL 96.33 VL 26.221 GAL 5.30 AZL 87.29 HCA 112.50 SMA 118.84 ECC .25428 INC 2.7121 V1 30.285  
RP 108.05 LAP 2.51 LOP 208.85 VP 36.603 GAP -13.80 AZP 91.04 TAL 163.99 TAP 276.49 RCA 88.62 APO 149.06 V2 35.073  
RC 43.347 GL 14.21 GP 4.95 ZAL 60.54 ZAP 5.77 ETS 303.27 ZAE 168.42 ETE 339.78 ZAC 117.90 ETC 163.20 CLP -2.98  
DISTANCE 268.459

PLANETOCENTRIC CONIC  
C3 25.344 VHL 5.034 DLA 27.15 RAL 29.30 RAD 6568.0 VEL 12.113 PTH 2.17 VWP 9.008 DPA 12.09 RAP 22.95 ECC 1.4171  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 4 27 3360.88 -23.45 121.78 263.53 73.66 3 0 28 2760.9 -25.47 113.69  
90.00 23 37 49 3826.85 -11.71 150.85 258.80 64.03 24 41 36 3226.8 -15.10 143.83  
100.00 4 1 38 2983.13 -26.83 94.99 264.55 76.29 4 51 21 2383.1 -28.45 86.56  
100.00 0 27 15 3679.83 -8.60 138.43 257.17 61.26 1 28 35 3079.8 -12.37 131.67  
110.00 6 6 8 2593.54 -33.17 66.86 266.01 81.23 6 49 22 1993.5 -34.03 57.72  
110.00 0 39 15 3642.19 -3.08 132.20 253.78 55.94 1 39 57 3042.2 -7.53 125.94

MID-COURSE EXECUTION ACCURACY  
SGT 1808.1 SGR 413.7 SG3 177.9  
RRT .3613 RRF -.3738 RTF -.8960  
SG8 1854.8 R23 -.0373 R13 -.8968  
SG1 1814.6 SG2 384.4 TMA 4.95

ORBIT DETERMINATION ACCURACY  
ST 877.7 SR 411.9 SS 795.9  
CRT .8208 CRS .8914 CST .9901  
LSA 1234.8 MSA 220.2 SSA 16.3  
EL1 944.6 EL2 218.6 ALF 22.33



LAUNCH DATE DEC 28 1968 FLIGHT TIME 110.00 ARRIVAL DATE APR 17 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 26.376 GAL 5.00 AZL 87.37 HCA 115.71 SMA 119.71 ECC .24408 INC 2.6342 V1 30.285  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.702 GAP -13.00 AZP 91.14 TAL 164.09 TAP 279.80 RCA 90.49 APO 148.93 V2 35.060  
 RC 44.011 GL 14.49 GP 5.37 ZAL 60.85 ZAP 7.11 ETS 313.30 ZAE 166.24 ETE 346.81 ZAC 119.20 ETC 162.64 CLP -4.66

Distance 275.203

Planetocentric Conic  
 C3 23.279 VHL 4.825 DLA 27.32 RAL 28.89 RAD 6567.9 VEL 12.027 PTH 2.15 VHP 8.558 OPA 13.09 RAP 24.20 ECC 1.3831  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 57 25 3357.96 -23.31 121.59 261.58 73.75 2 53 23 2758.0 -25.52 113.49  
 90.00 23 41 37 3780.06 -12.85 148.58 257.31 64.55 24 44 45 3188.1 -16.17 141.48  
 100.00 3 56 38 2973.61 -26.98 94.32 262.59 76.61 4 46 12 2373.6 -28.55 85.87  
 100.00 0 29 1 3647.64 -9.65 136.62 255.66 61.57 1 29 48 3047.6 -13.38 129.81  
 110.00 6 2 34 2579.55 -33.31 65.79 263.99 81.85 6 45 33 1979.5 -34.08 56.63  
 110.00 0 39 34 3614.47 -4.14 130.74 252.29 56.04 1 39 49 3014.5 -8.37 124.46

Differential Corrections  
 TDE -.6415 TRA-1.2619 TC3 .2321 BAU .0726 SGT 1864.2 SGR 411.2 SG3 196.0 ORBIT DETERMINATION ACCURACY  
 RDE -.3457 RRA -.0032 RC3 -.0242 FAU .03296 RRT .4108 RRF -.4252 RTF -.9028 CRT .8347 CRS .9001 CST .9908 ST 914.5 SR 410.5 SS 836.1  
 FDE .8559 FRA 1.2330 FC3-1.2258 BSP 6090 SGB 1909.0 R23 -.0428 R13 -.9038 LSA 1287.8 MSA 213.2 S3A 16.4  
 BDE .7287 BRA 1.2619 BC3 .2334 FSP -547 SGI 1872.2 SG2 373.4 THA 5.39 EL1 980.0 EL2 211.0 ALF 21.59

LAUNCH DATE DEC 28 1968 FLIGHT TIME 112.00 ARRIVAL DATE APR 19 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 26.519 GAL 4.71 AZL 87.45 HCA 118.92 SMA 120.53 ECC .23457 INC 2.5521 V1 30.285  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.792 GAP -12.24 AZP 91.23 TAL 164.23 TAP 283.15 RCA 92.26 APO 148.81 V2 35.047  
 RC 44.838 GL 14.73 GP 5.86 ZAL 61.21 ZAP 8.67 ETS 320.00 ZAE 164.09 ETE 352.05 ZAC 120.41 ETC 162.01 CLP -6.40

Distance 291.940

Planetocentric Conic  
 C3 21.421 VHL 4.828 DLA 27.42 RAL 28.45 RAD 6567.9 VEL 11.950 PTH 2.13 VHP 8.126 OPA 14.12 RAP 25.39 ECC 1.3525  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 15 3349.02 -23.68 120.99 259.65 74.00 2 48 4 2749.0 -25.65 112.87  
 90.00 23 43 16 3756.66 -13.76 146.73 255.74 65.01 24 45 52 3156.7 -17.02 139.56  
 100.00 3 52 50 2980.26 -27.19 93.38 260.65 77.07 4 42 11 2360.3 -28.69 84.90  
 100.00 0 29 17 3620.65 -10.52 135.09 254.08 61.86 1 29 38 3020.7 -14.20 128.23  
 110.00 5 59 39 2563.44 -33.46 64.56 261.95 82.57 6 42 22 1963.4 -34.15 55.38  
 110.00 0 38 58 3590.24 -5.06 129.47 250.77 56.15 1 38 48 2990.2 -9.47 123.16

Differential Corrections  
 TDE -.6445 TRA-1.2350 TC3 .2998 BAU .0859 SGT 1918.3 SGR 410.7 SG3 216.2 ORBIT DETERMINATION ACCURACY  
 RDE -.3312 RRA -.0173 RC3 -.0080 FAU .03544 RRT .4651 RRF -.4822 RTF -.9092 CRT .8488 CRS .9090 CST .9915 ST 950.6 SR 410.0 SS 878.1  
 FDE .9108 FRA 1.2890 FC3-1.4322 BSP 6286 SGB 1961.8 R23 -.0494 R13 -.9104 LSA 1341.7 MSA 205.8 S3A 16.4  
 BDE .7246 BRA 1.2351 BC3 .3000 FSP -808 SGI 1928.2 SG2 361.7 THA 5.90 EL1 1015.1 EL2 203.0 ALF 20.99

LAUNCH DATE DEC 28 1968 FLIGHT TIME 114.00 ARRIVAL DATE APR 21 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 26.650 GAL 4.43 AZL 87.54 HCA 122.13 SMA 121.30 ECC .22575 INC 2.4648 V1 30.285  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.875 GAP -11.49 AZP 91.31 TAL 164.41 TAP 286.54 RCA 93.92 APO 148.69 V2 35.033  
 RC 45.818 GL 14.90 GP 6.41 ZAL 61.61 ZAP 10.39 ETS 324.56 ZAE 162.04 ETE 356.21 ZAC 121.53 ETC 161.31 CLP -8.19

Distance 288.668

Planetocentric Conic  
 C3 19.749 VHL 4.444 DLA 27.44 RAL 27.98 RAD 6567.8 VEL 11.880 PTH 2.11 VHP 7.712 OPA 15.19 RAP 26.50 ECC 1.3250  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 41 3331.89 -24.00 119.83 257.77 74.50 2 45 12 2731.9 -25.89 111.68  
 90.00 23 42 5 3734.92 -14.38 145.43 254.06 65.34 24 44 20 3134.9 -17.59 138.22  
 100.00 3 50 34 2942.20 -27.45 92.11 258.72 77.69 4 39 36 2342.2 -28.87 83.59  
 100.00 0 27 49 3599.84 -11.19 133.90 252.44 62.10 1 27 49 2999.8 -14.84 127.01  
 110.00 5 57 33 2544.81 -33.62 63.12 259.92 83.40 6 39 57 1944.8 -34.16 53.92  
 110.00 0 37 20 3569.99 -5.82 128.41 249.21 56.26 1 36 50 2970.0 -10.22 122.07

Differential Corrections  
 TDE -.6457 TRA-1.2073 TC3 .3744 BAU .0989 SGT 1969.7 SGR 413.3 SG3 238.8 ORBIT DETERMINATION ACCURACY  
 RDE -.3184 RRA -.0319 RC3 .0133 FAU .03820 RRT .5244 RRF -.5444 RTF -.9152 CRT .8629 CRS .9180 CST .9922 ST 984.9 SR 410.7 SS 921.5  
 FDE .9698 FRA 1.3527 FC3-1.6747 BSP 6475 SGB 2012.6 R23 -.0573 R13 -.9165 LSA 1395.8 MSA 198.3 S3A 16.4  
 BDE .7199 BRA 1.2077 BC3 .3747 FSP -877 SGI 1982.0 SG2 349.7 THA 6.48 EL1 1049.1 EL2 194.9 ALF 20.53

LAUNCH DATE DEC 28 1968 FLIGHT TIME 116.00 ARRIVAL DATE APR 23 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 26.771 GAL 4.18 AZL 87.63 HCA 125.33 SMA 122.02 ECC .21758 INC 2.3712 V1 30.285  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.949 GAP -10.78 AZP 91.37 TAL 164.62 TAP 289.95 RCA 95.47 APO 148.57 V2 35.020  
 RC 46.944 GL 14.99 GP 7.03 ZAL 62.04 ZAP 12.26 ETS 327.71 ZAE 160.14 ETE 359.75 ZAC 122.54 ETC 160.54 CLP -10.05

Distance 295.386

Planetocentric Conic  
 C3 18.244 VHL 4.271 DLA 27.37 RAL 27.50 RAD 6567.7 VEL 11.818 PTH 2.09 VHP 7.315 OPA 16.30 RAP 27.51 ECC 1.3003  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 14 3305.01 -24.47 118.01 255.98 75.29 2 45 19 2705.0 -26.26 109.79  
 90.00 23 37 41 3724.42 -14.68 144.80 252.28 65.51 24 39 45 3124.4 -17.86 137.57  
 100.00 3 50 6 2918.60 -27.79 90.43 256.84 78.51 4 38 45 2318.6 -29.09 81.87  
 100.00 0 24 26 3586.07 -11.63 133.11 250.75 62.27 1 24 12 2986.1 -15.25 126.19  
 110.00 5 56 27 2523.21 -33.77 61.46 257.88 84.38 6 38 30 1923.2 -34.18 52.24  
 110.00 0 34 34 3554.22 -6.42 127.57 247.62 56.35 1 33 49 2934.2 -10.80 121.22

Differential Corrections  
 TDE -.6451 TRA-1.1794 TC3 .4554 BAU .1115 SGT 2018.3 SGR 420.1 SG3 264.1 ORBIT DETERMINATION ACCURACY  
 RDE -.3075 RRA -.0474 RC3 .0409 FAU .04129 RRT .5874 RRF -.6105 RTF -.9206 CRT .8770 CRS .9269 CST .9929 ST 1017.2 SR 413.1 SS 966.3  
 FDE 1.0329 FRA 1.4230 FC3-1.9592 BSP 6646 SGB 2061.8 R23 -.0669 R13 -.9222 LSA 1450.0 MSA 190.6 S3A 16.4  
 BDE .7147 BRA 1.1803 BC3 .4572 FSP -754 SGI 2033.8 SG2 337.4 THA 7.17 EL1 1081.8 EL2 186.6 ALF 20.23

LAUNCH DATE DEC 28 1968

FLIGHT TIME 118.00

ARRIVAL DATE APR 25 1969

Heliocentric Conic

DISTANCE 302.090

RL 147.11 LAL .00 LOL 96.33 VL 26.882 GAL 3.93 AZL 87.73 HCA 128.53 SMA 122.70 ECC .21004 INC 2.2699 V1 30.285  
 RP 108.25 LAP 1.78 LOP 224.89 VP 37.017 GAP -10.09 AZP 91.41 TAL 164.87 TAP 293.40 RCA 96.93 APO 148.47 V2 35.007  
 RC 48.205 GL 14.98 GP 7.79 ZAL 62.50 ZAP 14.26 ETS 329.90 ZAE 158.40 ETE 2.93 ZAC 123.42 ETC 159.67 CLP -11.98

Planetocentric Conic

C3 16.888 VHL 4.109 DLA 27.19 RAL 27.02 RAD 6567.7 VEL 11.759 PTH 2.08 VHP 6.935 DPA 17.48 RAP 28.42 ECC 1.2779  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 54 4 3268.09 -25.09 115.48 254.25 76.42 2 48 32 2668.1 -26.71 107.18  
 90.00 23 30 0 3725.51 -14.65 144.87 250.43 65.49 24 32 6 3125.5 -17.84 137.64  
 100.00 3 51 43 2888.81 -28.17 88.30 254.99 79.57 4 39 52 2288.8 -29.32 79.69  
 100.00 0 18 58 3580.02 -11.82 132.76 249.00 62.34 1 18 38 2980.0 -15.43 125.83  
 110.00 5 56 34 2498.15 -33.92 59.52 255.86 85.52 6 38 12 1898.1 -34.17 50.28  
 110.00 0 30 37 3543.44 -6.82 127.00 246.01 56.42 1 29 41 2943.4 -11.19 120.63

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6421 TRA-1.1508 TC3 .5428 BAU .1238 SGT 2082.6 SGR 432.9 SCS 292.3 ST 1046.1 SR 417.5 SS 1011.8  
 RDE -.2986 RRA -.0641 RC3 .0765 FAU .04475 RRT .6518 RRF -.6783 RTF -.9257 CRT .8909 CRS .9357 CST .9953  
 FDE 1.0994 FRA 1.5015 FC3-2.2938 BSP 6816 SGB 2107.5 R23 -.0784 R13 -.9276 LSA 1902.9 HSA 182.7 SSA 16.4  
 BOE .7081 BRA 1.1526 BC3 .3482 FSP -841 SGI 2082.3 SGE 325.2 THA 7.99 EL1 1112.1 EL2 178.4 ALF 20.11

LAUNCH DATE DEC 28 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 27 1969

Heliocentric Conic

DISTANCE 308.780

RL 147.11 LAL .00 LOL 96.33 VL 26.984 GAL 3.71 AZL 87.84 HCA 131.73 SMA 123.32 ECC .20308 INC 2.1593 V1 30.285  
 RP 108.29 LAP 1.61 LOP 228.09 VP 37.079 GAP -9.42 AZP 91.44 TAL 165.14 TAP 296.87 RCA 98.28 APO 148.36 V2 34.994  
 RC 49.590 GL 14.85 GP 8.66 ZAL 62.98 ZAP 16.42 ETS 331.41 ZAE 156.85 ETE 5.95 ZAC 124.16 ETC 158.72 CLP -14.00

Planetocentric Conic

C3 15.665 VHL 3.958 DLA 26.89 RAL 26.55 RAD 6567.6 VEL 11.707 PTH 2.06 VHP 6.573 DPA 18.73 RAP 29.20 ECC 1.2578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 58 3221.85 -25.79 112.27 252.58 77.88 2 54 40 2621.9 -27.20 103.89  
 90.00 23 19 23 3737.44 -14.31 145.58 248.53 65.30 24 21 40 3137.4 -17.53 138.38  
 100.00 3 55 34 2852.40 -28.99 89.68 253.18 80.89 4 43 7 2252.4 -29.56 77.01  
 100.00 0 11 24 3582.12 -11.75 132.88 247.23 62.32 1 11 6 2982.1 -15.37 125.96  
 110.00 5 58 4 2469.09 -34.08 57.26 255.86 86.85 6 39 13 1869.1 -34.12 48.01  
 110.00 0 25 23 3538.20 -7.02 126.73 244.40 56.46 1 24 21 2938.2 -11.38 120.35

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.8332 TRA-1.1191 TC3 .6416 BAU .1368 SGT 2097.0 SGR 453.3 SCS 323.6 ST 1066.5 SR 424.1 SS 1055.3  
 RDE -.2917 RRA -.0823 RC3 .1225 FAU .04868 RRT .7142 RRF -.7443 RTF -.9307 CRT .9040 CRS .9442 CST .9941  
 FDE 1.1664 FRA 1.5873 FC3-2.6903 BSP 7025 SGB 2145.5 R23 -.0920 R13 -.9331 LSA 1549.2 HSA 174.9 SSA 16.3  
 BOE .6971 BRA 1.1221 BC3 .6532 FSP -941 SGI 2122.4 SGE 315.5 THA 8.97 EL1 1135.0 EL2 170.4 ALF 20.25

LAUNCH DATE DEC 28 1968

FLIGHT TIME 122.00

ARRIVAL DATE APR 29 1969

Heliocentric Conic

DISTANCE 315.454

RL 147.11 LAL .00 LOL 96.33 VL 27.077 GAL 3.50 AZL 87.96 HCA 134.93 SMA 123.90 ECC .19670 INC 2.0371 V1 30.285  
 RP 108.33 LAP 1.44 LOP 231.28 VP 37.134 GAP -8.78 AZP 91.44 TAL 165.43 TAP 300.36 RCA 99.53 APO 148.27 V2 34.980  
 RC 51.091 GL 14.58 GP 9.67 ZAL 63.46 ZAP 18.73 ETS 332.40 ZAE 155.48 ETE 8.97 ZAC 124.72 ETC 157.66 CLP -16.12

Planetocentric Conic

C3 14.560 VHL 3.816 DLA 26.45 RAL 26.12 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.230 DPA 20.08 RAP 29.82 ECC 1.2396  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 10 38 3167.42 -26.51 108.45 250.96 79.66 3 3 26 2567.4 -27.67 99.97  
 90.00 23 6 16 3759.10 -13.69 146.87 246.62 64.97 24 8 55 3159.1 -16.95 139.71  
 100.00 4 1 47 2809.10 -29.02 82.53 251.40 82.49 4 48 36 2209.1 -29.75 73.80  
 100.00 0 1 44 3592.65 -11.42 135.49 245.46 62.19 1 1 37 2992.7 -15.05 126.58  
 110.00 6 1 12 2435.46 -34.15 54.63 251.88 88.40 6 41 47 1835.5 -33.99 45.39  
 110.00 0 18 49 3539.06 -6.99 126.77 242.80 56.45 1 17 48 2939.1 -11.35 120.40

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6230 TRA-1.0900 TC3 .7381 BAU .1479 SGT 2129.3 SGR 484.5 SCS 358.5 ST 1084.5 SR 434.2 SS 1098.9  
 RDE -.2871 RRA -.1031 RC3 .1806 FAU .05297 RRT .7726 RRF -.8059 RTF -.9348 CRT .9170 CRS .9523 CST .9947  
 FDE 1.2358 FRA 1.6865 FC3-3.1493 BSP 7161 SGB 2183.7 R23 -.1083 R13 -.9378 LSA 1595.0 HSA 166.9 SSA 16.3  
 BOE .6860 BRA 1.0949 BC3 .7598 FSP -1050 SGI 2162.6 SGE 302.8 THA 10.17 EL1 1156.9 EL2 162.4 ALF 20.58

LAUNCH DATE DEC 28 1968

FLIGHT TIME 124.00

ARRIVAL DATE MAY 1 1969

Heliocentric Conic

DISTANCE 322.111

RL 147.11 LAL .00 LOL 96.33 VL 27.161 GAL 3.30 AZL 88.10 HCA 138.12 SMA 124.43 ECC .19086 INC 1.9007 V1 30.285  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.183 GAP -8.15 AZP 91.42 TAL 165.73 TAP 303.86 RCA 100.68 APO 148.18 V2 34.967  
 RC 52.697 GL 14.14 GP 10.87 ZAL 63.94 ZAP 21.22 ETS 332.99 ZAE 154.27 ETE 12.12 ZAC 125.07 ETC 156.49 CLP -18.34

Planetocentric Conic

C3 13.561 VHL 3.683 DLA 25.83 RAL 25.74 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 5.905 DPA 21.56 RAP 30.27 ECC 1.2232  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 22 50 3105.61 -27.19 104.05 249.36 81.77 3 14 36 2505.6 -28.05 95.49  
 90.00 22 51 4 3789.64 -12.81 148.67 244.74 64.53 23 54 14 3189.6 -16.13 141.58  
 100.00 4 10 27 2758.67 -29.41 78.83 249.67 84.40 4 56 26 2158.7 -29.88 70.06  
 100.00 23 46 8 3611.81 -10.81 134.58 243.71 61.96 24 46 20 3011.8 -14.47 127.71  
 110.00 6 6 11 2396.58 -34.18 51.80 249.93 90.19 6 46 7 1796.6 -33.78 42.38  
 110.00 0 10 50 3546.66 -6.70 127.17 241.24 56.40 1 9 57 2946.7 -11.07 120.81

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6085 TRA-1.0807 TC3 .8371 BAU .1586 SGT 2153.6 SGR 528.9 SCS 397.2 ST 1094.8 SR 447.9 SS 1139.3  
 RDE -.2847 RRA -.1272 RC3 .2546 FAU .05771 RRT .8234 RRF -.8596 RTF -.9385 CRT .9291 CRS .9599 CST .9953  
 FDE 1.3031 FRA 1.7985 FC3-3.6839 BSP 7280 SGB 2217.8 R23 -.1272 R13 -.9423 LSA 1634.5 HSA 158.8 SSA 16.3  
 BOE .6716 BRA 1.0683 BC3 .8750 FSP -1170 SGI 2198.0 SGE 294.1 THA 11.65 EL1 1172.7 EL2 154.6 ALF 21.20

LAUNCH DATE DEC 28 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 96.33 VL 27.238 GAL 3.12 AZL 88.25 HCA 141.32 SMA 124.92 ECC .18553 INC 1.7463 V1 30.285  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.228 GAP -7.55 AZP 91.36 TAL 166.05 TAP 307.36 RCA 101.74 APO 148.10 V2 34.954  
 RC 54.988 GL 13.47 GP 12.29 ZAL 64.41 ZAP 25.91 ETS 333.24 ZAE 153.22 ETE 15.55 ZAC 125.17 ETC 155.20 CLP -20.68

DISTANCE 328.749

PLANETOCENTRIC CONIC

C3 12.656 VHL 3.550 DLA 25.01 RAL 25.45 RAD 6567.5 VEL 11.578 PTH 2.02 VHP 5.600 DPA 23.19 RAP 30.50 ECC 1.2083  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 37 30 3036.64 -27.76 99.09 247.79 84.19 3 28 7 2436.6 -28.28 90.46  
 90.00 22 34 3 3828.78 -11.65 150.97 242.93 64.01 23 37 52 3228.6 -15.05 143.94  
 100.00 4 21 42 2700.72 -29.72 74.55 247.97 86.65 5 6 42 2100.7 -29.87 65.75  
 100.00 23 32 32 3639.93 -9.90 136.18 242.02 61.65 24 33 12 3039.9 -13.61 129.36  
 110.00 6 13 16 2351.63 -34.12 48.09 248.02 92.27 6 52 28 1751.6 -33.43 38.91  
 110.00 0 1 23 3561.78 -6.13 127.97 239.73 56.31 1 0 45 2961.8 -10.52 121.63

DIFFERENTIAL CORRECTIONS

TDE -.5885 TRA-1.0308 TC3 .9353 BAU .1689  
 RDE -.2848 RRA -.1556 RC3 .3493 FAU .06289  
 FDE 1.3648 FRA 1.9243 FC3-4.3020 BSP 7301  
 BOE .6538 BRA 1.0425 BC3 .9984 FSP -1303

MID-COURSE EXECUTION ACCURACY

SGT 2167.3 SGR 590.4 SG3 439.7  
 RRT .8648 RRF -.9034 RTF -.9416  
 SGB 2246.3 R23 -.1481 R13 -.9467  
 SGI 2227.7 SGI 288.4 THA 13.49

ORBIT DETERMINATION ACCURACY

ST 1095.9 SR 466.2 SS 1174.5  
 CRT .9406 CRS .9667 CST .9959  
 LSA 1665.8 MSA 150.2 SSA 16.3  
 EL1 1181.8 EL2 146.8 ALF 22.17

LAUNCH DATE DEC 28 1968

FLIGHT TIME 128.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 96.33 VL 27.308 GAL 2.96 AZL 88.43 HCA 144.51 SMA 125.37 ECC .18069 INC 1.5690 V1 30.285  
 RP 108.45 LAP .91 LOP 240.85 VP 37.267 GAP -6.97 AZP 91.28 TAL 166.36 TAP 310.87 RCA 102.72 APO 148.02 V2 34.942  
 RC 56.186 GL 12.54 GP 14.00 ZAL 64.85 ZAP 26.85 ETS 333.21 ZAE 152.26 ETE 19.39 ZAC 124.98 ETC 153.79 CLP -23.15

DISTANCE 335.368

PLANETOCENTRIC CONIC

C3 11.835 VHL 3.440 DLA 23.94 RAL 25.26 RAD 6567.5 VEL 11.542 PTH 2.01 VHP 5.317 DPA 25.04 RAP 30.47 ECC 1.1948  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 54 46 2960.09 -28.17 93.52 246.23 86.95 3 44 6 2360.1 -28.29 84.86  
 90.00 22 15 19 3876.91 -10.20 153.76 241.23 63.44 23 19 56 3276.9 -13.68 146.81  
 100.00 4 35 43 2634.58 -29.88 69.64 246.30 89.21 5 19 38 2034.6 -29.67 60.84  
 100.00 23 17 3 3677.68 -8.68 138.31 240.42 61.28 24 18 20 3077.6 -12.44 131.55  
 110.00 6 22 49 2299.54 -33.90 44.04 246.14 94.66 7 1 8 1699.5 -32.89 34.95  
 110.00 23 46 27 3585.45 -5.24 129.22 238.32 56.17 24 46 12 2985.5 -9.65 122.90

DIFFERENTIAL CORRECTIONS

TDE -.9601 TRA -.9986 TC3 1.0381 BAU .1804  
 RDE -.2867 RRA -.1896 RC3 .4719 FAU .06863  
 FDE 1.4103 FRA 2.0830 FC3-5.0199 BSP 7528  
 BOE .6292 BRA 1.0164 BC3 1.1403 FSP -1454

MID-COURSE EXECUTION ACCURACY

SGT 2165.9 SGR 672.8 SG3 485.5  
 RRT .8961 RRF -.9367 RTF -.9447  
 SGB 2268.0 R23 -.1687 R13 -.9514  
 SGI 2249.7 SGI 287.5 THA 15.82

ORBIT DETERMINATION ACCURACY

ST 1081.0 SR 488.7 SS 1197.9  
 CRT .9506 CRS .9726 CST .9965  
 LSA 1679.9 MSA 141.5 SSA 16.3  
 EL1 1178.1 EL2 139.2 ALF 23.60

LAUNCH DATE DEC 28 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 96.33 VL 27.371 GAL 2.81 AZL 88.64 HCA 147.69 SMA 125.78 ECC .17632 INC 1.3615 V1 30.285  
 RP 108.49 LAP .73 LOP 244.03 VP 37.301 GAP -6.40 AZP 91.15 TAL 166.88 TAP 314.37 RCA 103.60 APO 147.96 V2 34.929  
 RC 58.051 GL 11.25 GP 16.07 ZAL 65.27 ZAP 30.07 ETS 332.93 ZAE 151.31 ETE 23.78 ZAC 124.43 ETC 152.26 CLP -25.77

DISTANCE 341.967

PLANETOCENTRIC CONIC

C3 11.091 VHL 3.330 DLA 22.54 RAL 25.23 RAD 6567.4 VEL 11.510 PTH 2.00 VHP 5.059 DPA 27.16 RAP 30.12 ECC 1.1825  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 14 57 2874.82 -28.32 87.29 244.70 90.07 4 2 52 2274.8 -28.01 78.64  
 90.00 21 54 51 3935.18 -8.40 157.10 239.68 62.86 23 0 26 3335.2 -11.98 150.25  
 100.00 4 52 52 2959.07 -29.82 64.03 244.67 92.16 5 35 31 1959.1 -29.20 55.28  
 100.00 22 59 36 3726.16 -7.08 141.02 238.96 60.88 24 1 42 3126.2 -10.91 134.33  
 110.00 6 35 13 2238.87 -33.47 39.35 244.31 97.40 7 12 32 1638.9 -32.08 30.40  
 110.00 23 33 45 3619.13 -3.96 130.99 237.04 56.02 24 34 4 3019.1 -8.39 124.71

DIFFERENTIAL CORRECTIONS

TDE -.5286 TRA -.9895 TC3 1.1226 BAU .1907  
 RDE -.2909 RRA -.2324 RC3 .6280 FAU .07448  
 FDE 1.4393 FRA 2.2225 FC3-5.8133 BSP 7579  
 BOE .6034 BRA .9969 BC3 1.2863 FSP -1606

MID-COURSE EXECUTION ACCURACY

SGT 2155.7 SGR 782.8 SG3 534.4  
 RRT .9183 RRF -.9605 RTF -.9466  
 SGB 2293.5 R23 -.1887 R13 -.9558  
 SGI 2274.6 SGI 295.7 THA 18.77

ORBIT DETERMINATION ACCURACY

ST 1058.8 SR 517.1 SS 1211.9  
 CRT .9602 CRS .9777 CST .9972  
 LSA 1685.1 MSA 131.7 SSA 16.5  
 EL1 1171.1 EL2 130.7 ALF 25.46

LAUNCH DATE DEC 28 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 96.33 VL 27.428 GAL 2.67 AZL 88.89 HCA 150.88 SMA 126.15 ECC .17238 INC 1.1143 V1 30.285  
 RP 108.53 LAP .54 LOP 247.21 VP 37.332 GAP -5.85 AZP 90.97 TAL 166.99 TAP 317.86 RCA 104.41 APO 147.90 V2 34.917  
 RC 59.985 GL 9.50 GP 18.60 ZAL 65.85 ZAP 33.64 ETS 332.43 ZAE 150.27 ETE 28.86 ZAC 123.44 ETC 150.60 CLP -28.55

DISTANCE 348.548

PLANETOCENTRIC CONIC

C3 10.419 VHL 3.228 DLA 20.72 RAL 25.38 RAD 6567.4 VEL 11.481 PTH 2.00 VHP 4.830 DPA 29.63 RAP 29.36 ECC 1.1715  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 38 2778.74 -28.11 80.27 243.22 93.58 4 24 57 2178.7 -27.31 71.70  
 90.00 21 32 24 4005.78 -6.19 161.11 238.56 62.31 22 39 10 3405.8 -9.85 154.34  
 100.00 5 13 42 2472.20 -29.42 57.60 243.10 95.52 5 54 54 1872.2 -28.35 48.97  
 100.00 22 40 2 3787.55 -5.03 144.43 237.72 60.50 23 43 9 3187.5 -8.92 137.81  
 110.00 6 51 5 2167.54 -32.71 33.92 242.56 100.53 7 27 12 1567.5 -30.91 25.17  
 110.00 23 19 8 3664.97 -2.21 133.39 235.97 55.88 24 20 13 3065.0 -6.67 127.14

DIFFERENTIAL CORRECTIONS

TDE -.4886 TRA -.9388 TC3 1.1967 BAU .2029  
 RDE -.2955 RRA -.2865 RC3 .8306 FAU .08045  
 FDE 1.4313 FRA 2.3955 FC3-6.6844 BSP 7664  
 BOE .5710 BRA .9815 BC3 1.4567 FSP -1767

MID-COURSE EXECUTION ACCURACY

SGT 2128.8 SGR 926.4 SG3 584.4  
 RRT .9328 RRF -.9765 RTF -.9480  
 SGB 2319.8 R23 -.2025 R13 -.9608  
 SGI 2299.1 SGI 308.9 THA 22.54

ORBIT DETERMINATION ACCURACY

ST 1019.0 SR 549.6 SS 1204.7  
 CRT .9687 CRS .9817 CST .9980  
 LSA 1666.3 MSA 120.8 SSA 17.0  
 EL1 1151.4 EL2 120.7 ALF 27.92

LAUNCH DATE DEC 28 1968

FLIGHT TIME 134.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 355.102

RL 147.11 LAL .00 LOL 96.33 VL 27.478 GAL 2.55 AZL 89.19 HCA 154.06 SMA 126.49 ECC .16885 INC .0130 V1 30.285
RP 108.57 LAP .36 LOP 250.39 VP 37.358 GAP -5.32 AZP 90.73 TAL 167.28 TAP 321.34 RCA 105.13 APO 147.84 V2 34.906
RC 61.981 GL 7.14 GP 21.72 ZAL 66.00 ZAP 37.62 ETS 331.74 ZAE 148.94 ETE 34.72 ZAC 121.92 ETC 148.82 CLP -31.51

PLANETOCENTRIC CONIC

C3 9.821 VHL 3.134 DLA 18.33 RAL 25.79 RAD 6567.4 VEL 11.455 PTH 1.99 VHP 4.639 DPA 32.56 RAP 28.08 ECC 1.1616
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 6 46 2668.53 -27.30 72.30 241.83 97.52 4 51 14 2068.5 -26.06 63.88
90.00 21 7 33 4092.33 -3.43 165.97 237.35 61.87 22 15 45 3492.3 -7.17 159.28
100.00 5 39 4 2370.85 -28.53 50.21 241.64 99.32 6 18 35 1770.9 -26.95 41.76
100.00 22 17 56 3865.24 -2.41 148.71 236.79 60.20 23 22 21 3265.2 -6.36 142.15
110.00 7 11 15 2082.49 -31.48 27.60 240.94 104.08 7 45 57 1482.5 -29.22 19.12
110.00 23 2 15 3726.37 .14 136.59 235.19 55.82 24 4 21 3126.4 -4.35 130.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY
SGT 2076.0 SGR 1112.6 SG3 632.0
RRT .9414 RRF -.9866 RTF -.9487
SG8 2355.4 R23 -.2060 R13 -.9666
SG1 2331.5 SG2 334.2 THA 27.38

ORBIT DETERMINATION ACCURACY

ST 958.8 SR 582.7 S3 1166.6
CRT .9766 CRS .9845 CST .9989
LSA 1614.9 MSA 108.4 SSA 17.9
EL1 1116.8 EL2 107.6 ALF 31.01

LAUNCH DATE DEC 28 1968

FLIGHT TIME 136.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 361.637

RL 147.11 LAL .00 LOL 96.33 VL 27.524 GAL 2.44 AZL 89.57 HCA 157.24 SMA 126.79 ECC .16571 INC .4336 V1 30.285
RP 108.60 LAP .17 LOP 253.57 VP 37.381 GAP -4.81 AZP 90.40 TAL 167.55 TAP 324.79 RCA 105.78 APO 147.80 V2 34.894
RC 64.032 GL 3.91 GP 25.61 ZAL 66.33 ZAP 42.11 ETS 330.91 ZAE 147.03 ETE 41.37 ZAC 119.72 ETC 146.96 CLP -34.64

PLANETOCENTRIC CONIC

C3 9.310 VHL 3.051 DLA 15.15 RAL 26.54 RAD 6567.3 VEL 11.432 PTH 1.98 VHP 4.496 DPA 36.10 RAP 26.12 ECC 1.1532
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 40 48 2539.02 -25.89 63.11 240.64 101.89 5 23 7 1939.0 -23.99 54.96
90.00 20 39 29 4200.86 .07 172.03 236.83 61.68 21 49 30 3600.9 -3.72 165.39
100.00 6 10 23 2250.12 -26.90 41.61 240.39 103.56 6 47 53 1650.1 -24.77 33.46
100.00 21 52 36 3964.99 .97 154.19 236.33 60.12 22 58 41 3365.0 -3.01 147.66
110.00 7 37 0 1979.11 -29.52 20.18 239.54 108.07 8 9 59 1379.1 -26.77 12.08
110.00 22 42 28 3808.76 5.28 140.89 234.88 55.96 23 45 57 3208.8 -1.21 134.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY
SGT 2005.4 SGR 1354.0 SG3 672.1
RRT .9453 RRF -.9927 RTF -.9480
SG8 2419.7 R23 -.1977 R13 -.9732
SG1 2391.2 SG2 370.4 THA 33.46

ORBIT DETERMINATION ACCURACY

ST 884.0 SR 612.6 S3 1093.6
CRT .9850 CRS .9862 CST .9996
LSA 1530.8 MSA 94.6 SSA 19.5
EL1 1072.0 EL2 87.2 ALF 34.58

LAUNCH DATE DEC 28 1968

FLIGHT TIME 138.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 368.149

RL 147.11 LAL .00 LOL 96.33 VL 27.564 GAL 2.35 AZL 90.06 HCA 160.41 SMA 127.05 ECC .16294 INC .0618 V1 30.285
RP 108.64 LAP -.02 LOP 256.74 VP 37.400 GAP -4.31 AZP 89.94 TAL 167.79 TAP 328.20 RCA 106.35 APO 147.76 V2 34.883
RC 66.131 GL -.36 GP 30.51 ZAL 66.71 ZAP 47.20 ETS 329.99 ZAE 144.18 ETE 48.62 ZAC 116.68 ETC 145.08 CLP -37.95

PLANETOCENTRIC CONIC

C3 8.927 VHL 2.988 DLA 10.81 RAL 27.75 RAD 6567.3 VEL 11.416 PTH 1.98 VHP 4.424 DPA 40.42 RAP 23.19 ECC 1.1469
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 23 8 2382.00 -23.25 52.37 239.86 106.64 6 2 50 1782.0 -20.75 44.59
90.00 20 6 48 4341.62 4.59 179.90 237.09 62.03 21 19 9 3741.6 .82 173.25
100.00 6 49 53 2102.22 -24.14 31.49 239.55 108.19 7 24 55 1502.2 -21.42 23.75
100.00 21 22 44 4096.63 5.41 161.43 236.64 60.56 22 31 1 3496.6 1.45 154.89
110.00 8 10 23 1850.32 -26.48 11.40 238.59 112.45 8 41 13 1250.3 -23.20 3.78
110.00 22 18 43 3921.30 7.54 146.82 235.33 56.56 23 24 4 3321.3 3.09 140.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY
SGT 1905.7 SGR 1662.9 SG3 694.9
RRT .9458 RRF -.9961 RTF -.9461
SG8 2529.2 R23 -.1748 R13 -.9808
SG1 2495.4 SG2 412.2 THA 40.89

ORBIT DETERMINATION ACCURACY

ST 787.1 SR 625.6 S3 971.1
CRT .9941 CRS .9862 CST .9976
LSA 1395.0 MSA 87.7 SSA 20.2
EL1 1004.1 EL2 53.0 ALF 38.44

LAUNCH DATE DEC 28 1968

FLIGHT TIME 140.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 374.637

RL 147.11 LAL .00 LOL 96.33 VL 27.599 GAL 2.27 AZL 90.74 HCA 163.58 SMA 127.29 ECC .16052 INC .7377 V1 30.285
RP 108.67 LAP -.21 LOP 259.92 VP 37.416 GAP -3.83 AZP 89.29 TAL 168.01 TAP 331.59 RCA 106.86 APO 147.72 V2 34.873
RC 68.274 GL -6.88 GP 36.70 ZAL 67.29 ZAP 53.02 ETS 329.11 ZAE 139.91 ETE 56.07 ZAC 112.61 ETC 143.27 CLP -41.39

PLANETOCENTRIC CONIC

C3 8.777 VHL 2.963 DLA 4.75 RAL 29.80 RAD 6567.3 VEL 11.409 PTH 1.97 VHP 4.462 DPA 45.73 RAP 18.81 ECC 1.1445
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 17 57 2184.31 -18.82 39.57 239.97 111.55 6 54 21 1584.3 -15.73 32.26
90.00 19 26 47 4532.85 10.57 190.77 238.73 63.58 20 42 20 3932.9 6.93 183.98
100.00 7 41 31 1914.74 -19.82 19.40 239.82 113.01 8 13 26 1314.7 -16.34 12.15
100.00 20 45 53 4277.66 11.34 171.61 238.33 62.16 21 57 11 3677.7 7.52 164.89
110.00 8 54 53 1685.12 -21.76 .90 238.56 117.04 9 22 58 1085.1 -17.96 353.83
110.00 21 49 1 4080.04 13.38 155.41 237.13 58.25 22 57 1 3480.0 9.08 148.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY
SGT 1776.7 SGR 2053.4 SG3 686.2
RRT .9427 RRF -.9981 RTF -.9417
SG8 2715.3 R23 -.1414 R13 -.9880
SG1 2677.0 SG2 454.5 THA 49.38

ORBIT DETERMINATION ACCURACY

ST 676.8 SR 611.5 S3 811.9
CRT .9987 CRS .9846 CST .9770
LSA 1215.1 MSA 120.4 SSA 14.3
EL1 911.9 EL2 22.9 ALF 42.09

LAUNCH DATE DEC 28 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 381.100

RL 147.11 LAL .00 LOL 96.33 VL 27.629 GAL 2.20 AZL 91.73 HCA 166.75 SMA 127.50 ECC .15842 INC 1.7267 V1 30.285
RP 108.70 LAP -.40 LOP 263.09 VP 37.429 GAP -3.36 AZP 88.32 TAL 168.18 TAP 334.93 RCA 107.30 APO 147.70 V2 34.862
RC 70.456 GL -15.96 GP 44.55 ZAL 68.42 ZAP 59.85 ETS 328.42 ZAE 133.69 ETE 63.14 ZAC 107.31 ETC 141.71 CLP -44.85

PLANETOCENTRIC CONIC

C3 9.157 VHL 3.026 DLA -3.89 RAL 32.41 RAD 6567.3 VEL 11.426 PTH 1.98 VHP 4.691 DPA 52.21 RAP 12.04 ECC 1.1507
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 33 26 1923.94 -11.62 23.86 242.09 116.00 8 5 30 1323.9 -0.03 17.02
90.00 18 33 38 4809.50 18.35 207.35 243.14 68.05 19 53 48 4209.5 15.21 200.08
100.00 8 52 58 1687.42 -12.40 4.59 241.69 117.42 9 20 45 1067.4 -8.63 357.83
100.00 19 56 48 4541.26 19.15 187.27 242.79 66.60 21 12 29 3941.3 15.83 180.05
110.00 9 57 2 1466.85 -14.48 348.17 240.49 121.31 10 21 28 866.9 -10.23 341.65
110.00 21 9 13 4314.60 21.30 168.97 241.70 62.61 22 21 8 3714.6 17.46 161.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1838 TRA -.7682 TC3 .9743 BAU .3561 SGT 1610.8 SGR 2529.8 SG3 627.5 ST 559.2 SR 600.4 SS 663.2
RDE -.0954 RRA-1.0019 RC3 2.7411 FAU .08184 RRT .9358 RRF -.9991 RTF -.9341 CRT .9329 CRS .9858 CST .8596
FDE .1216 FRA 2.9225 FC3-7.7377 BSP 9769 SGB 2999.0 R23 -.1030 R13 -.9938 LSA 1042.6 MSA 229.8 SSA 6.8
BOE .2071 BRA 1.2825 BC3 2.9091 FSP -1983 SGI 2959.5 SGE 485.4 THA 58.26 EL1 80677 EL2 149.9 ALF 47.18

LAUNCH DATE DEC 28 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 387.562

RL 147.11 LAL .00 LOL 96.33 VL 27.656 GAL 2.15 AZL 93.32 HCA 169.91 SMA 127.66 ECC .15667 INC 3.3211 V1 30.285
RP 108.73 LAP -.58 LOP 266.23 VP 37.440 GAP -2.91 AZP 86.73 TAL 168.27 TAP 338.17 RCA 107.67 APO 147.68 V2 34.853
RC 72.672 GL -28.84 GP 54.38 ZAL 70.78 ZAP 67.02 ETS 328.07 ZAE 125.04 ETE 69.12 ZAC 100.87 ETC 140.56 CLP -47.90

PLANETOCENTRIC CONIC

C3 11.019 VHL 3.320 DLA -16.07 RAL 36.69 RAD 6567.4 VEL 11.507 PTH 2.00 VHP 5.299 DPA 59.81 RAP .81 ECC 1.1613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 30 30 1557.36 -.08 3.10 249.16 118.32 9 56 28 957.4 3.70 356.47
90.00 17 10 46 5249.96 26.74 236.78 255.64 80.33 18 38 16 4650.0 25.13 228.48
100.00 10 42 54 1323.77 -1.06 345.39 248.61 119.88 11 4 58 723.8 2.92 358.86
100.00 18 41 4 4958.78 27.85 215.13 253.41 78.67 20 3 42 4358.8 26.00 208.82
110.00 11 31 18 1172.17 -3.57 332.33 247.05 124.02 11 50 50 572.2 -.92 326.12
110.00 20 9 9 4683.15 30.71 193.41 252.62 74.20 21 27 12 4083.2 28.24 185.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3336 TRA -.9207 TC3 -.0776 BAU .2921 SGT 1751.8 SGR 3155.5 SG3 518.0 ST 760.1 SR 865.9 SS 753.9
RDE -.0535 RRA-1.5961 RC3 1.9810 FAU .04552 RRT .8550 RRF -.9996 RTF -.8578 CRT .7290 CRS .9976 CST .6795
FDE .0393 FRA 3.0510 FC3-3.5762 BSP 4825 SGB 3609.2 R23 -.1111 R13 -.9934 LSA 1291.1 MSA 478.6 SSA 3.2
BOE .3379 BRA 1.8426 BC3 1.9825 FSP -786 SGI 3515.8 SGE 815.4 THA 63.04 EL1 1073.0 EL2 419.9 ALF 50.08

LAUNCH DATE DEC 28 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 393.932

RL 147.11 LAL .00 LOL 96.33 VL 27.678 GAL 2.11 AZL 96.34 HCA 173.05 SMA 127.83 ECC .15516 INC 6.3405 V1 30.285
RP 108.76 LAP -.77 LOP 269.42 VP 37.448 GAP -2.47 AZP 83.71 TAL 168.37 TAP 341.42 RCA 108.00 APO 147.66 V2 34.844
RC 74.919 GL -45.58 GP 66.56 ZAL 75.47 ZAP 74.91 ETS 327.91 ZAE 113.50 ETE 73.24 ZAC 92.68 ETC 139.76 CLP -49.13

PLANETOCENTRIC CONIC

C3 18.290 VHL 4.277 DLA -31.83 RAL 42.96 RAD 6567.7 VEL 11.818 PTH 2.09 VHP 6.802 DPA 67.65 RAP 339.30 ECC 1.3010
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.81 11 46 47 1252.38 22.50 352.15 271.09 113.13 12 7 39 652.4 25.44 344.42
105.19 15 44 31 5778.23 22.51 273.65 271.10 113.12 17 20 50 5178.2 25.45 265.92
74.81 11 46 47 1252.38 22.50 352.15 271.09 113.13 12 7 39 652.4 25.44 344.42
105.19 15 44 31 5778.23 22.51 273.65 271.10 113.12 17 20 50 5178.2 25.45 265.92
110.00 14 39 49 691.26 14.46 306.76 266.73 121.32 14 51 20 91.3 18.50 298.98
110.00 17 50 39 5387.35 31.06 246.97 274.41 105.05 19 20 27 4787.3 32.81 238.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1592 TRA -.7804 TC3 .2551 BAU .4319 SGT 1237.3 SGR 3628.7 SG3 327.7 ST 418.3 SR 1252.3 SS 783.4
RDE .5971 RRA-2.0345 RC3 1.7479 FAU .03699 RRT .8915 RRF -.9998 RTF -.8927 CRT .3357 CRS .9999 CST .3226
FDE -.6462 FRA 2.1404 FC3-1.7509 BSP 11701 SGB 3835.9 R23 -.0406 R13 -.9990 LSA 1484.1 MSA 392.8 SSA 1.4
BOE .6180 BRA 2.1719 BC3 1.7664 FSP -1012 SGI 3796.2 SGE 535.9 THA 72.74 EL1 1261.0 EL2 391.3 ALF 82.92

LAUNCH DATE DEC 28 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 400.249

RL 147.11 LAL .00 LOL 96.33 VL 27.697 GAL 2.10 AZL 104.22 HCA 176.14 SMA 127.96 ECC .15398 INC 14.2160 V1 30.285
RP 108.78 LAP -.95 LOP 272.59 VP 37.454 GAP -2.06 AZP 75.81 TAL 168.34 TAP 344.48 RCA 108.26 APO 147.66 V2 34.835
RC 77.194 GL -62.00 GP 81.25 ZAL 82.03 ZAP 82.45 ETS 319.70 ZAE 97.99 ETE 66.86 ZAC 83.85 ETC 131.58 CLP -30.36

PLANETOCENTRIC CONIC

C3 59.270 VHL 7.699 DLA -47.35 RAL 50.54 RAD 6568.1 VEL 13.440 PTH 2.46 VHP 11.353 DPA 72.04 RAP 294.46 ECC 1.9754
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.32 10 15 30 1894.68 19.30 42.97 301.71 134.12 10 47 4 1294.7 24.76 37.07
129.68 18 16 15 5718.18 19.31 266.49 301.72 134.12 19 51 33 5118.2 24.77 260.59
50.32 10 15 30 1894.68 19.30 42.97 301.71 134.12 10 47 4 1294.7 24.76 37.07
129.68 18 16 15 5718.18 19.31 266.49 301.72 134.12 19 51 33 5118.2 24.77 260.59
50.32 10 15 30 1894.68 19.30 42.97 301.71 134.12 10 47 4 1294.7 24.76 37.07
129.68 18 16 15 5718.18 19.31 266.49 301.72 134.12 19 51 33 5118.2 24.77 260.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0773 TRA -1.3480 TC3 .0750 BAU .3010 SGT 1484.2 SGR 3918.3 SG3 153.3 ST 447.3 SR 1622.5 SS 687.4
RDE 1.5936 RRA-3.3593 RC3 .3724 FAU .00986 RRT .9379 RRF -.9992 RTF -.9497 CRT .5827 CRS .9982 CST .6301
FDE -.6487 FRA 1.5409 FC3 -1.440 BSP 13142 SGB 4180.0 R23 -.0059 R13 -.9999 LSA 1782.2 MSA 359.0 SSA .8
BOE 1.5954 BRA 3.6190 BC3 .3798 FSP -494 SGI 4161.9 SGE 484.8 THA 70.16 EL1 1644.3 EL2 358.7 ALF 80.41

LAUNCH DATE DEC 28 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 405.986

RL 147.11 LAL .00 LOL 96.33 VL 27.713 GAL 2.20 AZL 152.83 MCA 178.73 SMA 128.06 ECC .15351 INC62.8310 V1 30.285
RP 108.81 LAP -1.13 LOP 275.75 VP 37.458 GAP -1.80 AZP 27.17 TAL 167.69 TAP 346.43 RCA 108.41 APO 147.72 V2 34.827
RC 79.493 GL -54.34 GP 60.12 ZAL 87.89 ZAP 88.10 ETS 181.29 ZAE 65.28 ETE 290.48 ZAC 74.44 ETC 359.54 CLP 86.18

PLANETOCENTRIC CONIC

C3 919.409 WHL 30.322 DLA -44.86 RAL 35.91 RAD 6572.9 VEL 32.260 PTH 3.48 WHP 39.457 DPA -53.95 RAP 220.54 ECC16.1312
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.63 9 29 13 2258.34 -.11 57.35 306.00 134.86 10 6 52 1658.3 5.52 52.08
126.37 17 5 49 855.52 -.09 308.76 306.02 134.86 17 20 4 255.5 5.54 303.49
53.63 9 29 13 2258.34 -.11 57.35 306.00 134.86 10 6 52 1658.3 5.52 52.08
126.37 17 5 49 855.52 -.09 308.76 306.02 134.86 17 20 4 255.5 5.54 303.49
53.63 9 29 13 2258.34 -.11 57.35 306.00 134.86 10 6 52 1658.3 5.52 52.08
126.37 17 5 49 855.52 -.09 308.76 306.02 134.86 17 20 4 255.5 5.54 303.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.6084 TRA-2.7183 TC3 -.1091 BAU 3.3657 SGT 1444.2 SGR 3583.6 SCS 67.0 ST 1082.0 SR 1538.7 SS 1199.5
RDE-8.6374 RRA11.1329 RC3 .2511 FAU-.05839 RRT -.8718 RRF .9995 RTF -.8874 CRT -.9151 CRS -.9990 CST .9325
FDE-1.5651 FRA 2.3805 FC3 .0950 BSP 10053 SGB 3845.2 R23 -.0315 R13 .9995 LSA 2199.3 MSA 374.3 SSA .4
BOE 8.6896 BRA11.4800 BC3 .2738 FSP -182 SGI 3787.1 SGE 665.6 THA 110.11 EL1 1845.6 EL2 363.7 ALF 124.28

LAUNCH DATE DEC 28 1968

FLIGHT TIME 152.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 413.477

RL 147.11 LAL .00 LOL 96.33 VL 27.725 GAL 1.99 AZL 83.27 MCA 182.89 SMA 128.15 ECC .15190 INC26.7247 V1 30.285
RP 108.83 LAP -1.30 LOP 278.92 VP 37.480 GAP -1.10 AZP 116.70 TAL 168.78 TAP 351.68 RCA 108.68 APO 147.61 V2 34.820
RC 81.813 GL 65.89 GP -86.28 ZAL 85.74 ZAP 86.78 ETS 137.97 ZAE 88.02 ETE 35.34 ZAC 108.90 ETC 332.20 CLP 30.10

PLANETOCENTRIC CONIC

C3 186.951 WHL 13.673 DLA 62.03 RAL 327.22 RAD 6571.0 VEL 17.558 PTH 2.97 WHP 15.002 DPA -62.32 RAP 102.21 ECC 4.0767
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.19 15 48 54 4889.33 -9.27 237.43 232.26 28.37 17 10 23 4289.3 -16.28 233.90
147.81 1 38 7 3199.83 -9.26 97.75 232.24 28.37 2 31 27 2599.8 -16.27 94.22
32.19 15 48 54 4889.33 -9.27 237.43 232.26 28.37 17 10 23 4289.3 -16.28 233.90
147.81 1 38 7 3199.83 -9.26 97.75 232.24 28.37 2 31 27 2599.8 -16.27 94.22
32.19 15 48 54 4889.33 -9.27 237.43 232.26 28.37 17 10 23 4289.3 -16.28 233.90
147.81 1 38 7 3199.83 -9.26 97.75 232.24 28.37 2 31 27 2599.8 -16.27 94.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.9322 TRA 1.8253 TC3 -.1020 BAU .3227 SGT 2986.2 SGR 3280.8 SCS 113.0 ST 2533.6 SR 3275.0 SS 1591.7
RDE-7.8134 RRA .2791 RC3 -.0792 FAU-.00730 RRT .8758 RRF -.8595 RTF -.9761 CRT .9853 CRS .9959 CST .9987
FDE 2.9116 FRA -.5174 FC3 .0338 BSP 13448 SGB 4443.7 R23 .0800 R13 -.9981 LSA 4422.5 MSA 345.4 SSA .7
BOE 9.8102 BRA 1.8465 BC3 .1291 FSP -380 SGI 4304.9 SGE 1101.9 THA 48.17 EL1 4126.4 EL2 343.2 ALF 52.38

LAUNCH DATE DEC 28 1968

FLIGHT TIME 154.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 419.678

RL 147.11 LAL .00 LOL 96.33 VL 27.734 GAL 2.02 AZL 75.61 MCA 185.93 SMA 128.21 ECC .15149 INC14.3920 V1 30.285
RP 108.85 LAP -1.47 LOP 282.08 VP 37.460 GAP -.73 AZP 104.32 TAL 168.54 TAP 354.48 RCA 108.79 APO 147.63 V2 34.813
RC 84.153 GL 62.48 GP -74.62 ZAL 82.36 ZAP 85.54 ETS 26.70 ZAE 104.59 ETE 284.56 ZAC 112.33 ETC 219.65 CLP -72.95

PLANETOCENTRIC CONIC

C3 60.345 WHL 7.768 DLA 62.32 RAL 336.28 RAD 6569.1 VEL 13.480 PTH 2.46 WHP 7.585 DPA -56.80 RAP 71.27 ECC 1.9931
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.84 16 24 11 4656.99 -23.21 230.59 233.30 30.35 17 41 48 4057.0 -30.04 226.35
148.16 2 15 5 2964.62 -23.20 90.50 233.27 30.35 3 4 29 2364.6 -30.03 86.26
31.84 16 24 11 4656.99 -23.21 230.59 233.30 30.35 17 41 48 4057.0 -30.04 226.35
148.16 2 15 5 2964.62 -23.20 90.50 233.27 30.35 3 4 29 2364.6 -30.03 86.26
31.84 16 24 11 4656.99 -23.21 230.59 233.30 30.35 17 41 48 4057.0 -30.04 226.35
148.16 2 15 5 2964.62 -23.20 90.50 233.27 30.35 3 4 29 2364.6 -30.03 86.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2238 TRA -.2252 TC3 .0021 BAU .3031 SGT 393.9 SGR 4388.3 SCS 272.6 ST 196.9 SR 4245.2 SS 2005.6
RDE 5.7415 RRA -.6243 RC3 -.3757 FAU .02184 RRT -.2002 RRF .9993 RTF -.2286 CRT -.7981 CRS -1.0000 CST .8037
FDE 4.1415 FRA -.3902 FC3 -.3133 BSP 13737 SGB 4405.9 R23 .0275 R13 .9994 LSA 4697.7 MSA 119.5 SSA 1.3
BOE 5.7459 BRA .6637 BC3 .3757 FSP -899 SGI 4389.0 SGE 385.9 THA 91.04 EL1 4248.1 EL2 118.5 ALF 92.12

LAUNCH DATE DEC 28 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 425.958

RL 147.11 LAL .00 LOL 96.33 VL 27.740 GAL 2.05 AZL 79.53 MCA 189.06 SMA 128.25 ECC .15123 INC10.4656 V1 30.285
RP 108.87 LAP -1.64 LOP 285.24 VP 37.459 GAP -.34 AZP 100.34 TAL 168.35 TAP 357.41 RCA 108.86 APO 147.65 V2 34.807
RC 86.508 GL 57.57 GP -63.77 ZAL 79.90 ZAP 86.51 ETS 12.20 ZAE 115.65 ETE 271.36 ZAC 114.85 ETC 204.20 CLP -82.08

PLANETOCENTRIC CONIC

C3 35.595 WHL 5.966 DLA 59.99 RAL 345.58 RAD 6566.4 VEL 12.529 PTH 2.27 WHP 5.353 DPA -50.04 RAP 56.56 ECC 1.5858
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.62 17 8 8 4512.91 -30.11 222.90 236.03 35.32 18 23 21 3912.9 -36.51 217.58
145.38 2 45 20 2844.89 -30.10 86.14 236.01 35.31 3 32 45 2244.9 -36.50 80.82
34.62 17 8 8 4512.91 -30.11 222.90 236.03 35.32 18 23 21 3912.9 -36.51 217.58
145.38 2 45 20 2844.89 -30.10 86.14 236.01 35.31 3 32 45 2244.9 -36.50 80.82
34.62 17 8 8 4512.91 -30.11 222.90 236.03 35.32 18 23 21 3912.9 -36.51 217.58
145.38 2 45 20 2844.89 -30.10 86.14 236.01 35.31 3 32 45 2244.9 -36.50 80.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7503 TRA -.2948 TC3 -.1771 BAU .4041 SGT 940.4 SGR 4123.9 SCS 491.1 ST 740.3 SR 3999.2 SS 2533.0
RDE 4.1838 RRA -.0964 RC3 -.8305 FAU .05227 RRT .8239 RRF .9993 RTF .8104 CRT .9764 CRS -1.0000 CST -.9748
FDE 5.7030 FRA -.0801 FC3 -1.2712 BSP 13169 SGB 4229.7 R23 .0487 R13 .9985 LSA 4788.8 MSA 160.4 SSA 2.0
BOE 4.2309 BRA .3102 BC3 .8491 FSP -1624 SGI 4197.2 SGE 523.6 THA 79.19 EL1 4064.1 EL2 157.3 ALF 79.74

LAUNCH DATE DEC 28 1968

FLIGHT TIME 158.00

ARRIVAL DATE JUN 4 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 27.744 GAL 2.09 AZL 81.45 HCA 192.21 SMA 128.28 ECC .15116 INC 8.5472 V1 30.285  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.457 GAP .04 AZP 98.36 TAL 168.13 TAP .33 RCA 108.89 APO 147.67 V2 34.802  
 RC 88.877 GL 55.42 GP -55.20 ZAL 78.03 ZAP 89.17 ETS 4.73 ZAE 124.06 ETE 263.50 ZAC 115.55 ETC 195.69 CLP -88.55

Distance 432.240

Planetocentric Conic  
 C3 26.334 VHL 5.132 DLA 57.49 RAL 352.11 RAD 6568.1 VEL 12.154 PTH 2.18 VHP 4.355 DPA -44.11 RAP 47.13 ECC 1.4334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.63 17 42 1 4422.42 -33.24 216.20 237.43 39.99 18 55 43 3822.4 -39.20 209.99  
 142.37 3 3 36 2784.26 -33.23 83.23 237.42 39.98 3 50 0 2184.3 -39.19 77.02  
 37.63 17 42 1 4422.42 -33.24 216.20 237.43 39.99 18 55 43 3822.4 -39.20 209.99  
 142.37 3 3 36 2784.26 -33.23 83.23 237.42 39.98 3 50 0 2184.3 -39.19 77.02  
 37.63 17 42 1 4422.42 -33.24 216.20 237.43 39.99 18 55 43 3822.4 -39.20 209.99  
 142.37 3 3 36 2784.26 -33.23 83.23 237.42 39.98 3 50 0 2184.3 -39.19 77.02

Differential Corrections  
 TOE 1.1118 TRA -.2311 TC3 -.4404 BAU .4256 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 3.2068 RRA .1475 RC3-1.1259 FAU .08214 SGT 1405.5 SGR 3774.8 SG3 714.3 ST 1249.7 SR 3581.8 SS 2914.5  
 FDE 6.9353 FRA .4159 FC3-2.7002 B8P 12426 RRT .9084 RRF .9992 RTF .8990 CRT .9901 CRS-1.0000 CST -.9889  
 BOE 3.3941 BRA .2741 BC3 1.2090 F8P -2361 SGB 4028.0 R23 .0688 R13 .9971 LSA 4780.7 MSA 174.4 SSA 2.5 EL1 3789.9 EL2 166.1 ALF 70.91

LAUNCH DATE DEC 28 1968

FLIGHT TIME 160.00

ARRIVAL DATE JUN 6 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 27.745 GAL 2.14 AZL 82.59 HCA 195.36 SMA 128.29 ECC .15128 INC 7.4072 V1 30.285  
 RP 108.90 LAP -1.98 LOP 291.57 VP 37.454 GAP .42 AZP 97.15 TAL 167.86 TAP 3.22 RCA 108.88 APO 147.70 V2 34.797  
 RC 91.256 GL 50.04 GP -48.17 ZAL 76.51 ZAP 92.95 ETS 359.47 ZAE 130.46 ETE 255.98 ZAC 115.03 ETC 189.37 CLP -94.42

Distance 438.511

Planetocentric Conic  
 C3 21.744 VHL 4.863 DLA 55.26 RAL 356.81 RAD 6567.9 VEL 11.963 PTH 2.13 VHP 3.831 DPA -39.12 RAP 40.12 ECC 1.3579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.34 18 8 8 4360.47 -34.62 210.70 238.22 43.82 19 20 49 3760.5 -40.18 203.87  
 139.66 3 14 57 2752.43 -34.61 81.31 238.21 43.82 4 0 50 2152.4 -40.17 74.48  
 40.34 18 8 8 4360.47 -34.62 210.70 238.22 43.82 19 20 49 3760.5 -40.18 203.87  
 139.66 3 14 57 2752.43 -34.61 81.31 238.21 43.82 4 0 50 2152.4 -40.17 74.48  
 40.34 18 8 8 4360.47 -34.62 210.70 238.22 43.82 19 20 49 3760.5 -40.18 203.87  
 139.66 3 14 57 2752.43 -34.61 81.31 238.21 43.82 4 0 50 2152.4 -40.17 74.48

Differential Corrections  
 TOE 1.3483 TRA -.1429 TC3 -.7552 BAU .4314 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 2.5484 RRA .2648 RC3-1.2773 FAU .10811 SGT 1826.3 SGR 3598.5 SG3 905.8 ST 1659.3 SR 3136.1 SS 3141.9  
 FDE 7.7100 FRA .9324 FC3-4.3042 B8P 11838 RRT .9426 RRF .9990 RTF .9350 CRT .9939 CRS-1.0000 CST -.9929  
 BOE 2.8831 BRA .3008 BC3 1.4839 F8P -3019 SGB 3858.1 R23 .0936 R13 .9948 LSA 4735.8 MSA 179.4 SSA 3.0 EL1 3544.4 EL2 161.7 ALF 62.20

LAUNCH DATE DEC 28 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 8 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 27.744 GAL 2.20 AZL 83.35 HCA 198.51 SMA 128.28 ECC .15159 INC 6.6483 V1 30.285  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.449 GAP .80 AZP 96.31 TAL 167.55 TAP 6.06 RCA 108.84 APO 147.73 V2 34.793  
 RC 93.644 GL 47.27 GP -42.29 ZAL 75.20 ZAP 97.37 ETS 355.94 ZAE 135.14 ETE 248.07 ZAC 113.80 ETC 184.47 CLP -99.99

Distance 444.766

Planetocentric Conic  
 C3 19.096 VHL 4.370 DLA 53.37 RAL .42 RAD 6567.8 VEL 11.852 PTH 2.10 VHP 3.537 DPA -34.93 RAP 34.53 ECC 1.3143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.67 18 29 13 4315.08 -35.16 206.24 238.86 46.87 19 41 8 3715.1 -40.39 198.99  
 137.33 3 22 40 2735.79 -35.15 80.08 238.84 46.86 4 8 16 2135.8 -40.38 72.84  
 42.67 18 29 13 4315.08 -35.16 206.24 238.86 46.87 19 41 8 3715.1 -40.39 198.99  
 137.33 3 22 40 2735.79 -35.15 80.08 238.84 46.86 4 8 16 2135.8 -40.38 72.84  
 42.67 18 29 13 4315.08 -35.16 206.24 238.86 46.87 19 41 8 3715.1 -40.39 198.99  
 137.33 3 22 40 2735.79 -35.15 80.08 238.84 46.86 4 8 16 2135.8 -40.38 72.84

Differential Corrections  
 TOE 1.5347 TRA -.0450 TC3-1.0992 BAU .4368 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 2.0679 RRA .3214 RC3-1.3111 FAU .12769 SGT 2232.0 SGR 3027.1 SG3 1051.1 ST 2012.7 SR 2719.8 SS 3253.9  
 FDE 8.0869 FRA 1.4367 FC3-5.7892 B8P 11395 RRT .9601 RRF .9987 RTF .9533 CRT .9957 CRS -.9999 CST -.9946  
 BOE 2.5752 BRA .3245 BC3 1.7109 F8P -3511 SGB 3761.0 R23 .1182 R13 .9919 LSA 4690.8 MSA 181.8 SSA 3.6 EL1 3360.2 EL2 150.0 ALF 53.53

LAUNCH DATE DEC 28 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 10 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 96.33 VL 27.741 GAL 2.27 AZL 83.90 HCA 201.67 SMA 128.26 ECC .15208 INC 6.1041 V1 30.285  
 RP 108.95 LAP -2.25 LOP 297.89 VP 37.444 GAP 1.17 AZP 95.68 TAL 167.18 TAP 8.85 RCA 108.76 APO 147.77 V2 34.789  
 RC 96.038 GL 44.92 GP -37.30 ZAL 74.00 ZAP 102.09 ETS 352.58 ZAE 138.29 ETE 239.86 ZAC 112.20 ETC 180.67 CLP-105.27

Distance 451.003

Planetocentric Conic  
 C3 17.423 VHL 4.174 DLA 51.77 RAL 3.38 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 3.376 DPA -31.39 RAP 29.90 ECC 1.2867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.67 18 47 2 4280.21 -35.27 202.60 239.53 49.28 19 58 22 3680.2 -40.23 195.07  
 135.33 3 28 28 2727.80 -35.25 79.34 239.52 49.28 4 13 56 2127.8 -40.22 71.82  
 44.67 18 47 2 4280.21 -35.27 202.60 239.53 49.28 19 58 22 3680.2 -40.23 195.07  
 135.33 3 28 28 2727.80 -35.25 79.34 239.52 49.28 4 13 56 2127.8 -40.22 71.82  
 44.67 18 47 2 4280.21 -35.27 202.60 239.53 49.28 19 58 22 3680.2 -40.23 195.07  
 135.33 3 28 28 2727.80 -35.25 79.34 239.52 49.28 4 13 56 2127.8 -40.22 71.82

Differential Corrections  
 TOE 1.6899 TRA .0584 TC3-1.4536 BAU .4497 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.6986 RRA .3405 RC3-1.2703 FAU .14114 SGT 2621.0 SGR 2670.5 SG3 1145.7 ST 2320.2 SR 2342.8 SS 3273.4  
 FDE 8.1236 FRA 1.8713 FC3-7.0130 B8P 11270 RRT .9705 RRF .9980 RTF .9641 CRT .9968 CRS -.9999 CST -.9955  
 BOE 2.3960 BRA .3455 BC3 1.9305 F8P -3858 SGB 3741.8 R23 .1377 R13 .9887 LSA 4642.6 MSA 182.1 SSA 4.2 EL1 3294.6 EL2 152.1 ALF 45.28

LAUNCH DATE DEC 28 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 12 1969

MELIOCENTRIC CONIC

DISTANCE 457.223

RL 147.11 LAL .00 LOL 96.33 VL 27.736 GAL 2.35 AZL 84.31 MCA 204.83 SMA 128.23 ECC .15275 INC 5.6926 V1 30.285  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.438 GAP 1.53 AZP 95.17 TAL 166.77 TAP 11.59 RCA 108.64 APO 147.81 V2 34.787  
 RC 98.436 GL 42.90 GP -33.04 ZAL 72.85 ZAP 106.88 ETS 350.35 ZAE 140.14 ETE 231.71 ZAC 110.51 ETC 177.74 CLP-110.27

PLANETOCENTRIC CONIC

C3 16.310 VHL 4.039 DLA 50.40 RAL 5.94 RAD 6567.7 VEL 11.734 PTH 2.07 VHP 3.299 DPA -28.36 RAP 26.04 ECC 1.2684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.39 19 2 39 4252.50 -35.15 199.59 240.33 51.22 20 13 31 3652.5 -39.89 191.88  
 133.61 3 33 17 2725.11 -35.14 78.94 240.32 51.21 4 18 43 2125.1 -39.88 71.23  
 46.39 19 2 39 4252.50 -35.15 199.59 240.33 51.22 20 13 31 3652.5 -39.89 191.88  
 133.61 3 33 17 2725.11 -35.14 78.94 240.32 51.21 4 18 43 2125.1 -39.88 71.23  
 46.39 19 2 39 4252.50 -35.15 199.59 240.33 51.22 20 13 31 3652.5 -39.89 191.88  
 133.61 3 33 17 2725.11 -35.14 78.94 240.32 51.21 4 18 43 2125.1 -39.88 71.23

DIFFERENTIAL CORRECTIONS

TDE 1.8223 TRA .1655 TC3-1.8042 BAU .4700 SGT 2990.5 SGR 2341.8 SG3 1195.3 ORBIT DETERMINATION ACCURACY  
 RDE 1.4110 RRA .3393 RC3-1.1790 FAU .14853 RRT .9768 RRF .9970 RTF .9706 ST 2588.0 SR 2014.7 SS 3231.4  
 FDE 7.9205 FRA 2.2269 FC3-7.8840 BSP 11419 SGB 3798.3 R23 .1485 R13 .9860 CRT .9976 CRS -.9998 CST -.9961  
 BOE 2.3047 BRA .3775 BC3 2.1553 FSP -4058 SG1 3777.5 SG2 396.6 THA 37.91 LSA 4600.6 MSA 181.7 SSA 4.8  
 EL1 3277.9 EL2 111.3 ALF 37.88

LAUNCH DATE DEC 28 1968

FLIGHT TIME 168.00

ARRIVAL DATE JUN 14 1969

MELIOCENTRIC CONIC

DISTANCE 463.423

RL 147.11 LAL .00 LOL 96.33 VL 27.730 GAL 2.45 AZL 84.63 MCA 207.99 SMA 128.18 ECC .15360 INC 5.3689 V1 30.285  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.431 GAP 1.89 AZP 94.74 TAL 166.30 TAP 14.29 RCA 108.49 APO 147.87 V2 34.785  
 RC 100.837 GL 41.10 GP -29.38 ZAL 71.72 ZAP 111.57 ETS 348.70 ZAE 140.92 ETE 224.04 ZAC 108.88 ETC 175.51 CLP-114.96

PLANETOCENTRIC CONIC

C3 15.551 VHL 3.943 DLA 49.22 RAL 8.26 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 3.280 DPA -25.72 RAP 22.83 ECC 1.2559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.90 19 16 48 4230.09 -34.90 197.09 241.28 52.79 20 27 18 3630.1 -39.47 189.25  
 132.10 3 37 40 2725.90 -34.89 78.79 241.27 52.78 4 23 6 2125.9 -39.46 70.95  
 47.90 19 16 48 4230.09 -34.90 197.09 241.28 52.79 20 27 18 3630.1 -39.47 189.25  
 132.10 3 37 40 2725.90 -34.89 78.79 241.27 52.78 4 23 6 2125.9 -39.46 70.95  
 47.90 19 16 48 4230.09 -34.90 197.09 241.28 52.79 20 27 18 3630.1 -39.47 189.25  
 132.10 3 37 40 2725.90 -34.89 78.79 241.27 52.78 4 23 6 2125.9 -39.46 70.95

DIFFERENTIAL CORRECTIONS

TDE 1.9358 TRA .2757 TC3-2.1395 BAU .4964 SGT 3336.8 SGR 2045.9 SG3 1207.6 ORBIT DETERMINATION ACCURACY  
 RDE 1.1841 RRA .3263 RC3-1.0602 FAU .15089 RRT .9777 RRF .9954 RTF .9749 ST 2819.1 SR 1734.3 SS 3147.1  
 FDE 7.5556 FRA 2.5014 FC3-8.4002 BSP 11784 SGB 3914.1 R23 .1489 R13 .9842 CRT .9982 CRS -.9997 CST -.9963  
 BOE 2.2692 BRA .4272 BC3 2.3878 FSP -4126 SG1 3699.1 SG2 342.5 THA 31.29 LSA 4563.6 MSA 180.8 SSA 5.5  
 EL1 3508.7 EL2 89.6 ALF 31.58

LAUNCH DATE DEC 28 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 16 1969

MELIOCENTRIC CONIC

DISTANCE 469.605

RL 147.11 LAL .00 LOL 96.33 VL 27.721 GAL 2.56 AZL 84.89 MCA 211.14 SMA 128.12 ECC .15462 INC 5.1061 V1 30.285  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.424 GAP 2.25 AZP 94.37 TAL 165.79 TAP 16.93 RCA 108.31 APO 147.93 V2 34.784  
 RC 103.240 GL 39.47 GP -26.22 ZAL 70.58 ZAP 116.08 ETS 347.49 ZAE 140.90 ETE 217.16 ZAC 107.43 ETC 175.83 CLP-119.34

PLANETOCENTRIC CONIC

C3 15.032 VHL 3.877 DLA 48.18 RAL 10.44 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 3.303 DPA -23.40 RAP 20.19 ECC 1.2474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.24 19 29 57 4211.58 -34.58 194.96 242.37 54.08 20 40 8 3611.6 -39.00 187.04  
 130.76 3 41 51 2729.18 -34.57 78.82 242.36 54.07 4 27 20 2129.2 -38.98 70.90  
 49.24 19 29 57 4211.58 -34.58 194.96 242.37 54.08 20 40 8 3611.6 -39.00 187.04  
 130.76 3 41 51 2729.18 -34.57 78.82 242.36 54.07 4 27 20 2129.2 -38.98 70.90  
 49.24 19 29 57 4211.58 -34.58 194.96 242.37 54.08 20 40 8 3611.6 -39.00 187.04  
 130.76 3 41 51 2729.18 -34.57 78.82 242.36 54.07 4 27 20 2129.2 -38.98 70.90

DIFFERENTIAL CORRECTIONS

TDE 2.0327 TRA .3884 TC3-2.4517 BAU .5269 SGT 3657.7 SGR 1784.4 SG3 1191.4 ORBIT DETERMINATION ACCURACY  
 RDE 1.0041 RRA .3069 RC3 -.9296 FAU .14928 RRT .9826 RRF .9929 RTF .9777 ST 3015.5 SR 1498.0 SS 3035.3  
 FDE 7.0937 FRA 2.7007 FC3-8.5970 BSP 12320 SGB 4069.8 R23 .1584 R13 .9833 CRT .9987 CRS -.9994 CST -.9965  
 BOE 2.2872 BRA .4951 BC3 2.6220 FSP -4098 SG1 4058.8 SG2 298.6 THA 25.76 LSA 4529.7 MSA 179.8 SSA 6.3  
 EL1 3366.4 EL2 68.5 ALF 26.40

LAUNCH DATE DEC 28 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 18 1969

MELIOCENTRIC CONIC

DISTANCE 475.768

RL 147.11 LAL .00 LOL 96.33 VL 27.711 GAL 2.68 AZL 85.11 MCA 214.30 SMA 128.05 ECC .15582 INC 4.8872 V1 30.285  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.416 GAP 2.60 AZP 94.04 TAL 165.23 TAP 19.53 RCA 108.10 APO 148.01 V2 34.783  
 RC 105.643 GL 37.97 GP -23.49 ZAL 69.42 ZAP 120.34 ETS 346.61 ZAE 140.33 ETE 211.24 ZAC 106.22 ETC 172.57 CLP-123.42

PLANETOCENTRIC CONIC

C3 14.691 VHL 3.833 DLA 47.28 RAL 12.52 RAD 6567.6 VEL 11.865 PTH 2.05 VHP 3.357 DPA -21.33 RAP 18.07 ECC 1.2418  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.44 19 42 25 4196.16 -34.21 193.15 243.62 55.15 20 52 21 3596.2 -38.50 185.17  
 129.56 3 46 1 2734.34 -34.20 79.00 243.61 55.14 4 31 36 2134.3 -38.49 71.03  
 50.44 19 42 25 4196.16 -34.21 193.15 243.62 55.15 20 52 21 3596.2 -38.50 185.17  
 129.56 3 46 1 2734.34 -34.20 79.00 243.61 55.14 4 31 36 2134.3 -38.49 71.03  
 50.44 19 42 25 4196.16 -34.21 193.15 243.62 55.15 20 52 21 3596.2 -38.50 185.17  
 129.56 3 46 1 2734.34 -34.20 79.00 243.61 55.14 4 31 36 2134.3 -38.49 71.03

DIFFERENTIAL CORRECTIONS

TDE 2.1177 TRA .5059 TC3-2.7303 BAU .5585 SGT 3955.1 SGR 1558.7 SG3 1155.9 ORBIT DETERMINATION ACCURACY  
 RDE .8624 RRA .2859 RC3 -.7945 FAU .14429 RRT .9826 RRF .9992 RTF .9796 ST 3183.8 SR 1303.1 SS 2911.5  
 FDE 6.5942 FRA 2.8473 FC3-8.5029 BSP 12900 SGB 4251.2 R23 .1190 R13 .9829 CRT .9992 CRS -.9991 CST -.9965  
 BOE 2.2865 BRA .5811 BC3 2.8435 FSP -3974 SG1 4242.6 SG2 269.9 THA 21.26 LSA 4503.2 MSA 179.1 SSA 7.0  
 EL1 3439.8 EL2 49.0 ALF 22.25



LAUNCH DATE DEC 28 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 481.912

RL 147.11 LAL .00 LOL 96.33 VL 27.700 GAL 2.81 AZL 85.30 MCA 217.46 SMA 127.98 ECC .15719 INC 4.7012 V1 30.285  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.407 GAP 2.95 AZP 93.73 TAL 164.63 TAP 22.09 RCA 107.86 APO 148.09 V2 34.783  
 RC 108.045 GL 36.57 GP -21.13 ZAL 68.23 ZAP 188.33 ETS 345.98 ZAE 139.41 ETE 206.27 ZAC 105.28 ETC 171.64 CLP-127.20

PLANETOCENTRIC CONIC

C3 14.486 VHL 3.806 DLA 46.43 RAL 14.56 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 3.437 DPA -19.47 RAP 16.41 ECC 1.2384  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.53 19 54 27 4183.21 -33.80 191.58 245.01 56.05 21 4 10 3583.2 -37.99 183.57  
 128.47 3 50 14 2741.06 -33.79 79.30 245.00 56.05 4 35 55 2141.1 -37.98 71.30  
 51.53 19 54 27 4183.21 -33.80 191.58 245.01 56.05 21 4 10 3583.2 -37.99 183.57  
 128.47 3 50 14 2741.06 -33.79 79.30 245.00 56.05 4 35 55 2141.1 -37.98 71.30  
 51.53 19 54 27 4183.21 -33.80 191.58 245.01 56.05 21 4 10 3583.2 -37.99 183.57  
 128.47 3 50 14 2741.06 -33.79 79.30 245.00 56.05 4 35 55 2141.1 -37.98 71.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1883 TRA .6243 TC3-2.9807 BAU .5917 SGT 4226.1 SGR 1364.0 SG3 1106.2 ST 3320.3 SR 1141.1 SS 2775.6  
 RDE .7493 RRA .2626 RC3 -.6693 FAU .13786 RRT .9807 RRF .9837 RTF .9810 CRT .9996 CRS -.9984 CST -.9965  
 FDE 6.0748 FRA 2.9307 FC3-8.2390 BSP 13582 SGB 4440.7 R23 .0925 R13 .9829 LSA 4471.9 MSA 177.7 SSA 7.7  
 BOE 2.3131 BRA .6773 BC3 3.0550 FSP -3823 SGI 4433.5 SG2 253.9 THA 17.62 EL1 3510.7 EL2 31.0 ALF 18.96

LAUNCH DATE DEC 28 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 488.037

RL 147.11 LAL .00 LOL 96.33 VL 27.687 GAL 2.98 AZL 85.46 MCA 220.62 SMA 127.89 ECC .15873 INC 4.5401 V1 30.285  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.399 GAP 3.30 AZP 93.45 TAL 163.98 TAP 24.60 RCA 107.59 APO 148.19 V2 34.784  
 RC 110.446 GL 35.23 GP -19.09 ZAL 67.00 ZAP 128.04 ETS 345.53 ZAE 138.29 ETE 202.16 ZAC 104.61 ETC 170.96 CLP-130.70

PLANETOCENTRIC CONIC

C3 14.394 VHL 3.794 DLA 45.66 RAL 16.57 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 3.537 DPA -17.77 RAP 15.17 ECC 1.2369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.55 20 6 10 4172.34 -33.36 190.21 246.53 56.80 21 15 43 3572.3 -37.46 182.19  
 127.45 3 54 34 2749.10 -33.35 79.71 246.53 56.79 4 40 23 2149.1 -37.45 71.69  
 52.55 20 6 10 4172.34 -33.36 190.21 246.53 56.80 21 15 43 3572.3 -37.46 182.19  
 127.45 3 54 34 2749.10 -33.35 79.71 246.53 56.79 4 40 23 2149.1 -37.45 71.69  
 52.55 20 6 10 4172.34 -33.36 190.21 246.53 56.80 21 15 43 3572.3 -37.46 182.19  
 127.45 3 54 34 2749.10 -33.35 79.71 246.53 56.79 4 40 23 2149.1 -37.45 71.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2480 TRA .7480 TC3-3.1976 BAU .6245 SGT 4473.4 SGR 1199.3 SG3 1048.8 ST 3430.0 SR 1008.4 SS 2636.1  
 RDE .6597 RRA .2399 RC3 -.5546 FAU .13034 RRT .9765 RRF .9760 RTF .9821 CRT .9999 CRS -.9975 CST -.9965  
 FDE 5.5653 FRA 2.9750 FC3-7.8395 BSP 14284 SGB 4631.4 R23 .0648 R13 .9831 LSA 4438.4 MSA 176.5 SSA 8.4  
 BOE 2.3428 BRA .7837 BC3 3.2453 FSP -3646 SGI 4624.6 SG2 250.0 THA 14.71 EL1 3575.1 EL2 15.4 ALF 16.38

LAUNCH DATE DEC 28 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 494.142

RL 147.11 LAL .00 LOL 96.33 VL 27.673 GAL 3.12 AZL 85.60 MCA 223.78 SMA 127.79 ECC .16046 INC 4.3985 V1 30.285  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.390 GAP 3.66 AZP 93.18 TAL 163.29 TAP 27.07 RCA 107.29 APO 148.30 V2 34.786  
 RC 112.844 GL 33.95 GP -17.32 ZAL 65.74 ZAP 131.49 ETS 345.21 ZAE 137.08 ETE 198.79 ZAC 104.21 ETC 170.47 CLP-133.94

PLANETOCENTRIC CONIC

C3 14.399 VHL 3.795 DLA 44.95 RAL 18.57 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 3.654 DPA -16.21 RAP 14.29 ECC 1.2370  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.51 20 17 46 4163.07 -32.90 188.99 248.19 57.45 21 27 9 3563.1 -36.93 180.97  
 126.49 3 58 57 2758.50 -32.89 80.22 248.18 57.44 4 44 55 2158.5 -36.91 72.21  
 53.51 20 17 46 4163.07 -32.90 188.99 248.19 57.45 21 27 9 3563.1 -36.93 180.97  
 126.49 3 58 57 2758.50 -32.89 80.22 248.18 57.44 4 44 55 2158.5 -36.91 72.21  
 53.51 20 17 46 4163.07 -32.90 188.99 248.19 57.45 21 27 9 3563.1 -36.93 180.97  
 126.49 3 58 57 2758.50 -32.89 80.22 248.18 57.44 4 44 55 2158.5 -36.91 72.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2990 TRA .8728 TC3-3.3772 BAU .6559 SGT 4699.6 SGR 1061.8 SG3 987.8 ST 3516.8 SR 901.2 SS 2498.7  
 RDE .5895 RRA .2189 RC3 -.4508 FAU .12200 RRT .9692 RRF .9654 RTF .9828 CRT .9999 CRS -.9960 CST -.9964  
 FDE 5.0838 FRA 2.9940 FC3-7.3353 BSP 14953 SGB 4818.1 R23 .0409 R13 .9834 LSA 4403.7 MSA 175.5 SSA 9.2  
 BOE 2.3734 BRA .8998 BC3 3.4071 FSP -3443 SGI 4811.3 SG2 255.5 THA 12.39 EL1 3630.5 EL2 9.6 ALF 14.37

LAUNCH DATE DEC 28 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 500.227

RL 147.11 LAL .00 LOL 96.33 VL 27.658 GAL 3.30 AZL 85.73 MCA 226.94 SMA 127.69 ECC .16236 INC 4.2723 V1 30.285  
 RP 108.93 LAP -3.12 LOP 323.19 VP 37.381 GAP 4.01 AZP 92.92 TAL 162.56 TAP 29.50 RCA 106.96 APO 148.42 V2 34.789  
 RC 115.239 GL 32.71 GP -15.78 ZAL 64.43 ZAP 134.68 ETS 344.99 ZAE 135.86 ETE 196.03 ZAC 104.06 ETC 170.13 CLP-136.95

PLANETOCENTRIC CONIC

C3 14.490 VHL 3.807 DLA 44.28 RAL 20.58 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 3.786 DPA -14.76 RAP 15.75 ECC 1.2385  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.42 20 29 15 4155.30 -32.41 187.92 249.96 58.01 21 38 30 3555.3 -36.37 179.90  
 125.58 4 3 26 2789.09 -32.40 80.83 249.95 58.00 4 49 35 2169.1 -36.36 72.82  
 54.42 20 29 15 4155.30 -32.41 187.92 249.96 58.01 21 38 30 3555.3 -36.37 179.90  
 125.58 4 3 26 2789.09 -32.40 80.83 249.95 58.00 4 49 35 2169.1 -36.36 72.82  
 54.42 20 29 15 4155.30 -32.41 187.92 249.96 58.01 21 38 30 3555.3 -36.37 179.90  
 125.58 4 3 26 2789.09 -32.40 80.83 249.95 58.00 4 49 35 2169.1 -36.36 72.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3417 TRA 1.0038 TC3-3.5217 BAU .6858 SGT 4903.6 SGR 948.0 SG3 925.8 ST 3581.9 SR 814.6 SS 2363.8  
 RDE .5347 RRA .1994 RC3 -.3601 FAU .11352 RRT .9583 RRF .9514 RTF .9834 CRT .9997 CRS -.9940 CST -.9963  
 FDE 4.6340 FRA 2.9899 FC3-6.7826 BSP 15803 SGB 4996.3 R23 .0218 R13 .9837 LSA 4364.7 MSA 174.6 SSA 9.8  
 BOE 2.4019 BRA 1.0235 BC3 3.5401 FSP -3238 SGI 4989.2 SG2 266.3 THA 10.52 EL1 3673.3 EL2 20.5 ALF 12.81

LAUNCH DATE DEC 28 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 506.293

RL 147.11 LAL .00 LOL 96.33 VL 27.641 GAL 3.49 AZL 85.84 MCA 230.10 SMA 127.58 ECC .16446 INC 4.1585 V1 30.285  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.372 GAP 4.36 AZP 92.67 TAL 161.79 TAP 31.89 RCA 106.60 APO 148.56 V2 34.792  
 RC 117.630 GL 31.50 GP -14.44 ZAL 63.09 ZAP 137.64 ETS 344.83 ZAE 134.68 ETE 193.77 ZAC 104.16 ETC 169.89 CLP-139.74

PLANETOCENTRIC CONIC

C3 14.664 WHL 3.829 DLA 43.63 RAL 22.58 RAD 6567.6 VEL 11.664 PTH 2.05 VHP 3.929 DPA -13.39 RAP 13.49 ECC 1.2413  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.30 20 40 43 4148.79 -31.90 186.95 251.84 58.49 21 49 52 3548.8 -35.80 178.96  
 124.70 4 8 0 2780.89 -31.89 81.52 251.83 58.48 4 54 21 2180.9 -35.80 73.52  
 55.30 20 40 43 4148.79 -31.90 186.95 251.84 58.49 21 49 52 3548.8 -35.80 178.96  
 124.70 4 8 0 2780.89 -31.89 81.52 251.83 58.48 4 54 21 2180.9 -35.80 73.52  
 55.30 20 40 43 4148.79 -31.90 186.95 251.84 58.49 21 49 52 3548.8 -35.80 178.96  
 124.70 4 8 0 2780.89 -31.89 81.52 251.83 58.48 4 54 21 2180.9 -35.80 73.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3797 TRA 1.1431 TC3-3.6247 BAU .7127 SGT 5095.8 SGR 855.8 SG3 865.6 ST 3631.4 SR 746.1 SS 2237.2  
 RDE .4928 RRA .1827 RC3 -.2802 FAU .10473 RRT .9433 RRF .9357 RTF .9837 CRT .9989 CRS -.9912 CST -.9961  
 FDE 4.2265 FRA 2.9801 FC3-6.1834 BSP 16167 SGB 5167.2 R23 -.0092 R13 .9838 LSA 4326.5 MSA 174.5 SSA 10.5  
 BDE 2.4302 BRA 1.1576 BC3 3.6555 FSP -3019 SGI 5159.6 SGE 280.7 THA 9.03 EL1 3707.1 EL2 33.9 ALF 11.60

LAUNCH DATE DEC 28 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 512.337

RL 147.11 LAL .00 LOL 96.33 VL 27.624 GAL 3.69 AZL 85.99 MCA 233.27 SMA 127.46 ECC .16674 INC 4.0547 V1 30.285  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.363 GAP 4.72 AZP 92.43 TAL 160.99 TAP 34.25 RCA 106.21 APO 148.72 V2 34.796  
 RC 120.015 GL 30.31 GP -13.27 ZAL 61.71 ZAP 140.39 ETS 344.70 ZAE 133.55 ETE 191.92 ZAC 104.47 ETC 169.73 CLP-142.33

PLANETOCENTRIC CONIC

C3 14.917 WHL 3.882 DLA 43.01 RAL 24.60 RAD 6567.6 VEL 11.675 PTH 2.05 VHP 4.084 DPA -12.09 RAP 13.49 ECC 1.2455  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 96.17 20 52 14 4143.30 -31.36 186.07 253.82 58.91 22 1 17 3543.3 -35.22 178.10  
 123.83 4 12 34 2794.00 -31.35 82.30 253.82 58.90 4 59 8 2194.0 -35.21 74.35  
 96.17 20 52 14 4143.30 -31.36 186.07 253.82 58.91 22 1 17 3543.3 -35.22 178.10  
 123.83 4 12 34 2794.00 -31.35 82.30 253.82 58.90 4 59 8 2194.0 -35.21 74.35  
 96.17 20 52 14 4143.30 -31.36 186.07 253.82 58.91 22 1 17 3543.3 -35.22 178.10  
 123.83 4 12 34 2794.00 -31.35 82.30 253.82 58.90 4 59 8 2194.0 -35.21 74.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4085 TRA 1.2853 TC3-3.7017 BAU .7394 SGT 5267.0 SGR 780.5 SG3 806.9 ST 3658.6 SR 690.7 SS 2111.8  
 RDE .4605 RRA .1872 RC3 -.2146 FAU .09668 RRT .9242 RRF .9121 RTF .9840 CRT .9976 CRS -.9876 CST -.9960  
 FDE 3.8472 FRA 2.9915 FC3-5.6113 BSP 16754 SGB 5324.5 R23 -.0004 R13 .9840 LSA 4276.9 MSA 174.5 SSA 11.1  
 BDE 2.4521 BRA 1.2961 BC3 3.7079 FSP -2824 SGI 5316.3 SGE 295.4 THA 7.82 EL1 3722.9 EL2 47.2 ALF 10.67

LAUNCH DATE DEC 28 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 518.361

RL 147.11 LAL .00 LOL 96.33 VL 27.606 GAL 3.91 AZL 86.04 MCA 236.43 SMA 127.34 ECC .16924 INC 3.9592 V1 30.285  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.354 GAP 5.07 AZP 92.19 TAL 160.15 TAP 36.58 RCA 105.79 APO 148.89 V2 34.800  
 RC 122.394 GL 29.14 GP -12.24 ZAL 60.30 ZAP 142.95 ETS 344.59 ZAE 132.49 ETE 190.38 ZAC 104.97 ETC 169.62 CLP-144.75

PLANETOCENTRIC CONIC

C3 15.249 WHL 3.905 DLA 42.40 RAL 26.62 RAD 6567.6 VEL 11.689 PTH 2.06 VHP 4.249 DPA -10.86 RAP 13.72 ECC 1.2510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.02 21 3 49 4138.69 -30.79 185.27 255.90 59.27 22 12 47 3538.7 -34.61 177.33  
 122.98 4 17 6 2808.48 -30.77 83.18 255.89 59.26 5 3 54 2208.5 -34.60 75.25  
 57.02 21 3 49 4138.69 -30.79 185.27 255.90 59.27 22 12 47 3538.7 -34.61 177.33  
 122.98 4 17 6 2808.48 -30.77 83.18 255.89 59.26 5 3 54 2208.5 -34.60 75.25  
 57.02 21 3 49 4138.69 -30.79 185.27 255.90 59.27 22 12 47 3538.7 -34.61 177.33  
 122.98 4 17 6 2808.48 -30.77 83.18 255.89 59.26 5 3 54 2208.5 -34.60 75.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4315 TRA 1.4347 TC3-3.7464 BAU .7644 SGT 5423.5 SGR 720.4 SG3 751.2 ST 3669.7 SR 646.9 SS 1992.3  
 RDE .4364 RRA .1538 RC3 -.1598 FAU .08899 RRT .9011 RRF .8869 RTF .9841 CRT .9955 CRS -.9830 CST -.9959  
 FDE 3.5028 FRA 2.9182 FC3-5.0525 BSP 17309 SGB 5471.2 R23 -.0066 R13 .9841 LSA 4221.8 MSA 175.1 SSA 11.7  
 BDE 2.4704 BRA 1.4429 BC3 3.7498 FSP -2640 SGI 5462.4 SGE 310.2 THA 6.85 EL1 3725.8 EL2 60.3 ALF 9.96

LAUNCH DATE DEC 28 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 524.362

RL 147.11 LAL .00 LOL 96.33 VL 27.587 GAL 4.15 AZL 86.13 MCA 239.59 SMA 127.21 ECC .17194 INC 3.8703 V1 30.285  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.345 GAP 5.44 AZP 91.96 TAL 159.28 TAP 38.87 RCA 105.34 APO 149.08 V2 34.805  
 RC 124.766 GL 27.99 GP -11.34 ZAL 58.85 ZAP 145.33 ETS 344.49 ZAE 131.51 ETE 189.11 ZAC 105.65 ETC 169.56 CLP-147.01

PLANETOCENTRIC CONIC

C3 15.663 WHL 3.958 DLA 41.79 RAL 28.64 RAD 6567.6 VEL 11.707 PTH 2.06 VHP 4.423 DPA -9.66 RAP 14.15 ECC 1.2578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.87 21 15 29 4134.90 -30.18 184.52 258.07 59.60 22 24 23 3534.9 -33.97 176.62  
 122.13 4 21 34 2824.34 -30.17 84.16 258.06 59.58 5 8 39 2224.3 -33.96 76.26  
 57.87 21 15 29 4134.90 -30.18 184.52 258.07 59.60 22 24 23 3534.9 -33.97 176.62  
 122.13 4 21 34 2824.34 -30.17 84.16 258.06 59.58 5 8 39 2224.3 -33.96 76.26  
 57.87 21 15 29 4134.90 -30.18 184.52 258.07 59.60 22 24 23 3534.9 -33.97 176.62  
 122.13 4 21 34 2824.34 -30.17 84.16 258.06 59.58 5 8 39 2224.3 -33.96 76.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4500 TRA 1.5918 TC3-3.7505 BAU .7874 SGT 5566.4 SGR 673.2 SG3 698.9 ST 3667.2 SR 612.7 SS 1879.6  
 RDE .4193 RRA .1425 RC3 -.1144 FAU .08164 RRT .8746 RRF .8589 RTF .9842 CRT .9926 CRS -.9773 CST -.9957  
 FDE 3.1924 FRA 2.8822 FC3-4.5125 BSP 17818 SGB 5607.0 R23 -.0101 R13 .9841 LSA 4162.4 MSA 176.3 SSA 12.2  
 BDE 2.4856 BRA 1.5981 BC3 3.7602 FSP -2463 SGI 5597.6 SGE 324.6 THA 6.06 EL1 3717.3 EL2 73.2 ALF 9.42

LAUNCH DATE DEC 28 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 6 1969

MELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.567 GAL 4.40 AZL 86.21 MCA 242.76 SMA 127.08 ECC .17486 INC 3.7870 V1 30.285  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.336 GAP 5.80 AZP 91.74 TAL 158.39 TAP 41.14 RCA 104.86 APO 149.30 V2 34.811  
 RC 127.128 GL 26.84 GP -10.54 ZAL 57.39 ZAP 147.55 ETS 344.37 ZAE 130.61 ETE 188.05 ZAC 106.49 ETC 169.53 CLP-149.13

DISTANCE 530.341

PLANETOCENTRIC CONIC  
 C3 16.182 VHL 4.020 DLA 41.19 RAL 30.66 RAD 6567.6 VEL 11.728 PTH 2.07 VHP 4.607 DPA -8.51 RAP 14.76 ECC 1.2660  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.73 21 27 14 4131.83 -29.55 183.83 260.31 59.88 22 36 6 3531.8 -33.31 175.96  
 121.27 4 25 57 2841.64 -29.54 85.23 260.30 59.87 5 13 19 2241.6 -33.30 77.37  
 58.73 21 27 14 4131.83 -29.55 183.83 260.31 59.88 22 36 6 3531.8 -33.31 175.96  
 121.27 4 25 57 2841.64 -29.54 85.23 260.30 59.87 5 13 19 2241.6 -33.30 77.37  
 58.73 21 27 14 4131.83 -29.55 183.83 260.31 59.88 22 36 6 3531.8 -33.31 175.96  
 121.27 4 25 57 2841.64 -29.54 85.23 260.30 59.87 5 13 19 2241.6 -33.30 77.37

MID-COURSE EXECUTION ACCURACY  
 SGT 5700.1 SGR 637.2 SG3 650.7  
 RRT .8461 RRF .8295 RTF .9841  
 SGB 5735.6 R23 -.0114 R13 .9841  
 SGI 5725.6 SG2 338.2 THA 5.42

ORBIT DETERMINATION ACCURACY  
 ST 3656.0 SR 586.5 SS 1775.9  
 CRT .9889 CR5 -.9707 CST -.9955  
 LSA 4102.7 MSA 178.4 SSA 12.7  
 EL1 3701.8 EL2 86.0 ALF 9.02

LAUNCH DATE DEC 28 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 8 1969

MELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.547 GAL 4.67 AZL 86.29 MCA 245.92 SMA 126.94 ECC .17803 INC 3.7083 V1 30.285  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.327 GAP 6.18 AZP 91.51 TAL 157.46 TAP 43.39 RCA 104.34 APO 149.54 V2 34.818  
 RC 129.481 GL 25.71 GP -9.84 ZAL 55.90 ZAP 149.64 ETS 344.24 ZAE 129.78 ETE 187.16 ZAC 107.47 ETC 169.51 CLP-151.13

DISTANCE 536.295

PLANETOCENTRIC CONIC  
 C3 16.751 VHL 4.093 DLA 40.59 RAL 32.68 RAD 6567.7 VEL 11.753 PTH 2.07 VHP 4.799 DPA -7.39 RAP 15.52 ECC 1.2757  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.60 21 30 8 4129.32 -28.88 183.17 262.62 60.14 22 47 57 3529.3 -32.62 175.35  
 120.40 4 30 9 2860.54 -28.87 86.42 262.62 60.13 5 17 49 2260.5 -32.61 78.60  
 59.60 21 30 8 4129.32 -28.88 183.17 262.62 60.14 22 47 57 3529.3 -32.62 175.35  
 120.40 4 30 9 2860.54 -28.87 86.42 262.62 60.13 5 17 49 2260.5 -32.61 78.60  
 59.60 21 30 8 4129.32 -28.88 183.17 262.62 60.14 22 47 57 3529.3 -32.62 175.35  
 120.40 4 30 9 2860.54 -28.87 86.42 262.62 60.13 5 17 49 2260.5 -32.61 78.60

MID-COURSE EXECUTION ACCURACY  
 SGT 5818.7 SGR 608.9 SG3 605.3  
 RRT .8165 RRF .7993 RTF .9841  
 SGB 5850.5 R23 -.0122 R13 .9840  
 SGI 5840.0 SG2 350.3 THA 4.90

ORBIT DETERMINATION ACCURACY  
 ST 3627.5 SR 565.8 SS 1674.4  
 CRT .9843 CR5 -.9631 CST -.9954  
 LSA 4031.0 MSA 181.1 SSA 13.0  
 EL1 3670.0 EL2 98.7 ALF 8.73

LAUNCH DATE DEC 28 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 10 1969

MELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.526 GAL 4.96 AZL 86.37 MCA 249.09 SMA 128.80 ECC .18144 INC 3.6333 V1 30.285  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.318 GAP 6.56 AZP 91.30 TAL 156.52 TAP 45.61 RCA 103.80 APO 149.81 V2 34.825  
 RC 131.823 GL 24.59 GP -9.21 ZAL 54.39 ZAP 151.60 ETS 344.07 ZAE 129.03 ETE 186.42 ZAC 108.58 ETC 169.51 CLP-153.01

DISTANCE 542.223

PLANETOCENTRIC CONIC  
 C3 17.439 VHL 4.176 DLA 39.99 RAL 34.69 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.001 DPA -6.30 RAP 16.41 ECC 1.2870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.49 21 51 10 4127.27 -28.18 182.54 265.00 60.37 22 59 57 3527.3 -31.90 174.77  
 119.51 4 34 7 2881.14 -28.17 87.71 264.99 60.35 5 22 8 2281.1 -31.88 79.94  
 60.49 21 51 10 4127.27 -28.18 182.54 265.00 60.37 22 59 57 3527.3 -31.90 174.77  
 119.51 4 34 7 2881.14 -28.17 87.71 264.99 60.35 5 22 8 2281.1 -31.88 79.94  
 60.49 21 51 10 4127.27 -28.18 182.54 265.00 60.37 22 59 57 3527.3 -31.90 174.77  
 119.51 4 34 7 2881.14 -28.17 87.71 264.99 60.35 5 22 8 2281.1 -31.88 79.94

MID-COURSE EXECUTION ACCURACY  
 SGT 5927.3 SGR 587.5 SG3 563.3  
 RRT .7872 RRF .7701 RTF .9839  
 SGB 5956.4 R23 -.0119 R13 .9839  
 SGI 5945.4 SG2 361.2 THA 4.48

ORBIT DETERMINATION ACCURACY  
 ST 3589.7 SR 549.9 SS 1579.6  
 CRT .9788 CR5 -.9545 CST -.9952  
 LSA 3955.9 MSA 184.7 SSA 13.3  
 EL1 3629.9 EL2 111.3 ALF 8.54

LAUNCH DATE DEC 28 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 12 1969

MELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.504 GAL 5.27 AZL 86.44 MCA 252.26 SMA 126.66 ECC .18512 INC 3.5615 V1 30.285  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.309 GAP 6.95 AZP 91.09 TAL 155.55 TAP 47.80 RCA 103.21 APO 150.11 V2 34.833  
 RC 134.153 GL 23.48 GP -8.66 ZAL 52.88 ZAP 153.45 ETS 343.86 ZAE 128.34 ETE 185.79 ZAC 109.80 ETC 169.51 CLP-154.80

DISTANCE 548.125

PLANETOCENTRIC CONIC  
 C3 18.232 VHL 4.270 DLA 39.38 RAL 36.68 RAD 6567.7 VEL 11.816 PTH 2.09 VHP 5.212 DPA -5.22 RAP 17.43 ECC 1.3001  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.40 22 3 19 4125.68 -27.45 181.94 267.44 60.57 23 12 4 3525.7 -31.14 174.21  
 118.60 4 37 50 2903.45 -27.44 89.12 267.43 60.56 5 26 14 2303.5 -31.13 81.40  
 61.40 22 3 19 4125.68 -27.45 181.94 267.44 60.57 23 12 4 3525.7 -31.14 174.21  
 118.60 4 37 50 2903.45 -27.44 89.12 267.43 60.56 5 26 14 2303.5 -31.13 81.40  
 61.40 22 3 19 4125.68 -27.45 181.94 267.44 60.57 23 12 4 3525.7 -31.14 174.21  
 118.60 4 37 50 2903.45 -27.44 89.12 267.43 60.56 5 26 14 2303.5 -31.13 81.40

MID-COURSE EXECUTION ACCURACY  
 SGT 6026.2 SGR 571.4 SG3 524.5  
 RRT .7594 RRF .7427 RTF .9837  
 SGB 6053.2 R23 -.0111 R13 .9837  
 SGI 6041.8 SG2 370.8 THA 4.13

ORBIT DETERMINATION ACCURACY  
 ST 3543.3 SR 537.7 SS 1490.7  
 CRT .9725 CR5 -.9450 CST -.9951  
 LSA 3876.9 MSA 188.9 SSA 13.5  
 EL1 3581.7 EL2 123.8 ALF 8.41

LAUNCH DATE DEC 28 1968

FLIGHT TIME 198.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 553.997

RL 147.11 LAL .00 LOL 96.33 VL 27.482 GAL 5.59 AZL 86.51 HCA 255.43 SMA 126.51 ECC .18909 INC 3.4921 V1 30.285
RP 108.77 LAP -3.38 LOP 351.73 VP 37.301 GAP 7.36 AZP 90.88 TAL 154.56 TAP 49.99 RCA 102.59 APO 150.44 V2 34.841
RC 136.471 GL 22.38 GP -0.16 ZAL 51.36 ZAP 155.19 ETS 343.59 ZAE 127.72 ETE 185.26 ZAC 111.13 ETC 169.50 CLP-156.49

PLANETOCENTRIC CONIC

C3 19.143 VHL 4.375 DLA 38.77 RAL 38.64 RAD 6567.8 VEL 11.854 PTH 2.10 VHP 5.433 DPA -4.17 RAP 18.56 ECC 1.3150
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.33 22 15 36 4124.42 -26.60 181.35 269.92 60.76 23 24 21 3524.4 -30.36 173.68
117.67 4 41 14 2927.61 -26.67 90.65 269.92 60.75 5 30 2 2327.6 -30.35 82.98
62.33 22 15 36 4124.42 -26.60 181.35 269.92 60.76 23 24 21 3524.4 +30.36 173.68
117.67 4 41 14 2927.61 -26.67 90.65 269.92 60.75 5 30 2 2327.6 -30.35 82.98
62.33 22 15 36 4124.42 -26.60 181.35 269.92 60.76 23 24 21 3524.4 -30.36 173.68
117.67 4 41 14 2927.61 -26.67 90.65 269.92 60.75 5 30 2 2327.6 -30.35 82.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4814 TRA 2.5150 TC3-3.4267 BAU .8770 SGT 6116.0 SGR 559.3 SG3 488.7 ST 3489.2 SR 528.3 SS 1407.6
RDE .4010 RRA .1146 RC3 .0032 FAU .05163 RRT .7541 RRF .7100 RTF .9835 CRT .9654 CRS -.9346 CST -.9949
FDE 2.0387 FRA 2.7082 FC3-2.3349 BSP 19015 SGB 6141.5 R23 -.0099 R13 .9835 LSA 3794.3 MSA 194.0 SSA 13.6
BOE 2.5136 BRA 2.5185 BC3 3.4267 FSP -1738 SGI 6129.8 SGE 378.9 THA 3.86 EL1 3526.3 EL2 136.3 ALF 6.33

LAUNCH DATE DEC 28 1968

FLIGHT TIME 200.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 559.837

RL 147.11 LAL .00 LOL 96.33 VL 27.480 GAL 5.95 AZL 86.58 HCA 258.60 SMA 126.36 ECC .19337 INC 3.4246 V1 30.285
RP 108.74 LAP -3.36 LOP 354.91 VP 37.293 GAP 7.77 AZP 90.88 TAL 153.55 TAP 52.15 RCA 101.93 APO 150.80 V2 34.850
RC 136.775 GL 21.29 GP -7.71 ZAL 49.84 ZAP 156.86 ETS 343.27 ZAE 127.14 ETE 184.80 ZAC 112.54 ETC 169.49 CLP-158.11

PLANETOCENTRIC CONIC

C3 20.184 VHL 4.493 DLA 38.15 RAL 40.58 RAD 6567.8 VEL 11.898 PTH 2.11 VHP 5.664 DPA -3.13 RAP 19.79 ECC 1.3322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.29 22 28 3 4123.43 -25.88 180.77 272.46 60.94 23 36 46 3523.4 -29.54 173.15
116.71 4 44 17 2953.73 -25.87 92.32 272.45 60.92 5 33 30 2353.7 -29.53 84.70
63.29 22 28 3 4123.43 -25.88 180.77 272.46 60.94 23 36 46 3523.4 -29.54 173.15
116.71 4 44 17 2953.73 -25.87 92.32 272.45 60.92 5 33 30 2353.7 -29.53 84.70
63.29 22 28 3 4123.43 -25.88 180.77 272.46 60.94 23 36 46 3523.4 -29.54 173.15
116.71 4 44 17 2953.73 -25.87 92.32 272.45 60.92 5 33 30 2353.7 -29.53 84.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4805 TRA 2.7356 TC3-3.2931 BAU .8886 SGT 6200.3 SGR 550.7 SG3 456.0 ST 3433.2 SR 521.3 SS 1332.4
RDE .4064 RRA .1145 RC3 .0122 FAU .04870 RRT .7120 RRF .6972 RTF .9832 CRT .9576 CRS -.9237 CST -.9948
FDE 1.8734 FRA 2.6815 FC3-2.0031 BSP 20067 SGB 6224.7 R23 -.0080 R13 .9832 LSA 3714.0 MSA 199.7 SSA 13.7
BOE 2.5136 BRA 2.7300 BC3 3.2931 FSP -1618 SGI 6212.7 SGE 385.9 THA 3.63 EL1 3489.4 EL2 148.6 ALF 8.29

LAUNCH DATE DEC 28 1968

FLIGHT TIME 202.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 565.643

RL 147.11 LAL .00 LOL 96.33 VL 27.437 GAL 6.32 AZL 86.64 HCA 261.77 SMA 126.21 ECC .19799 INC 3.3586 V1 30.285
RP 108.71 LAP -3.32 LOP 358.09 VP 37.285 GAP 8.20 AZP 90.48 TAL 152.54 TAP 54.31 RCA 101.22 APO 151.20 V2 34.860
RC 141.067 GL 20.22 GP -7.32 ZAL 48.33 ZAP 158.44 ETS 342.87 ZAE 126.62 ETE 184.42 ZAC 114.03 ETC 169.47 CLP-159.66

PLANETOCENTRIC CONIC

C3 21.370 VHL 4.623 DLA 37.52 RAL 42.49 RAD 6567.9 VEL 11.948 PTH 2.13 VHP 5.907 DPA -2.11 RAP 21.10 ECC 1.3517
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.29 22 40 39 4122.58 -25.04 180.19 275.03 61.10 23 49 21 3522.6 -28.69 172.62
115.71 4 46 53 2981.94 -25.03 94.12 275.02 61.09 5 36 35 2381.9 -28.68 86.55
64.29 22 40 39 4122.58 -25.04 180.19 275.03 61.10 23 49 21 3522.6 -28.69 172.62
115.71 4 46 53 2981.94 -25.03 94.12 275.02 61.09 5 36 35 2381.9 -28.68 86.55
64.29 22 40 39 4122.58 -25.04 180.19 275.03 61.10 23 49 21 3522.6 -28.69 172.62
115.71 4 46 53 2981.94 -25.03 94.12 275.02 61.09 5 36 35 2381.9 -28.68 86.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4756 TRA 2.9647 TC3-3.1514 BAU .9003 SGT 6273.2 SGR 543.7 SG3 425.5 ST 3367.4 SR 515.3 SS 1260.2
RDE .4134 RRA .1160 RC3 .0174 FAU .04231 RRT .6930 RRF .6792 RTF .9829 CRT .9489 CRS -.9119 CST -.9947
FDE 1.7206 FRA 2.6536 FC3-1.7143 BSP 20374 SGB 6296.7 R23 -.0064 R13 .9829 LSA 3626.3 MSA 205.9 SSA 13.7
BOE 2.5079 BRA 2.9670 BC3 3.1515 FSP -1514 SGI 6284.5 SGE 391.3 THA 3.45 EL1 3402.8 EL2 160.9 ALF 8.28

LAUNCH DATE DEC 28 1968

FLIGHT TIME 204.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 571.410

RL 147.11 LAL .00 LOL 96.33 VL 27.414 GAL 6.72 AZL 86.71 HCA 264.95 SMA 126.06 ECC .20297 INC 3.2936 V1 30.285
RP 108.68 LAP -3.28 LOP 1.27 VP 37.277 GAP 8.65 AZP 90.29 TAL 151.51 TAP 56.46 RCA 100.47 APO 151.65 V2 34.870
RC 143.344 GL 19.16 GP -6.96 ZAL 46.83 ZAP 159.95 ETS 342.38 ZAE 126.15 ETE 184.09 ZAC 115.59 ETC 169.43 CLP-161.15

PLANETOCENTRIC CONIC

C3 22.718 VHL 4.766 DLA 36.88 RAL 44.38 RAD 6567.9 VEL 12.004 PTH 2.14 VHP 6.161 DPA -1.10 RAP 22.49 ECC 1.3739
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.31 22 53 24 4121.87 -24.17 179.80 277.64 61.25 24 2 5 3521.9 -27.81 172.09
114.69 4 49 4 3012.26 -24.16 96.05 277.63 61.24 5 39 16 2412.3 -27.80 88.54
65.31 22 53 24 4121.87 -24.17 179.80 277.64 61.25 24 2 5 3521.9 -27.81 172.09
114.69 4 49 4 3012.26 -24.16 96.05 277.63 61.24 5 39 16 2412.3 -27.80 88.54
65.31 22 53 24 4121.87 -24.17 179.80 277.64 61.25 24 2 5 3521.9 -27.81 172.09
114.69 4 49 4 3012.26 -24.16 96.05 277.63 61.24 5 39 16 2412.3 -27.80 88.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4649 TRA 3.2076 TC3-2.9967 BAU .9102 SGT 6338.7 SGR 538.3 SG3 397.4 ST 3298.2 SR 510.1 SS 1193.4
RDE .4220 RRA .1192 RC3 .0203 FAU .03823 RRT .6774 RRF .6647 RTF .9826 CRT .9395 CRS -.8995 CST -.9947
FDE 1.5825 FRA 2.6292 FC3-1.4569 BSP 20659 SGB 6361.5 R23 -.0048 R13 .9826 LSA 3538.0 MSA 212.6 SSA 13.7
BOE 2.5007 BRA 3.2098 BC3 2.9967 FSP -1418 SGI 6349.2 SGE 395.4 THA 3.31 EL1 3332.9 EL2 172.9 ALF 8.29

LAUNCH DATE DEC 28 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.390 GAL 7.15 AZL 86.77 HCA 268.12 SMA 125.91 ECC .20835 INC 3.2292 V1 30.285  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.269 GAP 9.11 AZP 90.11 TAL 150.47 TAP 58.60 RCA 99.87 APO 152.14 V2 34.880  
 RC 145.608 GL 18.11 GP -6.63 ZAL 45.34 ZAP 161.40 ETS 341.78 ZAE 125.71 ETE 183.81 ZAC 117.21 ETC 169.38 CLP-162.58

PLANETOCENTRIC CONIC  
 C3 24.251 VHL 4.924 DLA 36.24 RAL 46.19 RAD 6568.0 VEL 12.068 PTH 2.16 VHP 6.429 DPA -.11 RAP 23.94 ECC 1.3991  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.37 23 6 20 4121.11 -23.27 179.00 280.28 61.40 24 15 1 3521.1 -26.90 171.54  
 113.63 4 50 42 3044.91 -23.26 98.15 280.27 61.39 5 41 27 2444.9 -26.89 90.69  
 66.37 23 6 20 4121.11 -23.27 179.00 280.28 61.40 24 15 1 3521.1 -26.90 171.54  
 113.63 4 50 42 3044.91 -23.26 98.15 280.27 61.39 5 41 27 2444.9 -26.89 90.69  
 66.37 23 6 20 4121.11 -23.27 179.00 280.28 61.40 24 15 1 3521.1 -26.90 171.54  
 113.63 4 50 42 3044.91 -23.26 98.15 280.27 61.39 5 41 27 2444.9 -26.89 90.69

DIFFERENTIAL CORRECTIONS  
 TOE 2.4539 TRA 3.4647 TC3-2.8319 BAU .9181 SGT 6596.3 SGR 533.9 SG3 371.5 ST 3226.0 SR 503.4 SS 1131.7  
 RDE .4319 RRA .1241 RC3 .0213 FAU .03443 RRT .6651 RRF .6535 RTF .9824 CRT .9294 CRS -.8865 CST -.9946  
 FDE 1.4575 FRA 2.6072 FC3-1.2293 BSP 20917 SGB 6418.8 R23 -.0032 R13 .9824 LSA 3448.8 MSA 219.5 SSA 13.5  
 BOE 2.4916 BRA 3.4669 BC3 2.8319 FSP -1328 SGI 6406.2 SGE 398.1 THA 3.19 EL1 3260.1 EL2 184.6 ALF 8.31

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 28 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.366 GAL 7.61 AZL 86.83 HCA 271.30 SMA 125.75 ECC .21416 INC 3.1650 V1 30.285  
 RP 108.61 LAP -3.18 LOP 7.64 VP 37.262 GAP 9.60 AZP 89.93 TAL 149.43 TAP 60.73 RCA 98.82 APO 152.68 V2 34.891  
 RC 147.857 GL 17.08 GP -6.34 ZAL 43.87 ZAP 162.79 ETS 341.05 ZAE 125.30 ETE 183.97 ZAC 118.88 ETC 169.31 CLP-163.97

PLANETOCENTRIC CONIC  
 C3 25.992 VHL 5.098 DLA 35.60 RAL 47.97 RAD 6568.1 VEL 12.140 PTH 2.18 VHP 6.712 DPA .87 RAP 25.46 ECC 1.4278  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.47 23 19 27 4120.24 -22.34 178.38 282.95 61.54 24 28 8 3520.2 -25.96 170.98  
 112.53 4 51 47 3079.97 -22.33 100.40 282.94 61.53 5 43 7 2480.0 -25.95 93.00  
 67.47 23 19 27 4120.24 -22.34 178.38 282.95 61.54 24 28 8 3520.2 -25.96 170.98  
 112.53 4 51 47 3079.97 -22.33 100.40 282.94 61.53 5 43 7 2480.0 -25.95 93.00  
 67.47 23 19 27 4120.24 -22.34 178.38 282.95 61.54 24 28 8 3520.2 -25.96 170.98  
 112.53 4 51 47 3079.97 -22.33 100.40 282.94 61.53 5 43 7 2480.0 -25.95 93.00

DIFFERENTIAL CORRECTIONS  
 TOE 2.4458 TRA 3.7422 TC3-2.6522 BAU .9218 SGT 6451.3 SGR 530.4 SG3 347.9 ST 3157.4 SR 501.1 SS 1077.2  
 RDE .4432 RRA .1310 RC3 .0214 FAU .03072 RRT .6565 RRF .6462 RTF .9821 CRT .9187 CRS -.8733 CST -.9946  
 FDE 1.3477 FRA 2.5920 FC3-1.0232 BSP 21059 SGB 6473.1 R23 -.0013 R13 .9821 LSA 3365.9 MSA 226.5 SSA 13.4  
 BOE 2.4856 BRA 3.7445 BC3 2.6522 FSP -1239 SGI 6480.7 SGE 399.5 THA 3.10 EL1 3190.9 EL2 195.9 ALF 8.33

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 28 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.342 GAL 8.10 AZL 86.90 HCA 274.48 SMA 125.59 ECC .22045 INC 3.1006 V1 30.285  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.255 GAP 10.11 AZP 89.76 TAL 148.39 TAP 62.87 RCA 97.91 APO 153.28 V2 34.902  
 RC 150.092 GL 16.07 GP -6.08 ZAL 42.43 ZAP 164.15 ETS 340.17 ZAE 124.93 ETE 183.37 ZAC 120.60 ETC 169.21 CLP-165.31

PLANETOCENTRIC CONIC  
 C3 27.973 VHL 5.289 DLA 34.95 RAL 49.70 RAD 6568.1 VEL 12.221 PTH 2.20 VHP 7.011 DPA 1.83 RAP 27.03 ECC 1.4604  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.61 23 32 50 4119.02 -21.38 177.73 285.64 61.67 24 41 29 3519.0 -24.99 170.38  
 111.39 4 52 13 3117.66 -21.37 102.83 285.63 61.67 5 44 10 2517.7 -24.98 95.48  
 68.61 23 32 50 4119.02 -21.38 177.73 285.64 61.67 24 41 29 3519.0 -24.99 170.38  
 111.39 4 52 13 3117.66 -21.37 102.83 285.63 61.67 5 44 10 2517.7 -24.98 95.48  
 68.61 23 32 50 4119.02 -21.38 177.73 285.64 61.67 24 41 29 3519.0 -24.99 170.38  
 111.39 4 52 13 3117.66 -21.37 102.83 285.63 61.67 5 44 10 2517.7 -24.98 95.48

DIFFERENTIAL CORRECTIONS  
 TOE 2.4320 TRA 4.0319 TC3-2.4739 BAU .9252 SGT 6495.0 SGR 526.8 SG3 325.8 ST 3082.7 SR 496.1 SS 1025.0  
 RDE .4551 RRA .1394 RC3 .0201 FAU .02743 RRT .6503 RRF .6410 RTF .9819 CRT .9071 CRS -.8593 CST -.9947  
 FDE 1.2450 FRA 2.5762 FC3 -.8489 BSP 21288 SGB 6516.4 R23 -.0000 R13 .9819 LSA 3276.0 MSA 233.6 SSA 13.2  
 BOE 2.4742 BRA 4.0344 BC3 2.4740 FSP -1163 SGI 6504.1 SGE 399.6 THA 3.03 EL1 3115.5 EL2 206.7 ALF 8.34

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 28 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 96.33 VL 27.318 GAL 8.62 AZL 86.96 HCA 277.67 SMA 125.44 ECC .22727 INC 3.0356 V1 30.285  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.248 GAP 10.65 AZP 89.59 TAL 147.35 TAP 65.02 RCA 96.93 APO 153.95 V2 34.914  
 RC 192.312 GL 15.08 GP -5.84 ZAL 41.02 ZAP 165.45 ETS 339.09 ZAE 124.57 ETE 183.20 ZAC 122.36 ETC 169.09 CLP-166.63

PLANETOCENTRIC CONIC  
 C3 30.227 VHL 5.498 DLA 34.29 RAL 51.37 RAD 6568.2 VEL 12.313 PTH 2.22 VHP 7.328 DPA 2.78 RAP 28.65 ECC 1.4975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.79 23 46 29 4117.26 -20.40 177.02 286.35 61.81 24 55 7 3517.3 -24.00 169.72  
 110.21 4 51 55 3158.19 -20.38 105.44 286.34 61.80 5 44 33 2558.2 -23.99 98.14  
 69.79 23 46 29 4117.26 -20.40 177.02 286.35 61.81 24 55 7 3517.3 -24.00 169.72  
 110.21 4 51 55 3158.19 -20.38 105.44 286.34 61.80 5 44 33 2558.2 -23.99 98.14  
 69.79 23 46 29 4117.26 -20.40 177.02 286.35 61.81 24 55 7 3517.3 -24.00 169.72  
 110.21 4 51 55 3158.19 -20.38 105.44 286.34 61.80 5 44 33 2558.2 -23.99 98.14

DIFFERENTIAL CORRECTIONS  
 TOE 2.4181 TRA 4.3407 TC3-2.2915 BAU .9261 SGT 6533.0 SGR 523.1 SG3 305.4 ST 3009.0 SR 490.8 SS 977.8  
 RDE .4678 RRA .1495 RC3 .0182 FAU .02433 RRT .6489 RRF .6384 RTF .9817 CRT .8948 CRS -.8450 CST -.9948  
 FDE 1.1528 FRA 2.5844 FC3 -.6870 BSP 21486 SGB 6553.9 R23 .0012 R13 .9817 LSA 3192.7 MSA 240.4 SSA 13.0  
 BOE 2.4629 BRA 4.3433 BC3 2.2916 FSP -1092 SGI 6541.8 SGE 398.4 THA 2.98 EL1 3041.1 EL2 216.8 ALF 8.35

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE DEC 28 1968

FLIGHT TIME 214.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 599.499

RL 147.11 LAL .00 LOL 96.33 VL 27.294 GAL 9.19 AZL 87.03 MCA 280.85 SMA 125.28 ECC .23467 INC 2.9695 V1 30.285
RP 108.50 LAP -2.92 LOP 17.20 VP 37.242 GAP 11.21 AZP 89.44 TAL 146.32 TAP 67.17 RCA 95.88 APO 154.68 V2 34.926
RC 154.516 GL 14.11 GP -5.62 ZAL 39.65 ZAP 166.89 ETS 337.77 ZAE 124.24 ETE 183.05 ZAC 124.15 ETC 168.94 CLP-167.91

PLANETOCENTRIC CONIC

C3 32.798 VHL 5.727 DLA 33.64 RAL 52.99 RAD 6568.3 VEL 12.417 PTH 2.24 VHP 7.665 DPA 3.71 RAP 30.31 ECC 1.5398
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.03 0 4 24 4114.80 -19.39 176.26 291.08 61.96 1 12 59 3514.8 -22.98 169.01
108.97 4 50 51 3201.70 -19.37 108.26 291.07 61.95 5 44 12 2601.7 -22.97 101.01
71.03 0 4 24 4114.80 -19.39 176.26 291.08 61.96 1 12 59 3514.8 -22.98 169.01
108.97 4 50 51 3201.70 -19.37 108.26 291.07 61.95 5 44 12 2601.7 -22.97 101.01
110.00 5 43 22 3041.07 -24.01 96.26 293.57 64.91 6 34 3 2441.1 -27.19 90.53
110.00 4 11 4 3323.43 -14.88 115.05 288.40 58.86 5 6 27 2723.4 -18.89 108.23

DIFFERENTIAL CORRECTIONS

TDE 2.4040 TRA 4.6696 TC3-2.1072 BAU .9240
RDE .4811 RRA .1615 RC3 .0161 FAU .02143
FOE 1.0692 FRA 2.5562 FC3 -.5657 BSP 21666
BDE 2.4516 BRA 4.6724 BC3 2.1072 FSP -1026

MID-COURSE EXECUTION ACCURACY

SGT 6564.8 SGR 519.3 SG3 286.6
RRR .6459 RRF .8381 RTF .9816
SG8 6585.3 R23 .0023 R13 .9817
SG1 6573.4 SG2 395.9 THA 2.94

ORBIT DETERMINATION ACCURACY

ST 2936.6 SR 484.8 SS 935.2
CRT .8819 CRS -.8304 CST -.9949
LSA 3109.9 HSA 246.9 SSA 12.8
EL1 2967.7 EL2 226.2 ALF 8.33

LAUNCH DATE DEC 28 1968

FLIGHT TIME 216.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 604.915

RL 147.11 LAL .00 LOL 96.33 VL 27.270 GAL 9.79 AZL 87.10 MCA 284.04 SMA 125.12 ECC .24272 INC 2.9020 V1 30.285
RP 108.47 LAP -2.82 LOP 20.39 VP 37.235 GAP 11.82 AZP 89.30 TAL 145.31 TAP 69.34 RCA 94.75 APO 155.49 V2 34.938
RC 156.704 GL 13.15 GP -5.42 ZAL 38.31 ZAP 167.91 ETS 336.13 ZAE 123.91 ETE 182.92 ZAC 125.97 ETC 168.75 CLP-169.17

PLANETOCENTRIC CONIC

C3 35.737 VHL 5.978 DLA 32.98 RAL 54.55 RAD 6568.4 VEL 12.534 PTH 2.27 VHP 8.025 DPA 4.63 RAP 32.01 ECC 1.5881
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.34 0 18 48 4111.28 -18.35 175.41 293.82 62.10 1 27 19 3511.3 -21.94 168.20
107.66 4 48 53 3248.54 -18.34 111.30 293.81 62.10 5 43 1 2648.5 -21.93 104.10
72.34 0 18 48 4111.28 -18.35 175.41 293.82 62.10 1 27 19 3511.3 -21.94 168.20
107.66 4 48 53 3248.54 -18.34 111.30 293.81 62.10 5 43 1 2648.5 -21.93 104.10
110.00 6 11 51 2993.52 -25.35 95.21 297.47 66.26 7 1 44 2393.5 -28.34 87.31
110.00 3 55 0 3414.30 -11.62 120.07 289.78 57.62 4 51 54 2814.3 -15.81 113.47

DIFFERENTIAL CORRECTIONS

TDE 2.3905 TRA 5.0209 TC3-1.9219 BAU .9183
RDE .4948 RRA .1752 RC3 .0139 FAU .01868
FOE .9943 FRA 2.5521 FC3 -.4525 BSP 21815
BDE 2.4412 BRA 5.0240 BC3 1.9220 FSP -964

MID-COURSE EXECUTION ACCURACY

SGT 6590.9 SGR 515.0 SG3 269.1
RRR .6471 RRF .6399 RTF .9817
SG8 6611.0 R23 .0031 R13 .9817
SG4 6599.4 SG2 392.2 THA 2.91

ORBIT DETERMINATION ACCURACY

ST 2866.4 SR 478.0 SS 897.0
CRT .8684 CRS -.8157 CST -.9951
LSA 3030.7 HSA 252.7 SSA 12.5
EL1 2896.5 EL2 234.6 ALF 8.30

LAUNCH DATE DEC 28 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 610.240

RL 147.11 LAL .00 LOL 96.33 VL 27.245 GAL 10.45 AZL 87.17 MCA 287.23 SMA 124.97 ECC .25149 INC 2.8326 V1 30.285
RP 108.43 LAP -2.71 LOP 23.58 VP 37.229 GAP 12.46 AZP 89.16 TAL 144.31 TAP 71.53 RCA 93.54 APO 156.40 V2 34.951
RC 158.875 GL 12.22 GP -5.24 ZAL 37.01 ZAP 169.09 ETS 334.09 ZAE 123.60 ETE 182.82 ZAC 127.91 ETC 168.54 CLP-170.42

PLANETOCENTRIC CONIC

C3 39.105 VHL 6.253 DLA 32.33 RAL 56.04 RAD 6568.5 VEL 12.668 PTH 2.30 VHP 8.410 DPA 5.53 RAP 33.75 ECC 1.6436
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.72 0 33 43 4106.24 -17.30 174.44 296.57 62.26 1 42 9 3506.2 -20.88 167.28
106.28 4 45 52 3299.10 -17.29 114.59 296.56 62.25 5 40 51 2699.1 -20.86 107.43
73.72 0 33 43 4106.24 -17.30 174.44 296.57 62.26 1 42 9 3506.2 -20.88 167.28
106.28 4 45 52 3299.10 -17.29 114.59 296.56 62.25 5 40 51 2699.1 -20.86 107.43
110.00 6 34 20 2964.13 -26.14 93.30 301.06 67.15 7 23 44 2364.1 -29.00 85.28
110.00 3 44 26 3489.20 -8.86 124.12 291.48 56.85 4 42 35 2889.2 -13.16 117.66

DIFFERENTIAL CORRECTIONS

TDE 2.3808 TRA 5.3997 TC3-1.7351 BAU .9072
RDE .5091 RRA .1909 RC3 .0121 FAU .01800
FOE .9285 FRA 2.5540 FC3 -.3542 BSP 21871
BDE 2.4347 BRA 5.4031 BC3 1.7352 FSP -902

MID-COURSE EXECUTION ACCURACY

SGT 6614.0 SGR 510.6 SG3 253.2
RRR .6505 RRF .6439 RTF .9818
SG8 6633.7 R23 .0040 R13 .9818
SG1 6622.4 SG2 387.3 THA 2.88

ORBIT DETERMINATION ACCURACY

ST 2801.4 SR 470.6 SS 864.1
CRT .8546 CRS -.8014 CST -.9954
LSA 2957.9 HSA 257.6 SSA 12.3
EL1 2830.3 EL2 241.9 ALF 8.23

LAUNCH DATE DEC 28 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 615.458

RL 147.11 LAL .00 LOL 96.33 VL 27.221 GAL 11.18 AZL 87.24 MCA 290.42 SMA 124.81 ECC .26107 INC 2.7606 V1 30.285
RP 108.39 LAP -2.59 LOP 26.77 VP 37.224 GAP 13.15 AZP 89.04 TAL 143.33 TAP 73.75 RCA 92.23 APO 157.40 V2 34.964
RC 161.027 GL 11.32 GP -5.07 ZAL 35.76 ZAP 170.24 ETS 331.50 ZAE 123.29 ETE 182.73 ZAC 129.66 ETC 168.28 CLP-171.65

PLANETOCENTRIC CONIC

C3 42.977 VHL 6.556 DLA 31.67 RAL 57.47 RAD 6568.6 VEL 12.820 PTH 2.33 VHP 8.825 DPA 6.41 RAP 35.51 ECC 1.7073
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.19 0 49 21 4099.01 -16.23 173.30 299.33 62.43 1 57 40 3499.0 -19.80 166.18
104.81 4 41 37 3353.98 -16.22 118.18 299.32 62.42 5 37 31 2754.0 -19.78 111.06
75.19 0 49 21 4099.01 -16.23 173.30 299.33 62.43 1 57 40 3499.0 -19.80 166.18
104.81 4 41 37 3353.98 -16.22 118.18 299.32 62.42 5 37 31 2754.0 -19.78 111.06
110.00 6 53 44 2944.10 -26.67 91.97 304.52 67.77 7 42 48 2344.1 -29.44 83.89
110.00 3 36 25 3556.89 -6.32 127.71 293.36 56.34 4 35 42 2956.9 -10.70 121.36

DIFFERENTIAL CORRECTIONS

TDE 2.3683 TRA 5.8011 TC3-1.5559 BAU .8940
RDE .5234 RRA .2082 RC3 .0102 FAU .01357
FOE .8674 FRA 2.5582 FC3 -.2733 BSP 22004
BDE 2.4254 BRA 5.8048 BC3 1.5560 FSP -849

MID-COURSE EXECUTION ACCURACY

SGT 6628.2 SGR 505.1 SG3 236.3
RRR .6551 RRF .6488 RTF .9820
SG8 6647.4 R23 .0044 R13 .9821
SG1 6636.5 SG2 381.2 THA 2.87

ORBIT DETERMINATION ACCURACY

ST 2735.3 SR 461.9 SS 833.8
CRT .8401 CRS -.7866 CST -.9956
LSA 2884.7 HSA 261.8 SSA 12.0
EL1 2762.9 EL2 248.0 ALF 8.14

LAUNCH DATE DEC 29 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 9 1969

HELIOCENTRIC CONIC

DISTANCE 144.520

RL 147.10 LAL -.00 LOL 97.35 VL 19.658 GAL 13.79 AZL 85.87 MCA 51.70 SMA 93.60 ECC .60423 INC 4.1285 V1 30.286
RP 107.51 LAP 3.24 LOP 148.98 VP 32.418 GAP -36.32 AZP 87.44 TAL 170.55 TAP 222.25 RCA 37.04 APO 150.15 V2 35.248
RC 59.338 GL 6.43 GP 1.89 ZAL 67.33 ZAP 25.43 ETS 184.45 ZAE 148.42 ETE 193.73 ZAC 88.54 ETC 166.28 CLP 25.36

PLANETOCENTRIC CONIC

C3 150.712 VHL 12.276 DLA 17.54 RAL 25.71 RAD 6570.6 VEL 16.494 PTH 2.87 VHP 21.339 DPA -3.59 RAP 355.41 ECC 3.4803
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 10 36 3265.33 -25.13 115.29 289.26 76.50 5 5 1 2665.3 -26.74 106.99
90.00 20 55 12 4750.43 16.81 203.70 275.72 66.87 22 14 22 4150.4 13.53 196.55
100.00 5 42 9 2970.06 -27.03 94.07 289.77 76.73 6 31 39 2370.1 -28.59 85.62
100.00 22 6 19 4520.91 18.60 186.01 274.90 66.17 23 21 40 3920.9 15.22 178.85
110.00 7 12 49 2686.40 -31.99 73.84 291.08 77.26 7 57 36 2086.4 -33.41 64.90
110.00 22 52 9 4377.35 23.22 172.84 272.61 64.18 24 5 6 3777.3 19.55 165.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5702 TRA-1.5155 TC3 -.1087 BAU .2241 SGT .832.1 SGR 442.5 SG3 33.8 ST 347.0 SR 412.7 SS 327.6
RDE -.8785 RRA .3185 RC3 -.0236 FAU .01407 RRT .0243 RRF -.0264 RTF -.6485 CRT .6894 CRS .7987 CST .9848
FOE .3281 FRA .6124 FC3 -.0808 B9P 2237 SGB 942.4 R23 -.0045 R13 -.6465 LSA 588.9 MSA 225.9 SSA 13.7
BOE 1.0474 BRA 1.5486 BC3 .1112 F9P -72 SG1 832.2 SG2 442.3 THA 1.03 EL1 497.2 EL2 208.6 ALF 52.09

LAUNCH DATE DEC 29 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 11 1969

HELIOCENTRIC CONIC

DISTANCE 150.668

RL 147.10 LAL -.00 LOL 97.35 VL 20.272 GAL 13.20 AZL 85.98 MCA 54.94 SMA 95.25 ECC .57720 INC 4.0216 V1 30.286
RP 107.52 LAP 3.29 LOP 152.23 VP 32.789 GAP -34.57 AZP 87.69 TAL 169.89 TAP 224.83 RCA 40.27 APO 150.22 V2 35.243
RC 57.901 GL 6.81 GP 1.96 ZAL 66.38 ZAP 23.90 ETS 184.99 ZAE 149.42 ETE 194.60 ZAC 90.17 ETC 166.33 CLP 23.82

PLANETOCENTRIC CONIC

C3 136.080 VHL 11.665 DLA 18.25 RAL 26.52 RAD 6570.5 VEL 16.044 PTH 2.83 VHP 20.441 DPA -2.84 RAP 356.94 ECC 3.2395
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 6 34 3274.00 -24.99 115.88 288.88 76.24 5 1 8 2674.0 -26.64 107.60
90.00 21 5 41 4704.09 15.54 200.88 275.34 66.03 22 24 5 4104.1 12.18 193.83
100.00 5 38 48 2976.58 -26.93 94.55 289.41 76.51 6 28 24 2376.6 -28.52 86.09
100.00 22 16 8 4476.74 17.36 183.31 274.48 65.28 23 30 45 3876.7 13.88 176.25
110.00 7 10 48 2688.70 -31.96 74.01 290.76 77.17 7 55 37 2088.7 -33.39 65.08
110.00 23 0 37 4337.39 22.01 170.36 272.10 63.16 24 12 54 3737.4 18.23 163.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5684 TRA-1.5180 TC3 -.1130 BAU .2109 SGT 871.2 SGR 446.6 SG3 36.7 ST 364.8 SR 417.3 SS 343.1
RDE -.8444 RRA .2978 RC3 -.0261 FAU .01437 RRT .0292 RRF -.0315 RTF -.6661 CRT .6896 CRS .8004 CST .9845
FOE .3409 FRA .6336 FC3 -.0914 B9P 2395 SGB 979.0 R23 -.0051 R13 -.6662 LSA 609.1 MSA 231.7 SSA 13.9
BOE 1.0179 BRA 1.5411 BC3 .1159 F9P -80 SG1 871.3 SG2 446.3 THA 1.16 EL1 510.4 EL2 216.0 ALF 50.54

LAUNCH DATE DEC 29 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 13 1969

HELIOCENTRIC CONIC

DISTANCE 156.890

RL 147.10 LAL -.00 LOL 97.35 VL 20.845 GAL 12.62 AZL 86.08 MCA 58.19 SMA 96.88 ECC .55105 INC 3.9229 V1 30.286
RP 107.54 LAP 3.33 LOP 155.48 VP 33.141 GAP -32.91 AZP 87.93 TAL 169.26 TAP 227.44 RCA 43.50 APO 150.27 V2 35.238
RC 55.726 GL 7.21 GP 2.03 ZAL 65.50 ZAP 22.38 ETS 185.60 ZAE 150.56 ETE 195.58 ZAC 91.92 ETC 166.36 CLP 22.30

PLANETOCENTRIC CONIC

C3 122.935 VHL 11.088 DLA 18.95 RAL 27.26 RAD 6570.3 VEL 15.629 PTH 2.78 VHP 19.577 DPA -2.07 RAP 358.49 ECC 3.0232
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 2 13 3281.89 -24.86 116.43 288.37 75.99 4 56 54 2681.9 -26.55 108.16
90.00 21 15 58 4656.96 14.22 198.06 274.89 65.25 22 33 35 4057.0 10.77 191.08
100.00 5 35 9 2982.18 -26.84 94.92 288.91 76.33 6 24 51 2382.2 -28.46 86.49
100.00 22 25 43 4431.90 16.07 180.61 275.99 64.45 23 39 35 3831.9 12.50 173.64
110.00 7 8 33 2689.96 -31.94 74.11 290.29 77.11 7 53 23 2090.0 -33.38 65.17
110.00 23 8 48 4296.89 20.74 167.90 271.52 62.20 24 20 25 3696.9 16.86 160.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5667 TRA-1.5074 TC3 -.1164 BAU .1970 SGT 911.4 SGR 490.0 SG3 40.0 ST 383.2 SR 421.3 SS 359.2
RDE -.8105 RRA .2775 RC3 -.0287 FAU .01471 RRT .0347 RRF -.0373 RTF -.6851 CRT .6902 CRS .8023 CST .9842
FOE .3542 FRA .6551 FC3 -.1036 B9P 2569 SGB 1016.4 R23 -.0059 R13 -.6852 LSA 630.0 MSA 237.1 SSA 14.1
BOE .9890 BRA 1.5327 BC3 .1199 F9P -89 SG1 911.6 SG2 449.6 THA 1.30 EL1 524.1 EL2 222.9 ALF 48.91

LAUNCH DATE DEC 29 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 15 1969

HELIOCENTRIC CONIC

DISTANCE 163.185

RL 147.10 LAL -.00 LOL 97.35 VL 21.378 GAL 12.05 AZL 86.17 MCA 61.43 SMA 98.50 ECC .52580 INC 3.8310 V1 30.286
RP 107.56 LAP 3.36 LOP 158.73 VP 33.473 GAP -31.33 AZP 88.17 TAL 168.65 TAP 230.08 RCA 46.71 APO 150.29 V2 35.232
RC 54.021 GL 7.61 GP 2.11 ZAL 64.68 ZAP 20.89 ETS 186.30 ZAE 151.85 ETE 196.67 ZAC 93.48 ETC 166.38 CLP 20.78

PLANETOCENTRIC CONIC

C3 111.116 VHL 10.541 DLA 19.62 RAL 27.94 RAD 6570.1 VEL 15.246 PTH 2.73 VHP 18.744 DPA -1.29 RAP .03 ECC 2.8287
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 57 31 3289.06 -24.74 116.92 287.72 75.77 4 52 20 2689.1 -26.46 108.67
90.00 21 26 4 4609.05 12.84 195.22 274.38 64.54 22 42 53 4009.0 9.30 188.32
100.00 5 31 13 2986.93 -26.77 95.25 288.28 76.17 6 21 0 2386.9 -28.40 86.83
100.00 22 35 4 4386.40 14.71 177.92 273.45 63.68 23 48 10 3786.4 11.06 171.03
110.00 7 6 3 2690.22 -31.93 74.13 289.68 77.10 7 50 54 2090.2 -33.38 65.19
110.00 23 16 43 4255.89 19.42 165.45 270.88 61.30 24 27 39 3655.9 15.44 158.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5683 TRA-1.5043 TC3 -.1199 BAU .1841 SGT 955.4 SGR 452.7 SG3 43.6 ST 404.1 SR 424.7 SS 376.1
RDE -.7771 RRA .2577 RC3 -.0315 FAU .01907 RRT .0420 RRF -.0441 RTF -.7029 CRT .6926 CRS .8046 CST .9842
FOE .3685 FRA .6773 FC3 -.1174 B9P 2687 SGB 1057.2 R23 -.0061 R13 -.7030 LSA 653.0 MSA 241.9 SSA 14.3
BOE .9627 BRA 1.5262 BC3 .1240 F9P -98 SG1 955.7 SG2 452.2 THA 1.47 EL1 539.5 EL2 229.5 ALF 47.06

LAUNCH DATE DEC 29 1968 FLIGHT TIME 78.00 ARRIVAL DATE MAR 17 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 97.35 VL 21.875 GAL 11.50 AZL 86.26 HCA 64.67 SMA 100.10 ECC .50150 INC 3.7445 V1 30.286  
 RP 107.58 LAP 3.38 LOP 161.97 VP 33.785 GAP -29.82 AZP 88.40 TAL 168.08 TAP 232.75 RCA 49.90 APO 150.30 V2 35.226  
 RC 52.393 GL 8.03 GP 2.19 ZAL 63.94 ZAP 19.41 ETS 187.11 ZAE 153.29 ZAC 95.15 ETC 166.37 CLP 19.29

Distance 169.545

Planetocentric Conic: C3 100.481 VHL 10.024 DLA 20.28 RAL 28.55 RAD 6569.9 VEL 14.894 PTH 2.69 VHP 17.942 DPA -.50 RAP 1.59 ECC 2.6537  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 52 29 3295.59 -24.63 117.38 286.93 75.58 4 47 25 2695.6 -26.38 109.13  
 90.00 21 35 59 4560.35 11.59 192.37 273.82 63.90 22 51 59 3980.3 7.79 185.94  
 100.00 5 26 59 2990.90 -26.70 95.53 287.51 76.04 6 16 50 2390.9 -28.36 87.12  
 100.00 22 44 10 4340.27 13.30 175.22 272.84 62.98 23 56 31 3740.3 9.57 168.41  
 110.00 7 3 18 2689.52 -31.94 74.07 288.94 77.13 7 48 8 2089.5 -33.38 65.14  
 110.00 23 24 20 4214.42 18.05 163.02 270.19 80.47 24 34 34 3614.4 13.98 156.27

Differential Corrections: TOE -.5683 TRA-1.4883 TC3 -.1217 BAU .1699 SGT 999.3 SGR 454.6 SCS 47.4 ORBIT DETERMINATION ACCURACY  
 RDE -.7441 RRA .2383 RC3 -.0343 FAU .01549 RRT .0492 RRF -.0516 RTF -.7203 ST 425.0 SR 427.5 SS 393.5  
 FDE .3833 FRA .8996 FC3 -.1334 BSP 2880 SGB 1097.9 R23 -.0069 R13 -.7204 CRT .6948 CRS .8072 CST .9840  
 BDE .9363 BRA 1.5171 BC3 .1265 FSP -108 SGI 999.6 SGI 454.0 TMA 1.62 LSA 676.3 MSA 246.1 SSA 14.5  
 EL1 554.9 EL2 235.5 ALF 45.25

LAUNCH DATE DEC 29 1968 FLIGHT TIME 80.00 ARRIVAL DATE MAR 19 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 97.35 VL 22.358 GAL 10.95 AZL 86.34 HCA 67.91 SMA 101.67 ECC .47816 INC 3.6626 V1 30.286  
 RP 107.60 LAP 3.39 LOP 165.22 VP 34.080 GAP -29.39 AZP 88.62 TAL 167.54 TAP 235.45 RCA 53.05 APO 150.28 V2 35.219  
 RC 50.852 GL 8.45 GP 2.29 ZAL 63.27 ZAP 17.94 ETS 188.05 ZAE 154.88 ETE 199.34 ZAC 96.82 ETC 166.35 CLP 17.80

Distance 175.965

Planetocentric Conic: C3 90.907 VHL 9.535 DLA 20.92 RAL 29.09 RAD 6569.8 VEL 14.589 PTH 2.64 VHP 17.169 DPA .31 RAP 3.15 ECC 2.4981  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 5 3301.59 -24.53 117.77 286.01 75.40 4 42 7 2701.6 -26.30 109.55  
 90.00 21 45 42 4510.89 9.90 189.51 273.19 63.33 23 0 53 3910.9 6.24 182.74  
 100.00 5 22 26 2994.16 -26.65 95.76 286.61 75.93 6 12 20 2394.2 -28.32 87.35  
 100.00 22 53 3 4293.55 11.84 172.52 272.17 62.35 24 4 37 3693.6 8.05 165.78  
 110.00 7 0 19 2687.93 -31.97 73.96 288.06 77.20 7 45 7 2087.9 -33.40 65.02  
 110.00 23 31 39 4172.55 16.63 160.61 269.44 59.62 24 41 12 3572.6 12.48 153.96

Differential Corrections: TOE -.5688 TRA-1.4908 TC3 -.1221 BAU .1552 SGT 1044.9 SGR 455.9 SCS 51.7 ORBIT DETERMINATION ACCURACY  
 RDE -.7116 RRA .2194 RC3 -.0373 FAU .01595 RRT .0574 RRF -.0600 RTF -.7371 ST 446.8 SR 429.7 SS 411.7  
 FDE .3990 FRA .7224 FC3 -.1519 BSP 3045 SGB 1139.7 R23 -.0078 R13 -.7373 CRT .6978 CRS .8102 CST .9840  
 BDE .9110 BRA 1.5069 BC3 .1277 FSP -120 SGI 1044.9 SGI 455.0 TMA 1.77 LSA 700.9 MSA 249.7 SSA 14.6  
 EL1 571.3 EL2 240.8 ALF 43.40

LAUNCH DATE DEC 29 1968 FLIGHT TIME 82.00 ARRIVAL DATE MAR 21 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 97.35 VL 22.769 GAL 10.42 AZL 86.42 HCA 71.15 SMA 103.20 ECC .45580 INC 3.5845 V1 30.286  
 RP 107.62 LAP 3.39 LOP 168.47 VP 34.356 GAP -27.01 AZP 88.84 TAL 167.04 TAP 238.18 RCA 56.16 APO 150.25 V2 35.211  
 RC 49.405 GL 8.88 GP 2.39 ZAL 62.68 ZAP 16.49 ETS 189.17 ZAE 156.62 ETE 201.01 ZAC 98.49 ETC 166.30 CLP 16.32

Distance 182.439

Planetocentric Conic: C3 82.284 VHL 9.071 DLA 21.55 RAL 29.57 RAD 6569.6 VEL 14.270 PTH 2.60 VHP 16.424 DPA 1.13 RAP 4.70 ECC 2.3542  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 41 18 3307.14 -24.44 118.15 284.96 75.23 4 36 25 2707.1 -26.23 109.94  
 90.00 21 55 16 4460.71 8.35 186.63 272.50 62.84 23 9 36 3860.7 4.65 179.91  
 100.00 5 17 33 2996.78 -26.60 95.94 285.58 75.84 6 7 30 2396.8 -28.29 87.54  
 100.00 23 1 42 4246.30 10.33 169.82 271.44 61.79 24 12 28 3646.3 6.48 163.15  
 110.00 6 57 4 2685.48 -32.01 73.78 287.06 77.30 7 41 49 2085.5 -33.42 64.83  
 110.00 23 38 41 4130.37 15.16 158.22 268.63 58.99 24 47 31 3530.4 10.94 151.66

Differential Corrections: TOE -.5697 TRA-1.4821 TC3 -.1211 BAU .1403 SGT 1091.2 SGR 456.4 SCS 56.3 ORBIT DETERMINATION ACCURACY  
 RDE -.6797 RRA .2011 RC3 -.0403 FAU .01648 RRT .0665 RRF -.0694 RTF -.7530 ST 469.8 SR 431.3 SS 430.7  
 FDE .4157 FRA .7457 FC3 -.1732 BSP 3233 SGB 1182.8 R23 -.0088 R13 -.7532 CRT .7013 CRS .8135 CST .9840  
 BDE .8869 BRA 1.4957 BC3 .1276 FSP -133 SGI 1091.7 SGI 455.2 TMA 1.93 LSA 726.8 MSA 252.6 SSA 14.8  
 EL1 588.7 EL2 245.3 ALF 41.52

LAUNCH DATE DEC 29 1968 FLIGHT TIME 84.00 ARRIVAL DATE MAR 23 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 97.35 VL 23.171 GAL 9.91 AZL 86.49 HCA 74.39 SMA 104.71 ECC .43443 INC 3.5093 V1 30.286  
 RP 107.65 LAP 3.38 LOP 171.71 VP 34.615 GAP -25.70 AZP 89.05 TAL 166.57 TAP 240.96 RCA 59.22 APO 150.19 V2 35.202  
 RC 48.064 GL 9.31 GP 2.50 ZAL 62.15 ZAP 15.05 ETS 190.52 ZAE 158.51 ETE 203.01 ZAC 100.17 ETC 166.23 CLP 14.84

Distance 188.961

Planetocentric Conic: C3 74.516 VHL 8.632 DLA 22.15 RAL 29.97 RAD 6569.4 VEL 13.995 PTH 2.55 VHP 15.705 DPA 1.96 RAP 6.26 ECC 2.2263  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 35 8 3312.35 -24.35 118.51 283.79 75.07 4 30 20 2712.4 -26.16 110.31  
 90.00 22 4 39 4409.85 6.76 183.74 271.75 62.44 23 18 9 3809.9 3.02 177.06  
 100.00 5 12 22 2998.83 -26.57 96.08 284.43 75.77 6 2 21 2398.8 -28.26 87.69  
 100.00 23 10 6 4198.61 8.79 167.12 270.65 61.31 24 20 5 3598.6 4.89 160.50  
 110.00 6 53 33 2682.24 -32.05 73.53 285.93 77.43 7 38 16 2082.2 -33.45 64.58  
 110.00 23 45 24 4087.96 13.66 155.85 267.77 58.36 24 53 32 3488.0 9.38 149.37

Differential Corrections: TOE -.5714 TRA-1.4724 TC3 -.1182 BAU .1254 SGT 1139.7 SGR 456.2 SCS 61.3 ORBIT DETERMINATION ACCURACY  
 RDE -.6486 RRA .1832 RC3 -.0432 FAU .01703 RRT .0769 RRF -.0801 RTF -.7682 ST 494.1 SR 432.3 SS 450.6  
 FDE .4335 FRA .7697 FC3 -.1979 BSP 3422 SGB 1227.6 R23 -.0099 R13 -.7684 CRT .7062 CRS .8172 CST .9841  
 BDE .8644 BRA 1.4837 BC3 .1259 FSP -147 SGI 1140.3 SGI 454.6 TMA 2.10 LSA 754.3 MSA 254.7 SSA 15.0  
 EL1 607.5 EL2 248.9 ALF 39.63



LAUNCH DATE DEC 29 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

DISTANCE 195.527

RL 147.10 LAL -.00 LOL 97.35 VL 23.545 GAL 9.41 AZL 86.56 MCA 77.62 SMA 106.17 ECC .41403 INC 3.4365 V1 30.286  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.857 GAP -24.45 AZP 89.26 TAL 166.14 TAP 243.77 RCA 62.21 APO 150.13 V2 35.194  
 RC 46.839 GL 9.76 GP 2.63 ZAL 61.70 ZAP 13.62 ETS 192.17 ZAE 160.54 ETE 205.47 ZAC 101.84 ETC 166.14 CLP 13.37

PLANETOCENTRIC CONIC

C3 67.518 WHL 8.217 DLA 22.74 RAL 30.30 RAD 6569.3 VEL 13.743 PTH 2.51 VMP 15.012 DPA 2.80 RAP 7.82 ECC 2.1112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 33 3317.33 -24.26 118.84 282.50 74.93 4 23 51 2717.3 -26.09 110.66  
 90.00 22 13 52 4358.39 5.13 180.84 270.94 62.11 23 26 31 3758.4 1.36 174.19  
 100.00 5 6 51 3000.38 -26.54 96.19 283.16 75.72 5 56 52 2400.4 -28.24 87.80  
 100.00 23 18 15 4190.57 7.21 164.43 269.81 60.91 24 27 26 3550.6 3.27 157.85  
 110.00 6 49 49 2678.27 -32.11 73.24 284.68 77.60 7 34 27 2078.3 -33.49 64.28  
 110.00 23 51 47 4045.44 12.13 153.51 266.85 57.79 24 59 13 3445.4 7.79 147.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY  
 SGT 1191.9 SGR 455.3 SG3 66.9  
 RRT .0896 RRF -.0923 RTF -.7821  
 SGB 1275.9 R23 -.0105 R13 -.7824  
 SGI 1192.7 SGT 455.2 THA 2.29

ORBIT DETERMINATION ACCURACY  
 ST 521.0 SR 432.7 SS 471.8  
 CRT .7125 CRS .8215 CST .9844  
 LSA 784.6 MSA 255.8 SSA 15.2  
 EL1 628.8 EL2 251.6 ALF 37.85

LAUNCH DATE DEC 29 1968

FLIGHT TIME 88.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 202.131

RL 147.10 LAL -.00 LOL 97.35 VL 23.893 GAL 8.93 AZL 86.63 MCA 80.86 SMA 107.59 ECC .39461 INC 3.3655 V1 30.286  
 RP 107.71 LAP 3.32 LOP 178.19 VP 35.084 GAP -23.24 AZP 89.46 TAL 165.76 TAP 246.62 RCA 65.14 APO 150.05 V2 35.184  
 RC 45.742 GL 10.20 GP 2.76 ZAL 61.33 ZAP 12.21 ETS 194.24 ZAE 162.69 ETE 208.57 ZAC 103.50 ETC 166.02 CLP 11.90

PLANETOCENTRIC CONIC

C3 61.213 WHL 7.824 DLA 23.30 RAL 30.56 RAD 6569.1 VEL 13.512 PTH 2.47 VMP 14.343 DPA 3.66 RAP 9.37 ECC 2.0074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 34 3322.16 -24.17 119.17 281.10 74.78 4 16 57 2722.2 -26.03 111.00  
 90.00 22 22 55 4306.40 3.47 177.92 270.08 61.88 23 34 42 3706.4 -.32 171.29  
 100.00 5 1 2 3001.49 -26.52 96.27 281.78 75.69 5 51 3 2401.5 -28.23 87.88  
 100.00 23 26 9 4102.30 5.60 161.75 268.90 60.59 24 34 32 3502.3 1.64 155.20  
 110.00 6 45 50 2673.59 -32.18 72.89 283.31 77.79 7 30 24 2073.6 -33.53 63.92  
 110.00 0 1 46 4002.96 10.58 151.19 265.88 57.30 1 8 29 3403.0 6.19 144.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY  
 SGT 1243.6 SGR 453.7 SG3 73.0  
 RRT .1030 RRF -.1060 RTF -.7958  
 SGB 1323.8 R23 -.0117 R13 -.7961  
 SGI 1244.6 SGT 450.9 THA 2.48

ORBIT DETERMINATION ACCURACY  
 ST 548.1 SR 432.6 SS 493.9  
 CRT .7191 CRS .8261 CST .9847  
 LSA 815.9 MSA 256.2 SSA 15.3  
 EL1 650.7 EL2 253.2 ALF 35.81

LAUNCH DATE DEC 29 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 208.768

RL 147.10 LAL -.00 LOL 97.35 VL 24.217 GAL 8.47 AZL 86.70 MCA 84.09 SMA 108.97 ECC .37615 INC 3.2958 V1 30.286  
 RP 107.74 LAP 3.28 LOP 181.43 VP 35.296 GAP -22.09 AZP 89.66 TAL 165.42 TAP 249.51 RCA 67.98 APO 149.96 V2 35.174  
 RC 44.782 GL 10.65 GP 2.91 ZAL 61.03 ZAP 10.82 ETS 196.89 ZAE 164.94 ETE 212.64 ZAC 105.15 ETC 165.87 CLP 10.43

PLANETOCENTRIC CONIC

C3 55.533 WHL 7.452 DLA 23.84 RAL 30.75 RAD 6569.0 VEL 13.300 PTH 2.43 VMP 13.698 DPA 4.52 RAP 10.91 ECC 1.9139  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 14 11 3326.94 -24.09 119.50 279.59 74.64 4 9 38 2726.9 -25.96 111.33  
 90.00 22 31 49 4254.00 1.78 174.99 269.16 61.73 23 42 43 3654.0 -2.01 168.36  
 100.00 4 54 54 3002.20 -26.51 96.32 280.30 75.66 5 44 56 2402.2 -28.22 87.93  
 100.00 23 33 46 4053.96 3.98 159.08 267.94 60.35 24 41 20 3454.0 .00 152.55  
 110.00 6 41 38 2668.26 -32.26 72.49 281.84 78.02 7 26 7 2068.3 -33.57 63.51  
 110.00 0 7 27 3960.66 9.01 148.92 264.85 56.89 1 13 28 3360.7 4.59 142.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY  
 SGT 1296.5 SGR 451.4 SG3 79.6  
 RRT .1180 RRF -.1214 RTF -.8087  
 SGB 1372.8 R23 -.0131 R13 -.8090  
 SGI 1297.7 SGT 447.8 THA 2.67

ORBIT DETERMINATION ACCURACY  
 ST 576.3 SR 431.9 SS 517.3  
 CRT .7264 CRS .8312 CST .9850  
 LSA 848.9 MSA 255.8 SSA 15.4  
 EL1 674.0 EL2 253.8 ALF 34.03

LAUNCH DATE DEC 29 1968

FLIGHT TIME 92.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 215.433

RL 147.10 LAL -.00 LOL 97.35 VL 24.519 GAL 8.02 AZL 86.77 MCA 87.32 SMA 110.30 ECC .35864 INC 3.2270 V1 30.286  
 RP 107.77 LAP 3.22 LOP 184.67 VP 35.493 GAP -20.98 AZP 89.85 TAL 165.13 TAP 252.45 RCA 70.74 APO 149.86 V2 35.164  
 RC 43.971 GL 11.10 GP 3.08 ZAL 60.80 ZAP 9.46 ETS 200.39 ZAE 167.22 ETE 218.22 ZAC 106.79 ETC 165.69 CLP 8.95

PLANETOCENTRIC CONIC

C3 50.417 WHL 7.100 DLA 24.36 RAL 30.86 RAD 6568.9 VEL 13.106 PTH 2.39 VMP 13.075 DPA 5.40 RAP 12.44 ECC 1.8297  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 6 24 3331.74 -24.00 119.82 277.98 74.50 4 1 55 2731.7 -25.90 111.67  
 90.00 22 40 31 4201.30 .08 172.05 268.18 61.68 23 50 32 3601.3 -3.71 165.42  
 100.00 4 48 30 3002.53 -26.51 96.34 278.72 75.65 5 38 32 2402.5 -28.22 87.96  
 100.00 23 41 6 4005.74 2.35 156.42 266.92 60.19 24 47 51 3405.7 -1.63 149.90  
 110.00 6 37 15 2662.29 -32.34 72.05 280.27 78.27 7 21 37 2062.3 -33.62 63.05  
 110.00 0 12 46 3918.74 7.45 146.68 263.77 56.54 1 18 4 3318.7 3.00 140.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY  
 SGT 1350.6 SGR 448.5 SG3 87.0  
 RRT .1349 RRF -.1388 RTF -.8210  
 SGB 1423.1 R23 -.0147 R13 -.8213  
 SGI 1352.1 SGT 443.9 THA 2.88

ORBIT DETERMINATION ACCURACY  
 ST 605.8 SR 430.8 SS 541.9  
 CRT .7346 CRS .8367 CST .9854  
 LSA 883.8 MSA 254.5 SSA 15.6  
 EL1 698.8 EL2 253.4 ALF 32.34

LAUNCH DATE DEC 29 1968

FLIGHT TIME 94.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 222.122

RL 147.10 LAL -.00 LOL 97.35 VL 24.799 GAL 7.59 AZL 86.84 HCA 90.55 SMA 111.58 ECC .34207 INC 3.1586 VI 30.286  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.676 GAP -19.91 AZP 90.03 TAL 164.88 TAP 255.43 RCA 73.41 APO 149.75 V2 35.153  
 RC 43.319 GL 11.54 GP 3.26 ZAL 60.64 ZAP 8.14 ETS 205.14 ZAE 169.46 ETE 226.26 ZAC 108.41 ETC 165.48 CLP 7.46

PLANETOCENTRIC CONIC

C3 45.809 VHL 6.768 DLA 24.85 RAL 30.91 RAD 6568.7 VEL 12.930 PTH 2.36 VHP 12.479 DPA 6.28 RAP 13.95 ECC 1.7539  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 58 13 3356.60 -23.91 120.15 276.28 74.36 3 53 50 2736.6 -25.83 112.01  
 90.00 22 49 1 4148.49 -1.62 169.11 267.15 61.73 23 58 10 3548.5 -5.39 162.45  
 100.00 4 41 51 3002.48 -26.51 96.34 277.05 75.65 5 31 54 2402.5 -28.22 87.95  
 100.00 23 48 5 3957.85 .73 153.79 265.84 60.12 24 54 2 3357.8 -3.25 147.27  
 110.00 6 32 42 2655.68 -32.43 71.55 278.61 78.55 7 16 58 2055.7 -33.67 62.54  
 110.00 0 17 39 3877.41 5.89 144.90 262.63 56.27 1 22 16 3277.4 1.42 138.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5914 TRA-1.4050 TC3 -.0858 BAU .0525 SGT 1405.9 SGR 445.0 SG3 95.1 ST 636.6 SR 429.2 SS 567.9  
 RDE -.5059 RRA .1020 RC3 -.0550 FAU .02097 RRT .1541 RRF -.1585 RTF -.8325 CRT .7437 CRS .8426 CST .9859  
 FDE .5457 FRA .9030 FC3 -.3964 BSP 4368 SGB 1474.7 R23 -.0165 R13 -.8329 LSA 920.9 MSA 252.4 SSA 15.7  
 BDE .7783 BRA 1.4087 BC3 .0858 FSP -244 SG1 1407.8 SG2 439.1 THA 3.09 EL1 725.3 EL2 251.9 ALF 30.73

LAUNCH DATE DEC 29 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 228.831

RL 147.10 LAL -.00 LOL 97.35 VL 25.059 GAL 7.17 AZL 86.91 HCA 93.78 SMA 112.81 ECC .32640 INC 3.0901 VI 30.286  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.846 GAP -18.89 AZP 90.20 TAL 164.68 TAP 258.46 RCA 75.99 APO 149.64 V2 35.141  
 RC 42.834 GL 11.98 GP 3.47 ZAL 60.56 ZAP 6.89 ETS 211.83 ZAE 171.50 ETE 238.47 ZAC 110.01 ETC 165.23 CLP 5.96

PLANETOCENTRIC CONIC

C3 41.661 VHL 6.455 DLA 25.31 RAL 30.88 RAD 6568.6 VEL 12.768 PTH 2.32 VHP 11.896 DPA 7.18 RAP 15.45 ECC 1.6856  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 49 43 3341.91 -23.82 120.48 274.90 74.22 3 45 24 2741.5 -25.76 112.35  
 90.00 22 57 18 4095.80 -3.32 166.16 266.06 61.86 24 5 34 3495.8 -7.06 159.48  
 100.00 4 35 2 3001.98 -26.52 96.30 275.30 75.67 5 25 4 2402.0 -28.23 87.92  
 100.00 23 54 41 3910.58 -.88 151.20 264.70 60.12 24 59 51 3310.6 -4.85 144.66  
 110.00 6 28 2 2648.41 -32.53 71.01 276.86 78.86 7 12 11 2048.4 -33.72 61.98  
 110.00 0 22 5 3836.89 4.35 142.36 261.45 56.06 1 26 2 3236.9 -.13 136.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5965 TRA-1.3867 TC3 -.0441 BAU .0396 SGT 1482.1 SGR 440.9 SG3 104.1 ST 668.8 SR 427.3 SS 595.5  
 RDE -.4805 RRA .0872 RC3 -.0559 FAU .02205 RRT .1759 RRF -.1809 RTF -.8434 CRT .7536 CRS .8491 CST .9864  
 FDE .5740 FRA .9346 FC3 -.4581 BSP 4577 SGB 1527.2 R23 -.0186 R13 -.8439 LSA 960.2 MSA 249.5 SSA 15.8  
 BDE .7659 BRA 1.3895 BC3 .0712 FSP -270 SG1 1484.4 SG2 433.4 THA 3.33 EL1 733.4 EL2 249.3 ALF 29.21

LAUNCH DATE DEC 29 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 235.554

RL 147.10 LAL -.00 LOL 97.35 VL 25.301 GAL 6.77 AZL 86.98 HCA 97.00 SMA 113.99 ECC .31162 INC 3.0212 VI 30.286  
 RP 107.87 LAP 3.00 LOP 194.36 VP 36.004 GAP -17.90 AZP 90.37 TAL 164.53 TAP 261.53 RCA 78.47 APO 149.52 V2 35.129  
 RC 42.524 GL 12.42 GP 3.69 ZAL 60.54 ZAP 5.77 ETS 221.51 ZAE 173.02 ETE 257.13 ZAC 111.58 ETC 164.94 CLP 4.44

PLANETOCENTRIC CONIC

C3 37.928 VHL 6.159 DLA 25.74 RAL 30.78 RAD 6568.5 VEL 12.621 PTH 2.29 VHP 11.338 DPA 8.09 RAP 16.92 ECC 1.6242  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 40 55 3346.40 -23.73 120.81 272.65 74.08 3 36 42 2746.4 -25.69 112.69  
 90.00 23 5 18 4043.49 -4.99 163.23 264.91 62.09 24 12 42 3443.5 -8.69 156.50  
 100.00 4 28 5 3000.91 -26.53 96.25 273.48 75.70 5 18 6 2400.9 -28.24 87.84  
 100.00 0 4 46 3864.21 -2.45 148.66 263.51 60.20 1 9 10 3264.2 -6.40 142.09  
 110.00 6 23 18 2640.43 -32.63 70.41 275.04 79.20 7 7 19 2040.4 -33.78 61.36  
 110.00 0 26 2 3797.46 2.85 140.30 260.81 55.92 1 29 19 3197.5 -1.64 134.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6019 TRA-1.3672 TC3 -.0174 BAU .0296 SGT 1519.2 SGR 436.5 SG3 114.0 ST 702.2 SR 425.1 SS 624.8  
 RDE -.4563 RRA .0728 RC3 -.0557 FAU .02324 RRT .2006 RRF -.2064 RTF -.8537 CRT .7644 CRS .8559 CST .9870  
 FDE .6048 FRA .9671 FC3 -.5306 BSP 4786 SGB 1580.7 R23 -.0209 R13 -.8542 LSA 1001.7 MSA 245.8 SSA 15.9  
 BDE .7553 BRA 1.3692 BC3 .0584 FSP -299 SG1 1522.0 SG2 426.9 THA 3.58 EL1 783.2 EL2 245.7 ALF 27.80

LAUNCH DATE DEC 29 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 242.289

RL 147.10 LAL -.00 LOL 97.35 VL 25.525 GAL 6.39 AZL 87.05 HCA 100.22 SMA 115.12 ECC .29771 INC 2.9514 VI 30.286  
 RP 107.91 LAP 2.90 LOP 197.59 VP 36.151 GAP -16.96 AZP 90.52 TAL 164.43 TAP 264.65 RCA 80.85 APO 149.39 V2 35.117  
 RC 42.392 GL 12.83 GP 3.95 ZAL 60.80 ZAP 4.90 ETS 235.53 ZAE 173.58 ETE 282.18 ZAC 113.11 ETC 164.61 CLP 2.90

PLANETOCENTRIC CONIC

C3 34.569 VHL 5.880 DLA 26.13 RAL 30.61 RAD 6568.4 VEL 12.488 PTH 2.26 VHP 10.800 DPA 9.01 RAP 18.37 ECC 1.5689  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 31 57 3351.08 -23.64 121.13 270.73 73.94 3 27 48 2751.1 -25.62 113.01  
 90.00 23 12 57 3991.95 -6.63 160.33 263.71 62.41 24 19 29 3392.0 -10.27 153.54  
 100.00 4 21 8 2999.08 -26.57 96.10 271.61 75.77 5 11 7 2399.1 -28.26 87.71  
 100.00 0 10 23 3819.19 -3.97 146.18 262.25 60.35 1 14 2 3219.2 -7.89 139.58  
 110.00 6 18 35 2631.63 -32.74 69.75 273.16 79.58 7 2 26 2031.6 -33.83 60.68  
 110.00 0 29 26 3759.40 1.40 138.31 258.91 55.84 1 32 5 3159.4 -3.09 132.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6074 TRA-1.3463 TC3 .0143 BAU .0260 SGT 1576.8 SGR 431.9 SG3 125.0 ST 736.6 SR 422.8 SS 655.7  
 RDE -.4334 RRA .0588 RC3 -.0543 FAU .02457 RRT .2286 RRF -.2354 RTF -.8633 CRT .7758 CRS .8631 CST .9876  
 FDE .6364 FRA 1.0017 FC3 -.6154 BSP 4996 SGB 1634.8 R23 -.0237 R13 -.8639 LSA 1045.4 MSA 241.3 SSA 16.1  
 BDE .7462 BRA 1.3476 BC3 .0562 FSP -331 SG1 1580.1 SG2 419.6 THA 3.85 EL1 814.3 EL2 241.3 ALF 26.91

LAUNCH DATE DEC 29 1968

FLIGHT TIME 102.00

ARRIVAL DATE APR 10 1969

Heliocentric Conic

RL 147.10 LAL -.00 LOL 97.35 VL 25.753 GAL 6.05 AZL 87.12 MCA 103.44 SMA 116.19 ECC .28464 INC 2.8802 V1 30.286  
 RP 107.95 LAP 2.80 LOP 200.81 VP 36.286 GAP -16.04 AZP 90.67 TAL 164.37 TAP 267.82 RCA 83.12 APO 149.27 V2 35.105  
 RC 42.442 GL 13.23 GP 4.23 ZAL 60.72 ZAP 4.44 ETS 254.37 ZAE 172.91 ETE 306.79 ZAC 114.60 ETC 164.23 CLP 1.34

Distance 249.031

Planetocentric Conic

C3 31.548 VHL 5.617 DLA 26.48 RAL 30.38 RAD 6566.3 VEL 12.366 PTH 2.23 WHP 10.281 DPA 9.94 RAP 19.79 ECC 1.5192  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 22 57 3355.19 -23.56 121.40 266.77 73.83 3 18 52 2755.2 -25.56 113.30  
 90.00 23 20 7 3941.74 -8.20 157.47 262.44 62.80 24 25 48 3341.7 -11.78 130.63  
 100.00 4 14 19 2996.17 -26.61 95.90 269.68 75.86 5 4 15 2396.2 -28.29 87.50  
 100.00 0 15 22 3775.99 -5.42 143.79 260.93 60.56 1 18 18 3176.0 -9.30 137.16  
 110.00 6 13 56 2621.88 -32.86 69.01 271.22 80.00 6 57 38 2021.9 -33.89 59.93  
 110.00 0 32 14 3723.05 .01 136.42 257.56 55.82 1 34 17 3123.1 -4.48 130.20

Differential Corrections

TDE -.6130 TRA-1.3241 TC3 .0520 BAU .0308  
 RDE -.4118 RRA .0451 RC3 -.0514 FAU .02606  
 FDE .6749 FRA 1.0387 FC3 -.7152 BSP 5212  
 BDE .7365 BRA 1.3249 BC3 .0731 FSP -368

Mid-Course Execution Accuracy

SGT 1634.5 SGR 427.1 SG3 137.2  
 RRT .2804 RRF -.2685 RTF -.8723  
 SGB 1689.4 R23 -.0268 R13 -.8729  
 SGI 1638.5 SGE 411.4 THA 4.16

Orbit Determination Accuracy

ST 772.0 SR 420.4 SS 688.4  
 CRT .7880 CRS .8708 CST .9883  
 LSA 1091.2 MSA 236.2 SSA 16.2  
 EL1 846.8 EL2 236.0 ALF 25.33

LAUNCH DATE DEC 29 1968

FLIGHT TIME 104.00

ARRIVAL DATE APR 12 1969

Heliocentric Conic

RL 147.10 LAL -.00 LOL 97.35 VL 25.925 GAL 5.68 AZL 87.19 MCA 106.66 SMA 117.21 ECC .27239 INC 2.8071 V1 30.286  
 RP 107.99 LAP 2.69 LOP 204.03 VP 36.410 GAP -15.16 AZP 90.81 TAL 164.37 TAP 271.03 RCA 85.29 APO 149.14 V2 35.092  
 RC 42.671 GL 13.61 GP 4.55 ZAL 60.91 ZAP 4.96 ETS 275.17 ZAE 171.34 ETE 324.78 ZAC 116.05 ETC 163.80 CLP -.25

Distance 255.777

Planetocentric Conic

C3 28.831 VHL 5.369 DLA 26.78 RAL 30.09 RAD 6566.2 VEL 12.256 PTH 2.20 WHP 9.782 DPA 10.89 RAP 21.16 ECC 1.4745  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 8 3358.15 -23.51 121.80 266.77 73.74 3 10 7 2758.2 -25.51 113.51  
 90.00 23 26 35 3893.61 -9.69 154.72 261.11 63.26 24 31 29 3293.6 -13.20 147.80  
 100.00 4 7 47 2991.78 -26.69 95.99 267.72 76.01 4 57 39 2391.8 -28.35 87.18  
 100.00 0 19 35 3735.21 -6.78 141.55 259.55 60.82 1 21 49 3135.2 -10.62 134.84  
 110.00 6 9 29 2811.00 -32.98 69.19 269.23 80.47 6 53 0 2011.0 -33.95 59.08  
 110.00 0 34 21 3688.77 -1.30 134.63 256.17 55.84 1 35 50 3088.8 -5.78 128.40

Differential Corrections

TDE -.8190 TRA-1.3013 TC3 .0965 BAU .0413  
 RDE -.3917 RRA .0315 RC3 -.0464 FAU .02771  
 FDE .7147 FRA 1.0787 FC3 -.8322 BSP 5430  
 BDE .7326 BRA 1.3017 BC3 .1071 FSP -408

Mid-Course Execution Accuracy

SGT 1693.0 SGR 422.6 SG3 150.7  
 RRT .2967 RRF -.3061 RTF -.8810  
 SGB 1745.0 R23 -.0304 R13 -.8817  
 SGI 1697.9 SGE 402.4 THA 4.49

Orbit Determination Accuracy

ST 808.7 SR 418.1 SS 723.1  
 CRT .8006 CRS .8788 CST .9890  
 LSA 1139.5 MSA 230.4 SSA 16.3  
 EL1 880.9 EL2 229.9 ALF 24.25

LAUNCH DATE DEC 29 1968

FLIGHT TIME 106.00

ARRIVAL DATE APR 14 1969

Heliocentric Conic

RL 147.10 LAL -.00 LOL 97.35 VL 26.103 GAL 5.35 AZL 87.27 MCA 109.88 SMA 118.18 ECC .26092 INC 2.7316 V1 30.286  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.525 GAP -14.32 AZP 90.93 TAL 164.41 TAP 274.28 RCA 87.34 APO 149.02 V2 35.080  
 RC 43.078 GL 13.95 GP 4.91 ZAL 61.18 ZAP 5.26 ETS 293.01 ZAE 169.31 ETE 336.64 ZAC 117.44 ETC 163.32 CLP -1.87

Distance 262.524

Planetocentric Conic

C3 26.388 VHL 5.137 DLA 27.03 RAL 29.74 RAD 6566.1 VEL 12.156 PTH 2.18 WHP 9.302 DPA 11.86 RAP 22.50 ECC 1.4343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 5 52 3359.03 -23.49 121.66 264.76 73.72 3 1 51 2759.0 -25.50 113.57  
 90.00 23 32 5 3848.66 -11.05 152.12 259.70 63.76 24 36 14 3248.7 -14.49 145.13  
 100.00 4 1 47 2985.35 -26.79 95.14 265.74 76.22 4 51 32 2385.4 -28.42 86.72  
 100.00 0 22 47 3697.57 -8.02 139.43 258.10 61.11 1 24 25 3097.6 -11.82 132.69  
 110.00 6 5 20 2598.75 -33.12 67.26 267.21 81.01 6 48 38 1998.7 -34.01 58.13  
 110.00 0 35 44 3656.94 -2.92 132.97 254.72 55.90 1 36 41 3056.9 -6.98 126.72

Differential Corrections

TDE -.6231 TRA-1.2760 TC3 .1474 BAU .0538  
 RDE -.3731 RRA .0181 RC3 -.0389 FAU .02958  
 FDE .7579 FRA 1.1218 FC3 -.9703 BSP 5628  
 BDE .7263 BRA 1.2761 BC3 .1524 FSP -454

Mid-Course Execution Accuracy

SGT 1748.9 SGR 418.6 SG3 165.8  
 RRT .3373 RRF -.3487 RTF -.8889  
 SGB 1798.3 R23 -.0350 R13 -.8897  
 SGI 1754.9 SGE 392.8 THA 4.86

Orbit Determination Accuracy

ST 844.3 SR 416.2 SS 759.5  
 CRT .8138 CRS .8870 CST .9897  
 LSA 1188.4 MSA 224.3 SSA 16.3  
 EL1 914.4 EL2 223.3 ALF 23.33

LAUNCH DATE DEC 29 1968

FLIGHT TIME 108.00

ARRIVAL DATE APR 16 1969

Heliocentric Conic

RL 147.10 LAL -.00 LOL 97.35 VL 26.288 GAL 5.04 AZL 87.35 MCA 113.09 SMA 119.09 ECC .25021 INC 2.6530 V1 30.286  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.630 GAP -13.50 AZP 91.04 TAL 164.50 TAP 277.58 RCA 89.29 APO 148.89 V2 35.067  
 RC 43.658 GL 14.25 GP 5.32 ZAL 61.46 ZAP 6.38 ETS 305.87 ZAE 167.12 ETE 344.66 ZAC 118.77 ETC 162.78 CLP -3.53

Distance 289.269

Planetocentric Conic

C3 24.193 VHL 4.919 DLA 27.22 RAL 29.34 RAD 6566.0 VEL 12.065 PTH 2.16 WHP 8.840 DPA 12.85 RAP 23.78 ECC 1.3981  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 58 35 3356.46 -23.54 121.49 262.75 73.79 2 54 31 2756.5 -25.54 113.39  
 90.00 23 36 11 3808.38 -12.25 149.77 258.22 64.27 24 39 40 3208.4 -15.62 142.71  
 100.00 3 56 35 2976.19 -26.94 94.50 263.75 76.53 4 46 9 2376.2 -28.52 86.06  
 100.00 0 24 51 3663.88 -9.12 137.53 256.58 61.41 1 25 55 3063.9 -12.87 130.75  
 110.00 6 1 36 2584.84 -33.26 66.20 265.16 81.62 6 44 41 1984.8 -34.06 57.05  
 110.00 0 36 16 3628.00 -3.62 131.45 253.22 55.99 1 36 44 3028.0 -8.06 125.18

Differential Corrections

TDE -.6279 TRA-1.2507 TC3 .2048 BAU .0669  
 RDE -.3560 RRA .0046 RC3 -.0283 FAU .03164  
 FDE .8050 FRA 1.1689 FC3 -1.1322 BSP 5824  
 BDE .7218 BRA 1.2507 BC3 .2068 FSP -504

Mid-Course Execution Accuracy

SGT 1805.5 SGR 415.7 SG3 182.5  
 RRT .3834 RRF -.3968 RTF -.8962  
 SGB 1852.7 R23 -.0401 R13 -.8972  
 SGI 1812.8 SGE 382.4 THA 5.28

Orbit Determination Accuracy

ST 881.2 SR 414.7 SS 797.9  
 CRT .8275 CRS .8956 CST .9904  
 LSA 1240.0 MSA 217.5 SSA 16.4  
 EL1 949.6 EL2 216.1 ALF 22.51

LAUNCH DATE DEC 29 1968 FLIGHT TIME 110.00 ARRIVAL DATE APR 18 1969

**HELIOCENTRIC CONIC**  
 RL 147.10 LAL -.00 LOL 97.35 VL 26.419 GAL 4.74 AZL 87.43 MCA 116.30 SMA 119.95 ECC .24023 INC 2.5705 V1 30.286  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.726 GAP -12.71 AZP 91.14 TAL 164.62 TAP 280.92 RCA 91.14 APO 148.77 V2 35.053  
 RC 44.405 GL 14.51 GP 5.78 ZAL 61.81 ZAP 7.80 ETS 314.59 ZAE 164.92 ETE 350.46 ZAC 120.02 ETC 162.17 CLP -5.24

**PLANETOCENTRIC CONIC**  
 C3 22.219 VHL 4.714 DLA 27.34 RAL 28.90 RAD 6567.9 VEL 11.983 PTH 2.14 WHP 8.396 DPA 13.88 RAP 25.00 ECC 1.3657  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 56 3348.60 -23.69 120.96 260.77 74.01 2 48 44 2748.6 -25.65 112.84  
 90.00 23 38 20 3774.73 -13.24 147.80 256.63 64.74 24 41 15 3174.7 -16.54 140.67  
 100.00 3 52 23 2963.50 -27.14 93.61 261.76 76.96 4 41 47 2363.5 -26.66 85.14  
 100.00 0 25 29 3635.08 -10.06 135.80 255.00 61.70 1 26 4 3035.1 -13.76 129.07  
 110.00 5 58 28 2568.94 -33.41 64.98 263.09 82.32 6 41 17 1968.9 -34.11 55.81  
 110.00 0 35 54 3602.40 -4.99 130.11 251.67 56.09 1 35 56 3002.4 -9.02 123.81

**DIFFERENTIAL CORRECTIONS**  
 TDE -.6286 TRA-1.2221 TC3 .2742 BAW .0815 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3404 RRA -.0090 RC3 -.0137 FAU .03401 SGT 1856.6 SGR 414.2 SCS 201.2 ST 914.1 SR 413.8 SS 836.7  
 FDE .8544 FRA 1.2194 FC3-1.3250 BSP 6082 RRT .4335 RRF -.4500 RTF -.9036 CRT .8407 CR3 .9041 CST .9910  
 BDE .7149 BRA 1.2221 BC3 .2745 FSP -562 SCS 1902.2 R23 -.0466 R13 -.9047 LSA 1269.3 MSA 210.7 SSA 16.4  
 SGI 1865.6 SGR 371.4 THA 5.75 ELI 981.4 EL2 208.7 ALF 21.88

LAUNCH DATE DEC 29 1968 FLIGHT TIME 112.00 ARRIVAL DATE APR 20 1969

**HELIOCENTRIC CONIC**  
 RL 147.10 LAL -.00 LOL 97.35 VL 26.559 GAL 4.46 AZL 87.52 MCA 119.51 SMA 120.76 ECC .23095 INC 2.4835 V1 30.286  
 RP 108.15 LAP 2.18 LOP 216.88 VP 36.814 GAP -11.95 AZP 91.22 TAL 164.79 TAP 284.30 RCA 92.87 APO 148.65 V2 35.040  
 RC 45.309 GL 14.70 GP 6.31 ZAL 62.21 ZAP 9.42 ETS 320.52 ZAE 162.80 ETE 354.94 ZAC 121.18 ETC 161.49 CLP -7.00

**PLANETOCENTRIC CONIC**  
 C3 20.444 VHL 4.522 DLA 27.38 RAL 28.43 RAD 6567.8 VEL 11.909 PTH 2.12 WHP 7.970 DPA 14.93 RAP 26.15 ECC 1.3365  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 34 3333.43 -23.97 119.94 258.84 74.45 2 45 8 2733.4 -25.87 111.78  
 90.00 23 37 55 3749.85 -13.96 146.32 254.95 65.11 24 40 25 3149.9 -17.20 139.14  
 100.00 3 49 37 2946.42 -27.39 92.41 259.79 77.54 4 38 44 2346.4 -26.83 83.90  
 100.00 0 24 29 3612.09 -10.80 134.60 253.34 61.96 1 24 41 3012.1 -14.46 127.73  
 110.00 5 56 5 2550.67 -33.57 63.58 261.01 83.14 6 38 36 1950.7 -34.15 54.38  
 110.00 0 34 31 3580.80 -5.42 128.97 250.09 56.20 1 34 12 2980.6 -9.82 122.64

**DIFFERENTIAL CORRECTIONS**  
 TDE -.6309 TRA-1.1953 TC3 .3469 BAW .0948 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3287 RRA -.0231 RC3 .0054 FAU .03680 SGT 1809.7 SGR 415.3 SCS 222.1 ST 949.2 SR 414.1 SS 878.3  
 FDE .9090 FRA 1.2763 FC3-1.5498 BSP 6277 RRT .4900 RRF -.5092 RTF -.9100 CRT .8548 CR3 .9130 CST .9918  
 BDE .7104 BRA 1.1953 BC3 .3469 FSP -626 SCS 1954.4 R23 -.0538 R13 -.9113 LSA 1342.5 MSA 203.4 SSA 16.5  
 SGI 1920.9 SGR 359.9 THA 6.30 ELI 1016.0 EL2 200.8 ALF 21.32

LAUNCH DATE DEC 29 1968 FLIGHT TIME 114.00 ARRIVAL DATE APR 22 1969

**HELIOCENTRIC CONIC**  
 RL 147.10 LAL -.00 LOL 97.35 VL 26.687 GAL 4.19 AZL 87.61 MCA 122.71 SMA 121.52 ECC .22235 INC 2.3908 V1 30.286  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.894 GAP -11.22 AZP 91.29 TAL 165.00 TAP 287.71 RCA 94.50 APO 148.54 V2 35.027  
 RC 46.364 GL 14.82 GP 6.92 ZAL 62.65 ZAP 11.20 ETS 324.60 ZAE 160.80 ETE 358.64 ZAC 122.24 ETC 160.73 CLP -8.83

**PLANETOCENTRIC CONIC**  
 C3 18.849 VHL 4.341 DLA 27.34 RAL 27.94 RAD 6567.8 VEL 11.842 PTH 2.10 WHP 7.561 DPA 16.03 RAP 27.21 ECC 1.3102  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 5 3309.25 -24.40 118.30 256.98 75.17 2 44 15 2709.3 -26.20 110.09  
 90.00 23 34 28 3755.47 -14.37 145.46 253.17 65.33 24 36 44 3135.5 -17.58 138.26  
 100.00 3 48 33 2924.16 -27.71 90.83 257.85 78.31 4 37 17 2324.2 -29.04 82.28  
 100.00 0 21 38 3595.80 -11.32 133.67 251.63 62.15 1 21 34 2995.8 -14.98 126.77  
 110.00 5 54 37 2529.62 -33.73 61.95 258.93 84.09 6 36 47 1929.6 -34.18 52.74  
 110.00 0 32 2 3363.11 -6.08 128.04 248.48 56.30 1 31 26 2963.1 -10.47 121.70

**DIFFERENTIAL CORRECTIONS**  
 TDE -.6314 TRA-1.1678 TC3 .4284 BAW .1077 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3148 RRA -.0378 RC3 .0304 FAU .03949 SGT 1959.9 SGR 420.0 SCS 245.4 ST 982.5 SR 415.7 SS 921.1  
 FDE .9672 FRA 1.3393 FC3-1.8140 BSP 6436 RRT .5508 RRF -.5730 RTF -.9158 CRT .8669 CR3 .9218 CST .9925  
 BDE .7055 BRA 1.1684 BC3 .4275 FSP -697 SCS 2004.4 R23 -.0625 R13 -.9174 LSA 1395.7 MSA 195.8 SSA 16.5  
 SGI 1973.8 SGR 348.1 THA 6.95 ELI 1048.3 EL2 192.7 ALF 20.93

LAUNCH DATE DEC 29 1968 FLIGHT TIME 116.00 ARRIVAL DATE APR 24 1969

**HELIOCENTRIC CONIC**  
 RL 147.10 LAL -.00 LOL 97.35 VL 26.808 GAL 3.94 AZL 87.71 MCA 125.92 SMA 122.22 ECC .21440 INC 2.2913 V1 30.286  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.967 GAP -10.51 AZP 91.34 TAL 165.24 TAP 291.15 RCA 96.02 APO 148.43 V2 35.013  
 RC 47.558 GL 14.85 GP 7.62 ZAL 63.12 ZAP 13.12 ETS 327.46 ZAE 158.96 ETE 362.18 ZAC 123.19 ETC 159.89 CLP -10.72

**PLANETOCENTRIC CONIC**  
 C3 17.413 VHL 4.173 DLA 27.19 RAL 27.43 RAD 6567.7 VEL 11.781 PTH 2.08 WHP 7.170 DPA 17.18 RAP 28.17 ECC 1.2866  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 51 43 3275.42 -24.97 115.98 255.19 76.19 2 46 19 2675.4 -26.62 107.70  
 90.00 23 27 50 3732.31 -14.46 145.28 251.30 65.39 24 30 2 3132.3 -17.86 138.06  
 100.00 3 49 24 2886.05 -28.08 98.82 255.94 79.31 4 37 40 2296.1 -29.27 80.22  
 100.00 0 16 46 3586.91 -11.60 133.18 249.86 62.26 1 16 33 2986.9 -15.22 126.24  
 110.00 5 54 16 2505.32 -33.88 60.07 256.86 85.19 6 36 2 1905.3 -34.18 50.84  
 110.00 0 28 23 3550.41 -6.56 127.37 248.84 56.38 1 27 34 2950.4 -10.94 121.01

**DIFFERENTIAL CORRECTIONS**  
 TDE -.6294 TRA-1.1387 TC3 .5127 BAW .1202 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3047 RRA -.0536 RC3 .0627 FAU .04273 SGT 2006.3 SGR 429.7 SCS 271.5 ST 1012.7 SR 419.1 SS 964.5  
 FDE 1.0297 FRA 1.4096 FC3-2.1245 BSP 6630 RRT .6142 RRF -.6398 RTF -.9212 CRT .8828 CR3 .9306 CST .9931  
 BDE .6993 BRA 1.1410 BC3 .5165 FSP -777 SCS 2051.8 R23 -.0729 R13 -.9231 LSA 1447.7 MSA 188.1 SSA 16.5  
 SGI 2024.1 SGR 336.1 THA 7.71 ELI 1080.4 EL2 184.6 ALF 20.70

LAUNCH DATE DEC 29 1968

FLIGHT TIME 110.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 302.474

RL 147.10 LAL -.00 LOL 97.35 VL 26.914 GAL 3.71 AZL 87.82 HCA 129.12 SMA 122.88 ECC .20707 INC 2.1835 V1 30.286
RP 108.27 LAP 1.69 LOP 226.49 VP 37.033 GAP -9.83 AZP 91.38 TAL 185.50 TAP 294.62 RCA 97.44 APO 148.33 V2 35.000
RC 48.883 GL 14.77 GP 8.42 ZAL 63.61 ZAP 15.19 ETS 329.45 ZAE 157.30 ETE 4.91 ZAC 124.00 ETC 158.96 CLP -12.68

PLANETOCENTRIC CONIC

C3 16.120 VHL 4.015 DLA 26.93 RAL 26.94 RAD 6567.6 VEL 11.726 PTH 2.07 WHP 6.797 DPA 18.41 RAP 29.02 ECC 1.2653
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 57 24 3232.35 -25.64 113.00 253.45 77.54 2 51 16 2632.4 -27.10 104.64
90.00 25 18 13 3739.95 -14.24 145.73 249.30 85.26 24 20 33 3140.0 -17.46 138.53
100.00 3 52 24 2861.63 -28.49 86.34 254.07 80.55 4 40 5 2261.6 -29.50 77.69
100.00 0 9 50 3585.91 -11.63 133.10 248.06 62.27 1 9 36 2985.9 -15.25 126.18
110.00 5 55 13 2477.30 -34.02 57.90 254.81 86.47 6 38 30 1877.3 -34.14 48.65
110.00 0 23 30 3543.00 -6.84 126.98 245.19 56.43 1 22 33 2943.0 -11.21 120.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6246 TRA-1.1114 TC3 .6045 BAW .1322 SGT 2D48.2 SGR 448.1 SCS 300.5 ST 1039.0 SR 424.7 SS 1008.0
RDE -.2966 RRA -.0708 RC3 .1040 FAU .04634 RRT .6779 RRF -.7068 RTF -.9261 CRT .8963 CRS .9391 CST .9938
FDE 1.0927 FRA 1.4883 FC3-2.4885 BSP 6784 SGB 2D96.2 R23 -.0855 R13 -.9284 LSA 1497.7 HSA 180.3 SSA 16.5
BOE .6915 BRA 1.1137 BC3 .6134 FSP -.866 SGI 2D70.9 SGE 324.3 TMA 8.61 EL1 1108.5 EL2 176.5 ALF 20.67

LAUNCH DATE DEC 29 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 309.557

RL 147.10 LAL -.00 LOL 97.35 VL 27.013 GAL 3.49 AZL 87.93 HCA 132.31 SMA 123.49 ECC .20032 INC 2.0655 V1 30.286
RP 108.31 LAP 1.53 LOP 229.68 VP 37.093 GAP -9.17 AZP 91.38 TAL 185.80 TAP 298.11 RCA 98.76 APO 148.23 V2 34.987
RC 50.327 GL 14.55 GP 9.37 ZAL 64.11 ZAP 17.41 ETS 330.82 ZAE 155.82 ETE 7.85 ZAC 124.64 ETC 167.94 CLP -14.74

PLANETOCENTRIC CONIC

C3 14.955 VHL 3.867 DLA 26.54 RAL 26.47 RAD 6567.6 VEL 11.676 PTH 2.05 WHP 6.442 DPA 19.72 RAP 29.73 ECC 1.2461
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 5 50 3181.01 -26.34 109.41 251.76 79.21 2 58 51 2581.0 -27.56 100.96
90.00 23 6 1 3757.44 -13.74 146.77 247.44 64.99 24 8 38 3157.4 -17.00 139.61
100.00 3 57 38 2820.80 -28.91 83.37 252.23 82.06 4 44 38 2220.6 -29.71 74.63
100.00 0 0 50 3893.08 -11.40 133.51 248.25 62.18 1 0 43 2993.1 -15.04 126.61
110.00 5 57 39 2445.02 -34.13 55.38 252.77 87.96 6 38 25 1845.0 -34.04 46.14
110.00 0 17 17 3541.43 -6.90 126.90 243.54 56.44 1 16 19 2941.4 -11.27 120.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6141 TRA-1.0804 TC3 .7081 BAW .1450 SGT 2D80.7 SGR 471.2 SCS 332.8 ST 1056.5 SR 432.6 SS 1049.0
RDE -.2904 RRA -.0897 RC3 .1372 FAU .05044 RRT .7383 RRF -.7709 RTF -.9311 CRT .9090 CRS .9472 CST .9943
FDE 1.1563 FRA 1.5750 FC3-2.8201 BSP 6887 SGB 2133.3 R23 -.1001 R13 -.9339 LSA 1540.7 HSA 172.6 SSA 16.5
BOE .6793 BRA 1.0841 BC3 .7253 FSP -.970 SGI 2110.2 SGE 313.4 TMA 9.71 EL1 1129.1 EL2 168.7 ALF 20.91

LAUNCH DATE DEC 29 1968

FLIGHT TIME 122.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 316.224

RL 147.10 LAL -.00 LOL 97.35 VL 27.103 GAL 3.29 AZL 88.07 HCA 135.51 SMA 124.06 ECC .19414 INC 1.9350 V1 30.286
RP 108.36 LAP 1.36 LOP 232.88 VP 37.146 GAP -8.53 AZP 91.38 TAL 186.11 TAP 301.61 RCA 99.97 APO 148.14 V2 34.974
RC 51.881 GL 14.18 GP 10.47 ZAL 64.62 ZAP 19.80 ETS 331.72 ZAE 154.52 ETE 10.87 ZAC 125.10 ETC 156.80 CLP -16.90

PLANETOCENTRIC CONIC

C3 13.904 VHL 3.729 DLA 25.99 RAL 26.04 RAD 6567.5 VEL 11.631 PTH 2.04 WHP 6.106 DPA 21.13 RAP 30.28 ECC 1.2288
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 16 46 3122.32 -27.02 105.25 250.09 81.19 3 8 49 2522.3 -27.96 96.71
90.00 22 51 39 3783.84 -12.97 148.33 245.51 64.61 23 54 43 3183.8 -16.29 141.22
100.00 4 5 11 2772.79 -29.31 79.87 250.43 83.86 4 51 24 2172.8 -29.85 71.11
100.00 23 45 55 3608.80 -10.91 134.40 244.45 62.00 24 46 4 3008.6 -14.57 127.52
110.00 6 1 48 2497.91 -34.18 52.48 250.76 89.87 6 41 56 1807.9 -33.85 43.25
110.00 0 9 44 3546.24 -6.72 127.15 241.92 56.40 1 8 50 2946.2 -11.09 120.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6023 TRA-1.0516 TC3 .8085 BAW .1560 SGT 2109.9 SGR 508.2 SCS 368.8 ST 1071.3 SR 444.2 SS 1089.4
RDE -.2866 RRA -.1114 RC3 .2244 FAU .05491 RRT .7935 RRF -.8291 RTF -.9350 CRT .9216 CRS .9550 CST .9950
FDE 1.2211 FRA 1.6746 FC3-3.4189 BSP 7117 SGB 2120.3 R23 -.1173 R13 -.9386 LSA 1582.6 HSA 164.4 SSA 16.5
BOE .6671 BRA 1.0575 BC3 .8391 FSP -1082 SGI 2148.9 SGE 303.7 TMA 11.04 EL1 1148.6 EL2 160.8 ALF 21.35

LAUNCH DATE DEC 29 1968

FLIGHT TIME 124.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 322.872

RL 147.10 LAL -.00 LOL 97.35 VL 27.185 GAL 3.10 AZL 88.21 HCA 138.70 SMA 124.58 ECC .18849 INC 1.7887 V1 30.286
RP 108.40 LAP 1.18 LOP 236.07 VP 37.194 GAP -7.92 AZP 91.34 TAL 186.43 TAP 305.13 RCA 101.10 APO 148.06 V2 34.961
RC 53.536 GL 13.62 GP 11.78 ZAL 65.12 ZAP 22.38 ETS 332.23 ZAE 153.37 ETE 14.08 ZAC 125.33 ETC 155.56 CLP -19.17

PLANETOCENTRIC CONIC

C3 12.954 VHL 3.599 DLA 25.25 RAL 25.88 RAD 6567.5 VEL 11.591 PTH 2.03 WHP 5.789 DPA 22.69 RAP 30.63 ECC 1.2132
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 30 6 3056.72 -27.62 100.54 248.45 83.48 3 21 3 2456.7 -28.25 91.93
90.00 22 35 27 3818.66 -11.95 150.38 243.63 64.14 23 39 6 3218.7 -15.33 143.33
100.00 4 15 11 2717.93 -29.64 75.83 248.67 85.97 5 0 29 2117.9 -29.89 67.03
100.00 23 35 3 3632.68 -10.14 135.77 242.89 61.75 24 33 36 3032.7 -13.84 128.93
110.00 6 7 54 2365.28 -34.15 49.15 248.78 91.64 6 47 19 1785.3 -33.54 39.98
110.00 0 0 46 3558.09 -6.27 127.78 240.35 56.33 1 0 4 2938.1 -10.65 121.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5854 TRA-1.0227 TC3 .9102 BAW .1665 SGT 2130.3 SGR 580.0 SCS 408.4 ST 1077.3 SR 459.5 SS 1125.3
RDE -.2850 RRA -.1367 RC3 .3099 FAU .05980 RRT .8402 RRF -.8784 RTF -.9385 CRT .9333 CRS .9621 CST .9956
FDE 1.2818 FRA 1.7874 FC3-3.9969 BSP 7231 SGB 2202.7 R23 -.1370 R13 -.9432 LSA 1616.8 HSA 156.2 SSA 16.5
BOE .6511 BRA 1.0318 BC3 .9615 FSP -1205 SGI 2182.7 SGE 296.4 TMA 12.69 EL1 1161.2 EL2 153.1 ALF 22.11

LAUNCH DATE DEC 29 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 329.503

RL 147.10 LAL -.00 LOL 97.35 VL 27.260 GAL 2.93 AZL 88.38 HCA 141.89 SMA 125.06 ECC .18334 INC 1.6229 V1 30.286
RP 108.43 LAP 1.00 LOP 239.25 VP 37.237 GAP -7.32 AZP 91.28 TAL 166.76 TAP 308.65 RCA 102.13 APO 147.98 V2 34.948
RC 55.282 GL 12.81 GP 13.34 ZAL 65.62 ZAP 25.18 ETS 332.42 ZAE 152.35 ETE 17.62 ZAC 125.29 ETC 154.20 CLP -21.56

PLANETOCENTRIC CONIC

C3 12.094 VHL 3.478 DLA 24.29 RAL 25.41 RAD 6567.5 VEL 11.553 PTH 2.02 VHP 5.493 DPA 24.43 RAP 30.75 ECC 1.1990
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 45 51 2984.11 -28.07 95.27 246.83 86.08 3 35 35 2384.1 -28.31 86.82
90.00 22 17 35 3861.99 -10.65 152.90 241.85 63.61 23 21 57 3262.0 -14.11 145.93
100.00 4 27 45 2655.57 -29.85 71.20 246.93 88.39 5 12 0 2055.6 -29.76 62.40
100.00 23 18 22 3665.76 -9.06 137.64 241.02 61.39 24 19 28 3065.8 -12.81 130.86
110.00 6 16 12 2316.26 -33.99 45.33 246.83 93.90 6 54 49 1716.3 -33.07 36.21
110.00 23 46 24 3577.84 -5.53 128.82 238.86 56.21 24 46 2 2977.8 -9.93 122.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5634 TRA -.9937 TC3 1.0089 BAU .1766 SGT 2140.1 SGR 630.3 S63 451.5 ST 1073.5 SR 479.2 S8 1154.3
RDE -.2856 RRA -.1669 RC3 .4190 FAU .06512 RRT .8770 RRF -.9176 RTF -.9414 CRT .9441 CR3 .9684 CST .9962
FDE 1.3337 FRA 1.9141 FC3-4.6614 BSP 7322 SGB 2231.0 R23 -.1584 R13 -.9475 LSA 1640.8 HSA 147.6 SSA 16.6
BOE .6316 BRA 1.0076 BC3 1.0924 FSP -1340 SGI 2211.6 S62 293.0 TMA 14.75 EL1 1166.6 EL2 145.3 ALF 23.23

LAUNCH DATE DEC 29 1968

FLIGHT TIME 128.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 336.113

RL 147.10 LAL -.00 LOL 97.35 VL 27.328 GAL 2.77 AZL 88.57 HCA 145.08 SMA 125.49 ECC .17868 INC 1.4319 V1 30.286
RP 108.47 LAP .82 LOP 242.44 VP 37.275 GAP -6.74 AZP 91.17 TAL 167.09 TAP 312.17 RCA 103.07 APO 147.91 V2 34.936
RC 57.109 GL 11.70 GP 15.21 ZAL 66.08 ZAP 28.25 ETS 332.35 ZAE 151.40 ETE 21.62 ZAC 124.93 ETC 152.71 CLP -24.09

PLANETOCENTRIC CONIC

C3 11.316 VHL 3.364 DLA 23.04 RAL 25.27 RAD 6567.4 VEL 11.520 PTH 2.01 VHP 5.220 DPA 26.40 RAP 30.58 ECC 1.1862
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 4 14 2903.73 -28.30 89.41 245.24 89.01 3 52 38 2303.7 -28.14 80.75
90.00 21 58 4 3914.56 -9.04 155.92 240.21 63.05 23 3 18 3314.6 -12.59 149.04
100.00 4 43 8 2584.84 -29.87 65.94 245.23 91.16 5 26 13 1984.8 -29.39 57.17
100.00 23 1 51 3708.68 -7.66 140.05 239.46 61.02 24 3 39 3108.7 -11.46 135.33
110.00 6 27 4 2259.68 -33.64 40.95 244.94 96.47 7 4 44 1659.7 -32.38 31.95
110.00 23 34 24 3606.61 -4.43 130.33 237.48 56.07 24 34 31 3006.6 -8.86 124.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5323 TRA -.9623 TC3 1.1128 BAU .1885 SGT 2134.2 SGR 723.6 S63 497.8 ST 1052.7 SR 502.6 S8 1169.6
RDE -.2875 RRA -.2034 RC3 .5604 FAU .07097 RRT .8044 RRF -.9467 RTF -.9444 CRT .9536 CR3 .9737 CST .9966
FDE 1.3658 FRA 2.0534 FC3-5.4298 BSP 7480 SGB 2253.5 R23 -.1778 R13 -.9525 LSA 1645.9 HSA 138.7 SSA 16.7
BOE .6050 BRA .9836 BC3 1.2459 FSP -1493 SGI 2234.2 S62 295.0 TMA 17.36 EL1 1158.4 EL2 137.5 ALF 24.86

LAUNCH DATE DEC 29 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 342.703

RL 147.10 LAL -.00 LOL 97.35 VL 27.389 GAL 2.62 AZL 88.79 HCA 148.27 SMA 125.89 ECC .17448 INC 1.2076 V1 30.286
RP 108.51 LAP .64 LOP 245.62 VP 37.308 GAP -6.19 AZP 91.03 TAL 167.41 TAP 315.67 RCA 103.92 APO 147.85 V2 34.923
RC 59.010 GL 10.20 GP 17.47 ZAL 66.52 ZAP 31.61 ETS 332.05 ZAE 150.42 ETE 26.21 ZAC 124.19 ETC 151.11 CLP -26.78

PLANETOCENTRIC CONIC

C3 10.614 VHL 3.258 DLA 21.43 RAL 25.30 RAD 6567.4 VEL 11.489 PTH 2.00 VHP 4.974 DPA 28.66 RAP 30.06 ECC 1.1747
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 25 41 2814.12 -28.23 82.86 243.69 92.30 4 12 35 2214.1 -27.61 74.24
90.00 21 36 49 3977.89 -7.07 159.53 238.75 62.51 22 43 7 3377.9 -10.70 152.73
100.00 5 1 45 2504.31 -29.61 59.97 243.60 94.29 5 43 30 1904.3 -28.70 51.29
100.00 22 43 25 3762.93 -5.85 143.07 238.09 60.63 23 46 8 3162.9 -9.72 136.42
110.00 6 40 58 2193.95 -33.02 35.92 243.12 99.38 7 17 31 1594.0 -31.37 27.09
110.00 23 20 43 3646.06 -2.93 132.40 236.28 55.95 24 21 29 3046.1 -7.38 126.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4974 TRA -.9331 TC3 1.1968 BAU .1997 SGT 2117.0 SGR 846.5 S63 546.4 ST 1022.5 SR 531.0 S8 1171.8
RDE -.2909 RRA -.2494 RC3 .7403 FAU .07686 RRT .8233 RRF -.9670 RTF -.9462 CRT .9626 CR3 .9782 CST .9976
FDE 1.3750 FRA 2.2113 FC3-6.2695 BSP 7529 SGB 2279.9 R23 -.1949 R13 -.9573 LSA 1638.2 HSA 128.6 SSA 17.1
BOE .5762 BRA .9659 BC3 1.4073 FSP -1646 SGI 2259.5 S62 304.6 TMA 20.66 EL1 1145.0 EL2 128.4 ALF 26.93

LAUNCH DATE DEC 29 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 349.272

RL 147.10 LAL -.00 LOL 97.35 VL 27.443 GAL 2.49 AZL 89.08 HCA 151.45 SMA 126.25 ECC .17070 INC .9395 V1 30.286
RP 108.55 LAP .45 LOP 248.80 VP 37.337 GAP -5.64 AZP 90.83 TAL 167.72 TAP 319.17 RCA 104.70 APO 147.80 V2 34.911
RC 60.976 GL 8.18 GP 20.23 ZAL 66.93 ZAP 35.35 ETS 331.55 ZAE 149.27 ETE 31.52 ZAC 122.97 ETC 149.40 CLP -29.63

PLANETOCENTRIC CONIC

C3 9.985 VHL 3.180 DLA 19.36 RAL 25.54 RAD 6567.4 VEL 11.462 PTH 1.99 VHP 4.761 DPA 31.31 RAP 29.10 ECC 1.1643
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 50 52 2712.84 -27.73 75.49 242.21 95.95 4 36 5 2112.8 -26.62 67.00
90.00 21 13 33 4054.62 -4.64 163.86 237.57 62.03 22 21 7 3454.6 -8.34 157.14
100.00 5 24 15 2411.68 -28.95 53.17 242.04 97.81 6 4 27 1811.7 -27.56 44.64
100.00 22 22 50 3831.01 -3.57 146.83 236.98 60.30 23 26 41 3231.0 -7.50 140.24
110.00 6 58 31 2116.77 -32.02 30.13 241.40 102.67 7 33 48 1516.8 -29.94 21.53
110.00 23 5 4 3688.69 -.92 135.15 235.33 55.83 24 6 43 3088.7 -5.40 128.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4550 TRA -.9037 TC3 1.2627 BAU .2127 SGT 2081.8 SGR 1005.8 S63 594.8 ST 976.1 SR 561.8 S8 1150.9
RDE -.2938 RRA -.3081 RC3 .9719 FAU .08285 RRT .9351 RRF -.9805 RTF -.9471 CRT .9710 CR3 .9816 CS1 .9985
FDE 1.3424 FRA 2.3820 FC3-7.1661 BSP 7617 SGB 2312.0 R23 -.2052 R13 -.9626 LSA 1605.9 HSA 117.3 SSA 17.8
BOE .5416 BRA .9548 BC3 1.5934 FSP -1802 SGI 2289.2 S62 324.1 TMA 24.84 EL1 1120.1 EL2 117.1 ALF 29.56

LAUNCH DATE DEC 29 1968

FLIGHT TIME 134.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 355.819

RL 147.10 LAL -.00 LOL 97.35 VL 27.492 GAL 2.36 AZL 89.39 MCA 154.63 SMA 126.57 ECC .16733 INC .6104 V1 30.286
RP 108.58 LAP .26 LOP 251.98 VP 37.562 GAP -5.12 AZP 90.55 TAL 168.01 TAP 322.64 RCA 105.39 APO 147.75 V2 34.900
RC 63.000 GL 5.47 GP 23.63 ZAL 67.31 ZAP 36.53 ETS 330.89 ZAE 147.74 ETE 37.58 ZAC 121.16 ETC 147.60 CLP -32.66

PLANETOCENTRIC CONIC

C3 9.436 VHL 3.072 DLA 16.64 RAL 26.06 RAD 6567.3 VEL 11.438 PTH 1.98 WHP 4.588 DPA 34.48 RAP 27.56 ECC 1.1553
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 20 52 2596.08 -26.63 67.13 240.88 100.00 5 4 8 1996.1 -24.98 58.85
90.00 20 47 42 4149.05 -1.61 169.14 236.77 61.72 21 56 51 3549.1 -5.37 162.49
100.00 5 51 38 2303.38 -27.89 45.37 240.65 101.73 6 30 1 1703.4 -25.79 37.08
100.00 21 59 37 3916.99 -.66 151.55 236.24 80.11 23 4 54 3317.0 -4.63 145.02
110.00 7 20 42 2024.71 -30.44 23.42 239.86 106.36 7 54 26 1424.7 -27.90 15.14
110.00 22 47 2 3768.42 1.74 138.78 234.74 55.86 23 49 51 3168.4 -2.75 132.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4032 TRA -.8720 TC3 1.3123 BAU .2305 SGT 2024.2 SGR 1211.1 SCS 639.3 ST 908.6 SR 590.1 SS 1096.2
RDE -.2923 RRA -.3842 RC3 1.2715 FAU .08799 RRT .9420 RRF -.9889 RTF -.9476 CRT .9790 CRS .9837 CST .9993
FDE 1.2456 FRA 2.5559 FC3-8.0723 B8P 7791 SGB 2358.0 R23 -.2029 R13 -.9660 LSA 1537.5 MSA 104.8 S5A 19.0
BOE .4980 BRA .9529 BC3 1.8272 F8P -1955 SGI 2332.3 SGE 352.7 THA 30.17 EL1 1078.6 EL2 101.3 ALF 32.78

LAUNCH DATE DEC 29 1968

FLIGHT TIME 136.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 362.344

RL 147.10 LAL -.00 LOL 97.35 VL 27.536 GAL 2.28 AZL 89.81 MCA 157.80 SMA 126.86 ECC .16434 INC .1936 V1 30.286
RP 108.62 LAP .07 LOP 255.16 VP 37.583 GAP -4.61 AZP 90.18 TAL 168.28 TAP 326.09 RCA 106.01 APO 147.71 V2 34.889
RC 65.076 GL 1.79 GP 27.85 ZAL 67.69 ZAP 44.23 ETS 330.13 ZAE 145.52 ETE 44.34 ZAC 118.65 ETC 145.75 CLP -35.86

PLANETOCENTRIC CONIC

C3 8.989 VHL 2.998 DLA 13.03 RAL 26.95 RAD 6567.3 VEL 11.418 PTH 1.98 WHP 4.471 DPA 38.25 RAP 25.25 ECC 1.1479
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 57 21 2438.03 -24.63 57.51 239.84 104.42 5 38 19 1858.0 -22.41 49.55
90.00 20 18 20 4268.24 2.24 175.79 236.55 61.76 21 29 28 3668.2 -1.55 169.16
100.00 6 25 28 2173.88 -25.57 36.33 239.96 106.03 7 1 42 1573.9 -23.13 28.39
100.00 21 32 55 4027.63 3.09 157.63 236.88 80.25 22 40 2 3427.6 -.89 151.10
110.00 7 48 56 1912.69 -28.03 15.59 236.85 110.41 8 20 49 1312.7 -25.00 7.73
110.00 22 25 56 3861.99 5.29 143.66 234.71 56.18 23 30 17 3261.6 .81 137.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3458 TRA -.8409 TC3 1.3144 BAU .2531 SGT 1943.9 SGR 1473.8 SCS 673.0 ST 825.9 SR 609.4 SS 1003.4
RDE -.2811 RRA -.4861 RC3 1.8480 FAU .09159 RRT .9445 RRF -.9939 RTF -.9463 CRT .9881 CRS .9843 CST .9992
FDE 1.0666 FRA 2.7232 FC3-8.8218 B8P 7993 SGB 2439.4 R23 -.1889 R13 -.9761 LSA 1432.2 MSA 93.3 S5A 20.6
BOE .4456 BRA .9713 BC3 2.1064 F8P -2067 SGI 2407.9 SGE 390.9 THA 36.75 EL1 1023.8 EL2 75.7 ALF 36.32

LAUNCH DATE DEC 29 1968

FLIGHT TIME 138.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 368.846

RL 147.10 LAL -.00 LOL 97.35 VL 27.574 GAL 2.19 AZL 90.35 MCA 160.98 SMA 127.12 ECC .16171 INC .3508 V1 30.286
RP 108.65 LAP -.11 LOP 256.33 VP 37.402 GAP -4.12 AZP 89.67 TAL 168.52 TAP 329.50 RCA 106.56 APO 147.67 V2 34.878
RC 67.198 GL -3.29 GP 33.13 ZAL 68.16 ZAP 49.58 ETS 329.36 ZAE 142.24 ETE 51.54 ZAC 115.25 ETC 143.94 CLP -39.23

PLANETOCENTRIC CONIC

C3 8.699 VHL 2.949 DLA 8.13 RAL 28.35 RAD 6567.3 VEL 11.406 PTH 1.97 WHP 4.435 DPA 42.85 RAP 21.83 ECC 1.1432
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 43 7 2289.57 -21.31 46.29 239.38 109.10 6 21 16 1689.6 -18.51 38.73
90.00 19 43 46 4424.19 7.21 184.55 237.30 62.54 20 57 30 3824.2 3.48 177.86
100.00 7 8 23 2014.55 -22.15 25.74 239.05 110.60 7 41 57 1414.5 -19.15 18.23
100.00 21 1 10 4174.45 7.99 165.77 236.88 61.10 22 10 45 3574.4 4.08 159.17
110.00 8 25 35 1772.94 -24.37 6.38 238.05 114.75 8 55 8 1172.9 -20.83 359.03
110.00 22 0 27 3988.82 10.06 150.43 235.63 57.16 23 6 56 3388.8 5.66 144.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2817 TRA -.8075 TC3 1.2642 BAU .2848 SGT 1834.8 SGR 1806.0 SCS 685.4 ST 725.2 SR 606.2 SS 867.5
RDE -.2474 RRA -.6243 RC3 2.0968 FAU .09233 RRT .9436 RRF -.9968 RTF -.9433 CRT .9976 CRS .9830 CST .9917
FDE .7781 FRA 2.8500 FC3-9.1881 B8P 8392 SGB 2574.5 R23 -.1619 R13 -.9836 LSA 1278.9 MSA 99.5 S5A 18.8
BOE .3749 BRA 1.0207 BC3 2.4484 F8P -2121 SGI 2537.9 SGE 432.4 THA 44.82 EL1 944.6 EL2 32.3 ALF 39.88

LAUNCH DATE DEC 29 1968

FLIGHT TIME 140.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 375.323

RL 147.10 LAL -.00 LOL 97.35 VL 27.607 GAL 2.12 AZL 91.11 MCA 164.15 SMA 127.34 ECC .15942 INC 1.1066 V1 30.286
RP 108.68 LAP -.30 LOP 261.50 VP 37.417 GAP -3.64 AZP 88.94 TAL 168.73 TAP 332.87 RCA 107.04 APO 147.64 V2 34.867
RC 69.360 GL -10.40 GP 39.74 ZAL 68.90 ZAP 55.60 ETS 328.70 ZAE 137.44 ETE 58.73 ZAC 110.79 ETC 142.28 CLP -42.72

PLANETOCENTRIC CONIC

C3 8.716 VHL 2.952 DLA 1.32 RAL 30.47 RAD 6567.3 VEL 11.406 PTH 1.97 WHP 4.528 DPA 48.44 RAP 16.75 ECC 1.1434
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 43 4 2076.17 -15.99 32.90 240.13 113.69 7 17 40 1476.2 -12.65 25.82
90.00 19 0 40 4638.33 13.69 196.95 239.79 64.97 20 17 59 4038.3 10.20 190.00
100.00 8 5 1 1811.81 -16.76 13.10 239.77 115.12 8 35 13 1211.8 -13.24 6.08
100.00 20 21 24 4377.92 14.45 177.42 239.41 63.55 21 34 22 3777.9 10.79 170.55
110.00 9 14 40 1593.78 -18.83 355.44 238.66 119.07 9 41 14 993.8 -14.81 348.63
110.00 21 28 14 4168.70 16.50 180.59 238.26 59.63 22 37 43 3568.7 12.34 153.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2134 TRA -.7725 TC3 1.1308 BAU .3268 SGT 1693.8 SGR 2217.4 SCS 661.7 ST 614.4 SR 579.9 SS 719.3
RDE -.1695 RRA -.8164 RC3 2.5867 FAU .08808 RRT .9388 RRF -.9984 RTF -.9374 CRT .9887 CRS .9806 CST .9412
FDE .3739 FRA 2.8888 FC3-8.7488 B8P 9057 SGB 2790.3 R23 -.1266 R13 -.9903 LSA 1097.6 MSA 162.2 S5A 11.2
BOE .2741 BRA 1.1239 BC3 2.8048 F8P -2088 SGI 2750.4 SGE 470.5 THA 53.10 EL1 842.5 EL2 63.4 ALF 43.33

LAUNCH DATE DEC 29 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 20 1969

MELIOCENTRIC CONIC

DISTANCE 361.774

RL 147.10 LAL -.00 LOL 97.35 VL 27.637 GAL 2.06 AZL 92.23 MCA 167.31 SMA 127.54 ECC .15745 INC 2.2265 V1 30.286  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.429 GAP -3.18 AZP 87.83 TAL 168.89 TAP 336.20 RCA 107.46 APO 147.62 V2 34.858  
 RC 71.560 GL -20.43 GP 47.99 ZAL 70.32 ZAP 62.38 ETS 328.33 ZAE 130.66 ETE 65.37 ZAC 105.13 ETC 140.97 CLP -46.15

PLANETOCENTRIC CONIC

C3 9.447 VHL 3.074 DLA -8.22 RAL 33.62 RAD 6567.5 VEL 11.438 PTH 1.98 VHP 4.848 DPA 55.08 RAP 8.82 ECC 1.1555  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 7 26 1793.21 -7.62 16.34 245.54 117.35 8 37 19 1193.2 -3.89 9.64  
 90.00 18 1 27 4952.38 21.73 216.46 245.77 71.38 19 24 0 4352.4 18.99 208.86  
 100.00 9 24 48 1543.61 -8.43 357.55 243.10 118.79 9 30 32 943.6 -4.52 350.94  
 100.00 19 26 46 4677.20 22.59 195.90 245.44 69.89 20 44 43 4077.2 19.65 188.34  
 110.00 10 23 59 1358.32 -10.56 342.21 241.82 122.70 10 46 37 758.3 -6.17 335.86  
 110.00 20 44 5 4435.26 24.89 176.51 244.42 65.77 21 58 0 3835.3 21.40 169.09

DIFFERENTIAL CORRECTIONS

TDE -.1539 TRA -.7350 TC3 .8948 BAU .3796 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.0076 RRA-1.0902 RC3 2.8694 FAU .07678 SGT 1517.1 SGR 2707.0 SCS 585.6 ST 905.1 SR 618.4 SS 663.1  
 FDE -.1106 FRA 2.7683 FC3-7.0365 BSP 10000 RRT .9295 RRF -.9992 RTF -.9276 CRT .8349 CRS .9882 CST .7412  
 BOE .1541 BRA 1.5149 BC3 3.0056 FSP -1858 SCS 3103.1 R23 -.0895 R13 -.9952 LSA 996.3 MSA 290.9 SSA 5.3  
 EL1 766.3 EL2 224.3 ALF 51.86

LAUNCH DATE DEC 29 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 22 1969

MELIOCENTRIC CONIC

DISTANCE 368.179

RL 147.10 LAL -.00 LOL 97.35 VL 27.662 GAL 2.01 AZL 94.07 MCA 170.46 SMA 127.71 ECC .15577 INC 4.0725 V1 30.286  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.439 GAP -2.73 AZP 85.98 TAL 169.02 TAP 339.49 RCA 107.82 APO 147.60 V2 34.848  
 RC 73.792 GL -34.18 GP 58.17 ZAL 73.18 ZAP 69.78 ETS 328.43 ZAE 121.50 ETE 70.88 ZAC 98.19 ETC 140.16 CLP -49.07

PLANETOCENTRIC CONIC

C3 12.228 VHL 3.497 DLA -21.19 RAL 38.29 RAD 6567.5 VEL 11.559 PTH 2.02 VHP 5.628 DPA 62.55 RAP 355.35 ECC 1.2012  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 27 35 1374.17 5.80 352.85 253.44 117.77 10 50 30 774.2 9.47 346.10  
 90.00 16 18 32 5476.58 28.27 253.16 258.86 88.38 17 49 49 4876.6 27.75 244.93  
 100.00 11 34 33 1158.05 4.54 356.28 252.75 119.58 11 53 51 558.1 8.45 329.67  
 100.00 17 34 16 5187.93 29.70 230.38 258.78 86.47 19 20 24 4567.9 28.90 221.66  
 110.00 12 12 29 1039.18 1.51 325.39 250.86 124.15 12 29 48 439.2 5.99 319.15  
 110.00 19 32 49 4859.57 33.25 206.52 258.35 81.57 20 53 49 4259.6 31.73 197.62

DIFFERENTIAL CORRECTIONS

TDE -.0114 TRA -.8054 TC3 .9109 BAU .5096 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4212 RRA-1.3772 RC3 2.9814 FAU .06630 SGT 1240.2 SGR 3268.2 SCS 453.8 ST 320.5 SR 1003.6 SS 827.3  
 FDE -.7498 FRA 2.2262 FC3-4.6943 BSP 15191 RRT .9598 RRF -.9996 RTF -.9564 CRT .6845 CRS .9888 CST .6486  
 BOE .4213 BRA 1.5044 BC3 3.1175 FSP -1873 SCS 3495.6 R23 -.0453 R13 -.9987 LSA 1318.5 MSA 236.4 SSA 2.0  
 EL1 1028.6 EL2 227.8 ALF 77.05

LAUNCH DATE DEC 29 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 24 1969

MELIOCENTRIC CONIC

DISTANCE 394.575

RL 147.10 LAL -.00 LOL 97.35 VL 27.683 GAL 1.98 AZL 97.71 MCA 175.60 SMA 127.85 ECC .15442 INC 7.7082 V1 30.286  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.448 GAP -2.30 AZP 82.34 TAL 169.04 TAP 342.64 RCA 108.11 APO 147.59 V2 34.839  
 RC 76.053 GL -50.68 GP 70.49 ZAL 77.95 ZAP 77.31 ETS 328.18 ZAE 109.59 ETE 73.91 ZAC 90.24 ETC 139.25 CLP -48.87

PLANETOCENTRIC CONIC

C3 23.010 VHL 4.797 DLA -36.65 RAL 45.07 RAD 6567.9 VEL 12.016 PTH 2.14 VHP 7.538 DPA 69.56 RAP 329.69 ECC 1.3787  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.69 10 56 7 1475.46 23.92 10.30 278.46 118.64 11 20 42 875.5 27.55 2.80  
 114.31 16 44 8 5664.87 23.93 265.57 278.47 118.63 18 18 32 5064.9 27.56 258.06  
 65.69 10 56 7 1475.46 23.92 10.30 278.46 118.64 11 20 42 875.5 27.55 2.80  
 114.31 16 44 8 5664.87 23.93 265.57 278.47 118.63 18 18 32 5064.9 27.56 258.06  
 65.69 10 56 7 1475.46 23.92 10.30 278.46 118.64 11 20 42 875.5 27.55 2.80  
 114.31 16 44 8 5664.87 23.93 265.57 278.47 118.63 18 18 32 5064.9 27.56 258.06

DIFFERENTIAL CORRECTIONS

TDE -.1714 TRA -.7514 TC3 .1754 BAU .4285 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .8186 RRA-2.2684 RC3 1.3820 FAU .02943 SGT 1149.7 SGR 3757.7 SCS 274.9 ST 393.1 SR 1408.6 SS 784.6  
 FDE -.7026 FRA 1.9342 FC3-1.1073 BSP 11849 RRT .8799 RRF -.9998 RTF -.8825 CRT .2530 CRS 1.0000 CST .2498  
 BOE .8363 BRA 2.3896 BC3 1.3931 FSP -843 SCS 3929.6 R23 -.0312 R13 -.9993 LSA 1615.6 MSA 379.7 SSA 1.2  
 EL1 1412.4 EL2 379.3 ALF 85.65

LAUNCH DATE DEC 29 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 26 1969

MELIOCENTRIC CONIC

DISTANCE 400.847

RL 147.10 LAL -.00 LOL 97.35 VL 27.700 GAL 1.98 AZL 108.08 MCA 176.66 SMA 127.97 ECC .15338 INC 8.0791 V1 30.286  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.451 GAP -1.80 AZP 71.95 TAL 168.95 TAP 345.61 RCA 108.34 APO 147.60 V2 34.831  
 RC 78.340 GL -64.52 GP 84.18 ZAL 83.96 ZAP 84.18 ETS 305.72 ZAE 93.23 ETE 52.54 ZAC 81.56 ETC 117.04 CLP -1.95

PLANETOCENTRIC CONIC

C3 90.564 VHL 9.517 DLA -49.95 RAL 51.55 RAD 6568.8 VEL 14.557 PTH 2.64 VHP 13.657 DPA 71.34 RAP 279.59 ECC 2.4905  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.96 10 4 20 2021.03 15.15 50.92 308.38 138.19 10 38 1 1421.0 21.04 45.64  
 133.04 18 27 35 5789.78 15.16 269.03 308.39 138.19 20 4 5 5189.8 21.05 263.74  
 46.96 10 4 20 2021.03 15.15 50.92 308.38 138.19 10 38 1 1421.0 21.04 45.64  
 133.04 18 27 35 5789.78 15.16 269.03 308.39 138.19 20 4 5 5189.8 21.05 263.74  
 46.96 10 4 20 2021.03 15.15 50.92 308.38 138.19 10 38 1 1421.0 21.04 45.64  
 133.04 18 27 35 5789.78 15.16 269.03 308.39 138.19 20 4 5 5189.8 21.05 263.74

DIFFERENTIAL CORRECTIONS

TDE .4506 TRA -2.4217 TC3 .0429 BAU .1656 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 2.0814 RRA-3.5436 RC3 .1299 FAU .00346 SGT 2283.6 SGR 3553.1 SCS 122.9 ST 731.9 SR 1600.0 SS 678.9  
 FDE -.6728 FRA 1.4557 FC3 -.0331 BSP 13028 RRT .9703 RRF -.9971 RTF -.9856 CRT .8677 CRS .9929 CST .9205  
 BOE 2.1296 BRA 4.2920 BC3 .1368 FSP -391 SCS 4223.7 R23 .0044 R13 -.9999 LSA 1855.3 MSA 337.9 SSA .8  
 EL1 1726.8 EL2 337.0 ALF 67.44



LAUNCH DATE DEC 29 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.714 GAL 2.19 AZL 179.45 MCA 178.79 SMA 128.07 ECC .15338 INC89.2964 VI 30.286  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.455 GAP -1.78 AZP .55 TAL 167.76 TAP 346.54 RCA 108.42 APO 147.71 V2 34.824  
 RC 80.691 GL -42.74 GP 45.73 ZAL 88.45 ZAP 88.58 ETS 179.78 ZAE 49.28 ETE 291.51 ZAC 72.98 ETC 1.42 CLP 87.97

DISTANCE 406.050

PLANETOCENTRIC CONIC

C31864.836 WHL 40.802 DLA -35.07 RAL 27.73 RAD 6573.2 VEL 42.262 PTH 3.57 WHP 52.252 DPA 41.44 RAP 209.48 ECC28.3990  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.38 10 1 48 2084.45 -.97 42.01 299.10 125.06 10 36 33 1484.5 3.62 35.88  
 111.62 15 20 5 1074.53 -.96 326.45 299.11 125.06 15 36 0 474.5 3.63 320.32  
 68.38 10 1 48 2084.45 -.97 42.01 299.10 125.06 10 36 33 1484.5 3.62 35.88  
 111.62 15 20 5 1074.53 -.96 326.45 299.11 125.06 15 36 0 474.5 3.63 320.32  
 68.38 10 1 48 2084.45 -.97 42.01 299.10 125.06 10 36 33 1484.5 3.62 35.88  
 111.62 15 20 5 1074.53 -.96 326.45 299.11 125.06 15 36 0 474.5 3.63 320.32

DIFFERENTIAL CORRECTIONS

TDE 6.4389 TRA-2.8951 TC3 -.1139 BAU 5.5035  
 RDE-7.1209 RRA12.3964 RC3 .2235 FAU-.10622  
 FDE-1.8372 FRA 3.0464 FC3 .0552 B3P 7325  
 BOE 9.6004 BRA12.7300 BC3 .2509 F3P -150

MID-COURSE EXECUTION ACCURACY

SGT 1368.6 SGR 2975.0 SCS 63.7  
 RRT -.8090 RRF .9999 RTF -.8912  
 SGB 3283.1 R23 -.0656 R13 .9978  
 SGI 3228.6 SGE 595.7 THA 113.28

ORBIT DETERMINATION ACCURACY

ST 916.8 SR 1187.5 SS 1363.8  
 CRT -.9192 CRS -.9998 CST .9276  
 LSA 2002.5 MSA 317.0 SSA .6  
 EL1 1471.6 EL2 291.2 ALF 127.06

LAUNCH DATE DEC 29 1968

FLIGHT TIME 152.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.725 GAL 1.88 AZL 66.20 MCA 183.44 SMA 128.14 ECC .15148 INC23.7953 VI 30.286  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.456 GAP -.94 AZP 113.76 TAL 169.40 TAP 352.84 RCA 108.73 APO 147.55 V2 34.816  
 RC 82.981 GL 65.81 GP -86.66 ZAL 85.55 ZAP 86.81 ETS 114.84 ZAE 90.85 ETE 11.20 ZAC 107.56 ETC 309.97 CLP -17.12

DISTANCE 414.090

PLANETOCENTRIC CONIC

C3 150.225 WHL 12.257 DLA 68.62 RAL 327.80 RAD 6570.6 VEL 16.479 PTH 2.87 WHP 13.236 DPA -62.30 RAP 96.27 ECC 3.4723  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.49 15 45 34 4854.95 -11.56 236.89 231.73 27.99 17 6 29 4255.0 -18.59 233.36  
 148.51 1 30 11 3159.64 -11.55 96.38 231.71 27.99 2 30 51 2559.6 -18.58 92.85  
 31.49 15 45 34 4854.95 -11.56 236.89 231.73 27.99 17 6 29 4255.0 -18.59 233.36  
 148.51 1 30 11 3159.64 -11.55 96.38 231.71 27.99 2 30 51 2559.6 -18.58 92.85  
 31.49 15 45 34 4854.95 -11.56 236.89 231.73 27.99 17 6 29 4255.0 -18.59 233.36  
 148.51 1 30 11 3159.64 -11.55 96.38 231.71 27.99 2 30 51 2559.6 -18.58 92.85

DIFFERENTIAL CORRECTIONS

TDE-7.3558 TRA 1.5985 TC3 -.0649 BAU .1428  
 RDE-4.8415 RRA -.3984 RC3 -.0291 FAU-.00273  
 FDE 2.9531 FRA -.5234 FC3 .0157 B3P 13404  
 BOE 8.8061 BRA 1.6474 BC3 .0711 F3P -406

MID-COURSE EXECUTION ACCURACY

SGT 3806.6 SGR 2300.3 SCS 127.9  
 RRT .8149 RRF -.8552 RTF -.9972  
 SGB 4447.6 R23 .0757 R13 -.9970  
 SGI 4287.2 SGE 1183.8 THA 28.60

ORBIT DETERMINATION ACCURACY

ST 3473.0 SR 2266.5 SS 1589.1  
 CRT .9811 CRS .9858 CST .9997  
 LSA 4425.6 MSA 371.3 SSA .9  
 EL1 4130.7 EL2 368.3 ALF 32.93

LAUNCH DATE DEC 29 1968

FLIGHT TIME 154.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.733 GAL 1.91 AZL 76.12 MCA 186.50 SMA 128.20 ECC .15113 INC13.8830 VI 30.286  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.456 GAP -.57 AZP 103.80 TAL 169.16 TAP 355.66 RCA 108.82 APO 147.57 V2 34.810  
 RC 85.328 GL 62.15 GP -73.75 ZAL 82.60 ZAP 86.21 ETS 22.46 ZAE 105.60 ETE 280.98 ZAC 112.30 ETC 216.60 CLP -76.34

DISTANCE 420.305

PLANETOCENTRIC CONIC

C3 56.579 WHL 7.522 DLA 62.24 RAL 337.03 RAD 6569.0 VEL 13.339 PTH 2.44 WHP 7.297 DPA -56.54 RAP 69.53 ECC 1.9311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.95 16 23 30 4640.84 -24.11 229.96 233.41 30.69 17 40 51 4040.8 -30.91 225.63  
 148.05 2 13 55 2949.27 -24.10 89.99 233.40 30.68 3 3 4 2349.3 -30.91 85.66  
 31.95 16 23 30 4640.84 -24.11 229.96 233.41 30.69 17 40 51 4040.8 -30.91 225.63  
 148.05 2 13 55 2949.27 -24.10 89.99 233.40 30.68 3 3 4 2349.3 -30.91 85.66  
 31.95 16 23 30 4640.84 -24.11 229.96 233.41 30.69 17 40 51 4040.8 -30.91 225.63  
 148.05 2 13 55 2949.27 -24.10 89.99 233.40 30.68 3 3 4 2349.3 -30.91 85.66

DIFFERENTIAL CORRECTIONS

TDE .1838 TRA -.2800 TC3 -.0210 BAU .3300  
 RDE 5.5208 RRA -.6050 RC3 -.4357 FAU .02503  
 FDE 4.2151 FRA -.4057 FC3 -.3831 B3P 13817  
 BOE 5.5236 BRA .6585 BC3 .4363 F3P -958

MID-COURSE EXECUTION ACCURACY

SGT 448.7 SGR 4369.4 SCS 287.6  
 RRT .5254 RRF .9994 RTF .5020  
 SGB 4392.4 R23 .0319 R13 .9992  
 SGI 4375.8 SGE 381.2 THA 86.89

ORBIT DETERMINATION ACCURACY

ST 189.4 SR 4215.6 SS 2028.0  
 CRT .7848 CRS-1.0000 CST -.7795  
 LSA 4680.4 MSA 118.6 SSA 1.5  
 EL1 4218.3 EL2 117.3 ALF 87.98

LAUNCH DATE DEC 29 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.738 GAL 1.95 AZL 79.66 MCA 189.63 SMA 128.23 ECC .15095 INC10.3424 VI 30.286  
 RP 108.86 LAP -1.72 LOP 286.83 VP 37.455 GAP -.19 AZP 100.20 TAL 168.94 TAP 358.57 RCA 108.88 APO 147.59 V2 34.804  
 RC 87.891 GL 57.50 GP -63.55 ZAL 80.58 ZAP 87.62 ETS 9.72 ZAE 115.91 ETE 269.19 ZAC 114.51 ETC 202.99 CLP -84.65

DISTANCE 426.579

PLANETOCENTRIC CONIC

C3 34.826 WHL 5.801 DLA 59.96 RAL 345.71 RAD 6568.4 VEL 12.498 PTH 2.26 WHP 5.296 DPA -50.13 RAP 55.81 ECC 1.5731  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.66 17 4 50 4507.20 -30.40 222.63 235.89 35.48 18 19 58 3907.2 -36.79 217.26  
 145.34 2 41 50 2839.56 -30.39 85.92 235.87 35.48 3 29 9 2239.6 -36.78 80.55  
 34.66 17 4 50 4507.20 -30.40 222.63 235.89 35.48 18 19 58 3907.2 -36.79 217.26  
 145.34 2 41 50 2839.56 -30.39 85.92 235.87 35.48 3 29 9 2239.6 -36.78 80.55  
 34.66 17 4 50 4507.20 -30.40 222.63 235.89 35.48 18 19 58 3907.2 -36.79 217.26  
 145.34 2 41 50 2839.56 -30.39 85.92 235.87 35.48 3 29 9 2239.6 -36.78 80.55

DIFFERENTIAL CORRECTIONS

TDE .9434 TRA -.2992 TC3 -.2226 BAU .4158  
 RDE 4.0843 RRA -.1183 RC3 -.8649 FAU .05425  
 FDE 5.8725 FRA -.0970 FC3-1.3486 B3P 13210  
 BOE 4.1723 BRA .3217 BC3 .8931 F3P -1647

MID-COURSE EXECUTION ACCURACY

SGT 1115.7 SGR 4082.3 SCS 495.6  
 RRT .8817 RRF .9993 RTF .8707  
 SGB 4232.0 R23 .0518 R13 .9982  
 SGI 4201.0 SGE 511.5 THA 76.24

ORBIT DETERMINATION ACCURACY

ST 932.4 SR 3946.7 SS 2520.3  
 CRT .9855 CRS-1.0000 CST -.9843  
 LSA 4772.1 MSA 157.7 SSA 2.1  
 EL1 4052.4 EL2 154.0 ALF 76.87

LAUNCH DATE DEC 29 1968

FLIGHT TIME 158.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 432.852

RL 147.10 LAL -.00 LOL 97.35 VL 27.741 GAL 1.99 AZL 81.47 MCA 192.77 SMA 128.25 ECC .15095 INC 8.5311 V1 30.286  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.452 GAP .19 AZP 98.32 TAL 168.70 TAP 1.47 RCA 108.99 APO 147.61 V2 34.799  
 RC 90.065 GL 53.53 GP -55.33 ZAL 78.65 ZAP 90.53 ETS 2.70 ZAE 123.86 ETE 261.47 ZAC 115.07 ETC 194.97 CLP -90.94

PLANETOCENTRIC CONIC

C3 26.154 WHL 5.114 DLA 57.57 RAL 351.96 RAD 6568.1 VEL 12.146 PTH 2.18 VHP 4.361 DPA -44.47 RAP 46.70 ECC 1.4304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.53 17 37 13 4421.21 -33.37 216.23 237.24 39.95 18 50 54 3821.2 -39.33 210.01  
 142.47 2 59 18 2782.05 -33.35 83.13 237.22 39.95 3 45 40 2182.1 -39.31 76.92  
 37.53 17 37 13 4421.21 -33.37 216.23 237.24 39.95 18 50 54 3821.2 -39.33 210.01  
 142.47 2 59 18 2782.05 -33.35 83.13 237.22 39.95 3 45 40 2182.1 -39.31 76.92  
 37.53 17 37 13 4421.21 -33.37 216.23 237.24 39.95 18 50 54 3821.2 -39.33 210.01  
 142.47 2 59 18 2782.05 -33.35 83.13 237.22 39.95 3 45 40 2182.1 -39.31 76.92

DIFFERENTIAL CORRECTIONS

TDE 1.2592 TRA -.2332 TC3 -.5015 BAU .4380 SGT 1578.2 SGR 3738.6 SCS 704.5 ORBIT DETERMINATION ACCURACY  
 ROE 3.1554 RRA .1131 RC3-1.1480 FAU .08299 RRT .9894 RRF .9992 RTF .9812 ST 1418.4 SR 3536.0 SS 2873.1  
 FDE 6.8031 FRA .3351 FC3-2.7470 BSP 12588 SGB 4092.5 R23 .0742 R13 .9967 CRT .9924 CR3-1.0000 CST -.9915  
 BOE 3.3974 BRA .2592 BC3 1.2528 FSP -2353 SGI 4016.1 SGE 541.5 THA 68.13 LSA 4768.7 MSA 171.4 SSA 2.5  
 EL1 3806.5 EL2 162.0 ALF 68.25

LAUNCH DATE DEC 29 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 439.114

RL 147.10 LAL -.00 LOL 97.35 VL 27.741 GAL 2.04 AZL 82.57 MCA 195.92 SMA 128.25 ECC .15114 INC 7.4272 V1 30.286  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.448 GAP .57 AZP 97.15 TAL 168.41 TAP 4.33 RCA 108.87 APO 147.64 V2 34.795  
 RC 92.449 GL 50.26 GP -48.49 ZAL 77.21 ZAP 94.44 ETS 357.70 ZAE 129.94 ETE 254.00 ZAC 114.53 ETC 188.94 CLP -96.70

PLANETOCENTRIC CONIC

C3 21.718 WHL 4.860 DLA 55.43 RAL 356.56 RAD 6567.8 VEL 11.962 PTH 2.13 VHP 3.859 DPA -39.63 RAP 39.83 ECC 1.3574  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.13 18 2 38 4361.37 -34.72 210.92 238.06 43.65 19 15 20 3761.4 -40.30 204.10  
 139.87 3 10 36 2750.95 -34.70 81.26 238.04 43.65 3 56 27 2150.9 -40.28 74.44  
 40.13 18 2 38 4361.37 -34.72 210.92 238.06 43.65 19 15 20 3761.4 -40.30 204.10  
 139.87 3 10 36 2750.95 -34.70 81.26 238.04 43.65 3 56 27 2150.9 -40.28 74.44  
 40.13 18 2 38 4361.37 -34.72 210.92 238.06 43.65 19 15 20 3761.4 -40.30 204.10  
 139.87 3 10 36 2750.95 -34.70 81.26 238.04 43.65 3 56 27 2150.9 -40.28 74.44

DIFFERENTIAL CORRECTIONS

TDE 1.4737 TRA -.1454 TC3 -.8275 BAU .4445 SGT 1994.3 SGR 3362.3 SCS 883.4 ORBIT DETERMINATION ACCURACY  
 ROE 2.5214 RRA .2326 RC3-1.2980 FAU .10747 RRT .9521 RRF .9990 RTF .9451 ST 1814.5 SR 3103.9 SS 3087.4  
 FDE 7.5193 FRA .8178 FC3-4.2842 BSP 12015 SGB 3909.2 R23 .0984 R13 .9943 CRT .9949 CR3-1.0000 CST -.9940  
 BOE 2.9205 BRA .2742 BC3 1.5309 FSP -2980 SGI 3873.2 SGE 529.4 THA 59.93 LSA 4735.7 MSA 177.1 SSA 3.0  
 EL1 3591.9 EL2 157.8 ALF 59.75

LAUNCH DATE DEC 29 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 445.360

RL 147.10 LAL -.00 LOL 97.35 VL 27.739 GAL 2.11 AZL 83.32 MCA 199.08 SMA 128.24 ECC .15152 INC 6.6809 V1 30.286  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.443 GAP .94 AZP 96.32 TAL 168.07 TAP 7.15 RCA 108.81 APO 147.67 V2 34.791  
 RC 94.840 GL 47.54 GP -42.70 ZAL 75.92 ZAP 98.90 ETS 353.96 ZAE 134.39 ETE 246.22 ZAC 113.35 ETC 184.22 CLP -102.15

PLANETOCENTRIC CONIC

C3 19.111 WHL 4.372 DLA 53.60 RAL .17 RAD 6567.8 VEL 11.853 PTH 2.10 VHP 3.575 DPA -35.51 RAP 34.33 ECC 1.3145  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.39 18 23 28 4317.07 -35.26 206.58 238.75 46.63 19 35 25 3717.1 -40.52 199.35  
 137.61 3 18 33 2734.18 -35.25 80.03 238.74 46.62 4 4 7 2134.2 -40.52 72.80  
 42.39 18 23 28 4317.07 -35.26 206.58 238.75 46.63 19 35 25 3717.1 -40.52 199.35  
 137.61 3 18 33 2734.18 -35.25 80.03 238.74 46.62 4 4 7 2134.2 -40.52 72.80  
 42.39 18 23 28 4317.07 -35.26 206.58 238.75 46.63 19 35 25 3717.1 -40.52 199.35  
 137.61 3 18 33 2734.18 -35.25 80.03 238.74 46.62 4 4 7 2134.2 -40.52 72.80

DIFFERENTIAL CORRECTIONS

TDE 1.6439 TRA -.0484 TC3-1.1785 BAU .4512 SGT 2390.7 SGR 2994.8 SCS 1018.5 ORBIT DETERMINATION ACCURACY  
 ROE 2.0512 RRA .2931 RC3-1.3154 FAU .12582 RRT .9649 RRF .9986 RTF .9585 ST 2155.1 SR 2695.5 SS 3191.3  
 FDE 7.8545 FRA 1.2919 FC3-5.6998 BSP 11627 SGB 3832.0 R23 .1217 R13 .9914 CRT .9962 CR3 -.9999 CST -.9952  
 BOE 2.6286 BRA .2971 BC3 1.7661 FSP -3416 SGI 3799.9 SGE 495.1 THA 51.62 LSA 4697.0 MSA 180.0 SSA 3.6  
 EL1 3448.0 EL2 146.4 ALF 51.38

LAUNCH DATE DEC 29 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 451.589

RL 147.10 LAL -.00 LOL 97.35 VL 27.736 GAL 2.18 AZL 83.86 MCA 202.24 SMA 128.21 ECC .15207 INC 6.1399 V1 30.286  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.438 GAP 1.30 AZP 95.69 TAL 167.68 TAP 9.92 RCA 108.72 APO 147.71 V2 34.788  
 RC 97.236 GL 45.21 GP -37.75 ZAL 74.73 ZAP 103.61 ETS 351.15 ZAE 137.41 ETE 238.24 ZAC 111.85 ETC 180.55 CLP -107.31

PLANETOCENTRIC CONIC

C3 17.446 WHL 4.177 DLA 52.03 RAL 3.17 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 3.420 DPA -31.96 RAP 29.78 ECC 1.2871  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.34 18 41 16 4282.76 -35.40 203.01 239.50 49.01 19 52 39 3682.8 -40.39 195.50  
 135.66 3 24 41 2725.85 -35.38 79.27 239.48 49.00 4 10 7 2125.8 -40.38 71.76  
 44.34 18 41 16 4282.76 -35.40 203.01 239.50 49.01 19 52 39 3682.8 -40.39 195.50  
 135.66 3 24 41 2725.85 -35.38 79.27 239.48 49.00 4 10 7 2125.8 -40.38 71.76  
 44.34 18 41 16 4282.76 -35.40 203.01 239.50 49.01 19 52 39 3682.8 -40.39 195.50  
 135.66 3 24 41 2725.85 -35.38 79.27 239.48 49.00 4 10 7 2125.8 -40.38 71.76

DIFFERENTIAL CORRECTIONS

TDE 1.7848 TRA .0530 TC3-1.5385 BAU .4657 SGT 2767.7 SGR 2842.9 SCS 1106.1 ORBIT DETERMINATION ACCURACY  
 ROE 1.6875 RRA .3182 RC3-1.2729 FAU .13849 RRT .9729 RRF .9980 RTF .9667 ST 2448.9 SR 2324.5 SS 3207.4  
 FDE 7.8669 FRA 1.7041 FC3-6.8721 BSP 11561 SGB 3826.9 R23 .1396 R13 .9883 CRT .9971 CR3 -.9999 CST -.9959  
 BOE 2.4561 BRA .3206 BC3 1.9968 FSP -3740 SGI 3800.9 SGE 444.7 THA 43.64 LSA 4653.4 MSA 180.7 SSA 4.2  
 EL1 3373.9 EL2 129.2 ALF 43.50

LAUNCH DATE DEC 29 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 457.800

RL 147.10 LAL -.00 LOL 97.35 VL 27.730 GAL 2.27 AZL 84.27 MCA 205.39 SMA 128.17 ECC .15280 INC 5.7275 V1 30.286
RP 108.94 LAP -2.45 LOP 302.65 VP 37.431 GAP 1.67 AZP 95.18 TAL 167.24 TAP 12.63 RCA 108.59 APO 147.76 V2 34.786
RC 99.636 GL 43.18 GP -33.50 ZAL 73.57 ZAP 108.35 ETS 349.05 ZAE 139.18 ETE 230.38 ZAC 110.26 ETC 177.73 CLP-112.18

PLANETOCENTRIC CONIC

C3 16.329 VHL 4.041 DLA 50.68 RAL 5.79 RAD 6567.7 VEL 11.735 PTH 2.07 WHP 3.346 DPA -28.89 RAP 26.01 ECC 1.2687
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.04 18 57 0 4255.44 -35.30 200.04 240.36 50.93 20 7 56 3655.4 -40.08 192.34
133.96 3 29 53 2722.75 -35.29 78.84 240.35 50.92 4 15 16 2122.7 -40.06 71.15
46.04 18 57 0 4255.44 -35.30 200.04 240.36 50.93 20 7 56 3655.4 -40.08 192.34
133.96 3 29 53 2722.75 -35.29 78.84 240.35 50.92 4 15 16 2122.7 -40.06 71.15
46.04 18 57 0 4255.44 -35.30 200.04 240.36 50.93 20 7 56 3655.4 -40.08 192.34
133.96 3 29 53 2722.75 -35.29 78.84 240.35 50.92 4 15 16 2122.7 -40.06 71.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9046 TRA .1583 TC3-1.8913 BAU .4867 SGT 3123.2 SGR 2318.0 SG3 1151.1 ST 2703.0 SR 2000.3 SS 3163.7
RDE 1.4025 RRA .3186 RC3-1.1803 FAU .14527 RRT .9781 RRF .9969 RTF .9721 CRT .9977 CRS -.9998 CST -.9963
FDE 7.6554 FRA 2.0447 FC3-7.7019 BSP 11734 SGB 3869.4 R23 .1490 R13 .9858 LSA 4613.4 MSA 180.5 SSA 4.9
BOE 2.3653 BRA .3558 BC3 2.2294 FSP -3920 SGI 3869.8 SG2 389.5 THA 38.40 EL1 3360.9 EL2 109.1 ALF 36.48

LAUNCH DATE DEC 29 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 463.992

RL 147.10 LAL -.00 LOL 97.35 VL 27.722 GAL 2.37 AZL 84.60 MCA 208.55 SMA 128.12 ECC .15371 INC 5.4011 V1 30.286
RP 108.94 LAP -2.58 LOP 305.79 VP 37.424 GAP 2.02 AZP 94.75 TAL 166.75 TAP 15.30 RCA 108.43 APO 147.82 V2 34.784
RC 102.036 GL 41.37 GP -29.83 ZAL 72.42 ZAP 112.97 ETS 347.49 ZAE 139.95 ETE 223.02 ZAC 108.76 ETC 175.57 CLP-116.73

PLANETOCENTRIC CONIC

C3 15.562 VHL 3.945 DLA 49.51 RAL 8.19 RAD 6567.6 VEL 11.702 PTH 2.06 WHP 3.330 DPA -26.20 RAP 22.90 ECC 1.2561
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.53 19 11 20 4233.18 -35.07 197.55 241.37 52.50 20 21 54 3633.2 -39.66 189.72
132.47 3 34 39 2723.13 -35.06 78.66 241.36 52.49 4 20 2 2123.1 -39.65 70.84
47.53 19 11 20 4233.18 -35.07 197.55 241.37 52.50 20 21 54 3633.2 -39.66 189.72
132.47 3 34 39 2723.13 -35.06 78.66 241.36 52.49 4 20 2 2123.1 -39.65 70.84
47.53 19 11 20 4233.18 -35.07 197.55 241.37 52.50 20 21 54 3633.2 -39.66 189.72
132.47 3 34 39 2723.13 -35.06 78.66 241.36 52.49 4 20 2 2123.1 -39.65 70.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0065 TRA .2662 TC3-2.2279 BAU .5134 SGT 3455.0 SGR 2025.8 SG3 1161.2 ST 2920.2 SR 1723.1 SS 3079.4
RDE 1.1776 RRA .3089 RC3-1.0614 FAU .14729 RRT .9812 RRF .9952 RTF .9756 CRT .9982 CRS -.9997 CST -.9965
FDE 7.2907 FRA 2.3103 FC3-8.1942 BSP 12119 SGB 4005.1 R23 .1484 R13 .9841 LSA 4576.8 MSA 179.8 SSA 5.6
BOE 2.3269 BRA .4078 BC3 2.4678 FSP -3982 SGI 3990.8 SG2 338.3 THA 30.15 EL1 3389.5 EL2 88.2 ALF 30.52

LAUNCH DATE DEC 29 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 470.165

RL 147.10 LAL -.00 LOL 97.35 VL 27.713 GAL 2.49 AZL 84.87 MCA 211.71 SMA 128.06 ECC .15478 INC 5.1347 V1 30.286
RP 108.95 LAP -2.70 LOP 308.96 VP 37.416 GAP 2.38 AZP 94.37 TAL 166.22 TAP 17.92 RCA 108.24 APO 147.88 V2 34.783
RC 104.441 GL 39.72 GP -26.66 ZAL 71.26 ZAP 117.39 ETS 346.36 ZAE 139.96 ETE 216.44 ZAC 107.44 ETC 173.94 CLP-120.98

PLANETOCENTRIC CONIC

C3 15.036 VHL 3.878 DLA 48.47 RAL 10.44 RAD 6567.6 VEL 11.680 PTH 2.05 WHP 3.355 DPA -23.82 RAP 20.36 ECC 1.2475
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.86 19 24 45 4214.73 -34.76 195.43 242.54 53.80 20 35 0 3614.7 -39.20 187.51
131.14 3 39 12 2726.12 -34.74 78.67 242.53 53.79 4 24 38 2126.1 -39.19 70.76
48.86 19 24 45 4214.73 -34.76 195.43 242.54 53.80 20 35 0 3614.7 -39.20 187.51
131.14 3 39 12 2726.12 -34.74 78.67 242.53 53.79 4 24 38 2126.1 -39.19 70.76
48.86 19 24 45 4214.73 -34.76 195.43 242.54 53.80 20 35 0 3614.7 -39.20 187.51
131.14 3 39 12 2726.12 -34.74 78.67 242.53 53.79 4 24 38 2126.1 -39.19 70.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0940 TRA .3780 TC3-2.5385 BAU .5435 SGT 3762.9 SGR 1768.9 SG3 1145.1 ST 3105.0 SR 1490.2 SS 2970.3
RDE .9997 RRA .2930 RC3 -.9302 FAU .14546 RRT .9827 RRF .9926 RTF .9780 CRT .9987 CRS -.9995 CST -.9965
FDE 6.8398 FRA 2.5112 FC3-8.3751 BSP 12630 SGB 4157.9 R23 .1375 R13 .9831 LSA 4544.5 MSA 179.0 SSA 6.3
BOE 2.3204 BRA .4782 BC3 2.7036 FSP -3945 SGI 4147.3 SG2 297.2 THA 24.93 EL1 3443.5 EL2 67.9 ALF 25.62

LAUNCH DATE DEC 29 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 476.320

RL 147.10 LAL -.00 LOL 97.35 VL 27.702 GAL 2.61 AZL 85.09 MCA 214.87 SMA 127.99 ECC .15603 INC 4.9121 V1 30.286
RP 108.95 LAP -2.81 LOP 312.12 VP 37.408 GAP 2.73 AZP 94.03 TAL 165.63 TAP 20.90 RCA 108.02 APO 147.96 V2 34.783
RC 106.844 GL 38.19 GP -23.92 ZAL 70.07 ZAP 121.96 ETS 345.55 ZAE 139.45 ETE 210.77 ZAC 106.35 ETC 172.73 CLP-124.93

PLANETOCENTRIC CONIC

C3 14.687 VHL 3.832 DLA 47.55 RAL 12.60 RAD 6567.6 VEL 11.665 PTH 2.05 WHP 3.412 DPA -21.69 RAP 18.34 ECC 1.2417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.06 19 37 30 4199.34 -34.39 193.61 243.85 54.88 20 47 30 3599.3 -38.71 185.64
129.94 3 43 43 2731.03 -34.38 78.83 243.84 54.87 4 29 14 2131.0 -38.70 70.87
50.06 19 37 30 4199.34 -34.39 193.61 243.85 54.88 20 47 30 3599.3 -38.71 185.64
129.94 3 43 43 2731.03 -34.38 78.83 243.84 54.87 4 29 14 2131.0 -38.70 70.87
50.06 19 37 30 4199.34 -34.39 193.61 243.85 54.88 20 47 30 3599.3 -38.71 185.64
129.94 3 43 43 2731.03 -34.38 78.83 243.84 54.87 4 29 14 2131.0 -38.70 70.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1694 TRA .4937 TC3-2.8163 BAU .5747 SGT 4046.6 SGR 1546.4 SG3 1110.4 ST 3260.6 SR 1297.3 SS 2847.7
RDE .8590 RRA .2744 RC3 -.7964 FAU .14060 RRT .9824 RRF .9987 RTF .9796 CRT .9992 CRS -.9991 CST -.9966
FDE 6.5513 FRA 2.6581 FC3-8.2876 BSP 13200 SGB 4332.0 R23 .1179 R13 .9827 LSA 4515.8 MSA 178.2 SSA 7.1
BOE 2.3333 BRA .5648 BC3 2.9267 FSP -3826 SGI 4323.6 SG2 270.1 THA 20.66 EL1 3508.9 EL2 48.9 ALF 21.68

LAUNCH DATE DEC 29 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 482.456

RL 147.10 LAL -.00 LOL 97.35 VL 27.690 GAL 2.75 AZL 85.28 MCA 218.03 SMA 127.90 ECC .15745 INC 4.7221 V1 30.286  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.400 GAP 3.08 AZP 93.72 TAL 165.00 TAP 23.03 RCA 107.76 APO 148.04 V2 34.784  
 RC 109.246 GL 36.76 GP -21.55 ZAL 68.85 ZAP 125.46 ETS 344.97 ZAE 138.61 ETE 205.99 ZAC 105.52 ETC 171.83 CLP-128.59

PLANETOCENTRIC CONIC

C3 14.476 WHL 3.805 OLA 46.71 RAL 14.72 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 3.494 DPA -19.76 RAP 16.77 ECC 1.2382  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.17 19 49 50 4186.40 -33.98 192.03 245.30 55.79 20 59 36 3586.4 -38.20 184.02  
 128.83 3 48 16 2737.55 -33.97 79.12 245.29 55.78 4 33 53 2137.5 -38.19 71.12  
 51.17 19 49 50 4186.40 -33.98 192.03 245.30 55.79 20 59 36 3586.4 -38.20 184.02  
 128.83 3 48 16 2737.55 -33.97 79.12 245.29 55.78 4 33 53 2137.5 -38.19 71.12  
 51.17 19 49 50 4186.40 -33.98 192.03 245.30 55.79 20 59 36 3586.4 -38.20 184.02  
 128.83 3 48 16 2737.55 -33.97 79.12 245.29 55.78 4 33 53 2137.5 -38.19 71.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2324 TRA .6117 TC3-3.0635 BAU .6069 SGT 4305.8 SGR 1355.3 SG3 1063.0 ST 3366.5 SR 1137.6 SS 2714.9  
 ROE .7472 RRA .2537 RC3 -.6709 FAU .13418 RRT .9803 RRF .9831 RTF .9809 CRT .9996 CRS -.9984 CST -.9965  
 FDE 5.8489 FRA 2.7507 FC3-8.0248 BSP 13854 SGB 4314.1 R23 .0920 R13 .9826 LSA 4483.5 MSA 177.1 SSA 7.8  
 BDE 2.3541 BRA .6622 BC3 3.1361 FSP -3680 SG1 4506.8 SG2 255.8 THA 17.21 EL1 3572.4 EL2 31.3 ALF 18.56

LAUNCH DATE DEC 29 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 488.573

RL 147.10 LAL -.00 LOL 97.35 VL 27.676 GAL 2.90 AZL 85.44 MCA 221.19 SMA 127.81 ECC .15905 INC 4.5572 V1 30.286  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.391 GAP 3.43 AZP 93.43 TAL 164.33 TAP 23.52 RCA 107.48 APO 148.14 V2 34.785  
 RC 111.645 GL 35.39 GP -19.49 ZAL 67.59 ZAP 129.09 ETS 344.56 ZAE 137.58 ETE 202.03 ZAC 104.96 ETC 171.17 CLP-131.97

PLANETOCENTRIC CONIC

C3 14.378 WHL 3.792 OLA 45.93 RAL 16.81 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 3.595 DPA -18.01 RAP 15.62 ECC 1.2366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.19 20 1 52 4175.48 -33.55 190.64 246.89 56.57 21 11 28 3575.5 -37.67 182.62  
 127.81 3 52 54 2745.47 -33.54 79.52 246.88 56.55 4 38 39 2145.5 -37.66 71.50  
 52.19 20 1 52 4175.48 -33.55 190.64 246.89 56.57 21 11 28 3575.5 -37.67 182.62  
 127.81 3 52 54 2745.47 -33.54 79.52 246.88 56.55 4 38 39 2145.5 -37.66 71.50  
 52.19 20 1 52 4175.48 -33.55 190.64 246.89 56.57 21 11 28 3575.5 -37.67 182.62  
 127.81 3 52 54 2745.47 -33.54 79.52 246.88 56.55 4 38 39 2145.5 -37.66 71.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2849 TRA .7333 TC3-3.2771 BAU .6389 SGT 4542.4 SGR 1193.8 SG3 1008.3 ST 3486.2 SR 1006.9 SS 2578.6  
 ROE .6587 RRA .2332 RC3 -.5562 FAU .12678 RRT .9758 RRF .9752 RTF .9818 CRT .9999 CRS -.9975 CST -.9964  
 FDE 5.3576 FRA 2.8054 FC3-7.6333 BSP 14515 SGB 4696.7 R23 .0651 R13 .9828 LSA 4448.1 MSA 175.9 SSA 8.6  
 BDE 2.3779 BRA .7694 BC3 3.3239 FSP -3503 SG1 4689.8 SG2 252.8 THA 14.43 EL1 3628.6 EL2 16.0 ALF 16.11

LAUNCH DATE DEC 29 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 494.670

RL 147.10 LAL -.00 LOL 97.35 VL 27.662 GAL 3.07 AZL 85.59 MCA 224.35 SMA 127.71 ECC .16082 INC 4.4119 V1 30.286  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.382 GAP 3.78 AZP 93.16 TAL 163.62 TAP 27.96 RCA 107.17 APO 148.25 V2 34.787  
 RC 114.042 GL 34.08 GP -17.70 ZAL 66.28 ZAP 132.45 ETS 344.27 ZAE 136.46 ETE 198.77 ZAC 104.66 ETC 170.70 CLP-135.11

PLANETOCENTRIC CONIC

C3 14.379 WHL 3.792 OLA 45.21 RAL 18.89 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 3.714 DPA -16.39 RAP 14.83 ECC 1.2366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.16 20 13 45 4166.25 -33.08 189.42 248.61 57.23 21 23 11 3566.2 -37.13 181.40  
 126.84 3 57 37 2754.72 -33.07 80.01 248.60 57.22 4 43 31 2154.7 -37.12 71.99  
 53.16 20 13 45 4166.25 -33.08 189.42 248.61 57.23 21 23 11 3566.2 -37.13 181.40  
 126.84 3 57 37 2754.72 -33.07 80.01 248.60 57.22 4 43 31 2154.7 -37.12 71.99  
 53.16 20 13 45 4166.25 -33.08 189.42 248.61 57.23 21 23 11 3566.2 -37.13 181.40  
 126.84 3 57 37 2754.72 -33.07 80.01 248.60 57.22 4 43 31 2154.7 -37.12 71.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3292 TRA .8595 TC3-3.4546 BAU .6688 SGT 4759.0 SGR 1059.0 SG3 950.4 ST 3563.4 SR 901.0 SS 2444.0  
 ROE .5895 RRA .2139 RC3 -.4534 FAU .11876 RRT .9683 RRF .9645 RTF .9825 CRT .9999 CRS -.9960 CST -.9963  
 FDE 4.8935 FRA 2.8331 FC3-7.1507 BSP 15171 SGB 4875.4 R23 .0414 R13 .9830 LSA 4410.4 MSA 174.9 SSA 9.3  
 BDE 2.4026 BRA .8857 BC3 3.4842 FSP -3314 SG1 4868.5 SG2 258.4 THA 12.19 EL1 3675.5 EL2 9.5 ALF 14.19

LAUNCH DATE DEC 29 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 500.747

RL 147.10 LAL -.00 LOL 97.35 VL 27.646 GAL 3.25 AZL 85.72 MCA 227.51 SMA 127.60 ECC .16278 INC 4.2820 V1 30.286  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.373 GAP 4.13 AZP 92.90 TAL 162.87 TAP 30.37 RCA 106.83 APO 148.37 V2 34.790  
 RC 116.435 GL 32.81 GP -16.15 ZAL 64.94 ZAP 135.57 ETS 344.07 ZAE 135.32 ETE 196.09 ZAC 104.61 ETC 170.37 CLP-138.02

PLANETOCENTRIC CONIC

C3 14.468 WHL 3.804 OLA 44.52 RAL 20.97 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 3.846 DPA -14.88 RAP 14.36 ECC 1.2381  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.08 20 25 35 4158.37 -32.59 188.32 250.44 57.80 21 34 53 3558.4 -36.57 180.31  
 125.92 4 2 22 2765.32 -32.57 80.61 250.44 57.79 4 48 27 2165.3 -36.56 72.60  
 54.08 20 25 35 4158.37 -32.59 188.32 250.44 57.80 21 34 53 3558.4 -36.57 180.31  
 125.92 4 2 22 2765.32 -32.57 80.61 250.44 57.79 4 48 27 2165.3 -36.56 72.60  
 54.08 20 25 35 4158.37 -32.59 188.32 250.44 57.80 21 34 53 3558.4 -36.57 180.31  
 125.92 4 2 22 2765.32 -32.57 80.61 250.44 57.79 4 48 27 2165.3 -36.56 72.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3858 TRA .9910 TC3-3.9958 BAU .6990 SGT 4956.3 SGR 947.3 SG3 891.5 ST 3619.6 SR 815.6 SS 2311.7  
 ROE .5351 RRA .1980 RC3 -.3631 FAU .11053 RRT .9573 RRF .9504 RTF .9830 CRT .9997 CRS -.9940 CST -.9962  
 FDE 4.4597 FRA 2.8404 FC3-6.6142 BSP 15795 SGB 5046.0 R23 .0228 R13 .9832 LSA 4368.0 MSA 174.2 SSA 10.0  
 BDE 2.4256 BRA 1.0102 BC3 3.8139 FSP -3118 SG1 5038.9 SG2 269.3 THA 10.40 EL1 3710.3 EL2 19.8 ALF 12.69

LAUNCH DATE DEC 29 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 506.805

RL 147.10 LAL -.00 LOL 97.35 VL 27.629 GAL 3.44 AZL 85.84 MCA 230.67 SMA 127.49 ECC .16492 INC 4.1647 V1 30.286  
 RP 108.91 LAP -3.22 LOP 327.94 VP 37.364 GAP 4.48 AZP 92.64 TAL 162.08 TAP 32.75 RCA 106.46 APO 148.51 V2 34.794  
 RC 118.823 GL 31.57 GP -14.80 ZAL 63.55 ZAP 138.46 ETS 343.92 ZAE 134.22 ETE 193.88 ZAC 104.79 ETC 170.13 CLP-140.73

PLANETOCENTRIC CONIC

C3 14.640 VHL 3.826 OLA 43.87 RAL 23.05 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 3.991 DPA -13.47 RAP 14.18 ECC 1.2409  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.98 20 37 23 4151.77 -32.06 187.34 252.39 58.29 21 46 34 3551.8 -35.99 179.34  
 125.02 4 7 10 2777.17 -32.05 81.30 252.38 58.28 4 53 28 2177.2 -35.98 73.31  
 54.98 20 37 23 4151.77 -32.06 187.34 252.39 58.29 21 46 34 3551.8 -35.99 179.34  
 125.02 4 7 10 2777.17 -32.05 81.30 252.38 58.28 4 53 28 2177.2 -35.98 73.31  
 54.98 20 37 23 4151.77 -32.06 187.34 252.39 58.29 21 46 34 3551.8 -35.99 179.34  
 125.02 4 7 10 2777.17 -32.05 81.30 252.38 58.28 4 53 28 2177.2 -35.98 73.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3983 TRA 1.1306 TC3-3.6953 BAU .7254 SGT 5138.9 SGR 856.9 SG3 834.2 ST 3660.8 SR 747.9 SS 2187.5  
 RDE .4938 RRA .1804 RC3 -.2837 FAU .10206 RRT .9423 RRF .9327 RTF .9832 CRT .9990 CRS -.9912 CST -.9960  
 FDE 4.0674 FRA 2.8400 FC3-6.0357 BSP 16337 SGB 5209.9 R23 .0101 R13 .9834 LSA 4326.1 HSA 174.0 SSA 10.7  
 BOE 2.4486 BRA 1.1449 BC3 3.7062 FSP -2911 SG1 5202.2 SG2 283.4 THA 8.96 EL1 3736.2 EL2 33.1 ALF 11.54

LAUNCH DATE DEC 29 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 512.842

RL 147.10 LAL -.00 LOL 97.35 VL 27.611 GAL 3.65 AZL 85.94 MCA 233.83 SMA 127.37 ECC .16725 INC 4.0574 V1 30.286  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.355 GAP 4.83 AZP 92.40 TAL 161.25 TAP 35.08 RCA 106.07 APO 148.67 V2 34.798  
 RC 121.206 GL 30.35 GP -13.61 ZAL 62.13 ZAP 141.14 ETS 343.81 ZAE 135.16 ETE 192.06 ZAC 105.17 ETC 169.98 CLP-143.25

PLANETOCENTRIC CONIC

C3 14.892 VHL 3.859 OLA 43.23 RAL 25.13 RAD 6567.6 VEL 11.674 PTH 2.05 VHP 4.146 DPA -12.13 RAP 14.24 ECC 1.2451  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.86 20 49 12 4146.21 -31.51 186.44 254.44 58.73 21 58 18 3546.2 -35.39 178.47  
 124.14 4 11 59 2790.36 -31.90 82.09 254.43 58.71 4 58 29 2190.4 -35.38 74.12  
 55.86 20 49 12 4146.21 -31.51 186.44 254.44 58.73 21 58 18 3546.2 -35.39 178.47  
 124.14 4 11 59 2790.36 -31.90 82.09 254.43 58.71 4 58 29 2190.4 -35.38 74.12  
 55.86 20 49 12 4146.21 -31.51 186.44 254.44 58.73 21 58 18 3546.2 -35.39 178.47  
 124.14 4 11 59 2790.36 -31.90 82.09 254.43 58.71 4 58 29 2190.4 -35.38 74.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4222 TRA 1.2741 TC3-3.7682 BAU .7515 SGT 5304.0 SGR 783.1 SG3 778.5 ST 3680.7 SR 693.3 SS 2064.7  
 RDE .4619 RRA .1661 RC3 -.2183 FAU .09426 RRT .9233 RRF .9112 RTF .9835 CRT .9977 CRS -.9876 CST -.9959  
 FDE 3.7029 FRA 2.8223 FC3-5.4797 BSP 16901 SGB 5361.5 R23 .0006 R13 .9835 LSA 4273.3 HSA 174.1 SSA 11.3  
 BOE 2.4659 BRA 1.2849 BC3 3.7745 FSP -2726 SG1 5353.2 SG2 298.0 THA 7.79 EL1 3745.1 EL2 46.5 ALF 10.64

LAUNCH DATE DEC 29 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 518.857

RL 147.10 LAL -.00 LOL 97.35 VL 27.593 GAL 3.88 AZL 86.04 MCA 236.99 SMA 127.24 ECC .16979 INC 3.9585 V1 30.286  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.346 GAP 5.19 AZP 92.16 TAL 160.40 TAP 37.39 RCA 105.64 APO 148.85 V2 34.803  
 RC 123.581 GL 29.15 GP -12.57 ZAL 60.68 ZAP 143.64 ETS 343.71 ZAE 132.16 ETE 190.56 ZAC 105.74 ETC 169.88 CLP-145.60

PLANETOCENTRIC CONIC

C3 15.225 VHL 3.902 OLA 42.60 RAL 27.22 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 4.312 DPA -10.85 RAP 14.53 ECC 1.2506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.74 21 1 5 4141.59 -30.93 185.62 256.57 59.11 22 10 7 3541.6 -34.77 177.68  
 123.26 4 16 45 2804.89 -30.92 82.97 256.56 59.09 5 3 30 2204.9 -34.76 75.03  
 56.74 21 1 5 4141.59 -30.93 185.62 256.57 59.11 22 10 7 3541.6 -34.77 177.68  
 123.26 4 16 45 2804.89 -30.92 82.97 256.56 59.09 5 3 30 2204.9 -34.76 75.03  
 56.74 21 1 5 4141.59 -30.93 185.62 256.57 59.11 22 10 7 3541.6 -34.77 177.68  
 123.26 4 16 45 2804.89 -30.92 82.97 256.56 59.09 5 3 30 2204.9 -34.76 75.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4405 TRA 1.4247 TC3-3.8081 BAU .7759 SGT 5454.5 SGR 724.2 SG3 725.6 ST 3684.7 SR 650.0 SS 1947.6  
 RDE .4382 RRA .1538 RC3 -.1637 FAU .08680 RRT .9006 RRF .8863 RTF .9837 CRT .9956 CRS -.9829 CST -.9957  
 FDE 3.3715 FRA 2.7994 FC3-4.9353 BSP 17430 SGB 5502.4 R23 -.0056 R13 .9836 LSA 4214.5 HSA 174.8 SSA 11.8  
 BOE 2.4795 BRA 1.4330 BC3 3.8117 FSP -2548 SG1 5493.5 SG2 312.6 THA 6.84 EL1 3741.1 EL2 59.7 ALF 9.96

LAUNCH DATE DEC 29 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 524.851

RL 147.10 LAL -.00 LOL 97.35 VL 27.573 GAL 4.12 AZL 86.15 MCA 240.16 SMA 127.11 ECC .17254 INC 3.8665 V1 30.286  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.336 GAP 5.55 AZP 91.93 TAL 159.91 TAP 39.67 RCA 105.18 APO 149.05 V2 34.808  
 RC 125.948 GL 27.96 GP -11.66 ZAL 59.20 ZAP 145.97 ETS 343.80 ZAE 131.24 ETE 189.30 ZAC 106.48 ETC 169.81 CLP-147.80

PLANETOCENTRIC CONIC

C3 15.642 VHL 3.959 OLA 41.98 RAL 29.31 RAD 6567.6 VEL 11.706 PTH 2.06 VHP 4.487 DPA -9.62 RAP 15.01 ECC 1.2574  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.61 21 13 5 4137.68 -30.32 184.85 258.80 59.44 22 22 2 3537.7 -34.12 176.95  
 122.39 4 21 25 2820.95 -30.30 83.95 258.79 59.43 5 8 26 2220.9 -34.11 76.05  
 57.61 21 13 5 4137.68 -30.32 184.85 258.80 59.44 22 22 2 3537.7 -34.12 176.95  
 122.39 4 21 25 2820.95 -30.30 83.95 258.79 59.43 5 8 26 2220.9 -34.11 76.05  
 57.61 21 13 5 4137.68 -30.32 184.85 258.80 59.44 22 22 2 3537.7 -34.12 176.95  
 122.39 4 21 25 2820.95 -30.30 83.95 258.79 59.43 5 8 26 2220.9 -34.11 76.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4544 TRA 1.5836 TC3-3.8182 BAU .7984 SGT 5592.8 SGR 677.8 SG3 675.9 ST 3675.4 SR 616.1 SS 1837.0  
 RDE .4214 RRA .1434 RC3 -.1185 FAU .07969 RRT .8746 RRF .8589 RTF .9837 CRT .9928 CRS -.9773 CST -.9955  
 FDE 3.0726 FRA 2.7732 FC3-4.4108 BSP 17913 SGB 5633.8 R23 -.0092 R13 .9837 LSA 4151.1 HSA 176.2 SSA 12.3  
 BOE 2.4903 BRA 1.5901 BC3 3.8180 FSP -2379 SG1 5624.3 SG2 326.8 THA 6.07 EL1 3726.0 EL2 72.7 ALF 9.45

LAUNCH DATE DEC 29 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.553 GAL 4.38 AZL 86.22 HCA 243.32 SMA 126.98 ECC .17552 INC 3.7800 VI 30.286
RP 108.85 LAP -3.38 LOP 340.62 VP 37.327 GAP 5.92 AZP 91.70 TAL 158.59 TAP 41.92 RCA 104.69 APO 149.27 V2 34.815
RC 128.306 GL 26.79 GP -10.85 ZAL 57.69 ZAP 148.14 ETS 343.48 ZAE 130.39 ETE 188.25 ZAC 107.38 ETC 169.78 CLP-149.86

DISTANCE 530.822

PLANETOCENTRIC CONIC

C3 16.145 WHL 4.018 DLA 41.36 RAL 31.39 RAD 6567.6 VEL 11.727 PTH 2.07 WHP 4.671 DPA -8.44 RAP 15.86 ECC 1.2657
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.49 21 25 10 4134.49 -29.67 184.14 261.09 59.74 22 34 4 3534.5 -33.44 176.27
121.51 4 25 58 2838.51 -29.66 85.04 261.09 59.73 5 13 16 2238.5 -33.43 77.18
58.49 21 25 10 4134.49 -29.67 184.14 261.09 59.74 22 34 4 3534.5 -33.44 176.27
121.51 4 25 58 2838.51 -29.66 85.04 261.09 59.73 5 13 16 2238.5 -33.43 77.18
58.49 21 25 10 4134.49 -29.67 184.14 261.09 59.74 22 34 4 3534.5 -33.44 176.27
121.51 4 25 58 2838.51 -29.66 85.04 261.09 59.73 5 13 16 2238.5 -33.43 77.18

DIFFERENTIAL CORRECTIONS

TDE 2.4663 TRA 1.7531 TC3-3.7888 BAU .8180
ROE .4103 RRA .1391 RC3 -.0811 FAU .07282
FOE 2.8062 FRA 2.7489 FC3-3.9046 B8P 18311
BOE 2.5002 BRA 1.7583 BC3 3.7897 F8P -2211

MID-COURSE EXECUTION ACCURACY

SGT 5721.5 SGR 642.2 SCS 629.8
RRT .8467 RRF .8302 RTF .9836
SG8 5757.2 R23 -.0106 R13 .9836
SG1 5747.2 SGE 340.2 TMA 5.45

ORBIT DETERMINATION ACCURACY

ST 3657.2 SR 590.1 SS 1734.8
CRT .9891 CRS -.9706 CST -.9954
LSA 4086.7 HSA 178.4 SSA 12.8
EL1 3703.5 EL2 85.7 ALF 9.07

LAUNCH DATE DEC 29 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.532 GAL 4.65 AZL 86.30 HCA 246.49 SMA 126.84 ECC .17874 INC 3.8982 VI 30.286
RP 108.85 LAP -3.39 LOP 343.80 VP 37.318 GAP 6.30 AZP 91.48 TAL 157.65 TAP 44.14 RCA 104.17 APO 149.51 V2 34.821
RC 130.693 GL 25.63 GP -10.13 ZAL 56.18 ZAP 150.18 ETS 343.33 ZAE 129.61 ETE 187.37 ZAC 108.41 ETC 169.78 CLP-151.81

DISTANCE 536.768

PLANETOCENTRIC CONIC

C3 16.740 WHL 4.091 DLA 40.75 RAL 33.47 RAD 6567.7 VEL 11.753 PTH 2.07 WHP 4.885 DPA -7.29 RAP 16.46 ECC 1.2755
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.38 21 37 21 4131.87 -28.99 183.46 263.46 60.01 22 46 13 3531.9 -32.73 175.64
120.62 4 30 19 2857.68 -28.97 86.24 263.45 60.00 5 17 56 2257.7 -32.72 78.42
59.38 21 37 21 4131.87 -28.99 183.46 263.46 60.01 22 46 13 3531.9 -32.73 175.64
120.62 4 30 19 2857.68 -28.97 86.24 263.45 60.00 5 17 56 2257.7 -32.72 78.42
59.38 21 37 21 4131.87 -28.99 183.46 263.46 60.01 22 46 13 3531.9 -32.73 175.64
120.62 4 30 19 2857.68 -28.97 86.24 263.45 60.00 5 17 56 2257.7 -32.72 78.42

DIFFERENTIAL CORRECTIONS

TDE 2.4710 TRA 1.9292 TC3-3.7417 BAU .8375
ROE .4035 RRA .1285 RC3 -.0525 FAU .06665
FOE 2.5807 FRA 2.7196 FC3-3.4471 B8P 18741
BOE 2.5037 BRA 1.9334 BC3 3.7421 F8P -2066

MID-COURSE EXECUTION ACCURACY

SGT 5836.5 SGR 614.3 SCS 586.5
RRT .8179 RRF .8008 RTF .9836
SG8 5868.7 R23 -.0114 R13 .9835
SG1 5858.1 SGE 352.1 TMA 4.94

ORBIT DETERMINATION ACCURACY

ST 3623.1 SR 569.5 SS 1635.4
CRT .9845 CRS -.9628 CST -.9952
LSA 4011.6 HSA 181.3 SSA 13.1
EL1 3666.3 EL2 98.6 ALF 8.80

LAUNCH DATE DEC 29 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.511 GAL 4.95 AZL 86.38 HCA 249.66 SMA 126.70 ECC .18220 INC 3.6202 VI 30.286
RP 108.80 LAP -3.39 LOP 346.97 VP 37.310 GAP 6.68 AZP 91.26 TAL 156.69 TAP 46.34 RCA 103.61 APO 149.78 V2 34.829
RC 132.989 GL 24.49 GP -9.50 ZAL 54.62 ZAP 152.10 ETS 343.15 ZAE 128.89 ETE 186.63 ZAC 109.56 ETC 169.75 CLP-153.65

DISTANCE 542.688

PLANETOCENTRIC CONIC

C3 17.435 WHL 4.176 DLA 40.12 RAL 35.52 RAD 6567.7 VEL 11.782 PTH 2.08 WHP 5.067 DPA -6.17 RAP 17.39 ECC 1.2869
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.30 21 49 40 4129.74 -28.27 182.81 265.89 60.25 22 58 30 3529.7 -31.99 175.04
119.70 4 34 25 2878.57 -28.26 87.55 265.88 60.24 5 22 24 2278.6 -31.98 79.78
60.30 21 49 40 4129.74 -28.27 182.81 265.89 60.25 22 58 30 3529.7 -31.99 175.04
119.70 4 34 25 2878.57 -28.26 87.55 265.88 60.24 5 22 24 2278.6 -31.98 79.78
60.30 21 49 40 4129.74 -28.27 182.81 265.89 60.25 22 58 30 3529.7 -31.99 175.04
119.70 4 34 25 2878.57 -28.26 87.55 265.88 60.24 5 22 24 2278.6 -31.98 79.78

DIFFERENTIAL CORRECTIONS

TDE 2.4718 TRA 2.1147 TC3-3.6697 BAU .8554
ROE .4004 RRA .1233 RC3 -.0302 FAU .08091
FOE 2.3368 FRA 2.6899 FC3-3.0245 B8P 19146
BOE 2.5040 BRA 2.1182 BC3 3.6699 F8P -1931

MID-COURSE EXECUTION ACCURACY

SGT 5941.0 SGR 592.9 SCS 546.3
RRT .7894 RRF .7723 RTF .9834
SG8 5970.5 R23 -.0113 R13 .9834
SG1 5959.5 SGE 362.8 TMA 4.52

ORBIT DETERMINATION ACCURACY

ST 3578.9 SR 553.5 SS 1541.8
CRT .9791 CRS -.9541 CST -.9950
LSA 3931.6 HSA 185.0 SSA 13.4
EL1 3619.7 EL2 111.4 ALF 8.62

LAUNCH DATE DEC 29 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 97.35 VL 27.489 GAL 5.26 AZL 86.45 HCA 252.83 SMA 126.55 ECC .18594 INC 3.5453 VI 30.286
RP 108.78 LAP -3.39 LOP 350.15 VP 37.301 GAP 7.07 AZP 91.05 TAL 155.70 TAP 48.53 RCA 103.02 APO 150.08 V2 34.837
RC 135.313 GL 23.35 GP -8.93 ZAL 53.08 ZAP 153.92 ETS 342.92 ZAE 128.24 ETE 186.00 ZAC 110.82 ETC 169.74 CLP-155.39

DISTANCE 548.581

PLANETOCENTRIC CONIC

C3 18.238 WHL 4.271 DLA 39.50 RAL 37.56 RAD 6567.7 VEL 11.816 PTH 2.09 WHP 5.279 DPA -5.07 RAP 18.45 ECC 1.3002
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.23 22 2 7 4129.03 -27.52 182.18 268.38 60.47 23 10 55 3528.0 -31.22 174.46
118.77 4 38 15 2901.26 -27.51 88.98 268.37 60.46 5 26 36 2301.3 -31.21 81.26
61.23 22 2 7 4129.03 -27.52 182.18 268.38 60.47 23 10 55 3528.0 -31.22 174.46
118.77 4 38 15 2901.26 -27.51 88.98 268.37 60.46 5 26 36 2301.3 -31.21 81.26
61.23 22 2 7 4129.03 -27.52 182.18 268.38 60.47 23 10 55 3528.0 -31.22 174.46
118.77 4 38 15 2901.26 -27.51 88.98 268.37 60.46 5 26 36 2301.3 -31.21 81.26

DIFFERENTIAL CORRECTIONS

TDE 2.4695 TRA 2.3107 TC3-3.5756 BAU .8719
ROE .4006 RRA .1201 RC3 -.0134 FAU .05556
FOE 2.1360 FRA 2.6621 FC3-2.6375 B8P 19519
BOE 2.5018 BRA 2.3138 BC3 3.5757 F8P -1805

MID-COURSE EXECUTION ACCURACY

SGT 6036.9 SGR 576.8 SCS 509.2
RRT .7825 RRF .7458 RTF .9833
SG8 6064.3 R23 -.0105 R13 .9832
SG1 6052.9 SGE 372.2 TMA 4.18

ORBIT DETERMINATION ACCURACY

ST 3526.7 SR 541.1 SS 1454.4
CRT .9727 CRS -.9443 CST -.9948
LSA 3848.3 HSA 189.6 SSA 13.6
EL1 3565.8 EL2 124.2 ALF 8.50

LAUNCH DATE DEC 29 1968 FLIGHT TIME 198.00 ARRIVAL DATE JUL 15 1969

MELIOCENTRIC CONIC DISTANCE 554.445  
 RL 147.10 LAL -0.00 LOL 97.35 VL 27.467 GAL 5.60 AZL 86.53 HCA 256.00 SMA 126.40 ECC .18997 INC 3.4729 V1 30.286  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.293 GAP 7.47 AZP 90.84 TAL 154.70 TAP 30.69 RCA 102.39 APO 150.41 V2 34.846  
 RC 137.625 GL 22.23 GP -8.43 ZAL 51.52 ZAP 155.63 ETS 342.65 ZAE 127.65 ETE 185.47 ZAC 112.18 ETC 169.73 CLP-157.05

PLANETOCENTRIC CONIC  
 C3 19.162 VHL 4.377 DLA 38.86 RAL 39.58 RAD 6567.8 VEL 11.855 PTH 2.10 WHP 5.501 DPA -4.00 RAP 19.60 ECC 1.3154  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.19 22 14 42 4126.64 -26.73 181.57 270.91 60.67 23 23 29 3526.6 -30.42 173.89  
 117.81 4 41 43 2925.85 -26.72 90.54 270.90 60.66 5 30 29 2325.9 -30.41 82.87  
 82.19 22 14 42 4126.64 -26.73 181.57 270.91 60.67 23 23 29 3526.6 -30.42 173.89  
 117.81 4 41 43 2925.85 -26.72 90.54 270.90 60.66 5 30 29 2325.9 -30.41 82.87  
 82.19 22 14 42 4126.64 -26.73 181.57 270.91 60.67 23 23 29 3526.6 -30.42 173.89  
 117.81 4 41 43 2925.85 -26.72 90.54 270.90 60.66 5 30 29 2325.9 -30.41 82.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4679 TRA 2.5224 TC3-3.4521 BAU .8843 SGT 6127.5 SGR 565.2 SG3 475.3 ST 3472.9 SR 532.0 SS 1375.7  
 RDE .4038 RRA .1190 RC3 -.0004 FAU .05034 RRT .7382 RRF .7225 RTF .9830 CRT .9655 CRS -.9339 CST -.9947  
 FDE 1.9829 FRA 2.6405 FC3-2.2744 BSP 19787 SGB 6153.5 R23 -.0088 R13 .9830 LSA 3768.0 HSA 194.8 S3A 13.8  
 BOE 2.5007 BRA 2.5252 BC3 3.4521 FSP -1678 SGI 6141.7 SGE 360.3 THA 3.91 ELI 3510.7 EL2 137.0 ALF 8.43

LAUNCH DATE DEC 29 1968 FLIGHT TIME 200.00 ARRIVAL DATE JUL 17 1969

MELIOCENTRIC CONIC DISTANCE 560.276  
 RL 147.10 LAL -0.00 LOL 97.35 VL 27.444 GAL 5.96 AZL 86.60 HCA 259.17 SMA 126.25 ECC .19432 INC 3.4025 V1 30.286  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.284 GAP 7.89 AZP 90.64 TAL 153.68 TAP 32.85 RCA 101.72 APO 150.78 V2 34.855  
 RC 139.923 GL 21.12 GP -7.98 ZAL 49.97 ZAP 157.26 ETS 342.27 ZAE 127.11 ETE 185.01 ZAC 113.62 ETC 169.71 CLP-158.64

PLANETOCENTRIC CONIC  
 C3 20.217 VHL 4.496 DLA 38.22 RAL 41.56 RAD 6567.8 VEL 11.899 PTH 2.11 WHP 5.734 DPA -2.94 RAP 20.85 ECC 1.3327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.18 22 27 26 4125.49 -25.91 180.96 273.49 60.86 23 36 11 3525.5 -29.58 173.34  
 116.82 4 44 49 2952.45 -25.90 92.23 273.48 60.85 5 34 1 2352.5 -29.57 84.62  
 63.18 22 27 26 4125.49 -25.91 180.96 273.49 60.86 23 36 11 3525.5 -29.58 173.34  
 116.82 4 44 49 2952.45 -25.90 92.23 273.48 60.85 5 34 1 2352.5 -29.57 84.62  
 63.18 22 27 26 4125.49 -25.91 180.96 273.49 60.86 23 36 11 3525.5 -29.58 173.34  
 116.82 4 44 49 2952.45 -25.90 92.23 273.48 60.85 5 34 1 2352.5 -29.57 84.62

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4590 TRA 2.7412 TC3-3.3211 BAU .8976 SGT 6205.3 SGR 555.7 SG3 443.5 ST 3406.6 SR 524.2 SS 1298.9  
 RDE .4088 RRA .1192 RC3 .0079 FAU .04576 RRT .7165 RRF .7016 RTF .9827 CRT .9575 CRS -.9224 CST -.9945  
 FDE 1.7967 FRA 2.6152 FC3-1.9597 BSP 20101 SGB 6230.1 R23 -.0075 R13 .9827 LSA 3677.9 HSA 200.8 S3A 13.8  
 BOE 2.4927 BRA 2.7437 BC3 3.3211 FSP -1572 SGI 6218.1 SGE 386.9 THA 3.69 ELI 3443.5 EL2 149.7 ALF 8.40

LAUNCH DATE DEC 29 1968 FLIGHT TIME 202.00 ARRIVAL DATE JUL 19 1969

MELIOCENTRIC CONIC DISTANCE 566.072  
 RL 147.10 LAL -0.00 LOL 97.35 VL 27.421 GAL 6.34 AZL 86.67 HCA 262.34 SMA 126.10 ECC .19900 INC 3.3334 V1 30.286  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.276 GAP 8.32 AZP 90.44 TAL 152.65 TAP 34.99 RCA 101.00 APO 151.19 V2 34.865  
 RC 142.207 GL 20.02 GP -7.57 ZAL 48.43 ZAP 158.82 ETS 341.83 ZAE 126.61 ETE 184.63 ZAC 115.14 ETC 169.68 CLP-160.16

PLANETOCENTRIC CONIC  
 C3 21.421 VHL 4.628 DLA 37.57 RAL 43.50 RAD 6567.9 VEL 11.950 PTH 2.13 WHP 5.978 DPA -1.91 RAP 22.19 ECC 1.3525  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.20 22 40 18 4124.50 -25.06 180.35 276.10 61.03 23 49 2 3524.5 -28.72 172.79  
 115.80 4 47 28 2981.17 -25.04 94.06 276.09 61.02 5 37 9 2381.2 -28.70 86.50  
 64.20 22 40 18 4124.50 -25.06 180.35 276.10 61.03 23 49 2 3524.5 -28.72 172.79  
 115.80 4 47 28 2981.17 -25.04 94.06 276.09 61.02 5 37 9 2381.2 -28.70 86.50  
 64.20 22 40 18 4124.50 -25.06 180.35 276.10 61.03 23 49 2 3524.5 -28.72 172.79  
 115.80 4 47 28 2981.17 -25.04 94.06 276.09 61.02 5 37 9 2381.2 -28.70 86.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4479 TRA 2.9731 TC3-3.1747 BAU .9092 SGT 6275.7 SGR 548.5 SG3 414.2 ST 3336.5 SR 517.8 SS 1227.9  
 RDE .4158 RRA .1211 RC3 .0133 FAU .04150 RRT .6979 RRF .6841 RTF .9825 CRT .9485 CRS -.9102 CST -.9944  
 FDE 1.6505 FRA 2.5924 FC3-1.6773 BSP 20404 SGB 6299.7 R23 -.0060 R13 .9825 LSA 3586.8 HSA 207.3 S3A 13.8  
 BOE 2.4830 BRA 2.9756 BC3 3.1747 FSP -1473 SGI 6287.4 SGE 392.1 THA 3.50 ELI 3372.5 EL2 162.2 ALF 8.39

LAUNCH DATE DEC 29 1968 FLIGHT TIME 204.00 ARRIVAL DATE JUL 21 1969

MELIOCENTRIC CONIC DISTANCE 571.829  
 RL 147.10 LAL -0.00 LOL 97.35 VL 27.397 GAL 6.75 AZL 86.73 HCA 265.52 SMA 125.94 ECC .20406 INC 3.2654 V1 30.286  
 RP 108.66 LAP -3.26 LOP 362.86 VP 37.269 GAP 8.77 AZP 90.26 TAL 151.60 TAP 37.12 RCA 100.24 APO 151.64 V2 34.875  
 RC 144.478 GL 18.94 GP -7.20 ZAL 46.90 ZAP 160.30 ETS 341.29 ZAE 126.16 ETE 184.30 ZAC 116.72 ETC 169.63 CLP-161.62

PLANETOCENTRIC CONIC  
 C3 22.791 VHL 4.774 DLA 36.92 RAL 45.41 RAD 6567.9 VEL 12.007 PTH 2.14 WHP 6.234 DPA -.88 RAP 25.60 ECC 1.3751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.25 22 53 20 4123.57 -24.17 179.74 278.75 61.20 24 2 3 3523.6 -27.82 172.23  
 114.75 4 49 37 3012.13 -24.16 96.04 278.74 61.19 5 39 49 2412.1 -27.80 88.54  
 65.25 22 53 20 4123.57 -24.17 179.74 278.75 61.20 24 2 3 3523.6 -27.82 172.23  
 114.75 4 49 37 3012.13 -24.16 96.04 278.74 61.19 5 39 49 2412.1 -27.80 88.54  
 65.25 22 53 20 4123.57 -24.17 179.74 278.75 61.20 24 2 3 3523.6 -27.82 172.23  
 114.75 4 49 37 3012.13 -24.16 96.04 278.74 61.19 5 39 49 2412.1 -27.80 88.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4351 TRA 3.2193 TC3-3.0146 BAU .9186 SGT 6338.9 SGR 542.8 SG3 387.2 ST 3263.5 SR 512.3 SS 1162.5  
 RDE .4243 RRA .1248 RC3 .0163 FAU .03750 RRT .6827 RRF .6700 RTF .9822 CRT .9388 CRS -.8973 CST -.9943  
 FDE 1.5170 FRA 2.5728 FC3-1.4244 BSP 20672 SGB 6382.1 R23 -.0044 R13 .9822 LSA 3495.5 HSA 214.3 S3A 13.7  
 BOE 2.4718 BRA 3.2217 BC3 3.0147 FSP -1380 SGI 6349.8 SGE 396.0 THA 3.36 ELI 3298.9 EL2 174.5 ALF 8.41

LAUNCH DATE DEC 29 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 577.544

RL 147.10 LAL -.00 LOL 97.35 VL 27.373 GAL 7.18 AZL 86.80 MCA 268.70 SMA 125.79 ECC .20952 INC 3.1979 V1 30.286
RP 108.63 LAP -3.20 LOP 6.05 VP 37.261 GAP 9.24 AZP 80.07 TAL 150.55 TAP 59.25 RCA 99.43 APO 152.14 V2 34.885
RC 146.754 GL 17.88 GP -6.87 ZAL 45.39 ZAP 161.75 ETS 340.63 ZAE 125.74 ETE 184.02 ZAC 118.36 ETC 169.57 CLP-163.03

PLANETOCENTRIC CONIC

C3 24.350 WHL 4.935 DLA 36.26 RAL 47.26 RAD 6568.0 VEL 12.072 PTH 2.16 WHP 6.504 DPA .12 RAP 25.07 ECC 1.4007
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.34 23 6 32 4122.59 -23.25 179.11 281.43 61.35 24 15 15 3522.6 -26.89 171.65
113.66 4 51 12 3045.44 -23.24 98.18 281.42 61.34 5 41 57 2445.4 -26.87 90.73
66.34 23 6 32 4122.59 -23.25 179.11 281.43 61.35 24 15 15 3522.6 -26.89 171.65
113.66 4 51 12 3045.44 -23.24 98.18 281.42 61.34 5 41 57 2445.4 -26.87 90.73
66.34 23 6 32 4122.59 -23.25 179.11 281.43 61.35 24 15 15 3522.6 -26.89 171.65
113.66 4 51 12 3045.44 -23.24 98.18 281.42 61.34 5 41 57 2445.4 -26.87 90.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4210 TRA 3.4807 TC3-2.8436 BAU .9257 SGT 6395.3 SGR 538.1 SCS 362.2 ST 3189.0 SR 507.2 SS 1102.4
ROE .4541 RRA .1303 RCS .0176 FAU .03375 RRT .6708 RRF .6591 RTF .9820 CRT .9283 CRS -.8837 CST -.9943
FOE 1.3983 FRA 2.5598 FC3-1.2001 B8P 20912 SGB 6417.9 R23 -.0028 R13 .9820 LSA 3404.9 MSA 221.5 S5A 13.6
BOE 2.4596 BRA 3.4832 BC3 2.8437 F8P -1294 SGI 6405.6 SGE 398.5 THA 3.24 EL1 3223.7 EL2 186.6 ALF 8.43

LAUNCH DATE DEC 29 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 583.210

RL 147.10 LAL -.00 LOL 97.35 VL 27.349 GAL 7.65 AZL 86.87 MCA 271.88 SMA 125.63 ECC .21542 INC 3.1305 V1 30.286
RP 108.59 LAP -3.13 LOP 9.23 VP 37.254 GAP 9.73 AZP 89.80 TAL 149.50 TAP 61.38 RCA 98.57 APO 152.69 V2 34.897
RC 148.977 GL 16.84 GP -6.57 ZAL 45.80 ZAP 163.10 ETS 339.84 ZAE 125.35 ETE 183.78 ZAC 120.06 ETC 169.48 CLP-164.40

PLANETOCENTRIC CONIC

C3 26.123 WHL 5.111 DLA 35.80 RAL 49.07 RAD 6568.1 VEL 12.145 PTH 2.18 WHP 6.789 DPA 1.11 RAP 26.61 ECC 1.4299
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.47 23 19 57 4121.42 -22.30 178.45 284.13 61.51 24 28 38 3521.4 -25.93 171.05
112.53 4 52 14 3081.27 -22.29 100.48 284.12 61.50 5 43 35 2481.3 -25.91 93.08
67.47 23 19 57 4121.42 -22.30 178.45 284.13 61.51 24 28 38 3521.4 -25.93 171.05
112.53 4 52 14 3081.27 -22.29 100.48 284.12 61.50 5 43 35 2481.3 -25.91 93.08
67.47 23 19 57 4121.42 -22.30 178.45 284.13 61.51 24 28 38 3521.4 -25.93 171.05
112.53 4 52 14 3081.27 -22.29 100.48 284.12 61.50 5 43 35 2481.3 -25.91 93.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4087 TRA 3.7816 TC3-2.8801 BAU .9290 SGT 6448.2 SGR 534.3 SCS 339.5 ST 3117.4 SR 502.4 SS 1049.1
ROE .4493 RRA .1378 RCS .0179 FAU .03013 RRT .6824 RRF .6520 RTF .9817 CRT .9171 CRS -.8699 CST -.9943
FOE 1.2900 FRA 2.5445 FC3 -.9907 B8P 21052 SGB 6470.3 R23 -.0010 R13 .9817 LSA 3319.4 MSA 228.8 S5A 13.4
BOE 2.4495 BRA 3.7842 BC3 2.8801 F8P -1207 SGI 6457.0 SGE 399.7 THA 3.15 EL1 3151.4 EL2 198.1 ALF 8.44

LAUNCH DATE DEC 29 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 588.822

RL 147.10 LAL -.00 LOL 97.35 VL 27.325 GAL 8.14 AZL 86.94 MCA 275.06 SMA 125.47 ECC .22180 INC 3.0629 V1 30.286
RP 108.56 LAP -3.05 LOP 12.42 VP 37.247 GAP 10.24 AZP 89.73 TAL 148.45 TAP 63.51 RCA 97.64 APO 153.30 V2 34.908
RC 151.204 GL 15.81 GP -6.30 ZAL 42.44 ZAP 164.42 ETS 338.87 ZAE 124.99 ETE 183.57 ZAC 121.90 ETC 169.37 CLP-165.72

PLANETOCENTRIC CONIC

C3 28.140 WHL 5.305 DLA 34.93 RAL 50.82 RAD 6568.1 VEL 12.228 PTH 2.20 WHP 7.090 DPA 2.08 RAP 28.20 ECC 1.4631
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.64 23 33 35 4119.90 -21.33 177.76 286.86 61.66 24 42 15 3519.9 -24.94 170.42
111.36 4 52 34 3119.76 -21.31 102.96 286.85 61.65 5 44 34 2519.8 -24.93 95.61
68.64 23 33 35 4119.90 -21.33 177.76 286.86 61.66 24 42 15 3519.9 -24.94 170.42
111.36 4 52 34 3119.76 -21.31 102.96 286.85 61.65 5 44 34 2519.8 -24.93 95.61
68.64 23 33 35 4119.90 -21.33 177.76 286.86 61.66 24 42 15 3519.9 -24.94 170.42
111.36 4 52 34 3119.76 -21.31 102.96 286.85 61.65 5 44 34 2519.8 -24.93 95.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3906 TRA 4.0550 TC3-2.4782 BAU .9323 SGT 6489.8 SGR 530.3 SCS 318.1 ST 3040.0 SR 497.0 SS 998.2
ROE .4570 RRA .1484 RCS .0168 FAU .02891 RRT .6562 RRF .6467 RTF .9815 CRT .9049 CRS -.8551 CST -.9943
FOE 1.1903 FRA 2.5324 FC3 -.8280 B8P 21282 SGB 6511.4 R23 -.0003 R13 .9815 LSA 3229.4 MSA 236.1 S5A 13.2
BOE 2.4338 BRA 4.0577 BC3 2.4782 F8P -1135 SGI 6489.1 SGE 399.6 THA 3.08 EL1 3073.2 EL2 209.2 ALF 8.46

LAUNCH DATE DEC 29 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 594.372

RL 147.10 LAL -.00 LOL 97.35 VL 27.300 GAL 8.68 AZL 87.01 MCA 278.24 SMA 125.31 ECC .22872 INC 2.9945 V1 30.286
RP 108.52 LAP -2.98 LOP 15.80 VP 37.240 GAP 10.78 AZP 89.57 TAL 147.40 TAP 65.65 RCA 96.65 APO 153.98 V2 34.920
RC 153.416 GL 14.81 GP -6.06 ZAL 41.01 ZAP 165.70 ETS 337.69 ZAE 124.65 ETE 183.39 ZAC 123.57 ETC 169.23 CLP-167.02

PLANETOCENTRIC CONIC

C3 30.439 WHL 5.517 DLA 34.26 RAL 52.52 RAD 6568.2 VEL 12.321 PTH 2.22 WHP 7.410 DPA 3.04 RAP 29.84 ECC 1.5010
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.86 23 47 30 4117.88 -20.32 177.03 289.80 61.81 24 56 8 3517.9 -23.93 169.73
110.14 4 52 11 3161.09 -20.31 103.82 289.59 61.80 5 44 52 2561.1 -23.92 96.33
69.86 23 47 30 4117.88 -20.32 177.03 289.80 61.81 24 56 8 3517.9 -23.93 169.73
110.14 4 52 11 3161.09 -20.31 103.82 289.59 61.80 5 44 52 2561.1 -23.92 96.33
69.86 23 47 30 4117.88 -20.32 177.03 289.80 61.81 24 56 8 3517.9 -23.93 169.73
110.14 4 52 11 3161.09 -20.31 103.82 289.59 61.80 5 44 52 2561.1 -23.92 96.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3724 TRA 4.3677 TC3-2.2924 BAU .9389 SGT 6525.9 SGR 526.2 SCS 298.4 ST 2964.2 SR 491.1 SS 952.2
ROE .4689 RRA .1578 RCS .0152 FAU .02388 RRT .6527 RRF .6440 RTF .9814 CRT .8920 CRS -.8400 CST -.9944
FOE 1.1006 FRA 2.5240 FC3 -.6793 B8P 21478 SGB 6547.1 R23 .0014 R13 .9814 LSA 3142.4 MSA 243.2 S5A 13.0
BOE 2.4184 BRA 4.3706 BC3 2.2925 F8P -1067 SGI 6535.0 SGE 398.1 THA 3.02 EL1 2996.6 EL2 219.6 ALF 8.45



LAUNCH DATE DEC 29 1968

FLIGHT TIME 214.00

ARRIVAL DATE JUL 31 1969

MELIOCENTRIC CONIC

DISTANCE 599.852

RL 147.10 LAL -.00 LOL 97.35 VL 27.276 GAL 9.25 AZL 87.07 MCA 281.43 SMA 125.16 ECC .23624 INC 2.9250 V1 30.286
RP 108.48 LAP -2.87 LOP 18.79 VP 37.233 GAP 11.35 AZP 89.42 TAL 146.36 TAP 67.79 RCA 95.59 APO 154.72 V2 34.932
RC 155.612 GL 13.82 GP -5.84 ZAL 39.62 ZAP 166.93 ETS 336.25 ZAE 124.32 ETE 183.24 ZAC 125.38 ETC 169.07 CLP-168.29

PLANETOCENTRIC CONIC

C3 33.063 VHL 5.750 DLA 33.59 RAL 54.15 RAD 6568.3 VEL 12.427 PTH 2.25 VHP 7.750 DPA 3.98 RAP 31.51 ECC 1.5441
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.13 0 5 43 4114.92 -19.30 176.22 292.36 61.96 1 14 18 3514.9 -22.89 168.97
108.87 4 50 55 3205.64 -19.28 108.51 292.35 61.95 5 44 20 2605.6 -22.88 101.27
71.13 0 5 43 4114.92 -19.30 176.22 292.36 61.96 1 14 18 3514.9 -22.89 168.97
108.87 4 50 55 3205.64 -19.28 108.51 292.35 61.95 5 44 20 2605.6 -22.88 101.27
110.00 5 46 10 3036.59 -24.14 97.98 294.96 65.03 6 36 46 2436.6 -27.30 90.23
110.00 4 9 59 3331.97 -14.57 115.53 289.55 56.73 5 5 11 2732.0 -18.61 108.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3542 TRA 4.7014 TC3-2.1043 BAU .9302 SGT 6556.2 SGR 522.0 SCS 280.2 ST 2890.4 SR 484.6 SS 910.9
RDE .4825 RRA .1894 RC3 .0134 FAU .02102 RRT .6516 RRF .6436 RTF .9813 CRT .8704 CRS -.8245 CST -.9946
FDE 1.0199 FRA 2.5194 FC3 -.5505 B8P 21647 SGB 6477.0 R23 .0024 R13 .9813 LSA 3058.8 MSA 249.9 SSA 12.8
BOE 2.4032 BRA 4.7045 BC3 2.1044 F8P -1002 SGI 6565.1 SGE 395.4 THA 2.98 EL1 2921.8 EL2 229.2 ALF 8.43

LAUNCH DATE DEC 29 1968

FLIGHT TIME 216.00

ARRIVAL DATE AUG 2 1969

MELIOCENTRIC CONIC

DISTANCE 605.251

RL 147.10 LAL -.00 LOL 97.35 VL 27.251 GAL 9.87 AZL 87.15 MCA 284.62 SMA 125.00 ECC .24442 INC 2.8538 V1 30.286
RP 108.45 LAP -2.76 LOP 21.98 VP 37.227 GAP 11.96 AZP 89.28 TAL 145.34 TAP 69.96 RCA 94.45 APO 155.55 V2 34.945
RC 157.792 GL 12.88 GP -5.63 ZAL 38.27 ZAP 168.13 ETS 334.47 ZAE 124.01 ETE 183.11 ZAC 127.21 ETC 168.87 CLP-169.54

PLANETOCENTRIC CONIC

C3 36.065 VHL 6.005 DLA 32.92 RAL 55.72 RAD 6568.4 VEL 12.547 PTH 2.27 VHP 8.114 DPA 4.90 RAP 33.23 ECC 1.5935
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.47 0 20 24 4110.96 -18.25 175.32 295.12 62.12 1 28 55 3511.0 -21.83 168.12
107.53 4 48 46 3253.48 -18.23 111.62 295.12 62.11 5 43 0 2653.5 -21.82 104.42
72.47 0 20 24 4110.96 -18.25 175.32 295.12 62.12 1 28 55 3511.0 -21.83 168.12
107.53 4 48 46 3253.48 -18.23 111.62 295.12 62.11 5 43 0 2653.5 -21.82 104.42
110.00 6 14 26 2990.04 -25.45 94.99 298.86 66.37 7 4 16 2390.0 -28.42 87.07
110.00 3 55 54 3422.39 -11.32 120.51 290.96 57.55 4 50 57 2822.4 -15.53 113.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3405 TRA 5.0616 TC3-1.9118 BAU .9218 SGT 6584.1 SGR 517.7 SCS 263.5 ST 2823.0 SR 477.6 SS 875.4
RDE .4963 RRA .1837 RC3 .0118 FAU .01820 RRT .6531 RRF .6458 RTF .9814 CRT .8643 CRS -.8094 CST -.9948
FDE .9495 FRA 2.5288 FC3 -.4370 B8P 21691 SGB 6604.4 R23 .0034 R13 .9814 LSA 2983.0 MSA 255.7 SSA 12.5
BOE 2.3925 BRA 5.0649 BC3 1.9118 F8P -937 SGI 6592.8 SGE 391.5 THA 2.95 EL1 2853.2 EL2 237.7 ALF 8.38

LAUNCH DATE DEC 29 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 4 1969

MELIOCENTRIC CONIC

DISTANCE 610.555

RL 147.10 LAL -.00 LOL 97.35 VL 27.227 GAL 10.54 AZL 87.22 MCA 287.81 SMA 124.84 ECC .25333 INC 2.7805 V1 30.286
RP 108.41 LAP -2.65 LOP 25.18 VP 37.221 GAP 12.61 AZP 89.15 TAL 144.33 TAP 72.14 RCA 93.21 APO 156.47 V2 34.957
RC 159.953 GL 11.92 GP -5.45 ZAL 36.96 ZAP 168.30 ETS 332.24 ZAE 123.70 ETE 183.00 ZAC 129.06 ETC 168.63 CLP-170.77

PLANETOCENTRIC CONIC

C3 39.509 VHL 6.286 DLA 32.25 RAL 57.23 RAD 6568.5 VEL 12.684 PTH 2.30 VHP 8.503 DPA 5.79 RAP 34.98 ECC 1.6502
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.89 0 35 40 4105.23 -17.18 174.29 297.90 62.29 1 44 5 3505.2 -20.75 167.14
106.11 4 45 30 3305.30 -17.17 115.00 297.89 62.28 5 40 35 2705.3 -20.74 107.84
73.89 0 35 40 4105.23 -17.18 174.29 297.90 62.29 1 44 5 3505.2 -20.75 167.14
106.11 4 45 30 3305.30 -17.17 115.00 297.89 62.28 5 40 35 2705.3 -20.74 107.84
110.00 6 36 55 2961.01 -26.23 93.09 302.48 67.25 7 26 16 2361.0 -29.07 85.07
110.00 3 43 25 3497.51 -8.55 124.56 292.70 56.78 4 41 43 2897.5 -12.86 118.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3225 TRA 5.4416 TC3-1.7272 BAU .9123 SGT 6602.4 SGR 512.4 SCS 247.9 ST 2753.5 SR 469.4 SS 842.3
RDE .5101 RRA .1996 RC3 .0099 FAU .01568 RRT .6558 RRF .6489 RTF .9815 CRT .8494 CRS -.7936 CST -.9951
FDE .8835 FRA 2.5234 FC3 -.3436 B8P 21647 SGB 6622.2 R23 .0040 R13 .9815 LSA 2905.7 MSA 260.9 SSA 12.2
BOE 2.3779 BRA 5.4453 BC3 1.7272 F8P -883 SGI 6610.9 SGE 386.4 THA 2.92 EL1 2782.4 EL2 245.2 ALF 8.30

LAUNCH DATE DEC 29 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 6 1969

MELIOCENTRIC CONIC

DISTANCE 615.749

RL 147.10 LAL -.00 LOL 97.35 VL 27.202 GAL 11.28 AZL 87.30 MCA 291.00 SMA 124.68 ECC .26307 INC 2.7045 V1 30.286
RP 108.37 LAP -2.52 LOP 28.37 VP 37.215 GAP 13.31 AZP 89.03 TAL 143.35 TAP 74.35 RCA 91.88 APO 157.48 V2 34.970
RC 162.097 GL 11.01 GP -5.28 ZAL 35.71 ZAP 170.42 ETS 329.42 ZAE 123.39 ETE 182.91 ZAC 130.92 ETC 168.35 CLP-172.00

PLANETOCENTRIC CONIC

C3 43.472 VHL 6.593 DLA 31.58 RAL 58.66 RAD 6568.6 VEL 12.839 PTH 2.34 VHP 8.922 DPA 6.67 RAP 36.75 ECC 1.7154
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.41 0 51 40 4097.17 -16.10 173.09 300.67 62.46 1 59 58 3497.2 -19.66 165.98
104.59 4 40 55 3361.59 -16.08 118.88 300.66 62.45 5 36 57 2761.6 -19.64 111.57
75.41 0 51 40 4097.17 -16.10 173.09 300.67 62.46 1 59 58 3497.2 -19.66 165.98
104.59 4 40 55 3361.59 -16.08 118.88 300.66 62.45 5 36 57 2761.6 -19.64 111.57
110.00 6 56 20 2941.20 -26.74 91.78 305.95 67.87 7 45 21 2341.2 -29.50 83.68
110.00 3 35 26 3565.56 -5.99 128.17 294.59 56.28 4 34 52 2965.6 -10.38 121.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3081 TRA 5.8488 TC3-1.5455 BAU .8983 SGT 6615.2 SGR 506.6 SCS 233.4 ST 2687.6 SR 460.3 SS 813.3
RDE .5241 RRA .2172 RC3 .0084 FAU .01327 RRT .6601 RRF .6536 RTF .9818 CRT .8340 CRS -.7780 CST -.9954
FDE .8244 FRA 2.5307 FC3 -.2644 B8P 21969 SGB 6634.6 R23 .0044 R13 .9818 LSA 2833.0 MSA 265.1 SSA 11.9
BOE 2.3649 BRA 5.8529 BC3 1.5456 F8P -831 SGI 6623.7 SGE 380.1 THA 2.90 EL1 2715.1 EL2 251.4 ALF 8.20

LAUNCH DATE DEC 30 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 10 1969

HELIOCENTRIC CONIC

DISTANCE 145.176

RL 147.10 LAL -.00 LOL 98.37 VL 19.805 GAL 13.29 AZL 85.87 MCA 52.30 SMA 93.96 ECC .59620 INC 4.1293 V1 30.287  
 RP 107.52 LAP 3.27 LOP 150.60 VP 32.504 GAP -35.78 AZP 87.47 TAL 170.61 TAP 222.92 RCA 37.95 APO 150.01 V2 35.246  
 RC 58.412 GL 6.61 GP 2.01 ZAL 67.64 ZAP 25.04 ETS 184.84 ZAE 149.29 ETE 194.17 ZAC 89.70 ETC 166.32 CLP 24.97

PLANETOCENTRIC CONIC

C3 145.325 WHL 12.055 DLA 17.97 RAL 26.34 RAD 6570.6 VEL 16.330 PTH 2.86 WHP 21.062 DPA -2.98 RAP 356.49 ECC 3.3917  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 4 50 3275.20 -24.87 115.97 289.53 76.20 4 59 25 2675.2 -26.63 107.69  
 90.00 20 58 7 4727.33 16.18 202.29 275.93 66.44 22 16 55 4127.3 12.86 195.19  
 100.00 5 36 48 2978.67 -26.90 94.67 290.05 76.44 6 26 26 2378.7 -28.50 86.24  
 100.00 22 8 51 4499.10 17.99 184.67 275.09 65.72 23 23 50 3899.1 14.57 177.56  
 110.00 7 8 16 2692.49 -31.90 74.29 291.40 77.01 7 53 8 2092.5 -33.36 65.37  
 110.00 22 53 52 4358.03 22.64 171.84 272.75 63.68 24 6 30 3758.0 18.92 164.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5587 TRA-1.4888 TC3 -.1076 BAU .2142 SGT 831.8 SGR 442.0 SCS 34.3 ST 347.1 SR 412.9 SS 326.7  
 RDE -.8634 RRA .3088 RC3 -.0242 FAU .01421 RRT .0271 RRF -.0292 RTF -.6475 CRT .6888 CRS .7999 CST .9843  
 FDE .3259 FRA .6061 FC3 -.0846 BSP 2245 SGB 941.9 R23 -.0048 R13 -.6476 LSA 588.6 MSA 225.9 SSA 13.7  
 BOE 1.0284 BRA 1.5211 BC3 .1102 FSP -73 SGI 831.9 SGE 441.7 THA 1.15 EL1 497.3 EL2 208.9 ALF 52.12

LAUNCH DATE DEC 30 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 12 1969

HELIOCENTRIC CONIC

DISTANCE 151.344

RL 147.10 LAL -.00 LOL 98.37 VL 20.412 GAL 12.71 AZL 85.98 MCA 55.55 SMA 95.63 ECC .56928 INC 4.0192 V1 30.287  
 RP 107.53 LAP 3.31 LOP 153.85 VP 32.872 GAP -34.05 AZP 87.72 TAL 169.97 TAP 225.52 RCA 41.19 APO 150.07 V2 35.241  
 RC 56.805 GL 7.00 GP 2.08 ZAL 66.71 ZAP 23.51 ETS 185.43 ZAE 150.35 ETE 193.10 ZAC 91.33 ETC 166.35 CLP 23.42

PLANETOCENTRIC CONIC

C3 131.114 WHL 11.451 DLA 18.67 RAL 27.13 RAD 6570.4 VEL 15.889 PTH 2.81 WHP 20.170 DPA -2.23 RAP 358.01 ECC 3.1578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 0 39 3283.52 -24.84 116.54 289.08 75.94 4 53 23 2683.5 -26.53 108.28  
 90.00 21 8 36 4680.41 14.88 199.46 275.53 65.83 22 26 36 4080.4 11.47 192.44  
 100.00 5 33 19 2984.75 -26.80 95.10 289.62 76.24 6 23 3 2384.7 -28.43 86.67  
 100.00 22 18 37 4494.43 16.72 181.97 274.65 64.86 23 32 52 3854.4 13.20 174.95  
 110.00 7 6 9 2694.25 -31.87 74.42 291.01 76.94 7 51 3 2094.3 -33.34 65.50  
 110.00 23 2 16 4317.68 21.40 169.16 272.21 62.69 24 14 14 3717.7 17.57 162.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5585 TRA-1.4880 TC3 -.1113 BAU .2007 SGT 870.5 SGR 446.0 SCS 37.3 ST 364.7 SR 417.5 SS 342.2  
 RDE -.8295 RRA .2865 RC3 -.0267 FAU .01455 RRT .0322 RRF -.0347 RTF -.6673 CRT .6891 CRS .8016 CST .9840  
 FDE .3382 FRA .6270 FC3 -.0999 BSP 2411 SGB 978.1 R23 -.0055 R13 -.6674 LSA 608.7 MSA 231.7 SSA 13.9  
 BOE .9989 BRA 1.5124 BC3 .1145 FSP -81 SGI 870.7 SGE 445.7 THA 1.28 EL1 510.5 EL2 216.2 ALF 50.57

LAUNCH DATE DEC 30 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 14 1969

HELIOCENTRIC CONIC

DISTANCE 157.588

RL 147.10 LAL -.00 LOL 98.37 VL 20.977 GAL 12.15 AZL 86.08 MCA 58.79 SMA 97.27 ECC .54325 INC 3.9173 V1 30.287  
 RP 107.55 LAP 3.35 LOP 157.10 VP 33.220 GAP -32.40 AZP 87.97 TAL 169.35 TAP 228.14 RCA 44.43 APO 150.11 V2 35.235  
 RC 54.864 GL 7.40 GP 2.15 ZAL 65.85 ZAP 22.00 ETS 186.08 ZAE 151.56 ETE 196.13 ZAC 92.97 ETC 166.37 CLP 21.90

PLANETOCENTRIC CONIC

C3 118.359 WHL 10.879 DLA 19.36 RAL 27.85 RAD 6570.2 VEL 15.482 PTH 2.76 WHP 19.312 DPA -1.46 RAP 359.55 ECC 2.9479  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 56 9 3291.06 -24.71 117.05 288.50 75.71 4 51 0 2691.1 -26.43 108.81  
 90.00 21 18 52 4632.70 13.52 196.61 275.06 64.88 22 36 4 4032.7 10.03 189.68  
 100.00 5 29 32 2989.90 -26.72 95.46 289.06 76.07 6 19 22 2389.9 -28.37 87.05  
 100.00 22 28 9 4409.09 15.39 179.26 274.14 64.05 23 41 38 3809.1 11.78 172.33  
 110.00 7 3 48 2694.97 -31.86 74.48 290.48 76.91 7 48 43 2095.0 -33.33 65.56  
 110.00 23 10 23 4276.78 20.10 166.70 271.61 61.75 24 21 39 3676.8 16.17 159.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5574 TRA-1.4819 TC3 -.1151 BAU .1880 SGT 912.8 SGR 449.4 SCS 40.6 ST 384.5 SR 421.5 SS 358.5  
 RDE -.7959 RRA .2685 RC3 -.0294 FAU .01487 RRT .0390 RRF -.0411 RTF -.6859 CRT .6910 CRS .8038 CST .9839  
 FDE .3518 FRA .6485 FC3 -.1087 BSP 2527 SGB 1017.4 R23 -.0058 R13 -.6860 LSA 630.7 MSA 236.9 SSA 14.1  
 BOE .9717 BRA 1.5057 BC3 .1188 FSP -90 SGI 913.1 SGE 448.9 THA 1.45 EL1 525.1 EL2 223.1 ALF 48.80

LAUNCH DATE DEC 30 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 16 1969

HELIOCENTRIC CONIC

DISTANCE 163.901

RL 147.10 LAL -.00 LOL 98.37 VL 21.303 GAL 11.80 AZL 86.18 MCA 62.03 SMA 98.89 ECC .51816 INC 3.8223 V1 30.287  
 RP 107.57 LAP 3.38 LOP 160.35 VP 33.549 GAP -30.84 AZP 88.21 TAL 168.77 TAP 230.80 RCA 47.65 APO 150.13 V2 35.229  
 RC 53.197 GL 7.81 GP 2.24 ZAL 65.07 ZAP 20.50 ETS 186.84 ZAE 152.91 ETE 197.30 ZAC 94.63 ETC 166.37 CLP 20.38

PLANETOCENTRIC CONIC

C3 106.898 WHL 10.339 DLA 20.03 RAL 28.50 RAD 6570.1 VEL 15.108 PTH 2.72 WHP 18.485 DPA -.67 RAP 1.09 ECC 2.7593  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 51 17 3297.88 -24.60 117.52 287.78 75.51 4 46 15 2697.9 -26.35 109.29  
 90.00 21 28 56 4584.19 12.10 193.76 274.53 64.20 22 45 20 3984.2 8.54 186.90  
 100.00 5 25 28 2994.21 -26.85 95.76 288.36 75.93 6 15 22 2394.2 -28.32 87.56  
 100.00 22 37 27 4363.09 14.00 176.55 273.57 63.32 23 50 10 3763.1 10.31 169.70  
 110.00 7 1 12 2694.67 -31.87 74.46 289.80 76.92 7 46 7 2094.7 -33.34 65.53  
 110.00 23 18 11 4235.40 18.75 164.25 270.95 60.88 24 28 47 3635.4 14.72 157.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5568 TRA-1.4780 TC3 -.1174 BAU .1740 SGT 955.1 SGR 452.0 SCS 44.3 ST 404.3 SR 424.9 SS 375.5  
 RDE -.7827 RRA .2470 RC3 -.0322 FAU .01526 RRT .0457 RRF -.0480 RTF -.7041 CRT .6928 CRS .8061 CST .9838  
 FDE .3658 FRA .6701 FC3 -.1236 BSP 2694 SGB 1056.6 R23 -.0065 R13 -.7042 LSA 652.9 MSA 241.7 SSA 14.3  
 BOE .9444 BRA 1.4865 BC3 .1218 FSP -100 SGI 955.3 SGE 451.4 THA 1.60 EL1 539.8 EL2 229.6 ALF 47.05

LAUNCH DATE DEC 30 1968 FLIGHT TIME 78.00 ARRIVAL DATE MAR 18 1969

HELIOCENTRIC CONIC DISTANCE 170.277  
 RL 147.10 LAL -.00 LOL 98.37 VL 21.993 GAL 11.06 AZL 86.27 MCA 65.27 SMA 100.49 ECC .49403 INC 3.7328 V1 30.287  
 RP 107.59 LAP 3.39 LOP 163.60 VP 33.858 GAP -29.35 AZP 86.44 TAL 168.21 TAP 233.48 RCA 50.94 APO 150.13 V2 35.222  
 RC 51.611 GL 8.22 GP 2.33 ZAL 64.35 ZAP 19.02 ETS 187.72 ZAE 154.42 ETE 198.63 ZAC 96.29 ETC 166.35 CLP 18.88

PLANETOCENTRIC CONIC  
 C3 96.594 WHL 9.828 DLA 20.68 RAL 29.09 RAD 6569.9 VEL 14.763 PTH 2.67 WHP 17.689 DPA .13 RAP 2.64 ECC 2.5897  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 46 5 3304.08 -24.49 117.94 286.92 75.92 4 41 9 2704.1 -26.27 109.73  
 90.00 21 38 49 4534.91 10.63 190.89 273.93 83.80 22 54 24 3934.9 7.00 184.09  
 100.00 5 21 5 2997.74 -26.59 96.01 287.52 75.81 6 11 3 2397.7 -28.28 87.61  
 100.00 22 46 29 4316.49 12.56 173.84 272.93 82.65 23 58 26 3716.5 8.80 167.07  
 110.00 6 58 21 2693.41 -31.89 74.36 288.99 76.97 7 43 15 2093.4 -33.35 65.44  
 110.00 23 25 42 4193.58 17.35 161.82 270.23 80.07 24 35 36 3593.6 13.24 155.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5567 TRA-1.4688 TC3 -.1185 BAU .1596 SGT 998.6 SGR 453.9 SCS 48.2 ST 425.1 SR 427.7 SS 392.7  
 RDE -.7300 RRA .2280 RC3 -.0350 FAU .01569 RRT .0533 RRF -.0559 RTF -.7216 CRT .6952 CRS .8089 CST .9837  
 FDE .3808 FRA .6920 FC3 -.1407 BSP 2875 SGB 1096.9 R23 -.0075 R13 -.7217 LSA 676.2 MSA 245.8 SSA 14.5  
 BOE .9181 BRA 1.4864 BC3 .1236 FSP -110 SGI 999.0 SGE 453.1 THA 1.75 EL1 555.2 EL2 235.4 ALF 45.25

LAUNCH DATE DEC 30 1968 FLIGHT TIME 80.00 ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC DISTANCE 176.712  
 RL 147.10 LAL -.00 LOL 98.37 VL 22.450 GAL 10.93 AZL 86.39 MCA 68.51 SMA 102.05 ECC .47088 INC 3.6479 V1 30.287  
 RP 107.61 LAP 3.39 LOP 166.84 VP 34.148 GAP -27.93 AZP 86.66 TAL 167.69 TAP 236.20 RCA 54.00 APO 150.11 V2 35.215  
 RC 90.116 GL 8.64 GP 2.43 ZAL 63.71 ZAP 17.95 ETS 188.75 ZAE 156.08 ETE 200.18 ZAC 97.95 ETC 166.31 CLP 17.39

PLANETOCENTRIC CONIC  
 C3 87.326 WHL 9.345 DLA 21.31 RAL 29.80 RAD 6569.7 VEL 14.445 PTH 2.62 WHP 16.922 DPA .94 RAP 4.19 ECC 2.4372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 40 30 3309.76 -24.39 118.35 285.93 75.15 4 35 39 2709.8 -26.19 110.13  
 90.00 21 48 30 4484.88 9.10 188.01 273.27 83.07 23 3 15 3884.9 5.42 181.27  
 100.00 5 16 23 3000.95 -26.54 96.20 286.55 75.72 6 6 24 2400.6 -28.24 87.81  
 100.00 22 55 18 4268.32 11.07 171.13 272.23 82.06 24 6 27 3669.3 7.25 164.43  
 110.00 6 55 15 2691.23 -31.92 74.20 288.04 77.06 7 40 7 2091.2 -33.37 65.27  
 110.00 23 32 55 4191.40 15.90 159.41 269.45 59.33 24 42 6 3591.4 11.71 152.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5571 TRA-1.4804 TC3 -.1181 BAU .1449 SGT 1043.6 SGR 455.1 SCS 52.5 ST 447.0 SR 429.9 SS 411.0  
 RDE -.6979 RRA .2095 RC3 -.0379 FAU .01618 RRT .0617 RRF -.0647 RTF -.7383 CRT .6985 CRS .8120 CST .9836  
 FDE .3963 FRA .7144 FC3 -.1804 BSP 3080 SGB 1138.6 R23 -.0085 R13 -.7385 LSA 700.8 MSA 249.3 SSA 14.6  
 BOE .8930 BRA 1.4754 BC3 .1241 FSP -123 SGI 1044.1 SGE 454.1 THA 1.90 EL1 571.6 EL2 240.6 ALF 43.40

LAUNCH DATE DEC 30 1968 FLIGHT TIME 82.00 ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC DISTANCE 183.199  
 RL 147.10 LAL -.00 LOL 98.37 VL 22.875 GAL 10.02 AZL 86.43 MCA 71.75 SMA 103.59 ECC .44872 INC 3.5668 V1 30.287  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.421 GAP -26.57 AZP 86.88 TAL 167.21 TAP 238.96 RCA 57.11 APO 150.07 V2 35.207  
 RC 48.721 GL 9.07 GP 2.54 ZAL 63.15 ZAP 16.10 ETS 189.98 ZAE 157.89 ETE 202.02 ZAC 99.62 ETC 166.25 CLP 15.90

PLANETOCENTRIC CONIC  
 C3 78.985 WHL 8.887 DLA 21.92 RAL 30.05 RAD 6569.5 VEL 14.154 PTH 2.58 WHP 16.183 DPA 1.77 RAP 5.74 ECC 2.2999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 34 32 3315.00 -24.30 118.69 284.81 74.99 4 29 47 2715.0 -26.12 110.49  
 90.00 21 58 1 4434.16 7.52 185.12 272.55 82.62 23 11 55 3834.2 5.80 178.42  
 100.00 5 11 22 3002.72 -26.50 96.35 285.45 75.65 6 1 25 2402.7 -28.22 87.97  
 100.00 23 3 51 4221.67 9.54 188.42 271.47 81.54 24 14 13 3621.7 5.66 161.78  
 110.00 6 51 54 2688.20 -31.96 73.98 286.97 77.19 7 36 42 2088.2 -33.40 65.04  
 110.00 23 39 49 4188.95 14.41 157.02 268.61 58.66 24 48 18 3509.0 10.15 150.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5584 TRA-1.4510 TC3 -.1161 BAU .1300 SGT 1090.4 SGR 455.6 SCS 57.3 ST 470.2 SR 431.5 SS 430.1  
 RDE -.8664 RRA .1915 RC3 -.0409 FAU .01672 RRT .0715 RRF -.0746 RTF -.7543 CRT .7028 CRS .8155 CST .9837  
 FDE .4130 FRA .7373 FC3 -.1832 BSP 3247 SGB 1181.7 R23 -.0095 R13 -.7545 LSA 727.0 MSA 252.0 SSA 14.8  
 BOE .8694 BRA 1.4635 BC3 .1231 FSP -136 SGI 1090.9 SGE 454.2 THA 2.07 EL1 589.3 EL2 244.9 ALF 41.51

LAUNCH DATE DEC 30 1968 FLIGHT TIME 84.00 ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC DISTANCE 189.733  
 RL 147.10 LAL -.00 LOL 98.37 VL 23.271 GAL 9.52 AZL 86.51 MCA 74.99 SMA 105.09 ECC .42756 INC 3.4886 V1 30.287  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.677 GAP -25.28 AZP 89.10 TAL 166.76 TAP 241.75 RCA 60.16 APO 150.02 V2 35.198  
 RC 47.437 GL 9.51 GP 2.66 ZAL 62.86 ZAP 14.66 ETS 191.47 ZAE 159.84 ETE 204.26 ZAC 101.28 ETC 166.16 CLP 14.42

PLANETOCENTRIC CONIC  
 C3 71.479 WHL 8.459 DLA 22.51 RAL 30.42 RAD 6569.4 VEL 13.886 PTH 2.54 WHP 15.470 DPA 2.61 RAP 7.29 ECC 2.1764  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 10 3319.01 -24.21 119.02 283.57 74.85 4 23 30 2719.9 -26.06 110.84  
 90.00 22 7 21 4382.80 5.90 182.21 271.77 82.26 23 20 24 3782.8 2.15 175.55  
 100.00 5 6 2 3004.32 -26.48 96.46 284.23 75.59 5 56 7 2404.3 -28.20 88.08  
 100.00 23 12 10 4173.63 7.97 185.72 270.65 81.09 24 21 43 3573.6 4.05 159.12  
 110.00 6 48 18 2684.37 -32.02 73.69 285.76 77.34 7 33 3 2084.4 -33.43 64.75  
 110.00 23 46 23 4066.34 12.89 154.65 267.71 58.06 24 54 9 3466.3 8.57 148.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5625 TRA-1.4426 TC3 -.1135 BAU .1162 SGT 1141.1 SGR 455.4 SCS 62.5 ST 496.1 SR 432.5 SS 450.4  
 RDE -.6357 RRA .1740 RC3 -.0438 FAU .01730 RRT .0834 RRF -.0861 RTF -.7689 CRT .7087 CRS .8195 CST .9840  
 FDE .4312 FRA .7612 FC3 -.2095 BSP 3381 SGB 1228.6 R23 -.0100 R13 -.7691 LSA 755.9 MSA 253.9 SSA 15.0  
 BOE .8488 BRA 1.4531 BC3 .1216 FSP -150 SGI 1141.9 SGE 453.5 THA 2.26 EL1 609.5 EL2 248.4 ALF 39.50

LAUNCH DATE DEC 30 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 23.839 GAL 9.03 AZL 86.59 MCA 78.22 SMA 106.55 ECC .40738 INC 3.4129 V1 30.287
RP 107.69 LAP 3.34 LOP 176.57 VP 34.916 GAP -24.03 AZP 89.30 TAL 166.36 TAP 244.59 RCA 63.14 APO 149.95 V2 35.189
RC 46.274 GL 9.95 GP 2.80 ZAL 62.24 ZAP 13.24 ETS 193.31 ZAE 161.93 ETE 207.05 ZAC 102.94 ETC 166.04 CLP 12.95

PLANETOCENTRIC CONIC

C3 64.722 VHL 8.045 DLA 23.08 RAL 30.72 RAD 6560.2 VEL 13.641 PTH 2.49 VHP 14.702 DPA 3.45 RAP 8.85 ECC 2.0652
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 21 24 3324.50 -24.13 119.34 202.21 74.71 4 16 48 2724.6 -25.99 111.17
90.00 22 16 30 4330.89 4.25 179.29 270.93 61.98 23 20 41 3730.9 .47 172.65
100.00 5 0 23 3005.40 -26.46 96.54 202.90 75.56 5 50 29 2405.4 -28.18 88.16
100.00 23 20 12 4125.31 6.37 163.02 269.77 60.73 24 28 57 3525.3 2.42 156.46
110.00 6 44 28 2679.78 -32.09 73.35 204.44 77.54 7 29 8 2079.8 -33.47 64.39
110.00 23 52 36 4023.69 11.34 152.32 266.76 57.53 24 59 40 3423.7 6.98 145.94

DIFFERENTIAL CORRECTIONS

TOE -.5651 TRA-1.4308 TC3 -.1074 BAU .1013
RDE -.6057 RRA .1571 RC3 -.0466 FAU .01796
FDE .4504 FRA .7856 FC3 -.2403 BSP 3573
BOE .8284 BRA 1.4394 BC3 .1171 FSP -166

MID-COURSE EXECUTION ACCURACY

SGT 1191.2 SGR 454.4 SCS 68.2
RRT .0958 RRF -.0988 RTF -.7833
SG8 1274.9 R23 -.0112 R13 -.7836
SG1 1192.1 SGT 452.0 THA 2.44

ORBIT DETERMINATION ACCURACY

ST 521.9 SR 432.9 SS 471.5
CRT .7147 CRS .8239 CST .9842
LSA 785.5 MSA 255.0 SSA 15.2
EL1 630.0 EL2 250.9 ALF 37.63

LAUNCH DATE DEC 30 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 23.882 GAL 8.57 AZL 86.66 MCA 81.46 SMA 107.96 ECC .38819 INC 3.3389 V1 30.287
RP 107.72 LAP 3.30 LOP 179.81 VP 35.139 GAP -22.84 AZP 89.30 TAL 166.00 TAP 247.46 RCA 66.05 APO 149.87 V2 35.179
RC 45.244 GL 10.39 GP 2.84 ZAL 61.90 ZAP 11.85 ETS 195.63 ZAE 164.12 ETE 210.64 ZAC 104.59 ETC 165.90 CLP 11.47

PLANETOCENTRIC CONIC

C3 58.640 VHL 7.858 DLA 23.63 RAL 30.95 RAD 6560.1 VEL 13.416 PTH 2.45 VHP 14.119 DPA 4.31 RAP 10.37 ECC 1.9651
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 14 15 3389.15 -24.05 119.65 200.74 74.58 4 9 43 2729.1 -25.93 111.48
90.00 22 25 29 4278.52 2.57 178.36 270.03 61.79 23 36 47 3678.5 -1.22 169.73
100.00 4 54 28 3006.02 -26.45 96.50 201.45 75.54 5 44 32 2406.0 -28.18 88.21
100.00 23 27 57 4076.86 4.75 160.34 268.82 60.45 24 35 54 3476.9 .78 153.80
110.00 6 40 25 2674.47 -32.17 72.96 203.01 77.76 7 24 59 2074.5 -33.52 63.99
110.00 0 2 24 3981.17 9.78 150.02 265.75 57.08 1 8 45 3381.2 5.37 143.70

DIFFERENTIAL CORRECTIONS

TOE -.5684 TRA-1.4178 TC3 -.0987 BAU .0864
RDE -.5766 RRA .1407 RC3 -.0492 FAU .0187D
FDE .4711 FRA .8108 FC3 -.2760 BSP 3765
BOE .8097 BRA 1.4246 BC3 .1102 FSP -184

MID-COURSE EXECUTION ACCURACY

SGT 1242.6 SGR 452.8 SCS 74.4
RRT .1099 RRF -.1133 RTF -.7969
SG8 1322.5 R23 -.0126 R13 -.7972
SG1 1243.8 SGT 449.6 THA 2.64

ORBIT DETERMINATION ACCURACY

ST 549.1 SR 432.8 SS 493.8
CRT .7217 CRS .8287 CST .9845
LSA 816.9 MSA 255.2 SSA 15.3
EL1 652.1 EL2 252.3 ALF 35.79

LAUNCH DATE DEC 30 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 24.301 GAL 8.11 AZL 86.73 MCA 84.69 SMA 109.33 ECC .36997 INC 3.2662 V1 30.287
RP 107.75 LAP 3.25 LOP 183.05 VP 35.347 GAP -21.70 AZP 89.70 TAL 165.69 TAP 250.38 RCA 68.88 APO 149.78 V2 35.169
RC 44.357 GL 10.84 GP 3.11 ZAL 61.83 ZAP 10.45 ETS 198.62 ZAE 166.59 ETE 215.49 ZAC 106.23 ETC 165.73 CLP 9.99

PLANETOCENTRIC CONIC

C3 53.166 VHL 7.291 DLA 24.16 RAL 31.10 RAD 6560.9 VEL 13.211 PTH 2.41 VHP 13.479 DPA 5.19 RAP 11.90 ECC 1.8750
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 6 39 3333.39 -23.97 119.95 279.17 74.45 4 2 13 2733.6 -25.87 111.80
90.00 22 34 15 4225.82 .87 173.42 269.07 61.70 23 44 41 3625.8 -2.92 166.79
100.00 4 48 12 3006.19 -26.45 96.59 279.90 75.53 5 38 18 2406.2 -28.17 88.22
100.00 23 35 24 4028.45 3.12 157.67 267.82 60.26 24 42 32 3428.5 -.86 151.15
110.00 6 36 9 2668.47 -32.25 72.51 281.47 78.01 7 20 37 2068.5 -33.57 63.52
110.00 0 7 52 3938.94 8.20 147.76 264.69 56.70 1 13 31 3338.9 3.77 141.48

DIFFERENTIAL CORRECTIONS

TOE -.5719 TRA-1.4028 TC3 -.0866 BAU .0716
RDE -.5485 RRA .1249 RC3 -.0514 FAU .01951
FDE .4934 FRA .8369 FC3 -.3177 BSP 3968
BOE .7924 BRA 1.4083 BC3 .1007 FSP -203

MID-COURSE EXECUTION ACCURACY

SGT 1295.1 SGR 450.5 SCS 81.3
RRT .1256 RRF -.1295 RTF -.8098
SG8 1371.3 R23 -.0142 R13 -.8102
SG1 1296.6 SGT 446.4 THA 2.84

ORBIT DETERMINATION ACCURACY

ST 577.3 SR 432.2 SS 517.2
CRT .7294 CRS .8340 CST .9849
LSA 850.1 MSA 254.6 SSA 15.4
EL1 675.5 EL2 252.7 ALF 34.04

LAUNCH DATE DEC 30 1968

FLIGHT TIME 92.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 24.597 GAL 7.88 AZL 86.81 MCA 87.92 SMA 110.65 ECC .35270 INC 3.1943 V1 30.287
RP 107.79 LAP 3.19 LOP 186.28 VP 35.541 GAP -20.80 AZP 89.88 TAL 165.42 TAP 253.34 RCA 71.63 APO 149.68 V2 35.158
RC 43.625 GL 11.28 GP 3.29 ZAL 61.44 ZAP 9.11 ETS 202.60 ZAE 168.66 ETE 222.34 ZAC 107.85 ETC 165.53 CLP 8.50

PLANETOCENTRIC CONIC

C3 48.240 VHL 6.945 DLA 24.66 RAL 31.18 RAD 6560.8 VEL 13.023 PTH 2.38 VHP 12.863 DPA 6.07 RAP 13.42 ECC 1.7939
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 58 42 3338.04 -23.88 120.25 277.49 74.32 3 54 20 2738.0 -25.81 112.11
90.00 22 42 50 4172.97 -.83 170.47 268.05 61.69 23 52 23 3573.0 -4.61 163.83
100.00 4 41 45 3005.94 -26.45 96.58 278.28 75.54 5 31 49 2405.9 -28.18 88.20
100.00 23 42 30 3980.30 1.49 155.03 266.76 60.14 24 48 51 3380.3 -2.90 148.50
110.00 6 31 43 2661.78 -32.35 72.01 279.83 78.29 7 16 5 2061.8 -33.62 63.01
110.00 0 12 56 3897.22 6.64 145.54 263.56 56.39 1 17 53 3297.2 2.18 139.30

DIFFERENTIAL CORRECTIONS

TOE -.5761 TRA-1.3866 TC3 -.0709 BAU .0572
RDE -.5214 RRA .1095 RC3 -.0432 FAU .02042
FDE .5175 FRA .8642 FC3 -.3865 BSP 4172
BOE .7770 BRA 1.3909 BC3 .0886 FSP -225

MID-COURSE EXECUTION ACCURACY

SGT 1348.9 SGR 447.6 SCS 88.8
RRT .1434 RRF -.1478 RTF -.8221
SG8 1421.5 R23 -.7159 R13 -.8225
SG1 1350.7 SGT 442.4 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 607.0 SR 431.2 SS 542.0
CRT .7381 CRS .8397 CST .9853
LSA 885.3 MSA 253.2 SSA 15.6
EL1 700.6 EL2 252.1 ALF 32.35

LAUNCH DATE DEC 30 1968

FLIGHT TIME 94.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 222.931

RL 147.10 LAL -.00 LOL 98.37 VL 24.873 GAL 7.25 AZL 86.88 HCA 91.15 SMA 111.93 ECC .33636 INC 3.1228 V1 30.287
RP 107.82 LAP 3.12 LOP 189.52 VP 35.721 GAP -19.55 AZP 90.06 TAL 165.20 TAP 256.35 RCA 74.28 APO 149.57 V2 35.147
RC 43.055 GL 11.72 GP 3.48 ZAL 61.33 ZAP 7.81 ETS 208.04 ZAE 170.80 ETE 238.59 ZAC 109.46 ETC 165.29 CLP 7.00

PLANETOCENTRIC CONIC

C3 43.808 VHL 6.619 DLA 25.13 RAL 31.18 RAD 6568.7 VEL 12.852 PTH 2.34 VHP 12.268 DPA 6.96 RAP 14.92 ECC 1.7210
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 50 23 3342.46 -23.80 120.55 275.73 74.19 3 46 7 2742.5 -25.74 112.41
90.00 22 51 10 4120.17 -2.54 167.53 266.97 61.79 23 59 50 3520.2 -6.29 160.86
100.00 4 35 1 3005.20 -26.46 96.53 276.52 75.56 5 25 6 2405.2 -28.19 88.15
100.00 23 49 14 3932.67 -.13 152.41 265.63 60.11 24 54 47 3332.7 -4.10 145.88
110.00 6 27 9 2854.41 -32.45 71.46 278.10 78.60 7 11 23 2054.4 -33.68 62.44
110.00 0 17 32 3856.22 5.09 143.38 262.39 56.15 1 21 48 3256.2 .61 137.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5809 TRA-1.3693 TC3 -.0514 BAU .0438 SGT 1404.1 SGR 444.2 SCS 97.2 ST 638.1 SR 429.7 SS 568.3
RDE -.4954 RRA .0946 RC3 -.0543 FAU .02143 RRT .1637 RRF -.1687 RTF -.8336 CRT .7476 CRS .8458 CST .9859
FDE .5438 FRA .8930 FC3 -.4235 BSP 4374 SGB 1472.7 R23 -.0178 R13 -.8340 LSA 922.8 MSA 250.9 SSA 15.7
BOE .7635 BRA 1.3725 BC3 .0748 FSP -290 SGI 1406.2 SGE 437.5 THA 3.28 EL1 727.4 EL2 250.3 ALF 30.76

LAUNCH DATE DEC 30 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 229.643

RL 147.10 LAL -.00 LOL 98.37 VL 25.129 GAL -6.85 AZL 86.85 HCA 94.37 SMA 113.15 ECC .32094 INC 3.0511 V1 30.287
RP 107.86 LAP 3.04 LOP 192.75 VP 35.889 GAP -18.55 AZP 90.23 TAL 165.03 TAP 259.40 RCA 76.83 APO 149.46 V2 35.135
RC 42.657 GL 12.15 GP 3.71 ZAL 61.28 ZAP 6.62 ETS 215.72 ZAE 172.59 ETE 248.44 ZAC 111.03 ETC 165.01 CLP 5.49

PLANETOCENTRIC CONIC

C3 39.822 VHL 6.310 DLA 25.56 RAL 31.11 RAD 6568.5 VEL 12.696 PTH 2.31 VHP 11.695 DPA 7.87 RAP 16.40 ECC 1.6554
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 41 49 3346.82 -23.72 120.84 273.69 74.06 3 37 36 2746.8 -25.68 112.72
90.00 22 59 12 4067.69 -4.22 164.59 265.83 61.97 24 7 0 3467.7 -7.94 157.88
100.00 4 28 12 3003.88 -28.48 96.43 274.71 75.61 5 18 15 2403.9 -28.20 88.05
100.00 23 55 31 3885.86 -1.71 149.85 264.44 60.15 25 0 17 3285.9 -5.67 143.30
110.00 6 22 29 2846.30 -32.55 70.85 276.29 78.95 7 6 35 2046.3 -33.74 61.82
110.00 0 21 39 3816.21 3.57 141.28 261.15 55.98 1 25 15 3216.2 -.92 135.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5857 TRA-1.3902 TC3 -.0268 BAU .0324 SGT 1459.7 SGR 440.2 SCS 106.4 ST 670.1 SR 427.9 SS 596.0
RDE -.4706 RRA .0802 RC3 -.0546 FAU .02256 RRT .1864 RRF -.1925 RTF -.8445 CRT .7579 CRS .8524 CST .9864
FDE .5721 FRA .9231 FC3 -.4905 BSP 4586 SGB 1524.6 R23 -.0282 R13 -.8450 LSA 962.1 MSA 247.8 SSA 15.8
BOE .7513 BRA 1.3526 BC3 .0608 FSP -277 SGI 1462.2 SGE 431.8 THA 3.53 EL1 755.5 EL2 247.6 ALF 29.27

LAUNCH DATE DEC 30 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 236.369

RL 147.10 LAL -.00 LOL 98.37 VL 25.366 GAL 6.46 AZL 87.02 HCA 97.59 SMA 114.31 ECC .30641 INC 2.9789 V1 30.287
RP 107.89 LAP 2.95 LOP 195.97 VP 36.044 GAP -17.58 AZP 90.39 TAL 164.91 TAP 262.51 RCA 79.29 APO 149.34 V2 35.123
RC 42.436 GL 12.57 GP 3.95 ZAL 61.31 ZAP 5.59 ETS 226.76 ZAE 173.59 ETE 271.58 ZAC 112.58 ETC 164.69 CLP 3.96

PLANETOCENTRIC CONIC

C3 36.237 VHL 6.020 DLA 25.96 RAL 30.97 RAD 6568.4 VEL 12.554 PTH 2.28 VHP 11.142 DPA 8.78 RAP 17.86 ECC 1.5964
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 33 2 3350.95 -23.64 121.12 271.98 73.95 3 28 53 2750.9 -25.62 113.00
90.00 23 6 54 4015.90 -5.87 161.68 264.63 62.25 24 13 50 3415.9 -9.54 154.92
100.00 4 21 19 3001.82 -26.52 96.29 272.84 75.67 5 11 21 2401.8 -28.23 87.90
100.00 0 5 13 3840.25 -3.26 147.34 263.19 60.27 1 9 13 3240.3 -7.19 140.76
110.00 6 17 48 2837.37 -32.67 70.18 274.41 79.33 7 1 45 2037.4 -33.80 61.13
110.00 0 25 14 3777.47 2.09 139.26 259.86 55.87 1 28 11 3177.5 -2.40 133.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5913 TRA-1.3302 TC3 .0024 BAU .0261 SGT 1516.5 SGR 436.0 SCS 116.6 ST 703.7 SR 426.0 SS 625.4
RDE -.4470 RRA .0662 RC3 -.0538 FAU .02381 RRT .2126 RRF -.2193 RTF -.8547 CRT .7691 CRS .8594 CST .9871
FDE .6032 FRA .9553 FC3 -.5688 BSP 4791 SGB 1578.0 R23 -.0226 R13 -.8552 LSA 1004.0 MSA 243.9 SSA 16.0
BOE .7412 BRA 1.3318 BC3 .0538 FSP -307 SGI 1519.6 SGE 425.2 THA 3.80 EL1 785.6 EL2 243.8 ALF 27.88

LAUNCH DATE DEC 30 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 243.105

RL 147.10 LAL -.00 LOL 98.37 VL 25.586 GAL 6.09 AZL 87.09 HCA 100.82 SMA 115.43 ECC .29274 INC 2.9057 V1 30.287
RP 107.93 LAP 2.85 LOP 199.20 VP 36.187 GAP -16.62 AZP 90.55 TAL 164.84 TAP 265.65 RCA 81.64 APO 149.22 V2 35.111
RC 42.394 GL 12.97 GP 4.23 ZAL 61.41 ZAP 4.86 ETS 242.25 ZAE 173.40 ETE 297.80 ZAC 114.09 ETC 164.32 CLP 2.41

PLANETOCENTRIC CONIC

C3 33.016 VHL 5.746 DLA 26.33 RAL 30.77 RAD 6568.3 VEL 12.425 PTH 2.25 VHP 10.610 DPA 9.71 RAP 19.29 ECC 1.5434
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 24 10 3354.35 -23.58 121.36 270.01 73.84 3 20 4 2754.5 -25.57 113.25
90.00 23 14 7 3965.29 -7.47 158.81 263.36 62.61 24 20 12 3365.3 -11.08 152.00
100.00 4 14 32 2998.75 -26.57 96.08 270.91 75.78 5 4 30 2398.7 -28.26 87.68
100.00 0 10 22 3796.32 -4.74 144.92 261.87 60.45 1 13 38 3196.3 -8.64 138.30
110.00 6 13 10 2827.51 -32.79 69.44 272.46 79.75 6 56 58 2027.5 -35.86 60.36
110.00 0 28 12 3740.32 .67 137.32 258.51 55.82 1 30 33 3140.3 -3.82 131.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5968 TRA-1.3087 TC3 .0378 BAU .0282 SGT 1573.5 SGR 431.8 SCS 127.9 ST 738.2 SR 423.9 SS 656.5
RDE -.4247 RRA .0525 RC3 -.0515 FAU .02521 RRT .2422 RRF -.2500 RTF -.8643 CRT .7810 CRS .8668 CST .9878
FDE .6369 FRA .9894 FC3 -.6610 BSP 4999 SGB 1631.6 R23 -.0256 R13 -.8650 LSA 1048.0 MSA 239.2 SSA 16.1
BOE .7325 BRA 1.3098 BC3 .0639 FSP -340 SGI 1577.2 SGE 417.8 THA 4.09 EL1 817.0 EL2 239.2 ALF 26.61

LAUNCH DATE DEC 30 1968

FLIGHT TIME 102.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 249.847

RL 147.10 LAL -.00 LOL 98.37 VL 25.790 GAL 5.74 AZL 87.17 HCA 104.03 SMA 116.49 ECC .27992 INC 2.8308 VI 30.287  
 RP 107.97 LAP 2.75 LOP 202.42 VP 36.319 GAP -15.72 AZP 90.69 TAL 164.82 TAP 268.85 RCA 83.88 APO 149.10 V2 35.099  
 RC 42.534 GL 13.35 GP 4.53 ZAL 61.57 ZAP 4.61 ETS 261.64 ZAE 172.11 ETE 318.85 ZAC 115.59 ETC 163.91 CLP .83

PLANETOCENTRIC CONIC

C3 30.120 VHL 5.488 DLA 26.64 RAL 30.50 RAD 6568.2 VEL 12.308 PTH 2.22 VHP 10.097 DPA 10.66 RAP 20.68 ECC 1.4957  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 15 26 3357.11 -23.53 121.53 268.01 73.77 3 11 23 2757.1 -25.53 113.43  
 90.00 23 20 41 3916.57 -8.98 156.04 262.03 65.03 24 25 57 3316.6 -12.53 149.15  
 100.00 4 7 58 2994.29 -26.65 95.77 268.94 75.92 4 37 52 2394.3 -28.32 87.36  
 100.00 0 14 45 3734.62 -6.13 142.61 260.49 60.69 1 17 20 3154.6 -9.99 135.95  
 110.00 6 8 41 2616.56 -32.92 68.61 270.46 80.23 6 52 18 2016.6 -33.92 59.51  
 110.00 0 30 31 3705.12 -.68 135.48 257.11 55.82 1 32 17 3105.1 -5.16 129.26

DIFFERENTIAL CORRECTIONS

TDE -.6023 TRA-1.2840 TC3 .0780 BAU .0368  
 RDE -.4039 RRA .0390 RC3 -.0474 FAU .02677  
 FDE .6736 FRA 1.0260 FC3 -.7694 BSP 5196  
 BOE .7252 BRA 1.2866 BC3 .0913 FSP -377

MID-COURSE EXECUTION ACCURACY

SGT 1630.8 SGR 427.2 SG3 140.5  
 RRT .2759 RRF -.2849 RTF -.8730  
 SGB 1685.8 R23 -.0290 R13 -.8737  
 SG1 1635.1 SGT 409.5 THA 4.41

ORBIT DETERMINATION ACCURACY

ST 773.6 SR 421.8 S3 609.3  
 CRT .7935 CRS .8746 CST .9885  
 LSA 1093.9 HSA 234.0 SSA 16.2  
 EL1 849.6 EL2 233.8 ALF 25.46

LAUNCH DATE DEC 30 1968

FLIGHT TIME 104.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 256.592

RL 147.10 LAL -.00 LOL 98.37 VL 25.979 GAL 5.40 AZL 87.25 HCA 107.25 SMA 117.50 ECC .26790 INC 2.7540 VI 30.287  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.441 GAP -14.85 AZP 90.82 TAL 164.84 TAP 272.09 RCA 86.02 APO 148.97 V2 35.086  
 RC 42.853 GL 13.70 GP 4.88 ZAL 61.80 ZAP 4.94 ETS 281.15 ZAE 170.20 ETE 332.89 ZAC 116.97 ETC 163.44 CLP -.78

PLANETOCENTRIC CONIC

C3 27.519 VHL 5.246 DLA 26.90 RAL 30.16 RAD 6568.1 VEL 12.202 PTH 2.19 VHP 9.604 DPA 11.63 RAP 22.03 ECC 1.4529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 7 3357.84 -23.51 121.58 265.97 73.75 3 3 5 2757.0 -25.52 113.48  
 90.00 23 26 21 3670.70 -10.39 153.40 260.62 63.51 24 30 51 3270.7 -13.86 146.45  
 100.00 4 1 51 2987.95 -26.75 95.32 266.94 76.13 4 51 39 2388.0 -28.39 86.91  
 100.00 0 18 14 3715.82 -7.42 140.45 259.04 60.96 1 20 9 3115.8 -11.24 133.74  
 110.00 6 4 28 2604.29 -33.06 67.68 268.42 80.76 6 47 52 2004.3 -33.98 58.56  
 110.00 0 32 6 3672.24 -1.93 133.77 255.68 55.86 1 33 19 3072.2 -6.40 127.53

DIFFERENTIAL CORRECTIONS

TDE -.6073 TRA-1.2825 TC3 .1268 BAU .0490  
 RDE -.3844 RRA .0257 RC3 -.0410 FAU .02890  
 FDE .7136 FRA 1.0658 FC3 -.8965 BSP 5415  
 BOE .7188 BRA 1.2827 BC3 .1333 FSP -419

MID-COURSE EXECUTION ACCURACY

SGT 1687.8 SGR 423.2 SG3 154.5  
 RRT .3138 RRF -.3247 RTF -.8817  
 SGB 1740.0 R23 -.0332 R13 -.8825  
 SG1 1693.3 SGT 400.8 THA 4.77

ORBIT DETERMINATION ACCURACY

ST 809.5 SR 420.0 S3 724.1  
 CRT .8064 CRS .8827 CST .9892  
 LSA 1141.8 HSA 228.2 SSA 16.5  
 EL1 883.0 EL2 227.7 ALF 24.43

LAUNCH DATE DEC 30 1968

FLIGHT TIME 106.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 263.337

RL 147.10 LAL -.00 LOL 98.37 VL 26.153 GAL 5.08 AZL 87.33 HCA 110.46 SMA 118.45 ECC .25667 INC 2.6744 VI 30.287  
 RP 108.05 LAP 2.51 LOP 208.88 VP 36.553 GAP -14.01 AZP 90.94 TAL 164.91 TAP 275.37 RCA 88.05 APO 148.85 V2 35.073  
 RC 43.347 GL 14.02 GP 5.27 ZAL 62.09 ZAP 5.80 ETS 296.88 ZAE 168.02 ETE 342.17 ZAC 118.32 ETC 162.91 CLP -2.42

PLANETOCENTRIC CONIC

C3 25.183 VHL 5.018 DLA 27.11 RAL 29.78 RAD 6568.0 VEL 12.106 PTH 2.17 VHP 9.129 DPA 12.61 RAP 23.34 ECC 1.4144  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 39 3355.53 -23.56 121.43 263.94 73.82 2 55 34 2755.5 -25.55 113.32  
 90.00 23 30 44 3829.04 -11.64 150.98 259.13 64.00 24 34 33 3229.0 -15.04 143.96  
 100.00 3 56 25 2979.10 -26.89 94.71 264.92 76.43 4 46 4 2379.1 -28.49 86.27  
 100.00 0 20 35 3680.70 -8.58 138.48 257.52 61.25 1 21 55 3080.7 -12.35 131.72  
 110.00 6 0 37 2590.46 -33.20 66.62 266.35 81.37 6 43 47 1990.5 -34.04 57.48  
 110.00 0 32 52 3642.11 -3.08 132.19 254.15 55.94 1 33 34 3042.1 -7.53 125.93

DIFFERENTIAL CORRECTIONS

TDE -.6117 TRA-1.2378 TC3 .1825 BAU .0624  
 RDE -.3665 RRA .0124 RC3 -.0318 FAU .03045  
 FDE .7566 FRA 1.1084 FC3-1.0467 BSP 5619  
 BOE .7131 BRA 1.2378 BC3 .1852 FSP -466

MID-COURSE EXECUTION ACCURACY

SGT 1743.9 SGR 420.0 SG3 170.0  
 RRT .3565 RRF -.3695 RTF -.8896  
 SGB 1793.7 R23 -.0381 R13 -.8906  
 SG1 1750.6 SGT 390.8 THA 5.16

ORBIT DETERMINATION ACCURACY

ST 845.3 SR 418.5 S3 760.3  
 CRT .8197 CRS .8910 CST .9899  
 LSA 1190.9 HSA 221.9 SSA 16.4  
 EL1 917.0 EL2 221.0 ALF 23.53

LAUNCH DATE DEC 30 1968

FLIGHT TIME 108.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 270.078

RL 147.10 LAL -.00 LOL 98.37 VL 26.314 GAL 4.77 AZL 87.41 HCA 113.68 SMA 119.35 ECC .24620 INC 2.5915 VI 30.287  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.656 GAP -13.20 AZP 91.04 TAL 165.03 TAP 278.70 RCA 89.97 APO 148.73 V2 35.060  
 RC 44.011 GL 14.29 GP 5.71 ZAL 62.43 ZAP 7.03 ETS 308.04 ZAE 165.79 ETE 348.67 ZAC 119.61 ETC 162.32 CLP -4.10

PLANETOCENTRIC CONIC

C3 23.084 VHL 4.805 DLA 27.25 RAL 29.34 RAD 6567.9 VEL 12.019 PTH 2.15 VHP 8.673 DPA 13.62 RAP 24.59 ECC 1.3799  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 34 3346.59 -23.69 120.96 261.92 74.01 2 49 23 2748.6 -25.65 112.84  
 90.00 23 33 21 3793.35 -12.70 148.89 257.54 64.48 24 36 34 3193.5 -16.03 141.80  
 100.00 3 51 58 2967.00 -27.08 93.86 262.89 76.84 4 41 23 2367.0 -28.62 85.39  
 100.00 0 21 35 3650.15 -9.57 136.76 255.92 61.55 1 22 26 3050.2 -13.30 129.95  
 110.00 5 57 17 2574.75 -33.56 65.42 264.25 82.07 6 40 12 1974.8 -34.10 56.26  
 110.00 0 32 44 3615.16 -4.11 130.78 252.59 56.03 1 32 59 3015.2 -8.54 124.50

DIFFERENTIAL CORRECTIONS

TDE -.6158 TRA-1.2119 TC3 .2443 BAU .0756  
 RDE -.3502 RRA -.0009 RC3 -.0191 FAU .03261  
 FDE .8039 FRA 1.1552 FC3-1.2230 BSP 5818  
 BOE .7084 BRA 1.2119 BC3 .2450 FSP -518

MID-COURSE EXECUTION ACCURACY

SGT 1799.2 SGR 418.0 SG3 187.3  
 RRT .4048 RRF -.4199 RTF -.8969  
 SGB 1847.1 R23 -.0436 R13 -.8980  
 SG1 1807.5 SGT 380.4 THA 5.62

ORBIT DETERMINATION ACCURACY

ST 881.5 SR 417.6 S3 798.4  
 CRT .8335 CRS .8996 CST .9907  
 LSA 1242.0 HSA 215.1 SSA 16.5  
 EL1 951.7 EL2 213.7 ALF 22.76

LAUNCH DATE DEC 30 1968

FLIGHT TIME 110.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 26.462 GAL 4.48 AZL 87.50 HCA 116.89 SMA 120.20 ECC .23645 INC 2.5045 V1 30.287
RP 108.13 LAP 2.23 LOP 215.28 VP 36.750 GAP -12.43 AZP 91.13 TAL 165.18 TAP 282.07 RCA 91.78 APO 148.62 V2 35.047
RC 44.838 GL 14.50 GP 6.21 ZAL 62.82 ZAP 8.52 ETS 315.88 ZAE 163.60 ETE 353.55 ZAC 120.81 ETC 161.66 CLP -5.84

DISTANCE 276.815

PLANETOCENTRIC CONIC

C3 21.200 WHL 4.604 DLA 27.32 RAL 28.87 RAD 6567.9 VEL 11.941 PTH 2.12 WHP 8.235 DPA 14.67 RAP 25.78 ECC 1.3489
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 49 32 3335.10 -23.94 120.05 259.94 74.40 2 45 7 2739.1 -25.85 111.90
90.00 23 33 37 3765.58 -13.51 147.25 255.86 64.87 24 36 23 3165.6 -16.78 140.11
100.00 3 48 44 2950.82 -27.33 92.72 280.88 77.39 4 37 55 2350.8 -28.79 84.22
100.00 0 21 2 3625.09 -10.38 135.34 254.25 61.81 1 21 27 3025.1 -14.07 128.49
110.00 5 54 38 2556.81 -33.52 64.05 262.13 82.86 6 37 15 1956.8 -34.14 54.86
110.00 0 31 36 3591.87 -4.99 129.56 250.99 56.14 1 31 28 2991.9 -9.41 123.25

DIFFERENTIAL CORRECTIONS

TOE -.6184 TRA-1.1852 TC3 .3145 BAU .0891
ROE -.3355 RRA -.0146 RC3 -.0019 FAU .03904
FOE .8539 FRA 1.2064 FC3-1.4309 BSP 6018
BOE .7036 BRA 1.1852 BC3 .3145 FSP -577

MID-COURSE EXECUTION ACCURACY

SGT 1852.4 SGR 418.0 SG3 206.6
RRF .4581 RRF -.4759 RTF -.9038
SG8 1899.0 R23 -.0503 R13 -.9051
SG1 1862.7 SG2 369.5 THA 6.14

ORBIT DETERMINATION ACCURACY

ST 916.7 SR 417.5 SS 858.1
CRT .8474 CR8 .9083 CST .9914
LSA 1293.6 MSA 208.0 S8A 16.5
EL1 986.0 EL2 206.1 ALF 22.12

LAUNCH DATE DEC 30 1968

FLIGHT TIME 112.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 26.599 GAL 4.21 AZL 87.59 HCA 120.09 SMA 120.99 ECC .22740 INC 2.4124 V1 30.287
RP 108.17 LAP 2.09 LOP 218.48 VP 36.836 GAP -11.67 AZP 91.21 TAL 165.38 TAP 285.47 RCA 93.48 APO 148.50 V2 35.033
RC 45.818 GL 14.64 GP 6.79 ZAL 63.26 ZAP 10.19 ETS 320.94 ZAE 161.52 ETE 357.47 ZAC 121.92 ETC 160.93 CLP -7.62

DISTANCE 283.542

PLANETOCENTRIC CONIC

C3 19.507 WHL 4.417 DLA 27.30 RAL 28.37 RAD 6567.8 VEL 11.870 PTH 2.11 WHP 7.815 DPA 15.75 RAP 26.88 ECC 1.3210
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 48 6 3313.34 -24.33 118.57 258.01 75.04 2 43 19 2713.3 -26.15 110.38
90.00 23 31 3 3747.59 -14.02 146.19 254.07 65.15 24 33 30 3147.6 -17.26 139.01
100.00 3 47 4 2929.79 -27.63 91.25 258.89 78.12 4 35 54 2329.8 -28.99 82.69
100.00 0 18 41 3606.38 -10.98 134.27 252.52 62.02 1 18 47 3006.4 -14.64 127.39
110.00 5 52 50 2536.23 -33.68 62.46 280.01 83.79 6 35 6 1936.2 -34.17 53.25
110.00 0 29 24 3572.70 -5.72 128.55 249.35 56.24 1 28 57 2972.7 -10.12 122.22

DIFFERENTIAL CORRECTIONS

TOE -.6175 TRA-1.1561 TC3 .3965 BAU .1035
ROE -.3224 RRA -.0286 RC3 .0208 FAU .03780
FOE .9066 FRA 1.2621 FC3-1.6778 BSP 6264
BOE .6965 BRA 1.1564 BC3 .3971 FSP -645

MID-COURSE EXECUTION ACCURACY

SGT 1800.6 SGR 420.7 SG3 228.2
RRF .5151 RRF -.5565 RTF -.9106
SG8 1946.7 R23 -.0585 R13 -.9121
SG1 1913.4 SG2 358.2 THA 6.74

ORBIT DETERMINATION ACCURACY

ST 947.6 SR 418.4 SS 877.9
CRT .8608 CR8 .9169 CST .9920
LSA 1342.8 MSA 200.8 S8A 16.6
EL1 1016.6 EL2 198.5 ALF 21.68

LAUNCH DATE DEC 30 1968

FLIGHT TIME 114.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 26.724 GAL 3.95 AZL 87.69 HCA 123.30 SMA 121.73 ECC .21902 INC 2.3143 V1 30.287
RP 108.21 LAP 1.93 LOP 221.69 VP 36.914 GAP -10.95 AZP 91.27 TAL 165.61 TAP 288.91 RCA 95.07 APO 148.39 V2 35.020
RC 46.944 GL 14.71 GP 7.45 ZAL 63.73 ZAP 12.03 ETS 324.62 ZAE 159.58 ETE .83 ZAC 122.92 ETC 160.12 CLP -9.48

DISTANCE 290.260

PLANETOCENTRIC CONIC

C3 17.985 WHL 4.241 DLA 27.19 RAL 27.85 RAD 6567.7 VEL 11.805 PTH 2.09 WHP 7.412 DPA 16.89 RAP 27.90 ECC 1.2960
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 49 37 3282.39 -24.85 116.46 256.15 75.98 2 44 19 2682.4 -26.54 108.20
90.00 23 25 24 3740.36 -14.23 145.76 252.19 65.26 24 27 44 3140.4 -17.45 138.56
100.00 3 47 14 2903.22 -27.99 89.33 256.93 79.05 4 35 37 2303.2 -29.21 80.74
100.00 0 14 23 3594.77 -11.35 133.61 250.73 62.16 1 14 18 2994.8 -14.99 126.71
110.00 5 52 3 2512.62 -33.84 60.64 257.89 84.86 6 33 56 1912.6 -34.18 51.41
110.00 0 26 3 3558.13 -6.27 127.78 247.68 56.33 1 25 22 2958.1 -10.65 121.43

DIFFERENTIAL CORRECTIONS

TOE -.6164 TRA-1.1282 TC3 .4817 BAU .1164
ROE -.3112 RRA -.0435 RC3 .0500 FAU .04085
FOE .9633 FRA 1.3248 FC3-1.9662 BSP 6439
BOE .6905 BRA 1.1291 BC3 .4843 FSP -719

MID-COURSE EXECUTION ACCURACY

SGT 1948.5 SGR 427.7 SG3 252.3
RRF .5768 RRF -.6014 RTF -.9164
SG8 1994.9 R23 -.0680 R13 -.9182
SG1 1964.6 SG2 346.6 THA 7.45

ORBIT DETERMINATION ACCURACY

ST 976.7 SR 420.9 SS 919.4
CRT .8747 CR8 .9255 CST .9927
LSA 1393.8 MSA 193.3 S8A 16.6
EL1 1048.2 EL2 190.5 ALF 21.36

LAUNCH DATE DEC 30 1968

FLIGHT TIME 116.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 26.840 GAL 3.71 AZL 87.79 HCA 126.50 SMA 122.42 ECC .21129 INC 2.2087 V1 30.287
RP 108.25 LAP 1.78 LOP 224.89 VP 36.985 GAP -10.25 AZP 91.31 TAL 165.88 TAP 292.37 RCA 96.56 APO 148.29 V2 35.007
RC 48.205 GL 14.67 GP 8.20 ZAL 64.24 ZAP 14.01 ETS 327.21 ZAE 157.82 ETE 3.87 ZAC 123.80 ETC 159.22 CLP -11.40

DISTANCE 296.965

PLANETOCENTRIC CONIC

C3 16.617 WHL 4.076 DLA 26.97 RAL 27.33 RAD 6567.7 VEL 11.747 PTH 2.07 WHP 7.028 DPA 18.08 RAP 28.81 ECC 1.2755
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 54 6 3242.34 -25.49 113.70 254.35 77.22 2 48 9 2642.3 -26.99 105.35
90.00 23 16 45 3743.84 -14.13 145.96 250.25 65.20 24 19 9 3143.8 -17.36 138.77
100.00 3 49 25 2870.63 -28.39 86.99 255.00 80.22 4 37 15 2270.6 -29.45 78.35
100.00 0 8 4 3590.79 -11.48 133.38 248.80 62.21 1 7 55 2990.8 -15.11 126.47
110.00 5 52 29 2485.52 -33.99 58.54 255.78 86.10 6 33 54 1885.5 -34.15 49.29
110.00 0 21 29 3548.66 -6.63 127.28 245.99 56.39 1 20 38 2948.7 -11.00 120.92

DIFFERENTIAL CORRECTIONS

TOE -.6136 TRA-1.1007 TC3 .5727 BAU .1287
ROE -.3020 RRA -.0596 RC3 .0875 FAU .04423
FOE 1.0234 FRA 1.3955 FC3-2.3042 BSP 6800
BOE .6838 BRA 1.1024 BC3 .5793 FSP -801

MID-COURSE EXECUTION ACCURACY

SGT 1993.7 SGR 440.6 SG3 279.2
RRF .6404 RRF -.6683 RTF -.9217
SG8 2041.8 R23 -.0793 R13 -.9239
SG1 2014.1 SG2 334.9 THA 8.29

ORBIT DETERMINATION ACCURACY

ST 1007.5 SR 425.4 SS 961.6
CRT .8884 CR8 .9341 CST .9934
LSA 1444.3 MSA 185.6 S8A 16.6
EL1 1078.3 EL2 182.5 ALF 21.20

LAUNCH DATE DEC 30 1968

FLIGHT TIME 118.00

ARRIVAL DATE APR 27 1969

MELIOCENTRIC CONIC

DISTANCE 303.657

RL 147.10 LAL -.00 LOL 98.37 VL 26.945 GAL 3.48 AZL 87.91 MCA 129.70 SMA 123.07 ECC .20416 INC 2.0941 V1 30.287
RP 108.29 LAP 1.61 LOP 228.09 VP 37.049 GAP -9.58 AZP 91.34 TAL 166.17 TAP 295.86 RCA 97.94 APO 148.20 V2 34.994
RC 49.590 GL 14.51 GP 9.09 ZAL 64.76 ZAP 16.15 ETS 329.03 ZAE 156.23 ETE 6.78 ZAC 124.52 ETC 158.22 CLP -13.41

PLANETOCENTRIC CONIC

C3 15.387 VML 3.923 DLA 26.82 RAL 26.82 RAD 6567.6 VEL 11.695 PTH 2.06 VHP 6.661 DPA 19.35 RAP 29.59 ECC 1.2532
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 1 21 3193.97 -28.17 110.32 252.59 78.78 2 54 35 2594.0 -27.46 101.89
90.00 23 5 28 3757.24 -13.75 146.76 248.27 65.00 24 8 5 3157.2 -17.00 139.60
100.00 3 53 44 2831.70 -28.81 84.18 253.10 81.65 4 40 55 2231.7 -29.66 75.48
100.00 23 59 47 3594.75 -11.35 133.61 247.05 62.16 24 55 42 2994.7 -14.99 126.71
110.00 5 54 18 2454.45 -34.10 56.12 253.69 87.52 6 35 12 1854.5 -34.07 46.87
110.00 0 15 38 3544.76 -6.78 127.07 244.30 56.41 1 14 43 2944.8 -11.14 120.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.6070 TRA-1.0724 TC3 .6701 BAU .1406
ROE -.2947 RRA -.0772 RC3 .1354 FAU .04801
FOE 1.0845 FRA 1.4743 FC3-2.7012 BSP 6761
BOE .6747 BRA 1.0752 BC3 .6837 FSP -894

SGT 2032.8 SGR 461.0 SCS 309.1
RRT .7028 RRF -.7342 RTF -.9265
SCB 2084.4 R23 -.0928 R13 -.9292
SGI 2059.1 SGI 323.7 TMA 9.29

ST 1030.8 SR 452.1 SS 1002.8
CRT .9015 CRS .9423 CST .9940
LSA 1490.9 MSA 177.8 SSA 16.7
EL1 1104.0 EL2 174.6 ALF 21.26

LAUNCH DATE DEC 30 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 29 1969

MELIOCENTRIC CONIC

DISTANCE 310.332

RL 147.10 LAL -.00 LOL 98.37 VL 27.041 GAL 3.27 AZL 88.03 MCA 132.89 SMA 123.67 ECC .19762 INC 1.9685 V1 30.287
RP 108.33 LAP 1.44 LOP 231.28 VP 37.107 GAP -8.92 AZP 91.34 TAL 166.48 TAP 299.37 RCA 99.23 APO 148.10 V2 34.980
RC 51.091 GL 14.21 GP 10.11 ZAL 65.30 ZAP 18.44 ETS 330.27 ZAE 154.83 ETE 9.69 ZAC 125.07 ETC 157.12 CLP -15.50

PLANETOCENTRIC CONIC

C3 14.278 VML 3.779 DLA 26.12 RAL 26.35 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 6.313 DPA 20.72 RAP 30.23 ECC 1.2350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 11 6 3138.21 -26.85 106.38 250.86 80.65 3 3 25 2538.2 -27.87 97.86
90.00 22 51 56 3779.65 -13.10 148.09 246.30 64.67 23 54 56 3179.7 -16.40 140.97
100.00 4 0 16 2786.27 -29.21 80.86 251.23 83.35 4 46 42 2186.3 -29.82 72.11
100.00 23 45 27 3806.82 -10.97 134.30 245.21 62.02 24 45 34 3006.8 -14.62 127.42
110.00 5 57 41 2418.90 -34.17 55.34 251.81 89.16 6 38 0 1818.9 -33.91 44.11
110.00 0 8 28 3546.96 -6.69 127.19 242.63 56.40 1 7 35 2947.0 -11.06 120.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5949 TRA-1.0419 TC3 .7788 BAU .1533
ROE -.2893 RRA -.0988 RC3 .1969 FAU .05229
FOE 1.1443 FRA 1.5614 FC3-3.1707 BSP 6958
BOE .6615 BRA 1.0464 BC3 .8033 FSP -1001

SGT 2063.1 SGR 491.2 SCS 342.4
RRT .7808 RRF -.7958 RTF -.9314
SCB 2120.7 R23 -.1082 R13 -.9348
SGI 2097.4 SGI 313.6 TMA 10.50

ST 1045.3 SR 441.4 SS 1040.9
CRT .9139 CRS .9500 CST .9946
LSA 1530.3 MSA 170.0 SSA 16.6
EL1 1122.3 EL2 166.9 ALF 21.60

LAUNCH DATE DEC 30 1968

FLIGHT TIME 122.00

ARRIVAL DATE MAY 1 1969

MELIOCENTRIC CONIC

DISTANCE 316.991

RL 147.10 LAL -.00 LOL 98.37 VL 27.129 GAL 3.08 AZL 88.17 MCA 136.09 SMA 124.22 ECC .19164 INC 1.8293 V1 30.287
RP 108.38 LAP 1.27 LOP 234.47 VP 37.159 GAP -8.29 AZP 91.32 TAL 166.81 TAP 302.89 RCA 100.41 APO 148.02 V2 34.967
RC 52.697 GL 13.73 GP 11.32 ZAL 65.83 ZAP 20.92 ETS 331.07 ZAE 153.59 ETE 12.73 ZAC 125.42 ETC 155.91 CLP -17.71

PLANETOCENTRIC CONIC

C3 13.279 VML 3.644 DLA 25.46 RAL 25.93 RAD 6567.5 VEL 11.605 PTH 2.03 VHP 5.985 DPA 22.21 RAP 30.69 ECC 1.2185
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 23 11 3075.68 -27.46 101.91 249.15 82.81 3 14 27 2475.7 -28.17 93.31
90.00 22 36 30 3810.41 -12.19 149.89 244.37 64.24 23 40 1 3210.4 -15.56 142.83
100.00 4 9 7 2734.18 -29.56 77.03 249.40 85.34 4 54 41 2134.2 -29.89 68.24
100.00 23 33 16 3627.14 -10.31 135.45 243.39 61.79 24 33 43 3027.1 -14.01 128.61
110.00 6 2 52 2378.27 -34.17 50.17 249.57 91.04 6 42 30 1778.3 -33.65 40.96
110.00 23 58 0 3555.82 -6.36 127.66 241.00 56.34 24 55 16 2955.8 -10.74 121.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5801 TRA-1.0129 TC3 .8841 BAU .1643
ROE -.2860 RRA -.1195 RC3 .2745 FAU .05695
FOE 1.2024 FRA 1.6808 FC3-3.7129 BSP 7090
BOE .6468 BRA 1.0199 BC3 .9257 FSP -1117

SGT 2087.7 SGR 534.4 SCS 379.2
RRT .8122 RRF -.8499 RTF -.9353
SCB 2155.0 R23 -.1263 R13 -.9396
SGI 2133.3 SGI 305.1 TMA 11.99

ST 1054.7 SR 454.1 SS 1076.4
CRT .9258 CRS .9573 CST .9952
LSA 1565.5 MSA 162.0 SSA 16.7
EL1 1137.2 EL2 159.2 ALF 22.19

LAUNCH DATE DEC 30 1968

FLIGHT TIME 124.00

ARRIVAL DATE MAY 3 1969

MELIOCENTRIC CONIC

DISTANCE 323.632

RL 147.10 LAL -.00 LOL 98.37 VL 27.209 GAL 2.90 AZL 88.33 MCA 139.28 SMA 124.72 ECC .18618 INC 1.6730 V1 30.287
RP 108.42 LAP 1.09 LOP 237.66 VP 37.203 GAP -7.68 AZP 91.27 TAL 167.14 TAP 306.42 RCA 101.50 APO 147.94 V2 34.954
RC 54.398 GL 13.03 GP 12.74 ZAL 66.37 ZAP 23.80 ETS 331.51 ZAE 152.50 ETE 16.02 ZAC 125.52 ETC 154.59 CLP -20.03

PLANETOCENTRIC CONIC

C3 12.377 VML 3.518 DLA 24.59 RAL 25.59 RAD 6567.5 VEL 11.566 PTH 2.02 VHP 5.676 DPA 23.86 RAP 30.94 ECC 1.2037
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 37 34 3006.53 -27.95 96.91 247.47 85.27 3 27 41 2406.5 -28.31 88.26
90.00 22 19 24 3849.35 -11.03 152.16 242.51 63.75 23 23 34 3249.4 -14.47 145.17
100.00 4 20 22 2875.10 -29.81 72.65 247.80 87.63 5 4 57 2075.1 -29.82 63.85
100.00 23 19 18 3636.01 -9.38 137.09 241.64 61.49 24 20 14 3056.0 -13.12 130.29
110.00 6 10 5 2351.85 -34.05 46.55 249.56 93.16 6 48 56 1731.8 -33.24 37.40
110.00 23 46 4 3572.03 -5.75 128.51 239.43 56.25 24 45 36 2972.0 -10.14 122.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5613 TRA -.9849 TC3 .9878 BAU .1747
ROE -.2850 RRA -.1482 RC3 .3730 FAU .068201
FOE 1.2553 FRA 1.7743 FC3-4.3373 BSP 7191
BOE .6295 BRA .9957 BC3 1.0559 FSP -1243

SGT 2104.8 SGR 594.0 SCS 419.7
RRT .8547 RRF -.8949 RTF -.9386
SCB 2187.0 R23 -.1485 R13 -.9441
SGI 2168.4 SGI 299.6 TMA 13.83

ST 1056.5 SR 470.7 SS 1107.2
CRT .9369 CRS .9639 CST .9959
LSA 1593.7 MSA 153.7 SSA 16.8
EL1 1146.7 EL2 151.6 ALF 23.09



LAUNCH DATE DEC 30 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 330.254

RL 147.10 LAL -.00 LOL 98.37 VL 27.282 GAL 2.75 AZL 88.50 HCA 142.47 SMA 125.19 ECC .18122 INC 1.4951 V1 30.287
RP 108.45 LAP .91 LOP 240.85 VP 37.246 GAP -7.09 AZP 91.19 TAL 167.49 TAP 309.95 RCA 102.50 APO 147.87 V2 34.942
RC 56.186 GL 12.07 GP 14.44 ZAL 66.88 ZAP 26.51 ETS 331.65 ZAE 151.50 ETE 19.69 ZAC 125.33 ETC 153.16 CLP -22.48

PLANETOCENTRIC CONIC

C3 11.562 VHL 3.400 OLA 23.47 RAL 25.36 RAD 6567.4 VEL 11.530 PTH 2.01 WHP 5.390 DPA 23.70 RAP 30.94 ECC 1.1903
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 54 22 2930.34 -28.25 91.35 245.81 88.04 3 43 12 2330.3 -28.23 82.69
90.00 22 0 45 3696.88 -9.59 154.91 240.78 63.23 23 5 41 3296.9 -13.11 148.00
100.00 4 34 12 2608.45 -29.89 67.70 245.83 90.23 5 17 41 2008.4 -29.54 58.91
100.00 23 3 35 3694.00 -8.14 139.23 240.00 61.14 24 5 9 3094.0 -11.93 132.49
110.00 6 19 36 2278.71 -33.78 42.42 245.60 95.61 6 57 35 1678.7 -32.63 33.37
110.00 23 34 41 3596.51 -4.82 129.80 237.97 56.12 24 34 38 2996.5 -9.24 123.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5369 TRA -.9569 TC3 1.0869 BAU .1848
RDE -.2857 RRA -.1784 RC3 .4963 FAU .06743
FOE 1.2964 FRA 1.9023 FC3-5.0490 BSP 7275
BOE .6082 BRA .9734 BC3 1.1956 FSP -1379

SGT 2110.6 SGR 673.8 SG3 463.5
RRR .8874 RRF -.9297 RTF -.9413
SGB 2215.5 R23 -.1677 R13 -.9486
SGI 2195.3 SG2 298.7 THA 16.12

ST 1047.3 SR 491.5 SS 1129.4
CRT .9472 CRS .9697 CST .9966
LSA 1610.2 HSA 145.0 SSA 16.9
ELI 1148.0 EL2 143.8 ALF 24.37

LAUNCH DATE DEC 30 1968

FLIGHT TIME 128.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 336.855

RL 147.10 LAL -.00 LOL 98.37 VL 27.347 GAL 2.58 AZL 88.71 HCA 145.65 SMA 125.61 ECC .17674 INC 1.2898 V1 30.287
RP 108.49 LAP .73 LOP 244.03 VP 37.282 GAP -6.52 AZP 91.06 TAL 167.82 TAP 313.48 RCA 103.41 APO 147.81 V2 34.929
RC 58.051 GL 10.77 GP 16.48 ZAL 67.37 ZAP 29.70 ETS 331.55 ZAE 150.54 ETE 23.87 ZAC 124.80 ETC 151.61 CLP -25.07

PLANETOCENTRIC CONIC

C3 10.827 VHL 3.290 OLA 22.04 RAL 25.26 RAD 6567.4 VEL 11.499 PTH 2.00 WHP 5.128 DPA 27.80 RAP 30.63 ECC 1.1782
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 13 53 2846.08 -28.30 85.19 244.18 91.13 4 1 19 2246.1 -27.84 76.55
90.00 21 40 29 3934.04 -7.82 158.17 239.21 62.70 22 46 23 3354.0 -11.42 151.34
100.00 4 50 56 2533.16 -29.74 62.11 244.12 93.17 5 33 9 1933.2 -28.98 53.39
100.00 22 46 8 3742.19 -6.55 141.92 238.92 60.77 23 48 30 3142.2 -10.39 135.24
110.00 6 31 48 2217.58 -33.27 37.72 243.70 98.34 7 8 46 1617.6 -31.76 28.82
110.00 23 21 43 3630.54 -3.52 131.59 236.65 55.98 24 22 15 3030.5 -7.97 123.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5031 TRA -.9280 TC3 1.1907 BAU .1971
RDE -.2872 RRA -.2173 RC3 .6608 FAU .07338
FOE 1.3126 FRA 2.0408 FC3-5.8675 BSP 7425
BOE .5793 BRA .9511 BC3 1.3618 FSP -1535

SGT 2099.3 SGR 778.4 SG3 509.9
RRR .9112 RRF -.9550 RTF -.9440
SGB 2239.0 R23 -.1854 R13 -.9538
SGI 2218.3 SG2 303.5 THA 19.04

ST 1020.0 SR 515.1 SS 1134.8
CRT .9562 CRS .9744 CST .9972
LSA 1604.6 HSA 135.9 SSA 17.2
ELI 1134.6 EL2 135.5 ALF 26.18

LAUNCH DATE DEC 30 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 343.436

RL 147.10 LAL -.00 LOL 98.37 VL 27.406 GAL 2.44 AZL 88.95 HCA 148.84 SMA 125.99 ECC .17270 INC 1.0481 V1 30.287
RP 108.53 LAP .54 LOP 247.21 VP 37.314 GAP -5.97 AZP 90.90 TAL 168.15 TAP 316.99 RCA 104.24 APO 147.75 V2 34.917
RC 59.985 GL 9.04 GP 18.94 ZAL 67.83 ZAP 33.23 ETS 331.24 ZAE 149.90 ETE 28.67 ZAC 123.84 ETC 149.95 CLP -27.82

PLANETOCENTRIC CONIC

C3 10.188 VHL 3.189 OLA 20.21 RAL 25.36 RAD 6567.4 VEL 11.470 PTH 1.99 WHP 4.895 DPA 30.22 RAP 29.93 ECC 1.1673
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 36 37 2751.97 -27.98 78.33 242.63 94.55 4 22 29 2152.0 -27.05 69.78
90.00 21 18 29 4022.73 -5.65 162.06 237.87 62.21 22 25 32 3422.7 -9.33 155.31
100.00 5 11 2 2447.57 -29.25 55.79 242.49 96.46 5 51 49 1847.6 -28.05 47.20
100.00 22 26 46 3802.37 -4.33 145.25 237.25 60.42 23 30 8 3802.4 -6.44 138.64
110.00 6 47 12 2146.70 -32.44 32.36 241.90 101.42 7 22 58 1546.7 -30.53 23.66
110.00 23 7 5 3676.00 -1.79 133.96 235.54 55.86 24 8 21 3076.0 -6.26 127.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4661 TRA -.8983 TC3 1.2688 BAU .2088
RDE -.2896 RRA -.2670 RC3 .8684 FAU .07920
FOE 1.3023 FRA 2.1984 FC3-6.7433 BSP 7482
BOE .5488 BRA .9371 BC3 1.5362 FSP -1885

SGT 2077.0 SGR 915.1 SG3 557.8
RRR .9270 RRF -.9724 RTF -.9454
SGB 2269.7 R23 -.1999 R13 -.9589
SGI 2247.4 SG2 317.1 THA 22.69

ST 984.0 SR 542.8 SS 1125.9
CRT .9650 CRS .9783 CST .9981
LSA 1583.7 HSA 125.5 SSA 17.7
ELI 1116.7 EL2 125.5 ALF 28.42

LAUNCH DATE DEC 30 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 349.996

RL 147.10 LAL -.00 LOL 98.37 VL 27.458 GAL 2.32 AZL 89.24 HCA 152.02 SMA 126.34 ECC .16909 INC .7575 V1 30.287
RP 108.57 LAP .36 LOP 250.39 VP 37.342 GAP -5.44 AZP 90.67 TAL 168.47 TAP 320.49 RCA 104.98 APO 147.70 V2 34.906
RC 61.981 GL 6.73 GP 21.94 ZAL 68.27 ZAP 37.14 ETS 330.75 ZAE 148.21 ETE 34.18 ZAC 122.37 ETC 148.20 CLP -30.74

PLANETOCENTRIC CONIC

C3 9.585 VHL 3.096 OLA 17.86 RAL 25.69 RAD 6567.3 VEL 11.444 PTH 1.99 WHP 4.698 DPA 33.06 RAP 28.74 ECC 1.1578
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 3 23 2845.20 -27.16 70.62 241.19 98.33 4 47 28 2045.2 -25.73 82.25
90.00 20 54 22 4106.08 -2.99 166.74 236.84 61.83 22 2 48 3306.1 -6.73 160.06
100.00 5 35 14 2349.01 -28.28 48.63 240.98 100.11 6 14 23 1749.0 -26.59 40.23
100.00 22 5 12 3877.50 -2.00 149.39 236.29 60.17 23 9 49 3277.5 -5.95 142.83
110.00 7 6 29 2063.50 -31.15 26.22 240.25 104.84 7 40 53 1463.5 -28.80 17.80
110.00 22 50 28 3735.78 .50 137.08 234.73 55.82 23 52 42 3135.8 -3.99 130.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4210 TRA -.8694 TC3 1.3282 BAU .2235
RDE -.2897 RRA -.3305 RC3 1.1300 FAU .08478
FOE 1.2428 FRA 2.3651 FC3-7.6567 BSP 7591
BOE .5110 BRA .9300 BC3 1.7439 FSP -1836

SGT 2034.8 SGR 1090.8 SG3 604.3
RRR .9368 RRF -.9838 RTF -.9461
SGB 2308.7 R23 -.2052 R13 -.9647
SGI 2283.5 SG2 340.2 THA 27.32

ST 929.9 SR 570.1 SS 1089.9
CRT .9732 CRS .9809 CST .9990
LSA 1537.6 HSA 114.0 SSA 18.7
ELI 1084.9 EL2 112.3 ALF 31.20

LAUNCH DATE DEC 30 1968

FLIGHT TIME 134.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 356.533

RL 147.10 LAL -.00 LOL 98.37 VL 27.505 GAL 2.21 AZL 89.60 MCA 155.20 SMA 126.65 ECC .16587 INC .3998 VI 30.287  
 RP 108.60 LAP .17 LOP 253.57 VP 37.366 GAP -4.92 AZP 80.36 TAL 168.76 TAP 323.96 RCA 105.64 APO 147.66 V2 34.894  
 RC 64.032 GL 3.65 GP 25.63 ZAL 68.68 ZAP 41.51 ETS 330.15 ZAE 146.45 ETE 40.41 ZAC 120.29 ETC 146.40 CLP -33.85

PLANETOCENTRIC CONIC

C3 9.090 VHL 3.015 DLA 14.79 RAL 26.33 RAD 6567.3 VEL 11.423 PTH 1.98 VHP 4.546 DPA 36.43 RAP 26.91 ECC 1.1496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 35 23 2521.50 -25.64 61.89 239.96 102.45 5 17 24 1921.5 -23.67 53.78  
 90.00 20 27 28 4209.12 .33 172.49 236.28 61.68 21 37 37 3609.1 -3.45 165.86  
 100.00 6 4 42 2235.47 -26.63 40.44 239.70 104.11 6 41 55 1633.5 -24.42 32.34  
 100.00 21 40 50 3972.39 1.22 154.59 235.79 60.13 22 47 3 3372.4 -2.76 148.07  
 110.00 7 30 45 1964.21 -29.20 19.14 238.84 108.61 8 3 29 1364.2 -26.59 11.09  
 110.00 22 31 17 3814.41 3.50 141.19 234.37 55.97 23 34 51 3214.4 -.99 134.98

DIFFERENTIAL CORRECTIONS

TOE -.3662 TRA -.8374 TC3 1.3643 BAU .2434  
 RDE -.2825 RRA -.4126 RC3 1.4665 FAU .08958  
 FDE 1.1097 FRA 2.5279 FC3-8.5316 BSP 7817  
 BOE .4625 BRA .9335 BC3 2.0030 FSP -1980

MID-COURSE EXECUTION ACCURACY

SGT 1967.2 SGR 1314.5 SCS 644.2  
 RRT .9420 RRF -.9908 RTF -.9461  
 SGB 2366.0 R23 -.1974 R13 -.9716  
 SGI 2336.6 SGT 371.5 THA 33.13

ORBIT DETERMINATION ACCURACY

ST 853.6 SR 590.0 SS 1016.0  
 CRT .9816 CR3 .9820 CST .9995  
 LSA 1448.5 MSA- 102.2 SSA 20.1  
 EL1 1033.4 EL2 93.0 ALF 34.47

LAUNCH DATE DEC 30 1968

FLIGHT TIME 136.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 363.048

RL 147.10 LAL -.00 LOL 98.37 VL 27.547 GAL 2.12 AZL 90.06 MCA 158.37 SMA 126.93 ECC .16303 INC .0546 VI 30.287  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.386 GAP -4.42 AZP 89.95 TAL 169.03 TAP 327.40 RCA 106.24 APO 147.62 V2 34.883  
 RC 66.131 GL -.52 GP 30.18 ZAL 69.13 ZAP 46.43 ETS 329.49 ZAE 143.91 ETE 47.22 ZAC 117.44 ETC 144.59 CLP -37.12

PLANETOCENTRIC CONIC

C3 8.715 VHL 2.952 DLA 10.72 RAL 27.38 RAD 6567.3 VEL 11.406 PTH 1.97 VHP 4.457 DPA 40.46 RAP 24.21 ECC 1.1434  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 14 32 2374.40 -23.10 51.87 239.14 106.85 5 54 6 1774.4 -20.57 44.11  
 90.00 19 56 42 4340.05 4.54 179.81 236.43 62.02 21 9 2 3740.1 .77 173.16  
 100.00 6 41 14 2094.79 -23.98 31.00 238.83 108.41 7 16 9 1494.8 -21.24 23.27  
 100.00 21 12 41 4094.89 5.35 161.34 235.99 80.55 22 20 56 3494.9 1.39 154.79  
 110.00 8 1 37 1843.25 -26.30 10.94 237.87 112.67 8 32 20 1243.2 -22.99 3.34  
 110.00 22 8 48 3919.19 7.46 146.71 234.69 56.54 23 14 7 3319.2 3.01 140.45

DIFFERENTIAL CORRECTIONS

TOE -.3082 TRA -.8077 TC3 1.3413 BAU .2687  
 RDE -.2819 RRA -.3239 RC3 1.8755 FAU .09214  
 FDE .8938 FRA 2.6810 FC3-9.1528 BSP 8065  
 BOE .4045 BRA .9627 BC3 2.3058 FSP -2068

MID-COURSE EXECUTION ACCURACY

SGT 1879.0 SGR 1598.6 SCS 670.7  
 RRT .9429 RRF -.9949 RTF -.9438  
 SGB 2467.0 R23 -.1788 R13 -.9789  
 SGI 2432.5 SGT 411.5 THA 40.12

ORBIT DETERMINATION ACCURACY

ST 766.5 SR 596.6 SS 908.0  
 CRT .9917 CR3 .9814 CST .9971  
 LSA 1325.9 MSA 96.4 SSA 20.9  
 EL1 969.4 EL2 60.6 ALF 37.84

LAUNCH DATE DEC 30 1968

FLIGHT TIME 138.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 369.539

RL 147.10 LAL -.00 LOL 98.37 VL 27.584 GAL 2.03 AZL 90.66 MCA 161.54 SMA 127.18 ECC .16054 INC .6589 VI 30.287  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.403 GAP -3.93 AZP 89.37 TAL 169.26 TAP 330.81 RCA 106.76 APO 147.59 V2 34.873  
 RC 68.274 GL -6.23 GP 35.83 ZAL 69.69 ZAP 51.98 ETS 328.89 ZAE 140.19 ETE 54.31 ZAC 113.69 ETC 142.89 CLP -40.56

PLANETOCENTRIC CONIC

C3 8.538 VHL 2.922 DLA 5.22 RAL 28.99 RAD 6567.3 VEL 11.399 PTH 1.97 VHP 4.461 DPA 45.32 RAP 20.26 ECC 1.1405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 4 4 2193.81 -19.06 40.17 239.10 111.35 6 40 37 1593.8 -15.99 32.84  
 90.00 19 20 0 4512.85 9.96 189.62 237.77 63.35 20 35 13 3912.9 6.30 182.85  
 100.00 7 27 52 1923.51 -19.86 19.95 238.76 112.81 7 59 55 1323.5 -16.59 12.67  
 100.00 20 38 53 4258.40 10.72 170.51 237.36 61.93 21 49 51 3658.4 6.89 163.82  
 110.00 8 41 45 1692.26 -21.98 1.34 237.71 116.87 9 9 57 1092.3 -18.20 354.25  
 110.00 21 41 29 4062.40 12.74 154.44 236.17 58.01 22 49 12 3462.4 8.43 148.00

DIFFERENTIAL CORRECTIONS

TOE -.2440 TRA -.7741 TC3 1.2598 BAU .3039  
 RDE -.2114 RRA -.6740 RC3 2.3457 FAU .09133  
 FDE .5870 FRA 2.7781 FC3-9.2609 BSP 8564  
 BOE .3228 BRA 1.0264 BC3 2.6626 FSP -2091

MID-COURSE EXECUTION ACCURACY

SGT 1759.0 SGR 1952.4 SCS 671.8  
 RRT .9408 RRF -.9973 RTF -.9399  
 SGB 2628.0 R23 -.1480 R13 -.9863  
 SGI 2589.1 SGT 450.5 THA 48.17

ORBIT DETERMINATION ACCURACY

ST 662.2 SR 576.2 SS 766.6  
 CRT .9993 CR3 .9781 CST .9764  
 LSA 1158.8 MSA 123.0 SSA 16.2  
 EL1 877.6 EL2 16.6 ALF 41.02

LAUNCH DATE DEC 30 1968

FLIGHT TIME 140.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 376.006

RL 147.10 LAL -.00 LOL 98.37 VL 27.616 GAL 1.97 AZL 91.50 MCA 164.71 SMA 127.39 ECC .15838 INC 1.5010 VI 30.287  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.417 GAP -3.46 AZP 88.55 TAL 169.45 TAP 334.17 RCA 107.21 APO 147.57 V2 34.862  
 RC 70.456 GL -14.14 GP 42.82 ZAL 70.61 ZAP 58.20 ETS 328.49 ZAE 134.87 ETE 61.20 ZAC 108.88 ETC 141.42 CLP -44.07

PLANETOCENTRIC CONIC

C3 8.780 VHL 2.960 DLA -2.33 RAL 31.38 RAD 6567.3 VEL 11.408 PTH 1.97 VHP 4.617 DPA 51.11 RAP 14.36 ECC 1.1442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 9 51 1963.84 -12.80 26.19 240.66 115.47 7 42 35 1363.8 -9.27 19.30  
 90.00 18 33 17 4752.57 16.86 203.83 241.27 66.91 19 52 29 4152.6 13.59 196.68  
 100.00 8 30 7 1704.95 -13.57 6.77 240.27 116.89 8 58 32 1105.0 -9.86 359.95  
 100.00 19 55 42 4486.69 17.65 183.92 240.91 65.47 21 10 29 3886.7 14.19 176.83  
 110.00 9 35 32 1499.13 -15.61 349.99 239.11 120.80 10 0 51 899.1 -11.41 343.40  
 110.00 21 6 27 4265.28 19.73 166.01 239.81 61.50 22 17 32 3665.3 15.77 159.13

DIFFERENTIAL CORRECTIONS

TOE -.1819 TRA -.7397 TC3 1.0782 BAU .3482  
 RDE -.1073 RRA -.8842 RC3 2.7719 FAU .08474  
 FDE .1455 FRA 2.7780 FC3-8.3748 BSP 9287  
 BOE .2112 BRA 1.1528 BC3 2.9735 FSP -1983

MID-COURSE EXECUTION ACCURACY

SGT 1607.4 SGR 2381.2 SCS 632.7  
 RRT .9336 RRF -.9986 RTF -.9320  
 SGB 2873.0 R23 -.1124 R13 -.9923  
 SGI 2831.9 SGT 484.2 THA 56.68

ORBIT DETERMINATION ACCURACY

ST 556.1 SR 556.5 SS 656.5  
 CRT .9534 CR3 .9779 CST .8700  
 LSA 1001.6 MSA 216.1 SSA 8.8  
 EL1 777.5 EL2 120.0 ALF 45.02

LAUNCH DATE DEC 30 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 362.445

RL 147.10 LAL -.00 LOL 98.37 VL 27.643 GAL 1.91 AZL 92.77 HCA 167.87 SMA 127.58 ECC .15654 INC 2.7696 V1 30.287  
 RP 108.73 LAP -.58 LOP 266.25 VP 37.429 GAP -3.00 AZP 87.29 TAL 169.60 TAP 337.47 RCA 107.61 APO 147.55 V2 34.853  
 RC 72.672 GL -25.06 GP 51.42 ZAL 72.32 ZAP 65.06 ETS 328.47 ZAE 127.58 ETE 67.40 ZAC 102.91 ETC 140.37 CLP -47.46

PLANETOCENTRIC CONIC

C3 9.941 VHL 3.153 DLA -12.68 RAL 34.90 RAD 6567.4 VEL 11.460 PTH 1.99 WHP 5.042 DPA 57.83 RAP 5.09 ECC 1.1636  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 45 5 1655.81 -3.26 8.60 245.65 118.14 9 12 41 1055.8 .55 1.97  
 90.00 17 26 9 5109.89 24.77 227.00 249.10 75.82 18 51 19 4509.9 22.57 219.02  
 100.00 9 59 53 1414.48 -4.13 350.37 245.16 119.63 10 23 27 814.5 -.15 343.84  
 100.00 18 54 2 4826.45 25.73 205.87 248.82 74.24 20 14 28 4226.5 23.32 197.90  
 110.00 10 53 23 1246.92 -6.40 336.26 243.76 123.65 11 14 10 646.9 -1.94 330.02  
 110.00 20 17 1 4566.77 28.27 185.23 247.90 69.93 21 33 8 3966.8 25.27 177.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1300 TRA -.7025 TC3 .7901 BAU .4009 SGT 1419.9 SGR 2876.2 SG3 540.5 ST 458.3 SR 686.6 SS 684.9  
 RDE .0990 RRA-1.1851 RC3 2.9109 FAU .07093 RRT .9213 RRF -.9993 RTF -.8193 CRT .6992 CRS .9927 CST .6084  
 FDE -.3166 FRA 2.6100 FC3-6.1766 BSP 10369 SGB 3207.5 R23 -.0774 R13 -.9963 LSA 1019.3 HSA 333.9 SSA 4.2  
 BOE .1610 BRA 1.3777 BC3 3.0163 FSP -1717 SG1 3168.1 SG2 901.4 THA 64.87 EL1 772.4 EL2 291.3 ALF 60.35

LAUNCH DATE DEC 30 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 366.836

RL 147.10 LAL -.00 LOL 98.37 VL 27.667 GAL 1.87 AZL 94.91 HCA 171.02 SMA 127.74 ECC .15498 INC 4.9127 V1 30.287  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.438 GAP -2.55 AZP 85.15 TAL 169.72 TAP 340.74 RCA 107.94 APO 147.53 V2 34.844  
 RC 74.919 GL -39.31 GP 61.83 ZAL 75.47 ZAP 72.35 ETS 328.91 ZAE 118.01 ETE 72.34 ZAC 95.82 ETC 139.86 CLP -50.03

PLANETOCENTRIC CONIC

C3 13.974 VHL 3.738 DLA -26.11 RAL 40.02 RAD 6567.6 VEL 11.634 PTH 2.04 WHP 6.022 DPA 65.01 RAP 349.14 ECC 1.2300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 48 7 1131.99 13.20 338.92 259.66 115.28 12 6 59 532.0 16.50 331.79  
 90.00 15 4 1 5776.37 26.91 274.92 264.17 99.15 16 40 17 5176.4 27.90 266.39  
 100.00 12 41 43 958.89 11.09 325.12 258.58 117.94 12 57 42 358.9 14.74 318.23  
 100.00 16 53 6 5424.71 29.25 249.40 264.53 98.44 18 23 30 4824.7 29.84 240.65  
 110.00 13 0 53 898.75 6.85 318.02 256.02 123.57 13 15 52 298.8 11.22 311.64  
 110.00 18 50 25 5057.61 34.18 221.88 264.89 90.59 20 14 43 4457.6 33.88 212.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0198 TRA -.5858 TC3 .7177 BAU .5220 SGT 1135.0 SGR 3407.8 SG3 397.7 ST 301.4 SR 1186.1 SS 871.7  
 RDE .5822 RRA-1.5211 RC3 2.7002 FAU .05743 RRT .9457 RRF -.9997 RTF -.9419 CRT .5958 CRS .9994 CST .5686  
 FDE -.8461 FRA 2.0855 FC3-3.5583 BSP 15320 SGB 3591.8 R23 -.0419 R13 -.9989 LSA 1482.6 HSA 243.5 SSA 1.7  
 BOE .5825 BRA 1.8300 BC3 2.7939 FSP -1635 SG1 3574.6 SG2 351.9 THA 72.34 EL1 1200.2 EL2 239.2 ALF 81.03

LAUNCH DATE DEC 30 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 395.210

RL 147.10 LAL -.00 LOL 98.37 VL 27.686 GAL 1.85 AZL 99.32 HCA 174.14 SMA 127.87 ECC .15374 INC 9.3250 V1 30.287  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.444 GAP -2.13 AZP 80.72 TAL 169.71 TAP 343.85 RCA 108.21 APO 147.53 V2 34.835  
 RC 77.194 GL -55.15 GP 74.26 ZAL 80.19 ZAP 79.47 ETS 328.27 ZAE 105.76 ETE 74.10 ZAC 87.92 ETC 138.51 CLP -47.64

PLANETOCENTRIC CONIC

C3 29.853 VHL 5.464 DLA -40.86 RAL 47.10 RAD 6568.2 VEL 12.297 PTH 2.21 WHP 8.439 DPA 70.87 RAP 318.93 ECC 1.4913  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.21 10 28 52 1630.18 23.98 23.19 286.14 124.14 10 56 2 1030.2 28.28 16.09  
 120.79 17 19 41 5639.03 23.99 263.46 286.15 124.13 18 53 40 5039.0 28.29 256.36  
 59.21 10 28 52 1630.18 23.98 23.19 286.14 124.14 10 56 2 1030.2 28.28 16.09  
 120.79 17 19 41 5639.03 23.99 263.46 286.15 124.13 18 53 40 5039.0 28.29 256.36  
 59.21 10 28 52 1630.18 23.98 23.19 286.14 124.14 10 56 2 1030.2 28.28 16.09  
 120.79 17 19 41 5639.03 23.99 263.46 286.15 124.13 18 53 40 5039.0 28.29 256.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1835 TRA -.7340 TC3 .1212 BAU .4200 SGT 1071.3 SGR 3854.3 SG3 228.4 ST 368.0 SR 1549.4 SS 775.2  
 RDE 1.0858 RRA-2.5246 RC3 1.0454 FAU .02301 RRT .8700 RRF -.9998 RTF -.8745 CRT .1937 CRS 1.0000 CST .2000  
 FDE -.7407 FRA 1.7446 FC3 -.6672 BSP 12286 SGB 4000.4 R23 -.0222 R13 -.9996 LSA 1734.1 HSA 360.6 SSA 1.1  
 BOE 1.1012 BRA 2.6348 BC3 1.0524 FSP -716 SG1 3967.4 SG2 513.2 THA 76.17 EL1 1551.1 EL2 360.6 ALF 87.22

LAUNCH DATE DEC 30 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 401.420

RL 147.10 LAL -.00 LOL 98.37 VL 27.703 GAL 1.87 AZL 113.30 HCA 177.15 SMA 127.98 ECC .15283 INC23.3031 V1 30.287  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.449 GAP -1.75 AZP 66.72 TAL 169.55 TAP 346.70 RCA 108.42 APO 147.54 V2 34.827  
 RC 79.493 GL -65.89 GP 83.70 ZAL 85.52 ZAP 85.82 ETS 247.80 ZAE 88.10 ETE 354.19 ZAC 79.33 ETC 98.74 CLP 45.87

PLANETOCENTRIC CONIC

C3 144.445 VHL 12.019 DLA -51.44 RAL 51.45 RAD 6570.6 VEL 16.303 PTH 2.85 WHP 16.791 DPA 69.60 RAP 265.28 ECC 3.3772  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.08 9 54 1 2129.72 10.53 56.80 312.91 140.66 10 29 31 1529.7 16.67 51.74  
 134.92 18 29 14 5870.59 10.54 271.83 312.93 140.65 20 7 5 5270.6 16.68 266.97  
 45.08 9 54 1 2129.72 10.53 56.80 312.91 140.66 10 29 31 1529.7 16.67 51.74  
 134.92 18 29 14 5870.59 10.54 271.83 312.93 140.65 20 7 5 5270.6 16.68 266.97  
 45.08 9 54 1 2129.72 10.53 56.80 312.91 140.66 10 29 31 1529.7 16.67 51.74  
 134.92 18 29 14 5870.59 10.54 271.83 312.93 140.65 20 7 5 5270.6 16.68 266.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6504 TRA -4.8908 TC3 -.0369 BAU .0836 SGT 3949.3 SGR 1475.2 SG3 100.0 ST 1689.9 SR 732.4 SS 704.4  
 RDE 1.2837 RRA 1.7535 RC3 .0226 FAU -.00294 RRT -.7292 RRF .7382 RTF -.9998 CRT .2399 CRS .2392 CST .9998  
 FDE -.7468 FRA 1.4388 FC3 .0176 BSP 13341 SGB 4215.8 R23 .0553 R13 .9984 LSA 1842.1 HSA 703.6 SSA .7  
 BOE 2.9449 BRA 5.1957 BC3 .0433 FSP -327 SG1 4102.3 SG2 971.8 THA 183.83 EL1 1702.8 EL2 701.9 ALF 7.75

LAUNCH DATE DEC 30 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.715 GAL 1.63 AZL 22.83 MCA 181.41 SMA 128.07 ECC .15124 INC67.1661 V1 30.287
RP 108.85 LAP -1.30 LOP 278.92 VP 37.452 GAP -1.02 AZP 157.17 TAL 170.78 TAP 352.19 RCA 108.70 APO 147.44 V2 34.820
RC 81.813 GL 52.56 GP -61.29 ZAL 88.53 ZAP 88.81 ETS 175.65 ZAE 61.68 ETE 68.45 ZAC 97.24 ETC 14.28 CLP 87.53

DISTANCE 409.020

PLANETOCENTRIC CONIC

C31034.338 VHL 32.161 OLA 50.69 RAL 340.50 RAD 6573.0 VEL 33.994 PTH 3.51 VHP 38.382 DPA -52.71 RAP 150.43 ECC18.0226
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.03 17 12 9 4972.84 .39 232.82 250.84 39.32 18 35 2 4372.8 -5.79 228.15
133.97 1 45 5 3440.03 .41 111.60 250.82 39.32 2 42 25 2840.0 -5.77 106.94
46.03 17 12 9 4972.84 .39 232.82 250.84 39.32 18 35 2 4372.8 -5.79 228.15
133.97 1 45 5 3440.03 .41 111.60 250.82 39.32 2 42 25 2840.0 -5.77 106.94
46.03 17 12 9 4972.84 .39 232.82 250.84 39.32 18 35 2 4372.8 -5.79 228.15
133.97 1 45 5 3440.03 .41 111.60 250.82 39.32 2 42 25 2840.0 -5.77 106.94

DIFFERENTIAL CORRECTIONS

TDE-6.0611 TRA 2.5524 TC3 -.1265 BAU 4.0009
RD-18.0879 RRA .9662 RC3 -.2602 FAU-.06764
FDE 5.8517 FRA -.2734 FC3 .0566 BSP 6185
BOE19.0764 BRA 2.7291 BC3 .2893 FSP -113

MID-COURSE EXECUTION ACCURACY

SGT 1530.6 SGR 3641.3 SCS 67.4
RRT .8036 RRF -.9997 RTF -.9142
SCB 3949.8 R23 -.0357 R13 -.9994
SG1 3902.3 SGE 611.9 THA 68.65

ORBIT DETERMINATION ACCURACY

ST 1101.3 SR 3223.8 SS 2277.2
CRT .9853 CRS 1.0000 CST .9867
LSA 4093.8 MSA 179.1 S5A .5
EL1 3402.1 EL2 178.2 ALF 71.34

LAUNCH DATE DEC 30 1968

FLIGHT TIME 152.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.725 GAL 1.76 AZL 68.34 MCA 183.99 SMA 128.14 ECC .15109 INC21.6606 V1 30.287
RP 108.85 LAP -1.47 LOP 282.08 VP 37.452 GAP -.79 AZP 111.61 TAL 170.02 TAP 354.01 RCA 108.78 APO 147.50 V2 34.813
RC 84.153 GL 65.70 GP -85.52 ZAL 85.46 ZAP 86.99 ETS 86.77 ZAE 93.15 ETE 344.05 ZAC 108.05 ETC 282.91 CLP -47.64

DISTANCE 414.707

PLANETOCENTRIC CONIC

C3 125.945 VHL 11.223 OLA 62.96 RAL 328.59 RAD 6570.3 VEL 15.725 PTH 2.79 VHP 11.952 DPA -62.11 RAP 91.48 ECC 3.0727
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.09 15 43 51 4823.46 -13.59 236.26 231.52 27.88 17 4 15 4223.5 -20.63 232.69
148.91 1 36 24 3124.90 -13.58 95.28 231.50 27.88 2 30 29 2524.9 -20.62 91.71
31.09 15 43 51 4823.46 -13.59 236.26 231.52 27.88 17 4 15 4223.5 -20.63 232.69
148.91 1 36 24 3124.90 -13.58 95.28 231.50 27.88 2 30 29 2524.9 -20.62 91.71
31.09 15 43 51 4823.46 -13.59 236.26 231.52 27.88 17 4 15 4223.5 -20.63 232.69
148.91 1 36 24 3124.90 -13.58 95.28 231.50 27.88 2 30 29 2524.9 -20.62 91.71

DIFFERENTIAL CORRECTIONS

TDE-7.9114 TRA 1.1814 TC3 -.0043 BAU .0416
RDE 1.3076 RRA -.9782 RC3 -.0243 FAU .00184
FDE 3.0054 FRA -.5451 FC3 -.0126 BSP 14254
BOE 8.0187 BRA 1.5339 BC3 .0247 FSP -482

MID-COURSE EXECUTION ACCURACY

SGT 4251.5 SGR 1286.8 SCS 142.8
RRT -.7593 RRF .7989 RTF -.9979
SCB 4442.0 R23 -.0189 R13 .9997
SG1 4366.5 SGE 815.3 THA 166.58

ORBIT DETERMINATION ACCURACY

ST 4058.7 SR 744.5 SS 1595.8
CRT -.9358 CRS -.9429 CST .9998
LSA 4416.6 MSA 239.2 S5A .9
EL1 4118.3 EL2 258.8 ALF 170.22

LAUNCH DATE DEC 30 1968

FLIGHT TIME 154.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.732 GAL 1.80 AZL 76.55 MCA 187.07 SMA 128.18 ECC .15082 INC13.4470 V1 30.287
RP 108.87 LAP -1.64 LOP 285.24 VP 37.452 GAP -.41 AZP 103.35 TAL 169.77 TAP 356.84 RCA 108.85 APO 147.52 V2 34.807
RC 86.508 GL 61.85 GP -72.97 ZAL 82.88 ZAP 86.98 ETS 18.58 ZAE 106.50 ETE 277.71 ZAC 112.23 ETC 213.92 CLP -79.56

DISTANCE 420.930

PLANETOCENTRIC CONIC

C3 53.447 VHL 7.311 OLA 62.14 RAL 337.69 RAD 6568.9 VEL 13.221 PTH 2.42 VHP 7.054 DPA -56.31 RAP 67.93 ECC 1.8796
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.06 16 22 30 4626.29 -24.91 229.37 233.49 31.01 17 39 36 4026.3 -31.68 224.95
147.94 2 12 20 2935.73 -24.90 89.54 233.48 31.01 3 1 15 2335.7 -31.67 85.12
32.06 16 22 30 4626.29 -24.91 229.37 233.49 31.01 17 39 36 4026.3 -31.68 224.95
147.94 2 12 20 2935.73 -24.90 89.54 233.48 31.01 3 1 15 2335.7 -31.67 85.12
32.06 16 22 30 4626.29 -24.91 229.37 233.49 31.01 17 39 36 4026.3 -31.68 224.95
147.94 2 12 20 2935.73 -24.90 89.54 233.48 31.01 3 1 15 2335.7 -31.67 85.12

DIFFERENTIAL CORRECTIONS

TDE .5316 TRA -.2916 TC3 -.0503 BAU .3500
RDE 5.3100 RRA -.5848 RC3 -.4872 FAU .02780
FDE 4.2778 FRA -.4175 FC3 -.4502 BSP 13743
BOE 5.3366 BRA .6535 BC3 .4898 FSP -1002

MID-COURSE EXECUTION ACCURACY

SGT 646.6 SGR 4334.5 SCS 301.3
RRT .8084 RRF .9994 RTF .7927
SCB 4382.5 R23 .0364 R13 .9990
SG1 4366.2 SGE 377.8 THA 83.07

ORBIT DETERMINATION ACCURACY

ST 441.7 SR 4172.0 SS 2047.3
CRT .9643 CRS-1.0000 CST -.9622
LSA 4666.7 MSA 118.0 S5A 1.5
EL1 4193.7 EL2 116.3 ALF 84.17

LAUNCH DATE DEC 30 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.736 GAL 1.84 AZL 79.77 MCA 190.19 SMA 128.21 ECC .15071 INC10.2264 V1 30.287
RP 108.89 LAP -1.80 LOP 288.41 VP 37.450 GAP -.03 AZP 100.07 TAL 169.54 TAP 359.73 RCA 108.89 APO 147.53 V2 34.802
RC 88.877 GL 57.43 GP -63.31 ZAL 80.88 ZAP 88.75 ETS 7.26 ZAE 116.16 ETE 267.00 ZAC 114.16 ETC 201.79 CLP -87.22

DISTANCE 427.197

PLANETOCENTRIC CONIC

C3 34.111 VHL 5.840 OLA 59.92 RAL 345.83 RAD 6568.3 VEL 12.469 PTH 2.26 VHP 5.246 DPA -50.22 RAP 55.03 ECC 1.5614
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.71 17 1 31 4501.74 -30.68 222.36 235.75 35.65 18 16 33 3901.7 -37.05 216.95
145.29 2 38 15 2834.56 -30.67 85.71 235.72 35.64 3 25 30 2234.6 -37.04 80.30
34.71 17 1 31 4501.74 -30.68 222.36 235.75 35.65 18 16 33 3901.7 -37.05 216.95
145.29 2 38 15 2834.56 -30.67 85.71 235.72 35.64 3 25 30 2234.6 -37.04 80.30
34.71 17 1 31 4501.74 -30.68 222.36 235.75 35.65 18 16 33 3901.7 -37.05 216.95
145.29 2 38 15 2834.56 -30.67 85.71 235.72 35.64 3 25 30 2234.6 -37.04 80.30

DIFFERENTIAL CORRECTIONS

TDE 1.1289 TRA -.3080 TC3 -.2720 BAU .4250
RDE 3.9638 RRA -.1359 RC3 -.8913 FAU .05579
FDE 5.6380 FRA -.1284 FC3-1.4159 BSP 13154
BOE 4.1214 BRA .3348 BC3 .9318 FSP -1855

MID-COURSE EXECUTION ACCURACY

SGT 1298.5 SGR 4034.2 SCS 499.3
RRT .9156 RRF .9993 RTF .9064
SCB 4238.1 R23 .0568 R13 .9979
SG1 4208.4 SGE 500.5 THA 73.34

ORBIT DETERMINATION ACCURACY

ST 1122.0 SR 3889.4 SS 2507.4
CRT .9902 CRS-1.0000 CST -.9892
LSA 4759.2 MSA 155.5 S5A 2.1
EL1 4045.2 EL2 150.9 ALF 74.04

LAUNCH DATE DEC 30 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 6 1969

MELIOCENTRIC CONIC

DISTANCE 433.461

RL 147.10 LAL -.00 LOL 98.37 VL 27.738 GAL 1.89 AZL 81.49 HCA 193.34 SMA 128.22 ECC .15078 INC 8.5107 V1 30.287  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.447 GAP .34 AZP 98.28 TAL 169.27 TAP 2.61 RCA 108.89 APO 147.56 V2 34.797  
 RC 91.256 GL 53.63 GP -55.40 ZAL 79.27 ZAP 91.89 ETS .66 ZAE 123.67 ETE 259.42 ZAC 114.60 ETC 194.23 CLP -93.33

PLANETOCENTRIC CONIC

C3 25.965 VML 5.096 DLA 57.63 RAL 351.82 RAD 6568.0 VEL 12.138 PTH 2.18 VHP 4.368 DPA -44.79 RAP 46.22 ECC 1.4273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.46 17 32 32 4419.82 -33.48 216.23 237.05 39.94 18 46 12 3819.8 -39.43 210.00  
 142.54 2 55 2 2779.85 -33.47 83.04 237.03 39.93 3 41 22 2179.9 -39.43 76.81  
 37.46 17 32 32 4419.82 -33.48 216.23 237.05 39.94 18 46 12 3819.8 -39.43 210.00  
 142.54 2 55 2 2779.85 -33.47 83.04 237.03 39.93 3 41 22 2179.9 -39.43 76.81  
 37.46 17 32 32 4419.82 -33.48 216.23 237.05 39.94 18 46 12 3819.8 -39.43 210.00  
 142.54 2 55 2 2779.85 -33.47 83.04 237.03 39.93 3 41 22 2179.9 -39.43 76.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4029 TRA -.2375 TC3 -.5647 BAU .4482 SGT 1751.7 SGR 3684.8 SG3 695.1 ST 1584.7 SR 3485.7 SS 2834.6  
 RDE 3.0995 RRA .0846 RC3-1.1612 FAU .08334 RRT .9435 RRF .9992 RTF .9363 CRT .9940 CRS-1.0000 CST -.9932  
 FDE 6.6778 FRA .2685 FC3-2.7788 B8P 12652 SGB 4080.0 R23 .0794 R13 .9962 LSA 4761.0 MSA 168.9 SSA 2.5  
 BDE 3.4022 BRA .2521 BC3 1.2913 F8P -2326 SGI 4045.6 SGE 528.5 THA 65.39 EL1 3825.7 EL2 158.3 ALF 65.64

LAUNCH DATE DEC 30 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 8 1969

MELIOCENTRIC CONIC

DISTANCE 439.714

RL 147.10 LAL -.00 LOL 98.37 VL 27.737 GAL 1.95 AZL 82.56 HCA 196.49 SMA 128.22 ECC .15104 INC 7.4412 V1 30.287  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.442 GAP .71 AZP 97.14 TAL 168.96 TAP 5.45 RCA 108.85 APO 147.59 V2 34.793  
 RC 93.644 GL 50.45 GP -48.73 ZAL 77.89 ZAP 95.90 ETS 355.92 ZAE 129.45 ETE 252.03 ZAC 114.06 ETC 188.47 CLP -98.97

PLANETOCENTRIC CONIC

C3 21.677 VML 4.656 DLA 55.57 RAL 356.34 RAD 6567.9 VEL 11.961 PTH 2.13 VHP 3.887 DPA -40.08 RAP 39.50 ECC 1.3567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.96 17 57 21 4361.92 -34.81 211.10 237.90 43.52 19 10 3 3761.9 -40.40 204.29  
 140.04 3 6 17 2749.48 -34.79 81.20 237.89 43.51 3 52 6 2149.5 -40.39 74.39  
 39.96 17 57 21 4361.92 -34.81 211.10 237.90 43.52 19 10 3 3761.9 -40.40 204.29  
 140.04 3 6 17 2749.48 -34.79 81.20 237.89 43.51 3 52 6 2149.5 -40.39 74.39  
 39.96 17 57 21 4361.92 -34.81 211.10 237.90 43.52 19 10 3 3761.9 -40.40 204.29  
 140.04 3 6 17 2749.48 -34.79 81.20 237.89 43.51 3 52 6 2149.5 -40.39 74.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9944 TRA -.1803 TC3 -.8015 BAU .4567 SGT 2159.1 SGR 3317.8 SG3 861.8 ST 1964.8 SR 3063.1 SS 3033.5  
 RDE 2.4865 RRA .2033 RC3-1.2924 FAU .10657 RRT .9590 RRF .9990 RTF .9326 CRT .9956 CRS-1.0000 CST -.9948  
 FDE 7.3292 FRA .7166 FC3-4.2582 B8P 12161 SGB 3958.5 R23 .1031 R13 .9938 LSA 4734.4 MSA 175.1 SSA 3.1  
 BDE 2.9530 BRA .2528 BC3 1.5758 F8P -2895 SGI 3924.5 SGE 517.4 THA 57.40 EL1 3635.8 EL2 154.3 ALF 57.37

LAUNCH DATE DEC 30 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 10 1969

MELIOCENTRIC CONIC

DISTANCE 445.952

RL 147.10 LAL -.00 LOL 98.37 VL 27.734 GAL 2.02 AZL 83.29 HCA 199.64 SMA 128.20 ECC .15148 INC 6.7074 V1 30.287  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.437 GAP 1.08 AZP 96.32 TAL 168.59 TAP 8.24 RCA 108.78 APO 147.62 V2 34.789  
 RC 96.038 GL 47.77 GP -43.03 ZAL 76.64 ZAP 100.40 ETS 352.38 ZAE 133.70 ETE 244.40 ZAC 112.93 ETC 183.95 CLP-104.29

PLANETOCENTRIC CONIC

C3 19.114 VML 4.372 DLA 53.79 RAL 359.85 RAD 6567.8 VEL 11.853 PTH 2.10 VHP 3.614 DPA -36.00 RAP 34.10 ECC 1.3146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.15 18 17 58 4318.62 -35.37 206.87 238.66 46.42 19 29 57 3718.6 -40.65 199.65  
 137.85 3 14 26 2732.70 -35.35 79.98 238.64 46.41 3 59 59 2132.7 -40.64 72.77  
 42.15 18 17 58 4318.62 -35.37 206.87 238.66 46.42 19 29 57 3718.6 -40.65 199.65  
 137.85 3 14 26 2732.70 -35.35 79.98 238.64 46.41 3 59 59 2132.7 -40.64 72.77  
 42.15 18 17 58 4318.62 -35.37 206.87 238.66 46.42 19 29 57 3718.6 -40.65 199.65  
 137.85 3 14 26 2732.70 -35.35 79.98 238.64 46.41 3 59 59 2132.7 -40.64 72.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7475 TRA -.0547 TC3-1.2596 BAU .4656 SGT 2544.1 SGR 2954.3 SG3 986.9 ST 2290.7 SR 2662.4 SS 3128.3  
 RDE 2.0269 RRA .2655 RC3-1.3164 FAU .12397 RRT .9685 RRF .9986 RTF .9625 CRT .9966 CRS -.9999 CST -.9957  
 FDE 7.6214 FRA 1.1587 FC3-5.6150 B8P 11847 SGB 3898.8 R23 .1250 R13 .9909 LSA 4700.0 MSA 178.2 SSA 3.6  
 BDE 2.6762 BRA .2711 BC3 1.8220 F8P -3321 SGI 3868.7 SGE 483.5 THA 49.40 EL1 3509.3 EL2 142.9 ALF 49.31

LAUNCH DATE DEC 30 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 12 1969

MELIOCENTRIC CONIC

DISTANCE 452.172

RL 147.10 LAL -.00 LOL 98.37 VL 27.729 GAL 2.10 AZL 83.83 HCA 202.80 SMA 128.17 ECC .15210 INC 6.1700 V1 30.287  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.431 GAP 1.44 AZP 95.69 TAL 168.18 TAP 10.98 RCA 108.67 APO 147.66 V2 34.787  
 RC 98.436 GL 45.46 GP -36.13 ZAL 75.45 ZAP 105.09 ETS 349.72 ZAE 136.58 ETE 236.64 ZAC 111.52 ETC 180.42 CLP-109.32

PLANETOCENTRIC CONIC

C3 17.459 VML 4.178 DLA 52.26 RAL 359.29 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 3.464 DPA -32.46 RAP 29.65 ECC 1.2873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.05 18 35 45 4284.90 -35.52 203.36 239.47 48.77 19 47 10 3684.9 -40.54 195.87  
 135.95 3 20 54 2724.05 -35.50 79.21 239.45 48.76 4 6 18 2124.0 -40.53 71.71  
 44.05 18 35 45 4284.90 -35.52 203.36 239.47 48.77 19 47 10 3684.9 -40.54 195.87  
 135.95 3 20 54 2724.05 -35.50 79.21 239.45 48.76 4 6 18 2124.0 -40.53 71.71  
 44.05 18 35 45 4284.90 -35.52 203.36 239.47 48.77 19 47 10 3684.9 -40.54 195.87  
 135.95 3 20 54 2724.05 -35.50 79.21 239.45 48.76 4 6 18 2124.0 -40.53 71.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8741 TRA .0490 TC3-1.6239 BAU .4815 SGT 2907.9 SGR 2807.1 SG3 1067.5 ST 2570.4 SR 2297.8 SS 3140.0  
 RDE 1.8695 RRA .2915 RC3-1.2720 FAU .13585 RRT .9749 RRF .9979 RTF .9690 CRT .9973 CRS -.9999 CST -.9962  
 FDE 7.6125 FRA 1.5488 FC3-6.7366 B8P 11834 SGB 3905.5 R23 .1413 R13 .9880 LSA 4659.9 MSA 179.0 SSA 4.2  
 BDE 2.5099 BRA .2950 BC3 2.0627 F8P -3624 SGI 3881.3 SGE 434.5 THA 41.80 EL1 3445.4 EL2 126.1 ALF 41.79

LAUNCH DATE DEC 30 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 458.374

RL 147.10 LAL -.00 LOL 98.37 VL 27.723 GAL 2.19 AZL 84.24 MCA 205.96 SMA 128.12 ECC .15289 INC 5.7573 V1 30.287
RP 108.94 LAP -2.52 LOP 304.21 VP 37.424 GAP 1.80 AZP 95.18 TAL 167.71 TAP 13.67 RCA 108.53 APO 147.71 V2 34.785
RC 100.837 GL 43.43 GP -33.89 ZAL 74.29 ZAP 109.77 ETS 347.74 ZAE 138.28 ETE 229.07 ZAC 110.05 ETC 177.70 CLP-114.05

PLANETOCENTRIC CONIC

C3 16.340 VHL 4.042 DLA 50.93 RAL 5.67 RAD 6567.7 VEL 11.736 PTH 2.07 VHP 3.394 DPA -29.35 RAP 25.98 ECC 1.2689
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.72 18 51 36 4257.89 -35.44 200.43 240.40 50.68 20 2 34 3657.9 -40.24 192.74
134.28 3 26 28 2720.59 -35.42 78.76 240.38 50.67 4 11 49 2120.6 -40.23 71.07
45.72 18 51 36 4257.89 -35.44 200.43 240.40 50.68 20 2 34 3657.9 -40.24 192.74
134.28 3 26 28 2720.59 -35.42 78.76 240.38 50.67 4 11 49 2120.6 -40.23 71.07
45.72 18 51 36 4257.89 -35.44 200.43 240.40 50.68 20 2 34 3657.9 -40.24 192.74
134.28 3 26 28 2720.59 -35.42 78.76 240.38 50.67 4 11 49 2120.6 -40.23 71.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9815 TRA .1487 TC3-1.9794 BAU .5033 SGT 3249.8 SGR 2287.9 SG3 1108.5 ST 2810.9 SR 1979.4 SS 3095.4
RDE 1.3891 RRA .2979 RC3-1.1792 FAU .14215 RRT .9791 RRF .9967 RTF .9732 CRT .9978 CRS -.9998 CST -.9964
FDE 7.3914 FRA 1.8751 FC3-7.5317 BSP 12034 SGB 3974.3 R23 .1495 R13 .9855 LSA 4622.6 MSA 179.2 SSA 4.9
BOE 2.4199 BRA .3329 BC3 2.3040 FSP -3786 SG1 3955.9 SG2 382.2 THA 34.95 EL1 3436.2 EL2 106.9 ALF 35.13

LAUNCH DATE DEC 30 1968

FLIGHT TIME 168.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 464.558

RL 147.10 LAL -.00 LOL 98.37 VL 27.714 GAL 2.30 AZL 84.57 MCA 209.12 SMA 128.06 ECC .15385 INC 5.4286 V1 30.287
RP 108.95 LAP -2.64 LOP 307.38 VP 37.417 GAP 2.16 AZP 94.75 TAL 167.20 TAP 16.31 RCA 108.36 APO 147.77 V2 34.784
RC 103.240 GL 41.61 GP -30.22 ZAL 73.12 ZAP 114.32 ETS 346.29 ZAE 139.04 ETE 222.02 ZAC 108.67 ETC 175.63 CLP-118.47

PLANETOCENTRIC CONIC

C3 15.967 VHL 3.946 DLA 49.76 RAL 8.14 RAD 6567.6 VEL 11.703 PTH 2.06 VHP 3.381 DPA -26.61 RAP 22.97 ECC 1.2562
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.20 19 6 9 4235.79 -35.22 197.96 241.48 52.25 20 16 45 3635.8 -39.84 190.13
132.80 3 31 35 2720.67 -35.21 78.56 241.46 52.24 4 16 56 2120.7 -39.83 70.74
47.20 19 6 9 4235.79 -35.22 197.96 241.48 52.25 20 16 45 3635.8 -39.84 190.13
132.80 3 31 35 2720.67 -35.21 78.56 241.46 52.24 4 16 56 2120.7 -39.83 70.74
47.20 19 6 9 4235.79 -35.22 197.96 241.48 52.25 20 16 45 3635.8 -39.84 190.13
132.80 3 31 35 2720.67 -35.21 78.56 241.46 52.24 4 16 56 2120.7 -39.83 70.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0731 TRA .2558 TC3-2.3147 BAU .5297 SGT 3567.9 SGR 2000.9 SG3 1116.7 ST 3015.9 SR 1707.3 SS 3012.7
RDE 1.1677 RRA .2919 RC3-1.0585 FAU .14364 RRT .9816 RRF .9949 RTF .9761 CRT .9983 CRS -.9997 CST -.9966
FDE 7.0311 FRA 2.1366 FC3-7.9884 BSP 12408 SGB 4090.7 R23 .1480 R13 .9839 LSA 4588.6 MSA 178.8 SSA 5.7
BOE 2.3793 BRA .3881 BC3 2.5453 FSP -3833 SG1 4077.0 SG2 334.2 THA 29.05 EL1 3464.5 EL2 86.8 ALF 29.49

LAUNCH DATE DEC 30 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 470.723

RL 147.10 LAL -.00 LOL 98.37 VL 27.704 GAL 2.42 AZL 84.84 MCA 212.27 SMA 127.99 ECC .15498 INC 5.1592 V1 30.287
RP 108.95 LAP -2.75 LOP 310.54 VP 37.409 GAP 2.51 AZP 94.37 TAL 166.64 TAP 18.91 RCA 108.16 APO 147.83 V2 34.783
RC 105.643 GL 39.94 GP -27.05 ZAL 71.93 ZAP 118.66 ETS 345.24 ZAE 139.08 ETE 215.72 ZAC 107.47 ETC 174.06 CLP-122.58

PLANETOCENTRIC CONIC

C3 15.034 VHL 3.877 DLA 48.73 RAL 10.46 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 3.409 DPA -24.17 RAP 20.53 ECC 1.2474
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.52 19 19 47 4217.47 -34.92 195.84 242.70 53.55 20 30 5 3617.5 -39.39 187.93
131.48 3 36 30 2723.33 -34.90 78.54 242.69 53.54 4 21 53 2123.3 -39.38 70.63
48.52 19 19 47 4217.47 -34.92 195.84 242.70 53.55 20 30 5 3617.5 -39.39 187.93
131.48 3 36 30 2723.33 -34.90 78.54 242.69 53.54 4 21 53 2123.3 -39.38 70.63
48.52 19 19 47 4217.47 -34.92 195.84 242.70 53.55 20 30 5 3617.5 -39.39 187.93
131.48 3 36 30 2723.33 -34.90 78.54 242.69 53.54 4 21 53 2123.3 -39.38 70.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1501 TRA .3656 TC3-2.6256 BAU .5597 SGT 3861.4 SGR 1748.1 SG3 1100.1 ST 3187.2 SR 1477.7 SS 2904.0
RDE .9918 RRA .2786 RC3 -.9285 FAU .14174 RRT .9827 RRF .9922 RTF .9782 CRT .9987 CRS -.9995 CST -.9966
FDE 6.5866 FRA 2.3330 FC3-8.1623 BSP 12926 SGB 4238.7 R23 .1365 R13 .9829 LSA 4554.5 MSA 178.0 SSA 6.5
BOE 2.3678 BRA .4596 BC3 2.7849 FSP -3797 SG1 4228.4 SG2 295.5 THA 24.11 EL1 3512.5 EL2 67.1 ALF 24.86

LAUNCH DATE DEC 30 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 476.870

RL 147.10 LAL -.00 LOL 98.37 VL 27.693 GAL 2.55 AZL 85.07 MCA 215.43 SMA 127.92 ECC .15628 INC 4.9330 V1 30.287
RP 108.95 LAP -2.86 LOP 313.70 VP 37.401 GAP 2.86 AZP 94.02 TAL 166.03 TAP 21.46 RCA 107.92 APO 147.91 V2 34.783
RC 108.045 GL 38.59 GP -24.30 ZAL 70.71 ZAP 122.74 ETS 344.49 ZAE 138.63 ETE 216.29 ZAC 106.50 ETC 172.89 CLP-126.40

PLANETOCENTRIC CONIC

C3 14.679 VHL 3.831 DLA 47.81 RAL 12.71 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 3.468 DPA -21.98 RAP 18.61 ECC 1.2416
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.72 19 32 48 4202.15 -34.56 194.02 244.08 54.64 20 42 51 3602.1 -38.90 186.05
130.28 3 41 22 2727.90 -34.55 78.68 244.07 54.63 4 26 50 2128.0 -38.90 70.72
49.72 19 32 48 4202.15 -34.56 194.02 244.08 54.64 20 42 51 3602.1 -38.90 186.05
130.28 3 41 22 2727.90 -34.55 78.68 244.07 54.63 4 26 50 2128.0 -38.90 70.72
49.72 19 32 48 4202.15 -34.56 194.02 244.08 54.64 20 42 51 3602.1 -38.90 186.05
130.28 3 41 22 2727.90 -34.55 78.68 244.07 54.63 4 26 50 2128.0 -38.90 70.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2176 TRA .4812 TC3-2.9008 BAU .5902 SGT 4133.6 SGR 1530.9 SG3 1067.0 ST 3332.5 SR 1288.7 SS 2785.1
RDE .8536 RRA .2631 RC3 -.7949 FAU .13683 RRT .9821 RRF .9882 RTF .9795 CRT .9992 CRS -.9991 CST -.9966
FDE 6.1150 FRA 2.4863 FC3-8.0700 BSP 13470 SGB 4408.0 R23 .1171 R13 .9824 LSA 4526.8 MSA 177.5 SSA 7.2
BOE 2.3762 BRA .5484 BC3 3.0077 FSP -3678 SG1 4399.6 SG2 270.9 THA 20.07 EL1 3572.7 EL2 48.8 ALF 21.13

LAUNCH DATE DEC 30 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 482.997

RL 147.10 LAL -.00 LOL 98.37 VL 27.680 GAL 2.69 AZL 85.26 HCA 218.59 SMA 127.83 ECC .15775 INC 4.7395 V1 30.287
RP 108.94 LAP -2.95 LOP 316.87 VP 37.392 GAP 3.21 AZP 93.71 TAL 165.38 TAP 23.97 RCA 107.66 APO 147.99 V2 34.784
RC 110.446 GL 36.92 GP -21.92 ZAL 69.45 ZAP 126.55 ETS 343.96 ZAE 137.86 ETE 205.71 ZAC 105.79 ETC 172.02 CLP-129.94

PLANETOCENTRIC CONIC

C3 14.462 VHL 3.803 DLA 46.96 RAL 14.90 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 3.551 DPA -20.00 RAP 17.15 ECC 1.2380
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.83 19 45 25 4189.21 -34.15 192.44 245.60 55.56 20 55 14 3589.2 -30.39 184.43
129.17 3 46 16 2734.31 -34.14 78.95 245.59 55.55 4 31 50 2134.3 -30.39 70.95
50.83 19 45 25 4189.21 -34.15 192.44 245.60 55.56 20 55 14 3589.2 -30.39 184.43
129.17 3 46 16 2734.31 -34.14 78.95 245.59 55.55 4 31 50 2134.3 -30.39 70.95
50.83 19 45 25 4189.21 -34.15 192.44 245.60 55.56 20 55 14 3589.2 -30.39 184.43
129.17 3 46 16 2734.31 -34.14 78.95 245.59 55.55 4 31 50 2134.3 -30.39 70.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2721 TRA .5983 TC3-3.1468 BAU .6221 SGT 4380.8 SGR 1343.6 SG3 1021.5 ST 3446.9 SR 1131.3 SS 2654.1
RDE .7431 RRA .2446 RC3 -.6708 FAU .13063 RRT .9797 RRF .9824 RTF .9806 CRT .9996 CRS -.9984 CST -.9965
FDE 5.6271 FRA 2.5838 FC3-7.8196 BSP 14106 SGB 4582.3 R23 .0915 R13 .9823 LSA 4491.5 HSA 176.4 SSA 7.9
BOE 2.3908 BRA .6464 BC3 3.2175 FSP -3538 SGI 4575.0 SGE 257.7 THA 16.78 EL1 3627.7 EL2 31.6 ALF 18.16

LAUNCH DATE DEC 30 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 489.106

RL 147.10 LAL -.00 LOL 98.37 VL 27.666 GAL 2.85 AZL 85.43 HCA 221.75 SMA 127.73 ECC .15940 INC 4.5709 V1 30.287
RP 108.94 LAP -3.04 LOP 320.03 VP 37.384 GAP 3.55 AZP 93.41 TAL 164.68 TAP 26.43 RCA 107.37 APO 148.09 V2 34.786
RC 112.844 GL 35.53 GP -19.85 ZAL 68.18 ZAP 130.10 ETS 343.59 ZAE 136.91 ETE 201.89 ZAC 105.34 ETC 171.39 CLP-133.22

PLANETOCENTRIC CONIC

C3 14.360 VHL 3.789 DLA 46.18 RAL 17.07 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 3.654 DPA -18.19 RAP 16.09 ECC 1.2363
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.86 19 57 47 4178.23 -33.72 191.04 247.26 56.35 21 7 25 3578.2 -37.87 183.02
128.14 3 51 11 2742.15 -33.70 79.34 247.25 56.34 4 36 54 2142.1 -37.86 71.32
51.86 19 57 47 4178.23 -33.72 191.04 247.26 56.35 21 7 25 3578.2 -37.87 183.02
128.14 3 51 11 2742.15 -33.70 79.34 247.25 56.34 4 36 54 2142.1 -37.86 71.32
51.86 19 57 47 4178.23 -33.72 191.04 247.26 56.35 21 7 25 3578.2 -37.87 183.02
128.14 3 51 11 2742.15 -33.70 79.34 247.25 56.34 4 36 54 2142.1 -37.86 71.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3180 TRA .7194 TC3-3.3575 BAU .6534 SGT 4607.2 SGR 1185.6 SG3 969.4 ST 3537.2 SR 1003.0 SS 2921.1
RDE .8561 RRA .2261 RC3 -.9569 FAU .12339 RRT .9750 RRF .9743 RTF .9815 CRT .9999 CRS -.9975 CST -.9964
FDE 5.1542 FRA 2.6454 FC3-7.4392 BSP 14747 SGB 4757.3 R23 .0650 R13 .9824 LSA 4454.5 HSA 175.2 SSA 8.7
BOE 2.4091 BRA .7541 BC3 3.4033 FSP -3371 SGI 4750.5 SGE 259.4 THA 14.13 EL1 3676.6 EL2 16.5 ALF 15.83

LAUNCH DATE DEC 30 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 495.195

RL 147.10 LAL -.00 LOL 98.37 VL 27.651 GAL 3.02 AZL 85.58 HCA 224.91 SMA 127.63 ECC .16122 INC 4.4220 V1 30.287
RP 108.93 LAP -3.12 LOP 323.19 VP 37.374 GAP 3.90 AZP 93.13 TAL 163.93 TAP 28.86 RCA 107.05 APO 148.20 V2 34.789
RC 115.239 GL 34.19 GP -18.05 ZAL 66.81 ZAP 135.38 ETS 343.34 ZAE 135.87 ETE 198.73 ZAC 105.14 ETC 170.94 CLP-136.25

PLANETOCENTRIC CONIC

C3 14.357 VHL 3.789 DLA 45.45 RAL 19.22 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 3.774 DPA -16.52 RAP 15.38 ECC 1.2363
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.84 20 9 58 4168.99 -33.25 189.80 249.04 57.02 21 19 27 3569.0 -37.32 181.78
127.16 3 56 13 2751.30 -33.24 79.82 249.03 57.01 4 42 4 2151.3 -37.31 71.80
52.84 20 9 58 4168.99 -33.25 189.80 249.04 57.02 21 19 27 3569.0 -37.32 181.78
127.16 3 56 13 2751.30 -33.24 79.82 249.03 57.01 4 42 4 2151.3 -37.31 71.80
52.84 20 9 58 4168.99 -33.25 189.80 249.04 57.02 21 19 27 3569.0 -37.32 181.78
127.16 3 56 13 2751.30 -33.24 79.82 249.03 57.01 4 42 4 2151.3 -37.31 71.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3559 TRA .8459 TC3-3.5319 BAU .6835 SGT 4814.5 SGR 1053.8 SG3 914.3 ST 3605.2 SR 898.9 SS 2388.8
RDE .5877 RRA .2084 RC3 -.4550 FAU .11563 RRT .9674 RRF .9634 RTF .9821 CRT .9999 CRS -.9960 CST -.9962
FDE 4.7062 FRA 2.6822 FC3-6.9728 BSP 15377 SGB 4928.5 R23 .0417 R13 .9826 LSA 4413.8 HSA 174.3 SSA 9.4
BOE 2.4281 BRA .8712 BC3 3.5611 FSP -3191 SGI 4921.6 SGE 261.2 THA 11.99 EL1 3715.5 EL2 9.5 ALF 14.00

LAUNCH DATE DEC 30 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 501.265

RL 147.10 LAL -.00 LOL 98.37 VL 27.634 GAL 3.21 AZL 85.71 HCA 228.07 SMA 127.52 ECC .16322 INC 4.2887 V1 30.287
RP 108.92 LAP -3.19 LOP 326.36 VP 37.365 GAP 4.25 AZP 92.87 TAL 163.17 TAP 31.24 RCA 106.70 APO 148.33 V2 34.792
RC 117.830 GL 32.88 GP -16.49 ZAL 65.43 ZAP 136.42 ETS 343.16 ZAE 134.81 ETE 196.13 ZAC 105.18 ETC 170.61 CLP-139.07

PLANETOCENTRIC CONIC

C3 14.443 VHL 3.800 DLA 44.75 RAL 21.38 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 3.907 DPA -14.97 RAP 14.99 ECC 1.2377
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.78 20 22 6 4161.09 -32.75 188.69 250.94 57.61 21 31 28 3561.1 -36.75 180.68
126.22 4 1 15 2761.86 -32.74 80.42 250.93 57.59 4 47 17 2161.9 -36.74 72.40
53.78 20 22 6 4161.09 -32.75 188.69 250.94 57.61 21 31 28 3561.1 -36.75 180.68
126.22 4 1 15 2761.86 -32.74 80.42 250.93 57.59 4 47 17 2161.9 -36.74 72.40
53.78 20 22 6 4161.09 -32.75 188.69 250.94 57.61 21 31 28 3561.1 -36.75 180.68
126.22 4 1 15 2761.86 -32.74 80.42 250.93 57.59 4 47 17 2161.9 -36.74 72.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3899 TRA .9806 TC3-3.6630 BAU .7108 SGT 5006.7 SGR 945.9 SG3 859.2 ST 3657.7 SR 816.1 SS 2263.8
RDE .5331 RRA .1928 RC3 -.3632 FAU .10729 RRT .9561 RRF .9493 RTF .9825 CRT .9997 CRS -.9940 CST -.9961
FDE 4.2974 FRA 2.7072 FC3-6.4310 BSP 15909 SGB 5095.2 R23 .0244 R13 .9827 LSA 4374.8 HSA 173.9 SSA 10.1
BOE 2.4491 BRA .9994 BC3 3.6809 FSP -2987 SGI 5087.9 SGE 272.8 THA 10.27 EL1 3747.6 EL2 19.2 ALF 12.57

LAUNCH DATE DEC 30 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 507.315

RL 147.10 LAL -.00 LOL 98.37 VL 27.617 GAL 3.41 AZL 85.83 MCA 231.23 SMA 127.40 ECC .16541 INC 4.1679 V1 30.287
RP 108.91 LAP -3.25 LOP 329.53 VP 37.356 GAP 4.60 AZP 92.61 TAL 162.36 TAP 33.59 RCA 106.33 APO 148.47 V2 34.796
RC 120.015 GL 31.61 GP -15.12 ZAL 64.01 ZAP 139.25 ETS 343.03 ZAE 133.78 ETE 193.98 ZAC 105.43 ETC 170.39 CLP-141.69

PLANETOCENTRIC CONIC

C3 14.614 VHL 3.823 DLA 44.08 RAL 23.53 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 4.053 DPA -13.51 RAP 14.88 ECC 1.2405
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.69 20 34 13 4154.43 -32.22 187.69 252.95 58.12 21 43 28 3554.4 -36.17 179.69
125.31 4 6 19 2773.73 -32.21 81.10 252.94 58.10 4 52 33 2173.7 -36.16 73.11
54.69 20 34 13 4154.43 -32.22 187.69 252.95 58.12 21 43 28 3554.4 -36.17 179.69
125.31 4 6 19 2773.73 -32.21 81.10 252.94 58.10 4 52 33 2173.7 -36.16 73.11
54.69 20 34 13 4154.43 -32.22 187.69 252.95 58.12 21 43 28 3554.4 -36.17 179.69
125.31 4 6 19 2773.73 -32.21 81.10 252.94 58.10 4 52 33 2173.7 -36.16 73.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4144 TRA 1.1188 TC3-3.7655 BAU .7378 SGT 5179.9 SGR 856.6 SCS 804.3 ST 3686.9 SR 748.6 SS 2158.4
RDE .4939 RRA .1780 RC3 -.2864 FAU .09946 RRT .9411 RRF .9314 RTF .9828 CRT .9990 CRS -.9912 CST -.9959
FDE 3.9132 FRA 2.7097 FC3-5.8921 BSP 16480 SGB 5250.3 R23 .0109 R13 .9829 LSA 4323.9 MSA 173.6 SSA 10.8
BOE 2.4644 BRA 1.1328 BC3 3.7764 FSP -2803 SGI 5242.5 S62 286.2 THA 8.87 EL1 3762.0 EL2 32.5 ALF 11.47

LAUNCH DATE DEC 30 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 513.344

RL 147.10 LAL -.00 LOL 98.37 VL 27.598 GAL 3.62 AZL 85.94 MCA 234.39 SMA 127.28 ECC .16779 INC 4.0574 V1 30.287
RP 108.89 LAP -3.30 LOP 332.70 VP 37.347 GAP 4.93 AZP 92.36 TAL 161.52 TAP 35.91 RCA 105.92 APO 148.63 V2 34.800
RC 122.394 GL 30.36 GP -13.93 ZAL 62.55 ZAP 141.87 ETS 342.92 ZAE 132.79 ETE 192.19 ZAC 105.89 ETC 170.23 CLP-144.14

PLANETOCENTRIC CONIC

C3 14.886 VHL 3.856 DLA 43.43 RAL 25.69 RAD 6567.6 VEL 11.673 PTH 2.05 VHP 4.209 DPA -12.13 RAP 15.00 ECC 1.2447
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.58 20 46 22 4148.81 -31.66 186.78 255.06 58.56 21 55 31 3548.8 -35.56 178.80
124.42 4 11 22 2786.98 -31.64 81.89 255.05 58.55 4 57 49 2187.0 -35.55 73.92
55.58 20 46 22 4148.81 -31.66 186.78 255.06 58.56 21 55 31 3548.8 -35.56 178.80
124.42 4 11 22 2786.98 -31.64 81.89 255.05 58.55 4 57 49 2187.0 -35.55 73.92
55.58 20 46 22 4148.81 -31.66 186.78 255.06 58.56 21 55 31 3548.8 -35.56 178.80
124.42 4 11 22 2786.98 -31.64 81.89 255.05 58.55 4 57 49 2187.0 -35.55 73.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4335 TRA 1.2633 TC3-3.8341 BAU .7633 SGT 5338.5 SGR 784.5 SCS 751.3 ST 3699.4 SR 694.9 SS 2018.2
RDE .4626 RRA .1648 RC3 -.2213 FAU .09188 RRT .9222 RRF .9100 RTF .9830 CRT .9977 CRS -.9875 CST -.9957
FDE 3.9627 FRA 2.7020 FC3-5.3506 BSP 17031 SGB 5395.9 R23 .0016 R13 .9831 LSA 4267.5 MSA 173.8 SSA 11.4
BOE 2.4771 BRA 1.2740 BC3 3.8405 FSP -2629 SGI 5387.5 S62 300.6 THA 7.74 EL1 3763.9 EL2 45.8 ALF 10.62

LAUNCH DATE DEC 30 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 519.352

RL 147.10 LAL -.00 LOL 98.37 VL 27.579 GAL 3.85 AZL 86.04 MCA 237.56 SMA 127.15 ECC .17037 INC 3.9553 V1 30.287
RP 108.88 LAP -3.34 LOP 335.87 VP 37.337 GAP 5.31 AZP 92.12 TAL 160.64 TAP 38.20 RCA 105.48 APO 148.81 V2 34.805
RC 124.766 GL 29.13 GP -12.88 ZAL 61.05 ZAP 144.31 ETS 342.82 ZAE 131.85 ETE 190.71 ZAC 106.53 ETC 170.13 CLP-146.42

PLANETOCENTRIC CONIC

C3 15.201 VHL 3.899 DLA 42.79 RAL 27.84 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 4.376 DPA -10.82 RAP 15.34 ECC 1.2502
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.48 20 58 34 4144.08 -31.06 185.94 257.25 58.95 22 7 39 3544.1 -34.92 177.99
123.52 4 16 21 2801.68 -31.05 82.78 257.24 58.94 5 3 3 2201.7 -34.91 74.83
56.48 20 58 34 4144.08 -31.06 185.94 257.25 58.95 22 7 39 3544.1 -34.92 177.99
123.52 4 16 21 2801.68 -31.05 82.78 257.24 58.94 5 3 3 2201.7 -34.91 74.83
56.48 20 58 34 4144.08 -31.06 185.94 257.25 58.95 22 7 39 3544.1 -34.92 177.99
123.52 4 16 21 2801.68 -31.05 82.78 257.24 58.94 5 3 3 2201.7 -34.91 74.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4471 TRA 1.4153 TC3-3.8703 BAU .7873 SGT 5483.8 SGR 726.9 SCS 701.0 ST 3696.4 SR 652.3 SS 1903.3
RDE .4394 RRA .1535 RC3 -.1671 FAU .08467 RRT .8997 RRF .8854 RTF .9832 CRT .9958 CRS -.9829 CST -.9955
FDE 3.2440 FRA 2.6878 FC3-4.8223 BSP 17540 SGB 5531.8 R23 -.0046 R13 .9832 LSA 4204.9 MSA 174.6 SSA 12.0
BOE 2.4862 BRA 1.4236 BC3 3.8739 FSP -2459 SGI 5522.8 S62 315.1 THA 6.82 EL1 3753.1 EL2 59.2 ALF 9.97

LAUNCH DATE DEC 30 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 525.338

RL 147.10 LAL -.00 LOL 98.37 VL 27.559 GAL 4.10 AZL 86.14 MCA 240.72 SMA 127.01 ECC .17317 INC 3.8601 V1 30.287
RP 108.86 LAP -3.37 LOP 339.04 VP 37.328 GAP 5.67 AZP 91.89 TAL 159.73 TAP 40.45 RCA 105.02 APO 149.01 V2 34.811
RC 127.128 GL 27.92 GP -11.96 ZAL 59.53 ZAP 146.58 ETS 342.71 ZAE 130.98 ETE 189.48 ZAC 107.33 ETC 170.07 CLP-148.56

PLANETOCENTRIC CONIC

C3 15.620 VHL 3.952 DLA 42.15 RAL 29.99 RAD 6567.6 VEL 11.705 PTH 2.06 VHP 4.551 DPA -9.56 RAP 15.87 ECC 1.2571
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.37 21 10 52 4140.13 -30.44 185.15 259.53 59.30 22 19 52 3540.1 -34.26 177.24
122.83 4 21 14 2817.88 -30.42 83.77 259.53 59.29 5 8 12 2217.9 -34.25 75.86
57.37 21 10 52 4140.13 -30.44 185.15 259.53 59.30 22 19 52 3540.1 -34.26 177.24
122.83 4 21 14 2817.88 -30.42 83.77 259.53 59.29 5 8 12 2217.9 -34.25 75.86
57.37 21 10 52 4140.13 -30.44 185.15 259.53 59.30 22 19 52 3540.1 -34.26 177.24
122.83 4 21 14 2817.88 -30.42 83.77 259.53 59.29 5 8 12 2217.9 -34.25 75.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4564 TRA 1.5754 TC3-3.8758 BAU .8093 SGT 5616.7 SGR 661.4 SCS 653.6 ST 3680.3 SR 618.8 SS 1794.6
RDE .4228 RRA .1439 RC3 -.1222 FAU .07779 RRT .8742 RRF .8584 RTF .9832 CRT .9929 CRS -.9771 CST -.9954
FDE 2.9559 FRA 2.6696 FC3-4.3117 BSP 18016 SGB 5657.9 R23 -.0083 R13 .9832 LSA 4137.2 MSA 176.1 SSA 12.5
BOE 2.4928 BRA 1.5820 BC3 3.8757 FSP -2299 SGI 5648.4 S62 329.0 THA 6.07 EL1 3731.2 EL2 72.3 ALF 9.48



LAUNCH DATE DEC 30 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.539 GAL 4.36 AZL 86.23 MCA 243.89 SMA 126.88 ECC .17620 INC 3.7706 VI 30.287  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.319 GAP 6.04 AZP 91.66 TAL 158.80 TAP 42.69 RCA 104.52 APO 149.23 V2 34.818  
 RC 129.481 GL 26.72 GP -11.14 ZAL 57.99 ZAP 148.71 ETS 342.59 ZAE 130.18 ETE 188.44 ZAC 108.27 ETC 170.03 CLP-150.57

DISTANCE 531.301

PLANETOCENTRIC CONIC

C3 16.127 VHL 4.016 DLA 41.52 RAL 32.14 RAD 6567.6 VEL 11.727 PTH 2.07 VHP 4.736 DPA -8.35 RAP 16.57 ECC 1.2654  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.27 21 23 15 4136.88 -29.77 184.42 261.89 59.62 22 32 12 3536.9 -33.56 176.55  
 121.73 4 25 57 2835.63 -29.76 84.86 261.88 59.61 5 13 13 2235.6 -33.55 77.00  
 58.27 21 23 15 4136.88 -29.77 184.42 261.89 59.62 22 32 12 3536.9 -33.56 176.55  
 121.73 4 25 57 2835.63 -29.76 84.86 261.88 59.61 5 13 13 2235.6 -33.55 77.00  
 58.27 21 23 15 4136.88 -29.77 184.42 261.89 59.62 22 32 12 3536.9 -33.56 176.55  
 121.73 4 25 57 2835.63 -29.76 84.86 261.88 59.61 5 13 13 2235.6 -33.55 77.00

DIFFERENTIAL CORRECTIONS

TDE 2.4640 TRA 1.7474 TC3-3.8419 BAU .8285  
 RDE .4121 RRA .1365 RC3 -.0851 FAU .07115  
 FDE 2.6992 FRA 2.6540 FC3-3.8191 BSP 18391  
 BDE 2.4982 BRA 1.7527 BC3 3.8428 FSP -2139

MID-COURSE EXECUTION ACCURACY

SGT 5741.5 SGR 646.5 SG3 609.8  
 RRT .8469 RRF .8304 RTF .9832  
 SGB 5777.8 R23 -.0098 R13 .9831  
 SGI 5767.7 SGT 342.2 THA 5.47

ORBIT DETERMINATION ACCURACY

ST 3655.7 SR 593.1 SS 1694.3  
 CRT .9893 CRS -.9704 CST -.9952  
 LSA 4068.7 MSA 178.4 SSA 12.9  
 EL1 3702.5 EL2 85.5 ALF 9.12

LAUNCH DATE DEC 30 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.518 GAL 4.64 AZL 86.31 MCA 247.06 SMA 126.73 ECC .17947 INC 3.6857 VI 30.287  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.310 GAP 6.41 AZP 91.44 TAL 157.84 TAP 44.89 RCA 103.99 APO 149.48 V2 34.825  
 RC 131.823 GL 25.54 GP -10.42 ZAL 56.42 ZAP 150.71 ETS 342.43 ZAE 129.45 ETE 187.57 ZAC 109.35 ETC 170.01 CLP-152.47

DISTANCE 537.259

PLANETOCENTRIC CONIC

C3 16.729 VHL 4.090 DLA 40.88 RAL 34.27 RAD 6567.7 VEL 11.752 PTH 2.07 VHP 4.931 DPA -7.17 RAP 17.41 ECC 1.2753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.19 21 35 46 4134.12 -29.08 183.71 264.31 59.90 22 44 40 3534.1 -32.84 175.89  
 120.81 4 30 27 2855.12 -29.07 86.08 264.30 59.89 5 18 2 2255.1 -32.83 78.26  
 59.19 21 35 46 4134.12 -29.08 183.71 264.31 59.90 22 44 40 3534.1 -32.84 175.89  
 120.81 4 30 27 2855.12 -29.07 86.08 264.30 59.89 5 18 2 2255.1 -32.83 78.26  
 59.19 21 35 46 4134.12 -29.08 183.71 264.31 59.90 22 44 40 3534.1 -32.84 175.89  
 120.81 4 30 27 2855.12 -29.07 86.08 264.30 59.89 5 18 2 2255.1 -32.83 78.26

DIFFERENTIAL CORRECTIONS

TDE 2.4642 TRA 1.9250 TC3-3.7896 BAU .8476  
 RDE .4054 RRA .1304 RC3 -.0565 FAU .06515  
 FDE 2.4619 FRA 2.6312 FC3-3.3714 BSP 18815  
 BDE 2.4973 BRA 1.9294 BC3 3.7901 FSP -2001

MID-COURSE EXECUTION ACCURACY

SGT 5851.9 SGR 618.8 SG3 568.3  
 RRT .8187 RRF .8017 RTF .9831  
 SGB 5884.8 R23 -.0106 R13 .9830  
 SGI 5873.9 SGT 354.0 THA 4.97

ORBIT DETERMINATION ACCURACY

ST 3615.1 SR 572.5 SS 1596.2  
 CRT .9847 CRS -.9625 CST -.9949  
 LSA 3988.9 MSA 181.5 SSA 13.3  
 EL1 3658.8 EL2 98.6 ALF 8.87

LAUNCH DATE DEC 30 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.496 GAL 4.94 AZL 86.40 MCA 250.22 SMA 126.59 ECC .18299 INC 3.6047 VI 30.287  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.301 GAP 6.79 AZP 91.22 TAL 156.86 TAP 47.08 RCA 103.42 APO 149.75 V2 34.833  
 RC 134.153 GL 24.36 GP -9.77 ZAL 54.85 ZAP 152.59 ETS 342.22 ZAE 128.77 ETE 186.83 ZAC 110.55 ETC 169.99 CLP-154.27

DISTANCE 543.151

PLANETOCENTRIC CONIC

C3 17.432 VHL 4.175 DLA 40.24 RAL 36.38 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.134 DPA -6.02 RAP 18.38 ECC 1.2869  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.13 21 48 23 4131.88 -28.35 183.04 266.79 60.15 22 57 15 3531.9 -32.08 175.27  
 119.87 4 34 41 2876.34 -28.33 87.41 266.78 60.14 5 22 37 2276.3 -32.07 79.64  
 60.13 21 48 23 4131.88 -28.35 183.04 266.79 60.15 22 57 15 3531.9 -32.08 175.27  
 119.87 4 34 41 2876.34 -28.33 87.41 266.78 60.14 5 22 37 2276.3 -32.07 79.64  
 60.13 21 48 23 4131.88 -28.35 183.04 266.79 60.15 22 57 15 3531.9 -32.08 175.27  
 119.87 4 34 41 2876.34 -28.33 87.41 266.78 60.14 5 22 37 2276.3 -32.07 79.64

DIFFERENTIAL CORRECTIONS

TDE 2.4613 TRA 2.1133 TC3-3.7129 BAU .8653  
 RDE .4025 RRA .1281 RC3 -.0344 FAU .05958  
 FDE 2.2486 FRA 2.6095 FC3-2.9592 BSP 19198  
 BDE 2.4940 BRA 2.1170 BC3 3.7131 FSP -1871

MID-COURSE EXECUTION ACCURACY

SGT 5954.3 SGR 597.8 SG3 530.0  
 RRT .7911 RRF .7741 RTF .9830  
 SGB 5984.3 R23 -.0106 R13 .9829  
 SGI 5973.2 SGT 364.5 THA 4.56

ORBIT DETERMINATION ACCURACY

ST 3566.0 SR 556.5 SS 1504.7  
 CRT .9792 CRS -.9535 CST -.9947  
 LSA 3905.8 MSA 185.5 SSA 13.5  
 EL1 3607.4 EL2 111.7 ALF 8.70

LAUNCH DATE DEC 30 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 98.37 VL 27.473 GAL 5.26 AZL 86.47 MCA 253.39 SMA 126.44 ECC .18679 INC 3.5269 VI 30.287  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.293 GAP 7.19 AZP 91.01 TAL 155.85 TAP 49.25 RCA 102.82 APO 150.06 V2 34.841  
 RC 136.471 GL 23.20 GP -9.20 ZAL 53.26 ZAP 154.37 ETS 341.97 ZAE 128.15 ETE 186.20 ZAC 111.84 ETC 169.97 CLP-155.98

DISTANCE 549.035

PLANETOCENTRIC CONIC

C3 18.245 VHL 4.271 DLA 39.59 RAL 38.47 RAD 6567.7 VEL 11.816 PTH 2.09 VHP 5.347 DPA -4.91 RAP 19.46 ECC 1.3003  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.09 22 1 6 4130.07 -27.58 182.39 269.32 60.38 23 9 57 3530.1 -31.29 174.67  
 118.91 4 38 36 2899.39 -27.56 88.86 269.32 60.37 5 26 56 2299.4 -31.28 81.14  
 61.09 22 1 6 4130.07 -27.58 182.39 269.32 60.38 23 9 57 3530.1 -31.29 174.67  
 118.91 4 38 36 2899.39 -27.56 88.86 269.32 60.37 5 26 56 2299.4 -31.28 81.14  
 61.09 22 1 6 4130.07 -27.58 182.39 269.32 60.38 23 9 57 3530.1 -31.29 174.67  
 118.91 4 38 36 2899.39 -27.56 88.86 269.32 60.37 5 26 56 2299.4 -31.28 81.14

DIFFERENTIAL CORRECTIONS

TDE 2.4549 TRA 2.3119 TC3-3.8129 BAU .8813  
 RDE .4028 RRA .1235 RC3 -.0176 FAU .05438  
 FDE 2.0558 FRA 2.5879 FC3-2.5802 BSP 19561  
 BDE 2.4877 BRA 2.3132 BC3 3.8129 FSP -1751

MID-COURSE EXECUTION ACCURACY

SGT 6046.9 SGR 581.7 SG3 494.5  
 RRT .7650 RRF .7483 RTF .9828  
 SGB 6074.8 R23 -.0099 R13 .9828  
 SGI 6063.3 SGT 373.6 THA 4.22

ORBIT DETERMINATION ACCURACY

ST 3508.5 SR 544.1 SS 1418.9  
 CRT .9727 CRS -.9436 CST -.9946  
 LSA 3818.7 MSA 190.2 SSA 13.7  
 EL1 3548.2 EL2 124.8 ALF 8.59

LAUNCH DATE DEC 30 1968

FLIGHT TIME 198.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 554.890

RL 147.10 LAL -.00 LOL 98.37 VL 27.451 GAL 5.60 AZL 86.55 MCA 256.57 SMA 126.29 ECC .19088 INC 3.4515 V1 30.287  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.284 GAP 7.59 AZP 90.80 TAL 154.83 TAP 51.40 RCA 102.18 APO 150.39 V2 34.850  
 RC 138.775 GL 22.06 GP -8.69 ZAL 51.68 ZAP 156.06 ETS 341.65 ZAE 127.59 ETE 185.67 ZAC 113.23 ETC 169.93 CLP-157.60

PLANETOCENTRIC CONIC

C3 19.181 VHL 4.380 DLA 38.94 RAL 40.53 RAD 6567.8 VEL 11.856 PTH 2.10 VHP 5.570 DPA -3.81 RAP 20.65 ECC 1.3157  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.07 22 14 0 4128.48 -26.77 181.74 271.91 60.60 23 22 49 3528.5 -30.47 174.08  
 117.93 4 42 8 2924.50 -26.76 90.45 271.90 60.59 5 30 53 2324.5 -30.46 82.78  
 62.07 22 14 0 4128.48 -26.77 181.74 271.91 60.60 23 22 49 3528.5 -30.47 174.08  
 117.93 4 42 8 2924.50 -26.76 90.45 271.90 60.59 5 30 53 2324.5 -30.46 82.78  
 62.07 22 14 0 4128.48 -26.77 181.74 271.91 60.60 23 22 49 3528.5 -30.47 174.08  
 117.93 4 42 8 2924.50 -26.76 90.45 271.90 60.59 5 30 53 2324.5 -30.46 82.78

DIFFERENTIAL CORRECTIONS

TDE 2.4488 TRA 2.5255 TC3-3.4850 BAU .0937  
 RDE .4060 RRA .1229 RC3 -.0046 FAU .04932  
 FDE 1.8848 FRA 2.5713 FC3-2.2260 BSP 19812  
 BOE 2.4822 BRA 2.5285 BC3 3.4850 FSP -1630

MID-COURSE EXECUTION ACCURACY

SGT 6134.0 SGR 569.9 SG3 401.9  
 RRT .7414 RRF .7257 RTF .9825  
 SGB 6160.4 R23 -.0082 R13 .9825  
 SG1 6148.6 SGT 381.6 THA 3.96

ORBIT DETERMINATION ACCURACY

ST 3449.0 SR 534.7 SS 1341.1  
 CRT .9654 CRS -.9328 CST -.9944  
 LSA 3733.8 MSA 195.7 SSA 13.8  
 EL1 3487.5 EL2 137.8 ALF 8.55

LAUNCH DATE DEC 30 1968

FLIGHT TIME 200.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 560.712

RL 147.10 LAL -.00 LOL 98.37 VL 27.427 GAL 5.97 AZL 86.62 MCA 259.74 SMA 126.14 ECC .19529 INC 3.3781 V1 30.287  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.276 GAP 8.01 AZP 90.80 TAL 153.80 TAP 53.54 RCA 101.50 APO 150.77 V2 34.860  
 RC 141.067 GL 20.93 GP -8.25 ZAL 50.10 ZAP 157.66 ETS 341.26 ZAE 127.07 ETE 185.22 ZAC 114.71 ETC 169.92 CLP-159.16

PLANETOCENTRIC CONIC

C3 20.252 VHL 4.500 DLA 38.28 RAL 42.55 RAD 6567.8 VEL 11.901 PTH 2.11 VHP 5.804 DPA -2.74 RAP 21.93 ECC 1.3333  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.09 22 27 0 4127.20 -25.93 181.11 274.53 60.80 23 35 47 3527.2 -29.61 173.90  
 116.91 4 45 17 2951.57 -25.92 92.17 274.52 60.79 5 34 28 2351.6 -29.60 84.56  
 63.09 22 27 0 4127.20 -25.93 181.11 274.53 60.80 23 35 47 3527.2 -29.61 173.90  
 116.91 4 45 17 2951.57 -25.92 92.17 274.52 60.79 5 34 28 2351.6 -29.60 84.56  
 63.09 22 27 0 4127.20 -25.93 181.11 274.53 60.80 23 35 47 3527.2 -29.61 173.90  
 116.91 4 45 17 2951.57 -25.92 92.17 274.52 60.79 5 34 28 2351.6 -29.60 84.56

DIFFERENTIAL CORRECTIONS

TDE 2.4361 TRA 2.7477 TC3-3.3480 BAU .9065  
 RDE .4110 RRA .1237 RC3 .0038 FAU .04484  
 FDE 1.7261 FRA 2.5517 FC3-1.9168 BSP 20121  
 BOE 2.4706 BRA 2.7503 BC3 3.3480 FSP -1527

MID-COURSE EXECUTION ACCURACY

SGT 6209.7 SGR 580.4 SG3 431.4  
 RRT .7203 RRF .7055 RTF .9823  
 SGB 6255.0 R23 -.0070 R13 .9823  
 SG1 6222.9 SGT 387.9 THA 3.73

ORBIT DETERMINATION ACCURACY

ST 3378.7 SR 526.7 SS 1265.9  
 CRT .9572 CRS -.9209 CST -.9942  
 LSA 3640.7 MSA 202.0 SSA 13.9  
 EL1 3416.2 EL2 150.8 ALF 8.50

LAUNCH DATE DEC 30 1968

FLIGHT TIME 202.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 566.498

RL 147.10 LAL -.00 LOL 98.37 VL 27.404 GAL 6.36 AZL 86.69 MCA 262.91 SMA 125.98 ECC .20004 INC 3.3061 V1 30.287  
 RP 108.68 LAP -3.28 LOP 358.09 VP 37.266 GAP 8.44 AZP 90.41 TAL 152.75 TAP 55.66 RCA 100.78 APO 151.18 V2 34.870  
 RC 143.344 GL 19.81 GP -7.81 ZAL 48.53 ZAP 159.19 ETS 340.78 ZAE 126.60 ETE 184.83 ZAC 116.25 ETC 169.88 CLP-160.65

PLANETOCENTRIC CONIC

C3 21.475 VHL 4.634 DLA 37.61 RAL 44.53 RAD 6567.9 VEL 11.952 PTH 2.13 VHP 6.049 DPA -1.69 RAP 23.28 ECC 1.3534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.14 22 40 9 4126.03 -25.06 180.48 277.18 60.98 23 48 55 3526.0 -28.73 172.92  
 115.86 4 47 56 2980.86 -25.05 94.04 277.17 60.97 5 37 37 2380.9 -28.71 86.48  
 64.14 22 40 9 4126.03 -25.06 180.48 277.18 60.98 23 48 55 3526.0 -28.73 172.92  
 115.86 4 47 56 2980.86 -25.05 94.04 277.17 60.97 5 37 37 2380.9 -28.71 86.48  
 64.14 22 40 9 4126.03 -25.06 180.48 277.18 60.98 23 48 55 3526.0 -28.73 172.92  
 115.86 4 47 56 2980.86 -25.05 94.04 277.17 60.97 5 37 37 2380.9 -28.71 86.48

DIFFERENTIAL CORRECTIONS

TDE 2.4209 TRA 2.9828 TC3-3.1961 BAU .9176  
 RDE .4179 RRA .1261 RC3 .0093 FAU .04067  
 FDE 1.5826 FRA 2.5340 FC3-1.6394 BSP 20419  
 BOE 2.4567 BRA 2.9894 BC3 3.1962 FSP -1433

MID-COURSE EXECUTION ACCURACY

SGT 6277.6 SGR 553.0 SG3 403.2  
 RRT .7022 RRF .6884 RTF .9820  
 SGB 6301.9 R23 -.0055 R13 .9820  
 SG1 6289.7 SGT 392.9 THA 3.55

ORBIT DETERMINATION ACCURACY

ST 3304.2 SR 520.0 SS 1196.2  
 CRT .9480 CRS -.9082 CST -.9941  
 LSA 3546.2 MSA 208.8 SSA 13.8  
 EL1 3340.9 EL2 163.7 ALF 8.51

LAUNCH DATE DEC 30 1968

FLIGHT TIME 204.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 572.245

RL 147.10 LAL -.00 LOL 98.37 VL 27.380 GAL 6.77 AZL 86.76 MCA 266.09 SMA 125.82 ECC .20517 INC 3.2350 V1 30.287  
 RP 108.65 LAP -3.23 LOP 358.09 VP 37.260 GAP 8.89 AZP 90.22 TAL 151.70 TAP 57.79 RCA 100.01 APO 151.64 V2 34.880  
 RC 145.608 GL 18.71 GP -7.44 ZAL 46.97 ZAP 160.65 ETS 340.19 ZAE 126.17 ETE 184.50 ZAC 117.86 ETC 169.83 CLP-162.09

PLANETOCENTRIC CONIC

C3 22.868 VHL 4.782 DLA 36.94 RAL 46.47 RAD 6567.9 VEL 12.010 PTH 2.14 VHP 6.307 DPA -.66 RAP 24.72 ECC 1.3763  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.22 22 53 28 4124.86 -24.16 179.83 279.87 61.16 24 2 12 3524.9 -27.81 172.33  
 114.78 4 50 4 3012.47 -24.14 96.06 279.86 61.15 5 40 17 2412.5 -27.79 88.56  
 65.22 22 53 28 4124.86 -24.16 179.83 279.87 61.16 24 2 12 3524.9 -27.81 172.33  
 114.78 4 50 4 3012.47 -24.14 96.06 279.86 61.15 5 40 17 2412.5 -27.79 88.56  
 65.22 22 53 28 4124.86 -24.16 179.83 279.87 61.16 24 2 12 3524.9 -27.81 172.33  
 114.78 4 50 4 3012.47 -24.14 96.06 279.86 61.15 5 40 17 2412.5 -27.79 88.56

DIFFERENTIAL CORRECTIONS

TDE 2.4036 TRA 3.2321 TC3-3.0319 BAU .9269  
 RDE .4263 RRA .1303 RC3 .0124 FAU .03678  
 FDE 1.4529 FRA 2.5188 FC3-1.3924 BSP 20690  
 BOE 2.4411 BRA 3.2347 BC3 3.0319 FSP -1344

MID-COURSE EXECUTION ACCURACY

SGT 6338.6 SGR 547.0 SG3 377.2  
 RRT .6874 RRF .6746 RTF .9818  
 SGB 6362.1 R23 -.0040 R13 .9818  
 SG1 6349.7 SGT 396.6 THA 3.41

ORBIT DETERMINATION ACCURACY

ST 3227.1 SR 514.1 SS 1131.9  
 CRT .9379 CRS -.8947 CST -.9940  
 LSA 3451.5 MSA 216.1 SSA 13.7  
 EL1 3263.0 EL2 176.3 ALF 8.52

LAUNCH DATE DEC 30 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 577.949

RL 147.10 LAL -.00 LOL 98.37 VL 27.356 GAL 7.21 AZL 86.84 MCA 269.27 SMA 125.67 ECC .21071 INC 3.1644 V1 30.287  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.253 GAP 9.36 AZP 90.04 TAL 150.63 TAP 59.90 RCA 99.19 APO 152.15 V2 34.891  
 RC 147.857 GL 17.64 GP -7.11 ZAL 45.44 ZAP 162.05 ETS 339.47 ZAE 125.77 ETE 184.22 ZAC 119.53 ETC 169.75 CLP-163.47

PLANETOCENTRIC CONIC

C3 24.453 VHL 4.945 DLA 36.26 RAL 48.35 RAD 6568.0 VEL 12.076 PTH 2.16 WHP 6.579 DPA .36 RAP 26.21 ECC 1.4024  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.34 23 6 55 4123.71 -23.22 179.18 282.58 61.33 24 15 39 3523.7 -26.86 171.73  
 113.66 4 51 40 3046.40 -23.21 98.23 282.58 61.32 5 42 26 2446.4 -26.85 90.79  
 66.34 23 6 55 4123.71 -23.22 179.18 282.58 61.33 24 15 39 3523.7 -26.86 171.73  
 113.66 4 51 40 3046.40 -23.21 98.23 282.58 61.32 5 42 26 2446.4 -26.85 90.79  
 66.34 23 6 55 4123.71 -23.22 179.18 282.58 61.33 24 15 39 3523.7 -26.86 171.73  
 113.66 4 51 40 3046.40 -23.21 98.23 282.58 61.32 5 42 26 2446.4 -26.85 90.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3854 TRA 3.4971 TC3-2.8561 BAU .9357 SGT 6393.0 SGR 942.0 SG3 353.2 ST 3149.4 SR 508.6 SS 1073.2  
 RDE .4360 RRA .1362 RC3 .0139 FAU .03312 RRT .6757 RRF .6640 RTF .9815 CRT .9270 CRS -.8805 CST -.9939  
 FDE 1.3361 FRA 2.5062 FC3-1.1725 B8P 20920 SGB 6416.0 R23 -.0025 R13 .9815 LSA 3358.4 MSA 223.7 SSA 13.6  
 BDE 2.4249 BRA 3.4997 BC3 2.8562 F8P -1261 SGI 6403.5 SG2 398.9 THA 3.29 EL1 3184.6 EL2 188.7 ALF 8.54

LAUNCH DATE DEC 30 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 583.803

RL 147.10 LAL -.00 LOL 98.37 VL 27.331 GAL 7.69 AZL 86.91 MCA 272.45 SMA 125.51 ECC .21670 INC 3.0939 V1 30.287  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.245 GAP 9.85 AZP 89.87 TAL 149.57 TAP 62.02 RCA 98.31 APO 152.71 V2 34.902  
 RC 150.092 GL 16.58 GP -6.80 ZAL 43.93 ZAP 163.40 ETS 338.61 ZAE 125.40 ETE 183.97 ZAC 121.24 ETC 169.65 CLP-164.82

PLANETOCENTRIC CONIC

C3 26.259 VHL 5.124 DLA 35.58 RAL 50.18 RAD 6568.1 VEL 12.151 PTH 2.18 WHP 6.866 DPA 1.36 RAP 27.77 ECC 1.4322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.50 23 20 36 4122.27 -22.25 178.49 285.32 61.49 24 29 18 3522.3 -25.88 171.10  
 112.50 4 52 36 3082.98 -22.24 100.59 285.31 61.48 5 43 59 2483.0 -25.87 93.19  
 67.50 23 20 36 4122.27 -22.25 178.49 285.32 61.49 24 29 18 3522.3 -25.88 171.10  
 112.50 4 52 36 3082.98 -22.24 100.59 285.31 61.48 5 43 59 2483.0 -25.87 93.19  
 67.50 23 20 36 4122.27 -22.25 178.49 285.32 61.49 24 29 18 3522.3 -25.88 171.10  
 112.50 4 52 36 3082.98 -22.24 100.59 285.31 61.48 5 43 59 2483.0 -25.87 93.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3687 TRA 3.7813 TC3-2.6685 BAU .9368 SGT 6443.5 SGR 537.8 SG3 331.2 ST 3074.6 SR 503.3 SS 1021.0  
 RDE .4470 RRA .1441 RC3 .0144 FAU .02958 RRT .6674 RRF .6569 RTF .9813 CRT .9152 CRS -.8659 CST -.9939  
 FDE 1.2328 FRA 2.4984 FC3 -.9752 B8P 21080 SGB 6465.9 R23 -.0007 R13 .9813 LSA 3270.4 MSA 231.3 SSA 13.5  
 BDE 2.4105 BRA 3.7841 BC3 2.6686 F8P -1178 SGI 6453.5 SG2 399.9 THA 3.20 EL1 3109.1 EL2 200.6 ALF 8.56

LAUNCH DATE DEC 30 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 589.202

RL 147.10 LAL -.00 LOL 98.37 VL 27.307 GAL 8.19 AZL 86.98 MCA 275.63 SMA 125.35 ECC .22318 INC 3.0230 V1 30.287  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.238 GAP 10.37 AZP 89.70 TAL 148.51 TAP 64.14 RCA 97.37 APO 153.32 V2 34.914  
 RC 152.312 GL 15.54 GP -6.53 ZAL 42.45 ZAP 164.70 ETS 337.55 ZAE 125.05 ETE 183.77 ZAC 122.99 ETC 169.53 CLP-166.13

PLANETOCENTRIC CONIC

C3 28.315 VHL 5.321 DLA 34.90 RAL 51.96 RAD 6568.1 VEL 12.235 PTH 2.20 WHP 7.169 DPA 2.34 RAP 29.37 ECC 1.4660  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.70 23 34 32 4120.39 -21.26 177.76 288.08 61.65 24 43 12 3520.4 -24.87 170.42  
 111.30 4 52 49 3122.35 -21.24 103.12 288.07 61.64 5 44 51 2522.4 -24.86 95.78  
 68.70 23 34 32 4120.39 -21.26 177.76 288.08 61.65 24 43 12 3520.4 -24.87 170.42  
 111.30 4 52 49 3122.35 -21.24 103.12 288.07 61.64 5 44 51 2522.4 -24.86 95.78  
 68.70 23 34 32 4120.39 -21.26 177.76 288.08 61.65 24 43 12 3520.4 -24.87 170.42  
 111.30 4 52 49 3122.35 -21.24 103.12 288.07 61.64 5 44 51 2522.4 -24.86 95.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3471 TRA 4.0794 TC3-2.4821 BAU .9396 SGT 6484.2 SGR 533.4 SG3 310.6 ST 2995.7 SR 497.5 SS 971.6  
 RDE .4588 RRA .1533 RC3 .0136 FAU .02642 RRT .6614 RRF .6518 RTF .9811 CRT .9024 CRS -.8503 CST -.9940  
 FDE 1.1365 FRA 2.4904 FC3 -.8077 B8P 21272 SGB 6505.1 R23 .0005 R13 .9811 LSA 3179.4 MSA 238.9 SSA 13.2  
 BDE 2.3914 BRA 4.0823 BC3 2.4821 F8P -1108 SGI 6493.8 SG2 399.5 THA 3.13 EL1 3029.3 EL2 211.9 ALF 8.57

LAUNCH DATE DEC 30 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 594.758

RL 147.10 LAL -.00 LOL 98.37 VL 27.282 GAL 8.74 AZL 87.05 MCA 278.82 SMA 125.19 ECC .23021 INC 2.9513 V1 30.287  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.231 GAP 10.92 AZP 89.55 TAL 147.45 TAP 66.27 RCA 96.37 APO 154.01 V2 34.926  
 RC 154.516 GL 14.52 GP -6.28 ZAL 41.00 ZAP 165.95 ETS 336.27 ZAE 124.72 ETE 183.59 ZAC 124.78 ETC 169.38 CLP-167.41

PLANETOCENTRIC CONIC

C3 30.680 VHL 5.537 DLA 34.21 RAL 53.67 RAD 6568.2 VEL 12.330 PTH 2.22 WHP 7.492 DPA 3.30 RAP 31.03 ECC 1.5046  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.95 23 48 45 4117.91 -20.24 176.98 290.85 61.81 24 57 23 3517.9 -23.84 169.69  
 110.05 4 52 16 3164.67 -20.22 105.86 290.84 61.80 5 45 0 2564.7 -23.83 98.57  
 69.95 23 48 45 4117.91 -20.24 176.98 290.85 61.81 24 57 23 3517.9 -23.84 169.69  
 110.05 4 52 16 3164.67 -20.22 105.86 290.84 61.80 5 45 0 2564.7 -23.83 98.57  
 69.95 23 48 45 4117.91 -20.24 176.98 290.85 61.81 24 57 23 3517.9 -23.84 169.69  
 110.05 4 52 16 3164.67 -20.22 105.86 290.84 61.80 5 45 0 2564.7 -23.83 98.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3251 TRA 4.3968 TC3-2.2918 BAU .9394 SGT 6518.6 SGR 529.0 SG3 291.6 ST 2918.5 SR 491.1 SS 927.1  
 RDE .4709 RRA .1643 RC3 .0123 FAU .02342 RRT .6579 RRF .6491 RTF .9810 CRT .8888 CRS -.8343 CST -.9941  
 FDE 1.0498 FRA 2.4856 FC3 -.6614 B8P 21458 SGB 6540.0 R23 .0016 R13 .9810 LSA 3091.5 MSA 246.2 SSA 13.0  
 BDE 2.3723 BRA 4.3997 BC3 2.2918 F8P -1041 SGI 6527.9 SG2 397.8 THA 3.07 EL1 2951.2 EL2 222.6 ALF 8.56

LAUNCH DATE DEC 30 1968

FLIGHT TIME 214.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 600.201

RL 147.10 LAL -.00 LOL 98.37 VL 27.257 GAL 9.32 AZL 87.12 HCA 282.00 SMA 125.03 ECC .23784 INC 2.8782 V1 30.287  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.225 GAP 11.49 AZP 89.40 TAL 146.40 TAP 68.41 RCA 95.29 APO 154.77 V2 34.938  
 RC 156.704 GL 13.53 GP -6.05 ZAL 39.59 ZAP 167.17 ETS 334.70 ZAE 124.41 ETE 183.43 ZAC 126.60 ETC 169.19 CLP-168.67

PLANETOCENTRIC CONIC

C3 33.338 VHL 5.774 DLA 33.52 RAL 55.32 RAD 6568.3 VEL 12.438 PTH 2.25 VHP 7.836 DPA 4.24 RAP 32.72 ECC 1.5487  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.26 0 7 14 4114.60 -19.19 176.13 293.64 61.98 1 15 49 3514.6 -22.79 168.89  
 108.74 4 50 52 3210.14 -19.18 108.80 293.63 61.97 5 44 22 2610.1 -22.77 101.56  
 71.26 0 7 14 4114.60 -19.19 176.13 293.64 61.98 1 15 49 3514.6 -22.79 168.89  
 108.74 4 50 52 3210.14 -19.18 108.80 293.63 61.97 5 44 22 2610.1 -22.77 101.56  
 110.00 5 49 29 3030.66 -24.31 97.60 296.37 65.20 6 40 0 2430.7 -27.45 89.83  
 110.00 4 7 47 3342.08 -14.22 116.09 290.67 58.58 5 3 29 2742.1 -18.27 109.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.3030 TRA 4.7348 TC3-2.1005 BAU .9362 SGT 6547.4 SGR 524.4 SG3 274.0 ST 2843.7 SR 484.2 SS 887.0  
 RDE .4837 RRA .1771 RC3 .0107 FAU .02062 RRT .6568 RRF .6486 RTF .9810 CRT .8744 CRS -.6180 CST -.9942  
 FDE .9716 FRA 2.4841 FC3 -.5353 BSP 21620 SGB 6568.4 R23 .0025 R13 .9810 LSA 3007.3 MSA 253.0 SSA 12.7  
 BOE 2.3533 BRA 4.7581 BC3 2.1005 FSP -979 SG1 6556.5 SG2 394.9 TMA 3.02 EL1 2875.3 EL2 232.3 ALF 8.52

LAUNCH DATE DEC 30 1968

FLIGHT TIME 216.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 805.582

RL 147.10 LAL -.00 LOL 98.37 VL 27.232 GAL 9.95 AZL 87.20 HCA 285.19 SMA 124.87 ECC .24615 INC 2.8034 V1 30.287  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.219 GAP 12.11 AZP 89.26 TAL 145.37 TAP 70.57 RCA 94.14 APO 155.61 V2 34.951  
 RC 158.875 GL 12.36 GP -5.84 ZAL 38.23 ZAP 188.35 ETS 338.76 ZAE 124.10 ETE 183.30 ZAC 128.45 ETC 168.97 CLP-169.90

PLANETOCENTRIC CONIC

C3 36.406 VHL 6.034 DLA 32.84 RAL 56.90 RAD 6568.4 VEL 12.561 PTH 2.28 VHP 8.203 DPA 5.16 RAP 34.45 ECC 1.5991  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.64 0 22 15 4109.99 -18.13 175.18 296.43 62.14 1 30 45 3510.0 -21.71 167.99  
 107.36 4 48 28 3259.19 -18.12 111.99 296.42 62.14 5 42 47 2659.2 -21.70 104.80  
 72.64 0 22 15 4109.99 -18.13 175.18 296.43 62.14 1 30 45 3510.0 -21.71 167.99  
 107.36 4 48 28 3259.19 -18.12 111.99 296.42 62.14 5 42 47 2659.2 -21.70 104.80  
 110.00 6 17 24 2985.54 -25.57 94.70 300.28 66.50 7 7 10 2385.5 -28.52 86.76  
 110.00 3 52 29 3431.64 -10.98 121.02 292.13 57.42 4 49 41 2831.6 -15.20 114.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.2848 TRA 5.0988 TC3-1.9056 BAU .9275 SGT 6575.7 SGR 519.7 SG3 257.9 ST 2775.2 SR 476.6 SS 852.7  
 RDE .4972 RRA .1919 RC3 .0094 FAU .01785 RRT .6580 RRF .6505 RTF .9811 CRT .8595 CRS -.8018 CST -.9945  
 FDE .9032 FRA 2.4885 FC3 -.4246 BSP 21671 SGB 6594.2 R23 .0035 R13 .9811 LSA 2930.7 MSA 259.0 SSA 12.5  
 BOE 2.3383 BRA 5.1034 BC3 1.9056 FSP -917 SG1 6582.6 SG2 390.8 TMA 2.99 EL1 2805.5 EL2 241.0 ALF 8.46

LAUNCH DATE DEC 30 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 610.865

RL 147.10 LAL -.00 LOL 98.37 VL 27.208 GAL 10.63 AZL 87.27 HCA 288.39 SMA 124.71 ECC .25520 INC 2.7262 V1 30.287  
 RP 108.39 LAP -2.59 LOP 26.77 VP 37.212 GAP 12.77 AZP 89.14 TAL 144.36 TAP 72.75 RCA 92.89 APO 156.54 V2 34.964  
 RC 161.027 GL 11.61 GP -5.65 ZAL 36.91 ZAP 169.49 ETS 330.34 ZAE 123.80 ETE 183.19 ZAC 130.31 ETC 168.72 CLP-171.13

PLANETOCENTRIC CONIC

C3 39.928 VHL 6.319 DLA 32.15 RAL 58.41 RAD 6568.5 VEL 12.700 PTH 2.31 VHP 8.597 DPA 6.06 RAP 36.21 ECC 1.6571  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.10 0 37 52 4103.55 -17.05 174.09 299.23 62.32 1 46 15 3503.5 -20.62 166.94  
 105.90 4 44 55 3312.30 -17.05 115.46 299.22 62.31 5 40 7 2712.3 -20.60 108.31  
 74.10 0 37 52 4103.55 -17.05 174.09 299.23 62.32 1 46 15 3503.5 -20.62 166.94  
 105.90 4 44 55 3312.30 -17.05 115.46 299.22 62.31 5 40 7 2712.3 -20.60 108.31  
 110.00 6 39 48 2957.08 -26.33 92.83 303.91 67.37 7 29 5 2357.1 -29.16 84.79  
 110.00 3 42 10 3506.77 -8.20 125.06 293.90 56.70 4 40 36 2906.8 -12.53 118.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.2626 TRA 5.4849 TC3-1.7184 BAU .9173 SGT 6590.2 SGR 514.0 SG3 242.7 ST 2705.3 SR 467.9 SS 820.9  
 RDE .5107 RRA .2081 RC3 .0079 FAU .01537 RRT .6603 RRF .6534 RTF .9813 CRT .8436 CRS -.7851 CST -.9948  
 FDE .8393 FRA 2.4941 FC3 -.3332 BSP 21819 SGB 6610.2 R23 .0040 R13 .9813 LSA 2853.3 MSA 264.3 SSA 12.2  
 BOE 2.3195 BRA 5.4888 BC3 1.7185 FSP -864 SG1 6599.0 SG2 385.4 TMA 2.96 EL1 2734.2 EL2 248.6 ALF 8.37

LAUNCH DATE DEC 30 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 616.035

RL 147.10 LAL -.00 LOL 98.37 VL 27.183 GAL 11.36 AZL 87.35 HCA 291.58 SMA 124.56 ECC .26511 INC 2.6460 V1 30.287  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.207 GAP 13.47 AZP 89.03 TAL 143.58 TAP 74.95 RCA 91.54 APO 157.58 V2 34.977  
 RC 163.161 GL 10.69 GP -5.48 ZAL 35.65 ZAP 170.59 ETS 327.28 ZAE 123.50 ETE 183.09 ZAC 132.18 ETC 168.42 CLP-172.34

PLANETOCENTRIC CONIC

C3 43.985 VHL 6.632 DLA 31.47 RAL 59.85 RAD 6568.7 VEL 12.859 PTH 2.34 VHP 9.022 DPA 6.94 RAP 37.99 ECC 1.7239  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.66 0 54 16 4094.58 -15.96 172.82 302.03 62.51 2 2 31 3494.6 -19.51 165.71  
 104.34 4 39 59 3370.09 -15.94 119.25 302.02 62.50 5 36 9 2770.1 -19.49 112.14  
 75.66 0 54 16 4094.58 -15.96 172.82 302.03 62.51 2 2 31 3494.6 -19.51 165.71  
 104.34 4 39 59 3370.09 -15.94 119.25 302.02 62.50 5 36 9 2770.1 -19.49 112.14  
 110.00 6 59 11 2937.63 -26.83 91.54 307.40 67.98 7 48 9 2337.6 -29.57 83.43  
 110.00 3 34 15 3575.03 -5.63 128.67 295.82 56.23 4 33 50 2975.0 -10.03 122.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.2419 TRA 5.8982 TC3-1.5345 BAU .9024 SGT 6601.9 SGR 507.8 SG3 228.7 ST 2639.5 SR 458.3 SS 793.2  
 RDE .5245 RRA .2261 RC3 .0066 FAU .01299 RRT .6646 RRF .6578 RTF .9816 CRT .8272 CRS -.7685 CST -.9951  
 FDE .7820 FRA 2.5043 FC3 -.2557 BSP 21940 SGB 6621.4 R23 .0043 R13 .9816 LSA 2781.0 MSA 268.5 SSA 11.9  
 BOE 2.3024 BRA 5.9025 BC3 1.5345 FSP -814 SG1 6610.5 SG2 378.9 TMA 2.94 EL1 2666.9 EL2 254.8 ALF 8.25

LAUNCH DATE DEC 31 1968

FLIGHT TIME 70.00

ARRIVAL DATE MAR 11 1969

HELIOCENTRIC CONIC

DISTANCE 145.838

RL 147.10 LAL -.00 LOL 99.39 VL 19.952 GAL 12.78 AZL 85.87 HCA 52.91 SMA 94.37 ECC .58814 INC 4.1272 V1 30.287  
 RP 107.52 LAP 3.29 LOP 152.23 VP 32.591 GAP -35.24 AZP 87.51 TAL 170.69 TAP 223.59 RCA 38.87 APO 149.87 V2 35.243  
 RC 57.501 GL 6.80 GP 2.13 ZAL 67.96 ZAP 24.65 ETS 185.25 ZAE 150.19 ETE 194.65 ZAC 90.85 ETC 166.34 CLP 24.57

PLANETOCENTRIC CONIC

C3 140.055 VHL 11.833 DLA 18.39 RAL 26.95 RAD 6570.5 VEL 16.167 PTH 2.84 VHP 20.785 DPA -2.38 RAP 357.56 ECC 3.3050  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 59 0 3284.83 -24.81 116.63 289.75 75.90 4 53 45 2684.8 -26.51 108.37  
 90.00 21 1 0 4704.06 15.54 200.88 276.13 66.03 22 19 24 4104.1 12.17 193.82  
 100.00 5 31 22 2986.97 -26.77 95.86 290.29 76.17 6 21 9 2387.0 -28.40 86.84  
 100.00 22 11 19 4477.16 17.37 183.34 275.27 65.29 23 25 56 3677.2 13.90 176.27  
 110.00 7 3 39 2698.24 -31.81 74.72 291.68 76.77 7 48 37 2098.2 -33.30 65.81  
 110.00 22 55 31 4338.65 22.05 170.44 272.87 63.19 24 7 50 3738.6 18.27 163.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5469 TRA-1.4833 TC3 -.1061 BAU .2040 SGT 831.0 SGR 441.4 SCS 34.8 ST 346.9 SR 413.2 SS 325.7  
 ROE -.8483 RRA .2955 RC3 -.0248 FAU .01435 RRT .0698 RRF -.0322 RTF -.8488 CRT .6881 CRS .8011 CST .9838  
 FDE .3228 FRA .5997 FC3 -.0887 BSP 2263 SGB 941.0 R23 -.0052 R13 -.8489 LSA 588.2 MSA 225.8 SSA 13.7  
 BOE 1.0093 BRA 1.4929 BC3 .1090 FSP -74 SGI 831.2 S62 441.2 THA 1.26 EL1 497.3 EL2 209.1 ALF 52.17

LAUNCH DATE DEC 31 1968

FLIGHT TIME 72.00

ARRIVAL DATE MAR 13 1969

HELIOCENTRIC CONIC

DISTANCE 152.027

RL 147.10 LAL -.00 LOL 99.39 VL 20.551 GAL 12.23 AZL 85.99 HCA 56.15 SMA 96.02 ECC .56133 INC 4.0140 V1 30.287  
 RP 107.54 LAP 3.33 LOP 155.48 VP 32.956 GAP -33.53 AZP 87.76 TAL 170.06 TAP 226.21 RCA 42.12 APO 149.92 V2 35.238  
 RC 55.728 GL 7.19 GP 2.20 ZAL 67.06 ZAP 23.12 ETS 185.88 ZAE 151.31 ETE 195.62 ZAC 92.48 ETC 166.36 CLP 23.02

PLANETOCENTRIC CONIC

C3 126.262 VHL 11.237 DLA 19.09 RAL 27.72 RAD 6570.3 VEL 15.735 PTH 2.79 VHP 19.900 DPA -1.62 RAP 359.08 ECC 3.0780  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 54 39 3292.78 -24.68 117.17 289.24 75.66 4 49 32 2892.8 -26.41 108.93  
 90.00 21 11 27 4656.55 14.21 198.03 275.70 65.25 22 29 3 4056.5 10.75 191.06  
 100.00 5 27 45 2992.59 -26.67 95.65 289.80 75.98 6 17 30 2392.6 -28.34 87.24  
 100.00 22 21 2 4431.98 16.07 180.82 274.80 64.45 23 34 54 3832.0 12.50 173.65  
 110.00 7 1 27 2699.48 -31.79 74.81 291.22 76.72 7 46 26 2099.5 -33.29 65.90  
 110.00 23 3 30 4297.87 20.78 167.96 272.31 62.22 24 15 28 3697.9 16.90 160.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5471 TRA-1.4802 TC3 -.1102 BAU .1917 SGT 871.7 SGR 445.4 SCS 37.9 ST 365.7 SR 417.8 SS 341.5  
 ROE -.8148 RRA .2754 RC3 -.0274 FAU .01487 RRT .0382 RRF -.0381 RTF -.6680 CRT .6896 CRS .8030 CST .9837  
 FDE .3358 FRA .6204 FC3 -.1008 BSP 2375 SGB 978.9 R23 -.0054 R13 -.6682 LSA 609.2 MSA 231.5 SSA 13.9  
 BOE .9813 BRA 1.4859 BC3 .1158 FSP -82 SGI 871.9 S62 445.0 THA 1.43 EL1 511.3 EL2 216.4 ALF 50.48

LAUNCH DATE DEC 31 1968

FLIGHT TIME 74.00

ARRIVAL DATE MAR 15 1969

HELIOCENTRIC CONIC

DISTANCE 158.290

RL 147.10 LAL -.00 LOL 99.39 VL 21.108 GAL 11.69 AZL 86.09 HCA 59.39 SMA 97.66 ECC .53544 INC 3.9091 V1 30.287  
 RP 107.56 LAP 3.36 LOP 158.73 VP 33.300 GAP -31.90 AZP 88.01 TAL 169.46 TAP 228.85 RCA 45.37 APO 149.96 V2 35.232  
 RC 54.021 GL 7.59 GP 2.28 ZAL 66.23 ZAP 21.61 ETS 186.59 ZAE 152.58 ETE 196.72 ZAC 94.12 ETC 166.37 CLP 21.49

PLANETOCENTRIC CONIC

C3 113.889 VHL 10.672 DLA 19.76 RAL 28.42 RAD 6570.2 VEL 15.337 PTH 2.75 VHP 19.047 DPA -.84 RAP .61 ECC 2.8743  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 49 59 3299.95 -24.56 117.66 288.59 75.44 4 44 59 2700.0 -26.32 109.44  
 90.00 21 21 41 4608.24 12.81 195.17 275.21 64.53 22 38 29 4008.2 9.28 188.27  
 100.00 5 23 51 2997.30 -26.60 95.98 289.17 75.82 6 13 48 2397.3 -28.28 87.58  
 100.00 22 30 31 4386.13 14.70 177.90 274.26 63.68 23 43 37 3786.1 11.05 171.02  
 110.00 6 59 0 2699.81 -31.79 74.82 290.62 76.72 7 43 59 2099.6 -33.29 65.91  
 110.00 23 11 51 4256.58 19.45 165.50 271.68 61.32 24 22 48 3656.6 15.47 158.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5459 TRA-1.4541 TC3 -.1129 BAU .1779 SGT 912.2 SGR 448.7 SCS 41.3 ST 384.6 SR 421.8 SS 357.6  
 ROE -.7813 RRA .2558 RC3 -.0301 FAU .01504 RRT .0424 RRF -.0448 RTF -.6871 CRT .6909 CRS .8052 CST .9835  
 FDE .3491 FRA .6414 FC3 -.1144 BSP 2540 SGB 1018.6 R23 -.0062 R13 -.6872 LSA 630.4 MSA 236.8 SSA 14.1  
 BOE .9531 BRA 1.4764 BC3 .1168 FSP -91 SGI 912.5 S62 448.2 THA 1.58 EL1 525.3 EL2 223.2 ALF 48.81

LAUNCH DATE DEC 31 1968

FLIGHT TIME 76.00

ARRIVAL DATE MAR 17 1969

HELIOCENTRIC CONIC

DISTANCE 164.621

RL 147.10 LAL -.00 LOL 99.39 VL 21.828 GAL 11.15 AZL 86.19 HCA 62.64 SMA 99.29 ECC .51051 INC 3.8111 V1 30.287  
 RP 107.58 LAP 3.38 LOP 161.97 VP 33.625 GAP -30.36 AZP 88.25 TAL 168.89 TAP 231.53 RCA 48.60 APO 149.97 V2 35.226  
 RC 52.393 GL 8.00 GP 2.37 ZAL 65.47 ZAP 20.11 ETS 187.41 ZAE 154.00 ETE 197.97 ZAC 95.77 ETC 166.35 CLP 19.97

PLANETOCENTRIC CONIC

C3 102.782 VHL 10.138 DLA 20.42 RAL 29.05 RAD 6570.0 VEL 14.971 PTH 2.70 VHP 18.227 DPA -.05 RAP 2.14 ECC 2.6915  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 44 58 3306.42 -24.45 118.10 287.80 75.25 4 40 4 2706.4 -26.24 109.89  
 90.00 21 31 43 4559.14 11.36 192.30 274.65 63.89 22 47 42 3959.1 7.76 185.47  
 100.00 5 19 38 3001.15 -28.53 96.24 288.39 75.70 6 9 39 2401.1 -28.24 87.86  
 100.00 22 39 44 4339.65 13.28 175.18 273.66 62.97 23 52 4 3739.6 9.55 188.38  
 110.00 6 58 18 2698.73 -31.80 74.76 289.87 76.75 7 41 16 2098.7 -33.30 65.85  
 110.00 23 19 34 4214.85 18.06 163.05 270.99 60.47 24 29 49 3614.8 14.00 156.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5454 TRA-1.4472 TC3 -.1149 BAU .1637 SGT 954.3 SGR 451.3 SCS 45.0 ST 404.3 SR 425.1 SS 374.5  
 ROE -.7484 RRA .2368 RC3 -.0328 FAU .01546 RRT .0495 RRF -.0520 RTF -.7053 CRT .6930 CRS .8077 CST .9834  
 FDE .3631 FRA .6826 FC3 -.1302 BSP 2711 SGB 1055.6 R23 -.0071 R13 -.7055 LSA 652.7 MSA 241.4 SSA 14.3  
 BOE .9260 BRA 1.4664 BC3 .1192 FSP -102 SGI 954.6 S62 450.6 THA 1.72 EL1 540.0 EL2 229.5 ALF 47.06

LAUNCH DATE DEC 31 1968

FLIGHT TIME 78.00

ARRIVAL DATE MAR 19 1969

HELIOCENTRIC CONIC

DISTANCE 171.013

RL 147.10 LAL -.00 LOL 99.39 VL 22.111 GAL 10.63 AZL 86.28 MCA 65.88 SMA 100.88 ECC .48656 INC 3.7186 V1 30.287  
 RP 107.60 LAP 3.39 LOP 165.22 VP 33.930 GAP -28.89 AZP 88.48 TAL 168.35 TAP 234.23 RCA 51.90 APO 149.97 V2 35.219  
 RC 50.852 GL 8.41 GP 2.47 ZAL 64.79 ZAP 18.63 ETS 188.37 ZAE 155.58 ETE 199.42 ZAC 97.42 ETC 166.31 CLP 18.47

PLANETOCENTRIC CONIC

C3 92.805 VHL 9.634 DLA 21.06 RAL 29.60 RAD 6569.8 VEL 14.634 PTH 2.65 VHP 17.437 DPA .76 RAP 3.68 ECC 2.5273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 39 34 3312.28 -24.35 118.50 286.87 75.08 4 34 46 2712.3 -26.16 110.30  
 90.00 21 41 34 4509.29 9.85 189.41 274.02 63.32 22 56 43 3909.3 6.19 182.65  
 100.00 5 15 6 3004.22 -26.48 96.46 287.49 75.60 6 5 11 2404.2 -28.20 88.08  
 100.00 22 48 43 4292.58 11.81 172.46 272.99 62.34 24 0 15 3692.6 8.01 165.73  
 110.00 6 53 21 2696.88 -31.83 74.62 288.99 76.83 7 38 17 2096.9 -33.31 65.70  
 110.00 23 26 58 4172.68 16.63 160.62 270.24 59.70 24 36 31 3572.7 12.48 153.97

DIFFERENTIAL CORRECTIONS

TDE -.5453 TRA-1.4382 TC3 -.1148 BAU .1493  
 RDE -.7161 RRA .2179 RC3 -.0357 FAU .01591  
 FDE .3779 FRA .6841 FC3 -.1484 BSP 2889  
 BDE .9001 BRA 1.4556 BC3 .1203 FSP -113

MID-COURSE EXECUTION ACCURACY

SGT 997.8 SGR 453.2 SG3 49.1  
 RRT .0574 RRF -.0602 RTF -.7228  
 SGB 1095.9 R23 -.0080 R13 -.7230  
 SG1 998.2 SG2 452.3 THA 1.88

ORBIT DETERMINATION ACCURACY

ST 425.4 SR 427.9 SS 392.0  
 CRT .6959 CR3 .8106 CST .9833  
 LSA 676.2 MSA 245.5 SSA 14.5  
 EL1 555.6 EL2 235.3 ALF 45.25

LAUNCH DATE DEC 31 1968

FLIGHT TIME 80.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC

DISTANCE 177.462

RL 147.10 LAL -.00 LOL 99.39 VL 22.561 GAL 10.11 AZL 86.37 MCA 69.12 SMA 102.45 ECC .46361 INC 3.6308 V1 30.287  
 RP 107.62 LAP 3.39 LOP 168.47 VP 34.217 GAP -27.48 AZP 88.70 TAL 167.86 TAP 236.97 RCA 54.95 APO 149.94 V2 35.211  
 RC 49.405 GL 8.84 GP 2.58 ZAL 64.18 ZAP 17.16 ETS 189.50 ZAE 157.31 ETE 201.12 ZAC 99.08 ETC 166.26 CLP 16.97

PLANETOCENTRIC CONIC

C3 83.838 VHL 9.158 DLA 21.68 RAL 30.09 RAD 6569.6 VEL 14.324 PTH 2.61 VHP 16.676 DPA 1.58 RAP 5.22 ECC 2.3798  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 33 48 3317.62 -24.25 118.86 285.81 74.92 4 29 6 2717.6 -26.09 110.68  
 90.00 21 51 13 4458.71 8.29 186.52 273.33 62.83 23 5 31 3858.7 4.58 179.80  
 100.00 5 10 16 3006.57 -26.44 96.62 286.45 75.52 6 0 23 2406.6 -28.17 88.25  
 100.00 22 57 28 4244.98 10.29 169.74 272.26 61.78 24 8 11 3645.0 6.44 163.07  
 110.00 6 50 8 2694.11 -31.87 74.41 287.97 76.94 7 35 3 2094.1 -33.34 65.49  
 110.00 23 34 3 4130.21 15.16 158.21 269.43 58.99 24 42 53 3530.2 10.94 151.65

DIFFERENTIAL CORRECTIONS

TDE -.5481 TRA-1.4322 TC3 -.1148 BAU .1357  
 RDE -.6843 RRA .1998 RC3 -.0386 FAU .01641  
 FDE .3938 FRA .7064 FC3 -.1694 BSP 3020  
 BDE .8767 BRA 1.4461 BC3 .1211 FSP -124

MID-COURSE EXECUTION ACCURACY

SGT 1045.0 SGR 454.4 SG3 53.5  
 RRT .0673 RRF -.0697 RTF -.7390  
 SGB 1139.5 R23 -.0085 R13 -.7392  
 SG1 1045.5 SG2 453.1 THA 2.07

ORBIT DETERMINATION ACCURACY

ST 448.8 SR 430.1 SS 410.5  
 CRT .7005 CR3 .8139 CST .9835  
 LSA 702.0 MSA 248.7 SSA 14.7  
 EL1 573.3 EL2 240.3 ALF 43.26

LAUNCH DATE DEC 31 1968

FLIGHT TIME 82.00

ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC

DISTANCE 183.962

RL 147.10 LAL -.00 LOL 99.39 VL 22.980 GAL 9.61 AZL 86.45 MCA 72.35 SMA 103.98 ECC .44166 INC 3.5467 V1 30.287  
 RP 107.65 LAP 3.38 LOP 171.71 VP 34.486 GAP -26.14 AZP 88.92 TAL 167.39 TAP 239.75 RCA 58.06 APO 149.90 V2 35.202  
 RC 48.064 GL 9.27 GP 2.70 ZAL 63.65 ZAP 15.71 ETS 190.85 ZAE 159.18 ETE 203.16 ZAC 100.73 ETC 166.17 CLP 15.48

PLANETOCENTRIC CONIC

C3 75.776 VHL 8.705 DLA 22.28 RAL 30.50 RAD 6569.5 VEL 14.040 PTH 2.56 VHP 15.942 DPA 2.41 RAP 6.76 ECC 2.2471  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 27 39 3322.54 -24.16 119.20 284.62 74.77 4 23 1 2722.5 -26.02 111.02  
 90.00 22 0 40 4407.46 6.68 183.80 272.58 62.42 23 14 8 3807.5 2.94 176.93  
 100.00 5 5 7 3008.27 -26.41 96.74 285.28 75.46 5 55 15 2408.3 -28.15 88.37  
 100.00 23 5 53 4196.96 8.73 167.03 271.47 61.30 24 15 50 3597.0 4.84 160.41  
 110.00 6 46 41 2690.47 -31.93 74.14 286.82 77.09 7 31 32 2090.5 -33.38 65.21  
 110.00 23 40 48 4087.52 13.65 155.82 268.56 58.35 24 48 55 3487.5 9.36 149.35

DIFFERENTIAL CORRECTIONS

TDE -.5497 TRA-1.4223 TC3 -.1121 BAU .1211  
 RDE -.6532 RRA .1822 RC3 -.0415 FAU .01696  
 FDE .4107 FRA .7290 FC3 -.1938 BSP 3200  
 BDE .8537 BRA 1.4340 BC3 .1195 FSP -138

MID-COURSE EXECUTION ACCURACY

SGT 1092.1 SGR 454.8 SG3 58.3  
 RRT .0778 RRF -.0803 RTF -.7549  
 SGB 1183.0 R23 -.0096 R13 -.7552  
 SG1 1092.7 SG2 453.1 THA 2.24

ORBIT DETERMINATION ACCURACY

ST 472.3 SR 431.7 SS 429.8  
 CRT .7051 CR3 .8177 CST .9836  
 LSA 728.5 MSA 251.3 SSA 14.8  
 EL1 591.3 EL2 244.5 ALF 41.36

LAUNCH DATE DEC 31 1968

FLIGHT TIME 84.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

DISTANCE 190.508

RL 147.10 LAL -.00 LOL 99.39 VL 23.370 GAL 9.13 AZL 86.53 MCA 75.59 SMA 105.47 ECC .42071 INC 3.4657 V1 30.287  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.738 GAP -24.85 AZP 89.14 TAL 166.97 TAP 242.56 RCA 61.10 APO 149.85 V2 35.194  
 RC 46.839 GL 9.70 GP 2.83 ZAL 63.19 ZAP 14.28 ETS 192.50 ZAE 161.20 ETE 205.68 ZAC 102.39 ETC 166.07 CLP 14.00

PLANETOCENTRIC CONIC

C3 68.528 VHL 8.278 DLA 22.86 RAL 30.84 RAD 6569.3 VEL 13.780 PTH 2.52 VHP 15.235 DPA 3.25 RAP 8.30 ECC 2.1278  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 5 3327.13 -24.08 119.51 283.31 74.64 4 16 32 2727.1 -25.96 111.34  
 90.00 22 9 56 4355.63 5.04 180.68 271.76 62.10 23 22 32 3755.6 1.27 174.03  
 100.00 4 59 38 3009.38 -26.39 96.82 283.99 75.43 5 49 48 2409.4 -28.13 88.45  
 100.00 23 14 4 4148.61 7.14 164.32 270.61 60.90 24 23 13 3548.6 3.21 157.74  
 110.00 6 43 0 2686.01 -32.00 73.81 285.55 77.28 7 27 46 2086.0 -33.42 64.87  
 110.00 23 47 12 4044.74 12.11 153.47 267.63 57.78 24 54 37 3444.7 7.77 147.06

DIFFERENTIAL CORRECTIONS

TDE -.5517 TRA-1.4108 TC3 -.1071 BAU .1062  
 RDE -.6228 RRA .1651 RC3 -.0443 FAU .01759  
 FDE .4286 FRA .7522 FC3 -.2222 BSP 3391  
 BDE .8320 BRA 1.4203 BC3 .1159 FSP -153

MID-COURSE EXECUTION ACCURACY

SGT 1140.3 SGR 454.5 SG3 63.6  
 RRT .0891 RRF -.0922 RTF -.7701  
 SGB 1227.6 R23 -.0108 R13 -.7704  
 SG1 1141.2 SG2 452.4 THA 2.41

ORBIT DETERMINATION ACCURACY

ST 496.9 SR 432.7 SS 450.0  
 CRT .7106 CR3 .8218 CST .9838  
 LSA 756.5 MSA 253.1 SSA 15.0  
 EL1 610.5 EL2 247.8 ALF 39.48

LAUNCH DATE DEC 31 1968

FLIGHT TIME 86.00

ARRIVAL DATE MAR 27 1969

Heliocentric Conic

DISTANCE 197.094

RL 147.10 LAL -.00 LOL 99.39 VL 23.733 GAL 8.66 AZL 86.61 HCA 78.82 SMA 106.93 ECC .40076 INC 3.3870 V1 30.287  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.974 GAP -23.62 AZP 89.34 TAL 166.60 TAP 245.42 RCA 64.07 APO 149.78 V2 35.184  
 RC 45.742 GL 10.14 GP 2.97 ZAL 62.81 ZAP 12.86 ETS 194.55 ZAE 163.34 ETE 208.88 ZAC 104.04 ETC 165.93 CLP 12.51

Planetocentric Conic

C3 62.006 VHL 7.874 DLA 23.42 RAL 31.11 RAD 6569.2 VEL 13.541 PTH 2.48 VMP 14.553 DPA 4.11 RAP 9.84 ECC 2.0205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 14 8 3331.49 -24.00 119.80 281.87 74.51 4 9 39 2731.5 -25.90 111.65  
 90.00 22 19 0 4303.31 3.37 177.75 270.88 61.87 23 30 44 3703.3 -.42 171.12  
 100.00 4 53 51 3009.96 -26.38 96.86 282.58 75.41 5 44 1 2410.0 -28.13 88.49  
 100.00 23 21 58 4100.07 5.53 161.62 269.69 60.58 24 30 18 3500.1 1.56 155.08  
 110.00 6 39 4 2680.77 -32.08 73.43 284.15 77.49 7 23 45 2080.8 -33.46 64.47  
 110.00 23 53 14 4002.02 10.54 151.14 266.64 57.29 24 59 56 3402.0 6.16 144.80

Differential Corrections

TDE -.5543 TRA-1.3979 TC3 -.0996 BAU .0913  
 RDE -.5933 RRA .1486 RC3 -.0468 FAU .01828  
 FDE .4479 FRA .7761 FC3 -.2552 BSP 3582  
 BDE .8119 BRA 1.4058 BC3 .1101 FSP -169

Mid-Course Execution Accuracy

SGT 1190.0 SGR 453.6 SG3 69.5  
 RRT .1021 RRF -.1055 RTF -.7844  
 SGB 1273.5 R23 -.0121 R13 -.7848  
 SG1 1191.0 SG2 450.8 THA 2.60

Orbit Determination Accuracy

ST 522.7 SR 433.2 SS 471.2  
 CRT .7171 CRS .8264 CST .9840  
 LSA 786.2 MSA 254.0 SSA 15.2  
 EL1 631.2 EL2 250.1 ALF 37.61

LAUNCH DATE DEC 31 1968

FLIGHT TIME 88.00

ARRIVAL DATE MAR 29 1969

Heliocentric Conic

DISTANCE 203.715

RL 147.10 LAL -.00 LOL 99.39 VL 24.071 GAL 8.20 AZL 86.69 HCA 82.06 SMA 108.33 ECC .38181 INC 3.3101 V1 30.287  
 RP 107.74 LAP 3.28 LOP 181.43 VP 35.194 GAP -22.44 AZP 89.94 TAL 166.26 TAP 248.32 RCA 66.97 APO 149.70 V2 35.174  
 RC 44.782 GL 10.58 GP 3.13 ZAL 62.50 ZAP 11.46 ETS 197.15 ZAE 165.56 ETE 213.12 ZAC 105.67 ETC 165.77 CLP 11.05

Planetocentric Conic

C3 56.143 VHL 7.493 DLA 23.99 RAL 31.30 RAD 6569.0 VEL 13.323 PTH 2.43 VMP 13.896 DPA 4.97 RAP 11.37 ECC 1.9240  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 8 47 3335.69 -23.93 120.09 280.33 74.39 4 2 25 2735.7 -25.84 111.94  
 90.00 22 27 52 4250.61 1.67 174.80 269.94 61.73 23 38 43 3650.6 -2.12 168.18  
 100.00 4 47 47 3010.04 -26.38 96.86 281.06 75.41 5 37 57 2410.0 -28.13 88.49  
 100.00 23 29 33 4051.50 3.90 158.94 268.71 60.34 24 37 5 3451.5 -.08 152.41  
 110.00 6 34 56 2674.79 -32.16 72.98 282.65 77.74 7 19 31 2074.8 -33.52 64.01  
 110.00 0 2 49 3959.51 8.97 148.88 285.59 56.88 1 8 49 3359.5 4.55 142.56

Differential Corrections

TDE -.5576 TRA-1.3839 TC3 -.0891 BAU .0784  
 RDE -.5847 RRA .1326 RC3 -.0493 FAU .01905  
 FDE .4688 FRA .8008 FC3 -.2938 BSP 3777  
 BDE .7936 BRA 1.3902 BC3 .1018 FSP -188

Mid-Course Execution Accuracy

SGT 1241.2 SGR 451.9 SG3 75.9  
 RRT .1168 RRF -.1207 RTF -.7981  
 SGB 1320.9 R23 -.0136 R13 -.7985  
 SG1 1242.4 SG2 448.4 THA 2.80

Orbit Determination Accuracy

ST 550.0 SR 433.1 SS 493.6  
 CRT .7244 CRS .8314 CST .9844  
 LSA 817.8 MSA 254.1 SSA 15.3  
 EL1 653.4 EL2 251.3 ALF 35.79

LAUNCH DATE DEC 31 1968

FLIGHT TIME 90.00

ARRIVAL DATE MAR 31 1969

Heliocentric Conic

DISTANCE 210.367

RL 147.10 LAL -.00 LOL 99.39 VL 24.384 GAL 7.76 AZL 86.77 HCA 85.29 SMA 109.69 ECC .36382 INC 3.2344 V1 30.287  
 RP 107.77 LAP 3.22 LOP 184.67 VP 35.399 GAP -21.31 AZP 89.73 TAL 165.98 TAP 251.26 RCA 69.79 APO 149.60 V2 35.164  
 RC 43.971 GL 11.02 GP 3.31 ZAL 62.28 ZAP 10.09 ETS 200.53 ZAE 167.83 ETE 219.00 ZAC 107.30 ETC 165.57 CLP 9.54

Planetocentric Conic

C3 50.871 VHL 7.132 DLA 24.46 RAL 31.41 RAD 6568.9 VEL 13.124 PTH 2.40 VMP 13.262 DPA 5.85 RAP 12.88 ECC 1.8372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 59 3 3339.78 -23.85 120.37 278.69 74.27 3 54 43 2739.8 -25.78 112.23  
 90.00 22 36 31 4197.72 -.04 171.85 268.94 61.68 23 46 29 3597.7 -3.82 165.22  
 100.00 4 41 27 3009.82 -26.39 96.83 279.45 75.42 5 31 37 2409.6 -28.13 88.47  
 100.00 23 36 48 4003.11 2.26 158.28 267.66 60.19 24 43 31 3403.1 -1.72 149.76  
 110.00 6 30 37 2668.08 -32.26 72.48 281.04 78.03 7 15 5 2068.1 -33.57 63.49  
 110.00 0 8 3 3917.42 7.40 146.61 264.48 56.33 1 13 21 3317.4 2.95 140.35

Differential Corrections

TDE -.5614 TRA-1.3684 TC3 -.0792 BAU .0610  
 RDE -.5371 RRA .1171 RC3 -.0513 FAU .01991  
 FDE .4912 FRA .8265 FC3 -.3388 BSP 3978  
 BDE .7769 BRA 1.3734 BC3 .0910 FSP -208

Mid-Course Execution Accuracy

SGT 1293.6 SGR 449.6 SG3 82.9  
 RRT .1334 RRF -.1378 RTF -.8110  
 SGB 1369.5 R23 -.0152 R13 -.8114  
 SG1 1295.2 SG2 445.1 THA 3.01

Orbit Determination Accuracy

ST 578.5 SR 432.6 SS 517.2  
 CRT .7327 CRS .8369 CST .9848  
 LSA 851.4 MSA 253.3 SSA 15.5  
 EL1 677.1 EL2 251.5 ALF 34.04

LAUNCH DATE DEC 31 1968

FLIGHT TIME 92.00

ARRIVAL DATE APR 2 1969

Heliocentric Conic

DISTANCE 217.044

RL 147.10 LAL -.00 LOL 99.39 VL 24.676 GAL 7.33 AZL 86.84 HCA 88.51 SMA 111.01 ECC .34680 INC 3.1595 V1 30.287  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.590 GAP -20.23 AZP 89.92 TAL 165.74 TAP 254.25 RCA 72.51 APO 149.50 V2 35.153  
 RC 43.319 GL 11.46 GP 3.50 ZAL 62.12 ZAP 8.76 ETS 205.04 ZAE 170.04 ETE 227.63 ZAC 108.90 ETC 165.34 CLP 8.04

Planetocentric Conic

C3 46.131 VHL 6.792 DLA 24.94 RAL 31.45 RAD 6568.7 VEL 12.942 PTH 2.36 VMP 12.651 DPA 6.74 RAP 14.39 ECC 1.7592  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 50 58 3343.79 -23.78 120.64 276.95 74.15 3 46 41 2743.8 -25.72 112.51  
 90.00 22 44 55 4144.81 -1.74 168.90 267.87 61.73 23 54 0 3544.8 -5.51 162.25  
 100.00 4 34 54 3008.69 -26.40 96.77 277.74 75.45 5 25 3 2408.7 -28.14 88.40  
 100.00 23 43 40 3955.15 .64 153.65 266.55 60.11 24 49 35 3355.1 -3.35 147.12  
 110.00 6 26 9 2680.64 -32.36 71.93 279.33 78.34 7 10 29 2060.6 -33.63 62.92  
 110.00 0 12 50 3875.97 5.84 144.42 263.32 56.26 1 17 26 3276.0 1.36 138.19

Differential Corrections

TDE -.5856 TRA-1.3516 TC3 -.0575 BAU .0481  
 RDE -.5105 RRA .1022 RC3 -.0527 FAU .02086  
 FDE .5154 FRA .8534 FC3 -.3914 BSP 4179  
 BDE .7819 BRA 1.3554 BC3 .0780 FSP -231

Mid-Course Execution Accuracy

SGT 1347.1 SGR 446.8 SG3 90.7  
 RRT .1521 RRF -.1572 RTF -.8232  
 SGB 1419.5 R23 -.0171 R13 -.8237  
 SG1 1349.0 SG2 441.0 THA 3.23

Orbit Determination Accuracy

ST 608.2 SR 431.6 SS 542.2  
 CRT .7418 CRS .8428 CST .9853  
 LSA 886.9 MSA 251.7 SSA 15.6  
 EL1 702.4 EL2 250.6 ALF 32.38

LAUNCH DATE DEC 31 1968

FLIGHT TIME 94.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 223.742

RL 147.10 LAL -.00 LOL 99.39 VL 24.947 GAL 6.92 AZL 86.92 MCA 91.74 SMA 112.27 ECC .33071 INC 3.0848 V1 30.287  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.767 GAP -19.18 AZP 90.09 TAL 165.55 TAP 257.29 RCA 75.14 APO 149.40 V2 35.141  
 RC 42.834 GL 11.89 GP 3.71 ZAL 62.05 ZAP 7.51 ETS 211.26 ZAE 172.01 ETE 240.92 ZAC 110.49 ETC 165.07 CLP 6.53

PLANETOCENTRIC CONIC

C3 41.871 VML 6.471 DLA 25.39 RAL 31.42 RAD 6568.6 VEL 12.776 PTH 2.32 VHP 12.062 DPA 7.64 RAP 15.87 ECC 1.6891  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 42 34 3347.60 -23.70 120.90 275.12 74.04 3 30 22 2747.7 -25.67 112.78  
 90.00 22 53 2 4092.16 -3.44 165.96 266.74 61.88 24 1 14 3492.2 -7.17 159.27  
 100.00 4 20 11 3007.17 -26.43 96.66 275.94 75.50 5 18 18 2407.2 -28.16 88.29  
 100.00 23 50 6 3907.91 -.97 151.05 265.37 60.12 24 55 14 3307.9 -4.94 144.52  
 110.00 6 21 34 2652.43 -32.47 71.31 277.53 78.69 7 5 47 2052.4 -33.69 62.29  
 110.00 0 17 8 3635.41 4.30 142.29 262.09 56.06 1 21 4 3235.4 -1.19 136.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5705 TRA-1.3334 TC3 -.0354 BAU .0350 SGT 1401.9 SGR 443.4 SCS 99.3 ST 639.5 SR 430.3 SS 568.6  
 RDE -.4851 RRA .0877 RC3 -.0533 FAU .02191 RRT .1735 RRF -.1793 RTF -.8347 CRT .7518 CRS .8491 CST .9859  
 FDE .5418 FRA .8816 FC3 -.4531 BSP 4381 SGB 1470.3 R23 -.0192 R13 -.8352 LSA 924.7 MSA 249.2 SBA 15.7  
 BOE .7489 BRA 1.3363 BC3 .0640 FSP -255 SGI 1404.2 SGE 436.0 THA 3.48 EL1 729.5 EL2 248.7 ALF 30.80

LAUNCH DATE DEC 31 1968

FLIGHT TIME 96.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 230.457

RL 147.10 LAL -.00 LOL 99.39 VL 25.198 GAL 6.53 AZL 86.99 MCA 94.96 SMA 113.48 ECC .31553 INC 3.0100 V1 30.287  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.931 GAP -18.18 AZP 90.26 TAL 165.41 TAP 280.37 RCA 77.67 APO 149.29 V2 35.129  
 RC 42.524 GL 12.31 GP 3.95 ZAL 62.04 ZAP 6.38 ETS 220.03 ZAE 175.40 ETE 261.30 ZAC 112.04 ETC 164.76 CLP 5.01

PLANETOCENTRIC CONIC

C3 38.043 VML 6.168 DLA 25.80 RAL 31.31 RAD 6568.5 VEL 12.626 PTH 2.29 VHP 11.494 DPA 8.55 RAP 17.34 ECC 1.6261  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 33 57 3351.31 -23.64 121.14 273.22 73.94 3 29 48 2751.3 -25.61 113.03  
 90.00 23 0 47 4040.10 -5.10 163.04 265.54 62.11 24 8 7 3440.1 -8.79 156.31  
 100.00 4 21 24 3004.91 -26.47 96.50 274.07 75.57 5 11 29 2404.9 -28.19 88.13  
 100.00 23 58 1 3861.74 -2.53 148.52 264.13 60.21 25 0 23 3261.7 -6.48 141.96  
 110.00 6 16 36 2643.40 -32.59 70.83 275.66 79.07 7 1 0 2043.4 -33.76 61.59  
 110.00 0 20 54 3796.01 2.80 140.22 280.81 55.92 1 24 10 3196.0 -1.69 134.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5755 TRA-1.3139 TC3 -.0082 BAU .0273 SGT 1457.3 SGR 439.7 SCS 108.8 ST 671.7 SR 428.7 SS 596.5  
 RDE -.4608 RRA .0736 RC3 -.0530 FAU .02309 RRT .1976 RRF -.2043 RTF -.8455 CRT .7626 CRS .8559 CST .9865  
 FDE .5704 FRA .9113 FC3 -.5255 BSP 4591 SGB 1522.1 R23 -.0217 R13 -.8461 LSA 964.4 MSA 245.9 SBA 15.9  
 BOE .7372 BRA 1.3180 BC3 .0536 FSP -284 SGI 1460.1 SGE 430.1 THA 3.74 EL1 758.0 EL2 245.8 ALF 29.33

LAUNCH DATE DEC 31 1968

FLIGHT TIME 98.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 237.184

RL 147.10 LAL -.00 LOL 99.39 VL 25.431 GAL 6.15 AZL 87.07 MCA 98.19 SMA 114.64 ECC .30125 INC 2.9345 V1 30.287  
 RP 107.91 LAP 2.90 LOP 197.59 VP 36.083 GAP -17.22 AZP 90.42 TAL 165.31 TAP 263.50 RCA 80.10 APO 149.17 V2 35.117  
 RC 42.392 GL 12.71 GP 4.22 ZAL 62.11 ZAP 5.46 ETS 232.45 ZAE 175.71 ETE 287.62 ZAC 113.57 ETC 164.41 CLP 3.47

PLANETOCENTRIC CONIC

C3 34.605 VML 5.883 DLA 26.17 RAL 31.13 RAD 6568.4 VEL 12.489 PTH 2.26 VHP 10.948 DPA 9.48 RAP 18.78 ECC 1.5695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 25 13 3394.49 -23.58 121.35 271.26 73.85 3 21 8 2754.4 -25.57 113.25  
 90.00 23 8 4 3989.10 -6.72 160.16 264.28 62.43 24 14 33 3389.1 -10.36 153.38  
 100.00 4 14 39 3001.68 -26.52 96.28 272.14 75.68 5 4 41 2401.7 -28.23 87.89  
 100.00 0 5 18 3817.10 -4.04 146.06 262.82 60.36 1 8 53 3217.1 -7.96 139.47  
 110.00 6 12 20 2633.45 -32.72 69.88 273.71 79.50 6 56 14 2033.5 -33.82 60.82  
 110.00 0 24 4 3758.10 1.35 138.24 259.46 55.84 1 26 42 3158.1 -3.14 132.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5808 TRA-1.2930 TC3 .0244 BAU .0263 SGT 1513.2 SGR 435.6 SCS 119.3 ST 705.1 SR 426.9 SS 626.1  
 RDE -.4379 RRA .0599 RC3 -.0514 FAU .02441 RRT .2251 RRF -.2328 RTF -.8557 CRT .7741 CRS .8631 CST .9872  
 FDE .6016 FRA .9429 FC3 -.6106 BSP 4796 SGB 1574.7 R23 -.0245 R13 -.8564 LSA 1006.3 MSA 241.8 SBA 16.0  
 BOE .7274 BRA 1.2944 BC3 .0589 FSP -315 SGI 1516.7 SGE 423.5 THA 4.02 EL1 788.1 EL2 241.8 ALF 27.98

LAUNCH DATE DEC 31 1968

FLIGHT TIME 100.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 243.921

RL 147.10 LAL -.00 LOL 99.39 VL 25.647 GAL 5.79 AZL 87.14 MCA 101.41 SMA 115.74 ECC .28783 INC 2.8577 V1 30.287  
 RP 107.95 LAP 2.80 LOP 200.81 VP 36.224 GAP -16.29 AZP 90.57 TAL 165.27 TAP 266.68 RCA 82.43 APO 149.05 V2 35.105  
 RC 42.442 GL 13.10 GP 4.51 ZAL 62.25 ZAP 4.90 ETS 249.14 ZAE 172.80 ETE 311.67 ZAC 115.05 ETC 164.01 CLP 1.90

PLANETOCENTRIC CONIC

C3 31.517 VML 5.614 DLA 26.50 RAL 30.88 RAD 6568.3 VEL 12.365 PTH 2.23 VHP 10.421 DPA 10.42 RAP 20.19 ECC 1.5187  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 16 34 3356.64 -23.54 121.50 269.24 73.78 3 12 31 2756.6 -25.54 113.40  
 90.00 23 14 45 3939.80 -8.26 157.36 262.95 62.82 24 20 24 3339.8 -11.84 150.51  
 100.00 4 8 5 2997.16 -26.80 99.97 270.16 75.83 4 58 2 2397.2 -28.28 87.57  
 100.00 0 9 51 3774.51 -3.47 143.71 261.43 60.57 1 12 46 3174.5 -9.35 137.07  
 110.00 6 7 30 2622.44 -32.85 69.05 271.70 79.97 6 51 33 2022.4 -33.89 59.97  
 110.00 0 26 35 3722.00 -.03 136.36 258.06 55.82 1 28 37 3122.0 -4.52 130.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5862 TRA-1.2712 TC3 .0632 BAU .0334 SGT 1569.9 SGR 431.5 SCS 131.0 ST 739.8 SR 425.1 SS 657.3  
 RDE -.4163 RRA .0465 RC3 -.0481 FAU .02587 RRT .2561 RRF -.2653 RTF -.8653 CRT .7863 CRS .8706 CST .9879  
 FDE .6355 FRA .9786 FC3 -.7106 BSP 5002 SGB 1628.1 R23 -.0278 R13 -.8661 LSA 1050.4 MSA 237.1 SBA 16.1  
 BOE .7189 BRA 1.2721 BC3 .0794 FSP -349 SGI 1574.1 SGE 416.0 THA 4.33 EL1 819.5 EL2 237.1 ALF 26.74



LAUNCH DATE DEC 31 1968 FLIGHT TIME 102.00 ARRIVAL DATE APR 12 1969

MELIOCENTRIC CONIC DISTANCE 250.662

RL 147.10 LAL -.00 LOL 99.39 VL 25.847 GAL 5.45 AZL 87.22 HCA 104.62 SMA 116.79 ECC .27525 INC 2.7793 V1 30.287  
 RP 107.99 LAP 2.69 LOP 204.03 VP 36.353 GAP -15.40 AZP 90.70 TAL 165.28 TAP 269.90 RCA 84.64 APO 148.93 V2 35.092  
 RC 42.671 GL 13.46 GP 4.85 ZAL 62.46 ZAP 4.86 ETS 268.44 ZAE 171.06 ETE 328.38 ZAC 116.48 ETC 163.56 CLP .51

PLANETOCENTRIC CONIC

C3 28.745 WHL 5.361 DLA 26.78 RAL 30.57 RAD 6568.2 VEL 12.252 PTH 2.20 WHP 9.914 DPA 11.38 RAP 21.56 ECC 1.4731  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 8 15 3357.21 -23.52 121.54 267.20 73.77 3 4 12 2757.2 -25.53 113.44  
 90.00 23 20 34 3693.06 -9.70 154.69 261.54 63.27 24 25 27 3293.1 -13.22 147.77  
 100.00 4 1 52 2990.90 -26.70 95.53 268.14 76.04 4 51 43 2390.9 -28.36 87.12  
 100.00 0 13 33 3734.60 -6.80 141.49 259.98 60.82 1 15 48 3134.6 -10.64 134.81  
 110.00 6 3 33 2610.16 -32.99 68.12 269.65 80.51 6 47 3 2010.2 -33.95 59.02  
 110.00 0 28 22 3688.11 -1.33 134.59 256.60 55.84 1 29 50 3088.1 -9.80 128.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.5945 TRA-1.2496 TC3 .1027 BAU .0428 SGT 1628.8 SGR 427.6 SG3 143.9 ST 777.8 SR 423.5 SS 690.2  
 RDE -.3961 RRA .0332 RC3 -.0428 FAU .02750 RRT .2934 RRF -.3021 RTF -.8727 CRT .8002 CRS .8785 CST .9889  
 FDE .6724 FRA 1.0129 FC3 -.8281 BSP 4774 SGB 1684.0 R23 -.0303 R13 -.8735 LSA 1098.6 HSA 231.2 S3A 16.4  
 BOE .7144 BRA 1.2500 BC3 .1113 FSP -388 SGI 1634.0 SG2 407.5 THA 4.70 EL1 854.9 EL2 231.1 ALF 25.54

LAUNCH DATE DEC 31 1968 FLIGHT TIME 104.00 ARRIVAL DATE APR 14 1969

MELIOCENTRIC CONIC DISTANCE 257.406

RL 147.10 LAL -.00 LOL 99.39 VL 26.032 GAL 5.12 AZL 87.30 HCA 107.84 SMA 117.78 ECC .26348 INC 2.6985 V1 30.287  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.472 GAP -14.54 AZP 90.83 TAL 165.33 TAP 273.17 RCA 86.75 APO 148.81 V2 35.080  
 RC 43.078 GL 13.78 GP 5.22 ZAL 62.73 ZAP 5.38 ETS 286.34 ZAE 168.93 ETE 339.25 ZAC 117.86 ETC 163.05 CLP -1.32

PLANETOCENTRIC CONIC

C3 26.257 WHL 5.124 DLA 27.00 RAL 30.19 RAD 6568.1 VEL 12.150 PTH 2.18 WHP 9.426 DPA 12.36 RAP 22.89 ECC 1.4321  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 37 3355.10 -23.56 121.40 265.14 73.85 2 56 32 2755.1 -25.56 113.29  
 90.00 23 25 13 3650.11 -11.01 152.21 260.05 63.75 24 29 23 3250.1 -14.45 145.22  
 100.00 3 56 15 2982.32 -26.84 94.93 266.10 76.32 4 45 58 2382.3 -28.46 86.50  
 100.00 0 16 12 3698.13 -8.00 139.46 258.45 61.10 1 17 50 3098.1 -11.80 132.72  
 110.00 5 59 35 2596.39 -33.14 67.08 267.55 81.11 6 42 52 1996.4 -34.02 57.95  
 110.00 0 29 21 3656.82 -2.52 132.96 255.08 55.90 1 30 18 3056.8 -6.98 126.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.5980 TRA-1.2237 TC3 .1611 BAU .0578 SGT 1682.2 SGR 424.1 SG3 158.3 ST 810.2 SR 422.0 SS 724.8  
 RDE -.3773 RRA .0202 RC3 -.0347 FAU .02932 RRT .3314 RRF -.3439 RTF -.8828 CRT .8122 CRS .8867 CST .9894  
 FDE .7122 FRA 1.0519 FC3 -.9668 BSP 5422 SGB 1734.9 R23 -.0360 R13 -.8838 LSA 1143.9 HSA 225.8 S3A 16.3  
 BOE .7054 BRA 1.2239 BC3 .1648 FSP -431 SGI 1688.4 SG2 398.7 THA 5.06 EL1 885.3 EL2 225.3 ALF 24.63

LAUNCH DATE DEC 31 1968 FLIGHT TIME 106.00 ARRIVAL DATE APR 16 1969

MELIOCENTRIC CONIC DISTANCE 264.148

RL 147.10 LAL -.00 LOL 99.39 VL 26.202 GAL 4.80 AZL 87.39 HCA 111.05 SMA 118.72 ECC .25249 INC 2.6149 V1 30.287  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.582 GAP -13.71 AZP 90.94 TAL 165.43 TAP 276.49 RCA 88.74 APO 148.69 V2 35.067  
 RC 43.658 GL 14.07 GP 5.64 ZAL 63.06 ZAP 6.38 ETS 300.13 ZAE 166.68 ETE 346.64 ZAC 119.18 ETC 162.48 CLP -2.98

PLANETOCENTRIC CONIC

C3 24.024 WHL 4.901 DLA 27.16 RAL 29.77 RAD 6568.0 VEL 12.058 PTH 2.16 WHP 8.958 DPA 13.37 RAP 24.17 ECC 1.3954  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 54 11 3348.90 -23.68 120.98 263.08 74.01 2 50 0 2748.9 -25.65 112.86  
 90.00 23 28 16 3812.51 -12.13 150.02 258.46 64.22 24 31 48 3212.5 -15.50 142.96  
 100.00 3 51 30 2970.73 -27.02 94.12 264.05 76.71 4 41 0 2370.7 -28.58 85.66  
 100.00 0 17 34 3665.91 -9.06 137.65 256.85 61.39 1 18 40 3065.9 -12.81 130.87  
 110.00 5 56 5 2580.84 -33.30 65.89 265.42 81.79 6 39 6 1980.8 -34.08 56.73  
 110.00 0 29 28 3628.58 -3.60 131.48 253.51 55.98 1 29 56 3028.6 -8.04 125.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6004 TRA-1.1988 TC3 .2203 BAU .0711 SGT 1737.8 SGR 421.7 SG3 174.4 ST 846.1 SR 421.0 SS 761.0  
 RDE -.3801 RRA .0071 RC3 -.0233 FAU .03136 RRT .3764 RRF -.3910 RTF -.8905 CRT .8258 CRS .8950 CST .9901  
 FDE .7554 FRA 1.0943 FC3-1.1300 BSP 5619 SGB 1788.3 R23 -.0412 R13 -.8916 LSA 1193.2 HSA 219.4 S3A 16.4  
 BOE .7001 BRA 1.1989 BC3 .2215 FSP -479 SGI 1745.4 SG2 389.0 THA 5.49 EL1 919.4 EL2 218.5 ALF 23.76

LAUNCH DATE DEC 31 1968 FLIGHT TIME 108.00 ARRIVAL DATE APR 18 1969

MELIOCENTRIC CONIC DISTANCE 270.887

RL 147.10 LAL -.00 LOL 99.39 VL 26.360 GAL 4.51 AZL 87.47 HCA 114.26 SMA 119.80 ECC .24225 INC 2.5277 V1 30.287  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.682 GAP -12.91 AZP 91.04 TAL 165.58 TAP 279.84 RCA 90.63 APO 148.58 V2 35.053  
 RC 44.405 GL 14.30 GP 6.12 ZAL 63.45 ZAP 7.70 ETS 309.86 ZAE 164.44 ETE 352.02 ZAC 120.42 ETC 161.84 CLP -4.69

PLANETOCENTRIC CONIC

C3 22.020 WHL 4.693 DLA 27.25 RAL 29.30 RAD 6567.9 VEL 11.975 PTH 2.13 WHP 8.507 DPA 14.40 RAP 25.38 ECC 1.3624  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 32 3336.86 -23.91 120.17 261.05 74.35 2 45 9 2736.9 -25.82 112.02  
 90.00 23 29 9 3782.14 -13.02 148.23 256.77 64.63 24 32 11 3182.1 -16.34 141.12  
 100.00 3 47 53 2955.37 -27.26 93.04 262.00 77.23 4 37 8 2355.4 -28.74 84.55  
 100.00 0 17 26 3638.86 -9.94 136.12 255.18 61.66 1 18 5 3038.9 -13.65 129.30  
 110.00 5 53 12 2583.19 -33.46 64.54 263.27 82.58 6 35 55 1963.2 -34.13 55.36  
 110.00 0 28 36 3603.80 -4.54 130.19 251.89 56.08 1 28 39 3003.8 -8.96 123.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.6037 TRA-1.1729 TC3 .2877 BAU .0847 SGT 1791.9 SGR 420.8 SG3 192.3 ST 881.4 SR 420.7 SS 798.7  
 RDE -.3445 RRA -.0062 RC3 -.0083 FAU .03364 RRT .4266 RRF -.4457 RTF -.8977 CRT .8396 CRS .9036 CST .9909  
 FDE .8018 FRA 1.1407 FC3-1.3225 BSP 5815 SGB 1840.7 R23 -.0473 R13 -.8990 LSA 1243.5 HSA 212.5 S3A 16.5  
 BOE .6951 BRA 1.1729 BC3 .2878 FSP -533 SGI 1801.3 SG2 378.6 THA 5.99 EL1 953.5 EL2 211.2 ALF 23.03

LAUNCH DATE DEC 31 1968

FLIGHT TIME 110.00

ARRIVAL DATE APR 20 1969

Heliocentric Conic

DISTANCE 277.619

RL 147.10 LAL -.00 LOL 99.39 VL 26.505 GAL 4.23 AZL 87.56 MCA 117.47 SMA 120.44 ECC .23274 INC 2.4360 V1 30.287  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.774 GAP -12.14 AZP 91.12 TAL 165.77 TAP 283.24 RCA 92.41 APO 148.47 V2 35.040  
 RC 45.309 GL 14.47 GP 6.66 ZAL 63.88 ZAP 9.26 ETS 316.59 ZAE 162.29 ETE 356.22 ZAC 121.57 ETC 161.13 CLP -6.44

Planetocentric Conic

C3 20.222 VHL 4.497 DLA 27.26 RAL 28.79 RAD 6567.8 VEL 11.900 PTH 2.11 VHP 8.075 DPA 15.47 RAP 26.53 ECC 1.3328  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 47 15 3317.28 -24.26 118.84 259.07 74.93 2 42 33 2717.3 -26.09 110.65  
 90.00 23 27 24 3760.79 -13.64 146.97 254.98 64.94 24 30 5 3160.8 -16.91 139.82  
 100.00 3 45 42 2935.46 -27.55 91.63 259.96 77.92 4 34 37 2335.5 -28.94 83.10  
 100.00 0 15 35 3617.84 -10.61 134.93 253.43 61.89 1 15 53 3017.8 -14.29 128.07  
 110.00 5 51 5 2543.06 -35.63 62.99 261.11 83.48 6 33 29 1943.1 -34.17 53.79  
 110.00 0 26 40 3583.00 -5.33 129.09 250.23 56.18 1 26 23 2983.0 -9.74 122.77

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE -.6059 TRA-1.1466 TC3 .3620 BAU .0979 SGT 1844.7 SGR 422.3 SCS 212.3 ST 916.0 SR 421.3 SS 837.9  
 RDE -.3306 RRA -.0199 RC3 .0118 FAU .03617 RRT .4819 RRF -.9017 RTF -.9045 CRT .8533 CRS .9122 CST .9916  
 FDE .8518 FRA 1.1921 FC3-1.5483 BSP 6004 SGB 1892.4 R23 -.0546 R13 -.9059 LSA 1294.7 MSA 205.4 SSA 16.6  
 BDE .6902 BRA 1.1460 BC3 .3622 FSP -.594 SGI 1856.3 SGI 367.7 THA 6.55 EL1 987.5 EL2 203.7 ALF 22.44

LAUNCH DATE DEC 31 1968

FLIGHT TIME 112.00

ARRIVAL DATE APR 22 1969

Heliocentric Conic

DISTANCE 284.342

RL 147.10 LAL -.00 LOL 99.39 VL 26.638 GAL 3.96 AZL 87.66 MCA 120.68 SMA 121.22 ECC .22392 INC 2.3389 V1 30.287  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.858 GAP -11.40 AZP 91.19 TAL 165.99 TAP 286.67 RCA 94.07 APO 148.36 V2 35.027  
 RC 46.364 GL 14.56 GP 7.29 ZAL 64.36 ZAP 11.00 ETS 321.29 ZAE 160.26 ETE 359.73 ZAC 122.63 ETC 160.34 CLP -8.26

Planetocentric Conic

C3 18.608 VHL 4.314 DLA 27.17 RAL 28.26 RAD 6567.8 VEL 11.832 PTH 2.10 VHP 7.661 DPA 16.59 RAP 27.60 ECC 1.3062  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 47 44 3289.00 -24.75 116.91 257.15 75.78 2 42 33 2689.0 -26.46 108.66  
 90.00 23 22 41 3749.70 -13.96 146.31 253.09 65.11 24 25 11 3149.7 -17.20 139.13  
 100.00 3 45 12 2910.31 -27.90 89.84 257.94 78.80 4 33 43 2310.3 -29.16 81.26  
 100.00 0 11 30 3603.82 -11.07 134.11 251.82 62.05 1 11 54 3003.6 -14.72 127.23  
 110.00 5 49 55 2520.06 -33.79 61.21 258.95 84.92 6 31 55 1920.1 -34.18 51.99  
 110.00 0 23 37 3566.63 -5.95 128.23 248.53 56.28 1 23 3 2966.6 -10.34 121.89

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE -.6034 TRA-1.1169 TC3 .4502 BAU .1124 SGT 1890.5 SGR 427.0 SCS 234.5 ST 944.9 SR 423.0 SS 876.5  
 RDE -.3183 RRA -.0359 RC3 .0385 FAU .03907 RRT .5402 RRF -.5638 RTF -.9113 CRT .8667 CRS .9206 CST .9923  
 FDE .9032 FRA 1.2471 FC3-1.8179 BSP 6247 SGB 1938.2 R23 -.0634 R13 -.9130 LSA 1341.7 MSA 198.2 SSA 16.6  
 BDE .6822 BRA 1.1174 BC3 .4519 FSP -.664 SGI 1905.1 SGI 356.6 THA 7.21 EL1 1016.5 EL2 196.1 ALF 22.07

LAUNCH DATE DEC 31 1968

FLIGHT TIME 114.00

ARRIVAL DATE APR 24 1969

Heliocentric Conic

DISTANCE 291.054

RL 147.10 LAL -.00 LOL 99.39 VL 26.761 GAL 3.71 AZL 87.76 MCA 123.88 SMA 121.95 ECC .21576 INC 2.2352 V1 30.287  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.934 GAP -10.68 AZP 91.25 TAL 166.25 TAP 290.13 RCA 95.63 APO 148.26 V2 35.013  
 RC 47.558 GL 14.56 GP 8.00 ZAL 64.87 ZAP 12.89 ETS 324.81 ZAE 158.40 ETE 2.83 ZAC 123.56 ETC 159.46 CLP -10.14

Planetocentric Conic

C3 17.159 VHL 4.142 DLA 26.99 RAL 27.72 RAD 6567.7 VEL 11.770 PTH 2.08 VHP 7.265 DPA 17.76 RAP 28.56 ECC 1.2824  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 51 6 3251.82 -25.34 114.35 255.27 76.93 2 45 18 2651.8 -26.89 106.03  
 90.00 23 15 1 3749.13 -13.98 146.28 251.13 65.12 24 17 30 3149.1 -17.22 139.10  
 100.00 3 46 37 2879.41 -28.29 87.63 255.95 79.91 4 34 37 2279.4 -29.39 79.00  
 100.00 0 6 6 3596.76 -11.29 133.72 249.77 62.14 1 6 3 2996.8 -14.93 126.83  
 110.00 5 49 51 2493.78 -33.95 59.18 256.78 85.72 6 31 25 1893.8 -34.17 49.94  
 110.00 0 19 21 3555.16 -6.38 127.82 246.81 56.35 1 18 37 2955.2 -10.76 121.27

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE -.6012 TRA-1.0894 TC3 .5406 BAU .1251 SGT 1936.9 SGR 436.7 SCS 259.4 ST 974.2 SR 426.4 SS 916.6  
 RDE -.3078 RRA -.0490 RC3 .0724 FAU .04226 RRT .8025 RRF -.6295 RTF -.9170 CRT .8803 CRS .9291 CST .9930  
 FDE .9584 FRA 1.3100 FC3-2.1321 BSP 6424 SGB 1985.6 R23 -.0737 R13 -.9191 LSA 1390.8 MSA 190.7 SSA 16.7  
 BDE .6755 BRA 1.0906 BC3 .5455 FSP -.741 SGI 1955.3 SGI 345.2 THA 7.99 EL1 1046.7 EL2 188.3 ALF 21.81

LAUNCH DATE DEC 31 1968

FLIGHT TIME 116.00

ARRIVAL DATE APR 26 1969

Heliocentric Conic

DISTANCE 297.753

RL 147.10 LAL -.00 LOL 99.39 VL 26.873 GAL 3.48 AZL 87.88 MCA 127.08 SMA 122.62 ECC .20825 INC 2.1234 V1 30.287  
 RP 108.27 LAP 1.89 LOP 226.49 VP 37.003 GAP -9.99 AZP 91.28 TAL 166.54 TAP 293.62 RCA 97.09 APO 148.16 V2 35.000  
 RC 48.883 GL 14.45 GP 8.82 ZAL 65.41 ZAP 14.94 ETS 326.96 ZAE 156.71 ETE 9.72 ZAC 124.36 ETC 158.90 CLP -12.10

Planetocentric Conic

C3 15.858 VHL 3.982 DLA 26.68 RAL 27.18 RAD 6567.6 VEL 11.715 PTH 2.06 VHP 6.887 DPA 19.00 RAP 29.42 ECC 1.2610  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 57 12 3206.31 -26.01 111.19 253.45 78.38 2 50 39 2606.3 -27.35 102.77  
 90.00 23 4 38 3758.53 -13.71 146.84 249.13 64.98 24 7 16 3158.5 -16.97 139.68  
 100.00 3 50 4 2842.44 -28.70 84.96 253.99 81.25 4 37 27 2242.4 -29.61 76.27  
 100.00 23 54 28 3597.63 -11.26 133.77 247.88 62.13 24 54 24 2997.6 -14.90 126.88  
 110.00 5 51 5 2463.78 -34.07 56.84 254.83 87.09 6 32 9 1863.8 -34.10 47.60  
 110.00 0 13 51 3549.05 -6.61 127.30 245.08 56.39 1 13 0 2949.1 -10.99 120.94

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE -.5967 TRA-1.0619 TC3 .6366 BAU .1372 SGT 1979.5 SGR 452.9 SCS 287.1 ST 1000.3 SR 431.9 SS 956.8  
 RDE -.2994 RRA -.0654 RC3 .1158 FAU .04580 RRT .6655 RRF -.6959 RTF -.9221 CRT .8936 CRS .9373 CST .9937  
 FDE 1.0180 FRA 1.3804 FC3-2.5001 BSP 6581 SGB 2030.7 R23 -.0860 R13 -.9247 LSA 1438.3 MSA 183.1 SSA 16.8  
 BDE .6676 BRA 1.0640 BC3 .6470 FSP -.826 SGI 2003.0 SGI 334.1 THA 8.91 EL1 1074.5 EL2 180.4 ALF 21.74

LAUNCH DATE DEC 31 1968

FLIGHT TIME 118.00

ARRIVAL DATE APR 28 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 99.39 VL 26.976 GAL 3.26 AZL 88.00 HCA 130.28 SMA 123.25 ECC .20133 INC 2.0019 V1 30.287  
 RP 108.31 LAP 1.53 LOP 229.68 VP 37.065 GAP -9.32 AZP 91.29 TAL 166.85 TAP 297.13 RCA 98.44 APO 148.07 V2 34.987  
 RC 50.327 GL 14.21 GP 9.78 ZAL 65.97 ZAP 17.14 ETS 328.62 ZAE 155.20 ETE 8.56 ZAC 125.00 ETC 157.43 CLP -14.15

Planetocentric Conic: C3 14.687 VHL 3.832 DLA 26.24 RAL 26.67 RAD 6567.6 VEL 11.665 PTH 2.05 WHP 6.528 DPA 20.32 RAP 30.13 ECC 1.2417  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 5 49 3153.35 -26.68 107.45 251.65 80.14 2 58 22 2553.4 -27.77 98.96  
 90.00 22 51 55 3777.04 -13.17 147.93 247.11 64.71 23 54 52 3177.0 -16.47 140.81  
 100.00 3 55 40 2799.21 -29.10 81.81 252.06 82.86 4 42 19 2199.2 -29.79 73.07  
 100.00 23 44 45 3606.41 -10.98 134.27 245.99 62.02 24 44 51 3006.4 -14.64 127.39  
 110.00 5 53 47 2429.61 -34.16 54.18 252.50 88.67 6 34 17 1829.6 -33.97 44.94  
 110.00 0 7 3 3548.78 -6.62 127.29 243.36 56.39 1 6 11 2948.8 -11.00 120.92

Differential Corrections: TDE -.5891 TRA -1.0344 TC3 .7383 BAU .1488 SGT 2017.0 SGR 477.7 SCS 318.0 ST 1021.5 SR 439.8 SS 995.7  
 RDE -.2928 RRA -.0836 RC3 .1709 FAU .04973 RRT .7263 RRF -.7600 RTF -.9268 CRT .9065 CRS .9452 CST .9943  
 FDE 1.0743 FRA 1.4597 FC3 -2.9315 BSP 6728 SGB 2072.9 R23 -.1005 R13 -.9300 LSA 1482.3 MSA 175.3 SSA 16.8  
 BDE .6578 BRA 1.0378 BC3 .7578 FSP -922 SGI 2047.5 SGT 323.5 THA 10.01 EL1 1098.7 EL2 172.7 ALF 21.89

LAUNCH DATE DEC 31 1968

FLIGHT TIME 120.00

ARRIVAL DATE APR 30 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 99.39 VL 27.070 GAL 3.06 AZL 88.13 HCA 133.47 SMA 123.84 ECC .19500 INC 1.8684 V1 30.287  
 RP 108.36 LAP 1.36 LOP 232.88 VP 37.121 GAP -8.68 AZP 91.29 TAL 167.18 TAP 300.66 RCA 99.69 APO 147.99 V2 34.974  
 RC 51.881 GL 13.81 GP 10.90 ZAL 66.54 ZAP 19.52 ETS 329.74 ZAE 153.86 ETE 11.46 ZAC 125.45 ETC 156.26 CLP -16.29

Planetocentric Conic: C3 13.634 VHL 3.692 DLA 25.64 RAL 26.20 RAD 6567.5 VEL 11.620 PTH 2.04 WHP 6.187 DPA 21.75 RAP 30.69 ECC 1.2244  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 16 43 3093.67 -27.30 103.20 249.88 82.18 3 8 17 2493.7 -28.10 94.62  
 90.00 22 37 14 3803.91 -12.39 149.51 245.13 64.33 23 40 38 3203.9 -15.74 142.44  
 100.00 4 3 27 2749.81 -29.47 78.16 250.16 84.75 4 49 16 2149.6 -29.89 69.38  
 100.00 23 33 12 3623.21 -10.44 135.23 244.12 61.83 24 33 35 3023.2 -14.13 128.38  
 110.00 5 58 9 2390.73 -34.18 51.14 250.40 90.47 6 37 59 1790.7 -33.74 41.92  
 110.00 23 54 59 3554.85 -6.39 127.61 241.67 56.35 24 54 14 2954.9 -10.77 121.25

Differential Corrections: TDE -.5772 TRA -1.0064 TC3 .8438 BAU .1600 SGT 2047.2 SGR 513.7 SCS 352.2 ST 1035.6 SR 450.8 SS 1031.9  
 RDE -.2883 RRA -.1041 RC3 .2409 FAU .05409 RRT .7816 RRF -.8185 RTF -.9310 CRT .9187 CRS .9526 CST .9950  
 FDE 1.1311 FRA 1.5490 FC3 -3.4344 BSP 6862 SGB 2110.6 R23 -.1174 R13 -.9350 LSA 1520.5 MSA 167.4 SSA 16.9  
 BDE .6452 BRA 1.0118 BC3 .8776 FSP -1028 SGI 2087.1 SGT 314.3 THA 11.36 EL1 1117.3 EL2 165.0 ALF 22.30

LAUNCH DATE DEC 31 1968

FLIGHT TIME 122.00

ARRIVAL DATE MAY 2 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 99.39 VL 27.155 GAL 2.87 AZL 88.28 HCA 136.67 SMA 124.37 ECC .18921 INC 1.7201 V1 30.287  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.171 GAP -8.05 AZP 91.25 TAL 167.53 TAP 304.19 RCA 100.84 APO 147.91 V2 34.961  
 RC 53.536 GL 13.21 GP 12.21 ZAL 67.11 ZAP 22.08 ETS 330.46 ZAE 152.69 ETE 14.56 ZAC 125.67 ETC 154.99 CLP -18.54

Planetocentric Conic: C3 12.686 VHL 3.562 DLA 24.86 RAL 25.79 RAD 6567.5 VEL 11.579 PTH 2.02 WHP 5.866 DPA 23.32 RAP 31.06 ECC 1.2088  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 51 3027.62 -27.82 98.43 248.13 84.51 3 20 18 2427.6 -28.29 89.80  
 90.00 22 20 51 3838.78 -11.35 151.55 243.20 63.88 23 24 50 3238.8 -14.77 144.54  
 100.00 4 13 30 2693.43 -29.75 74.01 248.30 86.92 4 58 23 2093.4 -29.86 65.21  
 100.00 23 19 53 3648.20 -9.63 136.65 242.30 61.97 24 20 41 3048.2 -13.36 129.84  
 110.00 6 4 22 2346.55 -34.10 47.69 248.32 92.50 6 43 29 1746.6 -33.38 38.53  
 110.00 23 45 30 3567.85 -5.90 128.29 240.04 56.27 24 44 58 2967.8 -10.30 121.96

Differential Corrections: TDE -.5584 TRA -.9760 TC3 .9592 BAU .1721 SGT 2066.0 SGR 563.5 SCS 389.9 ST 1037.8 SR 464.1 SS 1061.5  
 RDE -.2854 RRA -.1276 RC3 .3308 FAU .05900 RRT .8289 RRF -.8687 RTF -.9353 CRT .9297 CRS .9593 CST .9953  
 FDE 1.1812 FRA 1.6472 FC3 -4.0263 BSP 7040 SGB 2141.4 R23 -.1356 R13 -.9404 LSA 1547.0 MSA 159.5 SSA 16.9  
 BDE .6271 BRA .9843 BC3 1.0146 FSP -1150 SGI 2119.3 SGT 307.2 THA 13.02 EL1 1125.9 EL2 157.6 ALF 23.06

LAUNCH DATE DEC 31 1968

FLIGHT TIME 124.00

ARRIVAL DATE MAY 4 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 99.39 VL 27.232 GAL 2.70 AZL 88.45 HCA 139.86 SMA 124.87 ECC .18395 INC 1.5533 V1 30.287  
 RP 108.43 LAP 1.00 LOP 239.25 VP 37.215 GAP -7.45 AZP 91.19 TAL 167.88 TAP 307.74 RCA 101.90 APO 147.84 V2 34.948  
 RC 55.282 GL 12.38 GP 13.76 ZAL 67.87 ZAP 24.86 ETS 330.84 ZAE 151.64 ETE 17.95 ZAC 125.64 ETC 155.60 CLP -20.91

Planetocentric Conic: C3 11.831 VHL 3.440 DLA 23.84 RAL 25.47 RAD 6567.5 VEL 11.542 PTH 2.01 WHP 5.567 DPA 25.06 RAP 31.20 ECC 1.1947  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 45 13 2955.06 -28.18 93.16 246.41 87.14 3 34 28 2355.1 -28.28 84.49  
 90.00 22 2 57 3881.77 -10.05 154.04 241.38 63.39 23 7 38 3281.8 -13.54 147.10  
 100.00 4 25 57 2630.29 -29.89 69.32 246.47 89.38 5 9 47 2030.3 -29.65 60.53  
 100.00 23 4 54 3681.77 -8.54 138.54 240.98 61.24 24 6 18 3081.8 -12.31 131.78  
 110.00 6 12 42 2296.32 -33.88 43.79 246.29 94.81 6 50 58 1696.3 -32.85 34.70  
 110.00 23 34 39 3588.51 -5.12 129.38 238.49 56.16 24 34 27 2988.5 -9.53 123.07

Differential Corrections: TDE -.5373 TRA -.9488 TC3 1.0639 BAU .1823 SGT 2079.1 SGR 631.3 SCS 431.1 ST 1034.8 SR 481.8 SS 1086.3  
 RDE -.2846 RRA -.1559 RC3 .4436 FAU .06419 RRT .8672 RRF -.9093 RTF -.9384 CRT .9403 CRS .9654 CST .9962  
 FDE 1.2252 FRA 1.7615 FC3 -4.6969 BSP 7125 SGB 2172.8 R23 -.1561 R13 -.9450 LSA 1568.2 MSA 151.2 SSA 17.1  
 BDE .6081 BRA .9615 BC3 1.1527 FSP -1278 SGI 2151.5 SGT 303.7 THA 15.06 EL1 1131.4 EL2 149.9 ALF 24.10

LAUNCH DATE DEC 31 1968

FLIGHT TIME 126.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 331.002

RL 147.10 LAL -.00 LOL 99.39 VL 27.303 GAL 2.54 AZL 88.64 MCA 143.04 SMA 125.32 ECC .17917 INC 1.3632 V1 30.287
RP 108.47 LAP .82 LOP 242.44 VP 37.255 GAP -6.87 AZP 91.09 TAL 168.23 TAP 311.28 RCA 102.86 APO 147.77 V2 34.936
RC 57.109 GL 11.25 GP 15.60 ZAL 68.21 ZAP 27.90 ETS 330.94 ZAE 150.66 ETE 21.77 ZAC 125.29 ETC 152.09 CLP -23.42

PLANETOCENTRIC CONIC

C3 11.061 WHL 3.326 DLA 22.56 RAL 25.28 RAD 6567.4 VEL 11.509 PTH 2.00 WHP 5.290 DPA 27.02 RAP 31.07 ECC 1.1820
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 3 4 2875.31 -28.32 87.33 244.72 90.05 3 50 59 2275.3 -28.01 78.68
90.00 21 43 33 3933.56 -8.46 157.01 239.71 62.87 22 49 7 3333.6 -12.03 150.15
100.00 4 41 1 2559.44 -29.82 64.06 244.68 92.15 5 23 41 1959.4 -29.21 55.31
100.00 22 48 16 3724.67 -7.13 140.94 238.99 60.89 23 50 21 3124.7 -10.96 134.24
110.00 6 23 26 2239.03 -33.47 39.36 244.33 97.39 7 0 45 1639.0 -32.09 30.41
110.00 23 22 21 3617.84 -4.01 130.92 237.07 56.02 24 22 38 3017.8 -8.44 124.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5097 TRA -.9209 TC3 1.1675 BAU .1933 SGT 2079.8 SGR 721.1 SG3 475.5 ST 1018.5 SR 502.8 SS 1099.5
RDE -.2852 RRA -1.8899 RC3 .5881 FAU .06982 RRT .8961 RRF -.9401 RTF -.9411 CRT .9500 CRS .9706 CST .9969
FDE 1.2526 FRA 1.8886 FC3-5.4846 BSP 7229 SGB 2201.2 R23 -.1761 R13 -.9498 LSA 1574.3 MSA 142.4 SSA 17.4
BOE .5841 BRA .9402 BC3 1.3073 FSP -1419 SGI 2179.8 SG2 305.3 THA 17.62 EL1 1127.0 EL2 141.9 ALF 25.56

LAUNCH DATE DEC 31 1968

FLIGHT TIME 128.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 337.595

RL 147.10 LAL -.00 LOL 99.39 VL 27.366 GAL 2.39 AZL 88.86 MCA 146.23 SMA 125.73 ECC .17487 INC 1.1426 V1 30.287
RP 108.51 LAP .64 LOP 245.62 VP 37.290 GAP -6.30 AZP 90.95 TAL 168.58 TAP 314.81 RCA 103.74 APO 147.71 V2 34.923
RC 59.010 GL 9.75 GP 17.82 ZAL 68.72 ZAP 31.23 ETS 330.81 ZAE 149.67 ETE 26.13 ZAC 124.56 ETC 150.49 CLP -26.08

PLANETOCENTRIC CONIC

C3 10.370 WHL 3.220 DLA 20.93 RAL 25.24 RAD 6567.4 VEL 11.479 PTH 2.00 WHP 5.040 DPA 29.25 RAP 30.60 ECC 1.1707
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 23 44 2787.08 -28.14 80.88 243.08 93.28 4 10 11 2187.1 -27.39 72.30
90.00 21 22 35 3995.51 -6.52 180.53 238.23 62.38 22 29 11 3395.5 -10.16 153.75
100.00 4 59 5 2479.61 -29.47 58.15 242.97 95.24 5 40 25 1879.6 -28.43 49.50
100.00 22 29 55 3770.22 -5.34 143.92 237.59 60.55 23 32 53 3178.2 -9.23 137.28
110.00 6 36 59 2173.30 -32.78 34.36 242.44 100.28 7 13 13 1573.3 -31.02 25.58
110.00 23 8 30 3657.30 -2.50 132.99 235.83 55.90 24 9 27 3057.3 -6.96 126.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4764 TRA -.8931 TC3 1.2577 BAU .2045 SGT 2066.2 SGR 838.0 SG3 521.8 ST 989.8 SR 527.1 SS 1098.4
RDE -.2886 RRA -.2321 RC3 .7714 FAU .07558 RRT .8164 RRF -.9621 RTF -.9430 CRT .9590 CRS .9748 CST .9977
FOE 1.2567 FRA 2.0304 FC3-6.3103 BSP 7315 SGB 2229.7 R23 -.1932 R13 -.9548 LSA 1564.0 MSA 132.8 SSA 17.8
BOE .5560 BRA .9228 BC3 1.4755 FSP -1567 SGI 2207.5 SG2 313.9 THA 20.83 EL1 1113.5 EL2 132.8 ALF 27.48

LAUNCH DATE DEC 31 1968

FLIGHT TIME 130.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 344.167

RL 147.10 LAL -.00 LOL 99.39 VL 27.423 GAL 2.26 AZL 89.12 MCA 149.41 SMA 126.10 ECC .17100 INC .8823 V1 30.287
RP 108.55 LAP .45 LOP 248.80 VP 37.320 GAP -5.76 AZP 90.76 TAL 168.92 TAP 318.33 RCA 104.54 APO 147.66 V2 34.811
RC 60.976 GL 7.77 GP 20.49 ZAL 69.21 ZAP 34.91 ETS 330.50 ZAE 148.55 ETE 31.14 ZAC 123.39 ETC 148.79 CLP -28.90

PLANETOCENTRIC CONIC

C3 9.755 WHL 3.123 DLA 18.86 RAL 25.41 RAD 6567.4 VEL 11.452 PTH 1.99 WHP 4.822 DPA 31.83 RAP 29.70 ECC 1.1605
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 47 49 2688.28 -27.55 73.72 241.54 96.83 4 32 37 2088.3 -26.32 65.27
90.00 20 59 50 4069.92 -4.15 164.71 237.02 61.96 22 7 40 3469.9 -7.87 158.01
100.00 5 20 40 2388.85 -28.72 51.51 241.36 98.66 6 0 29 1788.8 -27.23 43.03
100.00 22 9 39 3844.58 -3.11 147.58 236.45 60.26 23 13 44 3244.6 -7.05 141.00
110.00 6 53 54 2097.15 -31.71 28.68 240.69 103.48 7 28 52 1497.2 -29.53 20.15
110.00 22 52 55 3709.04 -.53 135.69 234.84 55.82 23 54 44 3109.0 -5.01 129.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4341 TRA -.8633 TC3 1.3397 BAU .2186 SGT 2033.8 SGR 908.4 SG3 568.5 ST 941.7 SR 551.3 SS 1073.0
RDE -.2885 RRA -.2848 RC3 1.0074 FAU .08148 RRT .9299 RRF -.9769 RTF -.9446 CRT .9671 CRS .9778 CST .9986
FOE 1.2196 FRA 2.1814 FC3-7.2314 BSP 7452 SGB 2261.1 R23 -.2024 R13 -.9607 LSA 1525.3 MSA 122.5 SSA 18.5
BOE .5201 BRA .9091 BC3 1.6762 FSP -1723 SGI 2236.8 SG2 330.5 THA 24.90 EL1 1084.4 EL2 121.8 ALF 29.93

LAUNCH DATE DEC 31 1968

FLIGHT TIME 132.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 350.717

RL 147.10 LAL -.00 LOL 99.39 VL 27.473 GAL 2.15 AZL 89.43 MCA 152.59 SMA 126.43 ECC .16755 INC .5686 V1 30.287
RP 108.58 LAP .26 LOP 251.98 VP 37.347 GAP -5.23 AZP 90.50 TAL 169.23 TAP 321.82 RCA 105.25 APO 147.62 V2 34.900
RC 63.000 GL 5.15 GP 23.74 ZAL 69.67 ZAP 38.00 ETS 330.05 ZAE 147.10 ETE 36.84 ZAC 121.67 ETC 147.02 CLP -31.90

PLANETOCENTRIC CONIC

C3 9.221 WHL 3.037 DLA 16.21 RAL 25.84 RAD 6567.3 VEL 11.429 PTH 1.98 WHP 4.642 DPA 34.86 RAP 28.27 ECC 1.1518
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 16 14 2575.74 -26.38 65.69 240.17 100.68 4 59 10 1975.7 -24.64 57.45
90.00 20 34 50 4160.42 -1.24 169.77 236.19 61.71 21 44 11 3580.4 -5.01 163.12
100.00 5 46 39 2284.18 -27.42 44.01 239.93 102.40 6 24 43 1684.2 -25.44 35.77
100.00 21 47 7 3927.21 -.31 152.11 235.88 60.11 22 52 34 3327.2 -4.29 145.58
110.00 7 14 59 2007.78 -30.11 22.21 239.13 107.00 7 48 27 1407.8 -27.49 14.00
110.00 22 35 16 3776.37 2.05 139.20 234.20 55.87 23 38 12 3176.4 -2.44 132.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3883 TRA -.8351 TC3 1.3885 BAU .2349 SGT 1983.7 SGR 1180.7 SG3 612.1 ST 880.0 SR 572.9 SS 1020.7
RDE -.2826 RRA -.3532 RC3 1.3047 FAU .08674 RRT .9376 RRF -.9864 RTF -.9448 CRT .9755 CRS .9795 CST .9994
FOE 1.1304 FRA 2.3424 FC3-8.1438 BSP 7582 SGB 2308.5 R23 -.2031 R13 -.9670 LSA 1480.0 MSA 111.2 SSA 19.8
BOE .4787 BRA .9067 BC3 1.9033 FSP -1866 SGI 2280.7 SG2 357.2 THA 29.97 EL1 1044.7 EL2 106.2 ALF 32.80

LAUNCH DATE DEC 31 1968

FLIGHT TIME 134.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 357.244

RL 147.10 LAL -.00 LOL 99.39 VL 27.518 GAL 2.04 AZL 89.82 HCA 155.77 SMA 126.73 ECC .16448 INC .1782 V1 30.287  
 RP 108.62 LAP .07 LOP 255.16 VP 37.370 GAP -4.72 AZP 90.16 TAL 169.52 TAP 325.29 RCA 105.99 APO 147.58 V2 34.889  
 RC 65.076 GL 1.66 GP 27.71 ZAL 70.13 ZAP 43.57 ETS 329.52 ZAE 145.09 ETE 43.19 ZAC 119.28 ETC 145.24 CLP -35.08

PLANETOCENTRIC CONIC

C3 8.786 VHL 2.964 DLA 12.77 RAL 26.61 RAD 6567.3 VEL 11.409 PTH 1.97 VHP 4.513 DPA 38.44 RAP 26.12 ECC 1.1446  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 50 22 2444.71 -24.41 56.60 239.09 104.82 5 31 7 1844.7 -22.13 48.67  
 90.00 20 6 51 4272.84 2.39 176.04 235.92 61.78 21 18 3 3672.8 -1.40 169.42  
 100.00 6 18 19 2161.10 -25.33 35.46 238.81 106.43 6 54 20 1561.1 -22.83 27.55  
 100.00 21 21 35 4031.68 3.23 157.85 235.45 60.27 22 28 47 3431.7 -.75 151.33  
 110.00 7 41 25 1901.05 -27.75 14.80 237.90 110.81 8 13 6 1301.0 -24.67 6.99  
 110.00 22 14 58 3864.50 5.40 143.82 234.10 56.20 23 19 23 3264.5 .92 137.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3312 TRA -.8050 TC3 1.4011 BAU .2565 SGT 1909.3 SGR 1423.6 SG3 647.0 ST 799.7 SR 583.7 S5 932.8  
 RDE -.2691 RRA -.4429 RC3 1.6748 FAU .09071 RRT .9411 RRF -.9922 RTF -.9440 CRT .9848 CRS .9794 CST .9989  
 FDE .9667 FRA 2.4981 FC3-8.9382 BSP 7812 SGB 2381.7 R23 -.1907 R13 -.9742 LSA 1356.3 MSA 101.6 S5A 21.1  
 BDE .4267 BRA .9188 BC3 2.1836 FSP -1988 SG1 2349.3 SG2 391.2 THA 36.22 EL1 986.7 EL2 82.1 ALF 36.00

LAUNCH DATE DEC 31 1968

FLIGHT TIME 136.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 383.749

RL 147.10 LAL -.00 LOL 99.39 VL 27.558 GAL 1.95 AZL 90.32 HCA 158.94 SMA 127.00 ECC .16178 INC .3191 V1 30.287  
 RP 108.65 LAP -.11 LOP 256.33 VP 37.389 GAP -4.22 AZP 89.70 TAL 169.78 TAP 328.72 RCA 106.45 APO 147.55 V2 34.878  
 RC 67.198 GL -3.02 GP 32.59 ZAL 70.84 ZAP 48.70 ETS 328.99 ZAE 142.18 ETE 50.01 ZAC 116.11 ETC 143.51 CLP -38.43

PLANETOCENTRIC CONIC

C3 8.494 VHL 2.914 DLA 8.22 RAL 27.82 RAD 6567.3 VEL 11.397 PTH 1.97 VHP 4.455 DPA 42.71 RAP 22.99 ECC 1.1398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 32 25 2288.02 -21.28 46.19 238.58 109.13 6 10 33 1688.0 -18.48 38.64  
 90.00 19 34 31 4416.68 6.97 184.13 236.50 62.49 20 48 8 3816.7 3.24 177.44  
 100.00 6 57 44 2012.84 -22.11 25.63 238.24 110.65 7 31 17 1412.8 -19.10 18.12  
 100.00 20 51 53 4167.09 7.75 165.35 236.08 61.04 22 1 20 3567.1 3.83 158.76  
 110.00 8 15 3 1770.89 -24.31 6.25 237.24 114.81 8 44 34 1170.9 -20.76 358.91  
 110.00 21 51 4 3981.81 9.80 150.05 234.84 57.09 22 57 26 3381.8 5.39 143.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.72717 TRA -.7748 TC3 1.3536 BAU .2851 SGT 1810.0 SGR 1727.8 SG3 664.9 ST 706.4 SR 574.3 S5 811.2  
 RDE -.2363 RRA -.5630 RC3 2.1142 FAU .09217 RRT .9406 RRF -.9957 RTF -.9409 CRT .9957 CRS .9767 CST .9907  
 FDE .7119 FRA 2.6298 FC3-9.3940 BSP 8151 SGB 2502.3 R23 -.1672 R13 -.9817 LSA 1214.5 MSA 107.0 S5A 20.0  
 BDE .3601 BRA .9577 BC3 2.5104 FSP -2056 SG1 2464.9 SG2 430.8 THA 43.58 EL1 909.5 EL2 41.2 ALF 39.09

LAUNCH DATE DEC 31 1968

FLIGHT TIME 138.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 370.230

RL 147.10 LAL -.00 LOL 99.39 VL 27.593 GAL 1.88 AZL 90.98 HCA 162.11 SMA 127.24 ECC .15943 INC .9840 V1 30.287  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.405 GAP -3.74 AZP 89.06 TAL 170.01 TAP 332.12 RCA 106.95 APO 147.52 V2 34.867  
 RC 69.360 GL -9.38 GP 38.59 ZAL 71.32 ZAP 54.44 ETS 328.59 ZAE 138.02 ETE 56.93 ZAC 112.02 ETC 141.94 CLP -41.92

PLANETOCENTRIC CONIC

C3 8.451 VHL 2.907 DLA 2.11 RAL 29.65 RAD 6567.3 VEL 11.395 PTH 1.97 VHP 4.505 DPA 47.79 RAP 18.44 ECC 1.1391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 26 8 2094.70 -16.49 34.03 239.06 113.35 7 1 3 1494.7 -13.19 26.91  
 90.00 18 55 24 4608.11 12.81 195.16 238.53 64.53 20 12 12 4008.1 9.28 188.27  
 100.00 7 48 27 1829.16 -17.26 14.14 238.70 114.79 8 18 56 1229.2 -13.78 7.09  
 100.00 20 15 46 4348.88 13.57 175.72 238.15 63.11 21 28 15 3748.9 9.85 168.90  
 110.00 8 58 57 1608.45 -19.31 356.30 237.61 118.77 9 25 45 1008.5 -15.33 349.45  
 110.00 21 21 46 4142.29 15.58 158.89 237.00 59.18 22 30 48 3542.3 11.38 152.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2094 TRA -.7419 TC3 1.2300 BAU .3231 SGT 1680.1 SGR 2100.9 SG3 653.7 ST 602.9 SR 543.1 S5 682.1  
 RDE -.1868 RRA -.7266 RC3 2.5811 FAU .08950 RRT .9365 RRF -.9977 RTF -.9355 CRT .9937 CRS .9719 CST .9415  
 FDE .3567 FRA 2.6994 FC3-9.1883 BSP 8715 SGB 2690.1 R23 -.1342 R13 -.9886 LSA 1047.8 MSA 159.5 S5A 13.3  
 BDE .2677 BRA 1.0385 BC3 2.8592 FSP -2038 SG1 2649.3 SG2 467.1 THA 51.77 EL1 810.1 EL2 45.2 ALF 41.99

LAUNCH DATE DEC 31 1968

FLIGHT TIME 140.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 376.685

RL 147.10 LAL -.00 LOL 99.39 VL 27.624 GAL 1.82 AZL 91.92 HCA 165.27 SMA 127.44 ECC .15740 INC 1.9242 V1 30.287  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.418 GAP -3.27 AZP 88.14 TAL 170.19 TAP 335.46 RCA 107.38 APO 147.50 V2 34.858  
 RC 71.560 GL -18.08 GP 45.93 ZAL 72.42 ZAP 60.80 ETS 328.48 ZAE 132.22 ETE 63.50 ZAC 106.88 ETC 140.70 CLP -45.45

PLANETOCENTRIC CONIC

C3 8.927 VHL 2.988 DLA -6.18 RAL 32.34 RAD 6567.3 VEL 11.416 PTH 1.98 VHP 4.731 DPA 53.74 RAP 11.62 ECC 1.1469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 38 41 1847.22 -9.30 19.42 241.61 116.87 8 9 28 1247.2 -5.62 12.67  
 90.00 18 4 16 4876.43 20.00 211.57 243.23 69.52 19 25 32 4276.4 17.03 204.15  
 100.00 8 57 5 1594.27 -10.08 .41 241.19 118.29 9 23 39 994.3 -6.22 353.75  
 100.00 19 28 32 4804.61 20.82 191.24 242.89 68.05 20 45 17 4004.6 17.66 183.87  
 110.00 9 58 37 1401.62 -12.14 344.56 239.97 122.20 10 21 59 801.6 -7.80 338.16  
 110.00 20 43 30 4370.02 23.00 172.38 241.85 63.99 21 56 20 3770.0 19.31 165.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1525 TRA -.7070 TC3 1.0021 BAU .3702 SGT 1517.9 SGR 2543.9 SG3 599.9 ST 503.2 SR 558.4 S5 633.5  
 RDE -.0321 RRA -.9548 RC3 2.9351 FAU .08083 RRT .9271 RRF -.9988 RTF -.9252 CRT .8718 CRS .9799 CST .7570  
 FDE -.0731 FRA 2.6564 FC3-7.8368 BSP 9543 SGB 2962.4 R23 -.0990 R13 -.9939 LSA 943.8 MSA 274.8 S5A 7.0  
 BDE .1558 BRA 1.1881 BC3 3.1015 FSP -1887 SG1 2920.6 SG2 495.6 THA 60.10 EL1 727.5 EL2 189.2 ALF 48.41

LAUNCH DATE DEC 31 1968

FLIGHT TIME 142.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 383.111

RL 147.10 LAL -.00 LOL 99.39 VL 27.650 GAL 1.77 AZL 93.36 HCA 168.43 SMA 127.62 ECC .15568 INC 3.3636 V1 30.287  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.429 GAP -2.82 AZP 86.70 TAL 170.32 TAP 338.75 RCA 107.75 APO 147.48 V2 34.848  
 RC 73.792 GL -29.74 GP 54.81 ZAL 74.37 ZAP 67.67 ETS 328.83 ZAE 124.48 ETE 69.26 ZAC 100.67 ETC 139.94 CLP -48.75

PLANETOCENTRIC CONIC

C3 10.686 VHL 3.269 OLA -17.20 RAL 36.24 RAD 6567.4 VEL 11.492 PTH 2.00 VHP 5.276 DPA 60.42 RAP .80 ECC 1.1759  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 27 55 1508.82 1.48 .40 248.55 118.28 9 53 4 908.8 5.25 353.75  
 90.00 16 46 9 5285.95 27.13 239.34 253.14 81.56 18 14 15 4685.9 25.68 230.97  
 100.00 10 39 21 1278.31 .48 342.89 247.99 119.89 11 0 39 678.3 4.45 336.36  
 100.00 18 17 24 4991.69 28.27 217.49 252.95 79.84 19 40 36 4391.7 26.57 209.09  
 110.00 11 25 47 1132.83 -2.07 330.27 246.40 124.13 11 44 40 532.8 2.43 324.07  
 110.00 19 47 28 4709.93 31.19 195.34 252.19 75.26 21 5 58 4109.9 28.86 186.92

DIFFERENTIAL CORRECTIONS

TOE -.1105 TRA -.6689 TC3 .6814 BAU .4235  
 ROE .2186 RRA-1.2800 RC3 2.8852 FAU .06514  
 FOE -.5047 FRA 2.4368 FC3-5.2777 BSP 10785  
 BOE .2449 BRA 1.4433 BC3 2.9646 FSP -1591

MID-COURSE EXECUTION ACCURACY

SGT 1316.5 SGR 3036.6 SCS 493.9  
 RRT .9105 RRF -.9994 RTF -.9084  
 SGB 3309.7 R23 -.0663 R13 -.9972  
 SGI 3270.8 SGT 505.3 THA 67.90

ORBIT DETERMINATION ACCURACY

ST 415.2 SR 804.0 SS 753.9  
 CRT .5548 CRS .9964 CST .4823  
 LSA 1111.4 MSA 349.5 S3A 3.4  
 EL1 842.7 EL2 329.6 ALF 71.00

LAUNCH DATE DEC 31 1968

FLIGHT TIME 144.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 389.493

RL 147.10 LAL -.00 LOL 99.39 VL 27.672 GAL 1.74 AZL 95.86 HCA 171.57 SMA 127.77 ECC .15424 INC 5.8588 V1 30.287  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.437 GAP -2.38 AZP 84.20 TAL 170.41 TAP 341.98 RCA 108.06 APO 147.47 V2 34.839  
 RC 76.053 GL -44.19 GP 65.38 ZAL 77.87 ZAP 74.74 ETS 329.55 ZAE 114.57 ETE 73.61 ZAC 93.51 ETC 139.63 CLP -50.81

PLANETOCENTRIC CONIC

C3 16.408 VHL 4.051 OLA -30.75 RAL 41.81 RAD 6567.7 VEL 11.738 PTH 2.07 VHP 6.494 DPA 67.11 RAP 342.03 ECC 1.2700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.48 11 49 9 1168.25 22.41 345.76 267.90 111.62 12 8 37 568.3 25.15 337.96  
 102.52 15 9 24 5812.12 22.43 276.17 267.91 111.61 16 46 16 5212.1 25.16 268.37  
 77.48 11 49 9 1168.25 22.41 345.76 267.90 111.62 12 8 37 568.3 25.15 337.96  
 102.52 15 9 24 5812.12 22.43 276.17 267.91 111.61 16 46 16 5212.1 25.16 268.37  
 110.00 14 3 48 729.95 13.08 308.91 262.97 121.87 14 15 58 130.0 17.20 302.22  
 110.00 17 53 55 9298.42 32.45 240.41 271.25 101.40 19 22 13 4698.4 33.68 231.39

DIFFERENTIAL CORRECTIONS

TDE -.0574 TRA -.5891 TC3 .4729 BAU .5073  
 ROE .7255 RRA-1.7183 RC3 2.2659 FAU .04692  
 FOE -.8661 FRA 1.9537 FC3-2.4759 BSP 14356  
 BOE .7278 BRA 1.8165 BC3 2.3127 FSP -1323

MID-COURSE EXECUTION ACCURACY

SGT 1045.7 SGR 3523.5 SCS 344.1  
 RRT .9123 RRF -.9997 RTF -.9092  
 SGB 3675.4 R23 -.0580 R13 -.9990  
 SGI 3652.1 SGT 413.1 THA 74.65

ORBIT DETERMINATION ACCURACY

ST 302.2 SR 1332.7 SS 875.5  
 CRT .4074 CRS .9997 CST .3855  
 LSA 1599.2 MSA 276.6 S3A 1.6  
 EL1 1338.6 EL2 274.8 ALF 84.49

LAUNCH DATE DEC 31 1968

FLIGHT TIME 146.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 395.837

RL 147.10 LAL -.00 LOL 99.39 VL 27.690 GAL 1.73 AZL 101.26 HCA 174.68 SMA 127.89 ECC .15311 INC11.2612 V1 30.287  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.443 GAP -1.97 AZP 78.79 TAL 170.37 TAP 345.05 RCA 108.31 APO 147.47 V2 34.831  
 RC 78.340 GL -58.91 GP 77.87 ZAL 82.16 ZAP 81.39 ETS 327.81 ZAE 101.98 ETE 73.53 ZAC 85.70 ETC 137.22 CLP -44.92

PLANETOCENTRIC CONIC

C3 39.834 VHL 6.311 OLA -44.41 RAL 48.96 RAD 6568.5 VEL 12.696 PTH 2.31 VHP 9.549 DPA 71.55 RAP 307.36 ECC 1.6556  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.23 10 11 48 1758.65 22.69 33.48 293.68 129.27 10 41 6 1158.7 27.60 26.92  
 125.77 17 43 45 5656.00 22.70 263.91 293.68 129.26 19 18 1 5056.0 27.61 257.35  
 54.23 10 11 48 1758.65 22.69 33.48 293.68 129.27 10 41 6 1158.7 27.60 26.92  
 125.77 17 43 45 5656.00 22.70 263.91 293.69 129.26 19 18 1 5056.0 27.61 257.35  
 54.23 10 11 48 1758.65 22.69 33.48 293.68 129.27 10 41 6 1158.7 27.60 26.92  
 125.77 17 43 45 5656.00 22.70 263.91 293.69 129.26 19 18 1 5056.0 27.61 257.35

DIFFERENTIAL CORRECTIONS

TDE -.1890 TRA -.7896 TC3 .0809 BAU .3864  
 ROE 1.3826 RRA-2.8461 RC3 .7211 FAU .01672  
 FOE -.7500 FRA 1.5983 FC3 -.3635 BSP 12259  
 BOE 1.3954 BRA 2.9536 BC3 .7256 FSP -585

MID-COURSE EXECUTION ACCURACY

SGT 1023.2 SGR 3935.4 SCS 189.3  
 RRT .8711 RRF -.9997 RTF -.8781  
 SGB 4066.3 R23 -.0130 R13 -.9997  
 SGI 4036.6 SGT 490.0 THA 77.05

ORBIT DETERMINATION ACCURACY

ST 346.5 SR 1659.4 SS 753.9  
 CRT .1938 CRS .9999 CST .2106  
 LSA 1823.9 MSA 339.7 S3A 1.0  
 EL1 1660.8 EL2 339.7 ALF 87.58

LAUNCH DATE DEC 31 1968

FLIGHT TIME 148.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 401.953

RL 147.10 LAL -.00 LOL 99.39 VL 27.705 GAL 1.76 AZL 120.62 HCA 177.62 SMA 127.99 ECC .15235 INC30.6147 V1 30.287  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.446 GAP -1.62 AZP 59.41 TAL 170.10 TAP 347.72 RCA 108.49 APO 147.49 V2 34.824  
 RC 80.651 GL -65.20 GP 79.41 ZAL 86.75 ZAP 86.78 ETS 195.99 ZAE 82.23 ETE 301.94 ZAC 77.08 ETC 6.84 CLP 72.23

PLANETOCENTRIC CONIC

C3 241.333 VHL 15.535 OLA -51.60 RAL 49.82 RAD 6571.4 VEL 19.043 PTH 3.08 VHP 21.164 DPA 66.63 RAP 251.80 ECC 4.9717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.88 9 43 0 2213.68 6.18 80.00 314.88 141.33 10 19 54 1613.7 12.39 55.31  
 135.12 18 19 26 663.71 6.19 297.03 314.90 141.33 18 30 30 63.7 12.41 292.34  
 44.88 9 43 0 2213.68 6.18 80.00 314.88 141.33 10 19 54 1613.7 12.39 55.31  
 135.12 18 19 26 663.71 6.19 297.03 314.90 141.33 18 30 30 63.7 12.41 292.34  
 44.88 9 43 0 2213.68 6.18 80.00 314.88 141.33 10 19 54 1613.7 12.39 55.31  
 135.12 18 19 26 663.71 6.19 297.03 314.90 141.33 18 30 30 63.7 12.41 292.34

DIFFERENTIAL CORRECTIONS

TOE 3.6195 TRA-2.5030 TC3 -.0873 BAU .5308  
 ROE-2.0367 RRA 6.0302 RC3 .1394 FAU-.01174  
 FOE -.8830 FRA 1.5348 FC3 .0421 BSP 12171  
 BOE 4.1532 BRA 6.5290 BC3 .1645 FSP -253

MID-COURSE EXECUTION ACCURACY

SGT 2018.0 SGR 3683.9 SCS 84.4  
 RRT -.8673 RRF .9907 RTF -.9268  
 SGB 4199.5 R23 .0256 R13 .9996  
 SGI 4101.6 SGT 901.4 THA 116.79

ORBIT DETERMINATION ACCURACY

ST 1407.5 SR 1310.8 SS 777.6  
 CRT -.8032 CRS -.9658 CST .9301  
 LSA 1984.5 MSA 604.5 S3A .5  
 EL1 1826.8 EL2 601.6 ALF 137.53

LAUNCH DATE DEC 31 1968

FLIGHT TIME 150.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 409.433

RL 147.10 LAL -.00 LOL 99.39 VL 27.716 GAL 1.55 AZL 38.67 HCA 181.78 SMA 128.07 ECC .15096 INC51.3279 V1 30.287
RP 108.84 LAP -1.39 LOP 280.50 VP 37.448 GAP -.92 AZP 141.32 TAL 171.21 TAP 352.99 RCA 108.74 APO 147.40 V2 34.816
RC 82.981 GL 59.00 GP -70.49 ZAL 88.23 ZAP 88.61 ETS 173.06 ZAE 70.61 ETE 68.05 ZAC 99.79 ETC 12.05 CLP 85.82

PLANETOCENTRIC CONIC

C3 636.860 VHL 25.236 DLA 56.29 RAL 334.81 RAD 6572.6 VEL 27.535 PTH 3.40 VHP 29.621 DPA -58.84 RAP 138.19 ECC11.4811
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.08 16 25 7 4990.98 -1.08 236.81 244.10 33.72 17 48 18 4391.0 -7.73 232.76
140.92 1 38 54 3368.53 -1.07 105.74 244.09 33.72 2 35 2 2768.5 -7.72 101.68
39.08 16 25 7 4990.98 -1.08 236.81 244.10 33.72 17 48 18 4391.0 -7.73 232.76
140.92 1 38 54 3368.53 -1.07 105.74 244.09 33.72 2 35 2 2768.5 -7.72 101.68
39.08 16 25 7 4990.98 -1.08 236.81 244.10 33.72 17 48 18 4391.0 -7.73 232.76
140.92 1 38 54 3368.53 -1.07 105.74 244.09 33.72 2 35 2 2768.5 -7.72 101.68

DIFFERENTIAL CORRECTIONS

TDE-4.9614 TRA 2.3836 TC3 -.1213 BAU 2.3207
RD-15.5899 RRA 1.8598 RC3 -.2441 FAU-.03970
FDE 3.3336 FRA -.4951 FC3 .0540 BSP 12304
BOE16.3603 BRA 3.0233 BC3 .2726 FSP -223

MID-COURSE EXECUTION ACCURACY

SGT 1610.8 SGR 3824.2 SG3 71.7
RRF -.9901 RRF -.9989 RTF -.9107
SG8 4149.6 R23 -.0174 R13 -.9998
SG1 4092.5 SG2 685.9 THA 68.82

ORBIT DETERMINATION ACCURACY

ST 1163.9 SR 3547.1 SS 1943.4
CRT .9821 CR8 .9999 CST .9849
LSA 4203.5 MSA 209.0 SSA .5
ELI 3727.3 EL2 208.9 ALF 72.08

LAUNCH DATE DEC 31 1968

FLIGHT TIME 152.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 415.326

RL 147.10 LAL -.00 LOL 99.39 VL 27.725 GAL 1.65 AZL 69.97 HCA 184.55 SMA 128.13 ECC .15075 INC20.0332 V1 30.287
RP 108.86 LAP -1.56 LOP 283.66 VP 37.449 GAP -.63 AZP 109.98 TAL 170.64 TAP 355.19 RCA 108.81 APO 147.44 V2 34.810
RC 85.328 GL 65.48 GP -84.07 ZAL 85.47 ZAP 87.28 ETS 62.14 ZAE 95.09 ETE 320.26 ZAC 108.42 ETC 259.34 CLP -62.68

PLANETOCENTRIC CONIC

C3 108.878 VHL 10.454 DLA 63.15 RAL 329.46 RAD 6570.1 VEL 15.173 PTH 2.72 VHP 10.981 DPA -61.85 RAP 87.49 ECC 2.7918
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.87 15 42 52 4794.98 -15.38 235.59 231.47 27.93 17 2 47 4195.0 -22.41 231.96
149.13 1 38 26 3094.72 -15.37 94.36 231.45 27.93 2 30 1 2494.7 -22.40 90.73
30.87 15 42 52 4794.98 -15.38 235.59 231.47 27.93 17 2 47 4195.0 -22.41 231.96
149.13 1 38 26 3094.72 -15.37 94.36 231.45 27.93 2 30 1 2494.7 -22.40 90.73
30.87 15 42 52 4794.98 -15.38 235.59 231.47 27.93 17 2 47 4195.0 -22.41 231.96
149.13 1 38 26 3094.72 -15.37 94.36 231.45 27.93 2 30 1 2494.7 -22.40 90.73

DIFFERENTIAL CORRECTIONS

TDE-4.1721 TRA .6649 TC3 .0240 BAU .0906
RDE 6.1714 RRA-1.2437 RC3 -.0633 FAU .00513
FDE 3.0834 FRA -.5496 FC3 -.0408 BSP 13903
BOE 7.4493 BRA 1.4103 BC3 .0677 FSP -520

MID-COURSE EXECUTION ACCURACY

SGT 2429.8 SGR 3713.0 SG3 157.4
RRF -.9967 RRF .9990 RTF -.9990
SG8 4437.4 R23 .0165 R13 .9997
SG1 4434.3 SG2 166.3 THA 123.17

ORBIT DETERMINATION ACCURACY

ST 2303.7 SR 3418.9 SS 1617.6
CRT -.9996 CR8 -.9999 CST .9999
LSA 4428.3 MSA 55.7 SSA 1.0
ELI 4122.3 EL2 52.7 ALF 123.97

LAUNCH DATE DEC 31 1968

FLIGHT TIME 154.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 421.553

RL 147.10 LAL -.00 LOL 99.39 VL 27.730 GAL 1.69 AZL 76.93 HCA 187.63 SMA 128.17 ECC .15055 INC13.0676 V1 30.287
RP 108.88 LAP -1.72 LOP 286.83 VP 37.448 GAP -.26 AZP 102.96 TAL 170.39 TAP 358.02 RCA 108.87 APO 147.46 V2 34.804
RC 87.691 GL 61.57 GP -72.25 ZAL 83.20 ZAP 87.77 ETS 14.95 ZAE 107.30 ETE 274.64 ZAC 112.12 ETC 211.50 CLP -82.65

PLANETOCENTRIC CONIC

C3 50.792 VHL 7.127 DLA 62.03 RAL 338.28 RAD 6568.9 VEL 13.121 PTH 2.40 VHP 6.847 DPA -56.12 RAP 66.43 ECC 1.8359
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.19 16 21 12 4613.12 -25.62 228.81 233.54 31.34 17 38 5 4013.1 -32.37 224.31
147.81 2 10 26 2923.61 -25.61 89.12 233.52 31.34 2 59 9 2323.6 -32.36 84.63
32.19 16 21 12 4613.12 -25.62 228.81 233.54 31.34 17 38 5 4013.1 -32.37 224.31
147.81 2 10 26 2923.61 -25.61 89.12 233.52 31.34 2 59 9 2323.6 -32.36 84.63
32.19 16 21 12 4613.12 -25.62 228.81 233.54 31.34 17 38 5 4013.1 -32.37 224.31
147.81 2 10 26 2923.61 -25.61 89.12 233.52 31.34 2 59 9 2323.6 -32.36 84.63

DIFFERENTIAL CORRECTIONS

TDE .8316 TRA -.3214 TC3 -.0848 BAU .3694
RDE 5.1001 RRA -.5723 RC3 -.5374 FAU .03052
FDE 4.3229 FRA -.4334 FC3 -.5202 BSP 13735
BOE 5.1674 BRA .8564 BC3 .5441 FSP -1046

MID-COURSE EXECUTION ACCURACY

SGT 874.7 SGR 4284.9 SG3 313.7
RRF .8003 RRF .9994 RTF .8888
SG8 4373.3 R23 .0410 R13 .9989
SG1 4357.2 SG2 374.4 THA 79.51

ORBIT DETERMINATION ACCURACY

ST 688.7 SR 4110.8 SS 2060.3
CRT .9855 CR8-1.0000 CST -.9841
LSA 4648.0 MSA 117.6 SSA 1.5
ELI 4166.5 EL2 113.4 ALF 80.62

LAUNCH DATE DEC 31 1968

FLIGHT TIME 156.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 427.812

RL 147.10 LAL -.00 LOL 99.39 VL 27.734 GAL 1.73 AZL 79.88 HCA 190.76 SMA 128.19 ECC .15051 INC10.1165 V1 30.287
RP 108.90 LAP -1.88 LOP 289.99 VP 37.445 GAP .12 AZP 99.94 TAL 170.13 TAP .89 RCA 108.90 APO 147.48 V2 34.799
RC 90.085 GL 57.35 GP -83.05 ZAL 81.39 ZAP 89.90 ETS 4.81 ZAE 116.38 ETE 264.80 ZAC 113.81 ETC 200.60 CLP -89.78

PLANETOCENTRIC CONIC

C3 33.442 VHL 5.783 DLA 59.87 RAL 345.95 RAD 6568.3 VEL 12.442 PTH 2.25 VHP 5.203 DPA -50.30 RAP 54.25 ECC 1.5504
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.76 16 58 11 4496.49 -30.94 222.09 235.80 35.82 18 13 8 3896.5 -37.29 216.63
145.24 2 34 39 2829.82 -30.93 85.51 235.58 35.82 3 21 48 2229.8 -37.28 80.05
34.76 16 58 11 4496.49 -30.94 222.09 235.80 35.82 18 13 8 3896.5 -37.29 216.63
145.24 2 34 39 2829.82 -30.93 85.51 235.58 35.82 3 21 48 2229.8 -37.28 80.05
34.76 16 58 11 4496.49 -30.94 222.09 235.80 35.82 18 13 8 3896.5 -37.29 216.63
145.24 2 34 39 2829.82 -30.93 85.51 235.58 35.82 3 21 48 2229.8 -37.28 80.05

DIFFERENTIAL CORRECTIONS

TDE 1.3022 TRA -.3164 TC3 -.3251 BAU .4373
RDE 3.8326 RRA -.1580 RC3 -.9224 FAU .05785
FDE 5.5862 FRA -.1673 FC3-1.4923 BSP 13223
BOE 4.0667 BRA .3356 BC3 .9780 FSP -1674

MID-COURSE EXECUTION ACCURACY

SGT 1481.8 SGR 3975.6 SG3 501.7
RRF .9371 RRF .9993 RTF .9292
SG8 4242.7 R23 .0617 R13 .9976
SG1 4214.6 SG2 487.9 THA 70.47

ORBIT DETERMINATION ACCURACY

ST 1303.7 SR 3818.3 SS 2488.3
CRT .9928 CR8-1.0000 CST -.9920
LSA 4737.9 MSA 152.8 SSA 2.1
ELI 4032.1 EL2 147.4 ALF 71.25

LAUNCH DATE DEC 31 1968

FLIGHT TIME 158.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 434.068

RL 147.10 LAL -.00 LOL 99.39 VL 27.734 GAL 1.79 AZL 81.51 MCA 193.91 SMA 128.19 ECC .15066 INC 8.4866 V1 30.287  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.442 GAP .49 AZP 98.24 TAL 169.84 TAP 3.75 RCA 108.98 APO 147.51 V2 34.795  
 RC 92.449 GL 53.70 GP -55.41 ZAL 79.89 ZAP 93.24 ETS 358.63 ZAE 123.51 ETE 257.37 ZAC 114.16 ETC 193.47 CLP -95.71

PLANETOCENTRIC CONIC

C3 25.768 VHL 5.076 DLA 57.67 RAL 351.71 RAD 6568.0 VEL 12.130 PTH 2.17 VHP 4.376 DPA -45.06 RAP 45.71 ECC 1.4241  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.41 17 28 2 4418.22 -33.60 216.19 236.86 39.94 18 41 40 3818.2 -39.56 209.96  
 142.59 2 50 48 2777.70 -33.59 82.94 236.84 39.94 3 37 6 2177.7 -39.55 76.70  
 37.41 17 28 2 4418.22 -33.60 216.19 236.86 39.94 18 41 40 3818.2 -39.56 209.96  
 142.59 2 50 48 2777.70 -33.59 82.94 236.84 39.94 3 37 6 2177.7 -39.55 76.70  
 37.41 17 28 2 4418.22 -33.60 216.19 236.86 39.94 18 41 40 3818.2 -39.56 209.96  
 142.59 2 50 48 2777.70 -33.59 82.94 236.84 39.94 3 37 6 2177.7 -39.55 76.70

DIFFERENTIAL CORRECTIONS

TOE 1.5399 TRA -.2447 TC3 -.6307 BAU .4584  
 ROE 3.0354 RRA .0573 RC3-1.1717 FAU .08362  
 FDE 6.5476 FRA .2054 FC3-2.8095 BSP 12703  
 BOE 3.4037 BRA .2513 BC3 1.3307 FSP -2295

MID-COURSE EXECUTION ACCURACY

SGT 1923.0 SGR 3828.8 SG3 685.5  
 RRT .9538 RRF .9992 RTF .9470  
 SGB 4106.8 R23 .0843 R13 .9958  
 SG1 4074.3 SG2 515.6 THA 62.72

ORBIT DETERMINATION ACCURACY

ST 1745.1 SR 3426.5 SS 2794.8  
 CRT .9951 CR3-1.0000 CST -.9943  
 LSA 4750.7 MSA 166.5 SSA 2.6  
 EL1 3842.2 EL2 154.6 ALF 63.08

LAUNCH DATE DEC 31 1968

FLIGHT TIME 160.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 440.312

RL 147.10 LAL -.00 LOL 99.39 VL 27.733 GAL 1.85 AZL 82.55 MCA 197.06 SMA 128.18 ECC .15098 INC 7.4495 V1 30.287  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.437 GAP .86 AZP 97.13 TAL 169.50 TAP 6.56 RCA 108.83 APO 147.54 V2 34.791  
 RC 94.840 GL 50.61 GP -48.90 ZAL 78.56 ZAP 97.34 ETS 354.15 ZAE 129.01 ETE 250.09 ZAC 113.61 ETC 187.99 CLP-101.21

PLANETOCENTRIC CONIC

C3 21.622 VHL 4.650 DLA 55.69 RAL 356.16 RAD 6567.9 VEL 11.956 PTH 2.13 VHP 3.916 DPA -40.46 RAP 39.14 ECC 1.3558  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.81 17 52 17 4362.14 -34.89 211.24 237.75 43.41 19 4 59 3762.1 -40.50 204.43  
 140.19 3 2 0 2748.04 -34.88 81.14 237.74 43.40 3 47 48 2148.0 -40.48 74.34  
 39.81 17 52 17 4362.14 -34.89 211.24 237.75 43.41 19 4 59 3762.1 -40.50 204.43  
 140.19 3 2 0 2748.04 -34.88 81.14 237.74 43.40 3 47 48 2148.0 -40.48 74.34  
 39.81 17 52 17 4362.14 -34.89 211.24 237.75 43.41 19 4 59 3762.1 -40.50 204.43  
 140.19 3 2 0 2748.04 -34.88 81.14 237.74 43.40 3 47 48 2148.0 -40.48 74.34

DIFFERENTIAL CORRECTIONS

TOE 1.7100 TRA -.1574 TC3 -.9767 BAU .4682  
 ROE 2.4457 RRA .1765 RC3-1.2919 FAU .10550  
 FDE 7.1429 FRA .6266 FC3-4.2240 BSP 12261  
 BOE 2.9842 BRA .2365 BC3 1.6196 FSP -2820

MID-COURSE EXECUTION ACCURACY

SGT 2320.1 SGR 3267.1 SG3 841.1  
 RRT .9641 RRF .9989 RTF .9581  
 SGB 4007.1 R23 .1075 R13 .9933  
 SG1 3975.0 SG2 506.2 THA 54.95

ORBIT DETERMINATION ACCURACY

ST 2109.7 SR 3016.0 SS 2981.4  
 CRT .9962 CR3-1.0000 CST -.9954  
 LSA 4733.5 MSA 173.5 SSA 3.1  
 EL1 3677.5 EL2 150.9 ALF 55.06

LAUNCH DATE DEC 31 1968

FLIGHT TIME 162.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 446.541

RL 147.10 LAL -.00 LOL 99.39 VL 27.729 GAL 1.93 AZL 83.27 MCA 200.21 SMA 128.16 ECC .15149 INC 6.7281 V1 30.287  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.431 GAP 1.22 AZP 96.32 TAL 169.11 TAP 9.32 RCA 108.74 APO 147.57 V2 34.788  
 RC 97.236 GL 47.97 GP -43.29 ZAL 77.34 ZAP 101.86 ETS 350.80 ZAE 133.05 ETE 242.61 ZAC 112.54 ETC 183.66 CLP-106.40

PLANETOCENTRIC CONIC

C3 19.105 VHL 4.371 DLA 53.96 RAL 359.76 RAD 6567.8 VEL 11.853 PTH 2.10 VHP 3.653 DPA -36.42 RAP 33.85 ECC 1.3144  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.94 18 12 41 4319.82 -35.46 207.11 238.56 46.25 19 24 41 3719.8 -40.76 199.90  
 138.06 3 10 22 2731.27 -35.45 79.93 238.55 46.24 3 55 53 2131.3 -40.75 72.72  
 41.94 18 12 41 4319.82 -35.46 207.11 238.56 46.25 19 24 41 3719.8 -40.76 199.90  
 138.06 3 10 22 2731.27 -35.45 79.93 238.55 46.24 3 55 53 2131.3 -40.75 72.72  
 41.94 18 12 41 4319.82 -35.46 207.11 238.56 46.25 19 24 41 3719.8 -40.76 199.90  
 138.06 3 10 22 2731.27 -35.45 79.93 238.55 46.24 3 55 53 2131.3 -40.75 72.72

DIFFERENTIAL CORRECTIONS

TOE 1.8462 TRA -.0628 TC3-1.3409 BAU .4794  
 ROE 1.9968 RRA .2395 RC3-1.3133 FAU .12205  
 FDE 7.3918 FRA 1.0388 FC3-5.5305 BSP 12047  
 BOE 2.7195 BRA .2476 BC3 1.8769 FSP -3228

MID-COURSE EXECUTION ACCURACY

SGT 2692.6 SGR 2907.7 SG3 956.7  
 RRT .9714 RRF .9985 RTF .9657  
 SGB 3962.9 R23 .1281 R13 .9904  
 SG1 3934.7 SG2 472.1 THA 47.26

ORBIT DETERMINATION ACCURACY

ST 2420.6 SR 2622.7 SS 3066.4  
 CRT .9962 CR3 -.9999 CST -.9961  
 LSA 4702.1 MSA 176.5 SSA 3.7  
 EL1 3566.3 EL2 139.5 ALF 47.30

LAUNCH DATE DEC 31 1968

FLIGHT TIME 164.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 452.752

RL 147.10 LAL -.00 LOL 99.39 VL 27.723 GAL 2.01 AZL 83.81 MCA 203.37 SMA 128.12 ECC .15216 INC 6.1947 V1 30.287  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.425 GAP 1.58 AZP 95.69 TAL 168.67 TAP 12.03 RCA 108.62 APO 147.61 V2 34.786  
 RC 99.836 GL 45.68 GP -38.43 ZAL 76.16 ZAP 106.53 ETS 348.30 ZAE 135.80 ETE 235.08 ZAC 111.22 ETC 180.28 CLP-111.29

PLANETOCENTRIC CONIC

C3 17.462 VHL 4.179 DLA 52.46 RAL 2.84 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 3.509 DPA -32.87 RAP 29.51 ECC 1.2874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.80 18 30 27 4286.66 -35.62 203.67 239.44 48.56 19 41 54 3686.7 -40.67 196.18  
 136.20 3 17 8 2722.37 -35.61 79.15 239.43 48.55 4 2 31 2122.4 -40.66 71.66  
 43.80 18 30 27 4286.66 -35.62 203.67 239.44 48.56 19 41 54 3686.7 -40.67 196.18  
 136.20 3 17 8 2722.37 -35.61 79.15 239.43 48.55 4 2 31 2122.4 -40.66 71.66  
 43.80 18 30 27 4286.66 -35.62 203.67 239.44 48.56 19 41 54 3686.7 -40.67 196.18  
 136.20 3 17 8 2722.37 -35.61 79.15 239.43 48.55 4 2 31 2122.4 -40.66 71.66

DIFFERENTIAL CORRECTIONS

TOE 1.9585 TRA .0354 TC3-1.7090 BAU .4967  
 ROE 1.8467 RRA .2682 RC3-1.2671 FAU .13318  
 FDE 7.3803 FRA 1.4056 FC3-6.6027 BSP 12075  
 BOE 2.5588 BRA .2705 BC3 2.1275 FSP -3504

MID-COURSE EXECUTION ACCURACY

SGT 3042.7 SGR 2565.8 SG3 1030.7  
 RRT .9765 RRF .9977 RTF .9708  
 SGB 3980.1 R23 .1429 R13 .9876  
 SG1 3957.4 SG2 424.8 THA 40.03

ORBIT DETERMINATION ACCURACY

ST 2685.8 SR 2265.3 SS 3073.6  
 CRT .9975 CR3 -.9999 CST -.9964  
 LSA 4664.9 MSA 177.5 SSA 4.3  
 EL1 3511.4 EL2 123.2 ALF 40.13



LAUNCH DATE DEC 31 1968

FLIGHT TIME 166.00

ARRIVAL DATE JUN 15 1969

MELIOCENTRIC CONIC

DISTANCE 458.946

RL 147.10 LAL -.00 LOL 99.39 VL 27.716 GAL 2.11 AZL 84.22 HCA 206.52 SMA 128.07 ECC .15301 INC 5.7821 V1 30.287  
 RP 108.94 LAP -2.58 LOP 305.79 VP 37.418 GAP 1.94 AZP 95.18 TAL 168.18 TAP 14.70 RCA 108.47 APO 147.66 V2 34.784  
 RC 102.038 GL 43.65 GP -34.21 ZAL 74.99 ZAP 111.16 ETS 346.45 ZAE 137.44 ETE 227.79 ZAC 109.86 ETC 177.67 CLP-115.88

PLANETOCENTRIC CONIC

C3 16.343 VHL 4.043 OLA 51.15 RAL 5.58 RAD 6567.7 VEL 11.736 PTH 2.07 VHP 3.444 DPA -29.73 RAP 25.95 ECC 1.2690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.45 18 46 26 4259.95 -35.56 200.77 240.44 50.46 19 57 26 3660.0 -40.39 193.09  
 134.55 3 23 3 2718.62 -35.55 78.68 240.42 50.44 4 8 21 2118.6 -40.38 71.00  
 45.45 18 46 26 4259.95 -35.56 200.77 240.44 50.46 19 57 26 3660.0 -40.39 193.09  
 134.55 3 23 3 2718.62 -35.55 78.68 240.42 50.44 4 8 21 2118.6 -40.38 71.00  
 45.45 18 46 26 4259.95 -35.56 200.77 240.44 50.46 19 57 26 3660.0 -40.39 193.09  
 134.55 3 23 3 2718.62 -35.55 78.68 240.42 50.44 4 8 21 2118.6 -40.38 71.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0534 TRA .1375 TC3-2.0667 BAU .5193 SGT 3370.2 SGR 2252.2 SG3 1067.5 ST 2912.2 SR 1952.9 SS 3027.2  
 RDE 1.3714 RRA .2775 RC3-1.1741 FAU .13898 RRT .9799 RRF .9965 RTF .9742 CRT .9979 CRS -.9998 CST -.9966  
 FDE 7.1303 FRA 1.7197 FC3-7.3618 BSP 12306 SGB 4053.4 R23 .1499 R13 .9852 LSA 4628.9 MSA 177.8 SSA 5.0  
 BDE 2.4693 BRA .3097 BC3 2.3769 FSP -3654 SG1 4036.0 SG2 375.2 THA 33.55 EL1 3504.8 EL2 104.6 ALF 33.83

LAUNCH DATE DEC 31 1968

FLIGHT TIME 168.00

ARRIVAL DATE JUN 17 1969

MELIOCENTRIC CONIC

DISTANCE 465.121

RL 147.10 LAL -.00 LOL 99.39 VL 27.706 GAL 2.22 AZL 84.55 HCA 209.68 SMA 128.00 ECC .15402 INC 5.4516 V1 30.287  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.410 GAP 2.29 AZP 94.74 TAL 167.64 TAP 17.32 RCA 108.29 APO 147.72 V2 34.783  
 RC 104.441 GL 41.81 GP -30.96 ZAL 73.80 ZAP 115.64 ETS 345.10 ZAE 138.18 ETE 221.03 ZAC 108.61 ETC 175.68 CLP-120.16

PLANETOCENTRIC CONIC

C3 15.566 VHL 3.945 OLA 50.00 RAL 8.11 RAD 6567.6 VEL 11.703 PTH 2.06 VHP 3.433 DPA -26.95 RAP 23.04 ECC 1.2562  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.91 19 1 10 4238.06 -35.36 198.32 241.58 52.02 20 11 48 3638.1 -40.01 190.50  
 133.09 3 28 31 2718.38 -35.35 78.46 241.57 52.01 4 13 50 2118.4 -40.00 70.64  
 46.91 19 1 10 4238.06 -35.36 198.32 241.58 52.02 20 11 48 3638.1 -40.01 190.50  
 133.09 3 28 31 2718.38 -35.35 78.46 241.57 52.01 4 13 50 2118.4 -40.00 70.64  
 46.91 19 1 10 4238.06 -35.36 198.32 241.58 52.02 20 11 48 3638.1 -40.01 190.50  
 133.09 3 28 31 2718.38 -35.35 78.46 241.57 52.01 4 13 50 2118.4 -40.00 70.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1340 TRA .2433 TC3-2.4030 BAU .5461 SGT 3674.4 SGR 1971.1 SG3 1073.8 ST 3103.9 SR 1686.1 SS 2944.5  
 RDE 1.1538 RRA .2748 RC3-1.0545 FAU .14024 RRT .9819 RRF .9946 RTF .9765 CRT .9983 CRS -.9997 CST -.9966  
 FDE 6.7715 FRA 1.9744 FC3-7.7996 BSP 12700 SGB 4169.7 R23 .1477 R13 .9836 LSA 4595.2 MSA 177.7 SSA 5.8  
 BDE 2.4259 BRA .3670 BC3 2.6242 FSP -3697 SG1 4156.7 SG2 330.0 THA 27.97 EL1 3531.3 EL2 85.3 ALF 28.49

LAUNCH DATE DEC 31 1968

FLIGHT TIME 170.00

ARRIVAL DATE JUN 19 1969

MELIOCENTRIC CONIC

DISTANCE 471.278

RL 147.10 LAL -.00 LOL 99.39 VL 27.696 GAL 2.35 AZL 84.82 HCA 212.84 SMA 127.93 ECC .15521 INC 5.1795 V1 30.287  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.402 GAP 2.64 AZP 94.36 TAL 167.05 TAP 19.89 RCA 108.07 APO 147.78 V2 34.783  
 RC 106.844 GL 40.12 GP -27.38 ZAL 72.59 ZAP 119.89 ETS 344.13 ZAE 138.25 ETE 215.01 ZAC 107.53 ETC 174.18 CLP-124.14

PLANETOCENTRIC CONIC

C3 15.028 VHL 3.877 OLA 48.97 RAL 10.51 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 3.463 DPA -24.46 RAP 20.72 ECC 1.2473  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.22 19 15 2 4219.85 -35.06 196.21 242.88 53.33 20 25 22 3619.8 -39.56 188.31  
 131.78 3 33 47 2720.77 -35.05 78.42 242.87 53.32 4 19 8 2120.8 -39.55 70.52  
 48.22 19 15 2 4219.85 -35.06 196.21 242.88 53.33 20 25 22 3619.8 -39.56 188.31  
 131.78 3 33 47 2720.77 -35.05 78.42 242.87 53.32 4 19 8 2120.8 -39.55 70.52  
 48.22 19 15 2 4219.85 -35.06 196.21 242.88 53.33 20 25 22 3619.8 -39.56 188.31  
 131.78 3 33 47 2720.77 -35.05 78.42 242.87 53.32 4 19 8 2120.8 -39.55 70.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2016 TRA .3521 TC3-2.7130 BAU .5759 SGT 3954.9 SGR 1723.9 SG3 1057.1 ST 3263.3 SR 1461.4 SS 2837.7  
 RDE .9812 RRA .2643 RC3 -.9250 FAU .13818 RRT .9826 RRF .9918 RTF .9783 CRT .9988 CRS -.9995 CST -.9966  
 FDE 6.3378 FRA 2.1688 FC3-7.9603 BSP 13215 SGB 4314.3 R23 .1356 R13 .9827 LSA 4561.4 MSA 177.0 SSA 6.5  
 BDE 2.4104 BRA .4402 BC3 2.8663 FSP -3659 SG1 4304.3 SG2 293.8 THA 23.30 EL1 3575.0 EL2 66.3 ALF 24.11

LAUNCH DATE DEC 31 1968

FLIGHT TIME 172.00

ARRIVAL DATE JUN 21 1969

MELIOCENTRIC CONIC

DISTANCE 477.416

RL 147.10 LAL -.00 LOL 99.39 VL 27.683 GAL 2.48 AZL 85.05 HCA 216.00 SMA 127.85 ECC .15656 INC 4.9502 V1 30.287  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.394 GAP 2.99 AZP 94.01 TAL 166.42 TAP 22.42 RCA 107.83 APO 147.86 V2 34.784  
 RC 109.246 GL 38.55 GP -24.63 ZAL 71.34 ZAP 123.89 ETS 343.44 ZAE 137.85 ETE 209.81 ZAC 106.68 ETC 173.06 CLP-127.83

PLANETOCENTRIC CONIC

C3 14.667 VHL 3.830 OLA 48.04 RAL 12.83 RAD 6567.6 VEL 11.664 PTH 2.05 VHP 3.524 DPA -22.22 RAP 18.90 ECC 1.2414  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.42 19 28 21 4204.53 -34.71 194.39 244.33 54.42 20 38 25 3604.5 -39.08 186.42  
 130.58 3 38 59 2725.23 -34.70 78.55 244.31 54.41 4 24 24 2125.2 -39.07 70.58  
 49.42 19 28 21 4204.53 -34.71 194.39 244.33 54.42 20 38 25 3604.5 -39.08 186.42  
 130.58 3 38 59 2725.23 -34.70 78.55 244.31 54.41 4 24 24 2125.2 -39.07 70.58  
 49.42 19 28 21 4204.53 -34.71 194.39 244.33 54.42 20 38 25 3604.5 -39.08 186.42  
 130.58 3 38 59 2725.23 -34.70 78.55 244.31 54.41 4 24 24 2125.2 -39.07 70.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2609 TRA .4669 TC3-2.9856 BAU .6057 SGT 4214.5 SGR 1511.4 SG3 1024.8 ST 3397.6 SR 1276.4 SS 2721.2  
 RDE .8456 RRA .2513 RC3 -.7918 FAU .13321 RRT .9817 RRF .9876 RTF .9794 CRT .9992 CRS -.9991 CST -.9966  
 FDE 5.8804 FRA 2.3233 FC3-7.8630 BSP 13736 SGB 4477.3 R23 .1160 R13 .9821 LSA 4532.8 MSA 176.6 SSA 7.3  
 BDE 2.4138 BRA .5302 BC3 3.0888 FSP -3541 SG1 4469.1 SG2 271.3 THA 19.47 EL1 3629.1 EL2 48.5 ALF 20.58

LAUNCH DATE DEC 31 1968

FLIGHT TIME 174.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 483.536

RL 147.10 LAL -.00 LOL 99.39 VL 27.67D GAL 2.63 AZL 85.25 HCA 219.15 SMA 127.75 ECC .15808 INC 4.7532 V1 30.287  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.385 GAP 3.33 AZP 93.69 TAL 165.74 TAP 24.90 RCA 107.56 APO 147.95 V2 34.785  
 RC 111.645 GL 37.06 GP -22.25 ZAL 70.05 ZAP 127.61 ETS 342.97 ZAE 137.15 ETE 205.41 ZAC 106.09 ETC 172.22 CLP-131.25

PLANETOCENTRIC CONIC

C3 14.445 VHL 3.801 DLA 47.19 RAL 15.10 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 3.609 DPA -20.19 RAP 17.54 ECC 1.2377  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.53 19 41 14 4191.65 -34.31 192.80 245.91 55.35 20 51 5 3591.6 -38.58 184.80  
 129.47 3 44 13 2731.35 -34.30 78.80 245.90 55.34 4 29 44 2131.4 -38.57 70.80  
 50.53 19 41 14 4191.65 -34.31 192.80 245.91 55.35 20 51 5 3591.6 -38.58 184.80  
 129.47 3 44 13 2731.35 -34.30 78.80 245.90 55.34 4 29 44 2131.4 -38.57 70.80  
 50.53 19 41 14 4191.65 -34.31 192.80 245.91 55.35 20 51 5 3591.6 -38.58 184.80  
 129.47 3 44 13 2731.35 -34.30 78.80 245.90 55.34 4 29 44 2131.4 -38.57 70.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.3089 TRA .5842 TC3-3.2286 BAU .6367 SGT 4451.8 SGR 1329.4 SG3 981.7 ST 3503.2 SR 1123.0 SS 2594.5  
 ROE .7376 RRA .2353 RC3 -.6687 FAU .12709 RRT .9791 RRF .9816 RTF .9804 CRT .9996 CRS -.9984 CST -.9965  
 FDE 5.4126 FRA 2.4279 FC3-7.6170 BSP 14339 SGB 4646.0 R23 .0908 R13 .9820 LSA 4498.3 MSA 175.6 SSA 8.1  
 BDE 2.4239 BRA .6298 BC3 3.2971 FSP -3402 SG1 4638.8 SG2 259.6 THA 16.35 EL1 3678.7 EL2 31.7 ALF 17.77

LAUNCH DATE DEC 31 1968

FLIGHT TIME 176.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 489.637

RL 147.10 LAL -.00 LOL 99.39 VL 27.655 GAL 2.79 AZL 85.42 HCA 222.31 SMA 127.65 ECC .15977 INC 4.5813 V1 30.287  
 RP 108.93 LAP -3.00 LOP 321.61 VP 37.376 GAP 3.68 AZP 93.39 TAL 165.03 TAP 27.34 RCA 107.26 APO 148.05 V2 34.787  
 RC 114.042 GL 35.64 GP -20.17 ZAL 68.72 ZAP 131.07 ETS 342.64 ZAE 136.27 ETE 201.73 ZAC 105.74 ETC 171.62 CLP-134.42

PLANETOCENTRIC CONIC

C3 14.339 VHL 3.787 DLA 46.40 RAL 17.35 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 3.714 DPA -18.33 RAP 16.57 ECC 1.2360  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.56 19 53 53 4180.66 -33.87 191.39 247.64 56.15 21 3 34 3580.7 -38.05 183.37  
 128.44 3 49 28 2739.06 -33.86 79.17 247.62 56.14 4 35 7 2139.1 -38.04 71.15  
 51.56 19 53 53 4180.66 -33.87 191.39 247.64 56.15 21 3 34 3580.7 -38.05 183.37  
 128.44 3 49 28 2739.06 -33.86 79.17 247.62 56.14 4 35 7 2139.1 -38.04 71.15  
 51.56 19 53 53 4180.66 -33.87 191.39 247.64 56.15 21 3 34 3580.7 -38.05 183.37  
 128.44 3 49 28 2739.06 -33.86 79.17 247.62 56.14 4 35 7 2139.1 -38.04 71.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.3481 TRA .7058 TC3-3.4370 BAU .6674 SGT 4668.7 SGR 1175.5 SG3 932.4 ST 3584.0 SR 997.3 SS 2464.4  
 ROE .6522 RRA .2189 RC3 -.5560 FAU .12007 RRT .9741 RRF .9733 RTF .9811 CRT .9998 CRS -.9975 CST -.9965  
 FDE 4.9567 FRA 2.4985 FC3-7.2495 BSP 14961 SGB 4814.4 R23 .0649 R13 .9820 LSA 4459.0 MSA 174.6 SSA 8.8  
 BDE 2.4370 BRA .7390 BC3 3.4816 FSP -3243 SG1 4807.5 SG2 258.1 THA 13.82 EL1 3720.1 EL2 16.9 ALF 15.55

LAUNCH DATE DEC 31 1968

FLIGHT TIME 178.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 495.718

RL 147.10 LAL -.00 LOL 99.39 VL 27.639 GAL 2.97 AZL 85.57 HCA 225.47 SMA 127.54 ECC .16163 INC 4.4290 V1 30.287  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.367 GAP 4.02 AZP 93.11 TAL 164.27 TAP 29.74 RCA 106.93 APO 148.16 V2 34.790  
 RC 116.435 GL 34.27 GP -18.37 ZAL 67.34 ZAP 134.28 ETS 342.41 ZAE 135.32 ETE 198.68 ZAC 105.64 ETC 171.18 CLP-137.36

PLANETOCENTRIC CONIC

C3 14.332 VHL 3.786 DLA 45.66 RAL 19.58 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 3.835 DPA -16.61 RAP 15.95 ECC 1.2359  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.55 20 6 23 4171.40 -33.40 190.15 249.48 56.84 21 15 54 3571.4 -37.49 182.12  
 127.45 3 54 47 2748.14 -33.39 79.65 249.47 56.83 4 40 35 2148.1 -37.49 71.63  
 52.55 20 6 23 4171.40 -33.40 190.15 249.48 56.84 21 15 54 3571.4 -37.49 182.12  
 127.45 3 54 47 2748.14 -33.39 79.65 249.47 56.83 4 40 35 2148.1 -37.49 71.63  
 52.55 20 6 23 4171.40 -33.40 190.15 249.48 56.84 21 15 54 3571.4 -37.49 182.12  
 127.45 3 54 47 2748.14 -33.39 79.65 249.47 56.83 4 40 35 2148.1 -37.49 71.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.3800 TRA .8323 TC3-3.6089 BAU .6970 SGT 4867.1 SGR 1046.9 SG3 879.9 ST 3643.2 SR 895.3 SS 2334.8  
 ROE .5851 RRA .2029 RC3 -.4553 FAU .11258 RRT .9662 RRF .9621 RTF .9817 CRT .9999 CRS -.9960 CST -.9962  
 FDE 4.9254 FRA 2.5420 FC3-6.8001 BSP 15565 SGB 4978.4 R23 .0419 R13 .9822 LSA 4415.4 MSA 173.7 SSA 9.5  
 BDE 2.4508 BRA .8566 BC3 3.6375 FSP -3072 SG1 4971.4 SG2 264.1 THA 11.77 EL1 3751.6 EL2 9.6 ALF 13.81

LAUNCH DATE DEC 31 1968

FLIGHT TIME 180.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 501.780

RL 147.10 LAL -.00 LOL 99.39 VL 27.622 GAL 3.16 AZL 85.71 HCA 228.64 SMA 127.43 ECC .16368 INC 4.2924 V1 30.287  
 RP 108.91 LAP -3.22 LOP 327.94 VP 37.357 GAP 4.37 AZP 92.84 TAL 163.47 TAP 32.11 RCA 106.57 APO 148.29 V2 34.794  
 RC 118.823 GL 32.93 GP -16.80 ZAL 65.91 ZAP 137.25 ETS 342.26 ZAE 134.33 ETE 196.15 ZAC 105.76 ETC 170.86 CLP-140.09

PLANETOCENTRIC CONIC

C3 14.417 VHL 3.797 DLA 44.96 RAL 21.81 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 3.969 DPA -15.02 RAP 15.63 ECC 1.2373  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.50 20 18 49 4163.49 -32.90 189.03 251.45 57.43 21 28 13 3563.5 -36.92 181.01  
 126.50 4 0 7 2758.64 -32.89 80.23 251.44 57.42 4 46 6 2158.6 -36.91 72.22  
 53.50 20 18 49 4163.49 -32.90 189.03 251.45 57.43 21 28 13 3563.5 -36.92 181.01  
 126.50 4 0 7 2758.64 -32.89 80.23 251.44 57.42 4 46 6 2158.6 -36.91 72.22  
 53.50 20 18 49 4163.49 -32.90 189.03 251.45 57.43 21 28 13 3563.5 -36.92 181.01  
 126.50 4 0 7 2758.64 -32.89 80.23 251.44 57.42 4 46 6 2158.6 -36.91 72.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4058 TRA .9652 TC3-3.7432 BAU .7249 SGT 5049.3 SGR 941.0 SG3 827.1 ST 3683.5 SR 813.4 SS 2209.0  
 ROE .5330 RRA .1882 RC3 -.3665 FAU .10483 RRT .9549 RRF .9477 RTF .9821 CRT .9997 CRS -.9939 CST -.9960  
 FDE 4.1263 FRA 2.5692 FC3-6.2953 BSP 16139 SGB 5136.3 R23 .0242 R13 .9823 LSA 4368.0 MSA 173.2 SSA 10.2  
 BDE 2.4642 BRA .9834 BC3 3.7610 FSP -2892 SG1 5128.9 SG2 275.1 THA 10.12 EL1 3772.2 EL2 18.8 ALF 12.45

LAUNCH DATE DEC 31 1968

FLIGHT TIME 182.00

ARRIVAL DATE JUL 1 1969

MELIOCENTRIC CONIC

DISTANCE 507.822

RL 147.10 LAL -.00 LOL 99.39 VL 27.604 GAL 3.37 AZL 85.83 HCA 231.80 SMA 127.31 ECC .16592 INC 4.1684 V1 30.287  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.348 GAP 4.72 AZP 92.58 TAL 162.64 TAP 34.44 RCA 106.19 APO 148.43 V2 34.798  
 RC 121.206 GL 31.63 GP -15.43 ZAL 64.45 ZAP 140.01 ETS 342.14 ZAE 133.37 ETE 194.05 ZAC 106.10 ETC 170.65 CLP-142.64

PLANETOCENTRIC CONIC

C3 14.586 VHL 3.819 OLA 44.28 RAL 24.03 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 4.116 DPA -13.52 RAP 15.58 ECC 1.2401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.42 20 31 16 4156.76 -32.36 180.01 253.52 57.96 21 40 33 3556.8 -36.33 180.01  
 125.58 4 5 26 2770.57 -32.35 80.92 253.51 57.94 4 51 37 2170.6 -36.32 72.92  
 54.42 20 31 16 4156.76 -32.36 180.01 253.52 57.96 21 40 33 3556.8 -36.33 180.01  
 125.58 4 5 26 2770.57 -32.35 80.92 253.51 57.94 4 51 37 2170.6 -36.32 72.92  
 54.42 20 31 16 4156.76 -32.36 180.01 253.52 57.96 21 40 33 3556.8 -36.33 180.01  
 125.58 4 5 26 2770.57 -32.35 80.92 253.51 57.94 4 51 37 2170.6 -36.32 72.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4281 TRA 1.1068 TC3-3.8557 BAU .7501 SGT 5218.4 SGR 855.0 SG3 775.6 ST 3709.6 SR 748.3 SS 2090.0  
 RDE .4933 RRA .1753 RC3 -2.0883 FAU .09692 RRT .9397 RRF .9299 RTF .9823 CRT .9991 CRS -.9911 CST -.9958  
 FDE 3.7638 FRA 2.5876 FC3-5.7521 BSP 16634 SGB 5288.0 R23 .0118 R13 .9824 LSA 4319.6 MSA 173.2 SSA 10.9  
 BDE 2.4777 BRA 1.1206 BC3 3.8465 FSP -2705 SGI 5280.0 SG2 289.1 THA 8.78 EL1 3784.1 EL2 31.9 ALF 11.39

LAUNCH DATE DEC 31 1968

FLIGHT TIME 184.00

ARRIVAL DATE JUL 3 1969

MELIOCENTRIC CONIC

DISTANCE 513.844

RL 147.10 LAL -.00 LOL 99.39 VL 27.585 GAL 3.59 AZL 85.95 HCA 234.96 SMA 127.18 ECC .16835 INC 4.0547 V1 30.287  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.339 GAP 5.07 AZP 92.35 TAL 161.77 TAP 36.73 RCA 105.77 APO 148.59 V2 34.803  
 RC 123.581 GL 30.33 GP -14.23 ZAL 62.95 ZAP 142.57 ETS 342.04 ZAE 132.44 ETE 192.31 ZAC 106.62 ETC 170.90 CLP-145.01

PLANETOCENTRIC CONIC

C3 14.839 VHL 3.852 OLA 43.61 RAL 26.26 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 4.273 DPA -12.11 RAP 15.77 ECC 1.2442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.33 20 43 43 4151.11 -31.79 187.08 255.69 58.41 21 52 54 3551.1 -35.71 179.10  
 124.67 4 10 45 2783.87 -31.78 81.71 255.68 58.40 4 57 8 2183.9 -35.70 73.73  
 55.33 20 43 43 4151.11 -31.79 187.08 255.69 58.41 21 52 54 3551.1 -35.71 179.10  
 124.67 4 10 45 2783.87 -31.78 81.71 255.68 58.40 4 57 8 2183.9 -35.70 73.73  
 55.33 20 43 43 4151.11 -31.79 187.08 255.69 58.41 21 52 54 3551.1 -35.71 179.10  
 124.67 4 10 45 2783.87 -31.78 81.71 255.68 58.40 4 57 8 2183.9 -35.70 73.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4421 TRA 1.2525 TC3-3.9008 BAU .7752 SGT 5370.8 SGR 784.7 SG3 725.2 ST 3714.5 SR 695.5 SS 1971.8  
 RDE .4626 RRA .1632 RC3 -2.2339 FAU .08961 RRT .9208 RRF .9086 RTF .9825 CRT .9978 CRS -.9874 CST -.9956  
 FDE 3.4262 FRA 2.5879 FC3-5.2281 BSP 17160 SGB 5427.8 R23 .0024 R13 .9826 LSA 4259.0 MSA 173.4 SSA 11.5  
 BDE 2.4855 BRA 1.2631 BC3 3.9073 FSP -2536 SGI 5419.3 SG2 303.2 THA 7.69 EL1 3778.8 EL2 45.4 ALF 10.58

LAUNCH DATE DEC 31 1968

FLIGHT TIME 186.00

ARRIVAL DATE JUL 5 1969

MELIOCENTRIC CONIC

DISTANCE 519.844

RL 147.10 LAL -.00 LOL 99.39 VL 27.566 GAL 3.82 AZL 86.05 HCA 238.12 SMA 127.05 ECC .17098 INC 3.9495 V1 30.287  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.329 GAP 5.43 AZP 92.09 TAL 160.88 TAP 39.00 RCA 105.33 APO 148.77 V2 34.808  
 RC 125.948 GL 29.10 GP -13.17 ZAL 61.42 ZAP 144.96 ETS 341.94 ZAE 131.56 ETE 190.86 ZAC 107.32 ETC 170.40 CLP-147.23

PLANETOCENTRIC CONIC

C3 15.176 VHL 3.896 OLA 42.95 RAL 28.48 RAD 6567.6 VEL 11.686 PTH 2.06 VHP 4.440 DPA -10.76 RAP 16.17 ECC 1.2498  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.24 20 56 15 4146.28 -31.19 186.22 257.95 58.82 22 5 21 3546.3 -35.06 178.27  
 123.76 4 15 56 2798.73 -31.17 82.60 257.94 58.81 5 2 35 2198.7 -35.05 74.66  
 56.24 20 56 15 4146.28 -31.19 186.22 257.95 58.82 22 5 21 3546.3 -35.06 178.27  
 123.76 4 15 56 2798.73 -31.17 82.60 257.94 58.81 5 2 35 2198.7 -35.05 74.66  
 56.24 20 56 15 4146.28 -31.19 186.22 257.95 58.82 22 5 21 3546.3 -35.06 178.27  
 123.76 4 15 56 2798.73 -31.17 82.60 257.94 58.81 5 2 35 2198.7 -35.05 74.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4513 TRA 1.4062 TC3-3.9323 BAU .7986 SGT 5510.9 SGR 728.5 SG3 677.4 ST 3704.8 SR 653.7 SS 1859.4  
 RDE .4400 RRA .1529 RC3 -1.1700 FAU .08260 RRT .8985 RRF .8842 RTF .9826 CRT .9958 CRS -.9827 CST -.9954  
 FDE 3.1200 FRA 2.5827 FC3-4.7120 BSP 17630 SGB 5558.9 R23 -.0037 R13 .9826 LSA 4192.8 MSA 174.4 SSA 12.1  
 BDE 2.4905 BRA 1.4145 BC3 3.9360 FSP -2375 SGI 5549.8 SG2 317.6 THA 6.80 EL1 3761.6 EL2 58.7 ALF 9.97

LAUNCH DATE DEC 31 1968

FLIGHT TIME 188.00

ARRIVAL DATE JUL 7 1969

MELIOCENTRIC CONIC

DISTANCE 525.822

RL 147.10 LAL -.00 LOL 99.39 VL 27.545 GAL 4.07 AZL 86.15 HCA 241.29 SMA 126.91 ECC .17383 INC 3.8512 V1 30.287  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.320 GAP 5.79 AZP 91.85 TAL 159.95 TAP 41.24 RCA 104.85 APO 148.97 V2 34.815  
 RC 128.306 GL 27.86 GP -12.24 ZAL 59.86 ZAP 147.18 ETS 341.83 ZAE 130.75 ETE 189.64 ZAC 108.18 ETC 170.33 CLP-149.31

PLANETOCENTRIC CONIC

C3 15.598 VHL 3.949 OLA 42.30 RAL 30.70 RAD 6567.6 VEL 11.704 PTH 2.06 VHP 4.616 DPA -9.47 RAP 16.74 ECC 1.2567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.16 21 8 50 4142.28 -30.55 185.42 260.28 59.18 22 17 52 3542.3 -34.38 177.51  
 122.84 4 21 1 2815.08 -30.53 83.60 260.28 59.17 5 7 56 2215.1 -34.37 75.69  
 57.16 21 8 50 4142.28 -30.55 185.42 260.28 59.18 22 17 52 3542.3 -34.38 177.51  
 122.84 4 21 1 2815.08 -30.53 83.60 260.28 59.17 5 7 56 2215.1 -34.37 75.69  
 57.16 21 8 50 4142.28 -30.55 185.42 260.28 59.18 22 17 52 3542.3 -34.38 177.51  
 122.84 4 21 1 2815.08 -30.53 83.60 260.28 59.17 5 7 56 2215.1 -34.37 75.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4563 TRA 1.5684 TC3-3.9315 BAU .8202 SGT 5639.7 SGR 684.1 SG3 632.3 ST 3682.3 SR 620.7 SS 1752.6  
 RDE .4238 RRA .1442 RC3 -.1256 FAU .07597 RRT .8734 RRF .8576 RTF .9827 CRT .9930 CRS -.9769 CST -.9952  
 FDE 2.8424 FRA 2.5727 FC3-4.2165 BSP 18102 SGB 5681.0 R23 -.0075 R13 .9827 LSA 4121.3 MSA 176.0 SSA 12.6  
 BDE 2.4926 BRA 1.5730 BC3 3.9335 FSP -2222 SGI 5671.4 SG2 331.3 THA 6.07 EL1 3733.5 EL2 72.1 ALF 9.51

LAUNCH DATE DEC 31 1968

FLIGHT TIME 190.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 531.777

RL 147.10 LAL -.00 LOL 99.39 VL 27.524 GAL 4.34 AZL 86.24 HCA 244.45 SMA 126.77 ECC .17690 INC 3.7587 V1 30.287
RP 108.83 LAP -3.39 LOP 343.80 VP 37.311 GAP 6.15 AZP 91.62 TAL 159.00 TAP 43.45 RCA 104.35 APO 149.20 V2 34.821
RC 130.653 GL 26.63 GP -11.41 ZAL 58.27 ZAP 149.27 ETS 341.69 ZAE 129.99 ETE 188.62 ZAC 109.18 ETC 170.29 CLP-151.27

PLANETOCENTRIC CONIC

C3 16.110 VHL 4.014 DLA 41.65 RAL 32.90 RAD 6567.6 VEL 11.726 PTH 2.07 VHP 4.802 DPA -8.23 RAP 17.48 ECC 1.2651
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.08 21 21 33 4138.87 -29.87 184.65 262.70 59.51 22 30 32 3538.9 -33.67 176.79
121.92 4 25 53 2833.13 -29.86 84.71 262.69 59.49 5 13 6 2233.1 -33.66 76.85
58.08 21 21 33 4138.87 -29.87 184.65 262.70 59.51 22 30 32 3538.9 -33.67 176.79
121.92 4 25 53 2833.13 -29.86 84.71 262.69 59.49 5 13 6 2233.1 -33.66 76.85
58.08 21 21 33 4138.87 -29.87 184.65 262.70 59.51 22 30 32 3538.9 -33.67 176.79
121.92 4 25 53 2833.13 -29.86 84.71 262.69 59.49 5 13 6 2233.1 -33.66 76.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4597 TRA 1.7420 TC3-3.8941 BAU .8389 SGT 5759.9 SGR 649.9 SG3 590.5 ST 3651.7 SR 595.3 SS 1654.1
RDE .4134 RRA .1376 RC3 -.0887 FAU .06949 RRT .8466 RRF .8302 RTF .9826 CRT .9894 CRS -.9700 CST -.9949
FOE 2.5953 FRA 2.5641 FC3-3.7342 BSP 18465 SGB 5796.5 R23 -.0090 R13 .9826 LSA 4048.9 MSA 178.5 S5A 13.1
BOE 2.4942 BRA 1.7475 BC3 3.8951 FSP -2069 SG1 5786.2 SG2 344.3 TMA 5.48 EL1 3698.9 EL2 85.4 ALF 9.17

LAUNCH DATE DEC 31 1968

FLIGHT TIME 192.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 537.707

RL 147.10 LAL -.00 LOL 99.39 VL 27.502 GAL 4.63 AZL 86.33 HCA 247.62 SMA 126.63 ECC .18022 INC 3.6709 V1 30.287
RP 108.80 LAP -3.39 LOP 346.97 VP 37.302 GAP 6.53 AZP 91.40 TAL 158.02 TAP 45.64 RCA 103.81 APO 149.45 V2 34.829
RC 132.989 GL 25.42 GP -10.68 ZAL 56.67 ZAP 151.23 ETS 341.52 ZAE 129.29 ETE 187.75 ZAC 110.30 ETC 170.26 CLP-153.12

PLANETOCENTRIC CONIC

C3 16.718 VHL 4.089 DLA 41.00 RAL 35.09 RAD 6567.7 VEL 11.752 PTH 2.07 VHP 4.997 DPA -7.03 RAP 18.36 ECC 1.2751
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.02 21 34 20 4136.09 -29.16 183.93 265.17 59.80 22 43 16 3536.1 -32.93 176.11
120.98 4 30 33 2852.85 -29.15 85.94 265.16 59.79 5 18 6 2252.9 -32.92 78.12
59.02 21 34 20 4136.09 -29.16 183.93 265.17 59.80 22 43 16 3536.1 -32.93 176.11
120.98 4 30 33 2852.85 -29.15 85.94 265.16 59.79 5 18 6 2252.9 -32.92 78.12
59.02 21 34 20 4136.09 -29.16 183.93 265.17 59.80 22 43 16 3536.1 -32.93 176.11
120.98 4 30 33 2852.85 -29.15 85.94 265.16 59.79 5 18 6 2252.9 -32.92 78.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4560 TRA 1.9222 TC3-3.8377 BAU .8578 SGT 5867.7 SGR 622.8 SG3 551.0 ST 3605.5 SR 574.9 SS 1557.8
RDE .4069 RRA .1323 RC3 -.0604 FAU .06371 RRT .8193 RRF .8022 RTF .9826 CRT .9848 CRS -.9620 CST -.9947
FOE 2.3665 FRA 2.5488 FC3-3.2992 BSP 18872 SGB 5900.7 R23 -.0100 R13 .9825 LSA 3965.3 MSA 181.8 S5A 13.4
BOE 2.4894 BRA 1.9268 BC3 3.8381 FSP -1937 SG1 5889.9 SG2 355.8 TMA 4.99 EL1 3649.7 EL2 98.7 ALF 8.93

LAUNCH DATE DEC 31 1968

FLIGHT TIME 194.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 543.611

RL 147.10 LAL -.00 LOL 99.39 VL 27.480 GAL 4.94 AZL 86.41 HCA 250.79 SMA 126.48 ECC .18380 INC 3.5870 V1 30.287
RP 108.78 LAP -3.39 LOP 350.15 VP 37.293 GAP 6.91 AZP 91.18 TAL 157.02 TAP 47.81 RCA 103.23 APO 149.73 V2 34.837
RC 135.313 GL 24.22 GP -10.03 ZAL 55.06 ZAP 153.07 ETS 341.30 ZAE 128.66 ETE 187.02 ZAC 111.54 ETC 170.23 CLP-154.88

PLANETOCENTRIC CONIC

C3 17.429 VHL 4.175 DLA 40.34 RAL 37.25 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.201 DPA -5.86 RAP 19.36 ECC 1.2868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.98 21 47 16 4133.70 -28.41 183.24 267.70 60.07 22 56 10 3533.7 -32.16 175.46
120.02 4 34 53 2874.46 -28.40 87.29 267.69 60.05 5 22 47 2274.5 -32.14 79.52
59.98 21 47 16 4133.70 -28.41 183.24 267.70 60.07 22 56 10 3533.7 -32.16 175.46
120.02 4 34 53 2874.46 -28.40 87.29 267.69 60.05 5 22 47 2274.5 -32.14 79.52
59.98 21 47 16 4133.70 -28.41 183.24 267.70 60.07 22 56 10 3533.7 -32.16 175.46
120.02 4 34 53 2874.46 -28.40 87.29 267.69 60.05 5 22 47 2274.5 -32.14 79.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4485 TRA 2.1125 TC3-3.7553 BAU .8751 SGT 5965.8 SGR 601.9 SG3 514.3 ST 3550.1 SR 559.0 SS 1467.6
RDE .4042 RRA .1286 RC3 -.0384 FAU .05829 RRT .7923 RRF .7753 RTF .9825 CRT .9792 CRS -.9528 CST -.9945
FOE 2.1601 FRA 2.5328 FC3-2.8955 BSP 19252 SGB 5996.1 R23 -.0100 R13 .9824 LSA 3877.5 MSA 186.0 S5A 13.6
BOE 2.4817 BRA 2.1164 BC3 3.7555 FSP -1814 SG1 5984.9 SG2 366.1 TMA 4.59 EL1 3592.1 EL2 112.1 ALF 8.77

LAUNCH DATE DEC 31 1968

FLIGHT TIME 196.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 549.487

RL 147.10 LAL -.00 LOL 99.39 VL 27.457 GAL 5.26 AZL 86.49 HCA 253.96 SMA 126.33 ECC .18765 INC 3.5062 V1 30.287
RP 108.75 LAP -3.37 LOP 353.32 VP 37.285 GAP 7.31 AZP 90.97 TAL 156.00 TAP 49.96 RCA 102.62 APO 150.04 V2 34.846
RC 137.625 GL 23.04 GP -9.45 ZAL 53.44 ZAP 154.81 ETS 341.02 ZAE 128.07 ETE 186.40 ZAC 112.87 ETC 170.21 CLP-156.55

PLANETOCENTRIC CONIC

C3 18.253 VHL 4.272 DLA 39.67 RAL 39.39 RAD 6567.7 VEL 11.817 PTH 2.09 VHP 5.415 DPA -4.73 RAP 20.48 ECC 1.3004
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.97 22 0 18 4131.72 -27.62 182.56 270.28 60.31 23 9 10 3531.7 -31.35 174.84
119.03 4 38 54 2897.94 -27.61 88.77 270.28 60.30 5 27 11 2297.9 -31.34 81.05
60.97 22 0 18 4131.72 -27.62 182.56 270.28 60.31 23 9 10 3531.7 -31.35 174.84
119.03 4 38 54 2897.94 -27.61 88.77 270.28 60.30 5 27 11 2297.9 -31.34 81.05
60.97 22 0 18 4131.72 -27.62 182.56 270.28 60.31 23 9 10 3531.7 -31.35 174.84
119.03 4 38 54 2897.94 -27.61 88.77 270.28 60.30 5 27 11 2297.9 -31.34 81.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4381 TRA 2.3139 TC3-3.6496 BAU .8906 SGT 6055.5 SGR 586.0 SG3 480.2 ST 3487.4 SR 546.5 SS 1383.2
RDE .4045 RRA .1266 RC3 -.0217 FAU .05322 RRT .7669 RRF .7503 RTF .9823 CRT .9727 CRS -.9426 CST -.9943
FOE 1.9735 FRA 2.5172 FC3-2.5244 BSP 19598 SGB 6083.8 R23 -.0093 R13 .9823 LSA 3786.5 MSA 191.0 S5A 13.8
BOE 2.4714 BRA 2.3174 BC3 3.6497 FSP -1699 SG1 6072.2 SG2 375.0 TMA 4.26 EL1 3527.8 EL2 125.4 ALF 8.68

LAUNCH DATE DEC 31 1968

FLIGHT TIME 198.00

ARRIVAL DATE JUL 17 1969

Heliocentric Conic

DISTANCE 555.333

RL 147.10 LAL -.00 LOL 99.39 VL 27.434 GAL 5.61 AZL 86.57 MCA 257.13 SMA 126.18 ECC .19180 INC 3.4279 V1 30.287  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.276 GAP 7.71 AZP 90.76 TAL 154.96 TAP 52.10 RCA 101.98 APO 150.38 V2 34.855  
 RC 139.923 GL 21.87 GP -8.93 ZAL 51.82 ZAP 156.47 ETS 340.67 ZAE 127.54 ETE 185.87 ZAC 114.30 ETC 170.18 CLP-158.14

Planetocentric Conic

C3 19.202 VHL 4.382 DLA 39.00 RAL 41.49 RAD 6567.8 VEL 11.857 PTH 2.10 VHP 5.639 DPA -3.62 RAP 21.70 ECC 1.3160  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.98 22 13 28 4130.01 -26.80 181.89 272.91 60.54 23 22 18 3530.0 -30.51 174.27  
 118.02 4 42 30 2923.48 -26.79 90.39 272.90 60.52 5 31 13 2323.5 -30.49 82.72  
 61.98 22 13 28 4130.01 -26.80 181.89 272.91 60.54 23 22 18 3530.0 -30.51 174.22  
 118.02 4 42 30 2923.48 -26.79 90.39 272.90 60.52 5 31 13 2323.5 -30.49 82.72  
 61.98 22 13 28 4130.01 -26.80 181.89 272.91 60.54 23 22 18 3530.0 -30.51 174.22  
 118.02 4 42 30 2923.48 -26.79 90.39 272.90 60.52 5 31 13 2323.5 -30.49 82.72

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.4279 TRA 2.5304 TC3-3.5165 BAU .9027 SGT 6140.1 SGR 574.2 SG3 449.0 ST 3423.1 SR 537.0 SS 1306.9  
 RDE .4078 RRA .1266 RC3 -.0087 FAU .04830 RRT .7440 RRF .7283 RTF .9821 CRT .9652 CRS -.9315 CST -.9941  
 FDE 1.8085 FRA 2.5059 FC3-2.1777 BSP 19835 SGB 6166.8 R23 -.0077 R13 .9820 LSA 3698.0 MSA 196.8 SSA 13.9  
 BOE 2.4619 BRA 2.5335 BC3 3.5165 FSP -1583 SG1 6155.0 SG2 382.8 THA 4.00 EL1 3462.2 EL2 138.8 ALF 8.62

LAUNCH DATE DEC 31 1968

FLIGHT TIME 200.00

ARRIVAL DATE JUL 19 1969

Heliocentric Conic

DISTANCE 561.146

RL 147.10 LAL -.00 LOL 99.39 VL 27.411 GAL 5.98 AZL 86.65 MCA 260.31 SMA 126.02 ECC .19628 INC 3.3516 V1 30.287  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.268 GAP 8.13 AZP 90.56 TAL 153.91 TAP 54.22 RCA 101.29 APO 150.76 V2 34.865  
 RC 142.207 GL 20.72 GP -8.47 ZAL 50.21 ZAP 158.04 ETS 340.24 ZAE 127.05 ETE 185.42 ZAC 115.80 ETC 170.15 CLP-159.67

Planetocentric Conic

C3 20.289 VHL 4.504 DLA 38.32 RAL 43.55 RAD 6567.8 VEL 11.903 PTH 2.11 VHP 5.874 DPA -2.53 RAP 23.00 ECC 1.3359  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.02 22 26 44 4128.60 -25.94 181.23 275.57 60.75 23 35 33 3528.6 -29.63 173.62  
 116.98 4 45 41 2951.05 -25.93 92.14 275.57 60.74 5 34 52 2351.0 -29.62 84.53  
 63.02 22 26 44 4128.60 -25.94 181.23 275.57 60.75 23 35 33 3528.6 -29.63 173.62  
 116.98 4 45 41 2951.05 -25.93 92.14 275.57 60.74 5 34 52 2351.0 -29.62 84.53  
 63.02 22 26 44 4128.60 -25.94 181.23 275.57 60.75 23 35 33 3528.6 -29.63 173.62  
 116.98 4 45 41 2951.05 -25.93 92.14 275.57 60.74 5 34 52 2351.0 -29.62 84.53

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.4111 TRA 2.7552 TC3-3.3747 BAU .9154 SGT 6213.2 SGR 564.6 SG3 419.7 ST 3348.2 SR 528.8 SS 1233.1  
 RDE .4128 RRA .1280 RC3 -.0003 FAU .04395 RRT .7235 RRF .7087 RTF .9818 CRT .9567 CRS -.9192 CST -.9939  
 FDE 1.6550 FRA 2.4913 FC3-1.8754 BSP 20150 SGB 6238.8 R23 -.0065 R13 .9818 LSA 3601.2 MSA 203.3 SSA 13.9  
 BOE 2.4462 BRA 2.7582 BC3-3.3747 FSP -1485 SG1 6226.7 SG2 388.9 THA 3.78 EL1 3386.3 EL2 152.1 ALF 8.61

LAUNCH DATE DEC 31 1968

FLIGHT TIME 202.00

ARRIVAL DATE JUL 21 1969

Heliocentric Conic

DISTANCE 566.922

RL 147.10 LAL -.00 LOL 99.39 VL 27.387 GAL 6.38 AZL 86.72 MCA 263.48 SMA 125.86 ECC .20110 INC 3.2766 V1 30.287  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.260 GAP 8.56 AZP 90.37 TAL 152.85 TAP 56.34 RCA 100.55 APO 151.18 V2 34.875  
 RC 144.478 GL 19.59 GP -8.05 ZAL 48.61 ZAP 159.54 ETS 339.72 ZAE 126.60 ETE 185.03 ZAC 117.37 ETC 170.09 CLP-161.13

Planetocentric Conic

C3 21.531 VHL 4.640 DLA 37.64 RAL 45.57 RAD 6567.9 VEL 11.955 PTH 2.13 VHP 6.121 DPA -1.46 RAP 24.38 ECC 1.3544  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.10 22 40 11 4127.20 -25.05 180.57 278.27 60.95 23 48 58 3527.2 -28.72 173.01  
 115.90 4 48 21 2980.95 -25.04 94.04 278.26 60.93 5 38 2 2381.0 -28.71 86.49  
 64.10 22 40 11 4127.20 -25.05 180.57 278.27 60.95 23 48 58 3527.2 -28.72 173.01  
 115.90 4 48 21 2980.95 -25.04 94.04 278.26 60.93 5 38 2 2381.0 -28.71 86.49  
 64.10 22 40 11 4127.20 -25.05 180.57 278.27 60.95 23 48 58 3527.2 -28.72 173.01  
 115.90 4 48 21 2980.95 -25.04 94.04 278.26 60.93 5 38 2 2381.0 -28.71 86.49

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.3917 TRA 2.9933 TC3-3.2175 BAU .9262 SGT 6278.6 SGR 557.0 SG3 392.6 ST 3269.6 SR 521.8 SS 1164.7  
 RDE .4196 RRA .1309 RC3 .0053 FAU .03988 RRT .7059 RRF .6921 RTF .9816 CRT .9473 CRS -.9059 CST -.9937  
 FDE 1.5160 FRA 2.4781 FC3-1.6033 BSP 20434 SGB 6303.3 R23 -.0050 R13 .9816 LSA 3503.5 MSA 210.4 SSA 13.9  
 BOE 2.4283 BRA 2.9962 BC3 3.2175 FSP -1394 SG1 6291.0 SG2 393.7 THA 3.60 EL1 3306.8 EL2 165.3 ALF 8.62

LAUNCH DATE DEC 31 1968

FLIGHT TIME 204.00

ARRIVAL DATE JUL 23 1969

Heliocentric Conic

DISTANCE 572.659

RL 147.10 LAL -.00 LOL 99.39 VL 27.362 GAL 6.80 AZL 86.80 MCA 266.66 SMA 125.71 ECC .20630 INC 3.2025 V1 30.287  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.252 GAP 9.02 AZP 90.19 TAL 151.79 TAP 58.45 RCA 99.77 APO 151.64 V2 34.885  
 RC 146.734 GL 18.47 GP -7.67 ZAL 47.03 ZAP 160.98 ETS 339.07 ZAE 126.19 ETE 184.70 ZAC 119.01 ETC 170.03 CLP-162.54

Planetocentric Conic

C3 22.948 VHL 4.790 DLA 36.94 RAL 47.54 RAD 6567.9 VEL 12.014 PTH 2.14 VHP 6.381 DPA -.42 RAP 25.83 ECC 1.3777  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.21 22 53 45 4125.88 -24.13 179.90 281.00 61.13 24 2 31 3525.9 -27.78 172.40  
 114.79 4 50 28 3013.15 -24.12 96.10 280.99 61.12 5 40 42 2413.1 -27.77 88.60  
 65.21 22 53 45 4125.88 -24.13 179.90 281.00 61.13 24 2 31 3525.9 -27.78 172.40  
 114.79 4 50 28 3013.15 -24.12 96.10 280.99 61.12 5 40 42 2413.1 -27.77 88.60  
 65.21 22 53 45 4125.88 -24.13 179.90 281.00 61.13 24 2 31 3525.9 -27.78 172.40  
 114.79 4 50 28 3013.15 -24.12 96.10 280.99 61.12 5 40 42 2413.1 -27.77 88.60

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 2.3709 TRA 3.2462 TC3-3.0477 BAU .9350 SGT 6337.9 SGR 550.8 SG3 367.6 ST 3189.6 SR 515.5 SS 1102.0  
 RDE .4280 RRA .1357 RC3 .0086 FAU .03606 RRT .6915 RRF .6787 RTF .9814 CRT .9368 CRS -.8918 CST -.9936  
 FDE 1.3908 FRA 2.4674 FC3-1.3606 BSP 20693 SGB 6361.7 R23 -.0036 R13 .9814 LSA 3406.7 MSA 218.0 SSA 13.8  
 BOE 2.4092 BRA 3.2491 BC3 3.0477 FSP -1309 SG1 6349.3 SG2 397.1 THA 3.45 EL1 3226.0 EL2 178.3 ALF 8.64

LAUNCH DATE DEC 31 1968

FLIGHT TIME 206.00

ARRIVAL DATE JUL 25 1969

MELIOCENTRIC CONIC DISTANCE 578.351  
 RL 147.10 LAL -.00 LOL 99.39 VL 27.338 GAL 7.25 AZL 86.87 HCA 269.84 SMA 125.55 ECC .21193 INC 3.1289 V1 30.287  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.244 GAP 9.49 AZP 90.01 TAL 150.71 TAP 60.55 RCA 98.94 APO 152.15 V2 34.897  
 RC 148.977 GL 17.38 GP -7.33 ZAL 45.47 ZAP 162.36 ETS 338.30 ZAE 125.80 ETE 184.41 ZAC 120.69 ETC 169.94 CLP-163.91

PLANETOCENTRIC CONIC  
 C3 24.561 VHL 4.956 DLA 36.25 RAL 49.45 RAD 6568.0 VEL 12.081 PTH 2.16 VHP 6.654 DPA .60 RAP 27.35 ECC 1.4042  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.36 23 7 32 4124.33 -23.18 179.20 283.75 61.31 24 16 16 3524.3 -26.82 171.76  
 113.64 4 51 58 3047.94 -23.16 98.33 283.74 61.30 5 42 46 2447.9 -26.80 90.89  
 66.36 23 7 32 4124.33 -23.18 179.20 283.75 61.31 24 16 16 3524.3 -26.82 171.76  
 113.64 4 51 58 3047.94 -23.16 98.33 283.74 61.30 5 42 46 2447.9 -26.80 90.89  
 66.36 23 7 32 4124.33 -23.18 179.20 283.75 61.31 24 16 16 3524.3 -26.82 171.76  
 113.64 4 51 58 3047.94 -23.16 98.33 283.74 61.30 5 42 46 2447.9 -26.80 90.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3482 TRA 3.5146 TC3-2.8676 BAU .9416 SGT 6390.1 SGR 545.5 SG3 344.4 ST 3108.4 SR 509.6 SS 1044.4  
 RDE .4376 RRA .1421 RC3 .0102 FAU .03249 RRT .6801 RRF .6684 RTF .9811 CRT .9254 CRS -.8768 CST -.9935  
 FDE 1.2774 FRA 2.4587 FC3 -1.1451 BSP 20925 SGB 6413.4 R23 -.0021 R13 .9811 LSA 3310.8 MSA 226.0 SSA 13.6  
 BOE 2.3887 BRA 3.5174 BC3 2.8677 FSP -1228 SGI 6400.9 SG2 399.2 TMA 3.34 EL1 3144.1 EL2 191.0 ALF 8.66

LAUNCH DATE DEC 31 1968

FLIGHT TIME 208.00

ARRIVAL DATE JUL 27 1969

MELIOCENTRIC CONIC DISTANCE 583.993  
 RL 147.10 LAL -.00 LOL 99.39 VL 27.313 GAL 7.73 AZL 86.94 HCA 273.02 SMA 125.39 ECC .21800 INC 3.0552 V1 30.287  
 RP 108.56 LAP -3.03 LOP 12.42 VP 37.237 GAP 9.98 AZP 89.84 TAL 149.64 TAP 62.66 RCA 98.05 APO 152.72 V2 34.908  
 RC 151.204 GL 16.30 GP -7.02 ZAL 43.94 ZAP 163.69 ETS 337.36 ZAE 125.45 ETE 184.17 ZAC 122.42 ETC 169.83 CLP-165.24

PLANETOCENTRIC CONIC  
 C3 26.400 VHL 5.138 DLA 35.55 RAL 51.31 RAD 6568.1 VEL 12.156 PTH 2.18 VHP 6.943 DPA 1.61 RAP 28.92 ECC 1.4345  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.55 23 21 28 4122.66 -22.19 178.49 286.52 61.48 24 30 10 3522.7 -25.82 171.10  
 112.45 4 52 50 3085.25 -22.18 100.73 286.51 61.48 5 44 15 2485.2 -25.81 93.34  
 67.55 23 21 28 4122.66 -22.19 178.49 286.52 61.48 24 30 10 3522.7 -25.82 171.10  
 112.45 4 52 50 3085.25 -22.18 100.73 286.51 61.48 5 44 15 2485.2 -25.81 93.34  
 67.55 23 21 28 4122.66 -22.19 178.49 286.52 61.48 24 30 10 3522.7 -25.82 171.10  
 112.45 4 52 50 3085.25 -22.18 100.73 286.51 61.48 5 44 15 2485.2 -25.81 93.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3277 TRA 3.8028 TC3-2.6753 BAU .9442 SGT 6439.0 SGR 541.0 SG3 323.2 ST 3031.4 SR 503.9 SS 993.6  
 RDE .4485 RRA .1504 RC3 .0110 FAU .02902 RRT .6720 RRF .6614 RTF .9809 CRT .9131 CRS -.8615 CST -.9936  
 FDE 1.1774 FRA 2.4546 FC3 -.9516 BSP 21058 SGB 6461.6 R23 -.0004 R13 .9809 LSA 3221.1 MSA 233.8 SSA 13.5  
 BOE 2.3705 BRA 3.8058 BC3 2.6754 FSP -1149 SGI 6449.3 SG2 400.0 TMA 3.24 EL1 3066.3 EL2 203.2 ALF 8.67

LAUNCH DATE DEC 31 1968

FLIGHT TIME 210.00

ARRIVAL DATE JUL 29 1969

MELIOCENTRIC CONIC DISTANCE 589.578  
 RL 147.10 LAL -.00 LOL 99.39 VL 27.288 GAL 8.24 AZL 87.02 HCA 276.21 SMA 125.23 ECC .22458 INC 2.9810 V1 30.287  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.230 GAP 10.50 AZP 89.68 TAL 148.56 TAP 64.77 RCA 97.10 APO 153.35 V2 34.920  
 RC 153.416 GL 15.25 GP -6.74 ZAL 42.44 ZAP 164.97 ETS 336.21 ZAE 125.12 ETE 183.96 ZAC 124.20 ETC 169.69 CLP-166.53

PLANETOCENTRIC CONIC  
 C3 28.496 VHL 5.338 DLA 34.85 RAL 53.10 RAD 6568.1 VEL 12.242 PTH 2.20 VHP 7.250 DPA 2.60 RAP 30.55 ECC 1.4690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.79 23 35 41 4120.44 -21.18 177.72 289.31 61.66 24 44 21 3520.4 -24.79 170.38  
 111.21 4 52 56 3125.49 -21.16 103.32 289.30 61.65 5 45 2 2525.5 -24.78 95.99  
 68.79 23 35 41 4120.44 -21.18 177.72 289.31 61.66 24 44 21 3520.4 -24.79 170.38  
 111.21 4 52 56 3125.49 -21.16 103.32 289.30 61.65 5 45 2 2525.5 -24.78 95.99  
 68.79 23 35 41 4120.44 -21.18 177.72 289.31 61.66 24 44 21 3520.4 -24.79 170.38  
 111.21 4 52 56 3125.49 -21.16 103.32 289.30 61.65 5 45 2 2525.5 -24.78 95.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3019 TRA 4.1046 TC3-2.4846 BAU .9466 SGT 6477.5 SGR 536.3 SG3 303.3 ST 2950.3 SR 497.6 SS 945.5  
 RDE .4599 RRA .1601 RC3 .0104 FAU .02591 RRT .6661 RRF .6563 RTF .9808 CRT .8996 CRS -.8450 CST -.9936  
 FDE 1.0840 FRA 2.4500 FC3 -.7873 BSP 21263 SGB 6499.7 R23 .0007 R13 .9808 LSA 3128.4 MSA 241.7 SSA 13.2  
 BOE 2.3474 BRA 4.1078 BC3 2.4846 FSP -1081 SGI 6487.4 SG2 399.4 TMA 3.17 EL1 2984.2 EL2 214.8 ALF 8.67

LAUNCH DATE DEC 31 1968

FLIGHT TIME 212.00

ARRIVAL DATE JUL 31 1969

MELIOCENTRIC CONIC DISTANCE 595.099  
 RL 147.10 LAL -.00 LOL 99.39 VL 27.263 GAL 8.80 AZL 87.09 HCA 279.39 SMA 125.07 ECC .23172 INC 2.9059 V1 30.287  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.223 GAP 11.05 AZP 89.53 TAL 147.50 TAP 66.89 RCA 96.09 APO 154.05 V2 34.932  
 RC 155.612 GL 14.23 GP -6.49 ZAL 40.98 ZAP 166.20 ETS 334.82 ZAE 124.80 ETE 183.78 ZAC 126.00 ETC 169.52 CLP-167.80

PLANETOCENTRIC CONIC  
 C3 30.888 VHL 5.558 DLA 34.14 RAL 54.83 RAD 6568.2 VEL 12.339 PTH 2.23 VHP 7.575 DPA 3.56 RAP 32.22 ECC 1.5083  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.07 23 50 10 4117.57 -20.14 176.90 292.11 61.83 24 58 48 3517.6 -23.75 169.62  
 109.93 4 52 14 3168.74 -20.13 106.12 292.10 61.82 5 45 3 2568.7 -23.73 98.84  
 70.07 23 50 10 4117.57 -20.14 176.90 292.11 61.83 24 58 48 3517.6 -23.75 169.62  
 109.93 4 52 14 3168.74 -20.13 106.12 292.10 61.82 5 45 3 2568.7 -23.73 98.84  
 110.00 5 5 16 3129.04 -21.36 103.72 292.80 62.66 5 57 25 2529.0 -24.85 96.30  
 110.00 4 40 15 3205.27 -18.91 108.27 291.40 60.98 5 33 40 2605.3 -22.63 101.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.2759 TRA 4.4264 TC3-2.2908 BAU .9460 SGT 6510.7 SGR 531.6 SG3 285.0 ST 2871.8 SR 490.8 SS 902.3  
 RDE .4720 RRA .1715 RC3 .0094 FAU .02298 RRT .6627 RRF .6536 RTF .9807 CRT .8852 CRS -.8281 CST -.9937  
 FDE 1.0000 FRA 2.4487 FC3 -.6441 BSP 21440 SGB 6532.4 R23 .0018 R13 .9807 LSA 3039.7 MSA 249.3 SSA 13.0  
 BOE 2.3244 BRA 4.4298 BC3 2.2908 FSP -1017 SGI 6520.3 SG2 397.5 TMA 3.11 EL1 2904.6 EL2 225.7 ALF 8.66

LAUNCH DATE DEC 31 1968

FLIGHT TIME 214.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 600.546

RL 147.10 LAL -.00 LOL 99.39 VL 27.239 GAL 9.39 AZL 87.17 HCA 282.58 SMA 124.91 ECC .23947 INC 2.8294 VI 30.287  
 RP 108.45 LAP -2.76 LOP 21.98 VP 37.216 GAP 11.64 AZP 89.38 TAL 146.44 TAP 69.02 RCA 94.99 APO 154.82 V2 34.945  
 RC 157.792 GL 13.22 GP -6.26 ZAL 39.56 ZAP 167.40 ETS 333.12 ZAE 124.50 ETE 183.62 ZAC 127.84 ETC 169.32 CLP-169.04

PLANETOCENTRIC CONIC

C3 33.624 VHL 5.799 DLA 33.44 RAL 56.49 RAD 6568.3 VEL 12.450 PTH 2.25 VHP 7.922 DPA 4.50 RAP 33.93 ECC 1.5534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.42 0 8 58 4113.72 -19.08 176.00 294.92 62.00 1 17 32 3513.7 -22.67 168.77  
 108.58 4 50 38 3215.32 -19.07 109.14 294.92 61.99 5 44 13 2615.3 -22.66 101.91  
 71.42 0 8 58 4113.72 -19.08 176.00 294.92 62.00 1 17 32 3513.7 -22.67 168.77  
 108.58 4 50 38 3215.32 -19.07 109.14 294.92 61.99 5 44 13 2615.3 -22.66 101.91  
 110.00 5 53 15 3023.49 -24.52 97.14 297.81 65.40 6 43 39 2423.5 -27.62 89.35  
 110.00 4 5 32 3353.55 -13.81 116.73 291.78 58.42 5 1 25 2753.5 -17.89 109.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2493 TRA 4.7690 TC3-2.0965 BAU .9424 SGT 6537.6 SGR 526.5 SG3 267.9 ST 2795.5 SR 483.3 SS 863.4  
 RDE .4846 RRA .1847 RC3 .0081 FAU .02023 RRT .6614 RRF .6529 RTF .9807 CRT .8699 CRS -.8107 CST -.9939  
 FDE .9239 FRA 2.4501 FC3 -.5208 BSP 21804 SGB 6558.8 R23 .0026 R13 .9807 LSA 2954.4 MSA 256.4 SSA 12.7  
 BDE 2.3009 BRA 4.7726 BC3 2.0965 FSP -.957 SGI 6546.9 SG2 394.4 THA 3.06 EL1 2827.2 EL2 235.7 ALF 8.61

LAUNCH DATE DEC 31 1968

FLIGHT TIME 216.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 605.908

RL 147.10 LAL -.00 LOL 99.39 VL 27.214 GAL 10.03 AZL 87.25 HCA 285.77 SMA 124.75 ECC .24791 INC 2.7508 VI 30.287  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.210 GAP 12.26 AZP 89.25 TAL 145.40 TAP 71.17 RCA 93.82 APO 155.67 V2 34.957  
 RC 159.953 GL 12.25 GP -6.04 ZAL 38.18 ZAP 168.55 ETS 331.03 ZAE 124.20 ETE 183.48 ZAC 129.69 ETC 169.08 CLP-170.26

PLANETOCENTRIC CONIC

C3 36.759 VHL 6.063 DLA 32.74 RAL 58.09 RAD 6568.4 VEL 12.575 PTH 2.28 VHP 8.293 DPA 5.43 RAP 35.67 ECC 1.6050  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.84 0 24 19 4108.48 -18.00 175.00 297.74 62.18 1 32 48 3508.5 -21.58 167.81  
 107.16 4 47 59 3265.58 -17.99 112.41 297.73 62.17 5 42 25 2665.6 -21.57 105.22  
 72.84 0 24 19 4108.48 -18.00 175.00 297.74 62.18 1 32 48 3508.5 -21.58 167.81  
 107.16 4 47 59 3265.58 -17.99 112.41 297.73 62.17 5 42 25 2665.6 -21.57 105.22  
 110.00 6 20 42 2980.12 -25.72 94.34 301.71 66.66 7 10 22 2380.1 -28.64 86.39  
 110.00 3 50 47 3441.94 -10.60 121.57 293.29 57.31 4 48 9 2841.9 -14.84 115.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2270 TRA 5.1390 TC3-1.8987 BAU .9331 SGT 6562.5 SGR 521.4 SG3 252.3 ST 2726.6 SR 475.3 SS 830.5  
 RDE .4979 RRA .1998 RC3 .0071 FAU .01751 RRT .6625 RRF .6547 RTF .9808 CRT .8541 CRS -.7936 CST -.9941  
 FDE .8577 FRA 2.4574 FC3 -.4124 BSP 21649 SGB 6583.2 R23 .0035 R13 .9808 LSA 2877.6 MSA 262.5 SSA 12.5  
 BDE 2.2820 BRA 5.1429 BC3 1.8987 FSP -.897 SGI 6571.6 SG2 390.0 THA 3.02 EL1 2756.9 EL2 244.5 ALF 8.54

LAUNCH DATE DEC 31 1968

FLIGHT TIME 218.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 611.170

RL 147.10 LAL -.00 LOL 99.39 VL 27.189 GAL 10.72 AZL 87.33 HCA 288.96 SMA 124.59 ECC .25712 INC 2.6697 VI 30.287  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.204 GAP 12.92 AZP 89.13 TAL 144.38 TAP 73.35 RCA 92.55 APO 156.62 V2 34.970  
 RC 162.097 GL 11.29 GP -5.85 ZAL 36.86 ZAP 169.67 ETS 328.41 ZAE 123.91 ETE 183.37 ZAC 131.56 ETC 168.80 CLP-171.48

PLANETOCENTRIC CONIC

C3 40.362 VHL 6.353 DLA 32.04 RAL 59.61 RAD 6568.6 VEL 12.717 PTH 2.31 VHP 8.692 DPA 6.33 RAP 37.44 ECC 1.6643  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.34 0 40 18 4101.27 -16.91 173.84 300.56 62.37 1 48 39 3501.3 -20.47 166.70  
 105.66 4 44 8 3320.04 -16.90 115.97 300.56 62.36 5 39 28 2720.0 -20.46 108.83  
 74.34 0 40 18 4101.27 -16.91 173.84 300.56 62.37 1 48 39 3501.3 -20.47 166.70  
 105.66 4 44 8 3320.04 -16.90 115.97 300.56 62.36 5 39 28 2720.0 -20.46 108.83  
 110.00 6 42 56 2952.41 -26.45 92.53 305.36 67.51 7 32 9 2352.4 -29.26 84.47  
 110.00 3 40 40 3516.91 -7.82 125.60 295.09 56.62 4 39 17 2916.9 -12.16 119.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2010 TRA 5.5301 TC3-1.7087 BAU .9220 SGT 6578.1 SGR 515.4 SG3 237.7 ST 2657.1 SR 466.1 SS 800.1  
 RDE .5112 RRA .2164 RC3 .0059 FAU .01505 RRT .6648 RRF .6574 RTF .9810 CRT .8372 CRS -.7750 CST -.9945  
 FDE .7959 FRA 2.4661 FC3 -.3228 BSP 21787 SGB 6598.2 R23 .0040 R13 .9811 LSA 2801.0 MSA 267.9 SSA 12.2  
 BDE 2.2596 BRA 5.5343 BC3 1.7087 FSP -.845 SGI 6587.2 SG2 384.5 THA 2.99 EL1 2685.8 EL2 252.2 ALF 8.43

LAUNCH DATE DEC 31 1968

FLIGHT TIME 220.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 616.315

RL 147.10 LAL -.00 LOL 99.39 VL 27.164 GAL 11.47 AZL 87.41 HCA 292.16 SMA 124.43 ECC .26719 INC 2.5854 VI 30.287  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.198 GAP 13.64 AZP 89.02 TAL 143.40 TAP 75.55 RCA 91.18 APO 157.68 V2 34.983  
 RC 164.221 GL 10.37 GP -5.68 ZAL 35.59 ZAP 170.75 ETS 325.10 ZAE 123.61 ETE 183.26 ZAC 133.44 ETC 168.48 CLP-172.68

PLANETOCENTRIC CONIC

C3 44.517 VHL 6.872 DLA 31.35 RAL 61.05 RAD 6568.7 VEL 12.880 PTH 2.35 VHP 9.122 DPA 7.20 RAP 39.24 ECC 1.7326  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.96 0 57 8 4091.25 -15.80 172.48 303.38 62.57 2 5 20 3491.2 -19.35 165.38  
 104.04 4 38 49 3379.47 -15.79 119.88 303.38 62.56 5 35 8 2779.5 -19.34 112.77  
 75.96 0 57 8 4091.25 -15.80 172.48 303.38 62.57 2 5 20 3491.2 -19.35 165.38  
 104.04 4 38 49 3379.47 -15.79 119.88 303.38 62.56 5 35 8 2779.5 -19.34 112.77  
 110.00 7 2 15 2933.45 -26.94 91.27 308.86 68.11 7 51 9 2333.4 -29.66 83.14  
 110.00 3 32 52 3585.28 -5.24 129.21 297.04 56.17 4 32 38 2985.3 -9.65 122.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1761 TRA 5.9491 TC3-1.5229 BAU .9064 SGT 6588.3 SGR 508.7 SG3 224.1 ST 2591.6 SR 456.0 SS 775.7  
 RDE .9246 RRA .2348 RC3 .0049 FAU .01271 RRT .6686 RRF .6616 RTF .9814 CRT .8198 CRS -.7582 CST -.9948  
 FDE .7405 FRA 2.4790 FC3 -.2472 BSP 21907 SGB 6607.9 R23 .0043 R13 .9814 LSA 2729.2 MSA 272.1 SSA 11.8  
 BDE 2.2384 BRA 5.9538 BC3 1.5230 FSP -.797 SGI 6597.1 SG2 377.7 THA 2.96 EL1 2618.7 EL2 258.4 ALF 8.29

LAUNCH DATE JAN 1 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 12 1969

HELIOCENTRIC CONIC

DISTANCE 146.505

RL 147.09 LAL -.00 LOL 100.41 VL 20.099 GAL 12.28 AZL 85.88 MCA 53.51 SMA 94.76 ECC .58004 INC 4.1223 V1 30.288  
 RP 107.53 LAP 3.31 LOP 153.85 VP 32.678 GAP -34.71 AZP 87.55 TAL 170.77 TAP 224.28 RCA 39.80 APO 149.73 V2 35.241  
 RC 56.605 GL 6.98 GP 2.25 ZAL 68.31 ZAP 24.26 ETS 185.68 ZAE 151.11 ETE 195.15 ZAC 92.00 ETC 166.36 CLP 24.16

PLANETOCENTRIC CONIC

C3 134.904 VHL 11.615 DLA 18.80 RAL 27.55 RAD 6570.4 VEL 16.007 PTH 2.82 VHP 20.509 DPA -1.77 RAP 358.62 ECC 3.2202  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 4 3294.20 -24.66 117.27 289.93 75.62 4 47 59 2694.2 -26.39 109.03  
 90.00 21 3 49 4680.61 14.89 199.47 276.31 65.63 22 21 49 4080.6 11.48 192.45  
 100.00 5 25 52 2994.97 -26.63 95.81 290.49 75.90 6 15 47 2395.0 -28.31 87.41  
 100.00 22 13 42 4455.07 16.74 182.00 275.43 64.87 23 27 57 3855.1 13.22 174.98  
 110.00 6 58 59 2703.66 -31.73 75.12 291.92 76.55 7 44 2 2103.7 -33.25 66.22  
 110.00 22 57 5 4319.14 21.45 169.25 272.98 62.72 24 9 4 3719.1 17.62 162.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5354 TRA-1.4369 TC3 -.1045 BAU .1939 SGT 830.3 SGR 440.9 SG3 35.3 ST 346.8 SR 413.5 SS 324.7  
 RDE -.8333 RRA .2844 RC3 -.0255 FAU .01450 RRT .0326 RRF -.0352 RTF -.6500 CRT .6876 CRS .8023 CST .9833  
 FDE .3202 FRA .5931 FC3 -.0931 BSP 2278 SGB 940.1 R23 -.0057 R13 -.6501 LSA 587.8 MSA 225.8 SSA 13.7  
 BDE .9904 BRA 1.4648 BC3 .1075 FSP -76 SG1 830.5 SG2 440.6 THA 1.38 EL1 497.4 EL2 209.3 ALF 52.21

LAUNCH DATE JAN 1 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 14 1969

HELIOCENTRIC CONIC

DISTANCE 152.715

RL 147.09 LAL -.00 LOL 100.41 VL 20.690 GAL 11.75 AZL 85.99 MCA 56.76 SMA 96.42 ECC .55336 INC 4.0061 V1 30.288  
 RP 107.55 LAP 3.35 LOP 157.10 VP 33.039 GAP -33.01 AZP 87.80 TAL 170.16 TAP 226.91 RCA 43.07 APO 149.78 V2 35.235  
 RC 54.864 GL 7.38 GP 2.33 ZAL 67.43 ZAP 22.73 ETS 186.35 ZAE 152.30 ETE 196.19 ZAC 93.63 ETC 166.36 CLP 22.61

PLANETOCENTRIC CONIC

C3 121.522 VHL 11.024 DLA 19.49 RAL 28.29 RAD 6570.3 VEL 15.584 PTH 2.78 VHP 19.629 DPA -1.00 RAP .13 ECC 2.9999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 48 34 3301.77 -24.53 117.79 289.35 75.39 4 43 36 2701.8 -26.30 109.56  
 90.00 21 14 14 4632.50 13.52 196.60 275.86 64.88 22 31 26 4032.5 10.02 189.67  
 100.00 5 22 7 3000.13 -26.55 96.17 289.93 75.73 6 12 7 2400.1 -28.25 87.78  
 100.00 22 23 22 4409.38 15.40 179.27 274.93 64.06 23 36 51 3809.4 11.79 172.35  
 110.00 6 56 40 2704.30 -31.72 75.17 291.39 76.52 7 41 45 2104.3 -33.24 66.27  
 110.00 23 5 18 4277.97 20.14 166.77 272.38 61.78 24 16 36 3678.0 16.21 159.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5358 TRA-1.4331 TC3 -.1082 BAU .1816 SGT 871.1 SGR 444.9 SG3 38.5 ST 365.8 SR 418.0 SS 340.6  
 RDE -.7998 RRA .2846 RC3 -.0280 FAU .01484 RRT .0393 RRF -.0415 RTF -.6693 CRT .6894 CRS .8044 CST .9833  
 FDE .3331 FRA .6136 FC3 -.1057 BSP 2386 SGB 978.1 R23 -.0059 R13 -.6694 LSA 608.9 MSA 231.4 SSA 13.9  
 BDE .9627 BRA 1.4573 BC3 .1118 FSP -84 SG1 871.3 SG2 444.4 THA 1.56 EL1 511.5 EL2 216.5 ALF 50.50

LAUNCH DATE JAN 1 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 16 1969

HELIOCENTRIC CONIC

DISTANCE 158.997

RL 147.09 LAL -.00 LOL 100.41 VL 21.240 GAL 11.22 AZL 86.10 MCA 60.00 SMA 98.07 ECC .52762 INC 3.8983 V1 30.288  
 RP 107.57 LAP 3.38 LOP 160.35 VP 33.380 GAP -31.41 AZP 88.05 TAL 169.58 TAP 229.58 RCA 46.32 APO 149.81 V2 35.229  
 RC 53.197 GL 7.78 GP 2.42 ZAL 66.63 ZAP 21.21 ETS 187.12 ZAE 153.63 ETE 197.36 ZAC 95.26 ETC 166.35 CLP 21.08

PLANETOCENTRIC CONIC

C3 109.527 VHL 10.466 DLA 20.16 RAL 28.96 RAD 6570.1 VEL 15.194 PTH 2.73 VHP 18.783 DPA -.22 RAP 1.65 ECC 2.8025  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 43 44 3308.56 -24.41 118.25 288.63 75.19 4 38 53 2708.6 -26.21 110.04  
 90.00 21 24 26 4583.60 12.09 193.72 275.33 64.20 22 40 49 3983.6 8.52 186.86  
 100.00 5 18 4 3004.36 -26.48 96.47 289.22 75.59 6 8 9 2404.4 -28.20 88.09  
 100.00 22 32 47 4363.03 14.00 176.54 274.36 63.32 23 45 30 3763.0 10.31 169.70  
 110.00 6 54 7 2703.86 -31.72 75.13 290.71 76.54 7 39 11 2103.9 -33.25 66.24  
 110.00 23 13 13 4236.30 18.78 164.30 271.73 60.90 24 23 49 3636.3 14.76 157.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5347 TRA-1.4265 TC3 -.1104 BAU .1678 SGT 911.6 SGR 448.1 SG3 42.0 ST 384.7 SR 422.0 SS 356.8  
 RDE -.7668 RRA .2453 RC3 -.0307 FAU .01522 RRT .0459 RRF -.0483 RTF -.6883 CRT .6911 CRS .8067 CST .9831  
 FDE .3464 FRA .6341 FC3 -.1203 BSP 2549 SGB 1015.8 R23 -.0067 R13 -.6885 LSA 630.3 MSA 236.6 SSA 14.1  
 BDE .9348 BRA 1.4472 BC3 .1146 FSP -93 SG1 911.9 SG2 447.5 THA 1.70 EL1 525.6 EL2 223.3 ALF 48.81

LAUNCH DATE JAN 1 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 18 1969

HELIOCENTRIC CONIC

DISTANCE 165.344

RL 147.09 LAL -.00 LOL 100.41 VL 21.752 GAL 10.71 AZL 86.20 MCA 63.24 SMA 99.69 ECC .50286 INC 3.7974 V1 30.288  
 RP 107.59 LAP 3.39 LOP 163.60 VP 33.701 GAP -29.88 AZP 88.29 TAL 169.03 TAP 232.27 RCA 49.56 APO 149.82 V2 35.222  
 RC 51.611 GL 8.19 GP 2.51 ZAL 65.90 ZAP 19.72 ETS 188.01 ZAE 155.12 ETE 198.71 ZAC 96.90 ETC 166.32 CLP 19.56

PLANETOCENTRIC CONIC

C3 98.768 VHL 9.938 DLA 20.81 RAL 29.57 RAD 6569.9 VEL 14.836 PTH 2.68 VHP 17.969 DPA .58 RAP 3.18 ECC 2.6255  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 32 3314.66 -24.30 118.66 287.77 75.00 4 33 47 2714.7 -26.13 110.47  
 90.00 21 34 26 4533.92 10.60 190.83 274.74 63.59 22 50 0 3933.9 6.97 184.04  
 100.00 5 13 43 3007.74 -26.42 96.70 288.38 75.48 6 3 51 2407.7 -28.15 88.33  
 100.00 22 41 56 4316.08 12.55 173.81 275.73 62.65 23 53 52 3716.1 8.79 167.05  
 110.00 6 51 19 2702.39 -31.75 75.02 289.90 76.60 7 36 21 2102.4 -33.26 66.12  
 110.00 23 20 49 4194.19 17.37 161.85 271.01 60.08 24 30 43 3594.2 13.26 155.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5341 TRA-1.4184 TC3 -.1114 BAU .1535 SGT 953.5 SGR 450.7 SG3 45.8 ST 404.6 SR 425.4 SS 373.6  
 RDE -.7342 RRA .2265 RC3 -.0335 FAU .01566 RRT .0533 RRF -.0560 RTF -.7066 CRT .6934 CRS .8093 CST .9830  
 FDE .3604 FRA .6549 FC3 -.1372 BSP 2725 SGB 1054.6 R23 -.0076 R13 -.7068 LSA 652.6 MSA 241.1 SSA 14.3  
 BDE .9079 BRA 1.4364 BC3 .1163 FSP -103 SG1 953.8 SG2 449.8 THA 1.85 EL1 540.4 EL2 229.5 ALF 47.06



LAUNCH DATE JAN 1 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC

DISTANCE 171.753

RL 147.09 LAL -0.00 LOL 100.41 VL 22.229 GAL 10.20 AZL 86.30 HCA 66.48 SMA 101.28 ECC .47910 INC 3.7020 V1 30.288  
 RP 107.61 LAP 3.39 LOP 166.84 VP 34.003 GAP -28.42 AZP 88.52 TAL 168.51 TAP 234.99 RCA 52.76 APO 149.81 V2 35.215  
 RC 50.116 GL 8.61 GP 2.62 ZAL 65.25 ZAP 18.24 ETS 189.06 ZAE 156.77 ETE 200.28 ZAC 98.54 ETC 166.27 CLP 18.05

PLANETOCENTRIC CONIC

C3 89.112 VHL 9.440 DLA 21.44 RAL 30.09 RAD 6569.7 VEL 14.507 PTH 2.63 VHP 17.185 DPA 1.39 RAP 4.71 ECC 2.4666  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 58 3320.16 -24.21 119.04 286.77 74.84 4 28 18 2720.2 -26.06 110.86  
 90.00 21 44 13 4483.49 9.06 187.93 274.08 63.06 22 58 57 3883.5 5.37 181.19  
 100.00 5 9 3 3010.33 -26.37 96.88 287.40 75.40 5 59 13 2410.3 -28.12 88.52  
 100.00 22 50 49 4268.57 11.05 171.09 273.03 62.05 24 1 58 3668.6 7.22 164.38  
 110.00 6 48 16 2699.93 -31.78 74.84 288.94 76.70 7 33 16 2099.9 -33.29 65.94  
 110.00 23 28 6 4151.72 15.91 159.42 270.23 59.34 24 37 17 3551.7 11.72 152.82

DIFFERENTIAL CORRECTIONS

TDE -.5341 TRA-1.4096 TC3 -.1109 BAU .1391 SGT 996.9 SGR 452.5 S63 49.9 ST 425.6 SR 428.1 S5 391.2  
 RDE -.7022 RRA .2082 RC3 -.0363 FAU .01613 RRT .0618 RRF -.0647 RTF -.7241 CRT .6966 CRS .8124 CST .9829  
 FDE .3752 FRA .6761 FC3 -.1587 B5P 2905 SGB 1094.8 R23 -.0086 R13 -.7243 LSA 676.2 MSA 245.1 SSA 14.5  
 BOE .8822 BRA 1.4248 BC3 .1167 F5P -115 S61 997.4 S62 451.4 THA 2.01 EL1 556.0 EL2 235.1 ALF 45.24

LAUNCH DATE JAN 1 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC

DISTANCE 178.216

RL 147.09 LAL -0.00 LOL 100.41 VL 22.673 GAL 9.70 AZL 86.39 HCA 69.72 SMA 102.84 ECC .45635 INC 3.6114 V1 30.288  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.286 GAP -27.03 AZP 88.75 TAL 168.03 TAP 237.75 RCA 55.91 APO 149.78 V2 35.207  
 RC 48.721 GL 9.03 GP 2.74 ZAL 64.67 ZAP 16.77 ETS 190.29 ZAE 158.56 ETE 202.16 ZAC 100.19 ETC 166.19 CLP 16.55

PLANETOCENTRIC CONIC

C3 80.442 VHL 8.969 DLA 22.05 RAL 30.55 RAD 6569.6 VEL 14.205 PTH 2.59 VHP 16.430 DPA 2.21 RAP 6.25 ECC 2.3239  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 27 0 3325.15 -24.12 119.30 285.63 74.69 4 22 26 2725.2 -25.99 111.21  
 90.00 21 53 49 4432.38 7.47 185.02 273.36 62.61 23 7 41 3832.4 3.74 178.32  
 100.00 5 4 4 3012.19 -26.34 97.01 286.29 75.33 5 54 16 2412.2 -28.10 88.65  
 100.00 22 59 26 4220.57 9.50 168.36 272.27 61.52 24 9 47 3620.6 5.63 161.72  
 110.00 6 44 58 2696.54 -31.84 74.59 287.85 76.84 7 29 54 2096.5 -33.32 65.68  
 110.00 23 35 2 4108.99 14.41 157.02 269.38 58.66 24 43 31 3509.0 10.16 150.50

DIFFERENTIAL CORRECTIONS

TDE -.5374 TRA-1.4080 TC3 -.1101 BAU .1256 SGT 1044.3 SGR 453.6 S63 54.5 ST 449.4 SR 430.3 S5 409.9  
 RDE -.6708 RRA .1904 RC3 -.0392 FAU .01665 RRT .0722 RRF -.0748 RTF -.7402 CRT .7018 CRS .8160 CST .9832  
 FDE .3912 FRA .6980 FC3 -.1792 B5P 3028 SGB 1138.6 R23 -.0091 R13 -.7405 LSA 702.4 MSA 248.2 SSA 14.7  
 BOE .8995 BRA 1.4149 BC3 .1168 F5P -127 S61 1044.9 S62 452.2 THA 2.21 EL1 574.0 EL2 240.0 ALF 43.23

LAUNCH DATE JAN 1 1969

FLIGHT TIME 82.00

ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC

DISTANCE 184.729

RL 147.09 LAL -0.00 LOL 100.41 VL 23.085 GAL 9.21 AZL 86.48 HCA 72.95 SMA 104.37 ECC .43461 INC 3.5244 V1 30.288  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.552 GAP -25.70 AZP 88.97 TAL 167.60 TAP 240.55 RCA 59.01 APO 149.73 V2 35.198  
 RC 47.437 GL 9.46 GP 2.86 ZAL 64.17 ZAP 15.32 ETS 191.78 ZAE 160.50 ETE 204.44 ZAC 101.94 ETC 166.09 CLP 15.06

PLANETOCENTRIC CONIC

C3 72.653 VHL 8.524 DLA 22.64 RAL 30.93 RAD 6569.4 VEL 13.929 PTH 2.54 VHP 15.702 DPA 3.05 RAP 7.78 ECC 2.1957  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 20 40 3329.72 -24.04 119.69 284.37 74.56 4 16 9 2729.7 -25.92 111.53  
 90.00 22 3 12 4380.64 5.84 182.09 272.57 62.24 23 16 13 3780.6 2.08 175.43  
 100.00 4 58 46 3013.39 -26.32 97.09 285.05 75.30 5 48 59 2413.4 -28.08 88.73  
 100.00 23 7 47 4172.21 7.92 165.64 271.44 61.08 24 17 19 3572.2 4.00 159.04  
 110.00 6 41 25 2692.26 -31.90 74.28 286.62 77.02 7 26 17 2092.3 -33.36 65.35  
 110.00 23 41 38 4066.10 12.88 154.64 268.48 58.06 24 49 24 3466.1 8.56 148.20

DIFFERENTIAL CORRECTIONS

TDE -.5388 TRA-1.3910 TC3 -.1062 BAU .1109 SGT 1091.0 SGR 454.0 S63 59.4 ST 472.8 SR 431.9 S5 429.2  
 RDE -.6400 RRA .1732 RC3 -.0420 FAU .01724 RRT .0828 RRF -.0859 RTF -.7561 CRT .7068 CRS .8199 CST .9833  
 FDE .4080 FRA .7201 FC3 -.2054 B5P 3213 SGB 1181.7 R23 -.0103 R13 -.7564 LSA 728.9 MSA 250.6 SSA 14.8  
 BOE .8366 BRA 1.4017 BC3 .1142 F5P -141 S61 1091.7 S62 452.1 THA 2.38 EL1 592.1 EL2 244.0 ALF 41.35

LAUNCH DATE JAN 1 1969

FLIGHT TIME 84.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC

DISTANCE 191.286

RL 147.09 LAL -0.00 LOL 100.41 VL 23.469 GAL 8.74 AZL 86.56 HCA 76.19 SMA 105.86 ECC .41389 INC 3.4405 V1 30.288  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.800 GAP -24.43 AZP 89.18 TAL 167.20 TAP 243.39 RCA 62.05 APO 149.68 V2 35.189  
 RC 46.274 GL 9.89 GP 3.00 ZAL 63.75 ZAP 13.89 ETS 193.61 ZAE 162.58 ETE 207.31 ZAC 103.48 ETC 165.96 CLP 13.57

PLANETOCENTRIC CONIC

C3 65.656 VHL 8.103 DLA 23.20 RAL 31.24 RAD 6569.2 VEL 13.675 PTH 2.50 VHP 15.001 DPA 3.90 RAP 9.31 ECC 2.0805  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 55 3333.97 -23.96 119.97 282.98 74.44 4 9 29 2734.0 -25.86 111.82  
 90.00 22 12 23 4328.38 4.17 179.15 271.71 61.97 23 24 32 3728.4 .39 172.51  
 100.00 4 53 9 3013.99 -26.31 97.13 283.69 75.28 5 43 23 2414.0 -28.08 88.78  
 100.00 23 15 50 4123.59 6.31 162.93 270.54 60.72 24 24 33 3523.6 2.36 156.37  
 110.00 6 37 38 2687.15 -31.98 73.90 285.27 77.23 7 22 25 2087.1 -33.41 64.96  
 110.00 23 47 51 4023.20 11.32 152.29 267.51 57.53 24 54 54 3423.2 6.96 145.92

DIFFERENTIAL CORRECTIONS

TDE -.5411 TRA-1.3789 TC3 -.1000 BAU .0961 SGT 1139.3 SGR 453.7 S63 64.9 ST 497.7 SR 432.9 S5 449.6  
 RDE -.8101 RRA .1565 RC3 -.0447 FAU .01789 RRT .0950 RRF -.0984 RTF -.7713 CRT .7128 CRS .8242 CST .9836  
 FDE .4261 FRA .7429 FC3 -.2359 B5P 3400 SGB 1226.3 R23 -.0116 R13 -.7716 LSA 757.2 MSA 252.2 SSA 15.0  
 BOE .8155 BRA 1.3877 BC3 .1095 F5P -156 S61 1140.2 S62 451.3 THA 2.57 EL1 611.6 EL2 247.1 ALF 39.45

LAUNCH DATE JAN 1 1969

FLIGHT TIME 86.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

DISTANCE 197.881

RL 147.09 LAL -.00 LOL 100.41 VL 23.827 GAL 8.28 AZL 86.64 HCA 79.42 SMA 107.31 ECC .39417 INC 3.3590 V1 30.288
RP 107.72 LAP 3.30 LOP 179.81 VP 35.032 GAP -23.21 AZP 89.38 TAL 166.85 TAP 246.27 RCA 65.01 APO 149.61 V2 35.179
RC 45.244 GL 10.33 GP 3.16 ZAL 63.41 ZAP 12.48 ETS 195.89 ZAE 164.76 ETE 211.05 ZAC 105.12 ETC 165.80 CLP 12.08

PLANETOCENTRIC CONIC

C3 59.369 VHL 7.705 DLA 23.74 RAL 31.47 RAD 6569.1 VEL 13.443 PTH 2.46 VHP 14.325 DPA 4.76 RAP 10.84 ECC 1.9771
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 6 47 3337.97 -23.88 120.24 281.48 74.32 4 2 25 2738.0 -25.81 112.10
90.00 22 21 21 4275.70 2.48 176.20 270.79 61.78 23 32 37 3675.7 -1.31 169.58
100.00 4 47 15 3014.02 -26.31 97.14 282.21 75.28 5 37 29 2414.0 -28.08 88.78
100.00 23 23 34 4074.89 4.68 160.23 269.58 60.44 24 31 29 3474.9 .71 153.70
110.00 6 33 37 2681.23 -32.07 73.46 283.81 77.48 7 18 19 2081.2 -33.46 64.50
110.00 23 53 41 3980.44 9.75 149.98 266.48 57.07 25 0 1 3380.4 5.34 143.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5438 TRA-1.3652 TC3 -.0909 BAU .0813 SGT 1188.8 SGR 452.7 S63 70.8 ST 523.7 SR 433.4 SS 470.9
RDE -.5810 RRA .1404 RC3 -.0471 FAU .01861 RRT .1086 RRF -.1125 RTF -.7857 CRT .7197 CRS .8290 CST .9839
FDE .4454 FRA .7663 FC3 -.2714 BSP 3593 SGB 1272.0 R23 -.0130 R13 -.7860 LSA 787.1 MSA 253.0 SSA 15.2
BOE .7958 BRA 1.3724 BC3 .1024 FSP -173 SGI 1189.9 S62 449.6 THA 2.76 EL1 632.5 EL2 249.2 ALF 37.59

LAUNCH DATE JAN 1 1969

FLIGHT TIME 88.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 204.511

RL 147.09 LAL -.00 LOL 100.41 VL 24.159 GAL 7.84 AZL 86.72 HCA 82.65 SMA 108.71 ECC .37545 INC 3.2791 V1 30.288
RP 107.75 LAP 3.25 LOP 183.05 VP 35.249 GAP -22.05 AZP 89.58 TAL 166.54 TAP 249.20 RCA 67.89 APO 149.52 V2 35.169
RC 44.357 GL 10.76 GP 3.33 ZAL 63.14 ZAP 11.09 ETS 198.80 ZAE 167.00 ETE 216.14 ZAC 106.74 ETC 165.62 CLP 10.58

PLANETOCENTRIC CONIC

C3 53.721 VHL 7.329 DLA 24.26 RAL 31.62 RAD 6568.9 VEL 13.232 PTH 2.42 VHP 13.673 DPA 5.63 RAP 12.35 ECC 1.8841
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 59 15 3341.79 -23.81 120.50 279.87 74.21 3 54 57 2741.8 -25.75 112.37
90.00 22 30 5 4222.76 .77 173.25 269.81 61.69 23 40 28 3622.8 -3.02 166.62
100.00 4 41 5 3013.50 -26.32 97.10 280.62 75.29 5 31 18 2413.5 -28.08 88.74
100.00 23 30 57 4026.28 3.04 157.55 268.55 60.25 24 38 4 3426.3 -.94 151.03
110.00 6 29 25 2674.53 -32.17 72.96 282.23 77.76 7 14 0 2074.5 -33.52 63.99
110.00 0 3 2 3936.02 8.17 147.71 265.39 56.69 1 8 40 3338.0 3.73 141.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5472 TRA-1.3503 TC3 -.0788 BAU .0667 SGT 1239.7 SGR 451.1 S63 77.4 ST 551.0 SR 433.4 SS 493.5
RDE -.5529 RRA .1248 RC3 -.0493 FAU .01942 RRT .1240 RRF -.1285 RTF -.7993 CRT .7275 CRS .8342 CST .9843
FDE .4664 FRA .7906 FC3 -.3129 BSP 3786 SGB 1319.2 R23 -.0146 R13 -.7997 LSA 819.0 MSA 252.9 SSA 15.3
BOE .7779 BRA 1.3561 BC3 .0929 FSP -192 SGI 1241.2 S62 447.1 THA 2.97 EL1 654.9 EL2 250.2 ALF 35.79

LAUNCH DATE JAN 1 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 211.169

RL 147.09 LAL -.00 LOL 100.41 VL 24.467 GAL 7.41 AZL 86.80 HCA 85.88 SMA 110.06 ECC .35772 INC 3.2005 V1 30.288
RP 107.79 LAP 3.19 LOP 186.28 VP 35.450 GAP -20.93 AZP 89.77 TAL 166.28 TAP 252.17 RCA 70.69 APO 149.43 V2 35.158
RC 43.625 GL 11.20 GP 3.51 ZAL 62.95 ZAP 9.73 ETS 202.61 ZAE 169.25 ETE 223.44 ZAC 108.35 ETC 165.40 CLP 9.08

PLANETOCENTRIC CONIC

C3 48.647 VHL 6.975 DLA 24.75 RAL 31.69 RAD 6568.8 VEL 13.039 PTH 2.38 VHP 13.045 DPA 6.52 RAP 13.86 ECC 1.8006
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 51 22 3345.45 -23.75 120.75 278.16 74.10 3 47 8 2745.4 -25.70 112.62
90.00 22 38 34 4169.76 -.94 170.29 268.76 61.70 23 48 4 3569.8 -4.71 163.65
100.00 4 34 40 3012.42 -26.34 97.03 278.94 75.33 5 24 52 2412.4 -28.10 88.67
100.00 23 37 58 3978.02 1.41 154.90 267.45 60.14 24 44 16 3378.0 -2.57 148.38
110.00 6 25 3 2667.06 -32.27 72.40 280.55 78.07 7 9 30 2067.1 -33.58 63.42
110.00 0 8 0 3896.15 6.60 145.49 264.24 56.38 1 12 56 3296.1 2.13 139.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5510 TRA-1.3341 TC3 -.0629 BAU .0526 SGT 1291.8 SGR 448.8 S63 84.7 ST 579.6 SR 433.0 SS 517.2
RDE -.5258 RRA .1097 RC3 -.0509 FAU .02031 RRT .1414 RRF -.1465 RTF -.8122 CRT .7361 CRS .8399 CST .9847
FDE .4889 FRA .8158 FC3 -.3615 BSP 3987 SGB 1367.5 R23 -.0164 R13 -.8126 LSA 852.7 MSA 251.9 SSA 15.5
BOE .7616 BRA 1.3386 BC3 .0809 FSP -213 SGI 1293.5 S62 443.7 THA 3.19 EL1 678.8 EL2 250.2 ALF 34.05

LAUNCH DATE JAN 1 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 217.851

RL 147.09 LAL -.00 LOL 100.41 VL 24.754 GAL 6.99 AZL 86.88 HCA 89.11 SMA 111.36 ECC .34094 INC 3.1225 V1 30.288
RP 107.82 LAP 3.12 LOP 189.52 VP 35.638 GAP -19.85 AZP 89.95 TAL 166.07 TAP 255.18 RCA 73.40 APO 149.33 V2 35.147
RC 43.055 GL 11.63 GP 3.72 ZAL 62.84 ZAP 8.44 ETS 207.74 ZAE 171.34 ETE 234.53 ZAC 109.94 ETC 165.14 CLP 7.58

PLANETOCENTRIC CONIC

C3 44.090 VHL 6.640 DLA 25.20 RAL 31.69 RAD 6568.7 VEL 12.863 PTH 2.34 VHP 12.440 DPA 7.41 RAP 15.35 ECC 1.7256
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 43 11 3348.92 -23.68 120.98 276.35 74.00 3 39 0 2748.9 -25.65 112.86
90.00 22 46 45 4116.94 -2.64 167.35 267.64 61.80 23 55 22 3516.9 -6.39 160.67
100.00 4 28 5 3010.73 -26.37 96.91 277.16 75.38 5 18 15 2410.7 -28.12 88.54
100.00 23 44 32 3930.37 -.21 152.29 266.29 60.11 24 50 3 3330.4 -4.18 145.76
110.00 6 20 34 2658.80 -32.39 71.79 278.77 78.42 7 4 53 2058.8 -33.64 62.78
110.00 0 12 29 3855.06 5.04 143.32 263.02 56.15 1 16 44 3255.1 .56 137.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5555 TRA-1.3165 TC3 -.0428 BAU .0397 SGT 1345.1 SGR 446.0 S63 92.7 ST 609.6 SR 432.1 SS 542.3
RDE -.4998 RRA .0951 RC3 -.0519 FAU .02131 RRT .1612 RRF -.1670 RTF -.8244 CRT .7458 CRS .8460 CST .9853
FDE .5134 FRA .8422 FC3 -.4184 BSP 4193 SGB 1417.1 R23 -.0184 R13 -.8249 LSA 888.6 MSA 250.1 SSA 15.6
BOE .7472 BRA 1.3199 BC3 .0673 FSP -236 SGI 1347.2 S62 439.5 THA 3.42 EL1 704.4 EL2 249.1 ALF 32.40

LAUNCH DATE JAN 1 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 224.553

RL 147.09 LAL -.00 LOL 100.41 VL 25.020 GAL 6.59 AZL 86.96 HCA 92.34 SMA 112.62 ECC .32510 INC 3.0448 V1 30.288  
 RP 107.86 LAP 3.04 LOP 192.75 VP 35.812 GAP -18.82 AZP 90.12 TAL 165.91 TAP 258.25 RCA 76.00 APO 149.23 V2 35.135  
 RC 42.657 GL 12.05 GP 3.95 ZAL 62.81 ZAP 7.23 ETS 214.82 ZAE 173.02 ETE 251.90 ZAC 111.51 ETC 164.84 CLP 6.06

PLANETOCENTRIC CONIC

C3 39.998 VHL 6.324 DLA 25.63 RAL 31.61 RAD 6568.5 VEL 12.703 PTH 2.31 VHP 11.857 DPA 8.32 RAP 16.82 ECC 1.6583  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 34 44 3352.12 -23.62 121.20 274.46 73.91 3 30 36 2752.1 -25.60 113.09  
 90.00 22 54 35 4064.62 -4.32 164.42 266.46 61.99 24 2 19 3464.6 -8.03 157.71  
 100.00 4 21 23 3008.30 -26.41 96.74 275.30 75.46 5 11 31 2408.3 -28.15 88.37  
 100.00 23 50 37 3883.68 -1.79 149.73 265.06 60.16 24 55 21 3283.7 -5.75 143.17  
 110.00 6 16 0 2649.70 -32.51 71.11 276.90 78.80 7 0 9 2049.7 -33.71 62.08  
 110.00 0 16 25 3815.04 3.52 141.22 261.75 55.98 1 20 1 3215.0 -9.7 135.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5602 TRA-1.2975 TC3 -.0180 BAU .0294 SGT 1399.2 SGR 442.8 SG3 101.5 ST 640.7 SR 430.9 SS 568.9  
 RDE -.4749 RRA .0810 RC3 -.0520 FAU .02241 RRT .1838 RRF -.1902 RTF -.8359 CRT .7562 CRS .8526 CST .9859  
 FDE .5399 FRA .8698 FC3 -.4851 BSP 4398 SGB 1467.6 R23 -.0207 R13 -.8364 LSA 926.5 MSA 247.4 SSA 15.8  
 BDE .7344 BRA 1.3000 BC3 .0550 FSP -262 SG1 1401.8 SG2 434.4 THA 3.68 EL1 731.6 EL2 246.9 ALF 30.85

LAUNCH DATE JAN 1 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 231.271

RL 147.09 LAL -.00 LOL 100.41 VL 25.267 GAL 6.21 AZL 87.03 HCA 95.56 SMA 113.81 ECC .31017 INC 2.9667 V1 30.288  
 RP 107.89 LAP 2.95 LOP 195.97 VP 35.973 GAP -17.83 AZP 90.29 TAL 165.80 TAP 261.36 RCA 78.51 APO 149.12 V2 35.123  
 RC 42.436 GL 12.46 GP 4.71 ZAL 62.85 ZAP 6.17 ETS 224.76 ZAE 173.83 ETE 276.75 ZAC 113.04 ETC 164.50 CLP 4.52

PLANETOCENTRIC CONIC

C3 36.325 VHL 6.027 DLA 26.01 RAL 31.46 RAD 6568.4 VEL 12.558 PTH 2.28 VHP 11.295 DPA 9.25 RAP 18.27 ECC 1.5978  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 26 9 3354.83 -23.57 121.38 272.50 73.84 3 22 4 2754.8 -25.56 113.27  
 90.00 23 1 57 4013.23 -5.95 161.53 265.20 62.27 24 8 51 3413.2 -9.62 154.77  
 100.00 4 14 41 3004.94 -26.47 96.51 273.38 75.57 5 4 46 2404.9 -28.19 88.13  
 100.00 0 0 2 3838.36 -3.32 147.23 263.75 60.28 1 4 1 3238.4 -7.25 140.65  
 110.00 6 11 25 2639.67 -32.64 70.35 274.96 79.23 6 55 25 2039.7 -33.78 61.30  
 110.00 0 19 47 3776.39 2.05 139.20 260.41 55.87 1 22 44 3176.4 -2.44 133.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5655 TRA-1.2776 TC3 .0120 BAU .0254 SGT 1454.5 SGR 439.2 SG3 111.3 ST 673.3 SR 429.5 SS 597.0  
 RDE -.4513 RRA .0673 RC3 -.0510 FAU .02365 RRT .2092 RRF -.2167 RTF -.8466 CRT .7675 CRS .8595 CST .9866  
 FDE .5688 FRA .8992 FC3 -.5636 BSP 4592 SGB 1519.3 R23 -.0233 R13 -.8473 LSA 966.7 MSA 243.9 SSA 15.9  
 BDE .7235 BRA 1.2794 BC3 .0524 FSP -291 SG1 1457.7 SG2 428.5 THA 3.96 EL1 760.6 EL2 243.8 ALF 29.40

LAUNCH DATE JAN 1 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 238.000

RL 147.09 LAL -.00 LOL 100.41 VL 25.496 GAL 5.84 AZL 87.11 HCA 98.78 SMA 114.96 ECC .29614 INC 2.8878 V1 30.288  
 RP 107.93 LAP 2.85 LOP 199.20 VP 36.122 GAP -16.88 AZP 90.44 TAL 165.74 TAP 264.52 RCA 80.91 APO 149.00 V2 35.111  
 RC 42.394 GL 12.85 GP 4.49 ZAL 62.96 ZAP 5.38 ETS 238.51 ZAE 173.37 ETE 303.09 ZAC 114.54 ETC 164.11 CLP 2.96

PLANETOCENTRIC CONIC

C3 33.029 VHL 5.747 DLA 26.35 RAL 31.24 RAD 6568.3 VEL 12.426 PTH 2.25 VHP 10.754 DPA 10.18 RAP 19.69 ECC 1.5436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 17 35 3356.68 -23.53 121.50 270.49 73.78 3 13 31 2756.7 -25.53 113.40  
 90.00 23 8 44 3963.36 -7.53 158.70 263.87 62.62 24 14 48 3363.4 -11.14 151.89  
 100.00 4 8 7 3000.35 -26.54 96.19 271.39 75.72 4 58 7 2400.4 -28.24 87.80  
 100.00 0 4 50 3794.92 -4.78 144.84 262.38 60.46 1 8 5 3194.9 -8.68 138.22  
 110.00 6 6 55 2628.61 -32.78 69.52 272.95 79.71 6 50 44 2028.6 -33.85 60.45  
 110.00 0 22 30 3739.44 .64 137.27 259.01 55.82 1 24 50 3139.4 -3.85 131.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5706 TRA-1.2562 TC3 .0478 BAU .0300 SGT 1509.9 SGR 435.4 SG3 122.1 ST 706.7 SR 428.0 SS 626.5  
 RDE -.4289 RRA .0539 RC3 -.0484 FAU .02502 RRT .2380 RRF -.2467 RTF -.8567 CRT .7793 CRS .8668 CST .9873  
 FDE .6000 FRA .9302 FC3 -.6558 BSP 4800 SGB 1571.4 R23 -.0263 R13 -.8574 LSA 1008.7 MSA 239.7 SSA 16.0  
 BDE .7139 BRA 1.2573 BC3 .0680 FSP -323 SG1 1513.8 SG2 421.8 THA 4.26 EL1 790.7 EL2 239.7 ALF 28.07

LAUNCH DATE JAN 1 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 244.737

RL 147.09 LAL -.00 LOL 100.41 VL 25.707 GAL 5.49 AZL 87.19 HCA 102.00 SMA 116.05 ECC .28297 INC 2.8076 V1 30.288  
 RP 107.97 LAP 2.75 LOP 202.42 VP 36.260 GAP -15.96 AZP 90.58 TAL 165.73 TAP 267.72 RCA 83.21 APO 148.89 V2 35.099  
 RC 42.534 GL 13.21 GP 4.81 ZAL 63.14 ZAP 5.01 ETS 235.99 ZAE 171.88 ETE 322.90 ZAC 115.99 ETC 163.68 CLP 1.38

PLANETOCENTRIC CONIC

C3 30.072 VHL 5.484 DLA 26.64 RAL 30.95 RAD 6568.2 VEL 12.306 PTH 2.22 VHP 10.233 DPA 11.14 RAP 21.08 ECC 1.4949  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 9 16 3357.07 -23.53 121.53 268.43 73.77 3 5 13 2757.1 -25.53 113.43  
 90.00 23 14 44 3915.81 -9.00 155.99 262.46 63.04 24 20 0 3315.8 -12.55 149.11  
 100.00 4 1 50 2994.15 -26.85 93.76 269.36 75.93 4 51 44 2394.2 -28.32 87.35  
 100.00 0 8 46 3753.96 -6.15 142.57 260.92 60.69 1 11 20 3154.0 -10.01 135.91  
 110.00 6 2 35 2616.32 -32.92 68.59 270.89 80.24 6 46 11 2016.3 -33.92 59.49  
 110.00 0 24 31 3704.55 -.70 135.45 257.54 55.82 1 26 15 3104.6 -5.18 129.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5764 TRA-1.2341 TC3 .0901 BAU .0403 SGT 1566.3 SGR 431.6 SG3 134.1 ST 741.6 SR 426.5 SS 657.9  
 RDE -.4080 RRA .0407 RC3 -.0440 FAU .02655 RRT .2710 RRF -.2811 RTF -.8663 CRT .7920 CRS .8745 CST .9881  
 FDE .6341 FRA .9635 FC3 -.7644 BSP 5001 SGB 1624.7 R23 -.0297 R13 -.8671 LSA 1053.3 MSA 234.7 SSA 16.2  
 BDE .7061 BRA 1.2348 BC3 .1003 FSP -358 SG1 1571.0 SG2 414.2 THA 4.59 EL1 822.6 EL2 234.7 ALF 26.85

LAUNCH DATE JAN 1 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 251.478

RL 147.09 LAL -.00 LOL 100.41 VL 25.903 GAL 5.16 AZL 87.27 HCA 105.21 SMA 117.08 ECC .27064 INC 2.7255 V1 30.288  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.387 GAP -15.08 AZP 90.72 TAL 165.76 TAP 270.98 RCA 85.40 APO 148.77 V2 35.086  
 RC 42.853 GL 13.55 GP 5.17 ZAL 63.40 ZAP 5.17 ETS 274.64 ZAE 169.85 ETE 335.79 ZAC 117.39 ETC 163.18 CLP -.23

PLANETOCENTRIC CONIC

C3 27.421 VHL 5.236 DLA 26.88 RAL 30.59 RAD 6568.1 VEL 12.198 PTH 2.19 VHP 9.732 DPA 12.11 RAP 22.43 ECC 1.4513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 1 31 3353.10 -23.56 121.40 266.35 73.83 2 57 26 2755.1 -25.56 113.29  
 90.00 23 19 38 3871.65 -10.36 153.45 260.97 63.50 24 24 10 3271.7 -13.83 146.50  
 100.00 3 56 4 2985.80 -26.78 95.17 267.30 76.21 4 45 50 2385.8 -28.42 86.75  
 100.00 0 11 42 3716.18 -7.41 140.47 259.40 60.96 1 13 38 3116.2 -11.23 133.76  
 110.00 5 58 32 2602.61 -33.08 67.55 268.77 80.84 6 41 54 2002.6 -33.99 58.43  
 110.00 0 25 44 3672.14 -1.94 133.76 256.02 55.87 1 26 56 3072.1 -6.40 127.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5800 TRA-1.2099 TC3 .1402 BAU .0532 SGT 1620.9 SGR 428.1 SG3 147.5 ST 775.3 SR 425.1 SS 690.8  
 ROE -.3884 RRA .0278 RC3 -.0372 FAU .02026 RRT .3075 RRF -.3199 RTF -.8754 CRT .8045 CRS .8824 CST .9888  
 FOE .6709 FRA .9992 FC3 -.8921 BSP 5216 SGB 1676.5 R23 -.0343 R13 -.8764 LSA 1098.2 MSA 229.4 SSA 16.3  
 BOE .6981 BRA 1.2103 BC3 .1450 FSP -398 SG1 1626.6 SG2 406.0 THA 4.95 EL1 854.0 EL2 229.2 ALF 25.80

LAUNCH DATE JAN 1 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 258.220

RL 147.09 LAL -.00 LOL 100.41 VL 26.084 GAL 4.84 AZL 87.36 HCA 108.43 SMA 118.06 ECC .25911 INC 2.6410 V1 30.288  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.503 GAP -14.22 AZP 90.84 TAL 165.85 TAP 274.28 RCA 87.47 APO 148.66 V2 35.073  
 RC 43.347 GL 13.85 GP 5.57 ZAL 63.71 ZAP 5.88 ETS 290.79 ZAE 167.60 ETE 344.30 ZAC 118.74 ETC 162.63 CLP -1.87

PLANETOCENTRIC CONIC

C3 25.043 VHL 5.004 DLA 27.06 RAL 30.18 RAD 6568.0 VEL 12.100 PTH 2.17 VHP 9.250 DPA 13.11 RAP 23.73 ECC 1.4121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 54 47 3349.50 -23.67 121.02 264.26 73.99 2 50 37 2749.5 -25.64 112.90  
 90.00 23 23 4 3832.32 -11.54 151.17 259.38 63.96 24 26 56 3232.3 -14.95 144.15  
 100.00 3 51 3 2974.68 -26.96 94.39 265.22 76.58 4 40 38 2374.7 -28.54 85.95  
 100.00 0 13 24 3682.38 -8.52 138.57 257.79 61.24 1 14 47 3082.4 -12.29 131.82  
 110.00 5 54 53 2987.21 -33.24 66.30 266.62 81.51 6 38 0 1987.2 -34.05 57.23  
 110.00 0 26 4 3642.61 -3.06 132.22 254.44 55.94 1 26 47 3042.6 -7.51 125.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5853 TRA-1.1859 TC3 .1962 BAU .0663 SGT 1677.1 SGR 425.4 SG3 162.4 ST 811.4 SR 424.1 SS 725.3  
 ROE -.3704 RRA .0149 RC3 -.0274 FAU .03017 RRT .3498 RRF -.3639 RTF -.8835 CRT .8182 CRS .8907 CST .9896  
 FOE .7109 FRA 1.0378 FC3-1.0431 BSP 5407 SGB 1730.2 R23 -.0389 R13 -.8846 LSA 1146.4 MSA 223.3 SSA 16.4  
 BOE .6927 BRA 1.1860 BC3 .1961 FSP -443 SG1 1684.1 SG2 396.9 THA 5.37 EL1 888.1 EL2 222.8 ALF 24.82

LAUNCH DATE JAN 1 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 264.960

RL 147.09 LAL .00 LOL 100.41 VL 26.251 GAL 4.53 AZL 87.45 HCA 111.64 SMA 118.99 ECC .24837 INC 2.5533 V1 30.288  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.610 GAP -13.40 AZP 90.94 TAL 165.98 TAP 277.62 RCA 89.44 APO 148.54 V2 35.060  
 RC 44.011 GL 14.10 GP 6.03 ZAL 64.09 ZAP 6.99 ETS 302.88 ZAE 165.32 ETE 350.31 ZAC 120.01 ETC 162.01 CLP -3.55

PLANETOCENTRIC CONIC

C3 22.911 VHL 4.787 DLA 27.17 RAL 29.71 RAD 6567.9 VEL 12.012 PTH 2.14 VHP 8.787 DPA 14.13 RAP 24.98 ECC 1.3771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 37 3338.71 -23.87 120.29 262.19 74.30 2 45 15 2738.7 -25.80 112.15  
 90.00 23 24 32 3799.53 -12.51 149.26 257.69 64.39 24 27 51 3199.5 -15.86 142.18  
 100.00 3 47 4 2960.04 -27.19 93.37 263.13 77.07 4 36 24 2360.0 -28.70 84.89  
 100.00 0 13 41 3653.43 -9.46 136.94 256.11 61.51 1 14 34 3053.4 -13.20 130.14  
 110.00 5 51 47 2569.81 -33.40 65.05 264.44 82.28 6 34 37 1969.8 -34.11 55.87  
 110.00 0 25 28 3616.43 -4.06 130.85 252.81 56.03 1 25 44 3016.4 -8.49 124.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5891 TRA-1.1806 TC3 .2606 BAU .0799 SGT 1731.5 SGR 423.9 SG3 179.0 ST 846.6 SR 423.6 SS 761.2  
 ROE -.3539 RRA .0020 RC3 -.0140 FAU .03230 RRT .3968 RRF -.4132 RTF -.8913 CRT .8318 CRS .8990 CST .9904  
 FOE .7537 FRA 1.0797 FC3-1.2206 BSP 5612 SGB 1782.6 R23 -.0445 R13 -.8925 LSA 1195.1 MSA 216.8 SSA 16.5  
 BOE .6872 BRA 1.1806 BC3 .2609 FSP -493 SG1 1740.1 SG2 387.1 THA 5.84 EL1 921.7 EL2 216.0 ALF 24.00

LAUNCH DATE JAN 1 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 271.695

RL 147.09 LAL -.00 LOL 100.41 VL 26.405 GAL 4.24 AZL 87.54 HCA 114.85 SMA 119.86 ECC .23837 INC 2.4616 V1 30.288  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.708 GAP -12.62 AZP 91.03 TAL 166.16 TAP 281.01 RCA 91.29 APO 148.43 V2 35.047  
 RC 44.838 GL 14.29 GP 6.55 ZAL 64.52 ZAP 8.41 ETS 311.41 ZAE 163.10 ETE 354.87 ZAC 121.20 ETC 161.33 CLP -5.29

PLANETOCENTRIC CONIC

C3 21.000 VHL 4.583 DLA 27.21 RAL 29.21 RAD 6567.9 VEL 11.932 PTH 2.12 VHP 8.343 DPA 15.19 RAP 26.16 ECC 1.3456  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 46 34 3321.05 -24.19 119.10 260.16 74.82 2 41 55 2721.0 -26.04 110.92  
 90.00 23 23 32 3775.07 -13.23 147.82 255.90 64.73 24 26 27 3175.1 -16.53 140.69  
 100.00 3 44 24 2941.16 -27.47 92.05 261.05 77.72 4 33 25 2341.2 -28.88 83.52  
 100.00 0 12 18 3630.19 -10.22 135.63 254.35 61.75 1 12 48 3030.2 -13.91 128.79  
 110.00 5 49 23 2550.07 -33.57 63.53 262.24 83.17 6 31 53 1950.1 -34.16 54.33  
 110.00 0 23 49 3594.05 -4.91 129.67 251.13 56.13 1 23 43 2994.0 -9.33 123.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.5919 TRA-1.1347 TC3 .3327 BAU .0934 SGT 1784.7 SGR 424.2 SG3 197.5 ST 881.3 SR 424.0 SS 798.5  
 ROE -.3591 RRA -.0112 RC3 .0040 FAU .03469 RRT .4490 RRF -.4680 RTF -.8984 CRT .8457 CRS .9075 CST .9912  
 FOE .7999 FRA 1.1258 FC3-1.4300 BSP 5804 SGB 1834.4 R23 -.0512 R13 -.8999 LSA 1244.9 MSA 209.9 SSA 16.6  
 BOE .6821 BRA 1.1347 BC3 .3327 FSP -549 SG1 1795.3 SG2 376.8 THA 6.37 EL1 955.5 EL2 208.7 ALF 23.32

LAUNCH DATE JAN 1 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 278.423

RL 147.09 LAL -.00 LOL 100.41 VL 26.547 GAL 3.97 AZL 87.63 MCA 118.06 SMA 120.68 ECC .22909 INC 2.3652 V1 30.288
RP 108.17 LAP 2.09 LOP 218.48 VP 36.798 GAP -11.85 AZP 91.11 TAL 166.37 TAP 284.43 RCA 93.03 APO 148.33 V2 35.033
RC 45.818 GL 14.41 GP 7.13 ZAL 64.99 ZAP 10.03 ETS 317.37 ZAE 161.00 ETE 358.57 ZAC 122.30 ETC 160.56 CLP -7.07

PLANETOCENTRIC CONIC

C3 19.286 VHL 4.392 OLA 27.15 RAL 28.67 RAD 6567.8 VEL 11.860 PTH 2.10 VHP 7.917 DPA 16.29 RAP 27.27 ECC 1.3174
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 46 5 3295.24 -24.64 117.34 258.17 75.59 2 41 0 2695.2 -26.38 109.10
90.00 23 19 43 3760.32 -13.66 146.94 254.01 64.95 24 22 23 3160.3 -16.92 139.79
100.00 3 43 19 2917.33 -27.80 90.34 258.98 78.55 4 31 56 2317.3 -29.10 81.78
100.00 0 9 6 3613.46 -10.75 134.68 252.53 61.94 1 9 20 3013.5 -14.42 127.81
110.00 5 47 51 2527.63 -33.74 61.80 260.03 84.18 6 29 58 1927.6 -34.18 52.58
110.00 0 21 3 3575.92 -5.60 128.72 249.41 56.22 1 20 39 2975.9 -10.00 122.39

DIFFERENTIAL CORRECTIONS

TDE -.5925 TRA-1.1082 TC3 .4129 BAU .1067
RDE -.3258 RRA -.0248 RC3 .0276 FAU .03735
FDE .8485 FRA 1.1768 FC3-1.6766 BSP 5991
BDE .6762 BRA 1.1085 BC3 .4138 FSP -612

MID-COURSE EXECUTION ACCURACY

SGT 1835.6 SGR 427.4 SG3 218.1
RRT .5056 RRF -.5276 RTF -.9051
SGB 1884.7 R23 -.0592 R13 -.9068
SGI 1848.8 SG2 366.1 THA 6.99

ORBIT DETERMINATION ACCURACY

ST 914.0 SR 425.3 SS 836.5
CRT .8592 CRS .9159 CST .9919
LSA 1294.0 MSA 202.8 SSA 16.7
EL1 987.8 EL2 201.3 ALF 22.79

LAUNCH DATE JAN 1 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 285.140

RL 147.09 LAL -.00 LOL 100.41 VL 26.677 GAL 3.72 AZL 87.74 MCA 121.26 SMA 121.44 ECC .22050 INC 2.2628 V1 30.288
RP 108.21 LAP 1.93 LOP 221.69 VP 36.879 GAP -11.12 AZP 91.17 TAL 166.62 TAP 287.88 RCA 94.67 APO 148.22 V2 35.020
RC 46.944 GL 14.45 GP 7.81 ZAL 65.51 ZAP 11.83 ETS 321.59 ZAE 159.04 ETE 1.76 ZAC 123.30 ETC 159.71 CLP -8.92

PLANETOCENTRIC CONIC

C3 17.749 VHL 4.213 OLA 27.00 RAL 28.11 RAD 6567.7 VEL 11.795 PTH 2.09 VHP 7.509 DPA 17.44 RAP 28.28 ECC 1.2921
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 48 22 3260.80 -23.20 114.97 256.24 76.64 2 42 43 2660.8 -26.79 106.67
90.00 23 12 58 3755.82 -13.79 146.68 252.03 65.02 24 15 34 3155.8 -17.04 139.51
100.00 3 44 1 2888.02 -28.18 88.24 256.94 79.60 4 32 9 2288.0 -29.33 79.63
100.00 0 3 57 3603.83 -11.06 134.13 250.65 62.05 1 4 1 3003.8 -14.71 127.24
110.00 5 47 20 2502.09 -33.90 59.82 257.82 85.34 6 29 3 1902.1 -34.18 50.59
110.00 0 17 7 3562.52 -6.11 128.01 247.66 56.30 1 16 29 2962.5 -10.49 121.67

DIFFERENTIAL CORRECTIONS

TDE -.5920 TRA-1.0813 TC3 .5007 BAU .1196
RDE -.3144 RRA -.0391 RC3 .0582 FAU .04032
FDE .9006 FRA 1.2331 FC3-1.9668 BSP 6166
BDE .6704 BRA 1.0820 BC3 .5040 FSP -682

MID-COURSE EXECUTION ACCURACY

SGT 1884.1 SGR 434.6 SG3 241.1
RRT .5662 RRF -.5916 RTF -.9112
SGB 1933.6 R23 -.0687 R13 -.9132
SGI 1900.7 SG2 355.1 THA 7.71

ORBIT DETERMINATION ACCURACY

ST 945.3 SR 428.0 SS 875.6
CRT .8730 CRS .9244 CST .9926
LSA 1343.5 MSA 195.4 SSA 16.8
EL1 1019.5 EL2 193.6 ALF 22.42

LAUNCH DATE JAN 1 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 291.846

RL 147.09 LAL -.00 LOL 100.41 VL 26.797 GAL 3.47 AZL 87.85 MCA 124.46 SMA 122.16 ECC .21257 INC 2.1534 V1 30.288
RP 108.25 LAP 1.78 LOP 224.89 VP 36.953 GAP -10.41 AZP 91.22 TAL 166.91 TAP 291.37 RCA 96.19 APO 148.13 V2 35.007
RC 48.205 GL 14.38 GP 8.58 ZAL 66.07 ZAP 13.79 ETS 324.59 ZAE 157.25 ETE 4.67 ZAC 124.16 ETC 158.78 CLP -10.83

PLANETOCENTRIC CONIC

C3 16.371 VHL 4.046 OLA 26.73 RAL 27.55 RAD 6567.7 VEL 11.737 PTH 2.07 VHP 7.120 DPA 18.65 RAP 29.20 ECC 1.2694
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 53 22 3218.04 -25.84 112.01 254.34 78.00 2 47 1 2618.0 -27.24 103.62
90.00 23 3 29 3761.30 -13.63 147.00 250.00 64.94 24 6 10 3161.3 -16.90 139.85
100.00 3 46 39 2852.84 -28.59 85.71 254.92 80.87 4 34 12 2252.8 -29.55 77.04
100.00 23 52 53 3601.73 -11.13 134.01 248.73 62.08 24 52 55 3001.7 -14.78 127.12
110.00 5 48 2 2473.05 -34.04 57.56 255.61 86.67 6 29 15 1873.0 -34.13 48.32
110.00 0 11 56 3554.29 -6.42 127.58 245.89 56.35 1 11 10 2954.3 -10.79 121.22

DIFFERENTIAL CORRECTIONS

TDE -.5862 TRA-1.0513 TC3 .6021 BAU .1335
RDE -.3046 RRA -.0543 RC3 .0978 FAU .04372
FDE .9526 FRA 1.2941 FC3-2.3123 BSP 6394
BDE .6606 BRA 1.0527 BC3 .6100 FSP -764

MID-COURSE EXECUTION ACCURACY

SGT 1924.8 SGR 446.9 SG3 266.7
RRT .6278 RRF -.6571 RTF -.9174
SGB 1976.0 R23 -.0797 R13 -.9199
SGI 1945.8 SG2 344.1 THA 8.56

ORBIT DETERMINATION ACCURACY

ST 969.2 SR 432.2 SS 912.8
CRT .8859 CRS .9325 CST .9932
LSA 1387.0 MSA 188.1 SSA 16.8
EL1 1044.8 EL2 186.0 ALF 22.30

LAUNCH DATE JAN 1 1969

FLIGHT TIME 116.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 298.539

RL 147.09 LAL -.00 LOL 100.41 VL 26.906 GAL 3.25 AZL 87.96 MCA 127.66 SMA 122.82 ECC .20527 INC 2.0353 V1 30.288
RP 108.29 LAP 1.61 LOP 228.09 VP 37.020 GAP -9.73 AZP 91.24 TAL 167.22 TAP 294.88 RCA 97.61 APO 148.04 V2 34.994
RC 49.590 GL 14.20 GP 9.47 ZAL 66.64 ZAP 15.90 ETS 326.73 ZAE 155.64 ETE 7.47 ZAC 124.88 ETC 157.74 CLP -12.83

PLANETOCENTRIC CONIC

C3 15.134 VHL 3.890 OLA 26.34 RAL 27.00 RAD 6567.6 VEL 11.684 PTH 2.05 VHP 6.749 DPA 19.93 RAP 29.99 ECC 1.2491
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 0 53 3167.77 -26.51 108.47 252.48 79.65 2 53 41 2567.8 -27.67 100.00
90.00 22 51 35 3775.99 -13.20 147.87 247.95 64.72 23 54 31 3176.0 -16.50 140.75
100.00 3 51 21 2811.65 -29.00 82.71 252.93 82.40 4 38 12 2211.6 -29.74 73.99
100.00 23 43 48 3607.35 -10.95 134.33 246.79 62.01 24 43 55 3007.3 -14.61 127.45
110.00 5 50 6 2440.09 -34.14 55.00 253.42 88.18 6 30 46 1840.1 -34.02 45.75
110.00 0 5 28 3551.67 -6.51 127.44 244.12 56.37 1 4 40 2951.7 -10.89 121.08

DIFFERENTIAL CORRECTIONS

TDE -.5801 TRA-1.0240 TC3 .7035 BAU .1454
RDE -.2969 RRA -.0710 RC3 .1478 FAU .04742
FDE 1.0075 FRA 1.3648 FC3-2.7125 BSP 6552
BDE .6516 BRA 1.0265 BC3 .7189 FSP -852

MID-COURSE EXECUTION ACCURACY

SGT 1965.2 SGR 466.9 SG3 295.4
RRT .6898 RRF -.7225 RTF -.9225
SGB 2019.9 R23 -.0929 R13 -.9255
SGI 1992.1 SG2 333.5 THA 9.58

ORBIT DETERMINATION ACCURACY

ST 992.5 SR 438.6 SS 950.7
CRT .8988 CRS .9404 CST .9939
LSA 1431.2 MSA 180.5 SSA 16.9
EL1 1070.4 EL2 178.3 ALF 22.32

LAUNCH DATE JAN 1 1969

FLIGHT TIME 118.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 305.217

RL 147.09 LAL -.00 LOL 100.41 VL 27.006 GAL 3.04 AZL 88.09 HCA 130.86 SMA 123.44 ECC .19858 INC 1.9067 V1 30.288
RP 108.33 LAP 1.44 LOP 231.28 VP 37.080 GAP -9.07 AZP 91.25 TAL 167.56 TAP 298.41 RCA 98.93 APO 147.95 V2 34.980
RC 51.091 GL 13.86 GP 10.51 ZAL 67.24 ZAP 18.18 ETS 328.23 ZAE 154.20 ETE 10.27 ZAC 125.42 ETC 156.61 CLP -14.92

PLANETOCENTRIC CONIC

C3 14.022 VHL 3.745 DLA 25.80 RAL 26.48 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 6.396 DPA 21.31 RAP 30.64 ECC 1.2308
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 10 40 3110.78 -27.14 104.42 250.65 81.99 3 2 31 2510.8 -28.02 95.87
90.00 22 37 38 3799.10 -12.53 149.23 245.91 64.40 23 40 57 3199.1 -15.87 142.15
100.00 3 58 8 2764.32 -29.37 79.25 250.96 84.18 4 44 13 2164.3 -29.87 70.48
100.00 23 32 52 3620.79 -10.52 135.09 244.87 61.86 24 33 12 3020.8 -14.20 128.24
110.00 5 53 42 2402.76 -34.18 52.08 251.26 89.91 6 33 45 1802.8 -33.82 42.86
110.00 23 53 47 3555.12 -6.38 127.62 242.37 56.35 24 53 2 2955.1 -10.76 121.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5707 TRA -.9967 TC3 .8098 BAU .1569 SGT 1999.9 SGR 496.5 SG3 327.2 ST 1010.5 SR 447.6 SS 986.8
RDE -.2910 RRA -.0897 RC3 .2112 FAU .05152 RRT .7483 RRF -.7843 RTF -.9271 CRT .9112 CRS .9479 CST .9946
FDE 1.0621 FRA 1.4441 FC3-3.1810 BSP 6691 SGB 2060.6 R23 -.1083 R13 -.9308 LSA 1471.4 MSA 172.7 SSA 17.0
BDE .6406 BRA 1.0007 BC3 .8368 FSP -950 SG1 2035.0 SG2 323.7 THA 10.80 EL1 1092.0 EL2 170.7 ALF 22.56

LAUNCH DATE JAN 1 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 311.877

RL 147.09 LAL -.00 LOL 100.41 VL 27.097 GAL 2.84 AZL 88.23 HCA 134.05 SMA 124.01 ECC .19245 INC 1.7651 V1 30.288
RP 108.38 LAP 1.27 LOP 234.47 VP 37.134 GAP -8.43 AZP 91.23 TAL 167.91 TAP 301.96 RCA 100.14 APO 147.87 V2 34.967
RC 52.697 GL 13.36 GP 11.72 ZAL 67.84 ZAP 20.63 ETS 329.25 ZAE 152.94 ETE 13.20 ZAC 125.76 ETC 155.37 CLP -17.10

PLANETOCENTRIC CONIC

C3 13.023 VHL 3.609 DLA 25.09 RAL 26.01 RAD 6567.5 VEL 11.594 PTH 2.03 VHP 6.063 DPA 22.81 RAP 31.11 ECC 1.2143
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 22 37 3047.96 -27.69 99.88 248.83 83.80 3 13 25 2447.6 -28.26 91.26
90.00 22 21 57 3830.12 -11.61 151.04 243.92 63.99 23 25 47 3230.1 -15.01 144.02
100.00 4 7 5 2710.75 -29.68 75.29 249.03 86.24 4 52 16 2110.8 -29.88 66.50
100.00 23 20 10 3642.16 -9.83 136.31 242.99 61.63 24 20 52 3042.2 -13.55 129.49
110.00 5 59 2 2360.54 -34.14 48.78 249.12 91.86 6 38 22 1760.5 -33.50 39.60
110.00 23 44 43 3565.14 -6.01 128.15 240.67 56.29 24 44 8 2965.1 -10.40 121.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5568 TRA -.9690 TC3 .9192 BAU .1679 SGT 2026.7 SGR 538.3 SG3 362.3 ST 1020.5 SR 459.4 SS 1018.8
RDE -.2870 RRA -.1110 RC3 .2916 FAU .05605 RRT .8003 RRF -.8394 RTF -.9312 CRT .9228 CRS .9548 CST .9953
FDE 1.1134 FRA 1.5334 FC3-3.7260 BSP 6823 SGB 2096.9 R23 -.1261 R13 -.9359 LSA 1504.3 MSA 164.9 SSA 17.2
BDE .6264 BRA .9754 BC3 .9644 FSP -1060 SG1 2073.1 SG2 315.6 THA 12.29 EL1 1107.2 EL2 163.1 ALF 23.09

LAUNCH DATE JAN 1 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 318.520

RL 147.09 LAL -.00 LOL 100.41 VL 27.180 GAL 2.66 AZL 88.39 HCA 137.24 SMA 124.53 ECC .18686 INC 1.6076 V1 30.288
RP 108.42 LAP 1.09 LOP 237.66 VP 37.183 GAP -7.81 AZP 91.18 TAL 168.27 TAP 305.51 RCA 101.26 APO 147.80 V2 34.954
RC 54.398 GL 12.64 GP 13.14 ZAL 68.44 ZAP 23.29 ETS 329.88 ZAE 151.82 ETE 16.37 ZAC 125.86 ETC 154.03 CLP -19.41

PLANETOCENTRIC CONIC

C3 12.124 VHL 3.482 DLA 24.17 RAL 25.61 RAD 6567.5 VEL 11.555 PTH 2.02 VHP 5.751 DPA 24.46 RAP 31.38 ECC 1.1995
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 36 43 2978.19 -28.09 94.84 247.04 86.29 3 26 21 2378.2 -28.31 86.19
90.00 22 4 44 3868.96 -10.44 153.30 242.02 63.53 23 9 13 3269.0 -13.91 146.34
100.00 4 18 17 2650.68 -29.86 70.84 247.13 88.58 5 2 28 2050.7 -29.74 62.04
100.00 23 5 50 3671.70 -8.87 137.97 241.19 61.34 24 7 2 3071.7 -12.63 131.20
110.00 6 6 17 2312.79 -33.97 45.06 247.02 94.05 6 44 50 1712.8 -33.04 35.95
110.00 23 34 20 3582.36 -5.35 129.06 239.04 56.19 24 34 2 2982.4 -9.76 122.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5359 TRA -.9396 TC3 1.0374 BAU .1799 SGT 2042.4 SGR 595.4 SG3 400.8 ST 1018.1 SR 473.9 SS 1042.9
RDE -.2845 RRA -.1357 RC3 .3945 FAU .06112 RRT .8437 RRF -.8855 RTF -.9353 CRT .9333 CRS .9610 CST .9959
FDE 1.1559 FRA 1.6322 FC3-4.3644 BSP 6987 SGB 2127.4 R23 -.1447 R13 -.9413 LSA 1524.4 MSA 157.1 SSA 17.3
BDE .6067 BRA .9494 BC3 1.1098 FSP -1185 SG1 2104.7 SG2 310.1 THA 14.13 EL1 1112.1 EL2 155.8 ALF 23.98

LAUNCH DATE JAN 1 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 325.144

RL 147.09 LAL -.00 LOL 100.41 VL 27.255 GAL 2.50 AZL 88.57 HCA 140.43 SMA 125.01 ECC .18178 INC 1.4299 V1 30.288
RP 108.45 LAP .91 LOP 240.85 VP 37.226 GAP -7.22 AZP 91.10 TAL 168.64 TAP 309.07 RCA 102.29 APO 147.74 V2 34.942
RC 56.186 GL 11.65 GP 14.82 ZAL 69.03 ZAP 26.18 ETS 330.21 ZAE 150.80 ETE 19.89 ZAC 125.68 ETC 152.57 CLP -21.83

PLANETOCENTRIC CONIC

C3 11.316 VHL 3.364 DLA 23.01 RAL 25.33 RAD 6567.4 VEL 11.520 PTH 2.01 VHP 5.461 DPA 26.30 RAP 31.41 ECC 1.1862
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 53 4 2902.31 -28.30 89.30 245.28 89.06 3 41 26 2302.3 -28.13 80.64
90.00 21 46 5 3915.99 -9.00 156.00 240.25 63.04 22 51 21 3316.0 -12.55 149.12
100.00 4 31 54 2583.60 -29.87 65.85 245.28 91.21 5 14 58 1983.6 -29.38 57.08
100.00 22 49 55 3709.93 -7.61 140.12 239.51 61.01 23 51 45 3109.9 -11.42 133.40
110.00 6 15 45 2258.73 -33.63 40.88 244.98 96.51 6 53 23 1658.7 -32.37 31.88
110.00 23 22 34 3607.56 -4.40 130.38 237.53 56.07 24 22 42 3007.6 -8.82 124.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5117 TRA -.9120 TC3 1.1461 BAU .1907 SGT 2049.9 SGR 671.7 SG3 442.6 ST 1008.2 SR 491.9 SS 1059.8
RDE -.2836 RRA -.1652 RC3 .5241 FAU .06651 RRT .8780 RRF -.9219 RTF -.9383 CRT .9433 CRS .9665 CST .9966
FDE 1.1884 FRA 1.7450 FC3-5.0880 BSP 7094 SGB 2157.2 R23 -.1648 R13 -.9462 LSA 1535.9 MSA 148.7 SSA 17.5
BDE .5851 BRA .9268 BC3 1.2602 FSP -1318 SG1 2135.0 SG2 308.8 THA 16.40 EL1 1112.0 EL2 148.1 ALF 25.19

LAUNCH DATE JAN 1 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.323 GAL 2.34 AZL 88.77 HCA 143.62 SMA 125.45 ECC .17719 INC 1.2267 V1 30.288
RP 108.49 LAP .73 LOP 244.03 VP 37.264 GAP -6.64 AZP 90.99 TAL 169.00 TAP 312.62 RCA 103.22 APO 147.68 V2 34.929
RC 58.051 GL 10.35 GP 16.82 ZAL 69.59 ZAP 29.35 ETS 330.28 ZAE 149.82 ETE 23.87 ZAC 125.16 ETC 151.01 CLP -24.41

PLANETOCENTRIC CONIC

C3 10.591 VHL 3.254 DLA 21.55 RAL 25.18 RAD 6567.4 VEL 11.488 PTH 2.00 VHP 5.195 DPA 28.37 RAP 31.13 ECC 1.1743
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 11 56 2818.98 -28.24 83.21 243.57 92.12 3 58 55 2219.0 -27.65 74.59
90.00 21 26 0 3972.16 -7.25 159.20 238.65 62.55 22 32 12 3372.2 -10.87 152.40
100.00 4 48 12 2508.59 -29.63 60.29 243.49 94.12 5 30 0 1908.6 -28.75 51.60
100.00 22 32 26 3757.78 -6.03 142.78 237.99 60.67 23 35 3 3157.8 -9.89 136.13
110.00 6 27 43 2197.26 -33.06 36.17 243.02 99.24 7 4 20 1597.3 -31.43 27.33
110.00 23 9 24 3641.88 -3.09 132.18 236.17 55.94 24 10 6 3041.9 -7.54 125.92

DIFFERENTIAL CORRECTIONS

TDE -.4815 TRA -.8847 TC3 1.2481 BAU .2019
RDE -.2837 RRA -.2014 RC3 .6889 FAU .07221
FDE 1.2016 FRA 1.8718 FC3-5.9026 BSP 7198
BOE .5589 BRA .9073 BC3 1.4256 FSP -1461

MID-COURSE EXECUTION ACCURACY

SGT 2045.3 SGR 771.9 SG3 487.1
RRR .9032 RRF -.9489 RTF -.9407
SGB 2186.1 R23 -.1835 R13 -.9512
SG1 2163.6 SG2 313.1 THA 19.24

ORBIT DETERMINATION ACCURACY

ST 985.8 SR 512.6 SS 1063.9
CRT .9524 CRS .9710 CST .9973
LSA 1531.8 MSA 139.8 SSA 17.9
EL1 1102.3 EL2 139.8 ALF 26.81

LAUNCH DATE JAN 1 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.384 GAL 2.21 AZL 89.01 HCA 146.80 SMA 125.85 ECC .17306 INC .9904 V1 30.288
RP 108.53 LAP .54 LOP 247.21 VP 37.297 GAP -8.08 AZP 90.83 TAL 169.35 TAP 316.15 RCA 104.07 APO 147.62 V2 34.917
RC 59.985 GL 8.63 GP 19.22 ZAL 70.14 ZAP 32.82 ETS 330.14 ZAE 148.79 ETE 28.42 ZAC 124.23 ETC 149.36 CLP -27.13

PLANETOCENTRIC CONIC

C3 9.944 VHL 3.153 DLA 19.71 RAL 25.20 RAD 6567.4 VEL 11.460 PTH 1.99 VHP 4.958 DPA 30.74 RAP 30.49 ECC 1.1637
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 33 47 2726.66 -27.83 76.49 241.95 95.46 4 19 14 2126.7 -26.78 67.98
90.00 21 4 21 4039.15 -5.13 162.99 237.29 62.11 22 11 40 3439.2 -8.82 156.25
100.00 5 7 35 2424.19 -29.06 54.08 241.79 97.34 5 47 59 1824.2 -27.74 45.53
100.00 22 13 14 3816.85 -4.05 146.05 236.69 60.36 23 16 51 3216.9 -7.96 139.45
110.00 6 42 37 2126.86 -32.16 30.88 241.17 102.25 7 18 4 1526.9 -30.14 22.25
110.00 22 34 41 3686.95 -1.37 134.53 235.02 55.84 23 56 8 3087.0 -5.84 128.30

DIFFERENTIAL CORRECTIONS

TDE -.4456 TRA -.8584 TC3 1.3331 BAU .2136
RDE -.2838 RRA -.2465 RC3 .8972 FAU .07795
FDE 1.1868 FRA 2.0137 FC3-6.7861 BSP 7278
BOE .5283 BRA .8931 BC3 1.6069 FSP -1606

MID-COURSE EXECUTION ACCURACY

SGT 2026.7 SGR 901.4 SG3 533.1
RRR .9205 RRF -.9679 RTF -.9423
SGB 2218.1 R23 -.1981 R13 -.9565
SG1 2194.1 SG2 325.2 THA 22.79

ORBIT DETERMINATION ACCURACY

ST 950.4 SR 535.2 SS 1051.4
CRT .9610 CRS .9745 CST .9982
LSA 1509.3 MSA 130.2 SSA 18.5
EL1 1083.0 EL2 130.0 ALF 28.88

LAUNCH DATE JAN 1 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.439 GAL 2.08 AZL 89.29 HCA 149.98 SMA 126.20 ECC .16936 INC .7101 V1 30.288
RP 108.57 LAP .36 LOP 250.39 VP 37.327 GAP -5.54 AZP 90.62 TAL 169.69 TAP 319.67 RCA 104.83 APO 147.58 V2 34.906
RC 61.981 GL 6.38 GP 22.11 ZAL 70.65 ZAP 36.66 ETS 329.85 ZAE 147.56 ETE 33.62 ZAC 122.93 ETC 147.63 CLP -30.02

PLANETOCENTRIC CONIC

C3 9.376 VHL 3.062 DLA 17.39 RAL 25.45 RAD 6567.3 VEL 11.435 PTH 1.98 VHP 4.754 DPA 33.49 RAP 29.38 ECC 1.1543
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 59 17 2622.97 -26.93 69.04 240.45 99.09 4 43 0 2023.0 -25.40 60.70
90.00 20 40 50 4119.65 -2.55 167.50 236.24 61.79 21 49 30 3519.7 -6.31 160.83
100.00 5 30 42 2328.16 -28.02 47.13 240.23 100.86 6 9 30 1728.2 -26.24 38.79
100.00 21 52 6 3889.69 -1.59 150.06 235.70 60.15 22 56 56 3289.7 -5.55 143.51
110.00 7 1 6 2045.35 -30.83 24.90 239.48 105.56 7 35 11 1445.4 -28.39 16.55
110.00 22 38 12 3745.26 .86 137.57 234.17 55.83 23 40 38 3145.3 -3.63 131.37

DIFFERENTIAL CORRECTIONS

TDE -.4016 TRA -.8298 TC3 1.4031 BAU .2284
RDE -.2811 RRA -.3033 RC3 1.1621 FAU .08356
FDE 1.1271 FRA 2.1625 FC3-7.7157 BSP 7415
BOE .4902 BRA .8835 BC3 1.8219 FSP -1755

MID-COURSE EXECUTION ACCURACY

SGT 1987.5 SGR 1066.3 SG3 578.0
RRR .9317 RRF -.9805 RTF -.9434
SGB 2255.5 R23 -.2035 R13 -.9627
SG1 2228.9 SG2 345.4 THA 27.27

ORBIT DETERMINATION ACCURACY

ST 896.4 SR 555.9 SS 1013.4
CRT .9691 CRS .9767 CST .9990
LSA 1457.7 MSA 119.8 SSA 19.5
EL1 1048.3 EL2 117.2 ALF 31.44

LAUNCH DATE JAN 1 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.488 GAL 1.97 AZL 89.63 HCA 153.16 SMA 126.53 ECC .16607 INC .3709 V1 30.288
RP 108.60 LAP .17 LOP 253.57 VP 37.352 GAP -5.02 AZP 90.33 TAL 170.01 TAP 323.17 RCA 105.51 APO 147.54 V2 34.894
RC 64.032 GL 3.42 GP 25.61 ZAL 71.15 ZAP 40.94 ETS 329.45 ZAE 145.93 ETE 39.49 ZAC 120.84 ETC 145.87 CLP -33.10

PLANETOCENTRIC CONIC

C3 8.895 VHL 2.982 DLA 14.42 RAL 25.99 RAD 6567.3 VEL 11.414 PTH 1.98 VHP 4.594 DPA 36.70 RAP 27.68 ECC 1.1464
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 29 28 2504.37 -25.38 60.70 239.19 102.99 5 11 12 1904.4 -23.34 52.63
90.00 20 14 57 4217.87 .62 172.98 235.64 61.69 21 25 15 3617.9 -3.17 166.35
100.00 5 58 31 2217.18 -26.35 39.31 238.92 104.85 6 35 28 1617.2 -24.08 31.25
100.00 21 28 35 3980.30 1.49 155.03 235.15 60.14 22 34 55 3380.3 -2.50 148.50
110.00 7 24 1 1949.66 -28.88 18.13 238.05 109.13 7 56 31 1349.7 -26.00 10.14
110.00 22 19 34 3820.58 3.73 141.51 233.75 56.00 23 23 15 3220.6 -.75 135.30

DIFFERENTIAL CORRECTIONS

TDE -.3519 TRA -.8023 TC3 1.4381 BAU .2486
RDE -.2723 RRA -.3771 RC3 1.4936 FAU .08838
FDE 1.0082 FRA 2.3175 FC3-8.6021 BSP 7574
BOE .4450 BRA .8865 BC3 2.0734 FSP -1889

MID-COURSE EXECUTION ACCURACY

SGT 1930.2 SGR 1275.6 SG3 618.3
RRR .9376 RRF -.9885 RTF -.9431
SGB 2313.6 R23 -.1991 R13 -.9694
SG1 2283.0 SG2 374.9 THA 32.78

ORBIT DETERMINATION ACCURACY

ST 828.0 SR 569.9 SS 945.6
CRT .9780 CRS .9772 CST .9994
LSA 1375.6 MSA 109.4 SSA 20.9
EL1 1000.4 EL2 98.4 ALF 34.32

LAUNCH DATE JAN 1 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 357.952

RL 147.09 LAL -.00 LOL 100.41 VL 27.531 GAL 1.88 AZL 90.05 HCA 156.33 SMA 126.81 ECC .16316 INC .0499 V1 30.288  
 RP 108.64 LAP -.02 LOP 236.74 VP 37.373 GAP -4.52 AZP 89.95 TAL 170.30 TAP 326.63 RCA 106.12 APO 147.51 V2 34.883  
 RC 86.131 GL -.48 GP 29.88 ZAL 71.66 ZAP 45.70 ETS 329.01 ZAE 143.63 ETE 45.92 ZAC 118.16 ETC 144.14 CLP -36.35

PLANETOCENTRIC CONIC

C3 8.526 VHL 2.920 OLA 10.58 RAL 26.90 RAD 6567.3 VEL 11.398 PTH 1.97 VHP 4.490 DPA 40.50 RAP 25.18 ECC 1.1403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 5 54 2365.61 -22.92 51.28 238.32 107.09 5 45 19 1765.6 -20.37 43.54  
 90.00 19 45 46 4340.53 4.56 179.83 235.69 62.02 20 58 7 3740.5 -.78 173.19  
 100.00 6 32 31 2086.26 -23.79 30.43 238.01 108.65 7 7 17 1486.3 -21.02 22.73  
 100.00 21 1 50 4095.11 5.36 161.35 235.25 60.55 22 10 5 3495.1 1.40 154.80  
 110.00 7 52 43 1835.28 -26.09 10.41 237.05 112.92 8 23 18 1235.3 -22.75 2.84  
 110.00 21 58 7 3918.86 7.45 146.69 235.96 56.54 23 3 26 3318.9 3.00 140.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2950 TRA -.7718 TC3 1.4325 BAU .2711 SGT 1846.2 SGR 1537.3 SG3 647.2 ST 741.1 SR 567.4 SS 842.3  
 RDE -.2499 RRA -.4734 RC3 1.8990 FAU .09161 RRT .9399 RRF -.9934 RTF -.9417 CRT .9885 CRS .9751 CST .9964  
 FDE .8091 FRA 2.4583 FC3-9.3022 BSP 7877 SGB 2402.5 R23 -.1813 R13 -.9770 LSA 1252.7 MSA 105.0 SSA 21.6  
 BDE .3866 BRA .9054 BC3 2.3787 FSP -1998 SG1 2367.3 SG2 409.5 THA 39.46 EL1 930.9 EL2 68.2 ALF 37.36

LAUNCH DATE JAN 1 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 364.447

RL 147.09 LAL -.00 LOL 100.41 VL 27.569 GAL 1.79 AZL 90.60 HCA 159.51 SMA 127.07 ECC .16060 INC .5957 V1 30.288  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.392 GAP -4.03 AZP 89.44 TAL 170.55 TAP 330.06 RCA 106.66 APO 147.48 V2 34.873  
 RC 68.274 GL -5.70 GP 35.08 ZAL 72.23 ZAP 51.02 ETS 328.64 ZAE 140.36 ETE 52.69 ZAC 114.67 ETC 142.51 CLP -39.77

PLANETOCENTRIC CONIC

C3 8.331 VHL 2.886 OLA 5.53 RAL 28.30 RAD 6567.3 VEL 11.390 PTH 1.97 VHP 4.467 DPA 44.98 RAP 21.58 ECC 1.1371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 51 6 2198.88 -19.18 40.49 238.16 111.24 6 27 45 1598.9 -16.13 33.15  
 90.00 19 11 44 4498.52 9.52 188.79 236.78 63.21 20 26 42 3898.5 5.85 182.04  
 100.00 7 15 4 1928.09 -19.90 20.23 237.82 112.71 7 47 12 1328.1 -16.73 12.95  
 100.00 20 30 27 4244.54 10.28 169.72 236.38 61.78 21 41 12 3644.5 6.43 163.05  
 110.00 8 29 18 1695.77 -22.08 1.56 236.78 116.78 8 57 33 1095.8 -18.31 354.45  
 110.00 21 32 43 4049.63 12.28 153.74 235.19 57.85 22 40 13 3449.6 7.95 147.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2364 TRA -.7426 TC3 1.3498 BAU .3024 SGT 1738.0 SGR 1880.9 SG3 655.8 ST 646.7 SR 543.5 SS 719.2  
 RDE -.2035 RRA -.6039 RC3 2.3559 FAU .09165 RRT .9377 RRF -.9964 RTF -.9374 CRT .9988 CRS .9697 CST .9748  
 FDE .5231 FRA 2.5714 FC3-9.5246 BSP 8266 SGB 2546.3 R23 -.1544 R13 -.9844 LSA 1101.9 MSA 127.6 SSA 17.9  
 BDE .3119 BRA .9571 BC3 2.7152 FSP -2034 SG1 2506.5 SG2 448.3 THA 47.09 EL1 844.5 EL2 20.0 ALF 40.04

LAUNCH DATE JAN 1 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 370.917

RL 147.09 LAL -.00 LOL 100.41 VL 27.602 GAL 1.73 AZL 91.33 HCA 162.67 SMA 127.29 ECC .15838 INC 1.3291 V1 30.288  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.407 GAP -3.55 AZP 88.73 TAL 170.76 TAP 333.44 RCA 107.13 APO 147.45 V2 34.862  
 RC 70.456 GL -12.72 GP 41.40 ZAL 73.03 ZAP 56.92 ETS 328.48 ZAE 135.75 ETE 59.40 ZAC 110.25 ETC 141.12 CLP -43.32

PLANETOCENTRIC CONIC

C3 8.449 VHL 2.907 OLA -1.20 RAL 30.36 RAD 6567.3 VEL 11.395 PTH 1.97 VHP 4.568 DPA 50.24 RAP 16.34 ECC 1.1390  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 49 31 1992.23 -13.63 27.87 239.32 115.06 7 22 43 1392.2 -10.14 20.93  
 90.00 18 29 48 4710.47 15.72 201.27 239.63 66.14 19 48 18 4110.5 12.36 194.20  
 100.00 8 10 18 1731.63 -14.39 8.33 238.94 116.49 8 39 9 1131.6 -10.71 1.46  
 100.00 19 51 42 4446.30 16.49 181.48 239.26 64.71 21 5 48 3846.3 12.95 174.48  
 110.00 9 17 16 1522.01 -16.40 351.28 237.81 120.42 9 42 38 922.0 -12.24 344.65  
 110.00 21 1 13 4228.69 18.53 163.86 238.16 60.75 22 11 42 3628.7 14.49 157.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1767 TRA -.7093 TC3 1.1845 BAU .3433 SGT 1597.3 SGR 2251.1 SG3 632.0 ST 545.7 SR 514.0 SS 622.7  
 RDE -.1116 RRA -.7810 RC3 2.7992 FAU .08714 RRT .9319 RRF -.9980 RTF -.9304 CRT .9678 CRS .9667 CST .8724  
 FDE .1462 FRA 2.6096 FC3-8.9292 BSP 8923 SGB 2760.2 R23 -.1201 R13 -.9908 LSA 952.0 MSA 207.8 SSA 10.8  
 BDE .2090 BRA 1.0550 BC3 3.0395 FSP -1977 SG1 2718.1 SG2 480.0 THA 55.29 EL1 743.6 EL2 94.9 ALF 43.23

LAUNCH DATE JAN 1 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 377.360

RL 147.09 LAL -.00 LOL 100.41 VL 27.631 GAL 1.67 AZL 92.38 HCA 165.84 SMA 127.49 ECC .15648 INC 2.3783 V1 30.288  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.419 GAP -3.09 AZP 87.69 TAL 170.93 TAP 336.77 RCA 107.54 APO 147.44 V2 34.853  
 RC 72.672 GL -22.15 GP 49.04 ZAL 74.29 ZAP 63.37 ETS 328.69 ZAE 129.51 ETE 65.63 ZAC 104.83 ETC 140.12 CLP -46.86

PLANETOCENTRIC CONIC

C3 9.239 VHL 3.040 OLA -10.16 RAL 33.35 RAD 6567.3 VEL 11.429 PTH 1.98 VHP 4.872 DPA 56.27 RAP 8.47 ECC 1.1521  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 10 2 1725.86 -5.49 12.53 243.06 117.82 8 38 48 1125.9 -1.73 5.88  
 90.00 17 33 8 5011.05 22.95 220.33 245.74 72.95 18 56 39 4411.1 20.40 212.59  
 100.00 9 26 21 1479.66 -6.31 353.98 242.61 119.28 9 51 0 879.7 -2.36 347.42  
 100.00 18 59 30 4732.48 23.84 199.53 245.43 71.41 20 18 23 4132.5 21.08 191.82  
 110.00 10 23 10 1301.74 -8.46 339.17 241.29 123.24 10 44 52 701.7 -4.03 332.88  
 110.00 20 19 10 4483.17 26.19 179.62 244.45 67.20 21 33 54 3883.2 22.87 172.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1271 TRA -.6732 TC3 .9064 BAU .3913 SGT 1422.4 SGR 2700.8 SG3 563.5 ST 455.3 SR 602.9 SS 651.4  
 RDE .0567 RRA -1.0283 RC3 3.0354 FAU .07625 RRT .9189 RRF -.9990 RTF -.9168 CRT .7425 CRS .9864 CST .6225  
 FDE -.2764 FRA 2.5261 FC3-7.1443 BSP 9813 SGB 3052.5 R23 -.0863 R13 -.9952 LSA 944.5 MSA 320.8 SSA 5.6  
 BDE .1392 BRA 1.2291 BC3 3.1679 FSP -1778 SG1 3010.7 SG2 503.4 THA 63.37 EL1 709.7 EL2 259.1 ALF 55.48



LAUNCH DATE JAN 1 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.655 GAL 1.63 AZL 94.01 MCA 168.99 SMA 127.65 ECC .15488 INC 4.0130 V1 30.288
RP 108.76 LAP -.77 LOP 269.42 VP 37.429 GAP -2.64 AZP 86.06 TAL 171.05 TAP 340.03 RCA 107.98 APO 147.42 V2 34.844
RC 74.919 GL -34.38 GP 58.13 ZAL 76.43 ZAP 70.17 ETS 329.39 ZAE 121.40 ETE 70.97 ZAC 98.45 ETC 139.65 CLP -50.02

PLANETOCENTRIC CONIC

C3 11.740 VHL 3.426 DLA -21.68 RAL 37.64 RAD 6567.4 VEL 11.538 PTH 2.01 VHP 5.554 DPA 62.78 RAP 355.88 ECC 1.1932
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 19 17 1343.66 6.76 351.13 252.46 117.56 10 41 41 743.7 10.40 344.34
90.00 15 58 7 5489.96 28.30 254.13 257.73 88.87 17 29 37 4890.0 27.84 245.50
100.00 11 25 31 1129.91 5.49 334.72 251.76 119.43 11 44 21 529.9 9.37 328.09
100.00 17 34 35 5178.94 29.75 231.19 257.67 86.90 19 0 54 4578.9 29.00 222.47
110.00 12 2 9 1015.07 2.44 324.13 249.87 124.11 12 19 4 415.1 6.90 317.88
110.00 19 14 26 4866.55 33.32 207.05 257.25 81.87 20 35 32 4266.5 31.84 198.14

DIFFERENTIAL CORRECTIONS

TOE -.1020 TRA -.6337 TC3 .5525 BAU .4399
RDE -.3516 RRA-1.3894 RC3 2.7478 FAU .03850
FDE -.6494 FRA 2.2785 FC3-4.3138 BSP 10984
BOE .3661 BRA 1.5271 BC3 2.8028 FSP -1432

MID-COURSE EXECUTION ACCURACY

SGT 1213.5 SGR 3184.7 SG3 446.7
RRT .8962 RRF -.9995 RTF -.8941
SGB 3408.1 R23 -.0365 R13 -.9979
SG1 3369.9 SG2 508.8 THA 70.69

ORBIT DETERMINATION ACCURACY

ST 382.4 SR 954.7 SS 788.4
CRT .4300 CR5 .9983 CST .3765
LSA 1248.3 MSA 347.9 SSA 2.9
EL1 970.7 EL2 339.5 ALF 78.85

LAUNCH DATE JAN 1 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.676 GAL 1.60 AZL 96.93 MCA 172.12 SMA 127.79 ECC .15356 INC 6.9321 V1 30.288
RP 108.78 LAP -.95 LOP 272.59 VP 37.436 GAP -2.21 AZP 83.13 TAL 171.10 TAP 343.23 RCA 108.17 APO 147.42 V2 34.835
RC 77.194 GL -48.70 GP 68.82 ZAL 79.74 ZAP 76.95 ETS 330.29 ZAE 111.21 ETE 74.71 ZAC 91.29 ETC 139.47 CLP -51.32

PLANETOCENTRIC CONIC

C3 19.756 VHL 4.445 DLA -35.02 RAL 43.62 RAD 6567.8 VEL 11.880 PTH 2.11 VHP 7.054 DPA 68.81 RAP 334.00 ECC 1.3251
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.48 10 53 58 1392.71 24.06 3.78 274.01 116.24 11 17 11 792.7 27.38 356.12
111.52 16 11 8 5674.25 24.08 266.40 274.02 116.23 17 45 42 5074.2 27.40 258.73
68.48 10 53 58 1392.71 24.06 3.78 274.01 116.24 11 17 11 792.7 27.38 356.12
111.52 16 11 8 5674.25 24.08 266.40 274.02 116.23 17 45 42 5074.2 27.40 258.73
68.48 10 53 58 1392.71 24.06 3.78 274.01 116.24 11 17 11 792.7 27.38 356.12
111.52 16 11 8 5674.25 24.08 266.40 274.02 116.23 17 45 42 5074.2 27.40 258.73

DIFFERENTIAL CORRECTIONS

TDE -.0958 TRA -.5798 TC3 .3034 BAU .4953
RDE .9018 RRA-1.9219 RC3 1.8505 FAU .03817
FDE -.8853 FRA 1.8257 FC3-1.6728 BSP 13752
BOE .9069 BRA 2.0075 BC3 1.8752 FSP -1083

MID-COURSE EXECUTION ACCURACY

SGT 959.6 SGR 3634.4 SG3 296.4
RRT .8776 RRF -.9997 RTF -.8756
SGB 3758.9 R23 -.0321 R13 -.9992
SG1 3732.1 SG2 447.9 THA 76.76

ORBIT DETERMINATION ACCURACY

ST 300.4 SR 1475.7 SS 872.2
CRT .2374 CR5 .9999 CST .2220
LSA 1715.6 MSA 292.1 SSA 1.5
EL1 1477.5 EL2 291.5 ALF 87.12

LAUNCH DATE JAN 1 1969

FLIGHT TIME 146.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.693 GAL 1.60 AZL 103.62 MCA 175.21 SMA 127.91 ECC .15254 INC13.6203 V1 30.288
RP 108.81 LAP -1.13 LOP 275.75 VP 37.441 GAP -1.81 AZP 76.42 TAL 171.03 TAP 346.24 RCA 108.40 APO 147.42 V2 34.827
RC 79.493 GL -61.94 GP 81.28 ZAL 83.84 ZAP 83.06 ETS 325.95 ZAE 178.21 ETE 71.37 ZAC 83.59 ETC 134.53 CLP -37.21

PLANETOCENTRIC CONIC

C3 54.578 VHL 7.388 DLA -47.28 RAL 50.54 RAD 6569.0 VEL 13.264 PTH 2.42 VHP 10.929 DPA 71.58 RAP 295.46 ECC 1.8982
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.41 10 0 7 1873.59 20.23 41.89 300.63 133.69 10 31 20 1273.6 25.64 35.90
129.59 18 0 12 5698.78 20.25 265.57 300.64 133.69 19 35 11 5098.8 25.65 259.58
50.41 10 0 7 1873.59 20.23 41.89 300.63 133.69 10 31 20 1273.6 25.64 35.90
129.59 18 0 12 5698.78 20.25 265.57 300.64 133.69 19 35 11 5098.8 25.65 259.58
50.41 10 0 7 1873.59 20.23 41.89 300.63 133.69 10 31 20 1273.6 25.64 35.90
129.59 18 0 12 5698.78 20.25 265.57 300.64 133.69 19 35 11 5098.8 25.65 259.58

DIFFERENTIAL CORRECTIONS

TDE -.1411 TRA -.9019 TC3 .0582 BAU .3314
RDE 1.7508 RRA-3.2203 RC3 .4504 FAU .01119
FDE -.7575 FRA 1.4832 FC3 -.1775 BSP 12303
BOE 1.7565 BRA 3.3442 BC3 .4541 FSP -481

MID-COURSE EXECUTION ACCURACY

SGT 1040.4 SGR 3979.9 SG3 156.7
RRT .8946 RRF -.9995 RTF -.9044
SGB 4113.6 R23 -.0034 R13 -.9998
SG1 4088.7 SG2 452.5 THA 76.67

ORBIT DETERMINATION ACCURACY

ST 328.1 SR 1750.4 SS 733.8
CR1 .3362 CR5 .9995 CST .3650
LSA 1901.3 MSA 308.6 SSA 1.0
EL1 1754.0 EL2 308.4 ALF 86.28

LAUNCH DATE JAN 1 1969

FLIGHT TIME 148.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.706 GAL 1.67 AZL 131.15 MCA 178.02 SMA 128.00 ECC .15195 INC41.1475 V1 30.288
RP 108.83 LAP -1.30 LOP 278.92 VP 37.444 GAP -1.50 AZP 48.87 TAL 170.60 TAP 348.62 RCA 108.55 APO 147.45 V2 34.820
RC 81.813 GL -62.54 GP 72.79 ZAL 87.89 ZAP 87.69 ETS 183.92 ZAE 75.09 ETE 289.57 ZAC 74.73 ETC 359.26 CLP 82.16

PLANETOCENTRIC CONIC

C3 421.748 VHL 20.537 DLA -49.94 RAL 46.32 RAD 6572.2 VEL 23.303 PTH 3.29 VHP 27.351 DPA 61.98 RAP 239.24 ECC 7.9409
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.98 9 31 43 2262.42 2.70 60.79 314.03 139.88 10 9 26 1662.4 8.80 56.00
133.02 17 54 54 743.32 2.71 301.01 314.05 139.88 18 7 17 143.3 8.81 296.22
46.98 9 31 43 2262.42 2.70 60.79 314.03 139.88 10 9 26 1662.4 8.80 56.00
133.02 17 54 54 743.32 2.71 301.01 314.05 139.88 18 7 17 143.3 8.81 296.22
46.98 9 31 43 2262.42 2.70 60.79 314.03 139.88 10 9 26 1662.4 8.80 56.00
133.02 17 54 54 743.32 2.71 301.01 314.05 139.88 18 7 17 143.3 8.81 296.22

DIFFERENTIAL CORRECTIONS

TDE 4.2045 TRA-2.0545 TC3 -.0912 BAU 1.2944
RDE-4.3934 RRA 8.0212 RC3 .2107 FAU-.02402
FDE-1.1554 FRA 1.7498 FC3 .0493 BSP 12701
BOE 6.0811 BRA 8.2801 BC3 .2296 FSP -235

MID-COURSE EXECUTION ACCURACY

SGT 1519.7 SGR 3786.9 SG3 73.3
RRT -.8442 RRF .9981 RTF -.8758
SGB 4080.5 R23 -.0059 R13 1.0000
SG1 4007.2 SG2 769.8 THA 109.46

ORBIT DETERMINATION ACCURACY

ST 1203.1 SR 1609.7 SS 932.5
CRT -.8865 CR5 -.9959 CST .9246
LSA 2166.6 MSA 462.5 SSA .3
EL1 1956.7 EL2 458.1 ALF 125.79

LAUNCH DATE JAN 1 1969

FLIGHT TIME 150.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 409.941

RL 147.09 LAL -.00 LOL 100.41 VL 27.717 GAL 1.46 AZL 48.64 HCA 182.23 SMA 128.07 ECC .15066 INC41.3580 V1 30.288  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.445 GAP -.79 AZP 131.34 TAL 171.74 TAP 353.97 RCA 108.77 APO 147.37 V2 34.813  
 RC 84.153 GL 62.53 GP -76.76 ZAL 87.99 ZAP 88.48 ETS 169.63 ZAE 76.79 ETE 66.04 ZAC 101.56 ETC 9.16 CLP 83.36

PLANETOCENTRIC CONIC

C3 425.787 VHL 20.635 DLA 59.40 RAL 331.20 RAD 6572.2 VEL 23.390 PTH 3.29 VHP 23.828 DPA -62.02 RAP 127.19 ECC 8.0074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.32 15 56 51 4978.47 -3.00 238.30 239.44 30.64 17 19 50 4378.5 -9.87 234.59  
 144.68 1 30 29 3317.08 -2.98 102.41 239.42 30.64 2 25 46 2717.1 -9.85 98.70  
 35.32 15 56 51 4978.47 -3.00 238.30 239.44 30.64 17 19 50 4378.5 -9.87 234.59  
 144.68 1 30 29 3317.08 -2.98 102.41 239.42 30.64 2 25 46 2717.1 -9.85 98.70  
 35.32 15 56 51 4978.47 -3.00 238.30 239.44 30.64 17 19 50 4378.5 -9.87 234.59  
 144.68 1 30 29 3317.08 -2.98 102.41 239.42 30.64 2 25 46 2717.1 -9.85 98.70

DIFFERENTIAL CORRECTIONS

TDE-4.2690 TRA 2.1829 TC3 -.1167 BAU 1.3917  
 RD-13.1393 RRA 1.8798 RC3 -.2148 FAU-.02515  
 FDE 2.9997 FRA -.5580 FC3 .0511 BSP 12924  
 BDE13.8141 BRA 2.8807 BC3 .2445 FSP -250

MID-COURSE EXECUTION ACCURACY

SGT 1747.2 SGR 3892.1 SG3 78.7  
 RRT .8778 RRF -.9973 RTF -.9103  
 SGB 4266.2 R23 -.0029 R13-1.0000  
 SG1 4194.9 SG2 776.7 THA 67.69

ORBIT DETERMINATION ACCURACY

ST 1237.0 SR 3661.4 SS 1725.0  
 CRT .9783 CR5 .9997 CST .9831  
 LSA 4225.2 MSA 243.6 SSA .7  
 EL1 3857.1 EL2 243.5 ALF 71.63

LAUNCH DATE JAN 1 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 415.946

RL 147.09 LAL -.00 LOL 100.41 VL 27.724 GAL 1.54 AZL 71.25 HCA 185.11 SMA 128.12 ECC .15045 INC18.7500 V1 30.288  
 RP 108.87 LAP -1.64 LOP 285.24 VP 37.445 GAP -.47 AZP 108.68 TAL 171.27 TAP 356.38 RCA 108.84 APO 147.40 V2 34.807  
 RC 86.508 GL 65.20 GP -82.66 ZAL 85.56 ZAP 87.68 ETS 44.70 ZAE 96.75 ETE 303.61 ZAC 108.69 ETC 243.00 CLP -71.56

PLANETOCENTRIC CONIC

C3 96.296 VHL 9.813 DLA 63.23 RAL 330.33 RAD 6569.9 VEL 14.753 PTH 2.67 VHP 10.221 DPA -61.56 RAP 84.09 ECC 2.5848  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.77 15 42 12 4769.34 -16.96 234.91 231.50 28.09 17 1 41 4169.3 -23.97 231.21  
 149.23 1 38 13 3068.32 -16.95 93.57 231.48 28.09 2 29 21 2468.3 -23.96 89.87  
 30.77 15 42 12 4769.34 -16.96 234.91 231.50 28.09 17 1 41 4169.3 -23.97 231.21  
 149.23 1 38 13 3068.32 -16.95 93.57 231.48 28.09 2 29 21 2468.3 -23.96 89.87  
 30.77 15 42 12 4769.34 -16.96 234.91 231.50 28.09 17 1 41 4169.3 -23.97 231.21  
 149.23 1 38 13 3068.32 -16.95 93.57 231.48 28.09 2 29 21 2468.3 -23.96 89.87

DIFFERENTIAL CORRECTIONS

TDE-1.4009 TRA .2813 TC3 .0304 BAU .1646  
 RDE 6.8325 RRA-1.3009 RC3 -.1242 FAU .00847  
 FDE 3.1548 FRA -.5625 FC3 -.0761 BSP 13944  
 BDE 6.9747 BRA 1.3310 BC3 .1278 FSP -570

MID-COURSE EXECUTION ACCURACY

SGT 897.6 SGR 4338.0 SG3 171.7  
 RRT -.9998 RRF .9996 RTF -.9991  
 SGB 4429.9 R23 -.0122 R13 .9995  
 SG1 4429.8 SG2 19.3 THA 101.69

ORBIT DETERMINATION ACCURACY

ST 825.3 SR 4021.3 SS 1638.1  
 CRT-1.0000 CR5-1.0000 CST .9999  
 LSA 4419.8 MSA 13.7 SSA .7  
 EL1 4105.1 EL2 5.5 ALF 101.60

LAUNCH DATE JAN 1 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 422.172

RL 147.09 LAL -.00 LOL 100.41 VL 27.729 GAL 1.58 AZL 77.27 HCA 188.20 SMA 128.15 ECC .15032 INC12.7323 V1 30.288  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.443 GAP -.10 AZP 102.61 TAL 171.00 TAP 359.20 RCA 108.89 APO 147.42 V2 34.802  
 RC 88.877 GL 61.30 GP -71.56 ZAL 83.55 ZAP 88.63 ETS 11.53 ZAE 108.03 ETE 271.72 ZAC 111.98 ETC 209.27 CLP -85.65

PLANETOCENTRIC CONIC

C3 48.504 VHL 6.964 DLA 61.92 RAL 338.80 RAD 6568.8 VEL 13.033 PTH 2.38 VHP 6.669 DPA -55.96 RAP 65.01 ECC 1.7982  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.32 16 19 42 4601.06 -26.26 228.27 233.56 31.66 17 36 23 4001.1 -32.98 223.69  
 147.68 2 8 16 2912.68 -26.25 88.74 233.54 31.66 2 56 49 2312.7 -32.97 84.17  
 32.32 16 19 42 4601.06 -26.26 228.27 233.56 31.66 17 36 23 4001.1 -32.98 223.69  
 147.68 2 8 16 2912.68 -26.25 88.74 233.54 31.66 2 56 49 2312.7 -32.97 84.17  
 32.32 16 19 42 4601.06 -26.26 228.27 233.56 31.66 17 36 23 4001.1 -32.98 223.69  
 147.68 2 8 16 2912.68 -26.25 88.74 233.54 31.66 2 56 49 2312.7 -32.97 84.17

DIFFERENTIAL CORRECTIONS

TDE 1.0995 TRA -.3489 TC3 -.1230 BAU .3837  
 RDE 4.9010 RRA -.5567 RC3 -.5788 FAU .03284  
 FDE 4.3600 FRA -.4450 FC3 -.5861 BSP 13561  
 BDE 5.0229 BRA .6570 BC3 .5917 FSP -1073

MID-COURSE EXECUTION ACCURACY

SGT 1104.3 SGR 4223.4 SG3 324.9  
 RRT .9384 RRF .9994 RTF .9293  
 SGB 4367.3 R23 .0456 R13 .9986  
 SG1 4351.5 SG2 370.5 THA 76.12

ORBIT DETERMINATION ACCURACY

ST 922.9 SR 4042.6 SS 2071.3  
 CRT .9919 CR5-1.0000 CST -.9910  
 LSA 4633.7 MSA 117.0 SSA 1.6  
 EL1 4145.1 EL2 114.3 ALF 77.23

LAUNCH DATE JAN 1 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 428.424

RL 147.09 LAL -.00 LOL 100.41 VL 27.731 GAL 1.63 AZL 79.99 HCA 191.33 SMA 128.17 ECC .15035 INC10.0110 V1 30.288  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.440 GAP .27 AZP 99.82 TAL 170.72 TAP 2.05 RCA 108.90 APO 147.44 V2 34.797  
 RC 91.256 GL 57.27 GP -62.77 ZAL 81.91 ZAP 91.06 ETS 2.39 ZAE 116.60 ETE 262.59 ZAC 113.46 ETC 199.41 CLP -92.32

PLANETOCENTRIC CONIC

C3 32.812 VHL 5.728 DLA 59.81 RAL 346.06 RAD 6568.3 VEL 12.417 PTH 2.24 VHP 5.164 DPA -50.37 RAP 53.44 ECC 1.5400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.83 16 54 53 4491.35 -31.18 221.81 235.46 36.00 18 9 45 3891.4 -37.52 216.31  
 145.17 2 30 59 2825.36 -31.17 85.32 235.44 35.99 3 18 4 2225.4 -37.51 79.82  
 34.83 16 54 53 4491.35 -31.18 221.81 235.46 36.00 18 9 45 3891.4 -37.52 216.31  
 145.17 2 30 59 2825.36 -31.17 85.32 235.44 35.99 3 18 4 2225.4 -37.51 79.82  
 34.83 16 54 53 4491.35 -31.18 221.81 235.46 36.00 18 9 45 3891.4 -37.52 216.31  
 145.17 2 30 59 2825.36 -31.17 85.32 235.44 35.99 3 18 4 2225.4 -37.51 79.82

DIFFERENTIAL CORRECTIONS

TDE 1.4665 TRA -.3286 TC3 -.3809 BAU .4481  
 RDE 3.7393 RRA -.1768 RC3 -.9479 FAU .05923  
 FDE 5.5293 FRA -.2022 FC3-1.5628 BSP 13243  
 BDE 4.0166 BRA .3731 BC3 1.0215 FSP -1683

MID-COURSE EXECUTION ACCURACY

SGT 1664.1 SGR 3910.5 SG3 503.5  
 RRT .9512 RRF .9993 RTF .9443  
 SGB 4249.8 R23 .0665 R13 .9973  
 SG1 4223.2 SG2 475.4 THA 67.66

ORBIT DETERMINATION ACCURACY

ST 1480.0 SR 3741.8 SS 2468.4  
 CRT .9945 CR5-1.0000 CST -.9938  
 LSA 4718.2 MSA 150.2 SSA 2.1  
 EL1 4021.3 EL2 143.9 ALF 68.50

LAUNCH DATE JAN 1 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 8 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.730 GAL 1.69 AZL 81.54 MCA 194.47 SMA 128.16 ECC .15057 INC 8.4591 V1 30.288  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.436 GAP .64 AZP 98.19 TAL 170.41 TAP 4.88 RCA 108.87 APO 147.46 V2 34.793  
 RC 93.644 GL 53.75 GP -55.38 ZAL 80.90 ZAP 94.58 ETS 356.60 ZAE 123.36 ETE 255.32 ZAC 113.75 ETC 192.70 CLP -98.07

PLANETOCENTRIC CONIC

C3 25.565 VHL 5.056 DLA 57.70 RAL 351.63 RAD 6568.0 VEL 12.122 PTH 2.17 VHP 4.385 DPA -45.29 RAP 45.17 ECC 1.4207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.38 17 23 40 4416.42 -33.71 216.13 236.69 39.97 18 37 17 3816.4 -39.67 209.88  
 142.62 2 46 36 2775.58 -33.70 82.84 236.67 39.97 3 32 52 2175.6 -39.66 76.59  
 37.38 17 23 40 4416.42 -33.71 216.13 236.69 39.97 18 37 17 3816.4 -39.67 209.88  
 142.62 2 46 36 2775.58 -33.70 82.84 236.67 39.97 3 32 52 2175.6 -39.66 76.59  
 37.38 17 23 40 4416.42 -33.71 216.13 236.69 39.97 18 37 17 3816.4 -39.67 209.88  
 142.62 2 46 36 2775.58 -33.70 82.84 236.67 39.97 3 32 52 2175.6 -39.66 76.59

DIFFERENTIAL CORRECTIONS

TDE 1.6690 TRA -.2550 TC3 -.6995 BAU .4697  
 RDE 2.9633 RRA .0298 RC3-1.1830 FAU .08407  
 FDE 6.4111 FRA .1422 FC3-2.8470 BSP 12791  
 BOE 3.4010 BRA .2567 BC3 1.3743 FSP -2270

MID-COURSE EXECUTION ACCURACY

SGT 2090.3 SGR 3565.3 SG3 675.7  
 RRT .9611 RRF .9992 RTF .9551  
 SGB 4132.9 R23 .0889 R13 .9954  
 SGI 4102.3 SGI 501.7 THA 60.11

ORBIT DETERMINATION ACCURACY

ST 1898.3 SR 3358.2 S5 2752.9  
 CRT .9958 CR3-1.0000 CST -.9952  
 LSA 4736.4 MSA 163.9 SSA 2.6  
 EL1 3854.7 EL2 150.6 ALF 60.57

LAUNCH DATE JAN 1 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 10 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.728 GAL 1.76 AZL 82.55 MCA 197.62 SMA 128.14 ECC .15096 INC 7.4524 V1 30.288  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.431 GAP 1.00 AZP 97.11 TAL 170.04 TAP 7.66 RCA 108.80 APO 147.49 V2 34.789  
 RC 96.038 GL 50.74 GP -49.01 ZAL 79.23 ZAP 98.76 ETS 352.38 ZAE 128.60 ETE 248.16 ZAC 113.19 ETC 187.49 CLP-103.43

PLANETOCENTRIC CONIC

C3 21.555 VHL 4.643 DLA 55.78 RAL 356.00 RAD 6567.9 VEL 11.956 PTH 2.13 VHP 3.946 DPA -40.77 RAP 38.75 ECC 1.3547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.70 17 47 25 4362.05 -34.97 211.33 237.61 43.33 19 0 7 3762.0 -40.58 204.53  
 140.30 2 57 46 2746.64 -34.96 81.09 237.60 43.33 3 43 33 2146.6 -40.57 74.28  
 39.70 17 47 25 4362.05 -34.97 211.33 237.61 43.33 19 0 7 3762.0 -40.58 204.53  
 140.30 2 57 46 2746.64 -34.96 81.09 237.60 43.33 3 43 33 2146.6 -40.57 74.28  
 39.70 17 47 25 4362.05 -34.97 211.33 237.61 43.33 19 0 7 3762.0 -40.58 204.53  
 140.30 2 57 46 2746.64 -34.96 81.09 237.60 43.33 3 43 33 2146.6 -40.57 74.28

DIFFERENTIAL CORRECTIONS

TDE 1.8188 TRA -.1669 TC3-1.0531 BAU .4800  
 RDE 2.3968 RRA .1499 RC3-1.2905 FAU .10454  
 FDE 6.9514 FRA .5404 FC3-4.1989 BSP 12380  
 BOE 3.0087 BRA .2244 BC3 1.6657 FSP -2753

MID-COURSE EXECUTION ACCURACY

SGT 2475.5 SGR 3208.3 SG3 820.6  
 RRT .9683 RRF .9989 RTF .9626  
 SGB 4052.3 R23 .1115 R13 .9928  
 SGI 4022.2 SGI 493.5 THA 52.58

ORBIT DETERMINATION ACCURACY

ST 2247.4 SR 2959.7 S5 2927.2  
 CRT .9966 CR3-1.0000 CST -.9959  
 LSA 4727.6 MSA 171.4 SSA 3.1  
 EL1 3713.4 EL2 147.2 ALF 52.82

LAUNCH DATE JAN 1 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 12 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.723 GAL 1.84 AZL 83.26 MCA 200.78 SMA 128.11 ECC .15153 INC 6.7434 V1 30.288  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.425 GAP 1.36 AZP 96.31 TAL 169.62 TAP 10.40 RCA 108.70 APO 147.92 V2 34.787  
 RC 98.436 GL 48.14 GP -43.48 ZAL 78.03 ZAP 103.30 ETS 349.23 ZAE 132.46 ETE 240.86 ZAC 112.17 ETC 183.37 CLP-108.48

PLANETOCENTRIC CONIC

C3 19.084 VHL 4.369 DLA 54.10 RAL 359.61 RAD 6567.8 VEL 11.852 PTH 2.10 VHP 3.693 DPA -36.76 RAP 33.58 ECC 1.3141  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.76 18 7 38 4320.65 -35.54 207.31 238.48 46.11 19 19 39 3720.6 -40.86 200.10  
 138.24 3 6 19 2729.94 -35.53 79.88 238.46 46.10 3 51 49 2129.9 -40.85 72.68  
 41.76 18 7 38 4320.65 -35.54 207.31 238.48 46.11 19 19 39 3720.6 -40.86 200.10  
 138.24 3 6 19 2729.94 -35.53 79.88 238.46 46.10 3 51 49 2129.9 -40.85 72.68  
 41.76 18 7 38 4320.65 -35.54 207.31 238.48 46.11 19 19 39 3720.6 -40.86 200.10  
 138.24 3 6 19 2729.94 -35.53 79.88 238.46 46.10 3 51 49 2129.9 -40.85 72.68

DIFFERENTIAL CORRECTIONS

TDE 1.9379 TRA -.0738 TC3-1.4241 BAU .4936  
 RDE 1.9602 RRA .2136 RC3-1.3094 FAU .12030  
 FDE 7.1600 FRA .9251 FC3-5.4573 BSP 12235  
 BOE 2.7564 BRA .2260 BC3 1.9346 FSP -3133

MID-COURSE EXECUTION ACCURACY

SGT 2834.6 SGR 2854.3 SG3 927.3  
 RRT .9738 RRF .9984 RTF .9683  
 SGB 4022.7 R23 .1309 R13 .9899  
 SGI 3996.3 SGI 460.3 THA 45.20

ORBIT DETERMINATION ACCURACY

ST 2542.4 SR 2575.1 S5 3003.1  
 CRT .9972 CR3 -.9999 CST -.9963  
 LSA 4699.2 MSA 174.6 SSA 3.7  
 EL1 3616.1 EL2 136.0 ALF 45.37

LAUNCH DATE JAN 1 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 14 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.716 GAL 1.93 AZL 83.79 MCA 203.93 SMA 128.07 ECC .15226 INC 6.2142 V1 30.288  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.419 GAP 1.72 AZP 95.68 TAL 169.16 TAP 13.09 RCA 108.57 APO 147.57 V2 34.785  
 RC 100.837 GL 45.86 GP -38.66 ZAL 76.85 ZAP 107.93 ETS 346.89 ZAE 135.08 ETE 233.56 ZAC 110.95 ETC 180.14 CLP-113.22

PLANETOCENTRIC CONIC

C3 17.458 VHL 4.178 DLA 52.63 RAL 2.72 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 3.555 DPA -33.21 RAP 29.36 ECC 1.2873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.59 18 25 24 4288.02 -35.72 203.92 239.42 48.39 19 36 52 3688.0 -40.79 196.44  
 136.41 3 13 23 2720.86 -35.71 79.09 239.40 48.37 3 58 44 2120.9 -40.77 71.61  
 43.59 18 25 24 4288.02 -35.72 203.92 239.42 48.39 19 36 52 3688.0 -40.79 196.44  
 136.41 3 13 23 2720.86 -35.71 79.09 239.40 48.37 3 58 44 2120.9 -40.77 71.61  
 43.59 18 25 24 4288.02 -35.72 203.92 239.42 48.39 19 36 52 3688.0 -40.79 196.44  
 136.41 3 13 23 2720.86 -35.71 79.09 239.40 48.37 3 58 44 2120.9 -40.77 71.61

DIFFERENTIAL CORRECTIONS

TDE 2.0373 TRA .0240 TC3-1.7942 BAU .5114  
 RDE 1.8194 RRA .2459 RC3-1.2584 FAU .13045  
 FDE 7.1113 FRA 1.2771 FC3-6.4697 BSP 12300  
 BOE 2.6025 BRA .2471 BC3 2.1915 FSP -3388

MID-COURSE EXECUTION ACCURACY

SGT 3171.1 SGR 2519.2 SG3 995.1  
 RRT .9778 RRF .9976 RTF .9722  
 SGB 4050.0 R23 .1446 R13 .9872  
 SGI 4028.6 SGI 415.8 THA 38.32

ORBIT DETERMINATION ACCURACY

ST 2794.2 SR 2227.3 S5 3007.6  
 CRT .9976 CR3 -.9999 CST -.9966  
 LSA 4667.3 MSA 176.0 SSA 4.4  
 EL1 3571.3 EL2 120.3 ALF 38.54

LAUNCH DATE JAN 1 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 459.515

RL 147.09 LAL --.00 LOL 100.41 VL 27.708 GAL 2.03 AZL 84.20 HCA 207.09 SMA 128.01 ECC .15316 INC 5.8021 V1 30.288  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.411 GAP 2.07 AZP 95.17 TAL 168.64 TAP 15.73 RCA 108.40 APO 147.62 V2 34.784  
 RC 103.240 GL 43.83 GP -34.48 ZAL 75.67 ZAP 112.51 ETS 345.17 ZAE 136.65 ETE 226.55 ZAC 109.71 ETC 177.65 CLP-117.67

PLANETOCENTRIC CONIC

C3 16.340 VHL 4.042 DLA 51.34 RAL 5.52 RAD 6567.7 VEL 11.736 PTH 2.07 VHP 3.494 DPA -30.05 RAP 25.91 ECC 1.2689  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.20 18 41 29 4261.67 -35.67 201.07 240.48 50.26 19 52 31 3661.7 -40.52 193.39  
 134.80 3 19 38 2716.80 -35.66 78.61 240.47 50.25 4 4 55 2116.8 -40.51 70.93  
 45.20 18 41 29 4261.67 -35.67 201.07 240.48 50.26 19 52 31 3661.7 -40.52 193.39  
 134.80 3 19 38 2716.80 -35.66 78.61 240.47 50.25 4 4 55 2116.8 -40.51 70.93  
 45.20 18 41 29 4261.67 -35.67 201.07 240.48 50.26 19 52 31 3661.7 -40.52 193.39  
 134.80 3 19 38 2716.80 -35.66 78.61 240.47 50.25 4 4 55 2116.8 -40.51 70.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1203 TRA .1247 TC3-2.1533 BAU .5348 SGT 3484.6 SGR 2211.9 SG3 1027.9 ST 3007.0 SR 1922.1 SS 2959.6  
 RDE 1.3502 RRA .2578 RC3-1.1652 FAU .13574 RRT .9805 RRF .9963 RTF .9749 CRT .9980 CRS -.9998 CST -.9967  
 FDE 6.8742 FRA 1.5770 FC3-7.1922 BSP 12566 SGB 4127.3 R23 .1504 R13 .9849 LSA 4633.0 MSA 176.5 S5A 5.1  
 BDE 2.5137 BRA .2864 BC3 2.4483 FSP -3527 SG1 4110.9 SG2 368.5 THA 32.19 EL1 3567.4 EL2 102.4 ALF 32.57

LAUNCH DATE JAN 1 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 465.682

RL 147.09 LAL --.00 LOL 100.41 VL 27.698 GAL 2.15 AZL 84.53 HCA 210.24 SMA 127.94 ECC .15423 INC 5.4702 V1 30.288  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.404 GAP 2.42 AZP 94.73 TAL 168.08 TAP 18.32 RCA 108.21 APO 147.67 V2 34.783  
 RC 105.643 GL 41.98 GP -30.83 ZAL 74.47 ZAP 116.91 ETS 343.92 ZAE 137.38 ETE 220.07 ZAC 108.57 ETC 175.74 CLP-121.81

PLANETOCENTRIC CONIC

C3 15.559 VHL 3.945 DLA 50.20 RAL 8.12 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 3.487 DPA -27.22 RAP 23.13 ECC 1.2561  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.64 18 56 24 4239.97 -35.48 198.63 241.70 51.82 20 7 4 3640.0 -40.15 190.82  
 133.36 3 25 27 2716.28 -35.47 78.36 241.69 51.81 4 10 43 2116.3 -40.15 70.55  
 46.64 18 56 24 4239.97 -35.48 198.63 241.70 51.82 20 7 4 3640.0 -40.15 190.82  
 133.36 3 25 27 2716.28 -35.47 78.36 241.69 51.81 4 10 43 2116.3 -40.15 70.55  
 46.64 18 56 24 4239.97 -35.48 198.63 241.70 51.82 20 7 4 3640.0 -40.15 190.82  
 133.36 3 25 27 2716.28 -35.47 78.36 241.69 51.81 4 10 43 2116.3 -40.15 70.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1908 TRA .2297 TC3-2.4893 BAU .5617 SGT 3775.5 SGR 1937.6 SG3 1032.7 ST 3186.6 SR 1661.9 SS 2878.0  
 RDE 1.1376 RRA .2579 RC3-1.0462 FAU .13670 RRT .9821 RRF .9943 RTF .9768 CRT .9984 CRS -.9997 CST -.9967  
 FDE 6.5204 FRA 1.8247 FC3-7.6063 BSP 12953 SGB 4243.7 R23 .1471 R13 .9834 LSA 4600.9 MSA 176.4 S5A 5.9  
 BDE 2.4685 BRA .3453 BC3 2.7002 FSP -3558 SG1 4231.1 SG2 325.9 THA 26.92 EL1 3592.9 EL2 83.8 ALF 27.52

LAUNCH DATE JAN 1 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 471.830

RL 147.09 LAL --.00 LOL 100.41 VL 27.686 GAL 2.28 AZL 84.80 HCA 213.40 SMA 127.86 ECC .15546 INC 5.1957 V1 30.288  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.395 GAP 2.77 AZP 94.34 TAL 167.47 TAP 20.87 RCA 107.98 APO 147.74 V2 34.783  
 RC 108.045 GL 40.28 GP -27.67 ZAL 73.24 ZAP 121.08 ETS 343.03 ZAE 137.47 ETE 214.31 ZAC 107.62 ETC 174.30 CLP-125.66

PLANETOCENTRIC CONIC

C3 15.016 VHL 3.875 DLA 49.18 RAL 10.59 RAD 6567.6 VEL 11.679 PTH 2.05 VHP 3.519 DPA -24.69 RAP 20.92 ECC 1.2471  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.95 19 10 31 4221.85 -35.20 196.54 243.06 53.13 20 20 53 3621.8 -39.72 188.63  
 132.05 3 31 4 2718.43 -35.19 78.31 243.05 53.12 4 16 22 2118.4 -39.71 70.41  
 47.95 19 10 31 4221.85 -35.20 196.54 243.06 53.13 20 20 53 3621.8 -39.72 188.63  
 132.05 3 31 4 2718.43 -35.19 78.31 243.05 53.12 4 16 22 2118.4 -39.71 70.41  
 47.95 19 10 31 4221.85 -35.20 196.54 243.06 53.13 20 20 53 3621.8 -39.72 188.63  
 132.05 3 31 4 2718.43 -35.19 78.31 243.05 53.12 4 16 22 2118.4 -39.71 70.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2499 TRA .3383 TC3-2.7981 BAU .5912 SGT 4044.1 SGR 1697.1 SG3 1016.2 ST 3335.1 SR 1442.9 SS 2773.7  
 RDE .9690 RRA .2505 RC3 -.9184 FAU .13457 RRT .9825 RRF .9913 RTF .9783 CRT .9988 CRS -.9995 CST -.9966  
 FDE 6.0986 FRA 2.0197 FC3-7.7585 BSP 13460 SGB 4385.8 R23 .1346 R13 .9824 LSA 4568.1 MSA 176.0 S5A 6.7  
 BDE 2.4497 BRA .4209 BC3 2.9450 FSP -3518 SG1 4376.0 SG2 292.3 THA 22.51 EL1 3633.3 EL2 65.4 ALF 23.38

LAUNCH DATE JAN 1 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 477.961

RL 147.09 LAL --.00 LOL 100.41 VL 27.673 GAL 2.42 AZL 85.04 HCA 216.56 SMA 127.77 ECC .15686 INC 4.9635 V1 30.288  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.387 GAP 3.11 AZP 95.99 TAL 166.81 TAP 23.37 RCA 107.73 APO 147.82 V2 34.784  
 RC 110.446 GL 38.68 GP -24.92 ZAL 71.96 ZAP 124.99 ETS 342.41 ZAE 137.12 ETE 209.33 ZAC 106.89 ETC 173.23 CLP-129.23

PLANETOCENTRIC CONIC

C3 14.651 VHL 3.828 DLA 48.25 RAL 12.98 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 3.582 DPA -22.40 RAP 19.21 ECC 1.2411  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.14 19 24 4 4206.62 -34.85 194.72 244.58 54.23 20 34 11 3606.6 -39.25 186.75  
 130.86 3 36 37 2722.65 -34.84 78.42 244.57 54.22 4 21 59 2122.7 -39.24 70.46  
 49.14 19 24 4 4206.62 -34.85 194.72 244.58 54.23 20 34 11 3606.6 -39.25 186.75  
 130.86 3 36 37 2722.65 -34.84 78.42 244.57 54.22 4 21 59 2122.7 -39.24 70.46  
 49.14 19 24 4 4206.62 -34.85 194.72 244.58 54.23 20 34 11 3606.6 -39.25 186.75  
 130.86 3 36 37 2722.65 -34.84 78.42 244.57 54.22 4 21 59 2122.7 -39.24 70.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3013 TRA .4530 TC3-3.0688 BAU .6205 SGT 4292.2 SGR 1490.3 SG3 985.1 ST 3459.0 SR 1262.4 SS 2659.7  
 RDE .8363 RRA .2400 RC3 -.7866 FAU .12964 RRT .9813 RRF .9869 RTF .9792 CRT .9992 CRS -.9991 CST -.9965  
 FDE 5.6556 FRA 2.1763 FC3-7.6610 BSP 13964 SGB 4543.5 R23 .1149 R13 .9818 LSA 4538.9 MSA 175.7 S5A 7.4  
 BDE 2.4485 BRA .5126 BC3 3.1680 FSP -3403 SG1 4535.4 SG2 271.8 THA 18.88 EL1 3681.9 EL2 48.1 ALF 20.04

LAUNCH DATE JAN 1 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 484.072

RL 147.09 LAL -.00 LOL 100.41 VL 27.659 GAL 2.57 AZL 85.24 HCA 219.72 SMA 127.68 ECC .15843 INC 4.7635 V1 30.288  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.378 GAP 3.46 AZP 93.67 TAL 166.11 TAP 25.83 RCA 107.45 APO 147.90 V2 34.786  
 RC 112.844 GL 37.17 GP -22.54 ZAL 70.63 ZAP 128.64 ETS 341.98 ZAE 136.48 ETE 205.10 ZAC 106.41 ETC 172.43 CLP-132.53

PLANETOCENTRIC CONIC

C3 14.425 VHL 3.798 DLA 47.40 RAL 15.33 RAD 6567.6 VEL 11.654 PTH 2.05 VHP 3.669 DPA -20.33 RAP 17.94 ECC 1.2374  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.25 19 37 15 4193.74 -34.46 193.12 246.23 55.17 20 47 8 3593.7 -38.74 185.12  
 129.75 3 42 9 2728.64 -34.44 78.66 246.22 55.16 4 27 38 2128.6 -38.73 70.66  
 50.25 19 37 15 4193.74 -34.46 193.12 246.23 55.17 20 47 8 3593.7 -38.74 185.12  
 129.75 3 42 9 2728.64 -34.44 78.66 246.22 55.16 4 27 38 2128.6 -38.73 70.66  
 50.25 19 37 15 4193.74 -34.46 193.12 246.23 55.17 20 47 8 3593.7 -38.74 185.12  
 129.75 3 42 9 2728.64 -34.44 78.66 246.22 55.16 4 27 38 2128.6 -38.73 70.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3419 TRA .5696 TC3-3.3104 BAU .6512 SGT 4518.5 SGR 1312.8 SG3 943.7 ST 3554.2 SR 1112.5 SS 2535.1  
 RDE .7305 RRA .2260 RC3 -.6652 FAU .12368 RRT .9783 RRF .9807 RTF .9801 CRT .9996 CRS -.9984 CST -.9964  
 FDE 5.2028 FRA 2.2832 FC3-7.4232 BSP 14559 SGB 4705.3 R23 .0899 R13 .9816 LSA 4501.8 MSA 174.8 SSA 8.2  
 BOE 2.4532 BRA .6128 BC3 3.3766 FSP -3272 SGI 4698.1 SG2 261.4 THA 15.92 EL1 3724.1 EL2 31.7 ALF 17.37

LAUNCH DATE JAN 1 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 490.165

RL 147.09 LAL -.00 LOL 100.41 VL 27.644 GAL 2.74 AZL 85.41 HCA 222.88 SMA 127.57 ECC .16017 INC 4.5884 V1 30.288  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.368 GAP 3.80 AZP 93.37 TAL 165.37 TAP 28.24 RCA 107.14 APO 148.00 V2 34.789  
 RC 115.239 GL 35.72 GP -20.46 ZAL 69.26 ZAP 132.02 ETS 341.69 ZAE 135.68 ETE 201.56 ZAC 106.16 ETC 171.85 CLP-135.60

PLANETOCENTRIC CONIC

C3 14.315 VHL 3.783 DLA 46.61 RAL 17.65 RAD 6567.6 VEL 11.649 PTH 2.05 VHP 3.775 DPA -18.42 RAP 17.06 ECC 1.2356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.29 19 50 12 4182.78 -34.02 191.71 248.02 55.98 20 59 54 3582.8 -38.21 183.69  
 128.71 3 47 44 2736.21 -34.01 79.02 248.01 55.96 4 33 20 2136.2 -38.20 71.00  
 51.29 19 50 12 4182.78 -34.02 191.71 248.02 55.98 20 59 54 3582.8 -38.21 183.69  
 128.71 3 47 44 2736.21 -34.01 79.02 248.01 55.96 4 33 20 2136.2 -38.20 71.00  
 51.29 19 50 12 4182.78 -34.02 191.71 248.02 55.98 20 59 54 3582.8 -38.21 183.69  
 128.71 3 47 44 2736.21 -34.01 79.02 248.01 55.96 4 33 20 2136.2 -38.20 71.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3749 TRA .6914 TC3-3.5163 BAU .6812 SGT 4726.2 SGR 1163.3 SG3 896.7 ST 3626.2 SR 990.0 SS 2408.0  
 RDE .6471 RRA .2115 RC3 -.5538 FAU .11684 RRT .9731 RRF .9721 RTF .9807 CRT .9998 CRS -.9974 CST -.9963  
 FDE 4.7646 FRA 2.3599 FC3-7.0663 BSP 15158 SGB 4867.2 R23 .0646 R13 .9816 LSA 4460.7 MSA 173.9 SSA 9.0  
 BOE 2.4614 BRA .7230 BC3 3.5596 FSP -3120 SGI 4860.2 SG2 260.8 THA 13.91 EL1 3758.9 EL2 17.1 ALF 15.27

LAUNCH DATE JAN 1 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 496.239

RL 147.09 LAL -.00 LOL 100.41 VL 27.627 GAL 2.92 AZL 85.57 HCA 226.04 SMA 127.46 ECC .16208 INC 4.4329 V1 30.288  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.359 GAP 4.14 AZP 93.08 TAL 164.58 TAP 30.62 RCA 106.80 APO 148.12 V2 34.792  
 RC 117.630 GL 34.32 GP -18.66 ZAL 67.85 ZAP 135.15 ETS 341.50 ZAE 134.79 ETE 198.61 ZAC 106.15 ETC 171.43 CLP-138.44

PLANETOCENTRIC CONIC

C3 14.306 VHL 3.782 DLA 45.86 RAL 19.96 RAD 6567.6 VEL 11.649 PTH 2.04 VHP 3.896 DPA -16.67 RAP 16.52 ECC 1.2354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.28 20 3 0 4173.45 -33.54 190.45 249.93 56.67 21 12 34 3573.4 -37.66 182.42  
 127.72 3 53 19 2745.26 -33.53 79.49 249.92 56.66 4 39 5 2145.3 -37.65 71.47  
 52.28 20 3 0 4173.45 -33.54 190.45 249.93 56.67 21 12 34 3573.4 -37.66 182.42  
 127.72 3 53 19 2745.26 -33.53 79.49 249.92 56.66 4 39 5 2145.3 -37.65 71.47  
 52.28 20 3 0 4173.45 -33.54 190.45 249.93 56.67 21 12 34 3573.4 -37.66 182.42  
 127.72 3 53 19 2745.26 -33.53 79.49 249.92 56.66 4 39 5 2145.3 -37.65 71.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4016 TRA .8193 TC3-3.6842 BAU .7099 SGT 4917.2 SGR 1038.8 SG3 847.2 ST 3678.1 SR 890.7 SS 2282.2  
 RDE .5818 RRA .1974 RC3 -.4540 FAU .10952 RRT .9649 RRF .9607 RTF .9812 CRT .9999 CRS -.9960 CST -.9961  
 FDE 4.3516 FRA 2.4136 FC3-6.6280 BSP 15726 SGB 5025.8 R23 .0424 R13 .9817 LSA 4415.9 MSA 173.1 SSA 9.7  
 BOE 2.4711 BRA .8428 BC3 3.7121 FSP -2953 SGI 5018.7 SG2 267.2 THA 11.55 EL1 3784.4 EL2 9.7 ALF 13.61

LAUNCH DATE JAN 1 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 502.293

RL 147.09 LAL -.00 LOL 100.41 VL 27.609 GAL 3.12 AZL 85.71 HCA 229.20 SMA 127.34 ECC .16417 INC 4.2932 V1 30.288  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.350 GAP 4.49 AZP 92.81 TAL 163.77 TAP 32.97 RCA 106.44 APO 148.25 V2 34.796  
 RC 120.015 GL 32.96 GP -17.09 ZAL 66.39 ZAP 138.05 ETS 341.36 ZAE 133.88 ETE 196.16 ZAC 106.36 ETC 171.12 CLP-141.09

PLANETOCENTRIC CONIC

C3 14.388 VHL 3.793 DLA 45.15 RAL 22.26 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 4.032 DPA -15.04 RAP 16.28 ECC 1.2368  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.24 20 15 44 4165.55 -33.03 189.32 251.96 57.28 21 25 10 3565.5 -37.08 181.30  
 126.76 3 58 57 2755.71 -33.02 80.07 251.95 57.27 4 44 53 2155.7 -37.07 72.05  
 53.24 20 15 44 4165.55 -33.03 189.32 251.96 57.28 21 25 10 3565.5 -37.08 181.30  
 126.76 3 58 57 2755.71 -33.02 80.07 251.95 57.27 4 44 53 2155.7 -37.07 72.05  
 53.24 20 15 44 4165.55 -33.03 189.32 251.96 57.28 21 25 10 3565.5 -37.08 181.30  
 126.76 3 58 57 2755.71 -33.02 80.07 251.95 57.27 4 44 53 2155.7 -37.07 72.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4249 TRA .9554 TC3-3.8090 BAU .7360 SGT 5094.3 SGR 936.8 SG3 797.6 ST 3714.8 SR 811.6 SS 2162.7  
 RDE .5315 RRA .1848 RC3 -.3643 FAU .10172 RRT .9532 RRF .9462 RTF .9815 CRT .9997 CRS -.9939 CST -.9959  
 FDE 3.9744 FRA 2.4545 FC3-6.1203 BSP 16222 SGB 5179.7 R23 .0259 R13 .9818 LSA 4371.0 MSA 172.9 SSA 10.4  
 BOE 2.4824 BRA .9731 BC3 3.8264 FSP -2769 SGI 5172.2 SG2 278.9 THA 9.97 EL1 3802.4 EL2 18.5 ALF 12.32

LAUNCH DATE JAN 1 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 508.327

RL 147.09 LAL -.00 LOL 100.41 VL 27.591 GAL 3.33 AZL 85.83 MCA 232.35 SMA 127.22 ECC .16645 INC 4.1661 V1 30.288
RP 108.89 LAP -3.30 LOP 332.70 VP 37.340 GAP 4.84 AZP 92.55 TAL 162.91 TAP 35.27 RCA 106.04 APO 148.39 V2 34.800
RC 122.394 GL 31.63 GP -15.71 ZAL 64.88 ZAP 140.75 ETS 341.25 ZAE 132.98 ETE 194.12 ZAC 106.78 ETC 170.91 CLP-143.55

PLANETOCENTRIC CONIC

C3 14.557 VHL 3.815 DLA 44.45 RAL 24.56 RAD 6567.6 VEL 11.659 PTH 2.05 VHP 4.179 DPA -13.50 RAP 16.30 ECC 1.2396
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.18 20 28 29 4158.80 -32.49 188.29 254.10 57.81 21 37 48 3558.8 -36.47 180.29
125.82 4 4 33 2767.64 -32.48 80.75 254.09 57.80 4 50 40 2167.6 -36.46 72.75
54.18 20 28 29 4158.80 -32.49 188.29 254.10 57.81 21 37 48 3558.8 -36.47 180.29
125.82 4 4 33 2767.64 -32.48 80.75 254.09 57.80 4 50 40 2167.6 -36.46 72.75
54.18 20 28 29 4158.80 -32.49 188.29 254.10 57.81 21 37 48 3558.8 -36.47 180.29
125.82 4 4 33 2767.64 -32.48 80.75 254.09 57.80 4 50 40 2167.6 -36.46 72.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4394 TRA 1.0952 TC3-3.9051 BAU .7621 96T 5254.3 86R 852.2 863 740.0 ST 3728.9 SR 746.9 SS 2042.1
RDE .4921 RRA .1724 RC3 -.2893 FAU .09442 RRT .9380 RRF .9282 RTF .9818 CRT .9991 CRS -.9910 CST -.9957
FDE 3.6190 FRA 2.4726 FC3-5.6153 B&P 16782 96B 5322.9 R23 .0126 R13 .9819 LSA 4313.1 MSA 172.7 SSA 11.1
BOE 2.4885 BRA 1.1087 BC3 3.9158 F&P -2806 96I 5314.9 86Z 292.0 THA 8.66 EL1 3802.8 EL2 31.5 ALF 11.32

LAUNCH DATE JAN 1 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 514.341

RL 147.09 LAL -.00 LOL 100.41 VL 27.572 GAL 3.55 AZL 85.95 MCA 235.53 SMA 127.09 ECC .16893 INC 4.0494 V1 30.288
RP 108.88 LAP -3.34 LOP 339.87 VP 37.331 GAP 5.19 AZP 92.29 TAL 162.02 TAP 37.55 RCA 105.62 APO 148.55 V2 34.805
RC 124.766 GL 30.33 GP -14.50 ZAL 63.34 ZAP 143.25 ETS 341.16 ZAE 132.11 ETE 192.41 ZAC 107.37 ETC 170.76 CLP-145.86

PLANETOCENTRIC CONIC

C3 14.811 VHL 3.849 DLA 43.77 RAL 26.85 RAD 6567.6 VEL 11.670 PTH 2.05 VHP 4.337 DPA -12.06 RAP 16.55 ECC 1.2438
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.11 20 41 16 4153.03 -31.91 187.34 256.33 58.28 21 50 29 3553.0 -35.84 179.36
124.89 4 10 4 2781.09 -31.90 81.54 256.32 58.27 4 56 25 2181.1 -35.83 73.57
55.11 20 41 16 4153.03 -31.91 187.34 256.33 58.28 21 50 29 3553.0 -35.84 179.36
124.89 4 10 4 2781.09 -31.90 81.54 256.32 58.27 4 56 25 2181.1 -35.83 73.57
55.11 20 41 16 4153.03 -31.91 187.34 256.33 58.28 21 50 29 3553.0 -35.84 179.36
124.89 4 10 4 2781.09 -31.90 81.54 256.32 58.27 4 56 25 2181.1 -35.83 73.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4486 TRA 1.2424 TC3-3.9669 BAU .7868 96T 5401.3 86R 785.9 863 700.2 ST 3726.7 SR 695.3 SS 1926.2
RDE .4682 RRA .1815 RC3 -.2258 FAU .08737 RRT .9192 RRF .9069 RTF .9820 CRT .9978 CRS -.9872 CST -.9954
FDE 3.2944 FRA 2.4815 FC3-5.1067 B&P 17276 96B 5457.9 R23 .0033 R13 .9821 LSA 4248.7 MSA 173.1 SSA 11.7
BOE 2.4918 BRA 1.2520 BC3 3.9754 F&P -2447 96I 5449.3 86Z 306.0 THA 7.62 EL1 3790.7 EL2 45.0 ALF 10.55

LAUNCH DATE JAN 1 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 520.333

RL 147.09 LAL -.00 LOL 100.41 VL 27.551 GAL 3.80 AZL 86.06 MCA 238.69 SMA 126.95 ECC .17161 INC 3.9411 V1 30.288
RP 108.88 LAP -3.37 LOP 339.04 VP 37.321 GAP 5.54 AZP 92.05 TAL 161.11 TAP 39.80 RCA 105.17 APO 148.74 V2 34.811
RC 127.128 GL 29.04 GP -13.44 ZAL 61.77 ZAP 145.58 ETS 341.06 ZAE 131.29 ETE 190.99 ZAC 108.14 ETC 170.66 CLP-148.01

PLANETOCENTRIC CONIC

C3 15.149 VHL 3.892 DLA 43.10 RAL 29.14 RAD 6567.6 VEL 11.685 PTH 2.06 VHP 4.505 DPA -10.68 RAP 17.00 ECC 1.2493
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.03 20 54 6 4148.17 -31.30 186.46 258.65 58.70 22 3 14 3548.2 -35.18 178.52
123.97 4 15 29 2796.06 -31.28 82.44 258.64 58.69 5 2 5 2196.1 -35.17 74.50
58.03 20 54 6 4148.17 -31.30 186.46 258.65 58.70 22 3 14 3548.2 -35.18 178.52
123.97 4 15 29 2796.06 -31.28 82.44 258.64 58.69 5 2 5 2196.1 -35.17 74.50
58.03 20 54 6 4148.17 -31.30 186.46 258.65 58.70 22 3 14 3548.2 -35.18 178.52
123.97 4 15 29 2796.06 -31.28 82.44 258.64 58.69 5 2 5 2196.1 -35.17 74.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4532 TRA 1.3977 TC3-3.9944 BAU .8097 96T 5536.2 86R 729.2 863 654.7 ST 3710.0 SR 654.3 SS 1815.5
RDE .4400 RRA .1521 RC3 -.1725 FAU .08059 RRT .8970 RRF .8827 RTF .9821 CRT .9959 CRS -.9825 CST -.9952
FDE 2.9991 FRA 2.4837 FC3-4.6057 B&P 17751 96B 5584.0 R23 -.0028 R13 .9821 LSA 4178.3 MSA 174.2 SSA 12.3
BOE 2.4925 BRA 1.4059 BC3 3.9981 F&P -2294 96I 5574.9 86Z 320.1 THA 6.76 EL1 3766.8 EL2 58.5 ALF 9.96

LAUNCH DATE JAN 1 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 526.303

RL 147.09 LAL -.00 LOL 100.41 VL 27.530 GAL 4.05 AZL 86.16 MCA 241.86 SMA 126.81 ECC .17450 INC 3.8399 V1 30.288
RP 108.84 LAP -3.39 LOP 342.21 VP 37.312 GAP 5.90 AZP 91.81 TAL 160.16 TAP -42.02 RCA 104.68 APO 148.94 V2 34.818
RC 129.481 GL 27.78 GP -12.50 ZAL 60.17 ZAP 147.76 ETS 340.92 ZAE 130.52 ETE 189.79 ZAC 109.05 ETC 170.60 CLP-150.04

PLANETOCENTRIC CONIC

C3 15.575 VHL 3.946 DLA 42.44 RAL 31.42 RAD 6567.6 VEL 11.703 PTH 2.06 VHP 4.682 DPA -9.37 RAP 17.62 ECC 1.2563
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.97 21 7 1 4144.06 -30.64 185.64 261.05 59.07 22 16 5 3544.1 -34.49 177.73
123.03 4 20 45 2812.63 -30.63 83.45 261.04 59.06 5 7 37 2212.6 -34.48 75.54
58.97 21 7 1 4144.06 -30.64 185.64 261.05 59.07 22 16 5 3544.1 -34.49 177.73
123.03 4 20 45 2812.63 -30.63 83.45 261.04 59.06 5 7 37 2212.6 -34.48 75.54
58.97 21 7 1 4144.06 -30.64 185.64 261.05 59.07 22 16 5 3544.1 -34.49 177.73
123.03 4 20 45 2812.63 -30.63 83.45 261.04 59.06 5 7 37 2212.6 -34.48 75.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4543 TRA 1.5619 TC3-3.9885 BAU .8309 96T 5681.1 86R 886.0 863 611.8 ST 3681.7 SR 622.0 SS 1711.0
RDE .4244 RRA .1444 RC3 -.1288 FAU .07416 RRT .8723 RRF .8565 RTF .9822 CRT .9931 CRS -.9766 CST -.9950
FDE 2.7323 FRA 2.4813 FC3-4.1224 B&P 18188 96B 5702.5 R23 -.0067 R13 .9822 LSA 4103.4 MSA 175.9 SSA 12.7
BOE 2.4907 BRA 1.5686 BC3 3.9906 F&P -2149 96I 5692.7 86Z 333.5 THA 6.05 EL1 3733.2 EL2 71.9 ALF 9.53

LAUNCH DATE JAN 1 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 532.251

RL 147.09 LAL -.00 LOL 100.41 VL 27.509 GAL 4.33 AZL 86.26 HCA 245.02 SMA 126.67 ECC .17763 INC 3.7444 V1 30.288
RP 108.82 LAP -3.39 LOP 345.38 VP 37.303 GAP 6.27 AZP 91.58 TAL 159.19 TAP 44.21 RCA 104.17 APO 149.17 V2 34.825
RC 131.823 GL 26.52 GP -11.67 ZAL 58.55 ZAP 149.80 ETS 340.80 ZAE 129.81 ETE 180.79 ZAC 110.10 ETC 170.55 CLP-151.95

PLANETOCENTRIC CONIC

C3 16.092 VHL 4.011 DLA 41.77 RAL 33.68 RAD 6567.6 VEL 11.725 PTH 2.07 VHP 4.868 DPA -8.10 RAP 18.40 ECC 1.2648
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.91 21 20 1 4140.59 -29.96 184.86 263.51 59.41 22 29 2 3540.6 -33.77 176.99
122.09 4 25 48 2830.91 -29.94 84.58 263.50 59.40 5 12 59 2230.9 -33.76 76.71
57.91 21 20 1 4140.59 -29.96 184.86 263.51 59.41 22 29 2 3540.6 -33.77 176.99
122.09 4 25 48 2830.91 -29.94 84.58 263.50 59.40 5 12 59 2230.9 -33.76 76.71
57.91 21 20 1 4140.59 -29.96 184.86 263.51 59.41 22 29 2 3540.6 -33.77 176.99
122.09 4 25 48 2830.91 -29.94 84.58 263.50 59.40 5 12 59 2230.9 -33.76 76.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4532 TRA 1.7374 TC3-3.9471 BAU .8494 SGT 5777.1 SGR 652.6 SCS 571.9 ST 3644.5 SR 597.0 SS 1614.0
RDE .4142 RRA .1385 RC3 -.0921 FAU .06791 RRT .8481 RRF .8295 RTF .9821 CRT .9894 CRS -.9696 CST -.9947
FDE 2.4938 FRA 2.4789 FC3-3.6538 BSP 18539 SGB 5813.9 R23 -.0083 R13 .9821 LSA 4026.4 MSA 178.6 SSA 13.2
BDE 2.4879 BRA 1.7429 BC3 3.9482 FSP -2003 SGI 5803.6 SGT 346.3 THA 5.48 EL1 3692.1 EL2 85.4 ALF 9.21

LAUNCH DATE JAN 1 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 538.173

RL 147.09 LAL -.00 LOL 100.41 VL 27.487 GAL 4.62 AZL 86.35 HCA 248.19 SMA 126.52 ECC .18100 INC 3.6537 V1 30.288
RP 108.79 LAP -3.39 LOP 348.56 VP 37.294 GAP 6.64 AZP 91.36 TAL 158.19 TAP 46.38 RCA 103.62 APO 149.42 V2 34.833
RC 134.153 GL 25.29 GP -10.94 ZAL 56.91 ZAP 151.72 ETS 340.61 ZAE 129.15 ETE 187.93 ZAC 111.27 ETC 170.51 CLP-153.76

PLANETOCENTRIC CONIC

C3 16.708 VHL 4.087 DLA 41.10 RAL 35.93 RAD 6567.7 VEL 11.751 PTH 2.07 VHP 5.064 DPA -6.88 RAP 19.32 ECC 1.2749
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.87 21 33 8 4137.67 -29.23 184.12 266.04 59.72 22 42 5 3537.7 -33.01 176.29
121.13 4 30 35 2850.97 -29.22 85.82 266.03 59.70 5 18 6 2251.0 -33.00 78.00
58.87 21 33 8 4137.67 -29.23 184.12 266.04 59.72 22 42 5 3537.7 -33.01 176.29
121.13 4 30 35 2850.97 -29.22 85.82 266.03 59.70 5 18 6 2251.0 -33.00 78.00
58.87 21 33 8 4137.67 -29.23 184.12 266.04 59.72 22 42 5 3537.7 -33.01 176.29
121.13 4 30 35 2850.97 -29.22 85.82 266.03 59.70 5 18 6 2251.0 -33.00 78.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4452 TRA 1.9196 TC3-3.8854 BAU .8679 SGT 5881.1 SGR 626.0 SCS 534.1 ST 3592.4 SR 576.8 SS 1519.4
RDE .4080 RRA .1339 RC3 -.0842 FAU .08250 RRT .8193 RRF .8022 RTF .9821 CRT .9848 CRS -.9613 CST -.9945
FDE 2.2732 FRA 2.4695 FC3-3.2285 BSP 18936 SGB 5914.3 R23 -.0093 R13 .9821 LSA 3938.7 MSA 182.1 SSA 13.5
BDE 2.4790 BRA 1.9245 BC3 3.8860 FSP -1877 SGI 5903.5 SGT 357.6 THA 5.00 EL1 3637.0 EL2 99.0 ALF 8.99

LAUNCH DATE JAN 1 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 544.068

RL 147.09 LAL -.00 LOL 100.41 VL 27.464 GAL 4.93 AZL 86.43 HCA 251.36 SMA 126.37 ECC .18483 INC 3.5670 V1 30.288
RP 108.77 LAP -3.38 LOP 351.73 VP 37.285 GAP 7.03 AZP 91.14 TAL 157.18 TAP 48.54 RCA 103.04 APO 149.70 V2 34.841
RC 138.471 GL 24.07 GP -10.28 ZAL 55.26 ZAP 153.53 ETS 340.37 ZAE 128.55 ETE 187.21 ZAC 112.54 ETC 170.48 CLP-155.48

PLANETOCENTRIC CONIC

C3 17.427 VHL 4.175 DLA 40.42 RAL 38.14 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.269 DPA -5.69 RAP 20.36 ECC 1.2868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.86 21 46 20 4135.23 -28.46 183.40 268.62 59.99 22 55 15 3535.2 -32.22 175.63
120.14 4 35 3 2872.87 -28.45 87.19 268.62 59.98 5 22 56 2272.9 -32.21 79.42
59.86 21 46 20 4135.23 -28.46 183.40 268.62 59.99 22 55 15 3535.2 -32.22 175.63
120.14 4 35 3 2872.87 -28.45 87.19 268.62 59.98 5 22 56 2272.9 -32.21 79.42
59.86 21 46 20 4135.23 -28.46 183.40 268.62 59.99 22 55 15 3535.2 -32.22 175.63
120.14 4 35 3 2872.87 -28.45 87.19 268.62 59.98 5 22 56 2272.9 -32.21 79.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4341 TRA 2.1126 TC3-3.7969 BAU .8846 SGT 5976.3 SGR 605.6 SCS 499.1 ST 3532.0 SR 561.1 SS 1431.1
RDE .4055 RRA .1309 RC3 -.0422 FAU .05700 RRT .7930 RRF .7761 RTF .9820 CRT .9792 CRS -.9519 CST -.9942
FDE 2.0744 FRA 2.4600 FC3-2.8320 BSP 19297 SGB 6006.9 R23 -.0092 R13 .9819 LSA 3847.5 MSA 186.5 SSA 13.8
BDE 2.4676 BRA 2.1167 BC3 3.7971 FSP -1758 SGI 5995.6 SGT 367.8 THA 4.61 EL1 3574.6 EL2 112.6 ALF 8.85

LAUNCH DATE JAN 1 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 549.936

RL 147.09 LAL -.00 LOL 100.41 VL 27.441 GAL 5.26 AZL 86.52 HCA 254.53 SMA 126.22 ECC .18854 INC 3.4833 V1 30.288
RP 108.74 LAP -3.36 LOP 354.91 VP 37.276 GAP 7.42 AZP 90.93 TAL 156.14 TAP 50.67 RCA 102.42 APO 150.02 V2 34.850
RC 138.775 GL 22.86 GP -9.89 ZAL 53.61 ZAP 155.24 ETS 340.07 ZAE 128.00 ETE 186.59 ZAC 113.91 ETC 170.45 CLP-157.11

PLANETOCENTRIC CONIC

C3 18.262 VHL 4.273 DLA 39.74 RAL 40.33 RAD 6567.7 VEL 11.817 PTH 2.09 VHP 5.484 DPA -4.54 RAP 21.50 ECC 1.3005
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.87 21 59 40 4133.08 -27.66 182.70 271.26 60.25 23 8 33 3533.1 -31.39 174.98
119.13 4 39 8 2896.81 -27.65 88.70 271.25 60.24 5 27 24 2296.8 -31.38 80.98
60.87 21 59 40 4133.08 -27.66 182.70 271.26 60.25 23 8 33 3533.1 -31.39 174.98
119.13 4 39 8 2896.81 -27.65 88.70 271.25 60.24 5 27 24 2296.8 -31.38 80.98
60.87 21 59 40 4133.08 -27.66 182.70 271.26 60.25 23 8 33 3533.1 -31.39 174.98
119.13 4 39 8 2896.81 -27.65 88.70 271.25 60.24 5 27 24 2296.8 -31.38 80.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4191 TRA 2.3165 TC3-3.6870 BAU .9002 SGT 6083.2 SGR 589.8 SCS 466.5 ST 3463.7 SR 548.5 SS 1347.9
RDE .4060 RRA .1298 RC3 -.0257 FAU .05211 RRT .7683 RRF .7517 RTF .9818 CRT .9725 CRS -.9414 CST -.9940
FDE 1.8938 FRA 2.4488 FC3-2.4705 BSP 19640 SGB 6091.8 R23 -.0086 R13 .9818 LSA 3752.1 MSA 191.8 SSA 13.9
BDE 2.4550 BRA 2.3201 BC3 3.6871 FSP -1649 SGI 6080.2 SGT 376.5 THA 4.29 EL1 3504.6 EL2 126.3 ALF 8.77

LAUNCH DATE JAN 1 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 555.773

RL 147.09 LAL -.00 LOL 100.41 VL 27.417 GAL 5.62 AZL 86.60 HCA 257.70 SMA 126.06 ECC .19275 INC 3.4021 V1 30.288  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.268 GAP 7.83 AZP 90.73 TAL 155.09 TAP 52.80 RCA 101.76 APO 150.36 V2 34.860  
 RC 141.067 GL 21.67 GP -9.17 ZAL 51.96 ZAP 156.87 ETS 339.69 ZAE 127.49 ETE 186.06 ZAC 115.37 ETC 170.42 CLP-158.67

PLANETOCENTRIC CONIC

C3 19.225 VHL 4.365 DLA 39.05 RAL 42.47 RAD 6567.8 VEL 11.858 PTH 2.10 VHP 5.709 DPA -3.41 RAP 22.75 ECC 1.3164  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.91 22 13 6 4131.28 -26.82 182.01 273.93 60.49 23 21 58 3531.3 -30.53 174.34  
 118.09 4 42 49 2922.77 -26.81 90.34 273.92 60.48 5 31 32 2322.8 -30.52 82.67  
 61.91 22 13 6 4131.28 -26.82 182.01 273.93 60.49 23 21 58 3531.3 -30.53 174.34  
 118.09 4 42 49 2922.77 -26.81 90.34 273.92 60.48 5 31 32 2322.8 -30.52 82.67  
 61.91 22 13 6 4131.28 -26.82 182.01 273.93 60.49 23 21 58 3531.3 -30.53 174.34  
 118.09 4 42 49 2922.77 -26.81 90.34 273.92 60.48 5 31 32 2322.8 -30.52 82.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4053 TRA 2.5359 TC3-3.5482 BAU .9119 SGT 6145.4 SCR 578.1 SG3 436.6 ST 3395.1 SR 538.9 SS 1273.1  
 RDE .4093 RRA .1302 RC3 -.0127 FAU .04732 RRT .7461 RRF .7305 RTF .9816 CRT .9649 CRS -.9299 CST -.9938  
 FDE 1.7344 FRA 2.4435 FC3-2.1509 BSP 19869 SGB 6172.5 R23 -.0071 R13 .9816 LSA 3660.4 MSA 197.8 SSA 14.0  
 BDE 2.4399 BRA 2.5392 BC3 3.5482 FSP -1538 SGI 6160.6 SGI 384.0 THA 4.03 EL1 3434.7 EL2 139.9 ALF 8.72

LAUNCH DATE JAN 1 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 561.576

RL 147.09 LAL -.00 LOL 100.41 VL 27.393 GAL 6.00 AZL 86.68 HCA 260.88 SMA 125.91 ECC .19729 INC 3.3229 V1 30.288  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.260 GAP 8.25 AZP 90.53 TAL 154.03 TAP 54.91 RCA 101.07 APO 150.75 V2 34.870  
 RC 143.344 GL 20.50 GP -8.70 ZAL 50.32 ZAP 156.41 ETS 339.22 ZAE 127.03 ETE 185.61 ZAC 116.90 ETC 170.37 CLP-160.17

PLANETOCENTRIC CONIC

C3 20.328 VHL 4.509 DLA 38.35 RAL 44.57 RAD 6567.8 VEL 11.904 PTH 2.12 VHP 5.945 DPA -2.31 RAP 24.08 ECC 1.3346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.98 22 26 41 4129.62 -25.94 181.32 276.63 60.71 23 35 30 3529.6 -29.63 173.71  
 117.02 4 46 1 2950.95 -25.93 92.13 276.63 60.70 5 35 12 2350.9 -29.62 84.52  
 62.98 22 26 41 4129.62 -25.94 181.32 276.63 60.71 23 35 30 3529.6 -29.63 173.71  
 117.02 4 46 1 2950.95 -25.93 92.13 276.63 60.70 5 35 12 2350.9 -29.62 84.52  
 62.98 22 26 41 4129.62 -25.94 181.32 276.63 60.71 23 35 30 3529.6 -29.63 173.71  
 117.02 4 46 1 2950.95 -25.93 92.13 276.63 60.70 5 35 12 2350.9 -29.62 84.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3843 TRA 2.7638 TC3-3.4005 BAU .9242 SGT 6218.0 SCR 568.4 SG3 408.4 ST 3315.7 SR 530.4 SS 1200.5  
 RDE .4143 RRA .1321 RC3 -.0043 FAU .04307 RRT .7262 RRF .7114 RTF .9814 CRT .9561 CRS -.9171 CST -.9935  
 FDE 1.5856 FRA 2.4336 FC3-1.8341 BSP 20174 SGB 6241.9 R23 -.0060 R13 .9814 LSA 3560.1 MSA 204.7 SSA 14.0  
 BDE 2.4200 BRA 2.7669 BC3 3.4005 FSP -1444 SGI 6229.7 SGI 389.9 THA 3.81 EL1 3354.4 EL2 153.6 ALF 8.71

LAUNCH DATE JAN 1 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 567.343

RL 147.09 LAL -.00 LOL 100.41 VL 27.369 GAL 6.40 AZL 86.76 HCA 264.06 SMA 125.75 ECC .20219 INC 3.2449 V1 30.288  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.292 GAP 8.69 AZP 90.34 TAL 152.95 TAP 57.01 RCA 100.32 APO 151.17 V2 34.880  
 RC 145.608 GL 19.35 GP -8.28 ZAL 48.69 ZAP 159.89 ETS 338.65 ZAE 126.60 ETE 185.23 ZAC 118.50 ETC 170.31 CLP-161.61

PLANETOCENTRIC CONIC

C3 21.591 VHL 4.647 DLA 37.64 RAL 46.62 RAD 6567.9 VEL 11.957 PTH 2.13 VHP 6.194 DPA -1.23 RAP 25.48 ECC 1.3553  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.09 22 40 24 4128.01 -25.04 180.62 279.37 60.92 23 49 12 3528.0 -28.71 173.07  
 115.91 4 48 4 2981.47 -25.02 94.07 279.36 60.91 5 38 21 2381.5 -28.70 86.52  
 64.09 22 40 24 4128.01 -25.04 180.62 279.37 60.92 23 49 12 3528.0 -28.71 173.07  
 115.91 4 48 4 2981.47 -25.02 94.07 279.36 60.91 5 38 21 2381.5 -28.70 86.52  
 64.09 22 40 24 4128.01 -25.04 180.62 279.37 60.92 23 49 12 3528.0 -28.71 173.07  
 115.91 4 48 4 2981.47 -25.02 94.07 279.36 60.91 5 38 21 2381.5 -28.70 86.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3613 TRA 3.0054 TC3-3.2377 BAU .9346 SGT 6279.6 SCR 560.6 SG3 382.4 ST 3233.8 SR 523.2 SS 1133.7  
 RDE .4212 RRA .1356 RC3 .0014 FAU .03908 RRT .7091 RRF .6853 RTF .9811 CRT .9464 CRS -.9033 CST -.9934  
 FDE 1.4915 FRA 2.4250 FC3-1.5671 BSP 20447 SGB 6304.6 R23 -.0046 R13 .9811 LSA 3459.9 MSA 212.2 SSA 13.9  
 BDE 2.3986 BRA 3.0084 BC3 3.2377 FSP -1356 SGI 6292.2 SGI 394.5 THA 3.64 EL1 3271.6 EL2 167.1 ALF 8.73

LAUNCH DATE JAN 1 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 573.069

RL 147.09 LAL -.00 LOL 100.41 VL 27.345 GAL 6.83 AZL 86.83 HCA 267.23 SMA 125.59 ECC .20747 INC 3.1678 V1 30.288  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.244 GAP 9.14 AZP 90.15 TAL 151.87 TAP 59.10 RCA 99.53 APO 151.64 V2 34.891  
 RC 147.857 GL 18.22 GP -7.89 ZAL 47.09 ZAP 161.30 ETS 337.95 ZAE 126.21 ETE 184.89 ZAC 120.15 ETC 170.23 CLP-163.00

PLANETOCENTRIC CONIC

C3 23.031 VHL 4.799 DLA 36.93 RAL 48.62 RAD 6567.9 VEL 12.017 PTH 2.14 VHP 6.455 DPA -.18 RAP 26.96 ECC 1.3790  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.23 22 54 16 4126.39 -24.09 179.92 282.14 61.12 24 3 2 3526.4 -27.75 172.42  
 114.77 4 50 44 3014.41 -24.08 96.18 282.13 61.11 5 40 39 2414.4 -27.74 88.68  
 65.23 22 54 16 4126.39 -24.09 179.92 282.14 61.12 24 3 2 3526.4 -27.75 172.42  
 114.77 4 50 44 3014.41 -24.08 96.18 282.13 61.11 5 40 39 2414.4 -27.74 88.68  
 65.23 22 54 16 4126.39 -24.09 179.92 282.14 61.12 24 3 2 3526.4 -27.75 172.42  
 114.77 4 50 44 3014.41 -24.08 96.18 282.13 61.11 5 40 39 2414.4 -27.74 88.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3366 TRA 3.2618 TC3-3.0619 BAU .9428 SGT 6336.6 SCR 554.2 SG3 358.3 ST 3150.5 SR 516.6 SS 1072.4  
 RDE .4295 RRA .1409 RC3 .0049 FAU .03534 RRT .6932 RRF .6823 RTF .9809 CRT .9355 CRS -.8885 CST -.9932  
 FDE 1.3302 FRA 2.4184 FC3-1.3285 BSP 20688 SGB 6360.8 R23 -.0031 R13 .9809 LSA 3360.7 MSA 220.1 SSA 13.8  
 BDE 2.3757 BRA 3.2648 BC3 3.0619 FSP -1274 SGI 6348.4 SGI 397.7 THA 3.49 EL1 5187.5 EL2 180.4 ALF 8.75



LAUNCH DATE JAN 1 1969

FLIGHT TIME 206.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.320 GAL 7.28 AZL 86.91 HCA 270.41 SMA 125.43 ECC .21317 INC 3.0912 V1 30.288  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.236 GAP 9.61 AZP 89.98 TAL 150.79 TAP 61.20 RCA 98.69 APO 152.16 V2 34.902  
 RC 190.082 GL 17.11 GP -7.55 ZAL 45.50 ZAP 182.66 ETS 337.11 ZAE 125.84 ETE 184.61 ZAC 121.86 ETC 170.12 CLP-164.34

DISTANCE 578.750

PLANETOCENTRIC CONIC

C3 24.674 VHL 4.967 DLA 36.22 RAL 50.56 RAD 6568.0 VEL 12.085 PTH 2.16 VHP 6.730 DPA .86 RAP 28.49 ECC 1.4061  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.41 23 8 17 4124.67 -23.12 179.20 284.92 61.31 24 17 2 3524.7 -26.76 171.75  
 113.59 4 52 12 3049.86 -23.11 98.45 284.91 61.30 5 43 2 2449.9 -26.75 91.01  
 66.41 23 8 17 4124.67 -23.12 179.20 284.92 61.31 24 17 2 3524.7 -26.76 171.75  
 113.59 4 52 12 3049.86 -23.11 98.45 284.91 61.30 5 43 2 2449.9 -26.75 91.01  
 66.41 23 8 17 4124.67 -23.12 179.20 284.92 61.31 24 17 2 3524.7 -26.76 171.75  
 113.59 4 52 12 3049.86 -23.11 98.45 284.91 61.30 5 43 2 2449.9 -26.75 91.01

DIFFERENTIAL CORRECTIONS

TDE 2.3096 TRA 3.5335 TC3-2.8780 BAU .9494  
 RDE .4389 RRA .1477 RC3 .0066 FAU .03187  
 FDE 1.2200 FRA 2.4132 FC3-1.1182 BSP 20919  
 BDE 2.3509 BRA 3.5366 BC3 2.8780 FSP -1197

MID-COURSE EXECUTION ACCURACY

SGT 6387.0 SGR 548.6 SG3 335.9  
 RRT .6841 RRF .6722 RTF .9807  
 SGB 6410.5 R23 -.0018 R13 .9807  
 SGI 6398.0 SGI 399.5 THA 3.38

ORBIT DETERMINATION ACCURACY

ST 3066.2 SR 510.3 SS 1016.0  
 CRT .9235 CR5 -.8727 CST -.9931  
 LSA 3262.1 MSA 228.4 SSA 13.6  
 EL1 3102.3 EL2 193.5 ALF 8.77

LAUNCH DATE JAN 1 1969

FLIGHT TIME 208.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.295 GAL 7.77 AZL 86.99 HCA 273.60 SMA 125.27 ECC .21934 INC 3.0143 V1 30.288  
 RP 108.34 LAP -3.01 LOP 14.01 VP 37.229 GAP 10.11 AZP 89.81 TAL 149.70 TAP 63.30 RCA 97.79 APO 152.74 V2 34.914  
 RC 152.312 GL 16.02 GP -7.23 ZAL 43.95 ZAP 163.96 ETS 336.09 ZAE 125.50 ETE 184.36 ZAC 123.61 ETC 170.00 CLP-165.65

DISTANCE 584.379

PLANETOCENTRIC CONIC

C3 26.547 VHL 5.152 DLA 35.50 RAL 52.44 RAD 6568.1 VEL 12.162 PTH 2.18 VHP 7.022 DPA 1.87 RAP 30.09 ECC 1.4369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.63 23 22 32 4122.61 -22.12 178.44 287.73 61.49 24 31 14 3522.6 -25.75 171.05  
 112.37 4 52 57 3088.06 -22.10 100.91 287.72 61.48 5 44 25 2488.1 -25.73 93.53  
 67.63 23 22 32 4122.61 -22.12 178.44 287.73 61.49 24 31 14 3522.6 -25.75 171.05  
 112.37 4 52 57 3088.06 -22.10 100.91 287.72 61.48 5 44 25 2488.1 -25.73 93.53  
 67.63 23 22 32 4122.61 -22.12 178.44 287.73 61.49 24 31 14 3522.6 -25.75 171.05  
 112.37 4 52 57 3088.06 -22.10 100.91 287.72 61.48 5 44 25 2488.1 -25.73 93.53

DIFFERENTIAL CORRECTIONS

TDE 2.2848 TRA 3.8256 TC3-2.6810 BAU .9515  
 RDE .4497 RRA .1565 RC3 .0077 FAU .02846  
 FDE 1.1231 FRA 2.4127 FC3 -.9281 BSP 21045  
 BDE 2.3286 BRA 3.8288 BC3 2.6810 FSP -1120

MID-COURSE EXECUTION ACCURACY

SGT 8433.8 SGR 543.9 SG3 315.5  
 RRT .6761 RRF .6634 RTF .9805  
 SGB 8456.7 R23 -.0002 R13 .9805  
 SGI 8444.3 SGI 400.1 THA 3.28

ORBIT DETERMINATION ACCURACY

ST 2986.6 SR 504.1 SS 966.5  
 CRT .9106 CR5 -.8565 CST -.9931  
 LSA 3170.5 MSA 236.6 SSA 13.5  
 EL1 3021.8 EL2 206.0 ALF 8.78

LAUNCH DATE JAN 1 1969

FLIGHT TIME 210.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.270 GAL 8.30 AZL 87.06 HCA 276.78 SMA 125.10 ECC .22602 INC 2.9369 V1 30.288  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.222 GAP 10.84 AZP 89.65 TAL 148.62 TAP 65.40 RCA 96.85 APO 153.38 V2 34.926  
 RC 154.516 GL 14.96 GP -6.95 ZAL 42.43 ZAP 165.22 ETS 334.85 ZAE 125.18 ETE 184.15 ZAC 125.40 ETC 169.85 CLP-166.93

DISTANCE 589.951

PLANETOCENTRIC CONIC

C3 28.684 VHL 5.358 DLA 34.78 RAL 54.26 RAD 6568.2 VEL 12.250 PTH 2.20 VHP 7.331 DPA 2.86 RAP 31.73 ECC 1.4721  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.90 23 37 0 4120.08 -21.09 177.64 290.55 61.68 24 45 40 3520.1 -24.70 170.31  
 111.10 4 52 56 3129.14 -21.08 103.56 290.54 61.67 5 45 5 2529.1 -24.69 96.23  
 68.90 23 37 0 4120.08 -21.09 177.64 290.55 61.68 24 45 40 3520.1 -24.70 170.31  
 111.10 4 52 56 3129.14 -21.08 103.56 290.54 61.67 5 45 5 2529.1 -24.69 96.23  
 68.90 23 37 0 4120.08 -21.09 177.64 290.55 61.68 24 45 40 3520.1 -24.70 170.31  
 111.10 4 52 56 3129.14 -21.08 103.56 290.54 61.67 5 45 5 2529.1 -24.69 96.23

DIFFERENTIAL CORRECTIONS

TDE 2.2549 TRA 4.1314 TC3-2.4866 BAU .9536  
 RDE .4609 RRA .1667 RC3 .0073 FAU .02542  
 FDE 1.0325 FRA 2.4113 FC3 -.7673 BSP 21250  
 BDE 2.3015 BRA 4.1348 BC3 2.4866 FSP -1055

MID-COURSE EXECUTION ACCURACY

SGT 6470.8 SGR 538.8 SG3 296.3  
 RRT .6703 RRF .6603 RTF .9804  
 SGB 6493.2 R23 .0009 R13 .9804  
 SGI 6480.9 SGI 399.3 THA 3.21

ORBIT DETERMINATION ACCURACY

ST 2903.7 SR 497.4 SS 919.7  
 CRT .8964 CR5 -.8591 CST -.9932  
 LSA 3076.5 MSA 244.8 SSA 13.2  
 EL1 2938.0 EL2 217.9 ALF 8.78

LAUNCH DATE JAN 1 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 100.41 VL 27.245 GAL 8.86 AZL 87.14 HCA 279.97 SMA 124.94 ECC .23326 INC 2.8584 V1 30.288  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.215 GAP 11.19 AZP 89.50 TAL 147.54 TAP 67.51 RCA 95.80 APO 154.09 V2 34.938  
 RC 156.704 GL 13.92 GP -6.69 ZAL 40.86 ZAP 166.44 ETS 333.35 ZAE 124.88 ETE 183.96 ZAC 127.22 ETC 169.66 CLP-168.18

DISTANCE 595.457

PLANETOCENTRIC CONIC

C3 31.126 VHL 5.579 DLA 34.06 RAL 56.00 RAD 6568.2 VEL 12.349 PTH 2.23 VHP 7.659 DPA 3.83 RAP 33.41 ECC 1.5123  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.23 23 51 48 4116.76 -20.03 176.78 293.38 61.86 25 0 25 3516.8 -23.64 169.50  
 109.77 4 52 4 3173.41 -20.02 106.42 293.37 61.85 5 44 58 2575.4 -23.62 99.14  
 70.23 23 51 48 4116.76 -20.03 176.78 293.38 61.86 25 0 25 3516.8 -23.64 169.50  
 109.77 4 52 4 3173.41 -20.02 106.42 293.37 61.85 5 44 58 2575.4 -23.62 99.14  
 110.00 5 15 14 3102.76 -22.18 102.11 294.57 63.30 6 6 57 2502.8 -25.58 94.60  
 110.00 4 31 44 3235.41 -17.91 110.03 292.14 60.38 5 25 40 2635.4 -21.71 102.96

DIFFERENTIAL CORRECTIONS

TDE 2.2250 TRA 4.4377 TC3-2.2887 BAU .9524  
 RDE .4729 RRA .1786 RC3 .0066 FAU .02254  
 FDE .9512 FRA 2.4131 FC3 -.8270 BSP 21424  
 BDE 2.2747 BRA 4.4813 BC3 2.2888 FSP -993

MID-COURSE EXECUTION ACCURACY

SGT 6502.4 SGR 533.8 SG3 278.5  
 RRT .6889 RRF .6578 RTF .9803  
 SGB 6524.3 R23 .0019 R13 .9804  
 SGI 6512.2 SGI 397.2 THA 3.15

ORBIT DETERMINATION ACCURACY

ST 2824.1 SR 490.1 SS 877.9  
 CRT .8812 CR5 -.8212 CST -.9933  
 LSA 2987.1 MSA 252.6 SSA 13.0  
 EL1 2857.2 EL2 229.0 ALF 8.75

LAUNCH DATE JAN 1 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 600.887

RL 147.09 LAL -.00 LOL 100.41 VL 27.219 GAL 9.46 AZL 87.22 HCA 283.16 SMA 124.78 ECC .24114 INC 2.7783 V1 30.288
RP 108.43 LAP -2.71 LOP 23.58 VP 37.208 GAP 11.78 AZP 89.37 TAL 146.48 TAP 69.63 RCA 94.69 APO 154.87 V2 34.951
RC 158.875 GL 12.91 GP -6.46 ZAL 39.52 ZAP 187.61 ETS 331.52 ZAE 124.58 ETE 183.80 ZAC 129.07 ETC 169.44 CLP-169.41

PLANETOCENTRIC CONIC

C3 33.920 VHL 5.824 DLA 33.34 RAL 57.68 RAD 6568.3 VEL 12.462 PTH 2.25 VHP 8.010 DPA 4.77 RAP 35.14 ECC 1.5582
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.81 0 10 56 4112.31 -18.96 175.82 296.22 62.04 1 19 28 3512.3 -22.55 168.59
108.39 4 50 14 3221.16 -18.95 109.52 296.21 62.03 5 43 55 2621.2 -22.54 102.29
71.81 0 10 56 4112.31 -18.96 175.82 296.22 62.04 1 19 28 3512.3 -22.55 168.59
108.39 4 50 14 3221.16 -18.95 109.52 296.21 62.03 5 43 55 2621.2 -22.54 102.29
110.00 5 57 23 3013.29 -24.75 96.62 299.28 65.63 6 47 38 2415.3 -27.62 88.79
110.00 4 2 57 3386.17 -13.38 117.43 292.87 58.24 4 59 3 2766.2 -17.46 110.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1944 TRA 4.8050 TC3-2.0911 BAU .9483 8GT 6527.9 8GR 528.4 8G3 262.1 ST 2747.3 SR 482.2 SS 840.5
RDE .4853 RRA .1922 RC3 .0056 FAU .01983 RRT .6653 RRF .6569 RTF .9804 CRT .8650 CRS -.8027 CST -.9935
FDE .8775 FRA 2.4177 FC3 -.3062 B8P 21581 8GB 6549.2 R23 .0027 R13 .9804 LSA 2901.5 MSA 259.8 SSA 12.7
BOE 2.2474 BRA 4.8089 BC3 2.0912 F8P -.935 8G1 6537.4 8G2 393.8 THA 3.09 EL1 2779.0 EL2 239.2 ALF 8.70

LAUNCH DATE JAN 1 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 606.229

RL 147.09 LAL -.00 LOL 100.41 VL 27.194 GAL 10.11 AZL 87.30 HCA 286.35 SMA 124.62 ECC .24971 INC 2.6981 V1 30.288
RP 108.39 LAP -2.59 LOP 26.77 VP 37.202 GAP 12.41 AZP 89.24 TAL 145.43 TAP 71.78 RCA 93.50 APO 155.74 V2 34.964
RC 181.027 GL 11.93 GP -8.24 ZAL 38.14 ZAP 188.75 ETS 329.25 ZAE 124.30 ETE 183.87 ZAC 130.93 ETC 169.18 CLP-170.62

PLANETOCENTRIC CONIC

C3 37.125 VHL 6.093 DLA 32.63 RAL 59.28 RAD 6568.4 VEL 12.589 PTH 2.28 VHP 8.385 DPA 5.69 RAP 36.89 ECC 1.6110
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.07 0 26 38 4106.33 -17.87 174.76 299.06 62.23 1 35 5 3506.3 -21.44 167.57
106.93 4 47 18 3272.74 -17.85 112.89 299.05 62.22 5 41 51 2672.7 -21.43 105.70
73.07 0 26 38 4106.33 -17.87 174.76 299.06 62.23 1 35 5 3506.3 -21.44 167.57
106.93 4 47 18 3272.74 -17.85 112.89 299.05 62.22 5 41 51 2672.7 -21.43 105.70
110.00 6 24 18 2973.87 -25.88 95.94 303.17 66.85 7 13 52 2373.9 -28.78 85.96
110.00 3 48 50 3453.20 -10.19 122.18 294.44 57.19 4 46 23 2853.2 -14.44 115.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1680 TRA 5.1803 TC3-1.8904 BAU .9383 8GT 6551.3 8GR 522.9 8G3 247.0 ST 2678.0 SR 473.7 SS 808.9
RDE .4983 RRA .2077 RC3 .0049 FAU .01716 RRT .6665 RRF .6585 RTF .9805 CRT .8481 CRS -.7846 CST -.9938
FDE .8134 FRA 2.4278 FC3 -.4001 B8P 21623 8GB 6572.2 R23 .0038 R13 .9805 LSA 2824.8 MSA 266.1 SSA 12.4
JDE 2.2245 BRA 5.1845 BC3 1.8904 F8P -.877 8G1 6560.6 8G2 389.2 THA 3.06 EL1 2708.3 EL2 248.2 ALF 8.61

LAUNCH DATE JAN 1 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 611.469

RL 147.09 LAL -.00 LOL 100.41 VL 27.169 GAL 10.81 AZL 87.39 HCA 289.54 SMA 124.46 ECC .25907 INC 2.6110 V1 30.288
RP 108.35 LAP -2.46 LOP 29.97 VP 37.196 GAP 13.08 AZP 89.13 TAL 144.41 TAP 73.95 RCA 92.22 APO 156.70 V2 34.977
RC 183.181 GL 10.97 GP -8.05 ZAL 38.80 ZAP 189.84 ETS 326.44 ZAE 124.01 ETE 183.54 ZAC 132.81 ETC 168.88 CLP-171.82

PLANETOCENTRIC CONIC

C3 40.813 VHL 6.388 DLA 31.92 RAL 60.80 RAD 6568.6 VEL 12.735 PTH 2.32 VHP 8.788 DPA 6.59 RAP 38.68 ECC 1.6717
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.82 0 42 59 4098.31 -16.76 173.53 301.91 62.43 1 51 18 3498.3 -20.32 166.39
105.38 4 43 8 3328.82 -16.75 116.54 301.90 62.42 5 38 37 2728.6 -20.31 109.40
74.82 0 42 59 4098.31 -16.76 173.53 301.91 62.43 1 51 18 3498.3 -20.32 166.39
105.38 4 43 8 3328.82 -16.75 116.54 301.90 62.42 5 38 37 2728.6 -20.31 109.40
110.00 6 46 20 2947.05 -26.59 92.17 306.82 67.68 7 35 27 2347.1 -29.37 84.09
110.00 3 38 58 3527.87 -7.41 126.18 296.28 56.53 4 37 46 2927.9 -11.76 119.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1375 TRA 5.5767 TC3-1.6984 BAU .9267 8GT 6565.5 8GR 516.4 8G3 232.8 ST 2608.5 SR 464.1 SS 779.7
RDE .5113 RRA .2247 RC3 .0039 FAU .01474 RRT .6687 RRF .6610 RTF .9808 CRT .8302 CRS -.7857 CST -.9941
FDE .7533 FRA 2.4392 FC3 -.3127 B8P 21760 8GB 6585.7 R23 .0040 R13 .9808 LSA 2748.4 MSA 271.5 SSA 12.1
BOE 2.1978 BRA 5.5812 BC3 1.6984 F8P -.828 8G1 6574.6 8G2 383.4 THA 3.02 EL1 2637.1 EL2 255.9 ALF 8.48

LAUNCH DATE JAN 1 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 616.588

RL 147.09 LAL -.00 LOL 100.41 VL 27.144 GAL 11.57 AZL 87.48 HCA 292.74 SMA 124.30 ECC .26931 INC 2.5224 V1 30.288
RP 108.31 LAP -2.33 LOP 33.17 VP 37.190 GAP 13.80 AZP 89.02 TAL 143.41 TAP 76.15 RCA 90.83 APO 157.78 V2 34.990
RC 185.276 GL 10.43 GP -5.87 ZAL 35.53 ZAP 170.89 ETS 322.88 ZAE 123.72 ETE 183.44 ZAC 134.70 ETC 168.53 CLP-173.02

PLANETOCENTRIC CONIC

C3 45.089 VHL 6.713 DLA 31.21 RAL 62.25 RAD 6568.7 VEL 12.901 PTH 2.35 VHP 9.223 DPA 7.46 RAP 40.49 ECC 1.7417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.29 1 0 19 4087.04 -15.64 172.08 304.75 62.64 2 8 26 3487.0 -19.19 164.97
103.71 4 37 21 3389.88 -15.63 120.58 304.74 62.63 5 33 51 2789.9 -19.17 113.48
76.29 1 0 19 4087.04 -15.64 172.08 304.75 62.64 2 8 26 3487.0 -19.19 164.97
103.71 4 37 21 3389.88 -15.63 120.58 304.74 62.63 5 33 51 2789.9 -19.17 113.48
110.00 7 5 32 2928.66 -27.06 90.95 310.33 68.27 7 54 21 2328.7 -29.76 82.80
110.00 3 31 19 3598.25 -4.83 129.79 298.28 56.12 4 31 15 2996.3 -9.25 123.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1084 TRA 6.0018 TC3-1.5106 BAU .9102 8GT 6574.4 8GR 509.3 8G3 219.6 ST 2543.6 SR 453.5 SS 754.7
RDE .5245 RRA .2433 RC3 .0033 FAU .01243 RRT .8723 RRF .6849 RTF .9812 CRT .8117 CRS -.7470 CST -.9945
FDE .6997 FRA 2.4549 FC3 -.2387 B8P 21874 8GB 6594.1 R23 .0042 R13 .9812 LSA 2677.5 MSA 273.7 SSA 11.8
BOE 2.1727 BRA 6.0067 BC3 1.5106 F8P -.781 8G1 6583.4 8G2 376.5 THA 2.99 EL1 2570.4 EL2 262.1 ALF 8.32

LAUNCH DATE JAN 2 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 13 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 101.43 VL 20.246 GAL 11.79 AZL 85.89 HCA 54.12 SMA 95.16 ECC .57192 INC 4.1147 V1 30.288  
 RP 107.54 LAP 3.33 LOP 155.48 VP 32.765 GAP -34.17 AZP 87.59 TAL 170.86 TAP 224.98 RCA 40.74 APO 149.59 V2 35.238  
 RC 55.726 GL 7.17 GP 2.37 ZAL 68.68 ZAP 23.87 ETS 186.13 ZAE 152.06 ETE 195.68 ZAC 93.15 ETC 166.36 CLP 25.75

Distance 147.177

Planetocentric Conic: CS 129.873 VHL 11.396 DLA 19.21 RAL 28.13 RAD 6570.4 VEL 15.849 PTH 2.81 VHP 20.253 DPA -1.16 RAP 359.68 ECC 3.1374  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 4 3303.30 -24.50 117.89 290.07 75.34 4 42 7 2703.3 -26.28 109.67  
 90.00 21 6 33 4658.98 14.22 198.06 276.47 65.25 22 24 10 4057.0 10.77 191.08  
 100.00 5 20 17 3002.66 -26.51 96.35 290.64 75.65 6 10 20 2402.7 -28.22 87.97  
 100.00 22 16 0 4432.84 16.09 180.67 275.56 64.47 23 29 53 3832.8 12.53 173.70  
 110.00 6 54 15 2708.72 -31.64 75.49 292.11 76.34 7 39 23 2108.7 -33.20 66.61  
 110.00 22 58 33 4299.55 20.83 168.06 273.06 62.26 24 10 12 3699.6 16.95 161.08

Differential Corrections: TDE -.5263 TRA-1.4125 TC3 -.1034 BAU .1851 SGT 831.3 SGR 440.4 SCS 35.9 ST 347.8 SR 413.7 SS 324.0  
 RDE -.8183 RRA .2735 RC3 -.0261 FAU .01465 RRT .0364 RRF -.0384 RTF -.6507 CRT .6881 CRS .8037 CST .9830  
 FDE .3178 FRA .5866 FC3 -.0976 BSP 2243 SGB 940.8 R23 -.0055 R13 -.6508 LSA 588.2 MSA 225.6 SSA 13.7  
 BDE .9729 BRA 1.4387 BC3 .1066 FSP -77 SGT 831.5 SGT 440.0 THA 1.54 EL1 498.2 EL2 209.6 ALF 52.11

Mid-Course Execution Accuracy: SGT 831.3 SGR 440.4 SCS 35.9  
 RRT .0364 RRF -.0384 RTF -.6507  
 SGB 940.8 R23 -.0055 R13 -.6508  
 SGT 831.5 SGT 440.0 THA 1.54

Orbit Determination Accuracy: ST 347.8 SR 413.7 SS 324.0  
 CRT .6881 CRS .8037 CST .9830  
 LSA 588.2 MSA 225.6 SSA 13.7  
 EL1 498.2 EL2 209.6 ALF 52.11

LAUNCH DATE JAN 2 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 15 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 101.43 VL 20.829 GAL 11.27 AZL 86.00 HCA 57.36 SMA 96.83 ECC .54537 INC 3.9956 V1 30.288  
 RP 107.56 LAP 3.36 LOP 158.73 VP 33.123 GAP -32.50 AZP 87.84 TAL 170.27 TAP 227.63 RCA 44.02 APO 149.63 V2 35.232  
 RC 54.021 GL 7.56 GP 2.46 ZAL 67.83 ZAP 22.33 ETS 186.85 ZAE 153.31 ETE 196.79 ZAC 94.78 ETC 166.35 CLP 22.80

Distance 153.407

Planetocentric Conic: CS 116.894 VHL 10.812 DLA 19.89 RAL 28.84 RAD 6570.2 VEL 15.435 PTH 2.76 VHP 19.359 DPA -.39 RAP 1.18 ECC 2.9258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 24 3310.47 -24.38 118.38 289.42 75.13 4 37 34 2710.5 -26.19 110.18  
 90.00 21 16 56 4808.28 12.81 195.17 275.99 64.53 22 33 44 4008.3 9.28 188.28  
 100.00 5 16 24 3007.33 -26.43 96.67 290.01 75.49 6 6 32 2407.3 -28.16 88.30  
 100.00 22 25 38 4386.85 14.72 177.93 275.04 63.69 23 38 43 3786.6 11.07 171.04  
 110.00 6 51 50 2708.76 -31.64 75.49 291.51 76.34 7 36 59 2108.8 -33.20 66.61  
 110.00 23 6 40 4257.98 19.49 165.58 272.44 61.35 24 17 38 3658.0 15.52 158.71

Differential Corrections: TDE -.5249 TRA-1.4080 TC3 -.1061 BAU .1717 SGT 870.5 SGR 444.3 SCS 39.1 ST 366.0 SR 418.3 SS 339.7  
 RDE -.7851 RRA .2540 RC3 -.0287 FAU .01501 RRT .0427 RRF -.0449 RTF -.6705 CRT .6894 CRS .8058 CST .9828  
 FDE .3305 FRA .6065 FC3 -.1111 BSP 2394 SGB 977.4 R23 -.0062 R13 -.6706 LSA 608.7 MSA 231.2 SSA 13.9  
 BDE .8444 BRA 1.4288 BC3 .1099 FSP -85 SGT 870.8 SGT 443.8 THA 1.69 EL1 511.8 EL2 216.6 ALF 50.50

Mid-Course Execution Accuracy: SGT 870.5 SGR 444.3 SCS 39.1  
 RRT .0427 RRF -.0449 RTF -.6705  
 SGB 977.4 R23 -.0062 R13 -.6706  
 SGT 870.8 SGT 443.8 THA 1.69

Orbit Determination Accuracy: ST 366.0 SR 418.3 SS 339.7  
 CRT .6894 CRS .8058 CST .9828  
 LSA 608.7 MSA 231.2 SSA 13.9  
 EL1 511.8 EL2 216.6 ALF 50.50

LAUNCH DATE JAN 2 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 17 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 101.43 VL 21.372 GAL 10.76 AZL 86.12 HCA 60.60 SMA 98.47 ECC .51979 INC 3.8850 V1 30.288  
 RP 107.58 LAP 3.38 LOP 161.97 VP 33.460 GAP -30.91 AZP 88.09 TAL 169.71 TAP 230.31 RCA 47.29 APO 149.66 V2 35.226  
 RC 52.393 GL 7.97 GP 2.55 ZAL 67.05 ZAP 20.82 ETS 187.68 ZAE 154.72 ETE 198.05 ZAC 96.39 ETC 166.32 CLP 20.87

Distance 159.707

Planetocentric Conic: CS 105.272 VHL 10.260 DLA 20.55 RAL 29.49 RAD 6570.0 VEL 15.054 PTH 2.71 VHP 18.519 DPA .40 RAP 2.70 ECC 2.7325  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 37 23 3316.87 -24.27 118.81 288.82 74.94 4 32 40 2716.9 -26.10 110.63  
 90.00 21 27 6 4558.78 11.35 192.28 275.43 63.88 22 43 4 3958.8 7.75 185.45  
 100.00 5 12 13 3011.07 -26.36 96.93 289.24 75.37 6 2 24 2411.1 -28.11 88.57  
 100.00 22 34 57 4339.82 13.29 175.19 274.44 62.98 23 47 16 3739.8 9.56 168.38  
 110.00 6 49 11 2707.71 -31.66 75.42 290.76 76.38 7 34 19 2107.7 -33.21 66.55  
 110.00 23 14 28 4215.94 18.10 163.11 271.75 60.50 24 24 44 3615.9 14.03 156.36

Differential Corrections: TDE -.5235 TRA-1.3981 TC3 -.1075 BAU .1576 SGT 910.7 SGR 447.5 SCS 42.7 ST 384.8 SR 422.2 SS 355.8  
 RDE -.7523 RRA .2551 RC3 -.0314 FAU .01541 RRT .0494 RRF -.0520 RTF -.6895 CRT .6912 CRS .8083 CST .9827  
 FDE .3437 FRA .6266 FC3 -.1268 BSP 2569 SGB 1014.7 R23 -.0072 R13 -.6897 LSA 630.0 MSA 236.3 SSA 14.1  
 BDE .9165 BRA 1.4178 BC3 .1120 FSP -95 SGT 911.1 SGT 446.8 THA 1.83 EL1 525.8 EL2 223.3 ALF 48.83

Mid-Course Execution Accuracy: SGT 910.7 SGR 447.5 SCS 42.7  
 RRT .0494 RRF -.0520 RTF -.6895  
 SGB 1014.7 R23 -.0072 R13 -.6897  
 SGT 911.1 SGT 446.8 THA 1.83

Orbit Determination Accuracy: ST 384.8 SR 422.2 SS 355.8  
 CRT .6912 CRS .8083 CST .9827  
 LSA 630.0 MSA 236.3 SSA 14.1  
 EL1 525.8 EL2 223.3 ALF 48.83

LAUNCH DATE JAN 2 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 19 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 101.43 VL 21.877 GAL 10.26 AZL 86.22 HCA 63.84 SMA 100.09 ECC .49521 INC 3.7812 V1 30.288  
 RP 107.60 LAP 3.39 LOP 165.22 VP 33.777 GAP -29.40 AZP 88.33 TAL 169.18 TAP 233.02 RCA 50.53 APO 149.66 V2 35.219  
 RC 50.852 GL 8.38 GP 2.66 ZAL 66.36 ZAP 19.32 ETS 188.65 ZAE 156.28 ETE 199.51 ZAC 98.02 ETC 166.28 CLP 19.14

Distance 166.072

Planetocentric Conic: CS 94.857 VHL 9.739 DLA 21.19 RAL 30.06 RAD 6569.8 VEL 14.704 PTH 2.66 VHP 17.711 DPA 1.20 RAP 4.22 ECC 2.5811  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 0 3322.59 -24.16 119.20 287.69 74.77 4 27 23 2722.6 -26.02 111.03  
 90.00 21 37 3 4508.53 9.83 189.37 274.81 63.31 22 52 11 3908.5 6.17 182.60  
 100.00 5 7 43 3013.95 -26.31 97.13 288.32 75.28 5 57 57 2414.0 -28.08 88.78  
 100.00 22 44 1 4292.40 11.80 172.45 273.78 62.34 23 55 33 3692.4 8.01 165.72  
 110.00 6 46 17 2705.62 -31.69 75.26 289.87 76.47 7 31 22 2105.6 -33.23 66.37  
 110.00 23 21 57 4173.49 16.66 160.66 271.00 59.71 24 31 30 3573.5 12.51 154.01

Differential Corrections: TDE -.5231 TRA-1.3895 TC3 -.1078 BAU .1434 SGT 952.6 SGR 450.0 SCS 46.6 ST 404.9 SR 425.6 SS 372.8  
 RDE -.7200 RRA .2186 RC3 -.0341 FAU .01586 RRT .0572 RRF -.0602 RTF -.7078 CRT .6941 CRS .8111 CST .9826  
 FDE .3377 FRA .8470 FC3 -.1448 BSP 2740 SGB 1053.5 R23 -.0082 R13 -.7081 LSA 652.5 MSA 240.8 SSA 14.3  
 BDE .8900 BRA 1.4063 BC3 .1131 FSP -106 SGT 953.0 SGT 449.1 THA 1.99 EL1 540.7 EL2 229.4 ALF 47.06

Mid-Course Execution Accuracy: SGT 952.6 SGR 450.0 SCS 46.6  
 RRT .0572 RRF -.0602 RTF -.7078  
 SGB 1053.5 R23 -.0082 R13 -.7081  
 SGT 953.0 SGT 449.1 THA 1.99

Orbit Determination Accuracy: ST 404.9 SR 425.6 SS 372.8  
 CRT .6941 CRS .8111 CST .9826  
 LSA 652.5 MSA 240.8 SSA 14.3  
 EL1 540.7 EL2 229.4 ALF 47.06

LAUNCH DATE JAN 2 1969 FLIGHT TIME 78.00 ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC DISTANCE 172.496

RL 147.09 LAL -.00 LOL 101.43 VL 22.346 GAL 9.77 AZL 86.32 HCA 67.08 SMA 101.69 ECC .47164 INC 3.6831 V1 30.288  
 RP 107.62 LAP 3.39 LOP 168.47 VP 34.073 GAP -27.96 AZP 88.56 TAL 168.68 TAP 235.76 RCA 53.73 APO 149.65 V2 35.211  
 RC 49.405 GL 8.80 GP 2.77 ZAL 65.74 ZAP 17.84 ETS 189.79 ZAE 157.99 ETE 201.24 ZAC 99.66 ETC 166.20 CLP 17.63

PLANETOCENTRIC CONIC

C3 85.518 VHL 9.248 DLA 21.80 RAL 30.56 RAD 6569.7 VEL 14.383 PTH 2.61 VHP 16.933 DPA 2.02 RAP 5.74 ECC 2.4074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 26 15 3327.71 -24.07 119.55 286.61 74.62 4 21 43 2727.7 -25.95 111.38  
 90.00 21 46 47 4457.55 6.25 186.45 274.12 62.82 23 1 4 3857.6 4.54 179.73  
 100.00 5 2 55 3016.04 -26.28 97.28 287.27 75.21 5 53 11 2416.0 -28.05 88.92  
 100.00 22 52 48 4244.46 10.27 169.71 273.04 61.77 24 3 33 3644.5 6.42 163.04  
 110.00 6 43 7 2702.53 -31.74 75.04 288.84 76.60 7 28 10 2102.5 -33.26 66.14  
 110.00 23 29 5 4130.73 15.18 158.24 270.19 59.00 24 37 56 3530.7 10.96 151.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.9256 TRA-1.3821 TC3 -.1076 BAU .1301 SGT 998.1 SGR 451.8 SCS 50.8 ST 427.3 SR 428.3 SS 390.7  
 RDE -.6883 RRA .1987 RC3 -.0369 FAU .01635 RRT .0669 RRF -.0695 RTF -.7248 CRT .6986 CRS .8144 CST .9828  
 FDE .3727 FRA .6880 FC3 -.1655 BSP 2865 SGB 1095.6 R23 -.0086 R13 -.7250 LSA 677.3 HSA 244.5 SSA 14.5  
 BDE .8660 BRA 1.3963 BC3 .1136 FSP -117 SGI 998.7 SGI 450.5 THA 2.18 EL1 557.6 EL2 234.9 ALF 45.09

LAUNCH DATE JAN 2 1969 FLIGHT TIME 80.00 ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC DISTANCE 178.974

RL 147.09 LAL -.00 LOL 101.43 VL 22.784 GAL 9.29 AZL 86.41 HCA 70.32 SMA 103.25 ECC .44910 INC 3.5896 V1 30.288  
 RP 107.65 LAP 3.38 LOP 171.71 VP 34.355 GAP -26.58 AZP 88.79 TAL 168.23 TAP 238.55 RCA 56.88 APO 149.62 V2 35.202  
 RC 48.064 GL 9.22 GP 2.89 ZAL 65.19 ZAP 16.38 ETS 191.14 ZAE 159.85 ETE 203.33 ZAC 101.30 ETC 166.11 CLP 16.13

PLANETOCENTRIC CONIC

C3 77.158 VHL 8.783 DLA 22.40 RAL 30.98 RAD 6569.5 VEL 14.089 PTH 2.57 VHP 16.184 DPA 2.85 RAP 7.27 ECC 2.2695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 20 6 3332.33 -23.99 119.86 285.40 74.48 4 15 39 2732.3 -25.89 111.71  
 90.00 21 56 18 4405.92 6.64 183.52 273.36 62.41 23 9 44 3805.9 2.89 176.84  
 100.00 4 57 47 3017.39 -26.25 97.37 286.08 75.17 5 48 4 2417.4 -28.03 89.02  
 100.00 23 1 19 4196.10 8.70 168.98 272.24 61.29 24 11 15 3596.1 4.81 160.38  
 110.00 6 39 43 2698.49 -31.81 74.74 287.67 76.76 7 24 41 2098.5 -33.30 65.83  
 110.00 23 35 52 4067.76 13.65 155.84 269.31 58.35 24 44 0 3467.8 9.37 149.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.9268 TRA-1.3714 TC3 -.1047 BAU .1155 SGT 1043.2 SGR 452.9 SCS 55.4 ST 449.8 SR 430.5 SS 409.2  
 RDE -.6573 RRA .1813 RC3 -.0397 FAU .01690 RRT .0769 RRF -.0799 RTF -.7415 CRT .7032 CRS .8181 CST .9829  
 FDE .3885 FRA .6892 FC3 -.1897 BSP 3043 SGB 1137.3 R23 -.0098 R13 -.7418 LSA 702.6 HSA 247.5 SSA 14.7  
 BDE .8422 BRA 1.3834 BC3 .1120 FSP -130 SGI 1043.9 SGI 451.2 THA 2.35 EL1 574.7 EL2 239.6 ALF 43.22

LAUNCH DATE JAN 2 1969 FLIGHT TIME 82.00 ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC DISTANCE 185.499

RL 147.09 LAL -.00 LOL 101.43 VL 23.190 GAL 8.81 AZL 86.50 HCA 73.55 SMA 104.77 ECC .42758 INC 3.4999 V1 30.288  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.617 GAP -25.27 AZP 89.01 TAL 167.81 TAP 241.37 RCA 59.97 APO 149.57 V2 35.194  
 RC 46.839 GL 9.65 GP 3.03 ZAL 64.73 ZAP 14.93 ETS 192.78 ZAE 161.85 ETE 205.91 ZAC 102.94 ETC 165.99 CLP 14.63

PLANETOCENTRIC CONIC

C3 69.619 VHL 8.344 DLA 22.98 RAL 31.33 RAD 6569.3 VEL 13.819 PTH 2.52 VHP 15.462 DPA 3.69 RAP 8.79 ECC 2.1457  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 34 3338.53 -23.91 120.15 284.07 74.36 4 9 11 2736.5 -25.83 112.00  
 90.00 22 5 36 4353.73 4.98 180.58 272.53 62.09 23 18 10 3753.7 1.21 173.93  
 100.00 4 52 21 3018.06 -26.24 97.42 284.77 75.14 5 42 39 2418.1 -28.02 89.07  
 100.00 23 9 31 4147.44 7.10 164.26 271.37 60.89 24 18 38 3547.4 3.17 157.68  
 110.00 6 36 4 2693.55 -31.88 74.37 286.37 76.97 7 20 58 2093.5 -33.35 65.45  
 110.00 23 42 17 4044.71 12.10 153.47 268.36 57.79 24 49 42 3444.7 7.77 147.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.9284 TRA-1.3598 TC3 -.0997 BAU .1009 SGT 1089.9 SGR 453.2 SCS 60.5 ST 473.5 SR 432.1 SS 428.6  
 RDE -.6270 RRA .1645 RC3 -.0424 FAU .01752 RRT .0882 RRF -.0916 RTF -.7574 CRT .7087 CRS .8222 CST .9831  
 FDE .4055 FRA .7110 FC3 -.2178 BSP 3225 SGB 1180.4 R23 -.0110 R13 -.7577 LSA 729.4 HSA 249.8 SSA 14.8  
 BDE .8199 BRA 1.3697 BC3 .1084 FSP -144 SGI 1090.8 SGI 451.1 THA 2.53 EL1 593.1 EL2 243.4 ALF 41.31

LAUNCH DATE JAN 2 1969 FLIGHT TIME 84.00 ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC DISTANCE 192.066

RL 147.09 LAL -.00 LOL 101.43 VL 23.568 GAL 8.35 AZL 86.59 HCA 76.79 SMA 106.25 ECC .40709 INC 3.4131 V1 30.288  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.862 GAP -24.01 AZP 89.22 TAL 167.44 TAP 244.23 RCA 63.00 APO 149.51 V2 35.184  
 RC 45.742 GL 10.08 GP 3.18 ZAL 64.34 ZAP 13.50 ETS 194.81 ZAE 163.97 ETE 209.23 ZAC 104.57 ETC 165.84 CLP 13.13

PLANETOCENTRIC CONIC

C3 62.869 VHL 7.929 DLA 23.53 RAL 31.60 RAD 6569.2 VEL 13.573 PTH 2.48 VHP 14.767 DPA 4.55 RAP 10.31 ECC 2.0347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 6 39 3340.40 -23.84 120.41 282.61 74.25 4 2 19 2740.4 -25.77 112.27  
 90.00 22 14 41 4301.08 3.30 177.82 271.63 61.86 23 26 22 3701.1 -.49 170.99  
 100.00 4 46 36 3018.10 -26.24 97.42 283.33 75.14 5 36 55 2418.1 -28.02 89.07  
 100.00 23 17 24 4098.62 5.48 161.54 270.43 60.57 24 23 43 3498.6 1.52 155.00  
 110.00 6 32 12 2687.74 -31.97 73.94 284.95 77.21 7 17 0 2087.7 -33.40 65.00  
 110.00 23 48 18 4001.74 10.53 151.13 267.36 57.29 24 55 0 3401.7 6.15 144.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE -.9307 TRA-1.3466 TC3 -.0921 BAU .0862 SGT 1137.9 SGR 452.9 SCS 66.1 ST 498.5 SR 433.2 SS 449.1  
 RDE -.5975 RRA .1482 RC3 -.0450 FAU .01820 RRT .1009 RRF -.1047 RTF -.7725 CRT .7152 CRS .8267 CST .9834  
 FDE .4236 FRA .7333 FC3 -.2506 BSP 3410 SGB 1224.7 R23 -.0124 R13 -.7729 LSA 757.9 HSA 251.2 SSA 15.0  
 BDE .7991 BRA 1.3548 BC3 .1025 FSP -160 SGI 1139.0 SGI 450.2 THA 2.73 EL1 612.7 EL2 246.3 ALF 39.43

LAUNCH DATE JAN 2 1969

FLIGHT TIME 86.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 23.920 GAL 7.91 AZL 86.67 HCA 80.02 SMA 107.69 ECC .38762 INC 3.3287 V1 30.288
RP 107.74 LAP 3.28 LOP 181.43 VP 35.090 GAP -22.81 AZP 89.42 TAL 167.12 TAP 247.14 RCA 65.95 APO 149.44 V2 35.174
RC 44.782 GL 10.52 GP 3.34 ZAL 64.04 ZAP 12.09 ETS 197.35 ZAE 166.19 ETE 213.66 ZAC 106.19 ETC 165.66 CLP 11.63

DISTANCE 198.671

PLANETOCENTRIC CONIC

C3 56.811 VHL 7.537 DLA 24.05 RAL 31.79 RAD 6569.0 VEL 13.348 PTH 2.44 VHP 14.097 DPA 5.41 RAP 11.83 ECC 1.9350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 59 20 3344.00 -23.77 120.65 281.03 74.15 3 55 4 2744.0 -25.72 112.52
90.00 22 23 31 4248.12 1.59 174.66 270.67 61.72 23 34 19 3648.1 -2.20 168.04
100.00 4 40 35 3017.53 -26.25 97.38 281.78 75.16 5 30 53 2417.5 -28.03 89.03
100.00 23 24 57 4049.83 3.84 158.85 269.42 60.33 24 32 27 3449.8 -.14 152.32
110.00 6 28 7 2681.10 -32.07 73.45 283.40 77.48 7 12 48 2081.1 -33.46 64.50
110.00 23 53 54 3959.01 8.95 148.83 286.28 56.87 24 59 53 3359.0 4.53 142.53

DIFFERENTIAL CORRECTIONS

TDE -.5337 TRA-1.3324 TC3 -.0815 BAU .0716
RDE -.5689 RRA .1325 RC3 -.0472 FAU .01896
FDE .4431 FRA .7582 FC3 -.2889 BSP 3600
BDE .7800 BRA 1.3390 BC3 .0942 FSP -177

MID-COURSE EXECUTION ACCURACY

SGT 1187.4 SGR 451.9 SG3 72.3
RRT .1153 RRF -.1196 RTF -.7869
SG8 1270.5 R23 -.0139 R13 -.7873
SG1 1188.7 SGR 448.4 THA 2.93

ORBIT DETERMINATION ACCURACY

ST 524.7 SR 433.7 SS 470.6
CRT .7226 CRS .8317 CST .9837
LSA 788.2 MSA 251.8 SSA 15.2
EL1 633.9 EL2 248.2 ALF 37.57

LAUNCH DATE JAN 2 1969

FLIGHT TIME 88.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 24.247 GAL 7.48 AZL 86.75 HCA 83.25 SMA 109.09 ECC .36914 INC 3.2480 V1 30.288
RP 107.77 LAP 3.22 LOP 184.67 VP 35.303 GAP -21.65 AZP 89.62 TAL 166.84 TAP 250.09 RCA 68.82 APO 149.35 V2 35.164
RC 43.971 GL 10.95 GP 3.53 ZAL 63.81 ZAP 10.72 ETS 200.61 ZAE 168.43 ETE 219.89 ZAC 107.80 ETC 165.45 CLP 10.13

DISTANCE 205.308

PLANETOCENTRIC CONIC

C3 51.374 VHL 7.168 DLA 24.55 RAL 31.90 RAD 6568.9 VEL 13.143 PTH 2.40 VHP 13.452 DPA 6.29 RAP 13.33 ECC 1.8455
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 51 39 3347.37 -23.71 120.88 279.35 74.05 3 47 27 2747.4 -25.67 112.76
90.00 22 32 6 4195.03 -.12 171.70 269.84 61.68 23 42 1 3595.0 -3.91 165.07
100.00 4 34 19 3018.35 -26.27 97.30 280.13 79.20 5 24 36 2416.4 -28.05 88.95
100.00 23 32 7 4001.28 2.20 156.18 268.35 60.18 24 38 48 3401.3 -1.79 149.66
110.00 6 23 52 2673.65 -32.18 72.90 281.75 77.79 7 8 25 2073.6 -33.52 63.92
110.00 0 3 0 3916.75 7.37 146.58 285.15 56.53 1 8 16 3316.8 2.92 140.32

DIFFERENTIAL CORRECTIONS

TDE -.5372 TRA-1.3168 TC3 -.0675 BAU .0573
RDE -.5412 RRA .1173 RC3 -.0491 FAU .01980
FDE .4641 FRA .7800 FC3 -.3336 BSP 3797
BDE .7826 BRA 1.3220 BC3 .0834 FSP -196

MID-COURSE EXECUTION ACCURACY

SGT 1238.1 SGR 450.3 SG3 79.0
RRT .1315 RRF -.1384 RTF -.8005
SG8 1317.5 R23 -.0156 R13 -.8010
SG1 1239.7 SGR 445.8 THA 3.15

ORBIT DETERMINATION ACCURACY

ST 552.2 SR 433.8 SS 493.3
CRT .7309 CRS .8372 CST .9842
LSA 820.3 MSA 251.5 SSA 13.3
EL1 656.6 EL2 249.0 ALF 35.78

LAUNCH DATE JAN 2 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 24.550 GAL 7.06 AZL 86.84 HCA 86.48 SMA 110.43 ECC .35165 INC 3.1644 V1 30.288
RP 107.80 LAP 3.16 LOP 187.90 VP 35.302 GAP -20.55 AZP 89.81 TAL 166.61 TAP 253.09 RCA 71.60 APO 149.26 V2 35.153
RC 43.319 GL 11.38 GP 3.73 ZAL 63.67 ZAP 9.39 ETS 204.91 ZAE 170.60 ETE 229.17 ZAC 109.40 ETC 165.20 CLP 8.62

DISTANCE 211.973

PLANETOCENTRIC CONIC

C3 46.494 VHL 6.819 DLA 25.02 RAL 31.94 RAD 6568.7 VEL 12.956 PTH 2.36 VHP 12.830 DPA 7.19 RAP 14.82 ECC 1.7652
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 43 39 3350.49 -23.63 121.09 277.57 73.96 3 39 30 2750.5 -25.63 112.97
90.00 22 40 22 4142.05 -1.83 168.75 268.53 61.74 23 49 24 3542.1 -5.60 162.09
100.00 4 27 52 3014.32 -26.30 97.17 276.37 75.26 5 18 6 2414.5 -28.07 88.82
100.00 23 38 51 3933.25 .57 153.54 267.20 60.11 24 44 44 3353.3 -3.41 147.02
110.00 6 19 28 2665.36 -32.30 72.28 280.00 78.14 7 3 53 2065.4 -33.59 63.29
110.00 0 7 40 3873.18 5.81 144.38 283.95 56.25 1 12 15 3275.2 1.33 138.15

DIFFERENTIAL CORRECTIONS

TDE -.5411 TRA-1.2997 TC3 -.0493 BAU .0438
RDE -.5146 RRA .1026 RC3 -.0504 FAU .02073
FDE .4867 FRA .8047 FC3 -.3861 BSP 3998
BDE .7468 BRA 1.3038 BC3 .0705 FSP -218

MID-COURSE EXECUTION ACCURACY

SGT 1289.9 SGR 448.1 SG3 86.5
RRT .1498 RRF -.1554 RTF -.8134
SG8 1365.5 R23 -.0176 R13 -.8139
SG1 1291.9 SGR 442.3 THA 3.37

ORBIT DETERMINATION ACCURACY

ST 580.9 SR 433.4 SS 517.1
CRT .7400 CRS .8430 CST .9847
LSA 854.5 MSA 250.4 SSA 15.5
EL1 680.7 EL2 248.7 ALF 34.06

LAUNCH DATE JAN 2 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 24.832 GAL 6.85 AZL 86.92 HCA 89.71 SMA 111.72 ECC .33512 INC 3.0835 V1 30.288
RP 107.84 LAP 3.08 LOP 191.13 VP 35.688 GAP -19.48 AZP 89.98 TAL 166.43 TAP 256.13 RCA 74.28 APO 149.16 V2 35.141
RC 42.834 GL 11.80 GP 3.95 ZAL 63.80 ZAP 8.12 ETS 210.72 ZAE 172.50 ETE 243.70 ZAC 110.97 ETC 164.92 CLP 7.10

DISTANCE 218.660

PLANETOCENTRIC CONIC

C3 42.118 VHL 6.490 DLA 25.45 RAL 31.89 RAD 6568.6 VEL 12.786 PTH 2.33 VHP 12.230 DPA 8.09 RAP 16.30 ECC 1.6931
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 35 23 3353.31 -23.60 121.28 275.70 73.88 3 31 17 2753.3 -25.58 113.17
90.00 22 48 17 4089.48 -3.52 165.81 267.36 61.88 23 56 26 3489.5 -7.26 159.12
100.00 4 21 16 3011.96 -26.35 96.99 276.53 75.34 5 11 28 2412.0 -28.10 88.63
100.00 23 45 5 3906.07 -1.03 150.95 265.98 60.12 24 50 11 3306.1 -5.00 144.41
110.00 6 14 58 2656.22 -32.42 71.59 278.15 78.53 6 59 14 2056.2 -33.66 62.58
110.00 0 11 48 3834.57 4.27 142.24 282.88 56.05 1 15 43 3234.6 -.22 138.03

DIFFERENTIAL CORRECTIONS

TDE -.5456 TRA-1.2816 TC3 -.0267 BAU .0323
RDE -.4892 RRA .0884 RC3 -.0509 FAU .02178
FDE .5114 FRA .8306 FC3 -.4477 BSP 4199
BDE .7528 BRA 1.2846 BC3 .0575 FSP -242

MID-COURSE EXECUTION ACCURACY

SGT 1342.9 SGR 445.4 SG3 94.7
RRT .1708 RRF -.1770 RTF -.8256
SG8 1414.8 R23 -.0198 R13 -.8261
SG1 1343.3 SGR 438.0 THA 3.62

ORBIT DETERMINATION ACCURACY

ST 611.0 SR 432.6 SS 542.4
CRT .7501 CRS .8493 CST .9853
LSA 890.4 MSA 248.4 SSA 15.6
EL1 706.6 EL2 247.4 ALF 32.43

LAUNCH DATE JAN 2 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 225.366

RL 147.09 LAL -.00 LOL 101.43 VL 25.093 GAL 6.27 AZL 87.00 HCA 92.93 SMA 112.96 ECC .31954 INC 3.0026 V1 30.288  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.857 GAP -18.46 AZP 90.15 TAL 166.29 TAP 259.22 RCA 76.87 APO 149.06 V2 35.129  
 RC 42.524 GL 12.21 GP 4.20 ZAL 63.61 ZAP 6.97 ETS 218.75 ZAE 175.72 ETE 265.90 ZAC 112.51 ETC 164.59 CLP 5.57

PLANETOCENTRIC CONIC

C3 38.190 VHL 6.180 DLA 25.84 RAL 31.77 RAD 6568.5 VEL 12.632 PTH 2.29 VHP 11.653 DPA 9.01 RAP 17.76 ECC 1.6285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 26 57 3355.64 -23.55 121.43 273.75 73.81 3 22 52 2755.6 -25.55 113.33  
 90.00 22 55 45 4037.72 -5.18 162.91 266.11 62.12 24 3 3 3437.7 -8.87 156.17  
 100.00 4 14 38 3008.48 -26.41 96.75 274.61 75.46 5 4 46 2408.5 -28.15 88.38  
 100.00 23 50 45 3080.12 -2.59 148.43 264.68 60.21 24 55 6 3260.1 -6.53 141.87  
 110.00 6 10 26 2646.15 -32.56 70.84 276.21 78.95 6 54 32 2046.2 -33.74 61.80  
 110.00 0 15 22 3795.21 2.77 140.18 261.35 55.92 1 18 38 3195.2 -1.72 133.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5526 TRA-1.2642 TC3 -.0016 BAU .0257 SGT 1399.5 SGR 442.3 SCS 103.8 ST 644.3 SR 431.7 SS 569.5  
 RDE -.4649 RRA .0746 RC3 -.0504 FAU .02291 RRT .1953 RRF -.0219 RTF -.8363 CRT .7617 CRS .8562 CST .9861  
 FDE .5385 FRA .8582 FC3 -.5194 BSP 4348 SGB 1467.7 RZ3 -.0217 R13 -.8369 LSA 930.3 MSA 245.4 SSA 15.8  
 BOE .7222 BRA 1.2644 BC3 .0504 FSP -266 SGI 1402.5 SGT 432.8 THA 3.90 EL1 735.9 EL2 244.9 ALF 30.81

LAUNCH DATE JAN 2 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 232.086

RL 147.09 LAL -.00 LOL 101.43 VL 25.335 GAL 5.89 AZL 87.08 HCA 96.15 SMA 114.15 ECC .30487 INC 2.9214 V1 30.288  
 RP 107.91 LAP 2.90 LOP 197.59 VP 36.015 GAP -17.48 AZP 90.31 TAL 166.21 TAP 262.37 RCA 79.35 APO 148.95 V2 35.117  
 RC 42.392 GL 12.60 GP 4.47 ZAL 63.69 ZAP 6.01 ETS 229.91 ZAE 173.78 ETE 293.15 ZAC 114.02 ETC 164.22 CLP 4.02

PLANETOCENTRIC CONIC

C3 34.688 VHL 5.888 DLA 26.20 RAL 31.57 RAD 6568.4 VEL 12.492 PTH 2.26 VHP 11.097 DPA 9.94 RAP 19.19 ECC 1.5706  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 18 28 3357.17 -23.53 121.33 271.73 73.77 3 14 26 2757.2 -25.53 113.44  
 90.00 23 2 39 3987.31 -6.77 160.06 264.70 62.44 24 9 7 3387.3 -10.41 153.27  
 100.00 4 8 4 3003.84 -26.49 96.43 272.62 75.61 4 58 8 2403.8 -28.20 88.05  
 100.00 23 55 45 3815.87 -4.08 146.00 263.31 60.36 24 59 21 3215.9 -8.00 139.40  
 110.00 6 5 56 2635.04 -32.70 70.00 274.21 79.43 6 49 51 2035.0 -33.81 60.95  
 110.00 0 18 18 3757.43 1.32 138.21 259.95 55.84 1 20 55 3157.4 -3.17 132.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5556 TRA-1.2415 TC3 .0341 BAU .0275 SGT 1451.5 SGR 438.8 SCS 113.8 ST 674.9 SR 430.4 SS 597.3  
 RDE -.4419 RRA .0613 RC3 -.0485 FAU .02423 RRT .2209 RRF -.2295 RTF -.8477 CRT .7725 CRS .8632 CST .9867  
 FDE .5671 FRA .8864 FC3 -.6050 BSP 4604 SGB 1516.3 RZ3 -.0251 R13 -.8485 LSA 968.9 MSA 241.9 SSA 15.9  
 BOE .7098 BRA 1.2430 BC3 .0593 FSP -298 SGI 1455.0 SGT 426.9 THA 4.18 EL1 763.1 EL2 241.7 ALF 29.48

LAUNCH DATE JAN 2 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 238.817

RL 147.09 LAL -.00 LOL 101.43 VL 25.560 GAL 5.54 AZL 87.16 HCA 99.37 SMA 115.28 ECC .29109 INC 2.8391 V1 30.288  
 RP 107.95 LAP 2.80 LOP 200.81 VP 36.161 GAP -16.54 AZP 90.46 TAL 166.18 TAP 265.56 RCA 81.73 APO 148.84 V2 35.105  
 RC 42.442 GL 12.97 GP 4.78 ZAL 63.85 ZAP 5.37 ETS 244.83 ZAE 172.63 ETE 316.23 ZAC 113.49 ETC 163.79 CLP 2.45

PLANETOCENTRIC CONIC

C3 31.511 VHL 5.614 DLA 26.51 RAL 31.31 RAD 6568.3 VEL 12.365 PTH 2.23 VHP 10.562 DPA 10.89 RAP 20.59 ECC 1.5186  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 10 11 3357.38 -23.52 121.55 269.67 73.76 3 6 8 2757.4 -25.52 113.45  
 90.00 23 8 49 3938.98 -8.29 157.32 263.38 62.83 24 14 28 3339.0 -11.87 150.47  
 100.00 4 1 45 2997.68 -26.59 96.00 270.59 75.81 4 51 43 2397.7 -28.28 87.61  
 100.00 0 3 51 3773.91 -5.49 143.88 261.87 60.57 1 6 45 3173.9 -9.37 137.04  
 110.00 6 1 34 2622.76 -32.85 69.08 272.13 79.96 6 45 17 2022.8 -33.88 59.99  
 110.00 0 20 31 3721.59 -.05 136.34 258.49 55.82 1 22 33 3121.6 -4.53 130.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5609 TRA-1.2197 TC3 .0735 BAU .0363 SGT 1506.6 SGR 435.3 SCS 125.0 ST 708.4 SR 429.2 SS 627.1  
 RDE -.4202 RRA .0462 RC3 -.0449 FAU .02567 RRT .2514 RRF -.2613 RTF -.8578 CRT .7848 CRS .8707 CST .9875  
 FDE .5985 FRA .9170 FC3 -.7052 BSP 4807 SGB 1588.2 RZ3 -.0284 R13 -.8586 LSA 1011.3 MSA 237.5 SSA 16.1  
 BOE .7008 BRA 1.2208 BC3 .0862 FSP -331 SGI 1510.9 SGT 420.1 THA 4.50 EL1 793.5 EL2 237.5 ALF 28.17

LAUNCH DATE JAN 2 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 245.554

RL 147.09 LAL -.00 LOL 101.43 VL 25.767 GAL 5.19 AZL 87.24 HCA 102.59 SMA 116.36 ECC .27818 INC 2.7554 V1 30.288  
 RP 107.99 LAP 2.69 LOP 204.03 VP 36.296 GAP -15.63 AZP 90.60 TAL 166.20 TAP 268.79 RCA 83.99 APO 148.73 V2 35.092  
 RC 42.671 GL 13.32 GP 5.12 ZAL 64.08 ZAP 5.19 ETS 262.62 ZAE 170.74 ETE 331.63 ZAC 116.91 ETC 163.32 CLP .86

PLANETOCENTRIC CONIC

C3 28.682 VHL 5.356 DLA 26.76 RAL 30.97 RAD 6568.2 VEL 12.250 PTH 2.20 VHP 10.047 DPA 11.86 RAP 21.96 ECC 1.4720  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 2 20 3355.48 -23.56 121.42 267.57 73.82 2 58 16 2755.5 -25.55 113.32  
 90.00 23 13 58 3893.70 -9.68 154.72 261.89 63.26 24 18 51 3293.7 -13.20 147.81  
 100.00 3 55 51 2989.53 -26.72 95.43 268.51 76.08 4 45 41 2389.5 -28.37 87.02  
 100.00 0 7 4 3734.89 -6.79 141.51 260.34 60.82 1 9 18 3134.9 -10.63 134.83  
 110.00 5 57 26 2609.10 -33.01 68.04 270.00 80.55 6 40 55 2009.1 -33.96 58.93  
 110.00 0 21 58 3688.09 -1.33 134.59 256.97 55.84 1 23 26 3088.1 -5.80 128.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5659 TRA-1.1972 TC3 .1194 BAU .0482 SGT 1562.3 SGR 431.9 SCS 137.4 ST 742.8 SR 428.0 SS 658.4  
 RDE -.3999 RRA .0353 RC3 -.0392 FAU .02727 RRT .2858 RRF -.2974 RTF -.8671 CRT .7875 CRS .8784 CST .9882  
 FDE .6326 FRA .9497 FC3 -.8252 BSP 5004 SGB 1620.9 RZ3 -.0323 R13 -.8680 LSA 1055.5 MSA 232.5 SSA 16.2  
 BOE .6929 BRA 1.1978 BC3 .1257 FSP -368 SGI 1567.5 SGT 412.5 THA 4.86 EL1 825.1 EL2 232.5 ALF 26.99

LAUNCH DATE JAN 2 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 252.294

RL 147.09 LAL -.00 LOL 101.43 VL 25.959 GAL 4.87 AZL 87.35 HCA 105.80 SMA 117.38 ECC .26609 INC 2.6697 V1 30.288
RP 108.03 LAP 2.57 LOP 207.25 VP 36.420 GAP -14.76 AZP 90.73 TAL 166.27 TAP 272.08 RCA 86.15 APO 148.62 V2 35.080
RC 43.078 GL 13.63 GP 5.51 ZAL 64.38 ZAP 5.56 ETS 280.18 ZAE 168.54 ETE 341.58 ZAC 118.28 ETC 162.78 CLP -.77

PLANETOCENTRIC CONIC

C3 26.148 VHL 5.113 DLA 26.96 RAL 30.57 RAD 6568.1 VEL 12.146 PTH 2.18 VHP 9.551 DPA 12.85 RAP 23.28 ECC 1.4303
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 55 22 3350.38 -23.65 121.08 265.45 73.96 2 51 12 2750.4 -25.63 112.97
90.00 23 17 45 3052.78 -10.93 152.36 260.31 63.71 24 21 57 3252.8 -14.37 145.38
100.00 3 50 36 2978.81 -26.90 94.68 266.40 76.44 4 40 16 2378.8 -28.50 86.25
100.00 0 9 6 3699.58 -7.96 139.54 258.73 61.09 1 10 46 3099.6 -11.75 132.81
110.00 5 53 40 2593.82 -33.17 66.88 267.83 81.22 6 36 53 1993.8 -34.03 57.75
110.00 0 22 33 3657.33 -2.90 132.99 255.38 55.90 1 23 31 3057.3 -6.96 126.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5898 TRA-1.1724 TC3 .1738 BAU .0616 SGT 1616.0 SGR .429.0 SCS 151.2 ST 776.6 SR 427.0 SS 691.1
RDE -.3610 RRA .0227 RC3 -.0307 FAU .02906 RRT .3245 RRF -.3382 RTF -.8762 CRT .8103 CRS .8864 CST .9890
FDE .6693 FRA .9848 FC3 -.9623 BSP 5215 SGB 1672.0 R23 -.0369 R13 -.8772 LSA 1100.6 MSA 226.9 SSA 16.3
BDE .6854 BRA 1.1726 BC3 .1763 FSP -410 SGI 1622.4 SGT 404.2 THA 5.25 EL1 856.8 EL2 226.7 ALF 25.97

LAUNCH DATE JAN 2 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 259.034

RL 147.09 LAL -.00 LOL 101.43 VL 26.136 GAL 4.56 AZL 87.42 HCA 109.02 SMA 118.35 ECC .25482 INC 2.5812 V1 30.288
RP 108.07 LAP 2.44 LOP 210.46 VP 36.534 GAP -13.91 AZP 90.84 TAL 166.39 TAP 275.41 RCA 88.19 APO 148.51 V2 35.067
RC 43.658 GL 13.89 GP 5.94 ZAL 64.74 ZAP 6.42 ETS 294.60 ZAE 166.24 ETE 348.38 ZAC 119.58 ETC 162.19 CLP -2.44

PLANETOCENTRIC CONIC

C3 23.877 VHL 4.888 DLA 27.09 RAL 30.11 RAD 6568.0 VEL 12.052 PTH 2.15 VHP 9.076 DPA 13.86 RAP 24.55 ECC 1.3930
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 49 44 3340.63 -23.04 120.42 263.35 74.24 2 45 25 2740.6 -25.77 112.29
90.00 23 19 44 3817.79 -11.98 150.32 258.62 64.15 24 23 21 3217.8 -15.36 143.28
100.00 3 48 19 2984.83 -27.12 95.70 264.28 76.91 4 35 44 2364.8 -28.65 85.24
100.00 0 9 46 3688.82 -8.96 137.81 257.04 61.36 1 10 55 3068.8 -12.72 131.04
110.00 5 50 22 2576.65 -33.34 65.57 265.62 81.98 6 33 19 1978.6 -34.09 56.41
110.00 0 22 12 3629.77 -3.55 131.55 253.73 55.98 1 22 42 3029.8 -8.00 125.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5742 TRA-1.1481 TC3 .2350 BAU .0752 SGT 1671.1 SGR 427.0 SCS 166.6 ST 811.9 SR 426.4 SS 725.2
RDE -.3637 RRA .0100 RC3 -.0189 FAU .03106 RRT .3685 RRF -.3842 RTF -.8844 CRT .8241 CRS .8946 CST .9898
FDE .7089 FRA 1.0228 FC3-1.1263 BSP 5411 SGB 1724.8 R23 -.0420 R13 -.8856 LSA 1148.0 MSA 220.7 SSA 16.5
BDE .6797 BRA 1.1481 BC3 .2357 FSP -456 SGI 1678.9 SGT 395.1 THA 5.70 EL1 890.2 EL2 220.3 ALF 25.04

LAUNCH DATE JAN 2 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 265.771

RL 147.09 LAL -.00 LOL 101.43 VL 26.300 GAL 4.26 AZL 87.51 HCA 112.23 SMA 119.26 ECC .24432 INC 2.4894 V1 30.288
RP 108.11 LAP 2.30 LOP 213.67 VP 36.639 GAP -13.10 AZP 90.94 TAL 166.55 TAP 278.78 RCA 90.12 APO 148.40 V2 35.053
RC 44.405 GL 14.11 GP 6.43 ZAL 65.17 ZAP 7.65 ETS 305.22 ZAE 163.96 ETE 353.39 ZAC 120.81 ETC 161.52 CLP -4.14

PLANETOCENTRIC CONIC

C3 21.844 VHL 4.674 DLA 27.15 RAL 29.61 RAD 6567.9 VEL 11.968 PTH 2.13 VHP 8.619 DPA 14.91 RAP 25.77 ECC 1.3595
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 46 1 3324.66 -24.13 119.34 261.26 74.71 2 41 25 2724.7 -25.99 111.17
90.00 23 19 26 3790.45 -12.78 148.72 256.83 64.52 24 22 36 3190.4 -16.11 141.63
100.00 3 43 12 2946.88 -27.39 92.44 262.16 77.53 4 32 19 2348.9 -28.83 83.93
100.00 0 8 51 3643.46 -9.79 136.38 255.28 61.61 1 9 35 3043.5 -13.51 129.56
110.00 5 47 42 2557.27 -33.52 64.08 263.39 82.64 6 30 20 1957.3 -34.14 54.90
110.00 0 20 50 3605.84 -4.46 130.29 252.04 56.07 1 20 56 3005.8 -8.89 124.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5777 TRA-1.1228 TC3 .3042 BAU .0888 SGT 1724.8 SGR 426.5 SCS 183.7 ST 846.7 SR 426.5 SS 760.8
RDE -.3479 RRA -.0028 RC3 -.0030 FAU .03330 RRT .4176 RRF -.4358 RTF -.8920 CRT .8379 CRS .8946 CST .9906
FDE .7516 FRA 1.0644 FC3-1.3198 BSP 5804 SGB 1776.8 R23 -.0480 R13 -.8935 LSA 1196.4 MSA 214.1 SSA 16.6
BDE .6743 BRA 1.1228 BC3 .3042 FSP -508 SGI 1734.5 SGT 385.4 THA 6.20 EL1 923.7 EL2 213.4 ALF 24.26

LAUNCH DATE JAN 2 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 272.502

RL 147.09 LAL -.00 LOL 101.43 VL 26.450 GAL 3.98 AZL 87.61 HCA 115.43 SMA 120.12 ECC .23456 INC 2.3933 V1 30.288
RP 108.15 LAP 2.16 LOP 216.88 VP 36.734 GAP -12.32 AZP 91.03 TAL 166.76 TAP 282.19 RCA 91.94 APO 148.29 V2 35.040
RC 45.309 GL 14.28 GP 6.99 ZAL 65.84 ZAP 9.14 ETS 312.73 ZAE 161.78 ETE 357.35 ZAC 121.96 ETC 160.78 CLP -5.90

PLANETOCENTRIC CONIC

C3 20.023 VHL 4.475 DLA 27.12 RAL 29.06 RAD 6567.8 VEL 11.891 PTH 2.11 VHP 8.180 DPA 15.99 RAP 26.91 ECC 1.3295
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 44 39 3301.11 -24.54 117.74 259.22 75.41 2 39 40 2701.1 -26.31 109.52
90.00 23 16 27 3772.23 -13.31 147.85 254.93 64.78 24 19 19 3172.2 -16.60 140.52
100.00 3 41 33 2924.26 -27.71 90.83 260.05 78.31 4 30 17 2324.3 -29.04 82.28
100.00 0 6 10 3624.31 -10.41 135.29 253.44 61.82 1 6 35 3024.3 -14.09 128.44
110.00 5 45 50 2555.32 -33.89 62.38 261.14 83.83 6 28 6 1935.3 -34.18 53.18
110.00 0 18 22 3586.02 -5.22 129.25 250.29 56.17 1 18 8 2986.0 -9.62 122.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5795 TRA-1.0967 TC3 .3818 BAU .1023 SGT 1776.8 SGR 428.3 SCS 202.8 ST 880.1 SR 427.4 SS 797.3
RDE -.3338 RRA -.0159 RC3 .0182 FAU .03580 RRT .4715 RRF -.4925 RTF -.8992 CRT .8516 CRS .9113 CST .9914
FDE .7989 FRA 1.1102 FC3-1.5480 BSP 5793 SGB 1827.5 R23 -.0553 R13 -.9008 LSA 1244.9 MSA 207.2 SSA 16.7
BDE .6687 BRA 1.0968 BC3 .3822 FSP -565 SGI 1788.6 SGT 375.2 THA 6.78 EL1 956.5 EL2 206.2 ALF 23.63

LAUNCH DATE JAN 2 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 279.225

RL 147.09 LAL -.00 LOL 101.43 VL 26.589 GAL 3.72 AZL 87.71 HCA 118.64 SMA 120.92 ECC .22552 INC 2.2919 V1 30.288  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.821 GAP -11.57 AZP 91.10 TAL 167.00 TAP 285.64 RCA 93.65 APO 148.19 V2 35.027  
 RC 46.364 GL 14.33 GP 7.62 ZAL 66.16 ZAP 10.83 ETS 318.04 ZAE 159.73 ETE .67 ZAC 123.00 ETC 159.96 CLP -7.71

PLANETOCENTRIC CONIC

C3 18.391 VHL 4.289 DLA 27.00 RAL 28.49 RAD 6567.7 VEL 11.823 PTH 2.09 VHP 7.760 DPA 17.11 RAP 27.98 ECC 1.3027  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 55 3269.25 -25.07 115.56 257.25 76.38 2 40 25 2669.3 -26.70 107.27  
 90.00 23 10 37 3763.94 -13.55 147.16 252.95 64.90 24 13 21 3163.9 -16.83 140.01  
 100.00 3 41 35 2896.42 -28.08 88.85 257.95 79.30 4 29 51 2296.4 -29.27 80.25  
 100.00 0 1 35 3612.01 -10.80 134.59 251.54 61.96 1 1 47 3012.0 -14.47 127.72  
 110.00 5 44 55 2510.45 -33.85 80.47 258.88 84.96 6 26 46 1910.4 -34.18 51.24  
 110.00 0 14 44 3570.74 -5.79 128.45 248.51 56.25 1 14 15 2970.7 -10.19 122.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5796 TRA-1.0700 TC3 .4872 BAU .1154 SGT 1826.0 SGR 433.3 SCS 224.1 ST 911.9 SR 429.5 SS 834.7  
 RDE -.3213 RRA -.0295 RC3 .0456 FAU .03859 RRT .5297 RRF -.5539 RTF -.9057 CRT .8652 CRS .8197 CST .9921  
 FDE .8451 FRA 1.1604 FC3-1.8165 BSP 5975 SGB 1878.7 R23 -.0840 R13 -.9077 LSA 1293.2 MSA 200.1 SSA 16.8  
 BDE .6627 BRA 1.0704 BC3 .4695 FSP -630 SGI 1841.0 SGI 364.6 THA 7.46 EL1 988.2 EL2 198.7 ALF 23.16

LAUNCH DATE JAN 2 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 285.938

RL 147.09 LAL -.00 LOL 101.43 VL 26.716 GAL 3.47 AZL 87.82 HCA 121.84 SMA 121.67 ECC .21716 INC 2.1843 V1 30.288  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.900 GAP -10.84 AZP 91.15 TAL 167.28 TAP 289.13 RCA 95.25 APO 148.09 V2 35.013  
 RC 47.538 GL 14.30 GP 8.35 ZAL 66.72 ZAP 12.69 ETS 321.83 ZAE 157.85 ETE 3.63 ZAC 123.93 ETC 159.05 CLP -9.59

PLANETOCENTRIC CONIC

C3 18.930 VHL 4.115 DLA 26.77 RAL 27.91 RAD 6567.7 VEL 11.761 PTH 2.08 VHP 7.359 DPA 18.30 RAP 28.95 ECC 1.2786  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 52 3229.17 -25.88 112.78 255.27 77.64 2 43 41 2629.2 -27.13 104.41  
 90.00 23 2 2 3785.57 -15.51 147.25 250.89 64.87 24 4 47 3165.6 -16.78 140.11  
 100.00 3 43 28 2862.95 -28.48 88.44 255.88 80.50 4 31 11 2262.9 -29.49 77.78  
 100.00 23 51 7 3807.02 -10.96 134.31 249.59 62.01 24 51 14 3007.0 -14.62 127.43  
 110.00 5 45 7 2482.28 -34.00 58.28 256.63 86.24 6 26 29 1882.3 -34.15 49.04  
 110.00 0 9 52 3560.46 -6.18 127.90 246.71 56.31 1 9 13 2960.5 -10.57 121.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5776 TRA-1.0430 TC3 .5605 BAU .1282 SGT 1872.5 SGR 443.0 SCS 247.9 ST 941.0 SR 433.0 SS 872.0  
 RDE -.3108 RRA -.0439 RC3 .0810 FAU .04170 RRT .5909 RRF -.6185 RTF -.9117 CRT .8786 CRS .9278 CST .9929  
 FDE .8952 FRA 1.2165 FC3-2.1325 BSP 6147 SGB 1924.2 R23 -.0742 R13 -.9141 LSA 1340.1 MSA 192.8 SSA 17.0  
 BDE .6559 BRA 1.0440 BC3 .5663 FSP -703 SGI 1891.4 SGI 355.8 THA 8.25 EL1 1018.0 EL2 191.2 ALF 22.86

LAUNCH DATE JAN 2 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 292.638

RL 147.09 LAL -.00 LOL 101.43 VL 26.832 GAL 3.24 AZL 87.93 HCA 125.04 SMA 122.37 ECC .20946 INC 2.0691 V1 30.288  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.972 GAP -10.14 AZP 91.19 TAL 167.59 TAP 292.64 RCA 96.74 APO 148.00 V2 35.000  
 RC 48.883 GL 14.17 GP 9.19 ZAL 67.32 ZAP 14.71 ETS 324.55 ZAE 156.13 ETE 6.41 ZAC 124.72 ETC 158.05 CLP -11.54

PLANETOCENTRIC CONIC

C3 15.820 VHL 3.952 DLA 26.42 RAL 27.33 RAD 6567.6 VEL 11.705 PTH 2.06 VHP 6.976 DPA 19.55 RAP 29.81 ECC 1.2571  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 58 18 3181.52 -28.33 109.44 253.35 79.19 2 49 19 2581.5 -27.56 100.99  
 90.00 22 50 57 3776.49 -13.19 147.90 248.81 64.71 23 53 53 3176.5 -16.49 140.78  
 100.00 3 47 18 2823.64 -28.88 83.59 253.82 81.95 4 34 22 2223.6 -29.70 74.88  
 100.00 23 42 37 3609.80 -10.88 134.46 247.82 61.98 24 42 47 3009.8 -14.54 127.58  
 110.00 5 46 35 2450.41 -34.12 55.80 254.38 87.71 6 27 26 1850.4 -34.06 46.56  
 110.00 0 3 45 3555.59 -6.37 127.65 244.90 56.34 1 3 1 2955.6 -10.75 121.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5728 TRA-1.0158 TC3 .6615 BAU .1406 SGT 1914.5 SGR 458.7 SCS 274.4 ST 965.8 SR 438.3 SS 908.5  
 RDE -.3018 RRA -.0594 RC3 .1263 FAU .04519 RRT .6528 RRF -.6841 RTF -.9172 CRT .8915 CRS .9357 CST .9936  
 FDE .9464 FRA 1.2787 FC3-2.5048 BSP 6324 SGB 1968.7 R23 -.0863 R13 -.9201 LSA 1384.0 MSA 185.3 SSA 17.1  
 BDE .6472 BRA 1.0173 BC3 .6734 FSP -785 SGI 1938.6 SGI 343.2 THA 9.18 EL1 1044.5 EL2 183.6 ALF 27.77

LAUNCH DATE JAN 2 1969

FLIGHT TIME 116.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 299.324

RL 147.09 LAL -.00 LOL 101.43 VL 26.939 GAL 3.02 AZL 88.06 HCA 128.24 SMA 123.02 ECC .20238 INC 1.9445 V1 30.288  
 RP 108.31 LAP 1.53 LOP 229.88 VP 37.037 GAP -9.47 AZP 91.20 TAL 167.93 TAP 296.17 RCA 98.12 APO 147.92 V2 34.987  
 RC 50.327 GL 13.90 GP 10.15 ZAL 67.94 ZAP 16.90 ETS 326.50 ZAE 154.60 ETE 9.14 ZAC 125.35 ETC 156.95 CLP -13.58

PLANETOCENTRIC CONIC

C3 14.445 VHL 3.801 DLA 25.94 RAL 26.78 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 6.612 DPA 20.88 RAP 30.53 ECC 1.2377  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 5 1 3127.07 -26.97 105.59 251.45 81.03 2 57 8 2527.1 -27.93 97.05  
 90.00 22 37 44 3795.93 -12.62 149.04 246.72 64.44 23 41 0 3195.9 -15.96 141.96  
 100.00 3 53 10 2778.40 -29.27 80.28 251.80 83.65 4 39 29 2178.4 -29.84 71.52  
 100.00 23 32 16 3619.84 -10.55 135.04 245.85 61.87 24 32 36 3019.8 -14.23 128.18  
 110.00 5 49 30 2414.44 -34.18 52.99 252.15 89.37 6 29 44 1814.4 -33.89 43.76  
 110.00 23 52 26 3558.56 -6.33 127.70 243.10 56.34 24 51 42 2956.6 -10.71 121.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5827 TRA -.9885 TC3 .7738 BAU .1536 SGT 1949.5 SGR 482.6 SCS 303.9 ST 982.8 SR 445.4 SS 942.4  
 RDE -.2943 RRA -.0764 RC3 .1841 FAU .04912 RRT .7127 RRF -.7478 RTF -.9228 CRT .9035 CRS .9432 CST .9942  
 FDE .9986 FRA 1.3479 FC3-2.9440 BSP 6523 SGB 2008.3 R23 -.1002 R13 -.9263 LSA 1421.4 MSA 178.0 SSA 17.1  
 BDE .6330 BRA .9885 BC3 .7954 FSP -879 SGI 1980.5 SGI 333.2 THA 10.30 EL1 1064.6 EL2 176.2 ALF 22.93



LAUNCH DATE JAN 2 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 305.994

RL 147.09 LAL -.00 LOL 101.43 VL 27.036 GAL 2.82 AZL 88.19 HCA 131.44 SMA 123.62 ECC .19589 INC 1.8086 V1 30.288
RP 108.36 LAP 1.36 LOP 232.88 VP 37.096 GAP -8.81 AZP 91.20 TAL 168.29 TAP 299.72 RCA 99.41 APO 147.84 V2 34.974
RC 51.881 GL 13.47 GP 11.27 ZAL 68.57 ZAP 19.25 ETS 327.86 ZAE 153.24 ETE 11.94 ZAC 125.79 ETC 155.75 CLP -15.71

PLANETOCENTRIC CONIC

C3 13.391 VHL 3.639 DLA 25.29 RAL 26.24 RAD 6567.5 VEL 11.609 PTH 2.03 VHP 6.267 DPA 22.32 RAP 31.10 ECC 1.2204
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 15 52 3066.48 -27.54 101.24 249.57 83.13 3 6 58 2466.5 -28.20 92.64
90.00 22 22 43 3823.27 -11.81 150.65 244.67 64.08 23 26 26 3223.3 -15.20 143.61
100.00 4 1 6 2727.19 -29.60 78.51 249.80 85.61 4 46 33 2127.2 -29.89 67.72
100.00 23 20 10 3637.79 -9.97 136.06 243.71 61.67 24 20 48 3037.8 -13.68 129.23
110.00 5 54 1 2373.92 -34.16 49.83 249.95 91.24 6 33 35 1773.9 -33.61 40.63
110.00 23 43 45 3563.82 -6.06 128.08 241.34 56.29 24 43 8 2963.8 -10.44 121.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5510 TRA -.9592 TC3 .8854 BAU .1650 8GT 1980.7 8GR 517.2 8G3 336.5 ST 996.5 SR 455.3 SS 974.5
RDE -.2890 RRA -.0956 RC3 .2569 FAU .05340 RRT .7605 RRF -.8068 RTF -.9273 CRT .9153 CRS .9502 CST .9949
FDE 1.0462 FRA 1.4266 FC3-3.4523 B8P 6662 8GB 2047.1 R23 -.1164 R13 -.9317 LSA 1456.2 MSA 170.3 SSA 17.3
BDE .6222 BRA .9639 BC3 .9219 F8P -.981 8G1 2021.2 8G2 324.3 THA 11.65 EL1 1082.5 EL2 168.8 ALF 23.29

LAUNCH DATE JAN 2 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 312.647

RL 147.09 LAL -.00 LOL 101.43 VL 27.125 GAL 2.63 AZL 88.34 HCA 134.63 SMA 124.18 ECC .18997 INC 1.6587 V1 30.288
RP 108.40 LAP 1.18 LOP 238.07 VP 37.148 GAP -8.18 AZP 91.17 TAL 168.66 TAP 303.29 RCA 100.59 APO 147.77 V2 34.961
RC 53.536 GL 12.85 GP 12.58 ZAL 69.20 ZAP 21.80 ETS 328.78 ZAE 152.04 ETE 14.92 ZAC 126.01 ETC 154.45 CLP -17.94

PLANETOCENTRIC CONIC

C3 12.445 VHL 3.528 DLA 24.46 RAL 25.78 RAD 6567.5 VEL 11.569 PTH 2.02 VHP 5.942 DPA 23.89 RAP 31.49 ECC 1.2048
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 28 46 2999.99 -27.99 96.43 247.71 85.51 3 18 46 2400.0 -28.32 87.78
90.00 22 6 9 3858.24 -10.76 152.68 242.70 63.65 23 10 27 3258.2 -14.22 145.70
100.00 4 11 9 2689.86 -29.82 72.26 247.83 87.83 4 53 39 2069.9 -29.80 63.46
100.00 23 6 26 3683.60 -9.13 137.52 241.84 61.41 24 7 30 3063.6 -12.88 130.73
110.00 6 0 19 2328.35 -34.04 46.27 247.78 93.34 6 39 7 1728.3 -33.20 37.13
110.00 23 33 46 3577.88 -5.52 128.82 239.64 56.21 24 33 24 2977.9 -9.93 122.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5351 TRA -.9324 TC3 .9991 BAU .1761 8GT 2004.9 8GR 565.4 8G3 372.6 ST 1002.4 SR 467.9 SS 1001.8
RDE -.2854 RRA -.1178 RC3 .3490 FAU .05812 RRT .8170 RRF -.8582 RTF -.9313 CRT .9264 CRS .9567 CST .9955
FDE 1.0912 FRA 1.5166 FC3-4.0429 B8P 6786 8GB 2083.1 R23 -.1348 R13 -.9368 LSA 1483.4 MSA 162.5 SSA 17.4
BDE .6064 BRA .9398 BC3 1.0583 F8P -1093 8G1 2058.7 8G2 317.6 THA 13.30 EL1 1094.4 EL2 161.4 ALF 23.94

LAUNCH DATE JAN 2 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 319.282

RL 147.09 LAL -.00 LOL 101.43 VL 27.205 GAL 2.46 AZL 88.51 HCA 137.82 SMA 124.69 ECC .18458 INC 1.4914 V1 30.288
RP 108.43 LAP 1.00 LOP 239.26 VP 37.195 GAP -7.57 AZP 91.11 TAL 169.03 TAP 306.85 RCA 101.67 APO 147.70 V2 34.948
RC 55.282 GL 11.99 GP 14.12 ZAL 69.83 ZAP 24.56 ETS 329.35 ZAE 150.97 ETE 18.18 ZAC 125.98 ETC 153.03 CLP -20.30

PLANETOCENTRIC CONIC

C3 11.595 VHL 3.405 DLA 23.40 RAL 25.41 RAD 6567.4 VEL 11.532 PTH 2.01 VHP 5.639 DPA 25.63 RAP 31.65 ECC 1.1908
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 43 46 2927.45 -28.26 91.14 245.88 88.14 3 32 34 2327.4 -28.22 82.48
90.00 21 48 10 3900.97 -9.46 155.14 240.83 63.19 22 53 11 3301.0 -12.99 148.24
100.00 4 23 27 2806.04 -29.89 67.52 245.91 90.33 5 6 53 2006.0 -29.53 58.73
100.00 22 51 10 3697.61 -8.02 139.43 240.06 61.11 23 52 48 3097.6 -11.82 132.70
110.00 6 8 37 2277.03 -33.76 42.29 245.67 95.68 6 46 34 1677.0 -32.61 33.25
110.00 23 22 29 3599.38 -4.71 129.95 238.03 56.10 24 22 29 2999.4 -9.13 123.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5117 TRA -.9033 TC3 1.1186 BAU .1879 8GT 2018.1 8GR 630.0 8G3 411.8 ST 994.4 SR 482.8 SS 1019.5
RDE -.2830 RRA -.1436 RC3 .4663 FAU .06332 RRT .8565 RRF -.9002 RTF -.9352 CRT .9363 CRS .9622 CST .9962
FDE 1.1246 FRA 1.6152 FC3-4.7279 B8P 6957 8GB 2112.2 R23 -.1533 R13 -.9423 LSA 1495.7 MSA 154.7 SSA 17.6
BDE .5848 BRA .9146 BC3 1.2119 F8P -1222 8G1 2088.8 8G2 313.8 THA 15.34 EL1 1094.6 EL2 154.1 ALF 24.97

LAUNCH DATE JAN 2 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 325.897

RL 147.09 LAL -.00 LOL 101.43 VL 27.278 GAL 2.30 AZL 88.70 HCA 141.01 SMA 125.15 ECC .17970 INC 1.3024 V1 30.288
RP 108.47 LAP .82 LOP 242.44 VP 37.236 GAP -6.99 AZP 91.01 TAL 169.41 TAP 310.42 RCA 102.66 APO 147.64 V2 34.936
RC 57.109 GL 10.85 GP 15.94 ZAL 70.45 ZAP 27.56 ETS 329.63 ZAE 149.97 ETE 21.84 ZAC 125.64 ETC 151.52 CLP -22.79

PLANETOCENTRIC CONIC

C3 10.834 VHL 3.291 DLA 22.08 RAL 25.16 RAD 6567.4 VEL 11.499 PTH 2.00 VHP 5.358 DPA 27.57 RAP 31.55 ECC 1.1783
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 1 5 2848.27 -28.30 85.35 244.10 91.05 3 48 33 2248.3 -27.85 76.71
90.00 21 28 50 3952.09 -7.88 158.06 239.12 62.71 22 34 42 3352.1 -11.47 151.23
100.00 4 38 12 2535.11 -29.75 62.25 244.04 93.10 5 20 27 1935.1 -29.00 53.53
100.00 22 34 24 3740.48 -6.60 141.82 238.43 60.78 23 36 44 3140.5 -10.45 135.14
110.00 6 19 12 2219.14 -33.28 37.84 243.63 98.28 6 56 11 1619.1 -31.78 28.93
110.00 23 9 53 3629.22 -3.57 131.52 236.56 55.98 24 10 23 3029.2 -8.02 125.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4858 TRA -.8764 TC3 1.2278 BAU .1988 8GT 2019.7 8GR 715.8 8G3 454.2 ST 979.6 SR 500.9 SS 1029.1
RDE -.2821 RRA -.1747 RC3 .8142 FAU .06884 RRT .8871 RRF -.9328 RTF -.9380 CRT .9458 CRS .9671 CST .9969
FDE 1.1462 FRA 1.7280 FC3-5.3012 B8P 7050 8GB 2142.8 R23 -.1729 R13 -.9474 LSA 1499.3 MSA 146.2 SSA 18.0
BDE .5617 BRA .8937 BC3 1.3729 F8P -1356 8G1 2119.5 8G2 314.8 THA 17.86 EL1 1090.5 EL2 146.1 ALF 26.32

LAUNCH DATE JAN 2 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 332.493

RL 147.09 LAL -.00 LOL 101.43 VL 27.343 GAL 2.15 AZL 88.91 HCA 144.19 SMA 125.58 ECC .17529 INC 1.0856 V1 30.288
RP 108.51 LAP .64 LOP 245.62 VP 37.273 GAP -6.42 AZP 90.88 TAL 169.78 TAP 313.97 RCA 103.56 APO 147.59 V2 34.923
RC 59.010 GL 9.35 GP 18.10 ZAL 71.04 ZAP 30.86 ETS 329.68 ZAE 148.98 ETE 25.99 ZAC 124.94 ETC 149.91 CLP -25.42

PLANETOCENTRIC CONIC

C3 10.153 VHL 3.186 DLA 20.44 RAL 25.05 RAD 6567.4 VEL 11.469 PTH 1.99 VHP 5.104 DPA 29.76 RAP 31.12 ECC 1.1671
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 21 0 2761.31 -28.03 79.01 242.39 94.22 4 7 2 2161.3 -27.15 70.45
90.00 21 8 6 4012.81 -5.97 161.90 237.62 62.27 22 14 59 3412.8 -9.64 154.74
100.00 4 55 42 2455.98 -29.31 56.41 242.25 96.14 5 36 38 1856.0 -28.15 47.80
100.00 22 18 6 3793.37 -4.84 144.75 237.00 60.47 23 19 19 3193.4 -8.73 138.13
110.00 6 32 24 2153.46 -32.53 32.87 241.69 101.13 7 8 17 1553.5 -30.66 24.15
110.00 22 55 53 3668.66 -2.07 133.58 235.28 55.87 23 57 2 3068.7 -6.53 127.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4539 TRA -.8508 TC3 1.3226 BAU .2098 SGT 2010.5 SGR 826.9 SG3 498.6 ST 952.3 SR 321.0 SS 1024.5
RDE -.2814 RRA -.2133 RC3 .8003 FAU .07449 RRT .9090 RRF -.9584 RTF -.9400 CRT .9546 CRS .9710 CST .9978
FDE 1.1453 FRA 1.8558 FC3-6.3519 BSP 7139 SGB 2173.9 R23 -.1903 R13 -.9525 LSA 1486.1 MSA 137.3 SSA 18.5
BDE .5341 BRA .8771 BC3 1.5459 FSP -1498 SGI 2149.9 S62 322.3 THA 20.99 EL1 1076.7 EL2 137.2 ALF 28.07

LAUNCH DATE JAN 2 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 339.067

RL 147.09 LAL -.00 LOL 101.43 VL 27.402 GAL 2.02 AZL 89.17 HCA 147.37 SMA 125.96 ECC .17133 INC .8527 V1 30.288
RP 108.55 LAP .45 LOP 248.80 VP 37.305 GAP -5.87 AZP 90.70 TAL 170.14 TAP 317.52 RCA 104.38 APO 147.54 V2 34.911
RC 60.978 GL 7.40 GP 20.69 ZAL 71.82 ZAP 34.48 ETS 329.54 ZAE 147.88 ETE 30.73 ZAC 123.80 ETC 148.23 CLP -28.22

PLANETOCENTRIC CONIC

C3 9.552 VHL 3.091 DLA 18.38 RAL 25.15 RAD 6567.3 VEL 11.443 PTH 1.98 VHP 4.880 DPA 32.28 RAP 30.29 ECC 1.1572
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 44 4 2664.78 -27.35 72.03 240.79 97.65 4 28 29 2064.8 -26.01 63.82
90.00 20 45 47 4085.12 -3.66 165.57 236.39 61.90 21 53 52 3485.1 -7.39 158.87
100.00 5 16 26 2368.96 -28.49 49.92 240.59 99.46 5 55 53 1767.0 -26.89 41.49
100.00 21 56 7 3858.17 -2.65 148.32 235.83 60.21 23 0 25 3258.2 -6.60 141.76
110.00 6 48 41 2078.32 -31.41 27.30 239.89 104.25 7 23 19 1478.3 -29.13 18.83
110.00 22 40 21 3719.57 -1.12 136.24 234.25 55.82 23 42 20 3119.6 -4.61 130.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4152 TRA -.8248 TC3 1.4050 BAU .2230 SGT 1985.3 SGR 969.3 SG3 543.8 ST 909.2 SR 540.6 SS 999.2
RDE -.2794 RRA -.2614 RC3 1.0584 FAU .08023 RRT .9237 RRF -.9727 RTF -.9414 CRT .9629 CRS .9736 CST .9986
FDE 1.1095 FRA 1.9949 FC3-7.2717 BSP 7244 SGB 2209.3 R23 -.2011 R13 -.9583 LSA 1449.3 MSA 127.6 SSA 19.3
BDE .5004 BRA .8650 BC3 1.7460 FSP -1644 SGI 2183.3 S62 337.6 THA 24.91 EL1 1050.2 EL2 126.3 ALF 30.28

LAUNCH DATE JAN 2 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 345.620

RL 147.09 LAL -.00 LOL 101.43 VL 27.455 GAL 1.90 AZL 89.47 HCA 150.55 SMA 126.31 ECC .16780 INC .5320 V1 30.288
RP 108.58 LAP .26 LOP 251.98 VP 37.333 GAP -5.33 AZP 90.46 TAL 170.48 TAP 321.04 RCA 105.11 APO 147.50 V2 34.900
RC 63.000 GL 4.86 GP 23.80 ZAL 72.16 ZAP 38.49 ETS 329.28 ZAE 146.52 ETE 36.11 ZAC 122.15 ETC 146.49 CLP -31.19

PLANETOCENTRIC CONIC

C3 9.032 VHL 3.005 DLA 15.78 RAL 25.49 RAD 6567.3 VEL 11.420 PTH 1.98 VHP 4.693 DPA 35.19 RAP 28.95 ECC 1.1486
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 11 3 2555.99 -26.12 64.30 239.57 101.33 4 53 39 1956.0 -24.30 56.11
90.00 20 21 31 4172.13 -.86 170.43 235.53 61.70 21 31 3 3572.1 -4.64 163.78
100.00 5 41 7 2265.53 -27.14 42.69 239.13 103.04 6 18 53 1665.5 -25.07 34.50
100.00 21 34 8 3937.82 .05 152.70 235.02 60.11 22 39 45 3337.8 -3.93 146.17
110.00 7 8 45 1991.36 -29.78 21.05 238.30 107.62 7 41 56 1591.4 -27.08 12.90
110.00 22 22 59 3784.76 2.37 139.64 233.57 55.89 23 26 4 3184.8 -2.12 133.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3685 TRA -.7964 TC3 1.4651 BAU .2392 SGT 1938.8 SGR 1149.2 SG3 586.6 ST 847.6 SR 535.1 SS 946.0
RDE -.2730 RRA -.3220 RC3 1.3338 FAU .08562 RRT .9328 RRF -.9835 RTF -.9421 CRT .9712 CRS .9746 CST .9994
FDE 1.0231 FRA 2.1387 FC3-8.2068 BSP 7409 SGB 2253.8 R23 -.2021 R13 -.9649 LSA 1381.0 MSA 117.7 SSA 20.5
BDE .4586 BRA .8591 BC3 1.9813 FSP -1789 SGI 2224.7 S62 360.9 THA 29.80 EL1 1007.1 EL2 111.3 ALF 32.91

LAUNCH DATE JAN 2 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 352.150

RL 147.09 LAL -.00 LOL 101.43 VL 27.502 GAL 1.80 AZL 89.85 HCA 153.73 SMA 126.62 ECC .16466 INC .1645 V1 30.288
RP 108.62 LAP .07 LOP 255.16 VP 37.357 GAP -4.82 AZP 90.15 TAL 170.80 TAP 324.53 RCA 105.77 APO 147.47 V2 34.889
RC 65.076 GL 1.56 GP 27.56 ZAL 72.69 ZAP 42.94 ETS 328.95 ZAE 144.68 ETE 42.12 ZAC 119.89 ETC 144.76 CLP -34.34

PLANETOCENTRIC CONIC

C3 8.608 VHL 2.934 DLA 12.48 RAL 26.14 RAD 6567.3 VEL 11.402 PTH 1.97 VHP 4.554 DPA 38.59 RAP 26.96 ECC 1.1417
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 43 6 2431.05 -24.16 55.68 238.26 105.23 5 23 37 1831.0 -21.84 47.78
90.00 19 34 41 4278.70 2.96 178.37 235.19 61.79 21 5 59 3678.7 -1.21 169.74
100.00 6 10 52 2148.02 -25.07 34.57 237.97 106.83 6 46 40 1548.0 -22.53 26.70
100.00 21 9 36 4036.95 3.40 158.14 234.75 60.28 22 16 53 3437.0 -.58 151.61
110.00 7 33 34 1889.21 -27.46 14.00 237.05 111.20 8 5 4 1289.2 -24.33 6.23
110.00 22 3 23 3868.53 5.55 144.05 233.40 56.22 23 7 51 3268.5 1.08 137.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3174 TRA -.7695 TC3 1.4799 BAU .2592 SGT 1872.8 SGR 1375.2 SG3 622.5 ST 773.3 SR 539.4 SS 864.2
RDE -.2581 RRA -.4015 RC3 1.6977 FAU .08979 RRT .9371 RRF -.9903 RTF -.9411 CRT .9810 CRS .9734 CST .9986
FDE .8747 FRA 2.2863 FC3-9.0308 BSP 7601 SGB 2323.5 R23 -.1928 R13 -.9721 LSA 1282.7 MSA 109.6 SSA 21.8
BDE .4090 BRA .8680 BC3 2.2522 FSP -1910 SGI 2290.0 S62 392.7 THA 35.74 EL1 950.3 EL2 88.3 ALF 35.72

LAUNCH DATE JAN 2 1969 FLIGHT TIME 134.00 ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC DISTANCE 358.658
RL 147.09 LAL -.00 LOL 101.43 VL 27.543 GAL 1.71 AZL 90.29 HCA 156.90 SMA 126.89 ECC .16190 INC .2918 V1 30.288
RP 108.65 LAP -.11 LOP 258.33 VP 37.377 GAP -4.32 AZP 89.73 TAL 171.08 TAP 327.98 RCA 106.35 APO 147.44 V2 34.878
RC 67.198 GL -2.79 GP 32.11 ZAL 73.25 ZAP 47.90 ETS 328.64 ZAE 142.09 ETE 48.59 ZAC 116.91 ETC 143.10 CLP -37.67
PLANETOCENTRIC CONIC
C3 8.314 VHL 2.883 DLA 8.23 RAL 27.20 RAD 6567.3 VEL 11.389 PTH 1.97 VHP 4.478 DPA 42.58 RAP 24.07 ECC 1.1368
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 22 1 2284.20 -21.20 45.94 237.66 109.23 6 0 5 1604.2 -18.38 38.40
90.00 19 24 13 4412.46 6.84 183.89 235.63 62.46 20 37 45 3812.5 3.10 177.21
100.00 8 47 20 2009.02 -22.02 25.38 237.34 110.74 7 20 49 1409.0 -19.00 17.88
100.00 20 41 35 4162.88 7.61 165.12 235.21 61.01 21 50 57 3562.9 3.69 158.53
110.00 8 4 39 1767.04 -24.20 6.01 236.34 114.91 8 34 6 1167.0 -20.64 358.67
110.00 21 40 45 3977.62 9.64 149.83 233.98 57.05 22 47 2 3377.6 5.24 145.51
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2805 TRA -.7400 TC3 1.4471 BAU .2864 SGT 1781.0 SGR 1655.8 SG3 644.7 ST 683.6 SR 543.0 SS 752.4
RDE -.2855 RRA -.5054 RC3 2.1316 FAU .09204 RRT .9378 RRF -.9944 RTF -.9388 CRT .9930 CRS .9684 CST .9894
FDE .6444 FRA 2.4142 FC3-9.5840 BSP 7935 SGB 2431.8 R23 -.1708 R13 -.9798 LSA 1146.6 MSA 114.7 SSA 21.0
BDE .3448 BRA .8962 BC3 2.5764 FSP -1995 SGI 2393.9 SGI 427.7 THA 42.77 EL1 871.6 EL2 50.2 ALF 38.42

LAUNCH DATE JAN 2 1969 FLIGHT TIME 136.00 ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC DISTANCE 365.142
RL 147.09 LAL -.00 LOL 101.43 VL 27.579 GAL 1.64 AZL 90.89 HCA 160.07 SMA 127.14 ECC .15948 INC .8872 V1 30.288
RP 108.68 LAP -.30 LOP 261.50 VP 37.394 GAP -3.83 AZP 89.17 TAL 171.33 TAP 331.40 RCA 106.86 APO 147.41 V2 34.867
RC 69.360 GL -8.56 GP 37.61 ZAL 73.90 ZAP 53.39 ETS 328.45 ZAE 138.43 ETE 55.26 ZAC 113.11 ETC 141.81 CLP -41.16
PLANETOCENTRIC CONIC
C3 8.231 VHL 2.869 DLA 2.66 RAL 28.79 RAD 6567.3 VEL 11.385 PTH 1.97 VHP 4.493 DPA 47.26 RAP 19.94 ECC 1.1355
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 10 42 2106.98 -16.82 34.78 237.97 113.12 6 45 49 1507.0 -13.55 27.63
90.00 18 48 14 4585.91 12.16 193.86 237.31 64.23 20 4 40 3985.9 8.59 186.99
100.00 7 33 17 1840.61 -17.59 14.84 237.62 114.57 8 3 58 1240.6 -14.13 7.76
100.00 20 8 20 4327.51 12.91 174.48 236.92 62.80 21 20 28 3727.5 9.16 167.69
110.00 8 44 23 1818.10 -19.63 356.87 236.54 118.57 9 11 21 1018.1 -15.66 349.99
110.00 21 13 44 4122.79 14.90 157.79 233.78 58.87 22 22 27 3522.8 10.66 151.25
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.2029 TRA -.7108 TC3 1.3238 BAU .3202 SGT 1661.5 SGR 1996.0 SG3 642.8 ST 588.7 SR 507.4 SS 639.9
RDE -.1625 RRA -.6461 RC3 2.5911 FAU .09032 RRT .9336 RRF -.9969 RTF -.9329 CRT .9968 CRS .9602 CST .9388
FDE .3298 FRA 2.5048 FC3-9.5211 BSP 8400 SGB 2597.0 R23 -.1414 R13 -.9868 LSA 993.7 MSA 160.3 SSA 15.3
BDE .2600 BRA .9605 BC3 2.9097 FSP -2000 SGI 2555.1 SGI 464.9 THA 50.59 EL1 776.5 EL2 30.7 ALF 40.74

LAUNCH DATE JAN 2 1969 FLIGHT TIME 138.00 ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC DISTANCE 371.600
RL 147.09 LAL -.00 LOL 101.43 VL 27.611 GAL 1.57 AZL 91.70 HCA 163.24 SMA 127.35 ECC .15740 INC 1.6958 V1 30.288
RP 108.72 LAP -.49 LOP 264.67 VP 37.408 GAP -3.36 AZP 88.38 TAL 171.53 TAP 334.78 RCA 107.30 APO 147.39 V2 34.858
RC 71.560 GL -16.23 GP 44.24 ZAL 74.80 ZAP 59.42 ETS 328.55 ZAE 133.42 ETE 61.73 ZAC 108.40 ETC 140.42 CLP -44.75
PLANETOCENTRIC CONIC
C3 8.543 VHL 2.923 DLA -4.67 RAL 31.11 RAD 6567.3 VEL 11.399 PTH 1.97 VHP 4.650 DPA 52.65 RAP 13.94 ECC 1.1406
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 14 26 1886.37 -10.49 21.68 239.92 116.45 7 45 53 1286.4 -6.85 14.88
90.00 18 2 58 4820.49 18.63 208.04 241.11 68.28 19 23 18 4220.5 15.51 200.74
100.00 8 33 35 1631.04 -11.25 2.50 239.52 117.88 9 0 46 1031.0 -7.44 355.79
100.00 19 26 30 4551.05 19.42 187.87 240.77 68.82 20 42 21 3951.1 16.11 180.64
110.00 9 36 48 1433.13 -13.27 346.30 238.34 121.79 10 0 41 833.1 -8.98 339.84
110.00 20 39 46 4321.73 21.53 169.41 239.71 62.78 21 51 48 3721.7 17.71 162.36
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.1476 TRA -.6762 TC3 1.1129 BAU .3635 SGT 1508.6 SGR 2398.7 SG3 605.9 ST 493.3 SR 504.4 SS 599.6
RDE -.0454 RRA -.8367 RC3 2.9816 FAU .08410 RRT .9253 RRF -.9983 RTF -.9235 CRT .9994 CRS .9677 CST .7610
FDE -.0589 FRA 2.5090 FC3-8.5226 BSP 9127 SGB 2833.7 R23 -.1067 R13 -.9926 LSA 887.8 MSA 262.7 SSA 8.8
BDE .1544 BRA 1.0758 BC3 3.1825 FSP -1901 SGI 2790.7 SGI 491.8 THA 58.72 EL1 687.5 EL2 158.2 ALF 45.71

LAUNCH DATE JAN 2 1969 FLIGHT TIME 140.00 ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC DISTANCE 378.033
RL 147.09 LAL -.00 LOL 101.43 VL 27.638 GAL 1.52 AZL 92.87 HCA 166.40 SMA 127.53 ECC .15562 INC 2.8672 V1 30.288
RP 108.74 LAP -.67 LOP 267.84 VP 37.420 GAP -2.91 AZP 87.21 TAL 171.68 TAP 338.07 RCA 107.69 APO 147.38 V2 34.848
RC 73.792 GL -26.31 GP 52.12 ZAL 76.20 ZAP 65.88 ETS 329.09 ZAE 126.77 ETE 67.63 ZAC 102.76 ETC 139.69 CLP -48.28
PLANETOCENTRIC CONIC
C3 9.723 VHL 3.118 DLA -14.21 RAL 34.42 RAD 6567.4 VEL 11.450 PTH 1.99 VHP 5.043 DPA 58.68 RAP 4.87 ECC 1.1600
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 44 44 1598.59 -1.41 5.40 245.08 118.28 9 11 23 998.6 2.38 358.78
90.00 16 59 6 5158.31 25.53 230.34 248.82 77.32 18 25 4 4558.3 25.53 222.24
100.00 9 58 31 1360.54 -2.31 347.40 244.58 119.81 10 21 11 760.5 1.67 340.88
100.00 18 28 0 4871.80 26.53 208.99 248.56 75.69 19 49 11 4271.6 24.30 200.90
110.00 10 49 49 1199.83 -4.82 533.78 243.15 123.91 11 9 49 599.8 -.14 327.56
110.00 19 53 11 4605.07 29.14 187.87 247.68 71.28 21 9 56 4005.1 26.50 179.84
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE -.1082 TRA -.6394 TC3 .7905 BAU .4110 SGT 1323.4 SGR 2850.8 SG3 524.5 ST 414.6 SR 695.4 SS 699.0
RDE .1582 RRA -1.1065 RC3 3.0810 FAU .07107 RRT .9079 RRF -.9991 RTF -.9056 CRT .5959 CRS .9927 CST .4949
FDE -.4580 FRA 2.3930 FC3-6.3282 BSP 10054 SGB 3143.0 R23 -.0748 R13 -.9963 LSA 1013.3 MSA 342.5 SSA 4.7
BDE .1918 BRA 1.2779 BC3 3.1614 FSP -1657 SGI 3101.4 SGI 510.0 THA 66.47 EL1 748.2 EL2 309.5 ALF 66.10



LAUNCH DATE JAN 2 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.717 GAL 1.35 AZL 55.14 HCA 102.72 SMA 128.07 ECC .15030 INC34.8573 V1 30.288
RP 108.86 LAP -1.56 LOP 283.66 VP 37.442 GAP -.65 AZP 124.83 TAL 172.32 TAP 355.04 RCA 108.81 APO 147.33 V2 34.810
RC 85.328 GL 64.42 GP -81.24 ZAL 87.84 ZAP 88.47 ETS 165.21 ZAE 81.26 ETE 62.76 ZAC 102.81 ETC 5.49 CLP 79.91

DISTANCE 410.496

PLANETOCENTRIC CONIC

C3 308.257 VHL 17.557 DLA 61.18 RAL 329.21 RAD 6571.8 VEL 20.726 PTH 3.18 VHP 19.968 DPA -63.59 RAP 117.97 ECC 6.0731
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.20 15 39 38 4954.37 -5.07 238.72 236.43 28.94 17 2 13 4354.4 -12.05 235.19
146.80 1 23 56 3273.51 -5.05 100.23 236.41 28.94 2 18 29 2673.5 -12.04 96.70
33.20 15 39 38 4954.37 -5.07 238.72 236.43 28.94 17 2 13 4354.4 -12.05 235.19
146.80 1 23 56 3273.51 -5.05 100.23 236.41 28.94 2 18 29 2673.5 -12.04 96.70
33.20 15 39 38 4954.37 -5.07 238.72 236.43 28.94 17 2 13 4354.4 -12.05 235.19
146.80 1 23 56 3273.51 -5.05 100.23 236.41 28.94 2 18 29 2673.5 -12.04 96.70

DIFFERENTIAL CORRECTIONS

TDE -3.0623 TRA 2.0647 TC3 -.1083 BAU .8492
RD-11.2078 RRA 1.8549 RC3 -.1753 FAU-.01634
FDE 2.8089 FRA -.5793 FC3 .0459 BSP 13098
BDE11.8546 BRA 2.6461 BC3 .2061 FSP -277

MID-COURSE EXECUTION ACCURACY

SGT 1920.3 SGR 3874.5 SG3 87.3
RRT .8616 RRF -.9944 RTF -.9100
SG8 4324.3 R23 .0102 R13 -.9999
SG1 4231.1 SG2 892.6 THA 65.73

ORBIT DETERMINATION ACCURACY

ST 1328.4 SR 3673.0 SS 1594.4
CRT .9738 CRS .9994 CST .9813
LSA 4209.0 MSA 285.4 SSA .7
EL1 3895.4 EL2 285.0 ALF 70.49

LAUNCH DATE JAN 2 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.723 GAL 1.42 AZL 72.29 HCA 105.67 SMA 128.11 ECC .15020 INC17.7091 V1 30.288
RP 108.88 LAP -1.72 LOP 286.83 VP 37.441 GAP -.32 AZP 107.63 TAL 171.90 TAP 357.57 RCA 108.87 APO 147.35 V2 34.804
RC 87.691 GL 64.90 GP -81.36 ZAL 85.71 ZAP 88.18 ETS 32.64 ZAE 98.21 ETE 292.28 ZAC 108.88 ETC 232.08 CLP -77.80

DISTANCE 416.565

PLANETOCENTRIC CONIC

C3 86.664 VHL 9.309 DLA 63.24 RAL 331.18 RAD 6569.7 VEL 14.423 PTH 2.62 VHP 9.611 DPA -61.27 RAP 81.12 ECC 2.4263
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.76 15 41 34 4746.21 -18.35 234.24 231.56 28.31 17 0 41 4146.2 -25.34 230.47
149.24 1 37 42 3045.03 -18.34 92.88 231.54 28.31 2 28 27 2445.0 -25.34 89.11
30.76 15 41 34 4746.21 -18.35 234.24 231.56 28.31 17 0 41 4146.2 -25.34 230.47
149.24 1 37 42 3045.03 -18.34 92.88 231.54 28.31 2 28 27 2445.0 -25.34 89.11
30.76 15 41 34 4746.21 -18.35 234.24 231.56 28.31 17 0 41 4146.2 -25.34 230.47
149.24 1 37 42 3045.03 -18.34 92.88 231.54 28.31 2 28 27 2445.0 -25.34 89.11

DIFFERENTIAL CORRECTIONS

TDE -.0217 TRA .0187 TC3 .0183 BAU .2167
RDE 6.5853 RRA -1.2679 RC3 -.1061 FAU .01154
FDE 3.2234 FRA -.5748 FC3 -.1153 BSP 13918
BDE 6.5853 BRA 1.2681 BC3 .1870 FSP -615

MID-COURSE EXECUTION ACCURACY

SGT 44.6 SGR 4421.7 SG3 185.3
RRT -.5588 RRF .9994 RTF -.5632
SG8 4421.9 R23 .0057 R13 .9994
SG1 4421.8 SG2 37.0 THA 90.32

ORBIT DETERMINATION ACCURACY

ST 15.4 SR 4086.2 SS 1658.9
CRT -.9220 CRS -1.0000 CST .9184
LSA 4410.1 MSA 15.6 SSA 1.3
EL1 4086.3 EL2 6.0 ALF 90.20

LAUNCH DATE JAN 2 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.726 GAL 1.47 AZL 77.57 HCA 108.76 SMA 128.13 ECC .15013 INC12.4327 V1 30.288
RP 108.90 LAP -1.88 LOP 289.99 VP 37.439 GAP .05 AZP 102.29 TAL 171.62 TAP .38 RCA 108.90 APO 147.37 V2 34.799
RC 90.065 GL 61.05 GP -70.91 ZAL 83.93 ZAP 89.53 ETS 8.26 ZAE 108.70 ETE 268.91 ZAC 111.81 ETC 207.21 CLP -88.57

DISTANCE 422.789

PLANETOCENTRIC CONIC

C3 46.503 VHL 6.819 DLA 61.80 RAL 339.28 RAD 6568.7 VEL 12.956 PTH 2.36 VHP 6.515 DPA -55.80 RAP 63.64 ECC 1.7653
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.47 16 18 1 4589.91 -26.83 227.75 233.55 31.98 17 34 31 3989.9 -33.53 223.09
147.53 2 5 53 2902.74 -26.82 88.39 233.53 31.97 2 54 16 2302.7 -33.52 83.74
32.47 16 18 1 4589.91 -26.83 227.75 233.55 31.98 17 34 31 3989.9 -33.53 223.09
147.53 2 5 53 2902.74 -26.82 88.39 233.53 31.97 2 54 16 2302.7 -33.52 83.74
32.47 16 18 1 4589.91 -26.83 227.75 233.55 31.98 17 34 31 3989.9 -33.53 223.09
147.53 2 5 53 2902.74 -26.82 88.39 233.53 31.97 2 54 16 2302.7 -33.52 83.74

DIFFERENTIAL CORRECTIONS

TDE 1.3329 TRA -.3771 TC3 -.1661 BAU .4012
RDE 4.6976 RRA -.5521 RC3 -.6236 FAU .03537
FDE 4.3772 FRA -.4654 FC3 -.6585 BSP 13610
BDE 4.6830 BRA .6686 BC3 .6453 FSP -1113

MID-COURSE EXECUTION ACCURACY

SGT 1324.8 SGR 4155.1 SG3 334.8
RRT .9576 RRF .9994 RTF .9500
SG8 4361.2 R23 .0500 R13 .9984
SG1 4345.9 SG2 365.1 THA 72.90

ORBIT DETERMINATION ACCURACY

ST 1137.9 SR 3957.9 SS 2074.9
CRT .9947 CRS -1.0000 CST -.9939
LSA 4610.0 MSA 116.1 SSA 1.6
EL1 4116.7 EL2 112.7 ALF 74.03

LAUNCH DATE JAN 2 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.727 GAL 1.53 AZL 80.09 HCA 191.89 SMA 128.14 ECC .15024 INC 9.9092 V1 30.288
RP 108.91 LAP -2.03 LOP 293.15 VP 37.436 GAP .42 AZP 99.70 TAL 171.31 TAP 3.21 RCA 108.89 APO 147.39 V2 34.795
RC 92.449 GL 57.18 GP -82.47 ZAL 82.44 ZAP 92.24 ETS 360.00 ZAE 116.80 ETE 260.38 ZAC 113.12 ETC 198.24 CLP -94.85

DISTANCE 429.034

PLANETOCENTRIC CONIC

C3 32.215 VHL 5.876 DLA 59.74 RAL 348.18 RAD 6568.3 VEL 12.393 PTH 2.24 VHP 5.130 DPA -50.41 RAP 52.61 ECC 1.5302
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.91 16 51 37 4486.37 -31.41 221.52 235.32 36.18 18 6 23 3886.4 -37.74 215.98
145.09 2 27 19 2821.09 -31.40 85.13 235.30 36.18 3 14 20 2221.1 -37.72 79.58
34.91 16 51 37 4486.37 -31.41 221.52 235.32 36.18 18 6 23 3886.4 -37.74 215.98
145.09 2 27 19 2821.09 -31.40 85.13 235.30 36.18 3 14 20 2221.1 -37.72 79.58
34.91 16 51 37 4486.37 -31.41 221.52 235.32 36.18 18 6 23 3886.4 -37.74 215.98
145.09 2 27 19 2821.09 -31.40 85.13 235.30 36.18 3 14 20 2221.1 -37.72 79.58

DIFFERENTIAL CORRECTIONS

TDE 1.6202 TRA -.3434 TC3 -.4401 BAU .4583
RDE 3.6226 RRA -.1930 RC3 -.9690 FAU .06062
FDE 5.4656 FRA -.2341 FC3 -1.6291 BSP 13247
BDE 3.9684 BRA .3939 BC3 1.0642 FSP -1688

MID-COURSE EXECUTION ACCURACY

SGT 1843.4 SGR 3838.3 SG3 504.4
RRT .9608 RRF .9993 RTF .9544
SG8 4258.0 R23 .0713 R13 .9970
SG1 4232.6 SG2 464.5 THA 64.91

ORBIT DETERMINATION ACCURACY

ST 1648.6 SR 3658.9 SS 2446.7
CRT .9956 CRS -1.0000 CST -.9950
LSA 4697.9 MSA 148.2 SSA 2.2
EL1 4010.7 EL2 140.9 ALF 65.81

LAUNCH DATE JAN 2 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 435.273

RL 147.09 LAL -.00 LOL 101.43 VL 27.726 GAL 1.59 AZL 81.57 HCA 195.04 SMA 128.13 ECC .15052 INC 8.4282 V1 30.288  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.431 GAP .78 AZP 98.14 TAL 170.97 TAP 6.01 RCA 108.84 APO 147.42 V2 34.791  
 RC 94.840 GL 53.78 GP -55.29 ZAL 81.12 ZAP 95.91 ETS 354.59 ZAE 123.23 ETE 253.28 ZAC 113.32 ETC 191.93 CLP-100.41

PLANETOCENTRIC CONIC

C3 25.356 VHL 5.035 DLA 57.71 RAL 351.56 RAD 6568.0 VEL 12.113 PTH 2.17 VHP 4.396 DPA -45.47 RAP 44.60 ECC 1.4173  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.37 17 19 28 4414.45 -33.82 216.05 236.53 40.02 18 33 2 3814.4 -39.77 209.78  
 142.63 2 42 27 2773.50 -33.81 82.74 236.51 40.02 3 28 41 2173.5 -39.76 76.47  
 37.37 17 19 28 4414.45 -33.82 216.05 236.53 40.02 18 33 2 3814.4 -39.77 209.78  
 142.63 2 42 27 2773.50 -33.81 82.74 236.51 40.02 3 28 41 2173.5 -39.76 76.47  
 37.37 17 19 28 4414.45 -33.82 216.05 236.53 40.02 18 33 2 3814.4 -39.77 209.78  
 142.63 2 42 27 2773.50 -33.81 82.74 236.51 40.02 3 28 41 2173.5 -39.76 76.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7902 TRA -.2677 TC3 -.7707 BAU .4805 SGT 2253.1 SCR 3495.4 SC3 685.8 ST 2044.2 SR 3283.9 SS 2710.8  
 RDE 2.8859 RRA .0052 RC3 -1.1895 FAU .08431 RRT .9865 RRF .9991 RTF .9610 CRT .9964 CRS -1.0000 CST -.9958  
 FDE 6.2724 FRA .0855 FC3 -2.8788 BSP 12874 SGB 4156.6 R23 .0834 R13 .9949 LSA 4720.7 MSA 161.7 SSA 2.7  
 BDE 3.3980 BRA .2678 BC3 1.4173 FSP -2242 SGI 4129.8 SG2 489.2 THA 57.56 EL1 3865.4 EL2 147.1 ALF 58.14

LAUNCH DATE JAN 2 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 441.499

RL 147.09 LAL -.00 LOL 101.43 VL 27.722 GAL 1.66 AZL 82.55 HCA 198.19 SMA 128.11 ECC .15098 INC 7.4505 V1 30.288  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.428 GAP 1.15 AZP 97.08 TAL 170.58 TAP 8.76 RCA 108.76 APO 147.45 V2 34.788  
 RC 97.258 GL 50.84 GP -49.05 ZAL 79.89 ZAP 100.16 ETS 350.63 ZAE 128.22 ETE 246.26 ZAC 112.79 ETC -186.99 CLP-105.61

PLANETOCENTRIC CONIC

C3 21.477 VHL 4.634 DLA 55.85 RAL 355.88 RAD 6567.6 VEL 11.952 PTH 2.13 VHP 3.976 DPA -41.02 RAP 38.34 ECC 1.3535  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.61 17 42 45 4361.67 -35.05 211.39 237.48 43.28 18 55 26 3761.7 -40.67 204.58  
 140.39 2 53 34 2745.27 -35.04 81.03 237.46 43.28 3 39 20 2145.3 -40.65 74.22  
 39.61 17 42 45 4361.67 -35.05 211.39 237.48 43.28 18 55 26 3761.7 -40.67 204.58  
 140.39 2 53 34 2745.27 -35.04 81.03 237.46 43.28 3 39 20 2145.3 -40.65 74.22  
 39.61 17 42 45 4361.67 -35.05 211.39 237.48 43.28 18 55 26 3761.7 -40.67 204.58  
 140.39 2 53 34 2745.27 -35.04 81.03 237.46 43.28 3 39 20 2145.3 -40.65 74.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9177 TRA -.1808 TC3 -1.1338 BAU .4940 SGT 2623.7 SCR 3141.2 SC3 799.9 ST 2374.2 SR 2892.2 SS 2867.7  
 RDE 2.3582 RRA .1213 RC3 -1.2942 FAU .10414 RRT .9717 RRF .9988 RTF .9663 CRT .9970 CRS -1.0000 CST -.9963  
 FDE 6.7477 FRA .4505 FC3 -4.1977 BSP 12598 SGB 4092.8 R23 .1152 R13 .9923 LSA 4711.3 MSA 168.7 SSA 3.2  
 BDE 3.0241 BRA .2175 BC3 1.7206 FSP -2712 SGI 4064.7 SG2 479.0 THA 50.28 EL1 3739.1 EL2 143.1 ALF 50.63

LAUNCH DATE JAN 2 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 447.710

RL 147.09 LAL -.00 LOL 101.43 VL 27.717 GAL 1.75 AZL 83.25 HCA 201.34 SMA 128.07 ECC .15160 INC 6.7536 V1 30.288  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.419 GAP 1.50 AZP 96.29 TAL 170.13 TAP 11.48 RCA 108.65 APO 147.48 V2 34.786  
 RC 99.636 GL 48.28 GP -43.60 ZAL 78.71 ZAP 104.70 ETS 347.68 ZAE 131.90 ETE 239.14 ZAC 111.84 ETC 183.07 CLP-110.51

PLANETOCENTRIC CONIC

C3 19.054 VHL 4.365 DLA 54.22 RAL 359.48 RAD 6567.8 VEL 11.851 PTH 2.10 VHP 3.733 DPA -37.04 RAP 33.31 ECC 1.3136  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.62 18 2 48 4321.16 -35.62 207.45 238.40 46.00 19 14 49 3721.2 -40.95 200.26  
 138.38 3 2 18 2728.67 -35.61 79.83 238.39 45.99 3 47 47 2128.7 -40.93 72.64  
 41.62 18 2 48 4321.16 -35.62 207.45 238.40 46.00 19 14 49 3721.2 -40.95 200.26  
 138.38 3 2 18 2728.67 -35.61 79.83 238.39 45.99 3 47 47 2128.7 -40.93 72.64  
 41.62 18 2 48 4321.16 -35.62 207.45 238.40 46.00 19 14 49 3721.2 -40.95 200.26  
 138.38 3 2 18 2728.67 -35.61 79.83 238.39 45.99 3 47 47 2128.7 -40.93 72.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0222 TRA -.0873 TC3 -1.5091 BAU .5080 SGT 2969.8 SCR 2795.1 SC3 898.8 ST 2655.3 SR 2521.0 SS 2938.7  
 RDE 1.9180 RRA .1887 RC3 -1.3037 FAU .11863 RRT .9757 RRF .9983 RTF .9703 CRT .9974 CRS -.9999 CST -.9966  
 FDE 6.9272 FRA .8193 FC3 -5.3903 BSP 12453 SGB 4078.3 R23 .1337 R13 .9895 LSA 4691.7 MSA 172.8 SSA 3.8  
 BDE 2.7871 BRA .2079 BC3 1.9942 FSP -3052 SGI 4053.5 SG2 449.0 THA 43.22 EL1 3659.0 EL2 132.6 ALF 43.51

LAUNCH DATE JAN 2 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 453.904

RL 147.09 LAL -.00 LOL 101.43 VL 27.709 GAL 1.85 AZL 83.77 HCA 204.50 SMA 128.02 ECC .15239 INC 6.2290 V1 30.288  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.413 GAP 1.86 AZP 95.67 TAL 169.64 TAP 14.14 RCA 108.51 APO 147.52 V2 34.784  
 RC 102.038 GL 46.01 GP -38.84 ZAL 77.54 ZAP 109.30 ETS 345.50 ZAE 134.40 ETE 232.08 ZAC 110.72 ETC 180.00 CLP-115.11

PLANETOCENTRIC CONIC

C3 17.442 VHL 4.176 DLA 52.78 RAL 2.63 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 3.602 DPA -33.48 RAP 29.21 ECC 1.2870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.40 18 20 34 4289.05 -35.81 204.13 239.41 48.24 19 32 3 3689.1 -40.89 196.66  
 136.60 3 9 39 2719.44 -35.80 79.03 239.39 48.23 3 54 58 2119.4 -40.88 71.56  
 43.40 18 20 34 4289.05 -35.81 204.13 239.41 48.24 19 32 3 3689.1 -40.89 196.66  
 136.60 3 9 39 2719.44 -35.80 79.03 239.39 48.23 3 54 58 2119.4 -40.88 71.56  
 43.40 18 20 34 4289.05 -35.81 204.13 239.41 48.24 19 32 3 3689.1 -40.89 196.66  
 136.60 3 9 39 2719.44 -35.80 79.03 239.39 48.23 3 54 58 2119.4 -40.88 71.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1087 TRA .0098 TC3 -1.8819 BAU .5269 SGT 3292.6 SCR 2467.3 SC3 960.6 ST 2893.4 SR 2182.8 SS 2939.5  
 RDE 1.5870 RRA .2233 RC3 -1.2505 FAU .12807 RRT .9788 RRF .9974 RTF .9733 CRT .9977 CRS -.9999 CST -.9967  
 FDE 6.8601 FRA 1.1539 FC3 -6.3567 BSP 12551 SGB 4114.5 R23 .1460 R13 .9868 LSA 4663.3 MSA 174.3 SSA 4.5  
 BDE 2.6392 BRA .2235 BC3 2.2595 FSP -3286 SGI 4094.4 SG2 406.1 THA 36.68 EL1 3622.5 EL2 117.4 ALF 37.01

LAUNCH DATE JAN 2 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.700 GAL 1.96 AZL 84.18 HCA 207.65 SMA 127.95 ECC .15335 INC 5.8177 V1 30.288
RP 108.95 LAP -2.70 LOP 308.96 VP 37.405 GAP 2.21 AZP 95.16 TAL 169.10 TAP 16.75 RCA 108.33 APO 147.57 V2 34.783
RC 104.441 GL 43.98 GP -34.68 ZAL 76.35 ZAP 113.82 ETS 343.90 ZAE 135.91 ETE 225.33 ZAC 109.59 ETC 177.62 CLP-119.41

DISTANCE 460.081

PLANETOCENTRIC CONIC

C3 16.329 VHL 4.041 DLA 51.51 RAL 5.49 RAD 6567.7 VEL 11.735 PTH 2.07 VHP 3.545 DPA -30.29 RAP 25.89 ECC 1.2687
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.99 18 36 46 4263.03 -35.78 201.32 240.54 50.10 19 47 49 3663.0 -40.64 193.65
135.01 3 16 13 2715.13 -35.77 78.54 240.53 50.09 4 1 29 2115.1 -40.64 70.87
44.99 18 36 46 4263.03 -35.78 201.32 240.54 50.10 19 47 49 3663.0 -40.64 193.65
135.01 3 16 13 2715.13 -35.77 78.54 240.53 50.09 4 1 29 2115.1 -40.64 70.87
44.99 18 36 46 4263.03 -35.78 201.32 240.54 50.10 19 47 49 3663.0 -40.64 193.65
135.01 3 16 13 2715.13 -35.77 78.54 240.53 50.09 4 1 29 2115.1 -40.64 70.87

DIFFERENTIAL CORRECTIONS

TDE 2.1809 TRA .1102 TC3-2.2414 BAU .5505
RDE 1.3253 RRA .2384 RC3-1.1561 FAU .13279
FDE 6.6195 FRA 1.4444 FC3-7.0403 BSP 12822
BDE 2.5520 BRA .2627 BC3 2.5220 FSP -3408

MID-COURSE EXECUTION ACCURACY

SGT 3592.6 SGR 2167.8 SCS 990.0
RRR .9810 RRF .9960 RTF .9755
SGB 4196.0 R23 .1508 R13 .9846
SG1 4180.4 SG2 361.6 THA 30.88

ORBIT DETERMINATION ACCURACY

ST 3093.7 SR 1886.5 SS 2891.0
CRT .9981 CRS -.9998 CST -.9968
LSA 4632.2 MSA 175.1 SSA 5.2
EL1 3622.1 EL2 100.1 ALF 31.35

LAUNCH DATE JAN 2 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.689 GAL 2.08 AZL 84.52 HCA 210.81 SMA 127.88 ECC .15447 INC 5.4847 V1 30.288
RP 108.95 LAP -2.81 LOP 312.12 VP 37.397 GAP 2.55 AZP 94.71 TAL 168.51 TAP 19.32 RCA 108.13 APO 147.63 V2 34.783
RC 106.844 GL 42.13 GP -31.06 ZAL 75.13 ZAP 118.15 ETS 342.76 ZAE 136.62 ETE 219.13 ZAC 108.57 ETC 175.81 CLP-123.42

DISTANCE 466.240

PLANETOCENTRIC CONIC

C3 15.547 VHL 3.943 DLA 50.38 RAL 8.15 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 3.541 DPA -27.43 RAP 23.22 ECC 1.2559
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.42 18 51 52 4241.50 -35.60 198.90 241.82 51.65 20 2 34 3641.5 -40.29 191.09
133.58 3 22 22 2714.40 -35.59 78.28 241.81 51.64 4 7 37 2114.4 -40.28 70.48
46.42 18 51 52 4241.50 -35.60 198.90 241.82 51.65 20 2 34 3641.5 -40.29 191.09
133.58 3 22 22 2714.40 -35.59 78.28 241.81 51.64 4 7 37 2114.4 -40.28 70.48
46.42 18 51 52 4241.50 -35.60 198.90 241.82 51.65 20 2 34 3641.5 -40.29 191.09
133.58 3 22 22 2714.40 -35.59 78.28 241.81 51.64 4 7 37 2114.4 -40.28 70.48

DIFFERENTIAL CORRECTIONS

TDE 2.2421 TRA .2145 TC3-2.5773 BAU .3775
RDE 1.1188 RRA .2413 RC3-1.0377 FAU .13345
FDE 6.2726 FRA 1.6862 FC3-7.4311 BSP 13216
BDE 2.3057 BRA .3229 BC3 2.7784 FSP -3432

MID-COURSE EXECUTION ACCURACY

SGT 3871.0 SGR 1901.1 SCS 993.4
RRR .9822 RRF .9939 RTF .9771
SGB 4312.6 R23 .1466 R13 .9830
SG1 4300.6 SG2 321.9 THA 25.91

ORBIT DETERMINATION ACCURACY

ST 3261.9 SR 1634.0 SS 2811.2
CRT .9984 CRS -.9997 CST -.9967
LSA 4602.4 MSA 175.2 SSA 6.0
EL1 3647.3 EL2 82.2 ALF 26.59

LAUNCH DATE JAN 2 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.677 GAL 2.21 AZL 84.79 HCA 213.97 SMA 127.79 ECC .15575 INC 5.2081 V1 30.288
RP 108.94 LAP -2.91 LOP 315.28 VP 37.388 GAP 2.90 AZP 94.32 TAL 167.87 TAP 21.84 RCA 107.89 APO 147.70 V2 34.784
RC 109.246 GL 40.40 GP -27.91 ZAL 73.87 ZAP 122.24 ETS 341.95 ZAE 136.74 ETE 213.62 ZAC 107.74 ETC 174.44 CLP-127.14

DISTANCE 472.380

PLANETOCENTRIC CONIC

C3 15.001 VHL 3.873 DLA 49.37 RAL 10.69 RAD 6567.6 VEL 11.678 PTH 2.05 VHP 3.576 DPA -24.86 RAP 21.13 ECC 1.2469
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.71 19 6 11 4223.53 -35.32 196.82 243.25 52.95 20 16 35 3623.5 -39.86 188.91
132.29 3 28 20 2716.28 -35.31 78.21 243.24 52.95 4 13 36 2116.3 -39.86 70.31
47.71 19 6 11 4223.53 -35.32 196.82 243.25 52.95 20 16 35 3623.5 -39.86 188.91
132.29 3 28 20 2716.28 -35.31 78.21 243.24 52.95 4 13 36 2116.3 -39.86 70.31
47.71 19 6 11 4223.53 -35.32 196.82 243.25 52.95 20 16 35 3623.5 -39.86 188.91
132.29 3 28 20 2716.28 -35.31 78.21 243.24 52.95 4 13 36 2116.3 -39.86 70.31

DIFFERENTIAL CORRECTIONS

TDE 2.2929 TRA .3228 TC3-2.8840 BAU .6085
RDE .9544 RRA .2366 RC3 -.9100 FAU .13108
FDE 5.8625 FRA 1.8791 FC3-7.5639 BSP 13704
BDE 2.4836 BRA .4002 BC3 3.0242 FSP -3386

MID-COURSE EXECUTION ACCURACY

SGT 4127.2 SGR 1667.1 SCS 976.6
RRR .9822 RRF .9907 RTF .9783
SGB 4451.2 R23 .1336 R13 .9821
SG1 4441.7 SG2 290.9 THA 21.74

ORBIT DETERMINATION ACCURACY

ST 3399.8 SR 1421.2 SS 2709.0
CRT .9988 CRS -.9994 CST -.9967
LSA 4570.1 MSA 174.8 SSA 6.8
EL1 3684.3 EL2 64.4 ALF 22.67

LAUNCH DATE JAN 2 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.663 GAL 2.36 AZL 85.03 HCA 217.12 SMA 127.70 ECC .15720 INC 4.9733 V1 30.288
RP 108.94 LAP -3.00 LOP 318.45 VP 37.379 GAP 3.24 AZP 93.97 TAL 167.19 TAP 24.32 RCA 107.63 APO 147.78 V2 34.785
RC 111.645 GL 38.79 GP -25.17 ZAL 72.56 ZAP 126.07 ETS 341.39 ZAE 136.43 ETE 208.85 ZAC 107.13 ETC 175.41 CLP-130.58

DISTANCE 478.502

PLANETOCENTRIC CONIC

C3 14.831 VHL 3.825 DLA 48.44 RAL 13.16 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 3.640 DPA -22.54 RAP 19.53 ECC 1.2408
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.90 19 20 1 4208.34 -34.98 195.00 244.84 54.06 20 30 9 3608.3 -39.40 187.03
131.10 3 34 12 2720.33 -34.97 78.31 244.82 54.05 4 19 33 2120.3 -39.38 70.34
48.90 19 20 1 4208.34 -34.98 195.00 244.84 54.06 20 30 9 3608.3 -39.40 187.03
131.10 3 34 12 2720.33 -34.97 78.31 244.82 54.05 4 19 33 2120.3 -39.38 70.34
48.90 19 20 1 4208.34 -34.98 195.00 244.84 54.06 20 30 9 3608.3 -39.40 187.03
131.10 3 34 12 2720.33 -34.97 78.31 244.82 54.05 4 19 33 2120.3 -39.38 70.34

DIFFERENTIAL CORRECTIONS

TDE 2.3374 TRA .4377 TC3-3.1527 BAU .6353
RDE .8253 RRA .2285 RC3 -.7803 FAU .12622
FDE 5.4356 FRA 2.0375 FC3-7.4685 BSP 14185
BDE 2.4789 BRA .4938 BC3 3.2478 FSP -3272

MID-COURSE EXECUTION ACCURACY

SGT 4385.0 SGR 1488.6 SCS 946.9
RRR .9807 RRF .9861 RTF .9791
SGB 4604.8 R23 .1137 R13 .9815
SG1 4598.7 SG2 272.2 THA 18.30

ORBIT DETERMINATION ACCURACY

ST 3514.6 SR 1246.1 SS 2598.1
CRT .9992 CRS -.9990 CST -.9965
LSA 4541.4 MSA 174.7 SSA 7.6
EL1 3728.6 EL2 47.6 ALF 19.51

LAUNCH DATE JAN 2 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 484.606

RL 147.09 LAL -.00 LOL 101.43 VL 27.648 GAL 2.52 AZL 85.23 HCA 220.28 SMA 127.60 ECC .15881 INC 4.7705 V1 30.288  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.370 GAP 3.58 AZP 93.84 TAL 166.47 TAP 26.75 RCA 107.34 APO 147.86 V2 34.787  
 RC 114.042 GL 37.25 GP -22.79 ZAL 71.21 ZAP 129.63 ETS 341.01 ZAE 135.85 ETE 204.79 ZAC 106.75 ETC 172.65 CLP-133.78

PLANETOCENTRIC CONIC

C3 14.401 VHL 3.795 DLA 47.59 RAL 15.58 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 3.729 DPA -20.42 RAP 16.36 ECC 1.2370  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 19 33 28 4195.49 -34.59 193.40 246.56 55.01 20 43 23 3595.5 -38.89 185.40  
 130.00 3 40 5 2726.16 -34.58 78.53 246.55 54.99 4 25 31 2126.2 -38.88 70.53  
 50.00 19 33 28 4195.49 -34.59 193.40 246.56 55.01 20 43 23 3595.5 -38.89 185.40  
 130.00 3 40 5 2726.16 -34.58 78.53 246.55 54.99 4 25 31 2126.2 -38.88 70.53  
 50.00 19 33 28 4195.49 -34.59 193.40 246.56 55.01 20 43 23 3595.5 -38.89 185.40  
 130.00 3 40 5 2726.16 -34.58 78.53 246.55 54.99 4 25 31 2126.2 -38.88 70.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3707 TRA .5541 TC3-3.3944 BAU .6858 SGT 4581.2 SCR 1294.5 SCS 907.3 ST 3599.5 SR 1100.1 SS 2475.7  
 RDE .7221 RRA .2166 RC3 -.6612 FAU .12047 RRT .9775 RRF .9797 RTF .9798 CRT .9995 CRS -.9984 CST -.9964  
 FDE 4.9982 FRA 2.1479 FC3-7.2423 BSP 14782 SGB 4760.6 R23 .0890 R13 .9812 LSA 4501.7 MSA 173.9 SSA 8.3  
 BDE 2.4783 BRA .5949 BC3 3.4582 FSP -3152 SGI 4753.3 SGT 263.2 THA 15.49 EL1 3763.7 EL2 31.6 ALF 16.99

LAUNCH DATE JAN 2 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 490.891

RL 147.09 LAL -.00 LOL 101.43 VL 27.632 GAL 2.69 AZL 85.41 HCA 223.44 SMA 127.49 ECC .16059 INC 4.5924 V1 30.288  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.381 GAP 3.92 AZP 93.34 TAL 163.70 TAP 29.14 RCA 107.02 APO 147.97 V2 34.790  
 RC 116.435 GL 38.78 GP -20.72 ZAL 69.80 ZAP 132.93 ETS 340.76 ZAE 135.12 ETE 201.36 ZAC 106.61 ETC 172.09 CLP-136.74

PLANETOCENTRIC CONIC

C3 14.288 VHL 3.780 DLA 46.79 RAL 17.98 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 3.836 DPA -18.48 RAP 17.57 ECC 1.2351  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.05 19 46 41 4184.57 -34.15 191.99 248.41 55.82 20 56 26 3584.6 -38.36 183.96  
 128.95 3 45 58 2733.59 -34.14 78.88 248.41 55.81 4 31 32 2133.6 -38.35 70.86  
 51.05 19 46 41 4184.57 -34.15 191.99 248.41 55.82 20 56 26 3584.6 -38.36 183.96  
 128.95 3 45 58 2733.59 -34.14 78.88 248.41 55.81 4 31 32 2133.6 -38.35 70.86  
 51.05 19 46 41 4184.57 -34.15 191.99 248.41 55.82 20 56 26 3584.6 -38.36 183.96  
 128.95 3 45 58 2733.59 -34.14 78.88 248.41 55.81 4 31 32 2133.6 -38.35 70.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3981 TRA .6784 TC3-3.3974 BAU .6952 SGT 4780.4 SCR 1149.7 SCS 862.8 ST 3663.5 SR 981.1 SS 2352.1  
 RDE .6410 RRA .2040 RC3 -.5512 FAU .11379 RRT .9719 RRF .9708 RTF .9803 CRT .9998 CRS -.9974 CST -.9962  
 FDE 4.5780 FRA 2.2305 FC3-6.8950 BSP 15352 SGB 4916.7 R23 .0642 R13 .9812 LSA 4459.4 MSA 173.1 SSA 9.1  
 BDE 2.4823 BRA .7089 BC3 3.6384 FSP -3003 SGI 4909.6 SGT 263.3 THA 13.20 EL1 3792.6 EL2 17.3 ALF 14.99

LAUNCH DATE JAN 2 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 496.757

RL 147.09 LAL -.00 LOL 101.43 VL 27.615 GAL 2.88 AZL 85.57 HCA 226.60 SMA 127.37 ECC .16255 INC 4.4339 V1 30.288  
 RP 108.91 LAP -3.22 LOP 327.94 VP 37.352 GAP 4.27 AZP 93.05 TAL 164.90 TAP 31.50 RCA 106.67 APO 148.08 V2 34.794  
 RC 118.823 GL 34.35 GP -18.92 ZAL 68.35 ZAP 135.99 ETS 340.59 ZAE 134.30 ETE 198.53 ZAC 106.69 ETC 171.68 CLP-139.49

PLANETOCENTRIC CONIC

C3 14.277 VHL 3.778 DLA 46.04 RAL 20.36 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 3.959 DPA -16.69 RAP 17.11 ECC 1.2350  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.05 19 59 48 4175.25 -33.67 190.72 250.39 56.53 21 9 23 3575.2 -37.80 182.69  
 127.95 3 51 52 2742.57 -33.66 79.34 250.39 56.52 4 37 35 2142.6 -37.79 71.32  
 52.05 19 59 48 4175.25 -33.67 190.72 250.39 56.53 21 9 23 3575.2 -37.80 182.69  
 127.95 3 51 52 2742.57 -33.66 79.34 250.39 56.52 4 37 35 2142.6 -37.79 71.32  
 52.05 19 59 48 4175.25 -33.67 190.72 250.39 56.53 21 9 23 3575.2 -37.80 182.69  
 127.95 3 51 52 2742.57 -33.66 79.34 250.39 56.52 4 37 35 2142.6 -37.79 71.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4198 TRA .8054 TC3-3.7811 BAU .7230 SGT 4963.5 SCR 1029.0 SCS 815.7 ST 3707.8 SR 884.7 SS 2229.4  
 RDE .3774 RRA .1917 RC3 -.4522 FAU .10660 RRT .9634 RRF .9591 RTF .9807 CRT .9999 CRS -.9959 CST -.9960  
 FDE 4.1818 FRA 2.2919 FC3-6.4644 BSP 15898 SGB 5069.0 R23 .0427 R13 .9813 LSA 4412.6 MSA 172.5 SSA 9.8  
 BDE 2.4878 BRA .8279 BC3 3.7882 FSP -2843 SGI 5061.8 SGT 270.3 THA 11.33 EL1 3811.9 EL2 9.6 ALF 13.42

LAUNCH DATE JAN 2 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 502.804

RL 147.09 LAL -.00 LOL 101.43 VL 27.597 GAL 3.08 AZL 85.71 HCA 229.78 SMA 127.25 ECC .16469 INC 4.2911 V1 30.288  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.342 GAP 4.61 AZP 92.77 TAL 164.06 TAP 33.82 RCA 106.30 APO 148.21 V2 34.798  
 RC 121.206 GL 32.97 GP -17.35 ZAL 66.85 ZAP 138.83 ETS 340.47 ZAE 133.45 ETE 196.15 ZAC 106.99 ETC 171.39 CLP-142.06

PLANETOCENTRIC CONIC

C3 14.358 VHL 3.789 DLA 45.31 RAL 22.74 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 4.095 DPA -15.02 RAP 16.95 ECC 1.2363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.02 20 12 51 4167.28 -33.16 189.58 252.49 57.14 21 22 19 3567.3 -37.22 181.55  
 126.98 3 57 46 2753.05 -33.15 79.92 252.48 57.13 4 43 39 2153.1 -37.21 71.90  
 53.02 20 12 51 4167.28 -33.16 189.58 252.49 57.14 21 22 19 3567.3 -37.22 181.55  
 126.98 3 57 46 2753.05 -33.15 79.92 252.48 57.13 4 43 39 2153.1 -37.21 71.90  
 53.02 20 12 51 4167.28 -33.16 189.58 252.49 57.14 21 22 19 3567.3 -37.22 181.55  
 126.98 3 57 46 2753.05 -33.15 79.92 252.48 57.13 4 43 39 2153.1 -37.21 71.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4378 TRA .9427 TC3-3.8829 BAU .7486 SGT 5133.8 SCR 930.2 SCS 788.7 ST 3737.0 SR 807.6 SS 2112.3  
 RDE .5285 RRA .1805 RC3 -.3640 FAU .09909 RRT .9515 RRF .9444 RTF .9810 CRT .9997 CRS -.9938 CST -.9958  
 FDE 3.8192 FRA 2.3396 FC3-5.9748 BSP 16372 SGB 5217.4 R23 .0264 R13 .9813 LSA 4364.6 MSA 172.4 SSA 10.6  
 BDE 2.4945 BRA .9598 BC3 3.8999 FSP -2668 SGI 5209.7 SGT 281.9 THA 9.81 EL1 3823.3 EL2 18.2 ALF 12.19



LAUNCH DATE JAN 2 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 508.830

RL 147.08 LAL -.00 LOL 101.43 VL 27.578 GAL 3.29 AZL 85.84 HCA 232.93 SMA 127.12 ECC .16701 INC 4.1610 V1 30.288
RP 108.89 LAP -3.32 LOP 334.28 VP 37.332 GAP 4.96 AZP 92.51 TAL 163.18 TAP 36.11 RCA 105.89 APO 148.36 V2 34.803
RC 123.581 GL 31.61 GP -15.97 ZAL 65.31 ZAP 141.46 ETS 340.38 ZAE 132.61 ETE 194.17 ZAC 107.47 ETC 171.18 CLP-144.45

PLANETOCENTRIC CONIC

C3 14.527 VHL 3.811 DLA 44.61 RAL 25.11 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 4.243 DPA -13.46 RAP 17.03 ECC 1.2391
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.97 20 25 54 4160.50 -32.61 188.54 254.69 57.69 21 35 14 3560.5 -36.61 180.53
126.03 4 3 37 2765.01 -32.60 80.60 254.68 57.67 4 49 42 2165.0 -36.60 72.60
53.97 20 25 54 4160.50 -32.61 188.54 254.69 57.69 21 35 14 3560.5 -36.61 180.53
126.03 4 3 37 2765.01 -32.60 80.60 254.68 57.67 4 49 42 2165.0 -36.60 72.60
53.97 20 25 54 4160.50 -32.61 188.54 254.69 57.69 21 35 14 3560.5 -36.61 180.53
126.03 4 3 37 2765.01 -32.60 80.60 254.68 57.67 4 49 42 2165.0 -36.60 72.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4476 TRA 1.0840 TC3-3.9760 BAU .7742 86T 5288.0 86R 848.3 86S 721.7 ST 3744.0 SR 744.6 SS 1994.2
RDE .4901 RRA .1694 RC3 -.2901 FAU .09205 RRT .9362 RRF .9262 RTF .9813 CRT .9991 CRS -.9909 CST -.9955
FDE 3.4778 FRA 2.3855 FC3-5.4858 B8P 16895 86B 5355.7 R2S .0153 R13 .9814 LSA 4303.4 HSA 172.3 SSA 11.2
BOE 2.4962 BRA 1.0971 BC3 3.9866 F8P -2514 86I 5347.5 86Z 294.8 THA 8.57 EL1 3817.2 EL2 31.2 ALF 11.24

LAUNCH DATE JAN 2 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 514.836

RL 147.09 LAL -.00 LOL 101.43 VL 27.558 GAL 3.52 AZL 85.96 HCA 236.09 SMA 126.99 ECC .16953 INC 4.0414 V1 30.288
RP 108.87 LAP -3.35 LOP 337.45 VP 37.323 GAP 5.31 AZP 92.26 TAL 162.27 TAP 36.36 RCA 105.46 APO 148.52 V2 34.808
RC 123.948 GL 30.28 GP -14.78 ZAL 65.73 ZAP 143.91 ETS 340.29 ZAE 131.80 ETE 192.51 ZAC 108.14 ETC 171.04 CLP-146.68

PLANETOCENTRIC CONIC

C3 14.782 VHL 3.845 DLA 43.92 RAL 27.47 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 4.402 DPA -11.98 RAP 17.34 ECC 1.2433
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.91 20 38 59 4154.72 -32.02 187.57 256.98 58.17 21 48 14 3554.7 -35.97 179.59
125.09 4 9 23 2778.52 -32.01 81.39 256.97 58.16 4 55 42 2178.5 -35.96 73.41
54.91 20 38 59 4154.72 -32.02 187.57 256.98 58.17 21 48 14 3554.7 -35.97 179.59
125.09 4 9 23 2778.52 -32.01 81.39 256.97 58.16 4 55 42 2178.5 -35.96 73.41
54.91 20 38 59 4154.72 -32.02 187.57 256.98 58.17 21 48 14 3554.7 -35.97 179.59
125.09 4 9 23 2778.52 -32.01 81.39 256.97 58.16 4 55 42 2178.5 -35.96 73.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4526 TRA 1.2328 TC3-4.0334 BAU .7883 86T 5429.9 86R 782.1 86S 876.3 ST 3735.5 SR 694.3 SS 1880.9
RDE .4811 RRA .1596 RC3 -.2273 FAU .08520 RRT .9173 RRF .9049 RTF .9815 CRT .9979 CRS -.9870 CST -.9953
FDE 3.1861 FRA 2.3818 FC3-4.9903 B8P 17387 86B 5485.9 R2S .0041 R13 .9815 LSA 4256.0 HSA 172.8 SSA 11.8
BOE 2.4956 BRA 1.2431 BC3 4.0398 F8P -2363 86I 5477.2 86Z 308.7 THA 7.55 EL1 3799.2 EL2 44.7 ALF 10.51

LAUNCH DATE JAN 2 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 520.821

RL 147.09 LAL -.00 LOL 101.43 VL 27.537 GAL 3.77 AZL 86.07 HCA 239.26 SMA 126.85 ECC .17226 INC 3.9302 V1 30.288
RP 108.85 LAP -3.38 LOP 340.62 VP 37.313 GAP 5.66 AZP 92.01 TAL 161.33 TAP 40.59 RCA 105.00 APO 148.70 V2 34.815
RC 128.306 GL 28.97 GP -13.69 ZAL 62.11 ZAP 146.19 ETS 340.19 ZAE 131.03 ETE 191.11 ZAC 108.96 ETC 170.94 CLP-148.78

PLANETOCENTRIC CONIC

C3 15.122 VHL 3.889 DLA 43.24 RAL 29.82 RAD 6567.6 VEL 11.684 PTH 2.05 VHP 4.570 DPA -10.58 RAP 17.84 ECC 1.2489
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.85 20 52 8 4149.76 -31.40 186.68 259.36 58.60 22 1 18 3549.8 -35.30 178.73
124.15 4 15 0 2793.86 -31.38 82.30 259.35 58.58 5 1 34 2193.7 -35.28 74.35
55.85 20 52 8 4149.76 -31.40 186.68 259.36 58.60 22 1 18 3549.8 -35.30 178.73
124.15 4 15 0 2793.86 -31.38 82.30 259.35 58.58 5 1 34 2193.7 -35.28 74.35
55.85 20 52 8 4149.76 -31.40 186.68 259.36 58.60 22 1 18 3549.8 -35.30 178.73
124.15 4 15-0 2793.86 -31.38 82.30 259.35 58.58 5 1 34 2193.7 -35.28 74.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4530 TRA 1.3893 TC3-4.0568 BAU .8209 86T 5559.8 86R 729.1 86S 832.9 ST 3712.5 SR 654.3 SS 1772.5
RDE .4597 RRA .1511 RC3 -.1748 FAU .07866 RRT .8953 RRF .8809 RTF .9816 CRT .9959 CRS -.9822 CST -.9950
FDE 2.8825 FRA 2.3888 FC3-4.5033 B8P 17852 86B 5607.4 R2S -.0020 R13 .9816 LSA 4162.0 HSA 173.9 SSA 12.4
BOE 2.4921 BRA 1.3975 BC3 4.0605 F8P -2217 86I 5598.2 86Z 322.6 THA 6.72 EL1 3769.2 EL2 58.3 ALF 9.96

LAUNCH DATE JAN 2 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 526.783

RL 147.09 LAL -.00 LOL 101.43 VL 27.516 GAL 4.03 AZL 86.17 HCA 242.42 SMA 126.71 ECC .17520 INC 3.8261 V1 30.288
RP 108.83 LAP -3.39 LOP 343.80 VP 37.304 GAP 6.02 AZP 91.77 TAL 160.37 TAP 42.79 RCA 104.51 APO 148.91 V2 34.821
RC 130.653 GL 27.67 GP -12.75 ZAL 60.48 ZAP 148.32 ETS 340.07 ZAE 130.31 ETE 189.94 ZAC 109.93 ETC 170.87 CLP-150.76

PLANETOCENTRIC CONIC

C3 15.551 VHL 3.944 DLA 42.55 RAL 32.16 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 4.748 DPA -9.24 RAP 18.51 ECC 1.2559
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.80 21 5 21 4145.61 -30.73 185.84 261.82 58.98 22 14 27 3545.6 -34.59 177.92
123.20 4 20 28 2810.41 -30.72 83.32 261.81 58.97 5 7 19 2210.4 -34.58 75.41
56.80 21 5 21 4145.61 -30.73 185.84 261.82 58.98 22 14 27 3545.6 -34.59 177.92
123.20 4 20 28 2810.41 -30.72 83.32 261.81 58.97 5 7 19 2210.4 -34.58 75.41
56.80 21 5 21 4145.61 -30.73 185.84 261.82 58.98 22 14 27 3545.6 -34.59 177.92
123.20 4 20 28 2810.41 -30.72 83.32 261.81 58.97 5 7 19 2210.4 -34.58 75.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4486 TRA 1.5556 TC3-4.0470 BAU .8410 86T 5680.5 86R 687.2 86S 592.2 ST 3677.3 SR 622.7 SS 1669.7
RDE .4245 RRA .1443 RC3 -.1314 FAU .07244 RRT .8709 RRF .8550 RTF .9817 CRT .9931 CRS -.9762 CST -.9947
FDE 2.8253 FRA 2.3947 FC3-4.0328 B8P 18278 86B 5721.9 R2S -.0059 R13 .9816 LSA 4082.6 HSA 175.9 SSA 12.9
BOE 2.4861 BRA 1.5623 BC3 4.0491 F8P -2078 86I 5712.0 86Z 335.9 THA 6.03 EL1 3729.0 EL2 71.9 ALF 9.55

LAUNCH DATE JAN 2 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 532.722

RL 147.09 LAL -.00 LOL 101.43 VL 27.494 GAL 4.31 AZL 86.27 HCA 245.59 SMA 126.56 ECC .17838 INC 3.7278 V1 30.288
RP 108.80 LAP -3.39 LOP 346.97 VP 37.293 GAP 6.39 AZP 91.54 TAL 159.38 TAP 44.97 RCA 103.99 APO 149.14 V2 34.829
RC 132.989 GL 26.40 GP -11.92 ZAL 58.81 ZAP 130.32 ETS 339.91 ZAE 129.64 ETE 188.95 ZAC 111.03 ETC 170.81 CLP-152.62

PLANETOCENTRIC CONIC

C3 16.074 VHL 4.009 DLA 41.87 RAL 34.48 RAD 6567.6 VEL 11.724 PTH 2.07 VHP 4.935 DPA -7.95 RAP 19.33 ECC 1.2645
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.77 21 18 40 4142.01 -30.03 185.04 264.34 59.33 22 27 42 3542.0 -33.85 177.17
122.23 4 25 40 2828.98 -30.02 84.46 264.33 59.32 5 12 49 2229.0 -33.84 76.59
57.77 21 18 40 4142.01 -30.03 185.04 264.34 59.33 22 27 42 3542.0 -33.85 177.17
122.23 4 25 40 2828.98 -30.02 84.46 264.33 59.32 5 12 49 2229.0 -33.84 76.59
57.77 21 18 40 4142.01 -30.03 185.04 264.34 59.33 22 27 42 3542.0 -33.85 177.17
122.23 4 25 40 2828.98 -30.02 84.46 264.33 59.32 5 12 49 2229.0 -33.84 76.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4451 TRA 1.7338 TC3-3.9990 BAU .8596 SGT 5793.4 SGR 654.8 SCS 554.1 ST 3635.3 SR 598.2 SS 1574.9
RDE .4148 RRA .1394 RC3 -.0952 FAU .06634 RRT .8451 RRF .8286 RTF .9816 CRT .9894 CRS -.9690 CST -.9945
FDE 2.3963 FRA 2.3992 FC3-3.3731 B8P 18807 SGB 5830.3 R23 -.0074 R13 .9816 LSA 4002.7 MSA 178.7 S8A 13.3
BDE 2.4800 BRA 1.7394 BC3 4.0001 F8P -1938 SGI 5819.9 S62 348.5 THA 5.48 EL1 3683.2 EL2 85.6 ALF 9.25

LAUNCH DATE JAN 2 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 538.636

RL 147.09 LAL -.00 LOL 101.43 VL 27.471 GAL 4.61 AZL 86.37 HCA 248.76 SMA 126.41 ECC .18180 INC 3.6343 V1 30.288
RP 108.78 LAP -3.39 LOP 350.15 VP 37.288 GAP 6.76 AZP 91.32 TAL 158.37 TAP 47.12 RCA 103.43 APO 149.40 V2 34.837
RC 135.313 GL 25.14 GP -11.18 ZAL 57.14 ZAP 152.20 ETS 339.70 ZAE 129.02 ETE 188.10 ZAC 112.24 ETC 170.77 CLP-154.38

PLANETOCENTRIC CONIC

C3 16.696 VHL 4.088 DLA 41.18 RAL 36.78 RAD 6567.7 VEL 11.751 PTH 2.07 VHP 5.132 DPA -6.71 RAP 20.28 ECC 1.2748
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.75 21 32 5 4138.98 -29.29 184.27 266.92 59.65 22 41 4 3539.0 -33.08 176.45
121.25 4 30 35 2849.38 -29.27 85.72 266.91 59.64 5 18 5 2249.4 -33.07 77.90
58.75 21 32 5 4138.98 -29.29 184.27 266.92 59.65 22 41 4 3539.0 -33.08 176.45
121.25 4 30 35 2849.38 -29.27 85.72 266.91 59.64 5 18 5 2249.4 -33.07 77.90
58.75 21 32 5 4138.98 -29.29 184.27 266.92 59.65 22 41 4 3539.0 -33.08 176.45
121.25 4 30 35 2849.38 -29.27 85.72 266.91 59.64 5 18 5 2249.4 -33.07 77.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4329 TRA 1.9181 TC3-3.9330 BAU .8780 SGT 5894.0 SGR 628.8 SCS 518.1 ST 3577.3 SR 578.3 SS 1481.8
RDE .4089 RRA .1354 RC3 -.0677 FAU .06093 RRT .8189 RRF .8020 RTF .9816 CRT .9847 CRS -.9606 CST -.9942
FDE 2.1832 FRA 2.3952 FC3-3.3597 B8P 18998 SGB 5927.4 R23 -.0086 R13 .9816 LSA 3910.7 MSA 182.4 S8A 13.6
BDE 2.4670 BRA 1.9229 BC3 3.9336 F8P -1820 SGI 5916.5 S62 359.5 THA 5.01 EL1 3622.4 EL2 99.4 ALF 9.05

LAUNCH DATE JAN 2 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 544.523

RL 147.09 LAL -.00 LOL 101.43 VL 27.448 GAL 4.93 AZL 86.46 HCA 251.93 SMA 126.26 ECC .18549 INC 3.5447 V1 30.288
RP 108.75 LAP -3.37 LOP 353.32 VP 37.277 GAP 7.15 AZP 91.10 TAL 157.33 TAP 49.26 RCA 102.84 APO 149.68 V2 34.846
RC 137.625 GL 23.89 GP -10.52 ZAL 55.46 ZAP 153.98 ETS 339.44 ZAE 128.45 ETE 187.39 ZAC 113.55 ETC 170.74 CLP-156.06

PLANETOCENTRIC CONIC

C3 17.425 VHL 4.174 DLA 40.49 RAL 39.05 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.337 DPA -5.50 RAP 21.36 ECC 1.2868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.76 21 45 36 4136.37 -28.51 183.53 269.56 59.94 22 54 32 3536.4 -32.27 175.75
120.24 4 35 9 2871.67 -28.49 87.12 269.55 59.93 5 23 1 2271.7 -32.26 79.35
59.76 21 45 36 4136.37 -28.51 183.53 269.56 59.94 22 54 32 3536.4 -32.27 175.75
120.24 4 35 9 2871.67 -28.49 87.12 269.55 59.93 5 23 1 2271.7 -32.26 79.35
59.76 21 45 36 4136.37 -28.51 183.53 269.56 59.94 22 54 32 3536.4 -32.27 175.75
120.24 4 35 9 2871.67 -28.49 87.12 269.55 59.93 5 23 1 2271.7 -32.26 79.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4171 TRA 2.1134 TC3-3.8398 BAU .8946 SGT 5985.8 SGR 608.7 SCS 484.4 ST 3510.8 SR 562.6 SS 1394.5
RDE .4065 RRA .1331 RC3 -.0460 FAU .05580 RRT .7933 RRF .7764 RTF .9815 CRT .9790 CRS -.9509 CST -.9939
FDE 1.9904 FRA 2.3908 FC3-2.7724 B8P 19357 SGB 6016.7 R23 -.0085 R13 .9814 LSA 3814.7 MSA 187.1 S8A 13.9
BDE 2.4511 BRA 2.1176 BC3 3.8401 F8P -1707 SGI 6005.3 S62 369.4 THA 4.63 EL1 3553.8 EL2 113.3 ALF 8.93

LAUNCH DATE JAN 2 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 550.382

RL 147.09 LAL -.00 LOL 101.43 VL 27.424 GAL 5.27 AZL 86.54 HCA 255.10 SMA 126.11 ECC .18945 INC 3.4582 V1 30.288
RP 108.72 LAP -3.34 LOP 356.50 VP 37.268 GAP 7.54 AZP 90.89 TAL 156.28 TAP 51.38 RCA 102.21 APO 150.00 V2 34.855
RC 139.923 GL 22.87 GP -9.93 ZAL 53.77 ZAP 155.66 ETS 339.11 ZAE 127.93 ETE 186.77 ZAC 114.96 ETC 170.70 CLP-157.66

PLANETOCENTRIC CONIC

C3 18.272 VHL 4.275 DLA 39.78 RAL 41.28 RAD 6567.7 VEL 11.818 PTH 2.09 VHP 5.553 DPA -4.33 RAP 22.53 ECC 1.3007
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.80 21 59 13 4134.12 -27.69 182.80 272.24 60.21 23 8 7 3534.1 -31.42 175.08
119.20 4 39 20 2896.03 -27.67 88.65 272.23 60.20 5 27 36 2296.0 -31.41 80.93
60.80 21 59 13 4134.12 -27.69 182.80 272.24 60.21 23 8 7 3534.1 -31.42 175.08
119.20 4 39 20 2896.03 -27.67 88.65 272.23 60.20 5 27 36 2296.0 -31.41 80.93
60.80 21 59 13 4134.12 -27.69 182.80 272.24 60.21 23 8 7 3534.1 -31.42 175.08
119.20 4 39 20 2896.03 -27.67 88.65 272.23 60.20 5 27 36 2296.0 -31.41 80.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3987 TRA 2.3201 TC3-3.7232 BAU .9095 SGT 6070.0 SGR 593.1 SCS 453.2 ST 3438.1 SR 550.1 SS 1313.0
RDE .4071 RRA .1324 RC3 -.0296 FAU .05102 RRT .7693 RRF .7527 RTF .9813 CRT .9722 CRS -.9400 CST -.9936
FDE 1.8162 FRA 2.3856 FC3-2.4174 B8P 19678 SGB 6098.9 R23 -.0081 R13 .9813 LSA 3716.1 MSA 192.6 S8A 14.0
BDE 2.4330 BRA 2.3239 BC3 3.7233 F8P -1601 SGI 6067.2 S62 377.9 THA 4.32 EL1 3479.5 EL2 127.2 ALF 8.85

LAUNCH DATE JAN 2 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.400 GAL 5.63 AZL 86.63 HCA 250.27 SMA 125.95 ECC .19373 INC 3.3742 V1 30.288  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.260 GAP 7.95 AZP 90.69 TAL 155.21 TAP 53.49 RCA 101.55 APO 150.35 V2 34.865  
 RC 142.207 GL 21.46 GP -9.40 ZAL 52.09 ZAP 157.25 ETS 338.70 ZAE 127.45 ETE 186.25 ZAC 116.45 ETC 170.65 CLP-159.19

DISTANCE 556.210

PLANETOCENTRIC CONIC

C3 19.249 VHL 4.387 DLA 39.07 RAL 43.47 RAD 6567.8 VEL 11.859 PTH 2.10 VHP 5.779 DPA -3.19 RAP 25.80 ECC 1.3168  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.87 22 12 57 4132.11 -26.83 182.08 274.95 60.46 23 21 49 3532.1 -30.54 174.42  
 118.13 4 43 3 2922.52 -26.81 90.32 274.94 60.44 5 31 45 2322.5 -30.53 82.66  
 61.87 22 12 57 4132.11 -26.83 182.08 274.95 60.46 23 21 49 3532.1 -30.54 174.42  
 118.13 4 43 3 2922.52 -26.81 90.32 274.94 60.44 5 31 45 2322.5 -30.53 82.66  
 61.87 22 12 57 4132.11 -26.83 182.08 274.95 60.46 23 21 49 3532.1 -30.54 174.42  
 118.13 4 43 3 2922.52 -26.81 90.32 274.94 60.44 5 31 45 2322.5 -30.53 82.66

DIFFERENTIAL CORRECTIONS

TDE 2.3806 TRA 2.5425 TC3-3.5787 BAU .9209  
 RDE .4105 RRA .1336 RC3 -.0166 FAU .04635  
 FDE 1.6620 FRA 2.3843 FC3-2.0845 BSP 19896  
 BDE 2.4158 BRA 2.5460 BC3 3.5787 FSP -1494

MID-COURSE EXECUTION ACCURACY

SGT 6149.7 SGR 581.5 SCS 424.5  
 RRT .7477 RRF .7321 RTF .9811  
 SGB 6177.1 R23 -.0066 R13 .9811  
 SGI 6165.1 SGT 385.2 THA 4.06

ORBIT DETERMINATION ACCURACY

ST 3364.6 SR 540.3 SS 1239.5  
 CRT .9644 CRS -.9281 CST -.9934  
 LSA 3620.7 HSA 199.0 SSA 14.1  
 EL1 3404.8 EL2 141.2 ALF 8.82

LAUNCH DATE JAN 2 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.376 GAL 6.01 AZL 86.71 HCA 261.45 SMA 125.79 ECC .19833 INC 3.2920 V1 30.288  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.251 GAP 8.37 AZP 90.49 TAL 154.14 TAP 55.59 RCA 100.84 APO 150.74 V2 34.875  
 RC 144.478 GL 20.27 GP -8.92 ZAL 50.42 ZAP 158.77 ETS 338.19 ZAE 127.01 ETE 185.80 ZAC 118.00 ETC 170.59 CLP-160.66

DISTANCE 562.004

PLANETOCENTRIC CONIC

C3 20.370 VHL 4.513 DLA 38.36 RAL 45.60 RAD 6567.8 VEL 11.906 PTH 2.12 VHP 6.017 DPA -2.08 RAP 25.16 ECC 1.3352  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.97 22 26 48 4130.31 -25.93 181.37 277.70 60.69 23 35 38 3530.3 -29.63 173.76  
 117.03 4 46 16 2951.24 -25.92 92.15 277.70 60.68 5 35 27 2351.2 -29.62 84.54  
 62.97 22 26 48 4130.31 -25.93 181.37 277.70 60.69 23 35 38 3530.3 -29.63 173.76  
 117.03 4 46 16 2951.24 -25.92 92.15 277.70 60.68 5 35 27 2351.2 -29.62 84.54  
 62.97 22 26 48 4130.31 -25.93 181.37 277.70 60.69 23 35 38 3530.3 -29.63 173.76  
 117.03 4 46 16 2951.24 -25.92 92.15 277.70 60.68 5 35 27 2351.2 -29.62 84.54

DIFFERENTIAL CORRECTIONS

TDE 2.3559 TRA 2.7734 TC3-3.4256 BAU .9329  
 RDE .4156 RRA .1361 RC3 -.0081 FAU .04220  
 FDE 1.5183 FRA 2.3788 FC3-1.7934 BSP 20192  
 BDE 2.3922 BRA 2.7760 BC3 3.4256 FSP -1404

MID-COURSE EXECUTION ACCURACY

SGT 6218.1 SGR 571.8 SCS 397.5  
 RRT .7284 RRF .7136 RTF .9809  
 SGB 6244.3 R23 -.0054 R13 .9809  
 SGI 6232.1 SGT 390.9 THA 3.85

ORBIT DETERMINATION ACCURACY

ST 3281.4 SR 531.7 SS 1168.5  
 CRT .9554 CRS -.9148 CST -.9932  
 LSA 3517.5 HSA 206.2 SSA 14.1  
 EL1 3320.5 EL2 155.2 ALF 8.82

LAUNCH DATE JAN 2 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.352 GAL 6.42 AZL 86.79 HCA 264.63 SMA 125.63 ECC .20330 INC 3.2112 V1 30.288  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.243 GAP 8.61 AZP 90.30 TAL 153.05 TAP 57.67 RCA 100.09 APO 151.17 V2 34.885  
 RC 146.734 GL 19.10 GP -8.49 ZAL 48.76 ZAP 160.22 ETS 337.57 ZAE 126.61 ETE 185.42 ZAC 119.63 ETC 170.52 CLP-162.07

DISTANCE 567.761

PLANETOCENTRIC CONIC

C3 21.653 VHL 4.653 DLA 37.63 RAL 47.69 RAD 6567.9 VEL 11.960 PTH 2.13 VHP 6.267 DPA -.99 RAP 26.59 ECC 1.3564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.10 22 40 48 4128.48 -25.01 180.64 280.48 60.91 23 49 36 3528.5 -28.68 173.09  
 115.90 4 48 54 2982.40 -24.99 94.13 280.47 60.90 5 38 37 2382.4 -28.67 86.58  
 64.10 22 40 48 4128.48 -25.01 180.64 280.48 60.91 23 49 36 3528.5 -28.68 173.09  
 115.90 4 48 54 2982.40 -24.99 94.13 280.47 60.90 5 38 37 2382.4 -28.67 86.58  
 64.10 22 40 48 4128.48 -25.01 180.64 280.48 60.91 23 49 36 3528.5 -28.68 173.09  
 115.90 4 48 54 2982.40 -24.99 94.13 280.47 60.90 5 38 37 2382.4 -28.67 86.58

DIFFERENTIAL CORRECTIONS

TDE 2.3285 TRA 3.0180 TC3-3.2577 BAU .9430  
 RDE .4224 RRA .1402 RC3 -.0024 FAU .03831  
 FDE 1.3880 FRA 2.3741 FC3-1.5319 BSP 20465  
 BDE 2.3665 BRA 3.0213 BC3 3.2577 FSP -1320

MID-COURSE EXECUTION ACCURACY

SGT 6270.3 SGR 563.9 SCS 372.4  
 RRT .7118 RRF .6980 RTF .9807  
 SGB 6304.6 R23 -.0041 R13 .9807  
 SGI 6292.2 SGT 395.2 THA 3.67

ORBIT DETERMINATION ACCURACY

ST 3195.4 SR 524.1 SS 1102.8  
 CRT .9452 CRS -.9148 CST -.9930  
 LSA 3414.0 HSA 214.1 SSA 14.0  
 EL1 3233.6 EL2 169.1 ALF 8.84

LAUNCH DATE JAN 2 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 101.43 VL 27.327 GAL 6.88 AZL 86.87 HCA 267.81 SMA 125.47 ECC .20865 INC 3.1312 V1 30.288  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.235 GAP 9.26 AZP 90.12 TAL 151.95 TAP 59.76 RCA 99.29 APO 151.65 V2 34.897  
 RC 148.977 GL 17.95 GP -8.11 ZAL 47.13 ZAP 161.61 ETS 336.81 ZAE 126.23 ETE 185.08 ZAC 121.31 ETC 170.43 CLP-163.44

DISTANCE 573.476

PLANETOCENTRIC CONIC

C3 23.119 VHL 4.808 DLA 36.90 RAL 49.72 RAD 6567.9 VEL 12.021 PTH 2.15 VHP 6.530 DPA .07 RAP 28.08 ECC 1.3805  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.28 22 54 57 4126.60 -24.05 179.91 283.28 61.12 24 3 44 3526.6 -27.70 172.41  
 114.72 4 50 56 3016.05 -24.03 96.28 283.27 61.11 5 41 12 2416.0 -27.69 88.79  
 65.28 22 54 57 4126.60 -24.05 179.91 283.28 61.12 24 3 44 3526.6 -27.70 172.41  
 114.72 4 50 56 3016.05 -24.03 96.28 283.27 61.11 5 41 12 2416.0 -27.69 88.79  
 65.28 22 54 57 4126.60 -24.05 179.91 283.28 61.12 24 3 44 3526.6 -27.70 172.41  
 114.72 4 50 56 3016.05 -24.03 96.28 283.27 61.11 5 41 12 2416.0 -27.69 88.79

DIFFERENTIAL CORRECTIONS

TDE 2.2995 TRA 3.2776 TC3-3.0774 BAU .9512  
 RDE .4306 RRA .1459 RC3 .0012 FAU .03468  
 FDE 1.2704 FRA 2.3710 FC3-1.2985 BSP 20703  
 BDE 2.3595 BRA 3.2809 BC3 3.0774 FSP -1241

MID-COURSE EXECUTION ACCURACY

SGT 6334.3 SGR 557.3 SCS 349.2  
 RRT .6982 RRF .6853 RTF .9805  
 SGB 6358.7 R23 -.0028 R13 .9805  
 SGI 6346.2 SGT 398.2 THA 3.53

ORBIT DETERMINATION ACCURACY

ST 3108.6 SR 517.2 SS 1042.8  
 CRT .9339 CRS -.8848 CST -.9928  
 LSA 3311.9 HSA 222.4 SSA 13.9  
 EL1 3146.1 EL2 182.8 ALF 8.86

LAUNCH DATE JAN 2 1969

FLIGHT TIME 206.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 579.145

RL 147.09 LAL -.00 LOL 101.43 VL 27.302 GAL 7.32 AZL 86.95 HCA 270.99 SMA 125.31 ECC .21444 INC 3.0514 V1 30.288  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.228 GAP 9.74 AZP 89.95 TAL 150.86 TAP 61.84 RCA 98.44 APO 152.18 V2 34.908  
 RC 151.204 GL 16.83 GP -7.76 ZAL 45.53 ZAP 162.95 ETS 355.90 ZAE 125.89 ETE 184.80 ZAC 123.03 ETC 170.31 CLP-164.77

PLANETOCENTRIC CONIC

C3 24.792 VHL 4.979 DLA 36.17 RAL 51.60 RAD 6568.0 VEL 12.090 PTH 2.16 VHP 6.807 DPA 1.11 RAP 29.64 ECC 1.4080  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.49 23 9 15 4124.58 -23.05 179.15 286.10 61.32 24 18 0 3524.6 -26.70 171.71  
 113.51 4 52 19 3052.20 -23.04 98.61 286.10 61.31 5 43 11 2452.3 -26.68 91.17  
 66.49 23 9 15 4124.58 -23.05 179.15 286.10 61.32 24 18 0 3524.6 -26.70 171.71  
 113.51 4 52 19 3052.20 -23.04 98.61 286.10 61.31 5 43 11 2452.3 -26.68 91.17  
 66.49 23 9 15 4124.58 -23.05 179.15 286.10 61.32 24 18 0 3524.6 -26.70 171.71  
 113.51 4 52 19 3052.20 -23.04 98.61 286.10 61.31 5 43 11 2452.3 -26.68 91.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2691 TRA 3.5535 TC3-2.8873 BAU .9570 SGT 6383.1 SGR 551.5 SCS 327.7 ST 3022.3 SR 510.6 SS 988.1  
 RDE .4400 RRA .1533 RC3 .0032 FAU .03125 RRT .6674 RRF .6755 RTF .9803 CRT .9213 CRS -.8682 CST -.9927  
 FDE 1.1641 FRA 2.3698 FC3 -1.0911 BSP 20919 SGB 6406.8 R23 -.0014 R13 .9803 LSA 3212.2 MSA 230.9 SSA 13.7  
 BDE 2.3114 BRA 3.5568 BC3 2.8874 FSP -1167 SGI 6394.4 SGI 399.8 THA 3.41 EL1 3058.9 EL2 196.1 ALF 8.88

LAUNCH DATE JAN 2 1969

FLIGHT TIME 208.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 584.763

RL 147.09 LAL -.00 LOL 101.43 VL 27.276 GAL 7.82 AZL 87.03 HCA 274.17 SMA 125.14 ECC .22070 INC 2.9714 V1 30.288  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.220 GAP 10.24 AZP 89.78 TAL 149.76 TAP 63.93 RCA 97.52 APO 152.76 V2 34.920  
 RC 153.416 GL 15.73 GP -7.44 ZAL 43.95 ZAP 164.23 ETS 334.80 ZAE 125.56 ETE 184.55 ZAC 124.80 ETC 170.17 CLP-166.06

PLANETOCENTRIC CONIC

C3 26.701 VHL 5.167 DLA 35.44 RAL 53.58 RAD 6568.1 VEL 12.169 PTH 2.18 VHP 7.101 DPA 2.13 RAP 31.25 ECC 1.4394  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.74 23 23 47 4122.17 -22.03 178.36 288.94 61.52 24 32 29 3522.2 -25.66 170.97  
 112.26 4 52 57 3091.36 -22.02 101.12 288.93 61.51 5 44 28 2491.4 -25.63 93.74  
 67.74 23 23 47 4122.17 -22.03 178.36 288.94 61.52 24 32 29 3522.2 -25.66 170.97  
 112.26 4 52 57 3091.36 -22.02 101.12 288.93 61.51 5 44 28 2491.4 -25.63 93.74  
 67.74 23 23 47 4122.17 -22.03 178.36 288.94 61.52 24 32 29 3522.2 -25.66 170.97  
 112.26 4 52 57 3091.36 -22.02 101.12 288.93 61.51 5 44 28 2491.4 -25.63 93.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2402 TRA 3.8491 TC3-2.6867 BAU .9590 SGT 6428.0 SGR 546.5 SCS 308.0 ST 2940.5 SR 504.0 SS 939.8  
 RDE .4506 RRA .1626 RC3 .0043 FAU .02793 RRT .6797 RRF .6689 RTF .9801 CRT .9077 CRS -.8511 CST -.9927  
 FDE 1.0701 FRA 2.3723 FC3 -.9057 BSP 21047 SGB 6451.2 R23 .0001 R13 .9801 LSA 3118.7 MSA 239.5 SSA 13.5  
 BDE 2.2651 BRA 3.8525 BC3 2.6867 FSP -1093 SGI 6438.8 SGI 400.1 THA 3.32 EL1 2976.1 EL2 208.9 ALF 8.89

LAUNCH DATE JAN 2 1969

FLIGHT TIME 210.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 590.320

RL 147.09 LAL -.00 LOL 101.43 VL 27.251 GAL 8.35 AZL 87.11 HCA 277.36 SMA 124.98 ECC .22748 INC 2.8908 V1 30.288  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.213 GAP 10.77 AZP 89.63 TAL 148.66 TAP 66.02 RCA 96.55 APO 153.41 V2 34.932  
 RC 155.812 GL 14.66 GP -7.15 ZAL 42.42 ZAP 165.47 ETS 333.47 ZAE 125.25 ETE 184.33 ZAC 126.61 ETC 170.00 CLP-167.32

PLANETOCENTRIC CONIC

C3 26.880 VHL 5.374 DLA 34.70 RAL 55.42 RAD 6568.2 VEL 12.258 PTH 2.21 VHP 7.412 DPA 3.12 RAP 32.91 ECC 1.4753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.05 23 38 34 4119.19 -20.99 177.51 291.79 61.71 24 47 13 3519.2 -24.60 170.19  
 110.95 4 52 47 3133.44 -20.97 103.84 291.78 61.70 5 45 0 2533.4 -24.59 96.51  
 69.05 23 38 34 4119.19 -20.99 177.51 291.79 61.71 24 47 13 3519.2 -24.60 170.19  
 110.95 4 52 47 3133.44 -20.97 103.84 291.78 61.70 5 45 0 2533.4 -24.59 96.51  
 69.05 23 38 34 4119.19 -20.99 177.51 291.79 61.71 24 47 13 3519.2 -24.60 170.19  
 110.95 4 52 47 3133.44 -20.97 103.84 291.78 61.70 5 45 0 2533.4 -24.59 96.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2064 TRA 4.1595 TC3-2.4874 BAU .9804 SGT 6463.6 SGR 541.1 SCS 289.4 ST 2856.4 SR 496.8 SS 894.5  
 RDE .4617 RRA .1732 RC3 .0043 FAU .02494 RRT .6740 RRF .6639 RTF .9800 CRT .8928 CRS -.8326 CST -.9927  
 FDE .9823 FRA 2.3743 FC3 -.7476 BSP 21237 SGB 6486.2 R23 .0011 R13 .9800 LSA 3023.9 MSA 248.0 SSA 13.2  
 BDE 2.2542 BRA 4.1631 BC3 2.4875 FSP -1030 SGI 6473.9 SGI 399.1 THA 3.24 EL1 2890.8 EL2 221.2 ALF 8.88

LAUNCH DATE JAN 2 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 595.811

RL 147.09 LAL -.00 LOL 101.43 VL 27.226 GAL 8.92 AZL 87.19 HCA 280.55 SMA 124.82 ECC .23484 INC 2.8089 V1 30.288  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.206 GAP 11.33 AZP 89.49 TAL 147.58 TAP 68.13 RCA 95.51 APO 154.13 V2 34.945  
 RC 157.792 GL 13.61 GP -6.89 ZAL 40.93 ZAP 166.86 ETS 331.86 ZAE 124.96 ETE 184.15 ZAC 128.44 ETC 169.80 CLP-168.56

PLANETOCENTRIC CONIC

C3 31.373 VHL 5.601 DLA 33.97 RAL 57.18 RAD 6568.2 VEL 12.359 PTH 2.23 VHP 7.744 DPA 4.09 RAP 34.81 ECC 1.5163  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.41 23 53 40 4115.36 -19.92 176.60 294.65 61.90 25 2 15 3515.4 -23.52 169.33  
 109.59 4 51 43 3178.78 -19.91 106.78 294.64 61.89 5 44 42 2578.8 -23.50 99.50  
 70.41 23 53 40 4115.36 -19.92 176.60 294.65 61.90 25 2 15 3515.4 -23.52 169.33  
 109.59 4 51 43 3178.78 -19.91 106.78 294.64 61.89 5 44 42 2578.8 -23.50 99.50  
 110.00 5 23 23 3082.16 -22.80 100.84 296.24 63.82 6 14 45 2482.2 -26.13 93.26  
 110.00 4 25 7 3259.97 -17.08 111.45 292.98 59.93 5 19 27 2660.0 -20.94 104.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1723 TRA 4.4902 TC3-2.2861 BAU .9588 SGT 6493.6 SGR 535.7 SCS 272.3 ST 2775.8 SR 489.1 SS 854.0  
 RDE .4734 RRA .1856 RC3 .0038 FAU .02211 RRT .6706 RRF .6612 RTF .9800 CRT .8767 CRS -.8136 CST -.9929  
 FDE .9034 FRA 2.3791 FC3 -.6102 BSP 21407 SGB 6513.7 R23 .0021 R13 .9800 LSA 2933.7 MSA 256.0 SSA 13.0  
 BDE 2.2233 BRA 4.4940 BC3 2.2861 FSP -970 SGI 6503.6 SGI 396.8 THA 3.18 EL1 2808.8 EL2 232.5 ALF 8.84

LAUNCH DATE JAN 2 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 601.223

RL 147.09 LAL -.00 LOL 101.43 VL 27.200 GAL 9.54 AZL 87.27 HCA 283.74 SMA 124.66 ECC .24283 INC 2.7252 V1 30.288
RP 108.41 LAP -2.85 LOP 25.18 VP 37.200 GAP 11.93 AZP 89.35 TAL 146.51 TAP 70.24 RCA 94.38 APO 154.93 V2 34.957
RC 190.953 GL 12.59 GP -6.65 ZAL 39.48 ZAP 167.82 ETS 329.88 ZAE 124.67 ETE 183.98 ZAC 130.30 ETC 169.56 CLP-169.77

PLANETOCENTRIC CONIC

C3 34.228 VHL 5.850 DLA 33.23 RAL 58.86 RAD 6568.3 VEL 12.474 PTH 2.26 VHP 8.098 DPA 5.04 RAP 36.35 ECC 1.5633
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.83 0 13 7 4110.33 -18.83 175.60 297.52 62.10 1 21 37 3510.3 -22.41 168.37
108.17 4 49 39 3227.69 -18.82 109.96 297.51 62.09 5 43 27 2627.7 -22.40 102.73
71.83 0 13 7 4110.33 -18.83 175.60 297.52 62.10 1 21 37 3510.3 -22.41 168.37
108.17 4 49 39 3227.69 -18.82 109.96 297.51 62.09 5 43 27 2627.7 -22.40 102.73
110.00 6 1 50 3006.25 -25.00 96.04 300.76 65.89 6 51 56 2406.3 -28.04 88.18
110.00 4 0 7 3379.77 -12.87 118.18 293.95 58.06 4 56 27 2779.8 -17.00 111.51

DIFFERENTIAL CORRECTIONS

TDE 2.1375 TRA 4.8423 TC3-2.0850 BAU .9541
RDE .4856 RRA .1995 RC3 .0031 FAU .01944
FDE .8319 FRA 2.3885 FC3 -.4918 B9P 21557
BDE 2.1920 BRA 4.8464 BC3 2.0850 F9P -915

MID-COURSE EXECUTION ACCURACY

SGT 6517.5 SGR 529.9 SG3 256.3
RRT .6692 RRF .6604 RTF .9801
SGB 6539.0 R23 .0028 R13 .9801
SG1 6527.2 SGT 393.2 THA 3.13

ORBIT DETERMINATION ACCURACY

ST 2698.2 SR 480.7 SS 818.0
CRT .8594 CR8 -.7940 CST -.9931
LSA 2848.0 MSA 263.5 SSA 12.7
EL1 2729.9 EL2 242.9 ALF 8.78

LAUNCH DATE JAN 2 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 606.546

RL 147.09 LAL -.00 LOL 101.43 VL 27.175 GAL 10.20 AZL 87.38 HCA 286.93 SMA 124.49 ECC .25155 INC 2.6391 V1 30.288
RP 108.37 LAP -2.32 LOP 28.37 VP 37.193 GAP 12.56 AZP 89.23 TAL 145.46 TAP 72.38 RCA 93.18 APO 155.81 V2 34.970
RC 182.097 GL 11.80 GP -6.44 ZAL 38.08 ZAP 168.93 ETS 327.45 ZAE 124.40 ETE 183.84 ZAC 132.18 ETC 169.28 CLP-170.98

PLANETOCENTRIC CONIC

C3 37.506 VHL 6.124 DLA 32.51 RAL 60.47 RAD 6568.5 VEL 12.605 PTH 2.29 VHP 8.477 DPA 5.96 RAP 38.12 ECC 1.6172
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.33 0 29 11 4103.62 -17.73 174.47 300.39 62.30 1 37 35 3503.6 -21.29 167.29
106.67 4 46 28 3280.61 -17.71 113.41 300.38 62.29 5 41 7 2680.6 -21.28 106.23
73.33 0 29 11 4103.62 -17.73 174.47 300.39 62.30 1 37 35 3503.6 -21.29 167.29
106.67 4 46 28 3280.61 -17.71 113.41 300.38 62.29 5 41 7 2680.6 -21.28 106.23
110.00 6 28 9 2968.89 -26.07 93.48 304.63 67.06 7 17 36 2366.9 -28.94 85.47
110.00 3 46 39 3465.35 -9.74 122.84 295.59 57.07 4 44 24 2865.3 -14.01 116.34

DIFFERENTIAL CORRECTIONS

TDE 2.1071 TRA 5.2226 TC3-1.8816 BAU .9435
RDE .4984 RRA .2155 RC3 .0027 FAU .01681
FDE .7698 FRA 2.3994 FC3 -.3881 B9P 21599
BDE 2.1652 BRA 5.2270 BC3 1.8816 F9P -858

MID-COURSE EXECUTION ACCURACY

SGT 6539.5 SGR 524.0 SG3 241.8
RRT .6701 RRF .6619 RTF .9802
SGB 6560.5 R23 .0036 R13 .9803
SG1 6549.0 SGT 388.4 THA 3.08

ORBIT DETERMINATION ACCURACY

ST 2629.0 SR 471.8 SS 787.7
CRT .8416 CR8 -.7748 CST -.9934
LSA 2771.6 MSA 269.8 SSA 12.4
EL1 2659.1 EL2 252.0 ALF 8.67

LAUNCH DATE JAN 2 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 611.763

RL 147.09 LAL -.00 LOL 101.43 VL 27.149 GAL 10.91 AZL 87.45 HCA 290.12 SMA 124.33 ECC .26106 INC 2.5501 V1 30.288
RP 108.33 LAP -2.39 LOP 31.57 VP 37.187 GAP 13.24 AZP 89.12 TAL 144.43 TAP 74.55 RCA 91.87 APO 156.79 V2 34.983
RC 184.221 GL 10.64 GP -6.24 ZAL 36.74 ZAP 170.00 ETS 324.42 ZAE 124.12 ETE 183.72 ZAC 134.07 ETC 168.98 CLP-172.17

PLANETOCENTRIC CONIC

C3 41.280 VHL 6.425 DLA 31.78 RAL 62.01 RAD 6568.6 VEL 12.753 PTH 2.32 VHP 8.886 DPA 6.86 RAP 39.92 ECC 1.6794
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.93 0 45 58 4094.55 -16.60 173.16 303.25 62.50 1 54 13 3494.6 -20.16 166.03
105.07 4 41 52 3338.12 -16.59 117.18 303.25 62.50 5 37 31 2738.1 -20.14 110.04
74.93 0 45 58 4094.55 -16.60 173.16 303.25 62.50 1 54 13 3494.6 -20.16 166.03
105.07 4 41 52 3338.12 -16.59 117.18 303.25 62.50 5 37 31 2738.1 -20.14 110.04
110.00 6 49 57 2941.09 -26.74 91.77 308.29 67.87 7 38 58 2341.1 -29.50 83.67
110.00 3 37 4 3539.59 -6.97 128.80 297.46 56.45 4 36 4 2939.6 -11.33 120.42

DIFFERENTIAL CORRECTIONS

TDE 2.0724 TRA 5.6246 TC3-1.6874 BAU .9312
RDE .5112 RRA .2328 RC3 .0021 FAU .01443
FDE .7117 FRA 2.4135 FC3 -.3027 B9P 21731
BDE 2.1345 BRA 5.6295 BC3 1.6874 F9P -810

MID-COURSE EXECUTION ACCURACY

SGT 6552.4 SGR 517.2 SG3 226.0
RRT .6721 RRF .6642 RTF .9806
SGB 6572.8 R23 .0039 R13 .9806
SG1 6561.7 SGT 382.4 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 2559.9 SR 461.7 SS 759.9
CRT .8223 CR8 -.7547 CST -.9938
LSA 2695.9 MSA 275.3 SSA 12.1
EL1 2588.3 EL2 259.7 ALF 8.52

LAUNCH DATE JAN 2 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 616.856

RL 147.09 LAL -.00 LOL 101.43 VL 27.124 GAL 11.69 AZL 87.54 HCA 293.32 SMA 124.17 ECC .27148 INC 2.4572 V1 30.288
RP 108.29 LAP -2.26 LOP 34.77 VP 37.181 GAP 13.97 AZP 89.03 TAL 143.43 TAP 76.75 RCA 90.46 APO 157.88 V2 34.996
RC 186.326 GL 9.70 GP -6.06 ZAL 35.46 ZAP 171.02 ETS 320.61 ZAE 123.83 ETE 183.61 ZAC 135.96 ETC 168.58 CLP-173.36

PLANETOCENTRIC CONIC

C3 45.642 VHL 6.756 DLA 31.07 RAL 63.46 RAD 6568.7 VEL 12.923 PTH 2.36 VHP 9.326 DPA 7.73 RAP 41.74 ECC 1.7512
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.66 1 3 30 4081.92 -15.48 171.60 306.11 62.72 2 11 52 3481.9 -19.01 164.50
103.34 4 35 39 3401.34 -15.46 121.34 306.10 62.72 5 32 20 2801.3 -19.00 114.24
76.66 1 3 30 4081.92 -15.48 171.60 306.11 62.72 2 11 52 3481.9 -19.01 164.50
103.34 4 35 39 3401.34 -15.46 121.34 306.10 62.72 5 32 20 2801.3 -19.00 114.24
110.00 7 9 0 2923.36 -27.19 90.59 311.81 68.44 7 57 44 2323.4 -29.87 82.43
110.00 3 29 35 3607.90 -4.39 130.40 299.47 56.07 4 29 43 3007.9 -8.81 124.11

DIFFERENTIAL CORRECTIONS

TDE 2.0391 TRA 6.0560 TC3-1.4975 BAU .9138
RDE .5241 RRA .2517 RC3 .0017 FAU .01214
FDE .8597 FRA 2.4319 FC3 -.2303 B9P 21837
BDE 2.1053 BRA 6.0612 BC3 1.4975 F9P -765

MID-COURSE EXECUTION ACCURACY

SGT 6580.2 SGR 509.6 SG3 215.3
RRT .6755 RRF .6679 RTF .9810
SGB 6579.9 R23 .0041 R13 .9810
SG1 6589.2 SGT 373.3 THA 3.01

ORBIT DETERMINATION ACCURACY

ST 2495.9 SR 450.8 SS 736.3
CRT .8028 CR8 -.7350 CST -.9942
LSA 2626.2 MSA 279.5 SSA 11.8
EL1 2522.3 EL2 266.0 ALF 8.34

LAUNCH DATE JAN 3 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 14 1969

HELIOCENTRIC CONIC

DISTANCE 147.854

RL 147.09 LAL -.00 LOL 102.45 VL 20.392 GAL 11.30 AZL 85.90 HCA 54.72 SMA 95.57 ECC .56378 INC 4.1043 V1 30.288  
 RP 107.55 LAP 3.35 LOP 157.10 VP 32.853 GAP -33.64 AZP 87.63 TAL 170.97 TAP 225.69 RCA 41.69 APO 149.43 V2 35.235  
 RC 54.864 GL 7.36 GP 2.50 ZAL 69.07 ZAP 23.47 ETS 186.60 ZAE 153.04 ETE 196.25 ZAC 94.28 ETC 166.35 CLP 23.34

PLANETOCENTRIC CONIC

C3 124.959 VHL 11.178 DLA 19.61 RAL 28.68 RAD 6570.3 VEL 15.694 PTH 2.79 VHP 19.957 DPA -.55 RAP .72 ECC 3.0565  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 40 56 3312.10 -24.35 118.49 290.16 75.06 4 36 10 2712.1 -26.16 110.29  
 90.00 21 9 13 4633.18 13.54 196.84 276.81 64.89 22 26 26 4033.2 10.04 189.71  
 100.00 5 14 38 3010.02 -26.38 96.86 290.75 75.41 6 4 49 2410.0 -28.13 88.49  
 100.00 22 18 13 4410.49 15.43 179.34 275.68 64.08 23 31 44 3810.5 11.82 172.41  
 110.00 6 49 07 2713.40 -31.57 75.83 292.26 76.15 7 34 40 2113.4 -33.15 66.96  
 110.00 22 59 54 4279.87 20.20 166.88 273.12 61.82 24 11 14 3679.9 16.28 159.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5153 TRA-1.3860 TC3 -.1014 BAU .1752 SGT 830.8 SGR 439.9 SCS 36.5 ST 347.8 SR 414.0 SS 323.0  
 RDE -.8033 RRA .2629 RC3 -.0267 FAU .01480 RRT .0394 RRF -.0416 RTF -.6519 CRT .6879 CRS .8051 CST .9825  
 FDE .3151 FRA .5796 FC3 -.1026 BSP 2255 SGB 939.9 R23 -.0059 R13 -.6521 LSA 587.9 MSA 225.5 SSA 13.7  
 BDE .9543 BRA 1.4107 BC3 .1049 FSP -76 SGI 830.9 SGT 439.4 THA 1.66 EL1 498.4 EL2 209.7 ALF 52.13

LAUNCH DATE JAN 3 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 16 1969

HELIOCENTRIC CONIC

DISTANCE 154.104

RL 147.09 LAL -.00 LOL 102.45 VL 20.968 GAL 10.80 AZL 86.02 HCA 57.97 SMA 97.24 ECC .53737 INC 3.9825 V1 30.288  
 RP 107.97 LAP 3.38 LOP 160.35 VP 33.207 GAP -31.99 AZP 87.89 TAL 170.39 TAP 228.38 RCA 44.98 APO 149.49 V2 35.229  
 RC 53.197 GL 7.76 GP 2.59 ZAL 68.25 ZAP 21.93 ETS 187.38 ZAE 154.36 ETE 197.44 ZAC 95.90 ETC 166.33 CLP 21.79

PLANETOCENTRIC CONIC

C3 112.380 VHL 10.601 DLA 20.28 RAL 29.37 RAD 6570.1 VEL 15.288 PTH 2.74 VHP 19.089 DPA .23 RAP 2.22 ECC 2.8495  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 36 8 3318.86 -24.23 118.95 289.44 74.88 4 31 27 2718.9 -26.07 110.76  
 90.00 21 19 33 4583.88 12.10 193.74 276.10 64.20 22 35 57 3983.9 8.55 186.88  
 100.00 5 10 37 3084.18 -26.31 97.15 290.05 75.27 6 0 51 2414.2 -28.07 88.79  
 100.00 22 27 45 4363.79 14.02 176.59 275.12 63.33 23 40 29 3763.8 10.33 169.74  
 110.00 6 46 57 2712.82 -31.58 75.79 291.58 76.18 7 32 9 2112.8 -35.15 66.92  
 110.00 23 7 55 4237.91 18.83 164.40 272.47 60.93 24 18 33 3637.9 14.81 157.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5138 TRA-1.3785 TC3 -.1035 BAU .1616 SGT 869.6 SGR 443.8 SCS 39.8 ST 366.0 SR 418.5 SS 338.7  
 RDE -.7703 RRA .2437 RC3 -.0293 FAU .01518 RRT .0459 RRF -.0484 RTF -.6717 CRT .6895 CRS .8074 CST .9824  
 FDE .3278 FRA .5892 FC3 -.1170 BSP 2411 SGB 976.3 R23 -.0067 R13 -.6719 LSA 608.5 MSA 231.0 SSA 13.9  
 BDE .9280 BRA 1.3999 BC3 .1076 FSP -87 SGI 869.9 SGT 443.1 THA 1.81 EL1 512.0 EL2 216.7 ALF 50.52

LAUNCH DATE JAN 3 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 18 1969

HELIOCENTRIC CONIC

DISTANCE 160.423

RL 147.09 LAL -.00 LOL 102.45 VL 21.503 GAL 10.31 AZL 86.13 HCA 61.21 SMA 98.88 ECC .51196 INC 3.8691 V1 30.288  
 RP 107.99 LAP 3.39 LOP 163.60 VP 33.540 GAP -30.42 AZP 88.13 TAL 169.85 TAP 231.05 RCA 48.26 APO 149.51 V2 35.222  
 RC 51.811 GL 8.16 GP 2.69 ZAL 67.50 ZAP 20.42 ETS 188.28 ZAE 155.83 ETE 198.80 ZAC 97.52 ETC 166.28 CLP 20.23

PLANETOCENTRIC CONIC

C3 101.125 VHL 10.056 DLA 20.93 RAL 29.99 RAD 6570.0 VEL 14.915 PTH 2.69 VHP 18.256 DPA 1.02 RAP 3.73 ECC 2.6643  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 30 57 3324.86 -24.12 119.36 288.57 74.70 4 26 21 2724.9 -25.99 111.18  
 90.00 21 29 40 4533.81 10.59 190.83 275.51 63.59 22 45 13 3933.8 6.96 184.03  
 100.00 5 6 17 3017.41 -26.23 97.37 289.20 75.17 5 56 35 2417.4 -28.03 89.02  
 100.00 22 37 0 4316.49 12.56 173.84 274.49 62.65 23 48 56 3716.5 8.80 167.07  
 110.00 6 44 11 2711.14 -31.61 75.67 290.76 76.24 7 29 22 2111.1 -33.17 66.79  
 110.00 23 13 36 4195.52 17.41 161.93 271.75 60.11 24 25 31 3595.5 13.31 155.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5127 TRA-1.3699 TC3 -.1044 BAU .1476 SGT 909.8 SGR 446.9 SCS 43.4 ST 385.0 SR 422.4 SS 355.0  
 RDE -.7379 RRA .2251 RC3 -.0320 FAU .01581 RRT .0530 RRF -.0359 RTF -.6908 CRT .6917 CRS .8100 CST .9822  
 FDE .3410 FRA .6189 FC3 -.1336 BSP 2583 SGB 1013.6 R23 -.0077 R13 -.6911 LSA 629.9 MSA 236.0 SSA 14.1  
 BDE .8985 BRA 1.3883 BC3 .1092 FSP -97 SGI 910.2 SGT 446.1 THA 1.96 EL1 526.2 EL2 223.2 ALF 48.83

LAUNCH DATE JAN 3 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC

DISTANCE 168.803

RL 147.09 LAL -.00 LOL 102.45 VL 22.001 GAL 9.82 AZL 86.24 HCA 64.45 SMA 100.51 ECC .48756 INC 3.7626 V1 30.288  
 RP 107.81 LAP 3.39 LOP 166.84 VP 33.854 GAP -28.92 AZP 88.37 TAL 169.34 TAP 233.79 RCA 51.50 APO 149.51 V2 35.215  
 RC 50.116 GL 8.57 GP 2.80 ZAL 66.84 ZAP 18.92 ETS 189.32 ZAE 157.46 ETE 200.40 ZAC 99.14 ETC 166.22 CLP 18.72

PLANETOCENTRIC CONIC

C3 91.048 VHL 9.542 DLA 21.55 RAL 30.53 RAD 6569.8 VEL 14.574 PTH 2.64 VHP 17.454 DPA 1.83 RAP 5.25 ECC 2.4984  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 25 23 3330.18 -24.03 119.72 287.56 74.55 4 20 53 2730.2 -25.92 111.56  
 90.00 21 39 33 4482.99 9.04 187.90 274.85 63.05 22 34 16 3883.0 5.35 181.16  
 100.00 5 1 39 3019.77 -26.21 97.54 288.21 75.09 5 51 59 2419.8 -28.00 89.19  
 100.00 22 45 58 4268.63 11.05 171.09 273.79 62.05 23 57 7 3668.6 7.22 164.39  
 110.00 6 41 10 2708.41 -31.65 75.47 289.79 76.36 7 26 19 2108.4 -33.20 66.58  
 110.00 23 22 56 4152.76 15.94 159.48 270.97 59.36 24 32 9 3552.8 11.78 152.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5147 TRA-1.3627 TC3 -.1049 BAU .1345 SGT 953.8 SGR 449.4 SCS 47.4 ST 406.5 SR 425.8 SS 372.2  
 RDE -.7039 RRA .2070 RC3 -.0347 FAU .01607 RRT .0822 RRF -.0647 RTF -.7086 CRT .6959 CRS .8131 CST .9824  
 FDE .3553 FRA .6392 FC3 -.1528 BSP 2701 SGB 1054.3 R23 -.0082 R13 -.7088 LSA 653.5 MSA 240.3 SSA 14.3  
 BDE .8736 BRA 1.3784 BC3 .1105 FSP -107 SGI 954.3 SGT 448.2 THA 2.16 EL1 542.2 EL2 229.2 ALF 46.91

LAUNCH DATE JAN 3 1969 FLIGHT TIME 78.00 ARRIVAL DATE MAR 22 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 102.45 VL 22.464 GAL 9.35 AZL 86.34 HCA 67.68 SMA 102.10 ECC .46419 INC 3.6618 V1 30.288  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.148 GAP -27.50 AZP 88.61 TAL 168.87 TAP 236.55 RCA 54.70 APO 149.49 V2 35.207  
 RC 48.721 GL 8.99 GP 2.92 ZAL 66.25 ZAP 17.44 ETS 190.56 ZAE 159.24 ETE 202.31 ZAC 100.77 ETC 166.13 CLP 17.20

Distance 173.244

Planetocentric Conic: C3 82.020 VHL 9.056 DLA 22.16 RAL 31.00 RAD 6569.6 VEL 14.261 PTH 2.60 VHP 16.682 DPA 2.65 RAP 6.76 ECC 2.3498  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 19 26 3334.91 -23.94 120.04 286.41 74.41 4 15 1 2734.9 -25.85 111.89  
 90.00 21 49 13 4431.48 7.44 184.97 274.12 62.60 23 3 4 3631.5 3.71 178.27  
 100.00 4 56 42 3021.33 -26.18 97.64 287.08 75.04 5 47 3 2421.3 -27.98 89.30  
 100.00 22 54 39 4220.29 9.49 168.34 273.02 61.52 24 4 59 3620.3 5.62 161.70  
 110.00 6 37 55 2704.65 -31.71 75.19 288.68 76.51 7 22 59 2104.7 -33.24 66.30  
 110.00 23 29 55 4109.73 14.44 157.06 270.12 58.67 24 38 25 3509.7 10.18 150.54

Differential Corrections: TDE -.5152 TRA-1.3525 TC3 -.1029 BAU .1201 SGT 997.3 SGR 451.1 SCS 51.7 ST 427.9 SR 428.5 SS 390.0  
 RDE -.6746 RRA .1693 RC3 -.0375 FAU .01659 RRT .0715 RRF -.0744 RTF -.7260 CRT .6999 CRS .8166 CST .9825  
 FDE .3702 FRA .6593 FC3 -.1751 BSP 2873 SGB 1094.6 R23 -.0093 R13 -.7263 LSA 677.6 MSA 243.9 SSA 14.5  
 BDE .8488 BRA 1.3657 BC3 .1096 FSP -119 SGI 998.0 SGI 449.7 THA 2.32 EL1 558.3 EL2 234.6 ALF 45.06

Orbit Determination Accuracy: ST 427.9 SR 428.5 SS 390.0 CRT .6999 CRS .8166 CST .9825 LSA 677.6 MSA 243.9 SSA 14.5 EL1 558.3 EL2 234.6 ALF 45.06

LAUNCH DATE JAN 3 1969 FLIGHT TIME 80.00 ARRIVAL DATE MAR 24 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 102.45 VL 22.894 GAL 8.68 AZL 86.43 HCA 70.92 SMA 103.65 ECC .44186 INC 3.5656 V1 30.288  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.424 GAP -26.14 AZP 88.83 TAL 168.44 TAP 239.36 RCA 57.85 APO 149.46 V2 35.198  
 RC 47.437 GL 9.42 GP 3.06 ZAL 65.74 ZAP 15.98 ETS 192.05 ZAE 161.16 ETE 204.65 ZAC 102.40 ETC 166.01 CLP 15.69

Distance 179.734

Planetocentric Conic: C3 73.927 VHL 8.598 DLA 22.74 RAL 31.39 RAD 6569.4 VEL 13.974 PTH 2.55 VHP 15.939 DPA 3.49 RAP 8.28 ECC 2.2167  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 7 3339.13 -23.86 120.32 285.12 74.29 4 8 46 2739.1 -25.79 112.18  
 90.00 21 58 39 4379.37 5.80 182.02 273.32 62.23 23 11 38 3779.4 2.03 175.36  
 100.00 4 51 25 3022.13 -26.17 97.70 285.82 75.01 5 41 48 2422.1 -27.97 89.36  
 100.00 23 3 1 4171.61 7.90 165.81 272.18 61.08 24 12 33 3571.6 3.98 159.01  
 110.00 6 34 25 2699.94 -31.78 74.84 287.44 76.70 7 19 24 2099.9 -33.29 65.94  
 110.00 23 36 32 4066.56 12.89 154.67 269.20 58.06 24 44 18 3466.6 8.58 148.22

Differential Corrections: TDE -.5164 TRA-1.3412 TC3 -.0990 BAU .1056 SGT 1042.4 SGR 452.1 SCS 56.5 ST 450.5 SR 430.7 SS 408.6  
 RDE -.6439 RRA .1725 RC3 -.0402 FAU .01716 RRT .0820 RRF -.0853 RTF -.7427 CRT .7050 CRS .8204 CST .9826  
 FDE .3880 FRA .6804 FC3 -.2010 BSP 3051 SGB 1136.2 R23 -.0104 R13 -.7430 LSA 703.1 MSA 248.8 SSA 14.7  
 BDE .8254 BRA 1.3522 BC3 .1069 FSP -132 SGI 1043.2 SGI 450.3 THA 2.50 EL1 575.6 EL2 239.1 ALF 43.18

Orbit Determination Accuracy: ST 450.5 SR 430.7 SS 408.6 CRT .7050 CRS .8204 CST .9826 LSA 703.1 MSA 248.8 SSA 14.7 EL1 575.6 EL2 239.1 ALF 43.18

LAUNCH DATE JAN 3 1969 FLIGHT TIME 82.00 ARRIVAL DATE MAR 26 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 102.45 VL 23.295 GAL 8.42 AZL 86.53 HCA 74.15 SMA 105.17 ECC .42058 INC 3.4731 V1 30.288  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.682 GAP -24.84 AZP 89.05 TAL 168.05 TAP 242.20 RCA 60.94 APO 149.41 V2 35.189  
 RC 48.274 GL 9.84 GP 3.20 ZAL 65.32 ZAP 14.54 ETS 193.86 ZAE 163.22 ETE 207.62 ZAC 104.03 ETC 165.87 CLP 14.19

Distance 186.271

Planetocentric Conic: C3 66.672 VHL 8.165 DLA 23.30 RAL 31.70 RAD 6569.3 VEL 13.712 PTH 2.51 VHP 15.224 DPA 4.34 RAP 9.79 ECC 2.0972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 6 23 3342.93 -23.79 120.58 283.71 74.18 4 2 6 2742.9 -25.74 112.45  
 90.00 22 7 51 4326.77 4.12 179.06 272.45 61.96 23 19 58 3726.8 .34 172.42  
 100.00 4 49 51 3022.23 -26.17 97.70 284.43 75.01 5 36 13 2422.2 -27.97 89.37  
 100.00 23 11 4 4122.70 6.28 162.88 271.27 60.72 24 19 47 3522.7 2.33 156.32  
 110.00 6 30 40 2694.29 -31.87 74.43 286.06 76.93 7 15 35 2094.3 -33.34 65.51  
 110.00 23 42 45 4023.40 11.33 152.30 268.21 57.53 24 49 48 3423.4 6.96 145.93

Differential Corrections: TDE -.5181 TRA-1.3283 TC3 -.0926 BAU .0909 SGT 1088.6 SGR 452.5 SCS 61.7 ST 474.2 SR 432.3 SS 428.1  
 RDE -.6140 RRA .1561 RC3 -.0428 FAU .01781 RRT .0937 RRF -.0975 RTF -.7587 CRT .7109 CRS .8247 CST .9829  
 FDE .4029 FRA .7015 FC3 -.2312 BSP 3238 SGB 1178.9 R23 -.0118 R13 -.7590 LSA 730.0 MSA 248.9 SSA 14.8  
 BDE .8034 BRA 1.3375 BC3 .1020 FSP -147 SGI 1089.6 SGI 450.1 THA 2.69 EL1 594.0 EL2 242.7 ALF 41.29

Orbit Determination Accuracy: ST 474.2 SR 432.3 SS 428.1 CRT .7109 CRS .8247 CST .9829 LSA 730.0 MSA 248.9 SSA 14.8 EL1 594.0 EL2 242.7 ALF 41.29

LAUNCH DATE JAN 3 1969 FLIGHT TIME 84.00 ARRIVAL DATE MAR 28 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 102.45 VL 23.667 GAL 7.97 AZL 86.62 HCA 77.39 SMA 106.65 ECC .40032 INC 3.3836 V1 30.288  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.923 GAP -23.59 AZP 89.26 TAL 167.70 TAP 245.09 RCA 63.96 APO 149.35 V2 35.179  
 RC 45.244 GL 10.27 GP 3.36 ZAL 64.97 ZAP 13.11 ETS 196.10 ZAE 165.39 ETE 211.51 ZAC 105.65 ETC 165.70 CLP 12.68

Distance 192.849

Planetocentric Conic: C3 60.186 VHL 7.757 DLA 23.84 RAL 31.93 RAD 6569.1 VEL 13.473 PTH 2.46 VHP 14.534 DPA 5.20 RAP 11.30 ECC 1.9902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 59 17 3346.37 -23.73 120.81 282.18 74.08 3 55 3 2746.4 -25.69 112.69  
 90.00 22 16 48 4273.80 2.42 176.10 271.51 61.78 23 26 2 3673.8 -1.37 169.47  
 100.00 4 40 0 3021.66 -26.18 97.67 282.92 75.03 5 30 21 2421.7 -27.98 89.33  
 100.00 23 18 47 4073.74 4.64 160.17 270.28 60.44 24 26 40 3473.7 .67 153.63  
 110.00 6 26 43 2667.76 -31.97 73.94 284.56 77.20 7 11 31 2087.8 -33.40 65.01  
 110.00 23 48 33 3980.40 9.75 149.98 267.16 57.07 24 54 53 3380.4 5.34 143.66

Differential Corrections: TDE -.5206 TRA-1.3145 TC3 -.0835 BAU .0783 SGT 1136.4 SGR 452.1 SCS 67.4 ST 499.3 SR 433.4 SS 448.6  
 RDE -.5849 RRA .1402 RC3 -.0452 FAU .01852 RRT .1070 RRF -.1114 RTF -.7738 CRT .7178 CRS .8294 CST .9832  
 FDE .4211 FRA .7233 FC3 -.2665 BSP 3422 SGB 1223.1 R23 -.0133 R13 -.7742 LSA 758.7 MSA 250.2 SSA 15.0  
 BDE .7831 BRA 1.3220 BC3 .0949 FSP -163 SGI 1137.7 SGI 449.1 THA 2.89 EL1 613.9 EL2 245.4 ALF 39.41

Orbit Determination Accuracy: ST 499.3 SR 433.4 SS 448.6 CRT .7178 CRS .8294 CST .9832 LSA 758.7 MSA 250.2 SSA 15.0 EL1 613.9 EL2 245.4 ALF 39.41

LAUNCH DATE JAN 3 1969

FLIGHT TIME 86.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 199.463

RL 147.09 LAL -.00 LOL 102.45 VL 24.013 GAL 7.54 AZL 86.70 HCA 80.62 SMA 108.08 ECC .38109 INC 3.2963 V1 30.288  
 RP 107.75 LAP 3.25 LOP 183.05 VP 35.148 GAP -22.40 AZP 89.46 TAL 167.40 TAP 248.02 RCA 66.89 APO 149.27 V2 35.169  
 RC 44.357 GL 10.70 GP 3.54 ZAL 64.71 ZAP 11.72 ETS 198.93 ZAE 167.61 ETE 216.67 ZAC 107.26 ETC 165.50 CLP 11.18

PLANETOCENTRIC CONIC

C3 54.333 VHL 7.371 DLA 24.34 RAL 32.08 RAD 6569.0 VEL 13.255 PTH 2.42 VHP 13.870 DPA 6.07 RAP 12.81 ECC 1.8942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 49 3349.51 -23.67 121.02 290.53 73.99 3 47 38 2749.5 -25.64 112.90  
 90.00 22 25 29 4220.64 .71 173.13 270.50 81.69 23 35 50 3620.6 -3.08 166.50  
 100.00 4 33 53 3020.43 -26.20 97.58 281.30 75.07 5 24 13 2420.4 -27.99 89.24  
 100.00 23 26 6 4024.95 3.00 157.48 269.22 60.24 24 33 11 3425.0 -.98 150.96  
 110.00 6 22 34 2680.36 -32.08 73.40 262.84 77.51 7 7 15 2080.4 -33.47 64.44  
 110.00 23 53 54 3937.78 8.16 147.70 266.04 56.69 24 59 31 3337.8 3.72 141.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5236 TRA-1.2993 TC3 -.0710 BAU .0619 SGT 1185.5 SCR 451.1 S63 73.7 ST 525.6 SR 434.0 SS 470.2  
 RDE -.5568 RRA .1249 RC3 -.0472 FAU .01932 RRT .1220 RRF -.1270 RTF -.7882 CRT .7256 CRS .8346 CST .9836  
 FDE .4407 FRA .7458 FC3 -.3078 B8P 3619 SGB 1268.5 R23 -.0149 R13 -.7886 LSA 789.1 MSA 250.6 SSA 15.2  
 BDE .7643 BRA 1.3053 BC3 .0852 F8P -181 S61 1187.0 S62 447.2 THA 3.10 EL1 635.3 EL2 247.1 ALF 37.57

LAUNCH DATE JAN 3 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 206.108

RL 147.09 LAL -.00 LOL 102.45 VL 24.334 GAL 7.12 AZL 86.79 HCA 83.85 SMA 109.47 ECC .36287 INC 3.2107 V1 30.288  
 RP 107.79 LAP 3.19 LOP 186.28 VP 35.358 GAP -21.28 AZP 89.68 TAL 167.15 TAP 251.00 RCA 69.75 APO 149.19 V2 35.158  
 RC 43.623 GL 11.13 GP 3.73 ZAL 64.52 ZAP 10.36 ETS 202.59 ZAE 169.82 ETE 224.68 ZAC 108.85 ETC 165.26 CLP 9.67

PLANETOCENTRIC CONIC

C3 49.103 VHL 7.007 DLA 24.82 RAL 32.15 RAD 6568.8 VEL 13.056 PTH 2.38 VHP 13.231 DPA 6.96 RAP 14.30 ECC 1.8081  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 0 3352.35 -23.62 121.21 278.77 73.91 3 39 53 2752.4 -25.60 113.10  
 90.00 22 33 51 4167.52 -5.01 170.17 269.41 81.70 23 43 19 3567.5 -4.79 163.52  
 100.00 4 27 33 3018.52 -26.23 97.45 279.57 75.13 5 17 51 2418.5 -28.02 89.10  
 100.00 23 33 0 3976.58 1.36 154.82 268.09 60.14 24 39 16 3576.6 -2.82 148.30  
 110.00 6 18 16 2672.10 -32.20 72.78 281.21 77.86 7 2 48 2072.1 -33.54 63.80  
 110.00 0 2 42 3895.76 6.58 145.46 264.86 56.38 1 7 37 3295.8 2.12 139.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5297 TRA-1.2856 TC3 -.0570 BAU .0492 SGT 1239.1 SCR 449.6 S63 80.7 ST 555.3 SR 434.2 SS 493.5  
 RDE -.5297 RRA .1101 RC3 -.0488 FAU .02017 RRT .1403 RRF -.1451 RTF -.8010 CRT .7353 CRS .8404 CST .9843  
 FDE .4623 FRA .7695 FC3 -.3557 B8P 3753 SGB 1318.1 R23 -.0162 R13 -.8015 LSA 823.2 MSA 250.0 SSA 15.4  
 BDE .7491 BRA 1.2903 BC3 .0750 F8P -200 S61 1240.9 S62 444.5 THA 3.34 EL1 659.9 EL2 247.6 ALF 35.66

LAUNCH DATE JAN 3 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 212.779

RL 147.09 LAL -.00 LOL 102.45 VL 24.632 GAL 6.71 AZL 86.87 HCA 87.08 SMA 110.80 ECC .34563 INC 3.1262 V1 30.288  
 RP 107.82 LAP 3.12 LOP 189.52 VP 35.533 GAP -20.16 AZP 89.84 TAL 166.95 TAP 254.03 RCA 72.51 APO 149.10 V2 35.147  
 RC 43.053 GL 11.53 GP 3.95 ZAL 64.42 ZAP 9.05 ETS 207.44 ZAE 171.86 ETE 236.75 ZAC 110.43 ETC 164.99 CLP 8.15

PLANETOCENTRIC CONIC

C3 44.414 VHL 6.864 DLA 25.27 RAL 32.14 RAD 6568.7 VEL 12.875 PTH 2.35 VHP 12.615 DPA 7.86 RAP 15.78 ECC 1.7309  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 55 3354.83 -23.57 121.38 278.92 73.84 3 31 50 2754.8 -25.56 113.27  
 90.00 22 41 52 4114.71 -2.71 167.22 268.25 81.80 23 50 27 3514.7 -6.46 160.55  
 100.00 4 21 4 3015.85 -26.28 97.26 277.75 75.22 5 11 19 2415.8 -28.05 88.91  
 100.00 23 39 25 3928.93 -.25 152.21 268.89 60.11 24 44 54 3528.9 -4.23 145.68  
 110.00 6 13 31 2662.95 -32.33 72.10 279.38 78.24 6 58 14 2062.9 -33.61 63.10  
 110.00 0 7 2 3854.59 5.03 143.29 263.60 56.14 1 11 17 3254.6 .55 137.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5340 TRA-1.2679 TC3 -.0369 BAU .0367 SGT 1290.8 SCR 447.4 S63 88.3 ST 584.4 SR 433.9 SS 517.6  
 RDE -.5037 RRA .0958 RC3 -.0496 FAU .02115 RRT .1598 RRF -.1652 RTF -.8139 CRT .7450 CRS .8465 CST .9849  
 FDE .4852 FRA .7938 FC3 -.4123 B8P 3949 SGB 1366.1 R23 -.0182 R13 -.8144 LSA 857.7 MSA 248.6 SSA 15.6  
 BDE .7341 BRA 1.2715 BC3 .0618 F8P -222 S61 1293.0 S62 440.9 THA 3.59 EL1 684.7 EL2 247.0 ALF 33.96

LAUNCH DATE JAN 3 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 219.471

RL 147.09 LAL -.00 LOL 102.45 VL 24.909 GAL 6.32 AZL 86.96 HCA 90.30 SMA 112.09 ECC .32936 INC 3.0423 V1 30.288  
 RP 107.86 LAP 3.04 LOP 192.75 VP 35.734 GAP -19.11 AZP 90.02 TAL 166.80 TAP 257.10 RCA 75.17 APO 149.00 V2 35.133  
 RC 42.857 GL 11.96 GP 4.19 ZAL 64.39 ZAP 7.83 ETS 214.01 ZAE 173.42 ETE 255.78 ZAC 111.97 ETC 164.67 CLP 6.62

PLANETOCENTRIC CONIC

C3 40.211 VHL 6.341 DLA 25.67 RAL 32.05 RAD 6568.5 VEL 12.711 PTH 2.31 VHP 12.021 DPA 8.77 RAP 17.24 ECC 1.6618  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 27 37 3356.82 -23.53 121.51 274.99 73.78 3 23 34 2756.8 -25.53 113.41  
 90.00 22 49 27 4062.60 -4.38 164.30 267.02 82.00 23 57 9 3462.6 -8.10 157.39  
 100.00 4 14 30 3012.28 -26.34 97.02 275.84 75.33 5 4 42 2412.3 -28.10 88.65  
 100.00 23 45 16 3862.38 -1.83 149.85 265.61 60.18 24 49 58 3282.4 -5.79 143.10  
 110.00 6 9 22 2852.85 -32.47 71.34 277.46 78.67 6 53 35 2052.9 -33.69 62.32  
 110.00 0 10 48 3814.56 3.50 141.19 262.28 55.98 1 14 23 3214.6 -.98 134.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5385 TRA-1.2491 TC3 -.0118 BAU .0274 SGT 1343.6 SCR 444.8 S63 96.8 ST 614.7 SR 433.3 SS 543.0  
 RDE -.4788 RRA .0820 RC3 -.0496 FAU .02224 RRT .1816 RRF -.1880 RTF -.8260 CRT .7555 CRS .8529 CST .9855  
 FDE .5100 FRA .8191 FC3 -.4788 B8P 4148 SGB 1415.3 R23 -.0206 R13 -.8267 LSA 894.2 MSA 246.4 SSA 15.7  
 BDE .7206 BRA 1.2518 BC3 .0510 F8P -247 S61 1346.3 S62 436.5 THA 3.84 EL1 710.9 EL2 245.5 ALF 32.36



LAUNCH DATE JAN 3 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 226.180

RL 147.09 LAL -.00 LOL 102.45 VL 25.165 GAL 5.94 AZL 87.04 HCA 93.52 SMA 113.31 ECC .31403 INC 2.9584 V1 30.288
RP 107.89 LAP 2.95 LOP 195.97 VP 35.901 GAP -18.10 AZP 90.18 TAL 166.70 TAP 260.22 RCA 77.73 APO 148.90 V2 35.123
RC 42.436 GL 12.36 GP 4.45 ZAL 64.45 ZAP 6.75 ETS 223.07 ZAE 173.99 ETE 262.19 ZAC 113.90 ETC 164.31 CLP 5.08

PLANETOCENTRIC CONIC

C3 36.445 VHL 6.037 DLA 26.04 RAL 31.88 RAD 6568.4 VEL 12.562 PTH 2.28 VHP 11.450 DPA 9.70 RAP 18.68 ECC 1.5998
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 19 16 3350.05 -23.51 121.59 272.98 73.74 3 15 14 2758.0 -25.51 113.50
90.00 22 56 29 4011.68 -6.00 161.44 265.70 62.28 24 3 20 3411.7 -9.67 154.68
100.00 4 7 58 3007.59 -26.42 96.69 273.86 75.49 4 58 6 2407.6 -28.16 88.32
100.00 23 50 27 3837.37 -3.35 147.18 264.25 60.28 24 54 25 3237.4 -7.29 140.60
110.00 6 4 54 2641.73 -32.61 70.51 275.46 79.14 6 48 56 2041.7 -33.77 61.46
110.00 0 13 57 3776.00 2.03 139.18 260.89 55.87 1 16 53 3176.0 -2.46 132.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5434 TRA-1.2290 TC3 .0184 BAU .0252 SGT 1397.1 SCR 441.8 SCS 106.2 ST 646.3 SR 432.5 SS 569.9
RDE -.4551 RRA .0686 RC3 -.0483 FAU .02345 RRT .2064 RRF -.2139 RTF -.8373 CRT .7667 CRS .8599 CST .9862
FDE .5369 FRA .8457 FC3 -.5370 BSP 4348 SGB 1465.3 R23 -.0233 R13 -.8381 LSA 932.7 MSA 243.3 SSA 15.9
BDE .7088 BRA 1.2309 BC3 .0517 FSP -274 SGI 1400.3 SGI 431.3 THA 4.13 EL1 738.7 EL2 242.9 ALF 30.86

LAUNCH DATE JAN 3 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 232.903

RL 147.09 LAL -.00 LOL 102.45 VL 25.403 GAL 5.98 AZL 87.13 HCA 96.74 SMA 114.49 ECC .29962 INC 2.8739 V1 30.288
RP 107.93 LAP 2.85 LOP 199.20 VP 36.037 GAP -17.13 AZP 90.34 TAL 166.65 TAP 263.40 RCA 80.19 APO 148.79 V2 35.111
RC 42.394 GL 12.73 GP 4.75 ZAL 64.58 ZAP 5.90 ETS 235.43 ZAE 173.28 ETE 308.17 ZAC 114.98 ETC 163.91 CLP 3.51

PLANETOCENTRIC CONIC

C3 33.072 VHL 5.751 DLA 26.36 RAL 31.84 RAD 6568.3 VEL 12.428 PTH 2.25 VHP 10.900 DPA 10.64 RAP 20.09 ECC 1.5443
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 11 0 3358.08 -23.51 121.60 270.91 73.74 3 6 58 2758.1 -25.51 113.50
90.00 23 2 48 3982.82 -7.55 158.86 264.31 62.83 24 8 51 3362.6 -11.16 151.84
100.00 4 1 37 3001.47 -26.53 96.27 271.82 75.69 4 51 38 2401.5 -28.23 87.88
100.00 23 54 52 3794.46 -4.80 144.81 268.81 60.46 24 58 6 3194.5 -8.70 138.20
110.00 6 0 31 2629.45 -32.77 69.58 273.39 78.87 6 44 20 2029.4 -33.84 60.51
110.00 0 16 23 3739.24 .63 137.26 259.43 55.82 1 18 43 3139.2 -3.86 131.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5484 TRA-1.2079 TC3 .0551 BAU .0316 SGT 1451.4 SCR 438.8 SCS 116.6 ST 678.9 SR 431.5 SS 598.2
RDE -.4327 RRA .0555 RC3 -.0455 FAU .02400 RRT .2345 RRF -.2433 RTF -.8482 CRT .7786 CRS .8671 CST .9870
FDE .5660 FRA .8739 FC3 -.8492 BSP 4550 SGB 1516.2 R23 -.0264 R13 -.8490 LSA 973.3 MSA 239.5 SSA 16.0
BDE .6885 BRA 1.2092 BC3 .0715 FSP -305 SGI 1455.4 SGI 425.2 THA 4.43 EL1 768.0 EL2 239.4 ALF 29.47

LAUNCH DATE JAN 3 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 239.634

RL 147.09 LAL -.00 LOL 102.45 VL 25.623 GAL 5.23 AZL 87.21 HCA 99.96 SMA 115.61 ECC .28610 INC 2.7883 V1 30.288
RP 107.97 LAP 2.75 LOP 202.42 VP 36.200 GAP -16.20 AZP 90.48 TAL 166.65 TAP 266.82 RCA 82.53 APO 148.69 V2 35.099
RC 42.534 GL 13.09 GP 5.08 ZAL 64.79 ZAP 5.43 ETS 251.25 ZAE 171.61 ETE 326.59 ZAC 116.42 ETC 163.45 CLP 1.93

PLANETOCENTRIC CONIC

C3 30.051 VHL 5.482 DLA 26.64 RAL 31.33 RAD 6568.2 VEL 12.305 PTH 2.22 VHP 10.370 DPA 11.60 RAP 21.48 ECC 1.4946
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 3 6 3358.22 -23.54 121.47 268.80 73.80 2 59 3 2756.2 -25.54 113.37
90.00 23 8 11 3916.30 -8.99 156.02 262.82 63.04 24 13 27 3316.3 -12.54 149.14
100.00 3 55 37 2993.49 -26.86 95.71 269.73 75.95 4 45 31 2393.5 -28.33 87.31
100.00 0 2 17 3754.26 -6.14 142.59 261.29 60.69 1 4 51 3154.3 -10.00 135.93
110.00 5 56 19 2615.84 -32.93 68.55 271.25 80.26 6 39 55 2015.8 -33.92 59.46
110.00 0 18 4 3704.68 -.69 135.46 257.91 55.82 1 19 49 3104.7 -5.17 129.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5535 TRA-1.1857 TC3 .0978 BAU .0426 SGT 1506.1 SCR 435.5 SCS 128.1 ST 712.6 SR 430.5 SS 628.0
RDE -.4117 RRA .0427 RC3 -.0408 FAU .02630 RRT .2666 RRF -.2768 RTF -.8581 CRT .7911 CRS .8747 CST .9878
FDE .5976 FRA .9040 FC3 -.7378 BSP 4745 SGB 1567.8 R23 -.0300 R13 -.8590 LSA 1015.9 MSA 235.0 SSA 16.2
BDE .6898 BRA 1.1865 BC3 .1060 FSP -339 SGI 1511.0 SGI 418.4 THA 4.77 EL1 798.7 EL2 234.9 ALF 28.20

LAUNCH DATE JAN 3 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 246.371

RL 147.09 LAL -.00 LOL 102.45 VL 25.827 GAL 4.90 AZL 87.30 HCA 103.18 SMA 116.67 ECC .27344 INC 2.7012 V1 30.288
RP 108.01 LAP 2.63 LOP 205.64 VP 36.332 GAP -15.30 AZP 90.62 TAL 166.71 TAP 269.88 RCA 84.77 APO 148.58 V2 35.086
RC 42.853 GL 13.41 GP 5.44 ZAL 65.07 ZAP 5.45 ETS 268.85 ZAE 169.48 ETE 338.37 ZAC 117.81 ETC 162.93 CLP .31

PLANETOCENTRIC CONIC

C3 27.347 VHL 5.229 DLA 26.85 RAL 30.94 RAD 6568.1 VEL 12.195 PTH 2.19 VHP 9.861 DPA 12.58 RAP 22.82 ECC 1.4501
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 55 56 3321.50 -23.83 121.15 266.66 73.93 2 51 47 2751.5 -25.61 113.04
90.00 23 12 18 3873.91 -10.29 153.58 261.24 63.47 24 16 51 3273.9 -13.77 148.64
100.00 3 50 12 2983.12 -26.83 94.99 267.80 76.30 4 39 55 2383.1 -28.45 86.56
100.00 0 4 38 3717.52 -7.36 140.54 259.88 60.95 1 6 36 3117.5 -11.18 133.84
110.00 5 52 25 2800.67 -33.10 67.40 269.06 80.92 6 35 46 2000.7 -34.00 58.28
110.00 0 18 54 3672.73 -1.91 133.79 256.32 55.86 1 20 7 3072.7 -6.38 127.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5569 TRA-1.1808 TC3 .1446 BAU .0543 SGT 1558.0 SCR 432.5 SCS 140.9 ST 745.2 SR 429.6 SS 658.6
RDE -.3920 RRA .0303 RC3 -.0336 FAU .02801 RRT .3024 RRF -.3143 RTF -.8660 CRT .8037 CRS .8824 CST .9885
FDE .6310 FRA .9354 FC3 -.8889 BSP 4934 SGB 1616.9 R23 -.0344 R13 -.8671 LSA 1058.5 MSA 229.8 SSA 16.4
BDE .6610 BRA 1.1612 BC3 .1484 FSP -378 SGI 1583.8 SGI 410.7 THA 5.16 EL1 828.9 EL2 229.8 ALF 27.12

LAUNCH DATE JAN 3 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 253.110

RL 147.09 LAL -.00 LOL 102.45 VL 26.015 GAL 4.56 AZL 87.39 HCA 106.39 SMA 117.68 ECC .26162 INC 2.6117 V1 30.288  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.453 GAP -14.44 AZP 90.74 TAL 166.81 TAP 273.20 RCA 86.89 APO 148.47 V2 35.073  
 RC 43.347 GL 13.69 GP 5.86 ZAL 65.42 ZAP 6.01 ETS 285.07 ZAE 167.18 ETE 346.19 ZAC 119.14 ETC 162.35 CLP -1.33

PLANETOCENTRIC CONIC

C3 24.926 VML 4.993 DLA 27.00 RAL 30.50 RAD 6568.0 VEL 12.096 PTH 2.16 VHP 9.372 DPA 13.50 RAP 24.12 ECC 1.4102  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 55 3342.64 -23.80 120.56 264.52 74.19 2 45 38 2742.6 -25.74 112.43  
 90.00 23 14 45 3836.89 -11.41 151.44 259.55 83.91 24 18 42 3236.9 -14.82 144.43  
 100.00 3 45 34 2969.73 -27.04 94.05 265.45 76.75 4 35 5 2369.7 -28.59 85.59  
 100.00 0 5 41 3685.03 -8.43 158.72 257.99 61.22 1 7 6 3085.0 -12.21 151.97  
 110.00 5 48 58 2583.71 -33.27 66.11 266.82 81.67 6 32 1 1983.7 -34.07 56.96  
 110.00 0 18 49 3643.82 -3.02 132.28 254.66 55.93 1 19 33 3043.8 -7.47 126.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5603 TRA-1.1357 TC3 .2102 BAU .0705 SGT 1611.6 SCR 430.2 SCS 155.1 ST 778.5 SR 429.0 SS 691.2  
 RDE -.3738 RRA .0178 RC3 -.0233 FAU .02989 RRT .3423 RRF -.3573 RTF -.8772 CRT .8168 CRS .8905 CST .9893  
 FDE .6677 FRA .9700 FC3-1.0382 B8P 5208 SGB 1668.0 R23 -.0394 R13 -.8784 LSA 1103.3 MSA 224.2 SSA 16.4  
 BDE .6735 BRA 1.1358 BC3 .2115 F8P -421 SGT 1618.6 SGT 402.4 THA 5.57 EL1 860.2 EL2 224.0 ALF 26.14

LAUNCH DATE JAN 3 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 259.847

RL 147.09 LAL -.00 LOL 102.45 VL 26.188 GAL 4.28 AZL 87.48 HCA 109.60 SMA 118.63 ECC .25059 INC 2.5193 V1 30.288  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.965 GAP -13.61 AZP 90.85 TAL 166.96 TAP 276.56 RCA 88.91 APO 148.36 V2 35.080  
 RC 44.011 GL 13.92 GP 6.33 ZAL 65.83 ZAP 7.01 ETS 297.88 ZAE 164.86 ETE 351.76 ZAC 120.41 ETC 161.71 CLP -3.02

PLANETOCENTRIC CONIC

C3 22.781 VML 4.771 DLA 27.08 RAL 30.00 RAD 6567.9 VEL 12.006 PTH 2.14 VHP 8.902 DPA 14.62 RAP 25.36 ECC 1.3746  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 35 3328.15 -24.08 119.58 262.40 74.61 2 41 3 2728.2 -25.93 111.42  
 90.00 23 15 6 3806.89 -12.30 149.89 257.76 64.29 24 18 33 3208.9 -15.66 142.62  
 100.00 3 42 5 2952.62 -27.30 92.84 263.29 77.33 4 31 17 2352.6 -28.77 84.35  
 100.00 0 5 13 3697.85 -9.53 137.18 258.21 61.47 1 6 11 3057.6 -13.07 130.39  
 110.00 5 46 4 2584.64 -33.45 64.85 264.56 82.51 6 28 49 1964.6 -34.12 55.47  
 110.00 0 17 43 3618.40 -3.99 130.95 252.95 56.02 1 18 2 3018.4 -8.42 124.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5639 TRA-1.1109 TC3 .2757 BAU .0839 SGT 1665.4 SCR 429.1 SCS 171.0 ST 812.9 SR 428.9 SS 725.1  
 RDE -.3572 RRA .0053 RC3 -.0092 FAU .03198 RRT .3882 RRF -.4055 RTF -.8852 CRT .8303 CRS .8987 CST .9901  
 FDE .7072 FRA 1.0076 FC3-1.2165 B8P 5400 SGB 1719.8 R23 -.0451 R13 -.8866 LSA 1150.1 MSA 218.0 SSA 16.6  
 BDE .6875 BRA 1.1110 BC3 .2759 F8P -489 SGT 1674.2 SGT 393.4 THA 6.05 EL1 893.0 EL2 217.6 ALF 25.28

LAUNCH DATE JAN 3 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 266.581

RL 147.09 LAL -.00 LOL 102.45 VL 26.348 GAL 3.99 AZL 87.58 HCA 112.81 SMA 119.53 ECC .24034 INC 2.4233 V1 30.288  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.687 GAP -12.80 AZP 90.54 TAL 167.15 TAP 279.96 RCA 90.80 APO 148.26 V2 35.047  
 RC 44.838 GL 14.10 GP 6.85 ZAL 66.30 ZAP 8.33 ETS 307.22 ZAE 162.61 ETE 356.03 ZAC 121.59 ETC 160.99 CLP -4.75

PLANETOCENTRIC CONIC

C3 20.823 VML 4.563 DLA 27.08 RAL 29.45 RAD 6567.8 VEL 11.925 PTH 2.12 VHP 8.451 DPA 15.68 RAP 26.54 ECC 1.3427  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 25 3306.84 -24.44 118.12 260.30 75.24 2 38 32 2708.6 -26.24 109.91  
 90.00 23 12 55 3765.43 -12.93 148.43 255.86 64.59 24 16 0 3185.4 -16.25 141.32  
 100.00 3 39 54 2931.12 -27.61 91.32 261.14 78.07 4 28 45 2331.1 -28.98 82.78  
 100.00 0 3 3 3636.18 -10.02 135.97 254.36 61.69 1 3 39 3036.2 -13.73 129.14  
 110.00 5 43 54 2543.14 -33.83 63.00 262.27 83.48 6 26 17 1943.1 -34.17 53.79  
 110.00 0 15 33 3596.92 -4.80 129.82 251.19 56.12 1 15 30 2996.9 -9.22 123.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5682 TRA-1.0848 TC3 .3509 BAU .0977 SGT 1717.1 SCR 429.7 SCS 188.7 ST 846.2 SR 429.5 SS 759.9  
 RDE -.3421 RRA -.0073 RC3 .0097 FAU .03434 RRT .4389 RRF -.4590 RTF -.8928 CRT .8439 CRS .9069 CST .9909  
 FDE .7491 FRA 1.0485 FC3-1.4279 B8P 5594 SGB 1770.0 R23 -.0517 R13 -.8944 LSA 1197.1 MSA 211.4 SSA 16.7  
 BDE .6815 BRA 1.0848 BC3 .3511 F8P -522 SGT 1728.0 SGT 383.7 THA 6.60 EL1 925.3 EL2 210.7 ALF 24.55

LAUNCH DATE JAN 3 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 273.308

RL 147.09 LAL -.00 LOL 102.45 VL 26.495 GAL 3.72 AZL 87.68 HCA 116.02 SMA 120.37 ECC .23082 INC 2.3226 V1 30.288  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.780 GAP -12.03 AZP 91.02 TAL 167.39 TAP 283.41 RCA 92.59 APO 148.16 V2 35.033  
 RC 45.818 GL 14.20 GP 7.45 ZAL 66.82 ZAP 9.90 ETS 313.87 ZAE 160.48 ETE 359.53 ZAC 122.68 ETC 160.20 CLP -6.53

PLANETOCENTRIC CONIC

C3 19.089 VML 4.369 DLA 26.99 RAL 28.87 RAD 6567.8 VEL 11.852 PTH 2.10 VHP 8.019 DPA 16.79 RAP 27.65 ECC 1.3142  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 45 3277.21 -24.94 116.10 258.24 76.14 2 38 22 2677.2 -26.60 107.83  
 90.00 23 7 58 3773.49 -13.28 147.72 253.87 64.76 24 10 51 3173.5 -16.57 140.59  
 100.00 3 39 19 2904.64 -27.97 89.44 258.99 79.00 4 27 44 2304.6 -29.20 80.85  
 100.00 23 55 5 3621.30 -10.50 135.12 252.45 61.85 24 55 26 3021.3 -14.19 128.27  
 110.00 5 42 36 2518.88 -33.80 61.12 259.97 84.57 6 24 35 1918.9 -34.18 51.90  
 110.00 0 12 13 3579.83 -5.45 128.92 249.39 56.20 1 11 53 2979.8 -9.85 122.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5673 TRA-1.0590 TC3 .4335 BAU .1110 SGT 1768.1 SCR 433.1 SCS 208.4 ST 878.7 SR 431.1 SS 795.7  
 RDE -.3287 RRA -.0203 RC3 .0343 FAU .03695 RRT .4944 RRF -.5176 RTF -.8998 CRT .8575 CRS .9151 CST .9917  
 FDE .7938 FRA 1.0937 FC3-1.6759 B8P 5775 SGB 1820.4 R23 -.0596 R13 -.9017 LSA 1244.6 MSA 204.5 SSA 16.8  
 BDE .6556 BRA 1.0592 BC3 .4349 F8P -582 SGT 1781.6 SGT 373.6 THA 7.22 EL1 957.4 EL2 203.6 ALF 23.97

LAUNCH DATE JAN 3 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 280.026

RL 147.09 LAL -.00 LOL 102.45 VL 26.630 GAL 3.47 AZL 87.78 HCA 119.22 SMA 121.16 ECC .22202 INC 2.2164 V1 30.288
RP 108.21 LAP 1.93 LOP 221.69 VP 36.845 GAP -11.29 AZP 91.08 TAL 167.66 TAP 286.88 RCA 94.26 APO 148.06 V2 35.020
RC 48.944 GL 14.21 GP 8.14 ZAL 67.39 ZAP 11.66 ETS 318.62 ZAE 158.50 ETE 2.57 ZAC 123.66 ETC 159.32 CLP -8.38

PLANETOCENTRIC CONIC

C3 17.538 VHL 4.188 DLA 26.80 RAL 28.27 RAD 6567.7 VEL 11.786 PTH 2.08 VHP 7.606 DPA 17.95 RAP 28.67 ECC 1.2886
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 46 39 3239.70 -25.53 113.51 256.23 77.31 2 40 39 2639.7 -27.02 105.16
90.00 23 0 15 3771.34 -13.34 147.59 251.80 64.79 24 3 6 3171.3 -16.63 140.46
100.00 3 40 29 2878.75 -28.36 87.15 256.86 80.15 4 28 22 2272.8 -29.43 78.51
100.00 23 49 6 3613.52 -10.75 134.68 250.47 61.94 24 49 20 3013.5 -14.42 127.81
110.00 5 42 20 2491.48 -33.96 59.00 257.67 85.82 6 23 51 1891.5 -34.16 49.76
110.00 0 7 41 3567.56 -5.91 128.28 247.55 56.27 1 7 8 2967.6 -10.31 121.94

DIFFERENTIAL CORRECTIONS

TDE -.5662 TRA-1.0324 TC3 .5251 BAU .1241
RDE -.3169 RRA -.0339 RC3 .0662 FAU .03988
FDE .8403 FRA 1.1436 FC3-1.9687 BSP 5962
BDE .6488 BRA 1.0330 BC3 .5292 FSP -650

MID-COURSE EXECUTION ACCURACY

S6T 1815.9 S6R 440.2 S6S 230.4
RRR .5538 RRF -.5801 RTF -.9063
S6B 1868.5 R23 -.0689 R13 -.9086
S6I 1832.8 S6Z 363.2 THA 7.96

ORBIT DETERMINATION ACCURACY

ST 908.6 SR 433.8 SS 831.4
CRT .8708 CRS .9232 CST .9924
LSA 1290.6 MSA 197.4 SSA 17.0
EL1 987.5 EL2 196.2 ALF 23.56

LAUNCH DATE JAN 3 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 286.733

RL 147.09 LAL -.00 LOL 102.45 VL 26.754 GAL 3.23 AZL 87.90 HCA 122.43 SMA 121.90 ECC .21390 INC 2.1034 V1 30.288
RP 108.25 LAP 1.78 LOP 224.89 VP 36.922 GAP -10.57 AZP 91.13 TAL 167.97 TAP 290.39 RCA 95.83 APO 147.97 V2 35.007
RC 48.205 GL 14.32 GP 8.92 ZAL 67.99 ZAP 13.58 ETS 322.04 ZAE 156.69 ETE 5.36 ZAC 124.52 ETC 158.35 CLP -10.29

PLANETOCENTRIC CONIC

C3 18.149 VHL 4.019 DLA 26.49 RAL 27.66 RAD 6567.6 VEL 11.727 PTH 2.07 VHP 7.211 DPA 19.17 RAP 29.59 ECC 1.2658
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 52 3 3194.59 -26.16 110.38 254.24 78.76 2 45 18 2594.6 -27.45 101.93
90.00 22 49 59 3778.54 -13.13 148.02 249.68 64.68 23 52 58 3178.5 -16.43 140.90
100.00 3 43 32 2835.21 -28.77 84.43 254.75 81.52 4 30 47 2235.2 -29.65 75.74
100.00 23 41 12 3613.15 -10.76 134.66 248.47 61.94 24 41 25 3013.1 -14.43 127.79
110.00 5 43 15 2460.59 -34.09 56.59 255.37 87.24 6 24 16 1860.6 -34.09 47.35
110.00 0 1 54 3560.53 -6.18 127.91 245.70 56.31 1 1 14 2960.5 -10.57 121.56

DIFFERENTIAL CORRECTIONS

TDE -.5628 TRA-1.0054 TC3 .6239 BAU .1367
RDE -.3069 RRA -.0484 RC3 .1070 FAU .04315
FDE .8887 FRA 1.1991 FC3-2.3129 BSP 6125
BDE .6411 BRA 1.0066 BC3 .6330 FSP -725

MID-COURSE EXECUTION ACCURACY

S6T 1860.3 S6R 452.5 S6S 235.0
RRR .6151 RRF -.6451 RTF -.9122
S6B 1914.5 R23 -.0800 R13 -.9150
S6I 1881.8 S6Z 352.7 THA 8.82

ORBIT DETERMINATION ACCURACY

ST 935.5 SR 438.2 SS 867.1
CRT .8839 CRS .9311 CST .9931
LSA 1335.1 MSA 190.1 SSA 17.1
EL1 1015.6 EL2 188.6 ALF 23.34

LAUNCH DATE JAN 3 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 293.427

RL 147.09 LAL -.00 LOL 102.45 VL 26.867 GAL 3.00 AZL 88.02 HCA 125.62 SMA 122.58 ECC .20642 INC 1.9822 V1 30.288
RP 108.29 LAP 1.61 LOP 228.09 VP 36.991 GAP -9.88 AZP 91.15 TAL 168.30 TAP 293.93 RCA 97.28 APO 147.89 V2 34.994
RC 49.590 GL 13.91 GP 9.82 ZAL 68.63 ZAP 15.67 ETS 324.51 ZAE 155.06 ETE 8.05 ZAC 125.22 ETC 157.29 CLP -12.27

PLANETOCENTRIC CONIC

C3 14.906 VHL 3.861 DLA 26.05 RAL 27.06 RAD 6567.6 VEL 11.674 PTH 2.05 VHP 6.835 DPA 20.47 RAP 30.38 ECC 1.2453
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 59 44 3142.62 -26.80 106.69 252.28 80.50 2 52 7 2542.6 -27.84 98.18
90.00 22 37 31 3794.37 -12.67 148.95 247.56 64.46 23 40 45 3194.4 -16.00 141.86
100.00 3 48 31 2791.93 -29.17 81.27 252.67 83.14 4 35 3 2191.9 -29.81 72.53
100.00 23 31 25 3620.29 -10.53 135.06 246.45 61.86 24 31 46 3020.3 -14.22 128.21
110.00 5 45 31 2425.84 -34.17 53.88 253.08 88.84 6 25 57 1825.8 -33.95 44.65
110.00 23 50 55 3559.14 -6.23 127.83 243.85 56.32 24 50 14 2959.1 -10.62 121.48

DIFFERENTIAL CORRECTIONS

TDE -.5567 TRA -.9787 TC3 .7296 BAU .1488
RDE -.2986 RRA -.0642 RC3 .1589 FAU .04678
FDE .9375 FRA 1.2617 FC3-2.7167 BSP 6290
BDE .6317 BRA .9808 BC3 .7467 FSP -809

MID-COURSE EXECUTION ACCURACY

S6T 1901.0 S6R 471.9 S6S 282.4
RRR .6764 RRF -.7101 RTF -.9176
S6B 1956.7 R23 -.0930 R13 -.9209
S6I 1928.5 S6Z 342.6 THA 9.85

ORBIT DETERMINATION ACCURACY

ST 958.1 SR 444.3 SS 901.5
CRT .8964 CRS .9387 CST .9938
LSA 1376.4 MSA 182.7 SSA 17.3
EL1 1040.5 EL2 181.3 ALF 23.32

LAUNCH DATE JAN 3 1969

FLIGHT TIME 116.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 300.106

RL 147.09 LAL -.00 LOL 102.45 VL 26.971 GAL 2.79 AZL 88.15 HCA 128.82 SMA 123.22 ECC .19956 INC 1.8509 V1 30.288
RP 108.33 LAP 1.44 LOP 231.28 VP 37.054 GAP -9.21 AZP 91.16 TAL 168.66 TAP 297.48 RCA 98.63 APO 147.81 V2 34.980
RC 51.091 GL 13.55 GP 10.86 ZAL 69.29 ZAP 17.93 ETS 326.28 ZAE 153.60 ETE 10.75 ZAC 125.76 ETC 156.13 CLP -14.35

PLANETOCENTRIC CONIC

C3 15.792 VHL 3.714 DLA 25.47 RAL 26.49 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 6.478 DPA 21.85 RAP 31.04 ECC 1.2270
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 9 32 3084.48 -27.39 102.34 250.34 82.50 3 0 56 2484.5 -28.14 93.95
90.00 22 23 10 3818.15 -11.96 150.35 245.45 64.14 23 26 48 3218.1 -15.35 143.30
100.00 3 55 30 2742.87 -29.51 77.67 250.60 85.00 4 41 12 2142.9 -29.89 68.88
100.00 23 19 53 3634.99 -10.06 135.90 244.46 61.70 24 20 28 3035.0 -15.77 129.07
110.00 5 49 17 2386.84 -34.18 50.84 250.81 90.65 6 29 4 1786.8 -33.71 41.62
110.00 23 42 35 3563.79 -6.06 128.08 242.03 56.29 24 41 59 2963.8 -10.45 121.74

DIFFERENTIAL CORRECTIONS

TDE -.5450 TRA -.9496 TC3 .8478 BAU .1617
RDE -.2919 RRA -.0816 RC3 .2252 FAU .05088
FDE .9838 FRA 1.3302 FC3-3.1938 BSP 6485
BDE .8182 BRA .9531 BC3 .8772 FSP -906

MID-COURSE EXECUTION ACCURACY

S6T 1933.0 S6R 500.2 S6S 312.7
RRR .7344 RRF -.7718 RTF -.9232
S6B 1996.6 R23 -.1075 R13 -.9273
S6I 1968.6 S6Z 333.3 THA 11.08

ORBIT DETERMINATION ACCURACY

ST 971.7 SR 452.3 SS 932.2
CRT .9080 CRS .9457 CST .9945
LSA 1409.5 MSA 175.4 SSA 17.4
EL1 1057.6 EL2 174.1 ALF 23.59

LAUNCH DATE JAN 3 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC DISTANCE 306.769  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.066 GAL 2.60 AZL 88.29 HCA 132.01 SMA 123.81 ECC .19328 INC 1.7075 V1 30.288  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.111 GAP -8.56 AZP 91.14 TAL 169.04 TAP 301.05 RCA 99.88 APO 147.74 V2 34.967  
 RC 52.897 GL 13.02 GP 12.07 ZAL 69.96 ZAP 20.37 ETS 327.52 ZAE 152.32 ETE 13.58 ZAC 126.10 ETC 154.86 CLP -16.53

PLANETOCENTRIC CONIC  
 C3 12.795 VHL 3.577 DLA 24.71 RAL 25.97 RAD 6567.5 VEL 11.584 PTH 2.03 VHP 6.141 DPA 23.36 RAP 31.53 ECC 1.2106  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 20 3020.61 -27.87 97.93 248.42 84.76 3 11 40 2420.6 -28.30 89.29  
 90.00 22 7 13 3849.46 -11.03 152.17 243.40 63.75 23 11 22 3249.3 -14.47 145.18  
 100.00 4 4 30 2687.98 -29.77 73.61 246.57 87.13 4 49 18 2088.0 -29.85 64.80  
 100.00 23 6 43 3657.32 -9.34 137.16 242.52 61.47 24 7 41 3057.3 -13.08 130.37  
 110.00 5 54 43 2343.14 -34.09 47.43 248.58 92.66 6 33 46 1743.1 -33.35 38.26  
 110.00 23 32 59 3574.93 -5.64 120.67 240.26 56.23 24 32 34 2974.9 -10.03 122.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5311 TRA -.9229 TC3 .9633' BAU .1730 SGT 1961.4 SCR 540.3 SCS 346.3 ST 981.1 SR 462.8 SS 959.8  
 RDE -.2870 RRA -.1014 RC3 .3084 FAU .05534 RRT .7871 RRF -.8276 RTF -.9275 CRT .9192 CRS .9522 CST .9951  
 FDE 1.0279 FRA 1.4093 FC3-3.7445 BSP 6629 SGB 2034.5 R23 -.1246 R13 -.9326 LSA 1458.6 MSA 167.9 SSA 17.5  
 BDE .6037 BRA .9285 BC3 1.0117 FSP -1012 SGI 2008.3 SGI 323.5 THA 12.57 EL1 1071.9 EL2 166.8 ALF 24.06

LAUNCH DATE JAN 3 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC DISTANCE 313.414  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.152 GAL 2.42 AZL 88.45 HCA 135.21 SMA 124.35 ECC .18757 INC 1.5490 V1 30.288  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.162 GAP -7.94 AZP 91.10 TAL 169.43 TAP 304.83 RCA 101.02 APO 147.67 V2 34.954  
 RC 54.398 GL 12.27 GP 13.49 ZAL 70.63 ZAP 23.01 ETS 328.35 ZAE 151.17 ETE 16.63 ZAC 126.20 ETC 153.49 CLP -18.81

PLANETOCENTRIC CONIC  
 C3 11.900 VHL 3.450 DLA 23.75 RAL 25.52 RAD 6567.5 VEL 11.545 PTH 2.02 VHP 5.824 DPA 25.00 RAP 31.82 ECC 1.1958  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 7 2951.05 -28.20 92.86 246.52 87.28 3 24 18 2351.0 -28.28 84.20  
 90.00 21 49 51 3888.24 -9.85 154.41 241.46 63.32 22 54 39 3288.2 -13.36 147.49  
 100.00 4 15 36 2627.05 -29.89 69.08 246.58 89.51 4 59 23 2027.1 -29.64 60.29  
 100.00 22 52 3 3687.47 -8.35 138.86 240.66 61.19 23 53 30 3087.5 -12.13 132.11  
 110.00 6 2 0 2294.20 -33.87 43.62 248.40 94.90 6 40 14 1694.2 -32.82 34.54  
 110.00 23 22 9 3593.08 -4.95 129.62 238.57 56.13 24 22 2 2993.1 -9.36 123.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5132 TRA -.8963 TC3 1.0795 BAU .1839 SGT 1981.5 SCR 595.2 SCS 383.1 ST 982.5 SR 476.0 SS 981.9  
 RDE -.2836 RRA -.1244 RC3 .4134 FAU .06021 RRT .8319 RRF -.8752 RTF -.8313 CRT .9298 CRS .9582 CST .9959  
 FDE 1.0658 FRA 1.4988 FC3-4.3804 BSP 6741 SGB 2069.0 R23 -.1435 R13 -.9378 LSA 1459.4 MSA 160.1 SSA 17.8  
 BDE .5864 BRA .9049 BC3 1.1580 FSP -1127 SGI 2044.1 SGI 320.1 THA 14.39 EL1 1080.0 EL2 159.4 ALF 24.83

LAUNCH DATE JAN 3 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC DISTANCE 320.041  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.229 GAL 2.25 AZL 88.63 HCA 138.39 SMA 124.84 ECC .18238 INC 1.3717 V1 30.288  
 RP 108.45 LAP .91 LOP 240.85 VP 37.207 GAP -7.34 AZP 91.03 TAL 169.82 TAP 308.21 RCA 102.07 APO 147.61 V2 34.942  
 RC 56.188 GL 11.27 GP 15.15 ZAL 71.29 ZAP 25.87 ETS 328.86 ZAE 150.14 ETE 20.00 ZAC 126.02 ETC 152.02 CLP -21.23

PLANETOCENTRIC CONIC  
 C3 11.099 VHL 3.332 DLA 22.55 RAL 25.17 RAD 6567.4 VEL 11.510 PTH 2.00 VHP 5.530 DPA 26.83 RAP 31.87 ECC 1.1827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 1 2875.43 -28.32 87.34 244.67 90.05 3 38 57 2275.4 -28.01 78.69  
 90.00 21 31 11 3934.86 -8.41 157.08 239.64 62.86 22 36 46 3334.9 -11.99 150.23  
 100.00 4 28 58 2559.63 -29.82 64.07 244.63 92.14 5 11 37 1959.6 -29.21 55.32  
 100.00 22 35 55 3725.90 -7.09 141.01 238.93 60.88 23 36 1 3125.9 -10.92 134.31  
 110.00 6 11 20 2239.34 -33.47 39.39 244.28 97.38 6 48 40 1639.3 -32.09 30.43  
 110.00 23 10 2 3618.95 -3.97 130.98 237.00 56.02 24 10 21 3018.9 -6.40 124.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4900 TRA -.8698 TC3 1.1936 BAU .1948 SGT 1991.6 SCR 668.2 SCS 423.1 ST 973.1 SR 491.6 SS 994.9  
 RDE -.2815 RRA -.1516 RC3 .5459 FAU .06548 RRT .8677 RRF -.9133 RTF -.9345 CRT .9395 CRS .9633 CST .9966  
 FDE 1.0922 FRA 1.5990 FC3-5.1073 BSP 6854 SGB 2100.7 R23 -.1631 R13 -.9429 LSA 1468.0 MSA 152.0 SSA 18.1  
 BDE .5652 BRA .8829 BC3 1.3125 FSP -1254 SGI 2076.4 SGI 318.8 THA 16.63 EL1 1079.6 EL2 151.8 ALF 25.94

LAUNCH DATE JAN 3 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC DISTANCE 326.648  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.300 GAL 2.10 AZL 88.83 HCA 141.58 SMA 125.29 ECC .17768 INC 1.1709 V1 30.288  
 RP 108.49 LAP .73 LOP 244.03 VP 37.246 GAP -6.76 AZP 90.92 TAL 170.21 TAP 311.79 RCA 103.03 APO 147.56 V2 34.929  
 RC 58.051 GL 9.98 GP 17.11 ZAL 71.94 ZAP 29.00 ETS 329.10 ZAE 149.16 ETE 23.80 ZAC 125.52 ETC 150.45 CLP -23.78

PLANETOCENTRIC CONIC  
 C3 10.385 VHL 3.222 DLA 21.06 RAL 24.96 RAD 6567.4 VEL 11.479 PTH 2.00 VHP 5.260 DPA 28.88 RAP 31.63 ECC 1.1709  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 9 17 2792.96 -28.16 81.31 242.87 93.07 3 55 50 2193.0 -27.44 72.72  
 90.00 21 11 13 3990.17 -6.68 160.22 238.01 62.42 22 17 43 3390.2 -10.33 153.44  
 100.00 4 44 49 2484.91 -29.50 58.54 242.78 95.04 5 26 14 1884.9 -28.49 49.88  
 100.00 22 18 22 3773.45 -5.50 143.65 237.37 80.57 23 21 15 3173.4 -9.38 137.01  
 110.00 6 23 2 2177.59 -32.83 34.68 242.24 100.09 6 59 20 1577.6 -31.09 25.89  
 110.00 22 56 38 3653.53 -2.65 132.79 235.59 55.91 23 57 31 3053.5 -7.10 126.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4584 TRA -.8423 TC3 1.3070 BAU .2068 SGT 1988.0 SCR 783.3 SCS 465.7 ST 948.5 SR 508.5 SS 993.8  
 RDE -.2797 RRA -.1844 RC3 .7142 FAU .07114 RRT .8947 RRF -.9421 RTF -.9375 CRT .9481 CRS .9673 CST .9973  
 FDE 1.0983 FRA 1.7104 FC3-5.9314 BSP 7007 SGB 2129.5 R23 -.1804 R13 -.9486 LSA 1457.7 MSA 143.8 SSA 18.5  
 BDE .5378 BRA .8622 BC3 1.4894 FSP -1395 SGI 2105.0 SGI 321.9 THA 19.43 EL1 1066.6 EL2 143.8 ALF 27.49

LAUNCH DATE JAN 3 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 333.234

RL 147.09 LAL -.00 LOL 102.45 VL 27.363 GAL 1.96 AZL 89.06 HCA 144.76 SMA 125.70 ECC .17346 INC .9399 V1 30.288  
 RP 108.53 LAP .54 LOP 247.21 VP 37.282 GAP -6.19 AZP 90.77 TAL 170.59 TAP 315.35 RCA 103.90 APO 147.51 V2 34.917  
 RC 59.985 GL 8.26 GP 19.45 ZAL 72.56 ZAP 32.45 ETS 329.13 ZAE 148.14 ETE 28.13 ZAC 124.62 ETC 148.81 CLP -26.48

PLANETOCENTRIC CONIC

C3 9.748 VHL 3.122 DLA 19.22 RAL 24.92 RAD 6567.4 VEL 11.452 PTH 1.99 VHP 5.018 DPA 31.20 RAP 31.04 ECC 1.1804  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 30 17 2702.29 -27.66 74.73 241.17 96.33 4 15 19 2102.5 -26.49 68.25  
 90.00 20 49 52 4055.62 -4.61 163.91 236.62 62.03 21 57 27 3455.6 -8.31 137.19  
 100.00 5 3 31 2401.65 -28.85 52.44 241.00 98.18 5 43 32 1801.6 -27.42 43.93  
 100.00 21 59 19 3831.50 -3.55 146.86 236.04 60.30 23 3 10 3231.5 -7.48 140.27  
 110.00 6 37 28 2107.67 -31.88 29.45 240.34 103.05 7 12 36 1507.7 -29.75 20.89  
 110.00 22 41 50 3698.24 -.94 155.12 234.41 55.83 23 43 29 3098.2 -5.42 128.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4251 TRA -.8170 TC3 1.3994 BAU .2186 SGT 1973.0 SGR 885.9 SCS 509.9 ST 914.3 SR 526.5 SS 978.3  
 RDE -.2777 RRA -.2251 RC3 .9250 FAU .07685 RRT .9138 RRF -.9627 RTF -.9393 CRT .9563 CRS .9704 CST .9982  
 FDE 1.0802 FRA 1.8366 FC3-6.8247 BSP 7092 SGB 2162.8 R23 -.1952 R13 -.9541 LSA 1432.4 MSA 134.8 SSA 19.2  
 BDE .5077 BRA .8474 BC3 1.6775 FSP -1535 SGT 2137.1 SGR 332.5 THA 22.89 EL1 1046.5 EL2 134.2 ALF 29.38

LAUNCH DATE JAN 3 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 339.799

RL 147.09 LAL -.00 LOL 102.45 VL 27.420 GAL 1.84 AZL 89.33 HCA 147.94 SMA 126.08 ECC .16967 INC .6695 V1 30.288  
 RP 108.57 LAP .36 LOP 250.39 VP 37.312 GAP -5.85 AZP 90.57 TAL 170.93 TAP 318.89 RCA 104.68 APO 147.47 V2 34.906  
 RC 61.981 GL 6.06 GP 22.23 ZAL 73.16 ZAP 36.21 ETS 329.01 ZAE 146.95 ETE 33.06 ZAC 123.27 ETC 147.10 CLP -29.35

PLANETOCENTRIC CONIC

C3 9.193 VHL 3.032 DLA 16.92 RAL 25.08 RAD 6567.3 VEL 11.427 PTH 1.98 VHP 4.808 DPA 33.86 RAP 30.01 ECC 1.1513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 54 37 2801.40 -26.89 67.50 239.63 99.83 4 37 58 2001.4 -25.06 59.21  
 90.00 20 26 53 4133.56 -2.11 168.27 235.54 61.75 21 35 46 3533.6 -5.87 161.61  
 100.00 5 25 37 2507.93 -27.76 45.69 239.40 101.57 6 4 5 1707.9 -25.88 37.39  
 100.00 21 38 33 3902.26 -1.16 150.75 235.02 60.13 22 43 36 3302.3 -5.13 144.20  
 110.00 6 55 10 2027.75 -30.50 23.63 238.62 106.24 7 28 58 1427.7 -27.97 15.35  
 110.00 22 25 50 3755.21 1.24 138.09 233.52 55.84 23 28 5 3155.2 -3.25 131.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3845 TRA -.7915 TC3 1.4698 BAU .2323 SGT 1940.7 SGR 1041.3 SCS 553.6 ST 865.3 SR 542.1 SS 940.9  
 RDE -.2732 RRA -.2784 RC3 1.1890 FAU .08237 RRT .9259 RRF -.9768 RTF -.9401 CRT .9648 CRS .9720 CST .9991  
 FDE 1.0237 FRA 1.9732 FC3-7.7574 BSP 7196 SGB 2202.4 R23 -.2028 R13 -.9602 LSA 1382.6 MSA 125.3 SSA 20.3  
 BDE .4717 BRA .8383 BC3 1.8905 FSP -1676 SGT 2174.3 SGR 351.2 THA 27.19 EL1 1013.8 EL2 121.6 ALF 31.66

LAUNCH DATE JAN 3 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 346.342

RL 147.09 LAL -.00 LOL 102.45 VL 27.470 GAL 1.73 AZL 89.85 HCA 151.12 SMA 126.41 ECC .16630 INC .3468 V1 30.288  
 RP 108.60 LAP .17 LOP 253.57 VP 37.339 GAP -5.12 AZP 90.30 TAL 171.29 TAP 322.41 RCA 105.39 APO 147.43 V2 34.894  
 RC 64.032 GL 3.23 GP 25.57 ZAL 73.74 ZAP 40.59 ETS 328.80 ZAE 145.44 ETE 38.61 ZAC 121.37 ETC 145.38 CLP -32.39

PLANETOCENTRIC CONIC

C3 8.724 VHL 2.954 DLA 14.04 RAL 25.52 RAD 6567.3 VEL 11.407 PTH 1.97 VHP 4.639 DPA 36.94 RAP 28.41 ECC 1.1436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 23 9 2487.31 -25.12 59.52 238.32 103.53 5 4 36 1887.3 -23.01 51.49  
 90.00 20 1 50 4227.55 .93 173.52 234.90 61.70 21 12 17 3627.5 -2.86 168.89  
 100.00 5 51 56 2200.98 -26.07 38.19 238.05 105.17 6 28 37 1601.0 -23.73 30.17  
 100.00 21 15 44 3989.11 1.79 155.51 234.42 60.16 22 22 13 3389.1 -2.20 148.99  
 110.00 7 16 52 1935.24 -28.56 17.13 237.18 109.64 7 49 7 1335.2 -25.61 9.19  
 110.00 22 7 17 3827.62 4.00 141.88 233.04 56.02 23 11 5 3227.6 -.49 135.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3353 TRA -.7637 TC3 1.5195 BAU .2507 SGT 1887.1 SGR 1238.8 SCS 593.8 ST 796.1 SR 548.3 SS 872.5  
 RDE -.2819 RRA -.3412 RC3 1.5199 FAU .08747 RRT .9333 RRF -.9880 RTF -.9406 CRT .9735 CRS .9712 CST .9993  
 FDE .9091 FRA 2.1116 FC3-8.6796 BSP 7396 SGB 2256.2 R23 -.1985 R13 -.9674 LSA 1296.8 MSA 116.6 SSA 21.6  
 BDE .4255 BRA .8365 BC3 2.1492 FSP -1815 SGT 2224.8 SGR 376.7 THA 32.50 EL1 961.0 EL2 103.9 ALF 34.30

LAUNCH DATE JAN 3 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 352.863

RL 147.09 LAL -.00 LOL 102.45 VL 27.515 GAL 1.63 AZL 90.05 HCA 154.30 SMA 126.71 ECC .16332 INC .0474 V1 30.288  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.362 GAP -4.61 AZP 89.96 TAL 171.60 TAP 325.90 RCA 106.01 APO 147.40 V2 34.883  
 RC 66.131 GL -.45 GP 29.58 ZAL 74.51 ZAP 45.02 ETS 328.56 ZAE 143.36 ETE 44.72 ZAC 118.83 ETC 143.70 CLP -35.63

PLANETOCENTRIC CONIC

C3 8.363 VHL 2.892 DLA 10.39 RAL 26.30 RAD 6567.3 VEL 11.391 PTH 1.97 VHP 4.523 DPA 40.52 RAP 26.09 ECC 1.1376  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 57 12 2395.76 -22.73 50.63 237.41 107.36 5 36 28 1755.8 -20.14 42.91  
 90.00 19 34 0 4343.09 4.64 179.98 234.87 62.03 20 46 23 3743.1 .86 173.33  
 100.00 6 23 42 2076.75 -23.58 29.80 237.11 108.92 6 58 19 1476.8 -20.78 22.12  
 100.00 20 50 11 4097.32 5.43 161.47 234.43 60.56 21 58 28 3497.3 1.47 154.93  
 110.00 7 43 40 1828.52 -25.85 9.84 236.15 113.19 8 14 7 1228.5 -22.49 2.30  
 110.00 21 48 42 3920.32 7.51 146.77 233.16 56.55 22 52 2 3320.3 3.06 140.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2837 TRA -.7379 TC3 1.5103 BAU .2727 SGT 1813.3 SGR 1479.8 SCS 624.8 ST 718.0 SR 540.9 SS 779.4  
 RDE -.2394 RRA -.4285 RC3 1.9149 FAU .09092 RRT .9358 RRF -.9917 RTF -.9387 CRT .9848 CRS .9674 CST .9956  
 FDE .7318 FRA 2.2306 FC3-9.4126 BSP 7829 SGB 2340.5 R23 -.1849 R13 -.9748 LSA 1184.2 MSA 113.3 SSA 22.4  
 BDE .3712 BRA .8523 BC3 2.4368 FSP -1922 SGT 2304.2 SGR 410.5 THA 38.83 EL1 895.8 EL2 75.3 ALF 36.88

LAUNCH DATE JAN 3 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 359.360

RL 147.09 LAL -.00 LOL 102.45 VL 27.555 GAL 1.55 AZL 90.54 HCA 157.47 SMA 126.97 ECC .16070 INC .5444 V1 30.288  
 RP 106.67 LAP -.21 LOP 259.92 VP 37.381 GAP -4.12 AZP 89.50 TAL 171.88 TAP 329.34 RCA 106.57 APO 147.36 V2 34.873  
 RC 60.274 GL -5.26 GP 34.41 ZAL 74.91 ZAP 50.15 ETS 328.40 ZAE 140.45 ETE 51.19 ZAC 115.56 ETC 142.14 CLP -39.03

PLANETOCENTRIC CONIC

C3 8.154 VHL 2.856 DLA 5.71 RAL 27.52 RAD 6567.3 VEL 11.382 PTH 1.97 VHP 4.477 DPA 44.69 RAP 22.78 ECC 1.1342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 38 48 2200.49 -19.22 40.59 237.16 111.20 6 15 28 1800.5 -16.17 33.24  
 90.00 19 2 8 4488.90 9.22 108.24 235.75 63.11 20 16 57 3888.9 5.54 181.50  
 100.00 7 2 50 1929.41 -20.01 20.32 236.82 112.68 7 35 0 1329.4 -16.77 13.03  
 100.00 20 20 46 4235.21 9.98 169.19 235.35 61.68 21 31 21 3635.2 6.11 162.53  
 110.00 8 17 16 1696.48 -22.11 1.60 235.79 116.76 8 45 33 1096.5 -18.34 354.50  
 110.00 21 22 50 4040.92 11.97 153.26 234.17 57.74 22 30 11 3440.9 7.62 146.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2266 TRA -.7080 TC3 1.4443 BAU .3024 SGT 1710.4 SCR 1777.0 SG3 638.9 ST 625.1 SR 509.6 SS 665.7  
 RDE -.1944 RRA -.5380 RC3 2.3679 FAU .09199 RRT .9349 RRF -.9952 RTF -.9353 CRT .9974 CRS .9561 CST .9719  
 FDE .4708 FRA 2.3617 FC3-9.7672 B8P 8022 SGB 2466.4 R23 -.1590 R13 -.9825 LSA 1037.1 MSA 135.5 SSA 19.4  
 BDE .2906 BRA .8892 BC3 2.7736 F8P -1982 SGI 2426.1 SGI 444.5 THA 46.17 EL1 806.0 EL2 28.5 ALF 39.17

LAUNCH DATE JAN 3 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 365.833

RL 147.09 LAL -.00 LOL 102.45 VL 27.589 GAL 1.48 AZL 91.19 HCA 160.64 SMA 127.20 ECC .15843 INC 1.1940 V1 30.288  
 RP 106.70 LAP -.40 LOP 263.09 VP 37.397 GAP -3.64 AZP 88.87 TAL 172.11 TAP 332.75 RCA 107.05 APO 147.36 V2 34.862  
 RC 70.456 GL -11.58 GP 40.20 ZAL 75.62 ZAP 55.79 ETS 328.43 ZAE 136.43 ETE 57.72 ZAC 111.46 ETC 140.82 CLP -42.60

PLANETOCENTRIC CONIC

C3 8.201 VHL 2.864 DLA -.37 RAL 29.32 RAD 6567.3 VEL 11.384 PTH 1.97 VHP 4.535 DPA 49.52 RAP 18.06 ECC 1.1350  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 31 21 2012.37 -14.20 29.07 238.02 114.76 7 4 53 1412.4 -10.75 22.09  
 90.00 18 23 56 4679.19 14.85 199.38 238.11 65.61 19 41 55 4079.2 11.43 192.37  
 100.00 7 52 31 1750.53 -14.96 9.44 237.65 116.19 8 21 42 1150.5 -11.32 2.54  
 100.00 19 45 27 4416.26 15.60 179.88 237.75 64.18 20 59 3 3816.3 12.00 172.74  
 110.00 9 0 22 1538.14 -16.96 352.21 236.54 120.13 9 26 0 938.1 -12.83 345.53  
 110.00 20 54 5 4201.41 17.81 162.27 236.64 60.22 22 4 6 3601.4 13.52 155.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1722 TRA -.6788 TC3 1.2792 BAU .3387 SGT 1581.1 SCR 2133.0 SG3 626.4 ST 534.0 SR 474.4 SS 584.9  
 RDE -.1132 RRA -.6897 RC3 2.8120 FAU .08884 RRT .9287 RRF -.9973 RTF -.9275 CRT .9781 CRS .9514 CST .8663  
 FDE .1370 FRA 2.4299 FC3-9.3778 B8P 8549 SGB 2655.1 R23 -.1278 R13 -.9891 LSA 900.1 MSA 204.7 SSA 12.8  
 BDE .2061 BRA .9677 BC3 3.0893 F8P -1952 SGI 2611.6 SGI 478.7 THA 54.06 EL1 710.4 EL2 74.3 ALF 41.54

LAUNCH DATE JAN 3 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 372.281

RL 147.09 LAL -.00 LOL 102.45 VL 27.619 GAL 1.42 AZL 92.09 HCA 163.80 SMA 127.40 ECC .15647 INC 2.0862 V1 30.288  
 RP 106.73 LAP -.58 LOP 266.26 VP 37.410 GAP -3.17 AZP 88.00 TAL 172.30 TAP 336.10 RCA 107.47 APO 147.34 V2 34.853  
 RC 72.672 GL -19.87 GP 47.08 ZAL 76.61 ZAP 61.90 ETS 328.81 ZAE 131.02 ETE 63.94 ZAC 106.49 ETC 139.86 CLP -46.23

PLANETOCENTRIC CONIC

C3 8.746 VHL 2.957 DLA -8.26 RAL 31.90 RAD 6567.3 VEL 11.408 PTH 1.97 VHP 4.754 DPA 54.99 RAP 11.20 ECC 1.1439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 41 15 1778.95 -7.11 15.42 240.91 117.48 8 10 52 1177.0 -3.37 8.73  
 90.00 17 34 36 4938.85 21.43 215.58 243.03 71.04 18 56 55 4338.8 18.65 208.02  
 100.00 8 58 35 1527.43 -7.90 356.64 240.48 118.92 9 24 3 927.4 -3.98 350.05  
 100.00 18 59 56 4663.60 22.27 195.01 242.71 69.53 20 17 40 4063.6 19.28 187.49  
 110.00 9 57 43 1342.29 -9.87 341.34 239.23 122.87 10 20 5 742.3 -5.56 335.02  
 110.00 20 17 18 4421.51 24.50 175.83 241.70 65.38 21 30 59 3821.5 20.97 168.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1225 TRA -.6431 TC3 1.0229 BAU .3840 SGT 1418.9 SCR 2345.4 SG3 577.0 ST 446.5 SR 532.0 SS 616.5  
 RDE .0325 RRA -.8946 RC3 3.1211 FAU .08057 RRT .9189 RRF -.9985 RTF -.9148 CRT .7767 CRS .9767 CST 6241  
 FDE -.2547 FRA 2.4018 FC3-7.9753 B8P 9370 SGB 2913.1 R23 -.0940 R13 -.9940 LSA 875.5 MSA 309.8 SSA 7.2  
 BDE .1267 BRA 1.1018 BC3 3.2844 F8P -1819 SGI 2869.7 SGI 501.5 THA 62.03 EL1 656.0 EL2 228.0 ALF 51.39

LAUNCH DATE JAN 3 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 378.701

RL 147.09 LAL -.00 LOL 102.45 VL 27.645 GAL 1.38 AZL 93.40 HCA 166.95 SMA 127.58 ECC .15482 INC 3.3952 V1 30.288  
 RP 106.76 LAP -.77 LOP 269.42 VP 37.420 GAP -2.73 AZP 86.69 TAL 172.43 TAP 339.39 RCA 107.82 APO 147.33 V2 34.844  
 RC 74.919 GL -30.48 GP 55.17 ZAL 78.10 ZAP 68.33 ETS 329.70 ZAE 124.03 ETE 69.51 ZAC 100.67 ETC 139.41 CLP -49.71

PLANETOCENTRIC CONIC

C3 10.412 VHL 3.227 DLA -18.27 RAL 35.54 RAD 6567.4 VEL 11.480 PTH 2.00 VHP 5.246 DPA 60.92 RAP .78 ECC 1.1713  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 24 12 1462.33 2.98 357.80 247.79 118.17 9 48 34 862.3 6.73 351.12  
 90.00 18 20 43 5321.89 27.46 241.92 252.45 82.81 17 49 25 4721.9 26.18 233.49  
 100.00 10 34 38 1235.04 1.94 340.52 247.21 119.83 10 55 13 635.0 5.90 333.97  
 100.00 17 52 56 5024.41 28.64 219.85 252.26 81.03 19 16 43 4424.4 27.10 211.38  
 110.00 11 19 4 1095.81 -.65 328.34 245.59 124.18 11 37 20 495.8 3.84 322.13  
 110.00 19 25 1 4736.40 31.64 197.28 251.56 76.32 20 43 58 4136.4 29.43 188.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0949 TRA -.8035 TC3 .8882 BAU .4302 SGT 1219.7 SCR 2993.3 SG3 484.3 ST 378.3 SR 827.8 SS 761.4  
 RDE .2749 RRA -1.1872 RC3 3.0178 FAU .06570 RRT .8937 RRF -.9992 RTF -.8911 CRT .4598 CRS .9965 CST .3841  
 FDE -.8199 FRA 2.2544 FC3-5.4632 B8P 10332 SGB 3232.3 R23 -.0642 R13 -.9971 LSA 1136.4 MSA 341.8 SSA 3.9  
 BDE .2908 BRA 1.3318 BC3 3.0909 F8P -1536 SGI 3191.3 SGI 513.4 THA 69.43 EL1 849.2 EL2 327.5 ALF 76.01

LAUNCH DATE JAN 3 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 25 1969

MELIOCENTRIC CONIC

DISTANCE 385.087

RL 147.09 LAL -.00 LOL 102.45 VL 27.666 GAL 1.35 AZL 95.52 HCA 170.10 SMA 127.72 ECC .15345 INC 5.5187 V1 30.288
RP 108.78 LAP -.95 LOP 272.59 VP 37.428 GAP -2.29 AZP 84.56 TAL 172.50 TAP 342.60 RCA 108.12 APO 147.32 V2 34.835
RC 77.194 GL -43.19 GP 64.53 ZAL 80.33 ZAP 74.78 ETS 331.08 ZAE 115.34 ETE 74.03 ZAC 94.14 ETC 139.47 CLP -52.37

PLANETOCENTRIC CONIC

C3 15.108 VHL 3.887 DLA -30.12 RAL 40.61 RAD 6567.6 VEL 11.683 PTH 2.05 VHP 6.264 DPA 66.73 RAP 343.97 ECC 1.2486
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
79.28 11 45 51 1107.36 22.43 341.22 265.23 110.64 12 4 18 507.4 25.04 333.37
100.72 14 39 30 5835.65 22.44 277.93 265.23 110.63 16 16 46 5235.6 25.05 270.09
79.28 11 45 51 1107.36 22.43 341.22 265.23 110.64 12 4 18 507.4 25.04 333.37
100.72 14 39 30 5835.65 22.44 277.93 265.23 110.63 16 16 46 5235.6 25.05 270.09
110.00 13 37 16 744.12 12.57 309.69 280.12 122.05 13 49 41 144.1 16.71 303.03
110.00 17 47 15 5246.89 33.07 236.32 286.43 99.17 19 14 41 4846.9 33.99 227.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1073 TRA -.5571 TC3 .3224 BAU .4682 86T 994.6 86R 3443.5 86S 356.0 ST 326.0 SR 1296.9 SS 877.2
RDE .6741 RRA-1.6288 RC3 2.2956 FAU .04583 RRT .8531 RRF -.9995 RTF -.8508 CRT .1887 CRS .9996 CST .1606
FDE -.8624 FRA 1.9633 FC3 -2.6259 BSP 11534 86B 3584.3 86C -.0393 R13 -.9987 LSA 1566.8 MSA 321.2 SSA 2.2
BDE .6826 BRA 1.7198 BC3 2.3181 FSP -1150 86I 3548.8 86J 503.6 THA 75.87 EL1 1298.5 EL2 319.8 ALF 87.11

LAUNCH DATE JAN 3 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 27 1969

MELIOCENTRIC CONIC

DISTANCE 391.419

RL 147.09 LAL -.00 LOL 102.45 VL 27.684 GAL 1.34 AZL 99.58 HCA 173.21 SMA 127.84 ECC .15235 INC 9.5767 V1 30.288
RP 108.81 LAP -1.13 LOP 275.75 VP 37.434 GAP -1.88 AZP 80.49 TAL 172.50 TAP 345.71 RCA 108.36 APO 147.32 V2 34.827
RC 79.493 GL -56.33 GP 75.33 ZAL 83.27 ZAP 80.78 ETS 331.83 ZAE 104.69 ETE 76.26 ZAC 87.09 ETC 139.10 CLP -50.76

PLANETOCENTRIC CONIC

C3 30.607 VHL 5.532 DLA -42.19 RAL 47.15 RAD 6588.2 VEL 12.328 PTH 2.22 VHP 8.511 DPA 70.87 RAP 315.67 ECC 1.5037
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.31 10 5 11 1658.98 24.41 26.01 287.10 125.55 10 32 50 1059.0 28.87 19.00
122.69 17 12 22 5822.74 24.42 262.38 287.11 125.54 18 46 5 5022.7 28.89 255.36
57.31 10 5 11 1658.98 24.41 26.01 287.10 125.55 10 32 50 1059.0 28.87 19.00
122.69 17 12 22 5822.74 24.42 262.38 287.11 125.54 18 46 5 5022.7 28.89 255.36
57.31 10 5 11 1658.98 24.41 26.01 287.10 125.55 10 32 50 1059.0 28.87 19.00
122.69 17 12 22 5822.74 24.42 262.38 287.11 125.54 18 46 5 5022.7 28.89 255.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1856 TRA -.5504 TC3 .1273 BAU .4701 86T 773.7 86R 3814.2 86S 216.6 ST 280.5 SR 1727.8 SS 844.8
RDE 1.3648 RRA-2.3878 RC3 1.1417 FAU .02475 RRT .8099 RRF -.9997 RTF -.8103 CRT -.0425 CRS 1.0000 CST -.0460
FDE -.9097 FRA 1.5867 FC3 -.7000 BSP 13566 86B 3891.9 86C -.0181 R13 -.9996 LSA 1923.3 MSA 280.3 SSA 1.3
BDE 1.3747 BRA 2.4265 BC3 1.1488 FSP -768 86I 3886.0 86J 447.8 THA 80.54 EL1 1727.8 EL2 280.3 ALF 90.41

LAUNCH DATE JAN 3 1969

FLIGHT TIME 146.00

ARRIVAL DATE MAY 29 1969

MELIOCENTRIC CONIC

DISTANCE 397.639

RL 147.09 LAL -.00 LOL 102.45 VL 27.698 GAL 1.37 AZL 110.27 HCA 176.24 SMA 127.94 ECC .15156 INC20.2654 V1 30.288
RP 108.83 LAP -1.30 LOP 278.92 VP 37.437 GAP -1.50 AZP 89.77 TAL 172.31 TAP 348.55 RCA 108.55 APO 147.33 V2 34.820
RC 81.813 GL -65.54 GP 85.38 ZAL 86.41 ZAP 85.74 ETS 294.50 ZAE 90.31 ETE 59.00 ZAC 79.92 ETC 101.60 CLP 22.71

PLANETOCENTRIC CONIC

C3 111.022 VHL 10.537 DLA -50.87 RAL 52.28 RAD 6570.1 VEL 15.243 PTH 2.73 VHP 14.888 DPA 69.67 RAP 272.50 ECC 2.8271
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.80 9 43 52 2073.24 13.11 53.87 311.34 139.61 10 18 25 1473.2 19.14 48.81
134.20 18 14 34 5824.51 13.13 270.19 311.36 139.61 19 51 39 5224.5 19.15 265.13
45.80 9 43 52 2073.24 13.11 53.87 311.34 139.61 10 18 25 1473.2 19.14 48.81
134.20 18 14 34 5824.51 13.13 270.19 311.36 139.61 19 51 39 5224.5 19.15 265.13
45.80 9 43 52 2073.24 13.11 53.87 311.34 139.61 10 18 25 1473.2 19.14 48.81
134.20 18 14 34 5824.51 13.13 270.19 311.36 139.61 19 51 39 5224.5 19.15 265.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2759 TRA-3.1856 TC3 .0283 BAU .0962 86T 2815.1 86R 3058.0 86S 109.2 ST 1072.8 SR 1593.8 SS 728.5
RDE 2.3134 RRA-3.1718 RC3 .0583 FAU .00096 RRT .9789 RRF -.9939 RTF -.9942 CRT .9469 CRS .9905 CST .9821
FDE -.8109 FRA 1.3745 FC3 -.0075 BSP 12274 86B 4156.5 86C .0106 R13 -.9998 LSA 2034.0 MSA 290.5 SSA .9
BDE 2.8187 BRA 4.4812 BC3 .0648 FSP -332 86I 4132.5 86J 445.2 THA 47.42 EL1 1899.3 EL2 289.4 ALF 56.61

LAUNCH DATE JAN 3 1969

FLIGHT TIME 148.00

ARRIVAL DATE MAY 31 1969

MELIOCENTRIC CONIC

DISTANCE 402.953

RL 147.09 LAL -.00 LOL 102.45 VL 27.709 GAL 1.57 AZL 166.10 HCA 178.48 SMA 128.01 ECC .15148 INC76.1040 V1 30.288
RP 108.85 LAP -1.47 LOP 282.08 VP 37.439 GAP -1.36 AZP 13.90 TAL 171.17 TAP 349.65 RCA 108.62 APO 147.40 V2 34.813
RC 84.153 GL -48.67 GP 52.91 ZAL 88.79 ZAP 88.75 ETS 179.21 ZAE 55.09 ETE 285.86 ZAC 69.88 ETC 354.67 CLP 87.94

PLANETOCENTRIC CONIC

C31282.180 VHL 35.808 DLA -38.82 RAL 35.00 RAD 6573.1 VEL 37.463 PTH 3.54 VHP 46.083 DPA 45.58 RAP 218.61 ECC22.1014
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.57 9 40 27 2166.60 -.70 48.86 305.86 128.61 10 16 34 1566.6 4.29 43.01
117.43 16 0 10 975.49 -.68 318.66 305.87 128.61 16 16 26 375.5 4.30 312.81
62.57 9 40 27 2166.60 -.70 48.86 305.86 128.61 10 16 34 1566.6 4.29 43.01
117.43 16 0 10 975.49 -.68 318.66 305.87 128.61 16 16 26 375.5 4.30 312.81
62.57 9 40 27 2166.60 -.70 48.86 305.86 128.61 10 16 34 1566.6 4.29 43.01
117.43 16 0 10 975.49 -.68 318.66 305.87 128.61 16 16 26 375.5 4.30 312.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 6.1815 TRA-2.4712 TC3 -.1048 BAU 4.3964 86T 1340.7 86R 3228.6 86S 63.1 ST 1000.9 SR 1463.6 SS 1356.5
RDE -7.9043 RRA11.9820 RC3 .2341 FAU -.07826 RRT -.8668 RRF .9998 RTF -.8751 CRT -.9308 CRS -.9998 CST .9387
FDE -1.8632 FRA 2.6773 FC3 .0528 BSP 11300 86B 3494.1 86C -.0508 R13 .9987 LSA 2209.1 MSA 322.5 SSA .6
BDE10.0344 BRA12.2146 BC3 .2565 FSP -211 86I 3437.2 86J 628.1 THA 110.52 EL1 1746.5 EL2 306.5 ALF 123.65

LAUNCH DATE JAN 3 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 411.075

RL 147.09 LAL -.00 LOL 102.45 VL 27.716 GAL 1.24 AZL 59.62 HCA 183.24 SMA 128.07 ECC .15012 INC30.3794 V1 30.288
RP 108.87 LAP -1.84 LOP 285.24 VP 37.439 GAP -.50 AZP 120.34 TAL 172.93 TAP 356.17 RCA 108.84 APO 147.29 V2 34.807
RC 86.508 GL 65.42 GP -84.63 ZAL 87.76 ZAP 88.57 ETS 159.42 ZAE 84.68 ETE 57.95 ZAC 103.74 ETC .58 CLP 74.57

PLANETOCENTRIC CONIC

C3 237.483 VHL 15.410 DLA 62.25 RAL 328.27 RAD 6571.4 VEL 18.942 PTH 3.07 VHP 17.285 DPA -64.33 RAP 110.36 ECC 4.9084
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.93 15 28 51 4926.31 -7.13 238.63 234.50 27.99 16 50 58 4326.3 -14.17 235.19
148.07 1 19 20 3234.65 -7.12 98.64 234.49 27.99 2 13 15 2634.6 -14.16 95.20
31.93 15 28 51 4926.31 -7.13 238.63 234.50 27.99 16 50 58 4326.3 -14.17 235.19
148.07 1 19 20 3234.65 -7.12 98.64 234.49 27.99 2 13 15 2634.6 -14.16 95.20
31.93 15 28 51 4926.31 -7.13 238.63 234.50 27.99 16 50 58 4326.3 -14.17 235.19
148.07 1 19 20 3234.65 -7.12 98.64 234.49 27.99 2 13 15 2634.6 -14.16 95.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-3.6361 TRA 2.0336 TC3 -.0925 BAU .4990 SGT 2132.0 SGR 3794.4 SCS 96.7 ST 1437.0 SR 3630.5 SS 1517.8
RDE-9.7258 RRA 1.3537 RC3 -.1271 FAU-.00999 RRT .8350 RRF -.9884 RTF -.9085 CRT .9673 CRS .9986 CST .9792
FDE 2.7061 FRA -.5989 FC3 .0364 BSP 13762 SGB 4352.3 R23 .0255 R13 -.9996 LSA 4175.3 MSA 341.2 SSA .9
BDE10.3832 BRA 2.4430 BC3 .1572 FSP -320 SGI 4222.8 SGI 1054.0 THA 63.05 EL1 3889.7 EL2 340.2 ALF 68.88

LAUNCH DATE JAN 3 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 417.182

RL 147.09 LAL -.00 LOL 102.45 VL 27.721 GAL 1.31 AZL 73.15 HCA 186.23 SMA 128.10 ECC .14999 INC16.8451 V1 30.288
RP 108.89 LAP -1.80 LOP 286.41 VP 37.438 GAP -.16 AZP 106.75 TAL 172.54 TAP 358.76 RCA 108.89 APO 147.31 V2 34.802
RC 88.877 GL 64.50 GP -80.16 ZAL 85.91 ZAP 88.78 ETS 23.83 ZAE 99.51 ETE 284.15 ZAC 109.01 ETC 224.42 CLP -82.72

PLANETOCENTRIC CONIC

C3 79.062 VHL 8.892 DLA 63.21 RAL 331.98 RAD 6569.5 VEL 14.157 PTH 2.58 VHP 9.110 DPA -60.99 RAP 78.46 ECC 2.3012
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.80 15 40 57 4725.20 -19.59 233.57 231.64 28.58 16 59 42 4125.2 -26.56 229.72
149.20 1 36 50 3024.41 -19.58 92.26 231.62 28.58 2 27 15 2424.4 -26.55 88.41
30.80 15 40 57 4725.20 -19.59 233.57 231.64 28.58 16 59 42 4125.2 -26.56 229.72
149.20 1 36 50 3024.41 -19.58 92.26 231.62 28.58 2 27 15 2424.4 -26.55 88.41
30.80 15 40 57 4725.20 -19.59 233.57 231.64 28.58 16 59 42 4125.2 -26.56 229.72
149.20 1 36 50 3024.41 -19.58 92.26 231.62 28.58 2 27 15 2424.4 -26.55 88.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7669 TRA -1.1619 TC3 -.0048 BAU .2594 SGT 545.7 SGR 4380.4 SCS 198.3 ST 499.0 SR 4034.0 SS 1678.0
RDE 6.2063 RRA-1.2104 RC3 -.2454 FAU .01445 RRT .9960 RRF .9993 RTF .9924 CRT .9999 CRS -.9999 CST -.9998
FDE 3.2850 FRA -.5977 FC3 -.1583 BSP 13888 SGB 4414.3 R23 .0333 R13 .9992 LSA 4397.4 MSA 17.5 SSA 1.1
BDE 6.2554 BRA 1.2212 BC3 .2454 FSP -659 SGI 4414.0 SGI 48.3 THA 82.93 EL1 4064.7 EL2 5.4 ALF 82.93

LAUNCH DATE JAN 3 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 423.404

RL 147.09 LAL -.00 LOL 102.45 VL 27.724 GAL 1.36 AZL 77.84 HCA 189.33 SMA 128.12 ECC .14999 INC12.1618 V1 30.288
RP 108.90 LAP -1.96 LOP 291.37 VP 37.435 GAP -.20 AZP 102.01 TAL 172.23 TAP 1.56 RCA 108.90 APO 147.33 V2 34.797
RC 91.256 GL 60.81 GP -70.27 ZAL 84.34 ZAP 90.48 ETS 5.13 ZAE 109.31 ETE 266.19 ZAC 111.63 ETC 205.28 CLP -91.41

PLANETOCENTRIC CONIC

C3 44.732 VHL 8.888 DLA 61.67 RAL 339.72 RAD 6568.7 VEL 12.888 PTH 2.33 VHP 6.380 DPA -55.66 RAP 62.31 ECC 1.7362
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.62 16 16 12 4579.53 -27.36 227.24 233.53 32.30 17 32 31 3979.5 -34.03 222.51
147.38 2 3 21 2893.61 -27.35 88.06 233.52 32.29 2 51 35 2293.6 -34.02 83.33
32.62 16 16 12 4579.53 -27.36 227.24 233.53 32.30 17 32 31 3979.5 -34.03 222.51
147.38 2 3 21 2893.61 -27.35 88.06 233.52 32.29 2 51 35 2293.6 -34.02 83.33
32.62 16 16 12 4579.53 -27.36 227.24 233.53 32.30 17 32 31 3979.5 -34.03 222.51
147.38 2 3 21 2893.61 -27.35 88.06 233.52 32.29 2 51 35 2293.6 -34.02 83.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5387 TRA -.4066 TC3 -.2140 BAU .4192 SGT 1535.7 SGR 4076.7 SCS 343.7 ST 1336.5 SR 3862.9 SS 2073.5
RDE 4.4956 RRA -.5512 RC3 -.6675 FAU .03791 RRT .9684 RRF .9994 RTF .9618 CRT .9961 CRS -1.0000 CST -.9955
FDE 4.3803 FRA -.4888 FC3 -.7337 BSP 13712 SGB 4356.3 R23 .0545 R13 .9982 LSA 4581.9 MSA 115.3 SSA 1.6
BDE 4.7516 BRA .6849 BC3 .7010 FSP -1154 SGI 4341.4 SGI 359.7 THA 69.81 EL1 4086.0 EL2 111.3 ALF 70.97

LAUNCH DATE JAN 3 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 429.641

RL 147.09 LAL -.00 LOL 102.45 VL 27.724 GAL 1.42 AZL 80.19 HCA 192.46 SMA 128.11 ECC .15017 INC 9.8104 V1 30.288
RP 108.92 LAP -2.11 LOP 294.73 VP 37.431 GAP .57 AZP 99.58 TAL 171.90 TAP 4.36 RCA 108.88 APO 147.35 V2 34.793
RC 93.644 GL 57.08 GP -62.15 ZAL 82.97 ZAP 93.42 ETS 357.64 ZAE 116.99 ETE 258.18 ZAC 112.78 ETC 197.10 CLP -97.34

PLANETOCENTRIC CONIC

C3 31.645 VHL 5.625 DLA 59.67 RAL 346.30 RAD 6568.3 VEL 12.370 PTH 2.23 VHP 5.101 DPA -50.43 RAP 51.77 ECC 1.5208
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.01 16 48 24 4481.45 -31.63 221.23 235.18 36.38 18 3 5 3881.4 -37.94 215.64
144.99 2 23 38 2817.04 -31.62 84.95 235.17 36.37 3 10 35 2217.0 -37.92 79.36
35.01 16 48 24 4481.45 -31.63 221.23 235.18 36.38 18 3 5 3881.4 -37.94 215.64
144.99 2 23 38 2817.04 -31.62 84.95 235.17 36.37 3 10 35 2217.0 -37.92 79.36
35.01 16 48 24 4481.45 -31.63 221.23 235.18 36.38 18 3 5 3881.4 -37.94 215.64
144.99 2 23 38 2817.04 -31.62 84.95 235.17 36.37 3 10 35 2217.0 -37.92 79.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7823 TRA -.3607 TC3 -.5024 BAU .4694 SGT 2017.5 SGR 3780.3 SCS 504.7 ST 1808.2 SR 3569.1 SS 2422.4
RDE 3.5019 RRA -.2102 RC3 -.9892 FAU .06202 RRT .9674 RRF .9993 RTF .9618 CRT .9964 CRS -1.0000 CST -.9958
FDE 5.3935 FRA -.2886 FC3 -1.8968 BSP 13282 SGB 4267.3 R23 .0757 R13 .9966 LSA 4674.9 MSA 145.9 SSA 2.2
BDE 3.9203 BRA .4175 BC3 1.1094 FSP -1693 SGI 4243.2 SGI 452.5 THA 62.23 EL1 3998.6 EL2 137.6 ALF 63.18



LAUNCH DATE JAN 3 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 102.45 VL 27.721 GAL 1.49 AZL 81.61 HCA 195.60 SMA 128.10 ECC .15051 INC 8.3941 V1 30.288  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.426 GAP .93 AZP 98.09 TAL 171.53 TAP 7.13 RCA 108.82 APO 147.38 V2 34.789  
 RC 96.038 GL 53.78 GP -55.15 ZAL 81.73 ZAP 97.25 ETS 352.61 ZAE 123.12 ETE 251.26 ZAC 112.93 ETC 191.17 CLP-102.71

DISTANCE 435.871

PLANETOCENTRIC CONIC

C3 25.142 VHL 5.014 DLA 57.70 RAL 351.53 RAD 6568.0 VEL 12.104 PTH 2.17 VHP 4.407 DPA -45.60 RAP 44.00 ECC 1.4138  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.38 17 15 24 4412.31 -33.93 215.94 236.37 40.09 18 28 57 3812.3 -39.87 209.65  
 142.62 2 38 21 2771.47 -33.92 82.64 236.35 40.09 3 24 32 2171.5 -39.86 76.35  
 37.38 17 15 24 4412.31 -33.93 215.94 236.37 40.09 18 28 57 3812.3 -39.87 209.65  
 142.62 2 38 21 2771.47 -33.92 82.64 236.35 40.09 3 24 32 2171.5 -39.86 76.35  
 37.38 17 15 24 4412.31 -33.93 215.94 236.37 40.09 18 28 57 3812.3 -39.87 209.65  
 142.62 2 38 21 2771.47 -33.92 82.64 236.35 40.09 3 24 32 2171.5 -39.86 76.35

DIFFERENTIAL CORRECTIONS

TDE 1.9026 TRA -.2827 TC3 -.8436 BAU .4920  
 RDE 2.8021 RRA -.0188 RC3-1.1960 FAU .08467  
 FDE 6.1275 FRA .0299 FC3-2.9155 BSP 12959  
 BDE 3.3870 BRA .2834 BC3 1.4637 FSP -2215

MID-COURSE EXECUTION ACCURACY

SGT 2410.0 SGR 3419.4 SG3 655.6  
 RRT .9708 RRF .9991 RTF .9656  
 SGB 4183.3 R23 .0977 R13 .9945  
 SGI 4156.2 SGI 475.4 THA 55.10

ORBIT DETERMINATION ACCURACY

ST 2181.8 SR 3202.1 SS 2666.4  
 CRT .9968 CRS-1.0000 CST -.9963  
 LSA 4700.8 MSA 159.2 SSA 2.7  
 EL1 3872.1 EL2 143.2 ALF 55.76

LAUNCH DATE JAN 3 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 102.45 VL 27.716 GAL 1.57 AZL 82.56 HCA 198.75 SMA 128.07 ECC .15103 INC 7.4439 V1 30.288  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.420 GAP 1.29 AZP 97.05 TAL 171.11 TAP 9.86 RCA 108.72 APO 147.41 V2 34.787  
 RC 96.436 GL 50.91 GP -49.03 ZAL 80.55 ZAP 101.53 ETS 348.90 ZAE 127.87 ETE 244.39 ZAC 112.42 ETC 186.50 CLP-107.76

DISTANCE 442.089

PLANETOCENTRIC CONIC

C3 21.389 VHL 4.625 DLA 55.90 RAL 355.78 RAD 6567.9 VEL 11.949 PTH 2.13 VHP 4.006 DPA -41.21 RAP 37.92 ECC 1.3520  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.55 17 38 16 4361.03 -35.12 211.41 237.36 43.27 18 50 57 3761.0 -40.74 204.59  
 140.45 2 49 26 2743.92 -35.11 80.96 237.34 43.26 3 35 10 2143.9 -40.73 74.15  
 39.55 17 38 16 4361.03 -35.12 211.41 237.36 43.27 18 50 57 3761.0 -40.74 204.59  
 140.45 2 49 26 2743.92 -35.11 80.96 237.34 43.26 3 35 10 2143.9 -40.73 74.15  
 39.55 17 38 16 4361.03 -35.12 211.41 237.36 43.27 18 50 57 3761.0 -40.74 204.59  
 140.45 2 49 26 2743.92 -35.11 80.96 237.34 43.26 3 35 10 2143.9 -40.73 74.15

DIFFERENTIAL CORRECTIONS

TDE 2.0108 TRA -.1954 TC3-1.2143 BAU .5067  
 RDE 2.2772 RRA .0963 RC3-1.2905 FAU .10355  
 FDE 6.5512 FRA .3729 FC3-4.1830 BSP 12749  
 BDE 3.0379 BRA .2178 BC3 1.7719 FSP -2656

MID-COURSE EXECUTION ACCURACY

SGT 2766.5 SGR 3070.7 SG3 780.1  
 RRT .9743 RRF .9988 RTF .9692  
 SGB 4133.1 R23 .1187 R13 .9918  
 SGI 4106.8 SGI 466.0 THA 48.06

ORBIT DETERMINATION ACCURACY

ST 2494.7 SR 2822.2 SS 2811.0  
 CRT .9972 CRS-1.0000 CST -.9966  
 LSA 4697.1 MSA 166.6 SSA 3.2  
 EL1 3764.1 EL2 139.3 ALF 48.53

LAUNCH DATE JAN 3 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 102.45 VL 27.710 GAL 1.66 AZL 83.24 HCA 201.91 SMA 128.02 ECC .15171 INC 6.7589 V1 30.288  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.414 GAP 1.64 AZP 96.27 TAL 170.64 TAP 12.55 RCA 108.60 APO 147.44 V2 34.785  
 RC 100.837 GL 48.38 GP -43.66 ZAL 79.38 ZAP 106.08 ETS 346.16 ZAE 131.38 ETE 237.47 ZAC 111.54 ETC 182.78 CLP-112.51

DISTANCE 448.291

PLANETOCENTRIC CONIC

C3 19.013 VHL 4.360 DLA 54.31 RAL 359.39 RAD 6567.8 VEL 11.849 PTH 2.10 VHP 3.774 DPA -37.25 RAP 33.03 ECC 1.3129  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.51 17 58 10 4321.37 -35.69 207.56 238.34 45.92 19 10 11 3721.4 -41.03 200.37  
 138.49 2 58 20 2727.45 -35.68 79.78 238.32 45.91 3 43 47 2127.5 -41.01 72.59  
 41.51 17 58 10 4321.37 -35.69 207.56 238.34 45.92 19 10 11 3721.4 -41.03 200.37  
 138.49 2 58 20 2727.45 -35.68 79.78 238.32 45.91 3 43 47 2127.5 -41.01 72.59  
 41.51 17 58 10 4321.37 -35.69 207.56 238.34 45.92 19 10 11 3721.4 -41.03 200.37  
 138.49 2 58 20 2727.45 -35.68 79.78 238.32 45.91 3 43 47 2127.5 -41.01 72.59

DIFFERENTIAL CORRECTIONS

TDE 2.1013 TRA -.1018 TC3-1.5928 BAU .5216  
 RDE 1.8725 RRA .1652 RC3-1.2939 FAU .11685  
 FDE 6.7002 FRA .7233 FC3-5.3204 BSP 12633  
 BDE 2.8146 BRA .1940 BC3 2.0521 FSP -2967

MID-COURSE EXECUTION ACCURACY

SGT 3099.3 SGR 2732.3 SG3 871.3  
 RRT .9773 RRF .9982 RTF .9720  
 SGB 4131.8 R23 .1361 R13 .9890  
 SGI 4108.6 SGI 437.1 THA 41.32

ORBIT DETERMINATION ACCURACY

ST 2762.2 SR 2463.3 SS 2875.9  
 CRT .9975 CRS -.9999 CST -.9968  
 LSA 4683.9 MSA 170.7 SSA 3.9  
 EL1 3698.8 EL2 129.1 ALF 41.72

LAUNCH DATE JAN 3 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 102.45 VL 27.702 GAL 1.76 AZL 83.76 HCA 205.06 SMA 127.96 ECC .15256 INC 6.2390 V1 30.288  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.406 GAP 1.99 AZP 95.66 TAL 170.12 TAP 15.18 RCA 108.44 APO 147.49 V2 34.784  
 RC 103.240 GL 46.14 GP -38.95 ZAL 78.21 ZAP 110.84 ETS 344.13 ZAE 133.77 ETE 230.65 ZAC 110.52 ETC 179.87 CLP-116.96

DISTANCE 454.477

PLANETOCENTRIC CONIC

C3 17.419 VHL 4.174 DLA 52.90 RAL 2.57 RAD 6567.7 VEL 11.781 PTH 2.08 VHP 3.649 DPA -33.68 RAP 29.07 ECC 1.2867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.25 18 15 57 4289.80 -35.89 204.30 239.40 48.12 19 27 26 3689.8 -40.98 196.83  
 136.75 3 5 57 2718.10 -35.88 78.98 239.39 48.12 3 51 15 2118.1 -40.97 71.51  
 43.25 18 15 57 4289.80 -35.89 204.30 239.40 48.12 19 27 26 3689.8 -40.98 196.83  
 136.75 3 5 57 2718.10 -35.88 78.98 239.39 48.12 3 51 15 2118.1 -40.97 71.51  
 43.25 18 15 57 4289.80 -35.89 204.30 239.40 48.12 19 27 26 3689.8 -40.98 196.83  
 136.75 3 5 57 2718.10 -35.88 78.98 239.39 48.12 3 51 15 2118.1 -40.97 71.51

DIFFERENTIAL CORRECTIONS

TDE 2.1753 TRA -.0050 TC3-1.9679 BAU .5415  
 RDE 1.5920 RRA .2025 RC3-1.2384 FAU .12556  
 FDE 6.6164 FRA 1.0445 FC3-6.2403 BSP 12757  
 BDE 2.6722 BRA .2026 BC3 2.3251 FSP -3179

MID-COURSE EXECUTION ACCURACY

SGT 3408.3 SGR 2412.6 SG3 927.7  
 RRT .9797 RRF .9972 RTF .9743  
 SGB 4175.8 R23 .1474 R13 .9864  
 SGI 4156.8 SGI 397.0 THA 35.11

ORBIT DETERMINATION ACCURACY

ST 2986.7 SR 2135.3 SS 2873.2  
 CRT .9978 CRS -.9999 CST -.9968  
 LSA 4658.9 MSA 172.8 SSA 4.6  
 EL1 3669.7 EL2 114.6 ALF 35.54

LAUNCH DATE JAN 3 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 460.645

RL 147.09 LAL -.00 LOL 102.45 VL 27.692 GAL 1.88 AZL 84.17 HCA 208.22 SMA 127.89 ECC .15357 INC 5.8288 V1 30.288  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.398 GAP 2.34 AZP 95.14 TAL 169.55 TAP 17.77 RCA 108.25 APO 147.54 V2 34.783  
 RC 105.643 GL 44.10 GP -34.83 ZAL 77.02 ZAP 115.10 ETS 342.86 ZAE 135.22 ETE 224.16 ZAC 109.50 ETC 177.61 CLP-121.11

PLANETOCENTRIC CONIC

C3 16.311 VML 4.039 DLA 51.65 RAL 5.48 RAD 6567.7 VEL 11.734 PTH 2.07 VHP 3.597 DPA -30.47 RAP 25.88 ECC 1.2684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.81 18 32 16 4264.02 -35.87 201.52 240.60 49.96 19 43 20 3664.0 -40.75 193.85  
 135.19 3 12 49 2713.65 -35.86 78.48 240.59 49.95 3 58 2 2113.7 -40.74 70.81  
 44.81 18 32 16 4264.02 -35.87 201.52 240.60 49.96 19 43 20 3664.0 -40.75 193.85  
 135.19 3 12 49 2713.65 -35.86 78.48 240.59 49.95 3 58 2 2113.7 -40.74 70.81  
 44.81 18 32 16 4264.02 -35.87 201.52 240.60 49.96 19 43 20 3664.0 -40.75 193.85  
 135.19 3 12 49 2713.65 -35.86 78.48 240.59 49.95 3 58 2 2113.7 -40.74 70.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2371 TRA .0948 TC3-2.3282 BAU .5656 SGT 3695.4 SGR 2121.4 SG3 953.9 ST 3174.9 SR 1848.7 SS 2824.9  
 RDE 1.2986 RRA .2201 RC3-1.1435 FAU .12973 RRT .9813 RRF .9958 RTF .9760 CRT .9981 CRS -.9998 CST -.9968  
 FDE 6.3745 FRA 1.3242 FC3-6.8866 BSP 13046 SGB 4261.0 R23 .1511 R13 .9842 LSA 4631.1 MSA 173.7 SSA 5.3  
 BDE 2.5867 BRA .2396 BC3 2.5938 FSP -3286 SGI 4246.2 SG2 355.3 THA 29.62 EL1 3872.6 EL2 98.0 ALF 30.19

LAUNCH DATE JAN 3 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 466.795

RL 147.09 LAL -.00 LOL 102.45 VL 27.680 GAL 2.00 AZL 84.50 HCA 211.37 SMA 127.82 ECC .15473 INC 5.4950 V1 30.288  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.390 GAP 2.69 AZP 94.70 TAL 168.94 TAP 20.31 RCA 108.04 APO 147.59 V2 34.783  
 RC 108.045 GL 42.24 GP -31.24 ZAL 75.78 ZAP 119.35 ETS 341.62 ZAE 135.92 ETE 218.22 ZAC 108.61 ETC 175.88 CLP-124.98

PLANETOCENTRIC CONIC

C3 15.529 VML 3.941 DLA 50.54 RAL 8.21 RAD 6567.6 VEL 11.701 PTH 2.06 VHP 3.596 DPA -27.59 RAP 23.33 ECC 1.2556  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.22 18 47 33 4242.70 -35.70 199.13 241.95 51.51 19 58 15 3642.7 -40.41 191.32  
 133.78 3 19 18 2712.67 -35.69 78.20 241.94 51.49 4 4 50 2112.7 -40.40 70.40  
 46.22 18 47 33 4242.70 -35.70 199.13 241.95 51.51 19 58 15 3642.7 -40.41 191.32  
 133.78 3 19 18 2712.67 -35.69 78.20 241.94 51.49 4 4 50 2112.7 -40.40 70.40  
 46.22 18 47 33 4242.70 -35.70 199.13 241.95 51.51 19 58 15 3642.7 -40.41 191.32  
 133.78 3 19 18 2712.67 -35.69 78.20 241.94 51.49 4 4 50 2112.7 -40.40 70.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2891 TRA .1991 TC3-2.6631 BAU .5925 SGT 5961.0 SGR 1882.1 SG3 955.7 ST 3331.5 SR 1603.6 SS 2745.2  
 RDE 1.0977 RRA .2257 RC3-1.0260 FAU .13013 RRT .9813 RRF .9935 RTF .9772 CRT .9984 CRS -.9997 CST -.9968  
 FDE 6.0313 FRA 1.5611 FC3-7.2545 BSP 13443 SGB 4376.9 R23 .1462 R13 .9827 LSA 4601.8 MSA 174.0 SSA 6.1  
 BDE 2.5388 BRA .3010 BC3 2.8539 FSP -3303 SGI 4365.3 SG2 318.1 THA 24.92 EL1 3696.5 EL2 80.7 ALF 25.68

LAUNCH DATE JAN 3 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 472.927

RL 147.09 LAL -.00 LOL 102.45 VL 27.667 GAL 2.14 AZL 84.78 HCA 214.53 SMA 127.73 ECC .15607 INC 5.2167 V1 30.288  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.381 GAP 3.03 AZP 94.30 TAL 168.28 TAP 22.81 RCA 107.79 APO 147.66 V2 34.784  
 RC 110.448 GL 40.50 GP -28.11 ZAL 74.50 ZAP 123.36 ETS 340.89 ZAE 136.05 ETE 212.94 ZAC 107.89 ETC 174.57 CLP-128.57

PLANETOCENTRIC CONIC

C3 14.980 VML 3.870 DLA 49.53 RAL 10.82 RAD 6567.6 VEL 11.678 PTH 2.05 VHP 3.633 DPA -24.98 RAP 21.35 ECC 1.2465  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.50 19 2 6 4224.84 -35.44 197.05 243.45 52.81 20 12 31 3624.8 -39.99 189.15  
 132.50 3 25 35 2714.36 -35.42 78.12 243.44 52.80 4 10 50 2114.4 -39.98 70.22  
 47.50 19 2 6 4224.84 -35.44 197.05 243.45 52.81 20 12 31 3624.8 -39.99 189.15  
 132.50 3 25 35 2714.36 -35.42 78.12 243.44 52.80 4 10 50 2114.4 -39.98 70.22  
 47.50 19 2 6 4224.84 -35.44 197.05 243.45 52.81 20 12 31 3624.8 -39.99 189.15  
 132.50 3 25 35 2714.36 -35.42 78.12 243.44 52.80 4 10 50 2114.4 -39.98 70.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3319 TRA .3070 TC3-2.9694 BAU .6214 SGT 4205.9 SGR 1635.3 SG3 939.0 ST 3459.0 SR 1397.5 SS 2645.2  
 RDE .9383 RRA .2232 RC3 -.9003 FAU .12768 RRT .9819 RRF .9901 RTF .9782 CRT .9988 CRS -.9994 CST -.9966  
 FDE 5.6355 FRA 1.7509 FC3-7.3785 BSP 13931 SGB 4512.6 R23 .1325 R13 .9817 LSA 4570.0 MSA 173.8 SSA 6.9  
 BDE 2.5138 BRA .3796 BC3 3.1029 FSP -3259 SGI 4503.3 SG2 289.6 THA 20.99 EL1 3730.1 EL2 63.4 ALF 21.98

LAUNCH DATE JAN 3 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 479.042

RL 147.09 LAL -.00 LOL 102.45 VL 27.652 GAL 2.30 AZL 85.02 HCA 217.69 SMA 127.63 ECC .15756 INC 4.9796 V1 30.288  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.372 GAP 3.37 AZP 93.94 TAL 167.57 TAP 25.26 RCA 107.52 APO 147.74 V2 34.786  
 RC 112.844 GL 38.87 GP -25.39 ZAL 73.16 ZAP 127.11 ETS 340.39 ZAE 135.79 ETE 208.37 ZAC 107.40 ETC 173.60 CLP-131.90

PLANETOCENTRIC CONIC

C3 14.607 VML 3.822 DLA 48.61 RAL 13.36 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 3.700 DPA -22.62 RAP 19.86 ECC 1.2404  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.68 19 16 9 4209.78 -35.10 195.25 245.10 53.91 20 26 19 3609.8 -39.53 187.28  
 131.32 3 31 49 2718.18 -35.09 78.20 245.09 53.90 4 17 7 2118.2 -39.52 70.23  
 48.68 19 16 9 4209.78 -35.10 195.25 245.10 53.91 20 26 19 3609.8 -39.53 187.28  
 131.32 3 31 49 2718.18 -35.09 78.20 245.09 53.90 4 17 7 2118.2 -39.52 70.23  
 48.68 19 16 9 4209.78 -35.10 195.25 245.10 53.91 20 26 19 3609.8 -39.53 187.28  
 131.32 3 31 49 2718.18 -35.09 78.20 245.09 53.90 4 17 7 2118.2 -39.52 70.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3693 TRA .4218 TC3-3.2572 BAU .6500 SGT 4433.3 SGR 1441.2 SG3 910.3 ST 3564.3 SR 1227.9 SS 2537.0  
 RDE .8131 RRA .2173 RC3 -.7727 FAU .12291 RRT .9801 RRF .9853 RTF .9788 CRT .9992 CRS -.9990 CST -.9965  
 FDE 5.2216 FRA 1.9092 FC3-7.2843 BSP 14414 SGB 4661.7 R23 .1124 R13 .9811 LSA 4540.7 MSA 173.7 SSA 7.7  
 BDE 2.5050 BRA .2756 BC3 3.3282 FSP -3153 SGI 4653.7 SG2 272.8 THA 17.74 EL1 3769.6 EL2 47.1 ALF 19.00

LAUNCH DATE JAN 3 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 485.137

RL 147.09 LAL -.00 LOL 102.45 VL 27.637 GAL 2.46 AZL 85.23 HCA 220.85 SMA 127.52 ECC .15922 INC 4.7741 V1 30.288
RP 108.93 LAP -3.12 LOP 323.20 VP 37.363 GAP 3.71 AZP 93.62 TAL 166.82 TAP 27.67 RCA 107.22 APO 147.83 V2 34.789
RC 115.239 GL 37.31 GP -23.02 ZAL 71.77 ZAP 130.59 ETS 340.06 ZAE 135.27 ETE 204.48 ZAC 107.13 ETC 172.87 CLP-134.99

PLANETOCENTRIC CONIC

C3 14.375 VHL 3.791 DLA 47.76 RAL 15.86 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 3.789 DPA -20.47 RAP 18.79 ECC 1.2366
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.79 19 29 53 4196.95 -34.71 193.65 246.90 54.86 20 39 50 3597.0 -39.03 185.64
130.21 3 38 0 2723.88 -34.70 78.41 246.89 54.85 4 23 24 2123.9 -39.02 70.41
49.79 19 29 53 4196.95 -34.71 193.65 246.90 54.86 20 39 50 3597.0 -39.03 185.64
130.21 3 38 0 2723.88 -34.70 78.41 246.89 54.85 4 23 24 2123.9 -39.02 70.41
49.79 19 29 53 4196.95 -34.71 193.65 246.90 54.86 20 39 50 3597.0 -39.03 185.64
130.21 3 38 0 2723.88 -34.70 78.41 246.89 54.85 4 23 24 2123.9 -39.02 70.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3970 TRA .9392 TC3-3.4743 BAU .6794 SGT 4640.3 SGR 1274.6 SG3 872.6 ST 3641.5 SR 1086.5 SS 2417.9
RDE .7129 RRA .2075 RC3 -.8546 FAU .11717 RRT .9765 RRF .9785 RTF .9794 CRT .9995 CRS -.9984 CST -.9963
FDE 4.8014 FRA 2.0243 FC3-7.0568 BSP 14970 SGB 4812.1 R23 .0880 R13 .9808 LSA 4500.8 MSA 173.0 SSA 8.5
BOE 2.5008 BRA .5778 BC3 3.5355 FSP -3033 SGI 4804.8 SG2 265.1 THA 15.06 EL1 3800.0 EL2 31.4 ALF 16.61

LAUNCH DATE JAN 3 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 491.214

RL 147.09 LAL -.00 LOL 102.45 VL 27.820 GAL 2.64 AZL 85.41 HCA 224.01 SMA 127.41 ECC .16104 INC 4.5932 V1 30.288
RP 108.92 LAP -3.19 LOP 326.36 VP 37.354 GAP 4.05 AZP 93.31 TAL 166.03 TAP 30.04 RCA 106.89 APO 147.93 V2 34.792
RC 117.630 GL 35.81 GP -20.95 ZAL 70.33 ZAP 133.82 ETS 339.84 ZAE 134.59 ETE 201.20 ZAC 107.08 ETC 172.33 CLP-137.85

PLANETOCENTRIC CONIC

C3 14.259 VHL 3.776 DLA 46.96 RAL 18.33 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 3.898 DPA -18.49 RAP 18.10 ECC 1.2347
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.83 19 43 23 4186.05 -34.27 192.23 248.82 55.68 20 53 9 3586.0 -38.50 184.20
129.17 3 44 12 2731.21 -34.26 78.75 248.81 55.67 4 29 43 2131.2 -38.49 70.73
50.83 19 43 23 4186.05 -34.27 192.23 248.82 55.68 20 53 9 3586.0 -38.50 184.20
129.17 3 44 12 2731.21 -34.26 78.75 248.81 55.67 4 29 43 2131.2 -38.49 70.73
50.83 19 43 23 4186.05 -34.27 192.23 248.82 55.68 20 53 9 3586.0 -38.50 184.20
129.17 3 44 12 2731.21 -34.26 78.75 248.81 55.67 4 29 43 2131.2 -38.49 70.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4192 TRA .8827 TC3-3.6745 BAU .7082 SGT 4831.7 SGR 1134.9 SG3 830.4 ST 3698.2 SR 971.4 SS 2297.9
RDE .6343 RRA .1969 RC3 -.5464 FAU .11067 RRT .9706 RRF .9694 RTF .9799 CRT .9998 CRS -.9973 CST -.9961
FDE 4.3988 FRA 2.1130 FC3-6.7191 BSP 15314 SGB 4963.2 R23 .0839 R13 .9808 LSA 4457.6 MSA 172.3 SSA 9.2
BOE 2.5010 BRA .6913 BC3 3.7149 FSP -2869 SGI 4956.1 SG2 266.1 THA 12.88 EL1 3823.6 EL2 17.4 ALF 14.72

LAUNCH DATE JAN 3 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 497.272

RL 147.09 LAL -.00 LOL 102.45 VL 27.602 GAL 2.83 AZL 85.57 HCA 227.17 SMA 127.29 ECC .16305 INC 4.4319 V1 30.288
RP 108.91 LAP -3.25 LOP 329.53 VP 37.344 GAP 4.39 AZP 93.02 TAL 163.20 TAP 32.37 RCA 106.54 APO 148.04 V2 34.796
RC 120.015 GL 34.36 GP -19.15 ZAL 68.84 ZAP 136.81 ETS 339.69 ZAE 133.83 ETE 198.44 ZAC 107.25 ETC 171.94 CLP-140.52

PLANETOCENTRIC CONIC

C3 14.246 VHL 3.774 DLA 46.20 RAL 20.79 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 4.022 DPA -16.67 RAP 17.72 ECC 1.2344
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.84 19 56 48 4176.70 -33.79 190.96 250.87 56.40 21 6 25 3576.7 -37.94 182.92
128.16 3 50 23 2740.15 -33.78 79.21 250.86 56.39 4 36 3 2140.2 -37.93 71.18
51.84 19 56 48 4176.70 -33.79 190.96 250.87 56.40 21 6 25 3576.7 -37.94 182.92
128.16 3 50 23 2740.15 -33.78 79.21 250.86 56.39 4 36 3 2140.2 -37.93 71.18
51.84 19 56 48 4176.70 -33.79 190.96 250.87 56.40 21 6 25 3576.7 -37.94 182.92
128.16 3 50 23 2740.15 -33.78 79.21 250.86 56.39 4 36 3 2140.2 -37.93 71.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4353 TRA .7919 TC3-3.8375 BAU .7359 SGT 5007.4 SGR 1018.2 SG3 785.7 ST 3734.4 SR 877.7 SS 2177.6
RDE .5725 RRA .1859 RC3 -.4497 FAU .10380 RRT .9619 RRF .9574 RTF .9803 CRT .9999 CRS -.9958 CST -.9959
FDE 4.0179 FRA 2.1783 FC3-6.3080 BSP 16050 SGB 5109.9 R23 .0427 R13 .9808 LSA 4407.8 MSA 171.8 SSA 10.0
BOE 2.5017 BRA .8135 BC3 3.8637 FSP -2738 SGI 5102.6 SG2 273.2 THA 11.10 EL1 3836.1 EL2 10.0 ALF 13.23

LAUNCH DATE JAN 3 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 503.312

RL 147.09 LAL -.00 LOL 102.45 VL 27.583 GAL 3.04 AZL 85.71 HCA 230.33 SMA 127.16 ECC .16523 INC 4.2862 V1 30.288
RP 108.89 LAP -3.30 LOP 332.70 VP 37.334 GAP 4.73 AZP 92.74 TAL 164.34 TAP 34.67 RCA 106.15 APO 148.17 V2 34.800
RC 122.394 GL 32.95 GP -17.58 ZAL 67.30 ZAP 139.58 ETS 339.59 ZAE 133.05 ETE 196.14 ZAC 107.63 ETC 171.66 CLP-143.00

PLANETOCENTRIC CONIC

C3 14.326 VHL 3.785 DLA 45.46 RAL 23.23 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 4.159 DPA -14.97 RAP 17.62 ECC 1.2358
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.82 20 10 8 4168.76 -33.27 189.80 253.03 57.02 21 19 37 3568.8 -37.35 181.78
127.18 3 56 34 2750.58 -33.27 79.78 253.02 57.01 4 42 25 2150.6 -37.34 71.76
52.82 20 10 8 4168.76 -33.27 189.80 253.03 57.02 21 19 37 3568.8 -37.35 181.78
127.18 3 56 34 2750.58 -33.27 79.78 253.02 57.01 4 42 25 2150.6 -37.34 71.76
52.82 20 10 8 4168.76 -33.27 189.80 253.03 57.02 21 19 37 3568.8 -37.35 181.78
127.18 3 56 34 2750.58 -33.27 79.78 253.02 57.01 4 42 25 2150.6 -37.34 71.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4486 TRA .9304 TC3-3.9560 BAU .7809 SGT 5171.0 SGR 922.6 SG3 741.0 ST 3756.3 SR 802.8 SS 2062.6
RDE .5249 RRA .1760 RC3 -.3829 FAU .09653 RRT .9497 RRF .9424 RTF .9805 CRT .9997 CRS -.9936 CST -.9956
FDE 3.6890 FRA 2.2319 FC3-5.8332 BSP 16508 SGB 5252.7 R23 .0266 R13 .9808 LSA 4356.5 MSA 171.7 SSA 10.7
BOE 2.5042 BRA .9469 BC3 3.9726 FSP -2573 SGI 5244.9 SG2 284.8 THA 9.65 EL1 3841.1 EL2 18.1 ALF 12.06

LAUNCH DATE JAN 3 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 509.330

RL 147.09 LAL -.00 LOL 102.45 VL 27.564 GAL 3.26 AZL 85.85 HCA 233.49 SMA 127.03 ECC .16760 INC 4.1533 V1 30.288  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.325 GAP 5.08 AZP 92.47 TAL 183.44 TAP 36.94 RCA 105.74 APO 148.32 V2 34.805  
 RC 124.766 GL 31.57 GP -16.20 ZAL 65.72 ZAP 142.15 ETS 339.51 ZAE 132.26 ETE 194.21 ZAC 108.19 ETC 171.46 CLP-145.32

PLANETOCENTRIC CONIC

C3 14.495 VHL 3.007 DLA 44.75 RAL 25.67 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 4.307 DPA -13.38 RAP 17.77 ECC 1.2386  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.78 20 23 31 4161.89 -32.72 188.75 255.29 57.58 21 32 53 3561.9 -36.73 180.73  
 126.22 4 2 40 2762.65 -32.71 80.47 255.28 57.56 4 48 42 2162.7 -36.72 72.46  
 53.78 20 23 31 4161.89 -32.72 188.75 255.29 57.58 21 32 53 3561.9 -36.73 180.73  
 126.22 4 2 40 2762.65 -32.71 80.47 255.28 57.56 4 48 42 2162.7 -36.72 72.46  
 53.78 20 23 31 4161.89 -32.72 188.75 255.29 57.58 21 32 53 3561.9 -36.73 180.73  
 126.22 4 2 40 2762.65 -32.71 80.47 255.28 57.56 4 48 42 2162.7 -36.72 72.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4541 TRA 1.0730 TC3-4.0458 BAU .7860 SGT 5319.8 SGR 843.6 SG3 696.4 ST 3756.8 SR 741.6 SS 1947.5  
 RDE .4878 RRA .1662 RC3 -.2902 FAU .08973 RRT .9342 RRF .9240 RTF .9808 CRT .9991 CRS -.9908 CST -.9954  
 FDE 3.3420 FRA 2.2644 FC3-3.3592 BSP 17010 SGB 5386.3 R23 .0138 R13 .9809 LSA 4292.6 MSA 171.7 SSA 11.4  
 BDE 2.5021 BRA 1.0858 BC3 4.0562 FSP -2425 SGI 5376.0 SGI 297.7 THA 8.45 EL1 3829.2 EL2 31.0 ALF 11.16

LAUNCH DATE JAN 3 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 515.328

RL 147.09 LAL -.00 LOL 102.45 VL 27.543 GAL 3.49 AZL 85.97 HCA 236.66 SMA 126.89 ECC .17016 INC 4.0308 V1 30.288  
 RP 108.88 LAP -3.37 LOP 339.04 VP 37.315 GAP 5.42 AZP 92.28 TAL 182.51 TAP 39.17 RCA 105.30 APO 148.49 V2 34.811  
 RC 127.128 GL 30.21 GP -14.99 ZAL 64.10 ZAP 144.55 ETS 339.42 ZAE 131.51 ETE 192.59 ZAC 108.92 ETC 171.32 CLP-147.49

PLANETOCENTRIC CONIC

C3 14.731 VHL 3.041 DLA 44.05 RAL 28.10 RAD 6567.6 VEL 11.668 PTH 2.05 VHP 4.467 DPA -11.88 RAP 18.13 ECC 1.2428  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.73 20 36 54 4156.08 -32.12 187.77 257.65 58.07 21 46 10 3556.1 -36.08 179.79  
 125.27 4 8 40 2776.23 -32.11 81.26 257.64 58.06 4 54 57 2176.2 -36.07 73.28  
 54.73 20 36 54 4156.08 -32.12 187.77 257.65 58.07 21 46 10 3556.1 -36.08 179.79  
 125.27 4 8 40 2776.23 -32.11 81.26 257.64 58.06 4 54 57 2176.2 -36.07 73.28  
 54.73 20 36 54 4156.08 -32.12 187.77 257.65 58.07 21 46 10 3556.1 -36.08 179.79  
 125.27 4 8 40 2776.23 -32.11 81.26 257.64 58.06 4 54 57 2176.2 -36.07 73.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4548 TRA 1.2235 TC3-4.0990 BAU .8096 SGT 5456.5 SGR 779.6 SG3 653.3 ST 3741.7 SR 692.7 SS 1836.5  
 RDE .4597 RRA .1575 RC3 -.2283 FAU .08309 RRT .9152 RRF .9027 RTF .9810 CRT .9979 CRS -.9868 CST -.9951  
 FDE 3.0426 FRA 2.2874 FC3-4.8785 BSP 17488 SGB 5511.9 R23 .0049 R13 .9810 LSA 4221.7 MSA 172.3 SSA 12.0  
 BDE 2.4974 BRA 1.2338 BC3 4.1054 FSP -2280 SGI 5503.1 SGI 311.5 THA 7.47 EL1 3805.0 EL2 44.5 ALF 10.47

LAUNCH DATE JAN 3 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 521.305

RL 147.09 LAL -.00 LOL 102.45 VL 27.522 GAL 3.74 AZL 86.08 HCA 239.82 SMA 126.75 ECC .17294 INC 3.9168 V1 30.288  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.306 GAP 5.78 AZP 91.97 TAL 181.56 TAP 41.38 RCA 104.83 APO 148.67 V2 34.818  
 RC 129.481 GL 28.87 GP -13.93 ZAL 62.45 ZAP 146.78 ETS 339.32 ZAE 130.79 ETE 191.23 ZAC 109.80 ETC 171.21 CLP-149.53

PLANETOCENTRIC CONIC

C3 15.094 VHL 3.085 DLA 43.35 RAL 30.52 RAD 6567.6 VEL 11.682 PTH 2.05 VHP 4.636 DPA -10.45 RAP 18.68 ECC 1.2484  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.69 20 50 22 4151.06 -31.49 186.86 260.09 58.51 21 59 33 3551.1 -35.39 178.90  
 124.31 4 14 30 2791.53 -31.47 82.17 260.08 58.50 5 1 2 2191.5 -35.38 74.22  
 55.69 20 50 22 4151.06 -31.49 186.86 260.09 58.51 21 59 33 3551.1 -35.39 178.90  
 124.31 4 14 30 2791.53 -31.47 82.17 260.08 58.50 5 1 2 2191.5 -35.38 74.22  
 55.69 20 50 22 4151.06 -31.49 186.86 260.09 58.51 21 59 33 3551.1 -35.39 178.90  
 124.31 4 14 30 2791.53 -31.47 82.17 260.08 58.50 5 1 2 2191.5 -35.38 74.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4512 TRA 1.3826 TC3-4.1178 BAU .8517 SGT 5582.7 SGR 728.4 SG3 612.2 ST 3712.7 SR 653.7 SS 1730.2  
 RDE .4389 RRA .1502 RC3 -.1765 FAU .07674 RRT .8933 RRF .8788 RTF .9811 CRT .9959 CRS -.9818 CST -.9948  
 FDE 2.7697 FRA 2.3033 FC3-4.4018 BSP 17931 SGB 5630.1 R23 -.0012 R13 .9811 LSA 4144.3 MSA 173.7 SSA 12.6  
 BDE 2.4902 BRA 1.3907 BC3 4.1216 FSP -2141 SGI 5620.7 SGI 325.2 THA 6.67 EL1 3769.4 EL2 58.2 ALF 9.95

LAUNCH DATE JAN 3 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 527.260

RL 147.09 LAL -.00 LOL 102.45 VL 27.500 GAL 4.01 AZL 86.19 HCA 242.99 SMA 126.61 ECC .17593 INC 3.8099 V1 30.288  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.296 GAP 6.14 AZP 91.73 TAL 180.57 TAP 43.56 RCA 104.33 APO 148.88 V2 34.825  
 RC 131.823 GL 27.55 GP -12.98 ZAL 60.77 ZAP 148.87 ETS 339.19 ZAE 130.11 ETE 190.07 ZAC 110.82 ETC 171.14 CLP-151.45

PLANETOCENTRIC CONIC

C3 15.527 VHL 3.940 DLA 42.65 RAL 32.92 RAD 6567.6 VEL 11.701 PTH 2.06 VHP 4.815 DPA -9.09 RAP 19.40 ECC 1.2555  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.66 21 3 53 4148.83 -30.81 186.00 262.60 58.90 22 12 59 3546.8 -34.67 178.08  
 123.34 4 20 9 2808.50 -30.80 83.20 262.59 58.89 5 6 58 2208.5 -34.67 75.29  
 56.66 21 3 53 4148.83 -30.81 186.00 262.60 58.90 22 12 59 3546.8 -34.67 178.08  
 123.34 4 20 9 2808.50 -30.80 83.20 262.59 58.89 5 6 58 2208.5 -34.67 75.29  
 56.66 21 3 53 4148.83 -30.81 186.00 262.60 58.90 22 12 59 3546.8 -34.67 178.08  
 123.34 4 20 9 2808.50 -30.80 83.20 262.59 58.89 5 6 58 2208.5 -34.67 75.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4438 TRA 1.5503 TC3-4.1039 BAU .8524 SGT 5699.0 SGR 887.7 SG3 573.2 ST 3671.4 SR 622.8 SS 1629.1  
 RDE .4243 RRA .1441 RC3 -.1339 FAU .07074 RRT .8692 RRF .8533 RTF .9811 CRT .9931 CRS -.9757 CST -.9945  
 FDE 2.5221 FRA 2.3127 FC3-3.9442 BSP 18351 SGB 5740.3 R23 -.0051 R13 .9811 LSA 4060.8 MSA 175.7 SSA 13.0  
 BDE 2.4801 BRA 1.5370 BC3 4.1060 FSP -2011 SGI 5730.3 SGI 338.2 THA 6.01 EL1 3723.1 EL2 72.0 ALF 9.57

LAUNCH DATE JAN 3 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 533.191

RL 147.09 LAL -.00 LOL 102.45 VL 27.478 GAL 4.30 AZL 86.29 HCA 246.16 SMA 126.46 ECC .17915 INC 3.7089 V1 30.288
RP 108.78 LAP -3.39 LOP 348.58 VP 37.287 GAP 6.50 AZP 91.90 TAL 159.56 TAP 45.72 RCA 103.80 APO 149.11 V2 34.833
RC 134.153 GL 26.25 GP -12.15 ZAL 59.07 ZAP 150.85 ETS 339.02 ZAE 129.48 ETE 189.10 ZAC 111.96 ETC 171.08 CLP-153.27

PLANETOCENTRIC CONIC

C3 16.056 VHL 4.007 DLA 41.95 RAL 35.30 RAD 6567.6 VEL 11.723 PTH 2.07 VHP 5.002 DPA -7.78 RAP 20.26 ECC 1.2642
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.65 21 17 30 4143.14 -30.09 185.18 265.18 59.27 22 26 34 3543.1 -33.92 177.31
122.35 4 25 31 2027.34 -30.08 84.36 265.17 59.25 5 12 38 2227.3 -33.91 76.49
57.65 21 17 30 4143.14 -30.09 185.18 265.18 59.27 22 26 34 3543.1 -33.92 177.31
122.35 4 25 31 2027.34 -30.08 84.36 265.17 59.25 5 12 38 2227.3 -33.91 76.49
57.65 21 17 30 4143.14 -30.09 185.18 265.18 59.27 22 26 34 3543.1 -33.92 177.31
122.35 4 25 31 2027.34 -30.08 84.36 265.17 59.25 5 12 38 2227.3 -33.91 76.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4347 TRA 1.7306 TC3-4.0516 BAU .0699 SGT 5808.1 SGR 656.3 SCS 536.9 ST 3622.9 SR 598.8 SS 1535.6
RDE .4150 RRA .1599 RC3 -.0982 FAU .06485 RRT .8439 RRF .8273 RTF .9811 CRT .9894 CRS -.9683 CST -.9942
FDE 2.3006 FRA 2.3228 FC3-3.4967 BSP 18669 SGB 5845.0 R23 -.0067 R13 .9811 LSA 3976.2 MSA 178.9 SSA 13.5
BDE 2.4698 BRA 1.7362 BC3 4.0528 FSP -1877 SGI 5834.5 SGT 350.5 THA 5.47 EL1 3671.1 EL2 85.9 ALF 9.29

LAUNCH DATE JAN 3 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 539.097

RL 147.09 LAL -.00 LOL 102.45 VL 27.455 GAL 4.60 AZL 86.39 HCA 249.33 SMA 126.31 ECC .18262 INC 3.6126 V1 30.288
RP 108.77 LAP -3.38 LOP 351.73 VP 37.278 GAP 6.88 AZP 91.28 TAL 158.53 TAP 47.86 RCA 103.24 APO 149.37 V2 34.841
RC 136.471 GL 24.97 GP -11.40 ZAL 57.36 ZAP 152.67 ETS 338.80 ZAE 128.90 ETE 188.27 ZAC 113.22 ETC 171.03 CLP-155.00

PLANETOCENTRIC CONIC

C3 16.685 VHL 4.085 DLA 41.25 RAL 37.66 RAD 6567.7 VEL 11.750 PTH 2.07 VHP 5.199 DPA -6.52 RAP 21.25 ECC 1.2746
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.66 21 31 13 4139.99 -29.33 184.39 267.82 59.59 22 40 13 3540.0 -33.13 176.57
121.34 4 30 33 2848.05 -29.32 85.64 267.81 59.58 5 18 1 2248.0 -33.12 77.82
58.66 21 31 13 4139.99 -29.33 184.39 267.82 59.59 22 40 13 3540.0 -33.13 176.57
121.34 4 30 33 2848.05 -29.32 85.64 267.81 59.58 5 18 1 2248.0 -33.12 77.82
58.66 21 31 13 4139.99 -29.33 184.39 267.82 59.59 22 40 13 3540.0 -33.13 176.57
121.34 4 30 33 2848.05 -29.32 85.64 267.81 59.58 5 18 1 2248.0 -33.12 77.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4183 TRA 1.9178 TC3-3.9793 BAU .8878 SGT 5905.4 SGR 631.0 SCS 502.5 ST 3559.2 SR 579.3 SS 1444.3
RDE .4094 RRA .1368 RC3 -.0709 FAU .05955 RRT .8182 RRF .8013 RTF .9810 CRT .9846 CRS -.9597 CST -.9939
FDE 2.0951 FRA 2.3251 FC3-3.0901 BSP 19044 SGB 5939.0 R23 -.0077 R13 .9810 LSA 3880.2 MSA 182.8 SSA 13.8
BDE 2.4527 BRA 1.9225 BC3 3.9799 FSP -1763 SGI 5928.0 SGT 361.4 THA 5.02 EL1 3604.7 EL2 99.9 ALF 9.11

LAUNCH DATE JAN 3 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 544.976

RL 147.09 LAL -.00 LOL 102.45 VL 27.431 GAL 4.93 AZL 86.48 HCA 252.50 SMA 126.15 ECC .18636 INC 3.5202 V1 30.288
RP 108.74 LAP -3.38 LOP 354.91 VP 37.269 GAP 7.26 AZP 91.06 TAL 157.48 TAP 49.98 RCA 102.64 APO 149.66 V2 34.850
RC 136.775 GL 23.70 GP -10.74 ZAL 55.64 ZAP 154.41 ETS 338.51 ZAE 128.37 ETE 187.56 ZAC 114.57 ETC 170.99 CLP-156.64

PLANETOCENTRIC CONIC

C3 17.424 VHL 4.174 DLA 40.53 RAL 39.97 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.406 DPA -5.30 RAP 22.36 ECC 1.2868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.69 21 45 2 4137.26 -28.54 183.62 270.50 59.90 22 53 59 3537.3 -32.30 175.85
120.31 4 35 14 2870.77 -28.52 87.06 270.49 59.88 5 23 5 2270.8 -32.29 79.29
59.69 21 45 2 4137.26 -28.54 183.62 270.50 59.90 22 53 59 3537.3 -32.30 175.85
120.31 4 35 14 2870.77 -28.52 87.06 270.49 59.88 5 23 5 2270.8 -32.29 79.29
59.69 21 45 2 4137.26 -28.54 183.62 270.50 59.90 22 53 59 3537.3 -32.30 175.85
120.31 4 35 14 2870.77 -28.52 87.06 270.49 59.88 5 23 5 2270.8 -32.29 79.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3989 TRA 2.1155 TC3-3.8805 BAU .9040 SGT 5994.6 SGR 611.3 SCS 470.3 ST 3488.0 SR 563.7 SS 1358.6
RDE .4072 RRA .1352 RC3 -.0495 FAU .05459 RRT .7933 RRF .7764 RTF .9810 CRT .9788 CRS -.9497 CST -.9936
FDE 1.9092 FRA 2.3254 FC3-2.7123 BSP 19391 SGB 6025.7 R23 -.0079 R13 .9809 LSA 3780.7 MSA 187.7 SSA 14.0
BDE 2.4333 BRA 2.1198 BC3 3.8808 FSP -1655 SGI 6014.3 SGT 371.0 THA 4.64 EL1 3531.4 EL2 114.0 ALF 9.00

LAUNCH DATE JAN 3 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 550.826

RL 147.09 LAL -.00 LOL 102.45 VL 27.407 GAL 5.27 AZL 86.57 HCA 255.67 SMA 125.99 ECC .19039 INC 3.4309 V1 30.288
RP 108.71 LAP -3.32 LOP 358.09 VP 37.260 GAP 7.66 AZP 90.85 TAL 156.42 TAP 52.09 RCA 102.01 APO 149.98 V2 34.860
RC 141.067 GL 22.48 GP -10.14 ZAL 53.92 ZAP 156.06 ETS 338.15 ZAE 127.87 ETE 186.95 ZAC 116.01 ETC 170.94 CLP-158.20

PLANETOCENTRIC CONIC

C3 18.283 VHL 4.276 DLA 39.81 RAL 42.25 RAD 6567.7 VEL 11.818 PTH 2.09 VHP 5.623 DPA -4.11 RAP 23.57 ECC 1.3009
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.76 21 58 57 4134.85 -27.70 182.87 273.23 60.18 23 7 51 3534.8 -31.44 175.15
119.24 4 39 28 2895.58 -27.69 88.62 273.22 60.16 5 27 44 2295.6 -31.43 80.90
60.76 21 58 57 4134.85 -27.70 182.87 273.23 60.18 23 7 51 3534.8 -31.44 175.15
119.24 4 39 28 2895.58 -27.69 88.62 273.22 60.16 5 27 44 2295.6 -31.43 80.90
60.76 21 58 57 4134.85 -27.70 182.87 273.23 60.18 23 7 51 3534.8 -31.44 175.15
119.24 4 39 28 2895.58 -27.69 88.62 273.22 60.16 5 27 44 2295.6 -31.43 80.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3788 TRA 2.3253 TC3-3.7576 BAU .9185 SGT 6076.5 SGR 596.1 SCS 440.4 ST 3410.8 SR 551.3 SS 1278.7
RDE .4080 RRA .1351 RC3 -.0332 FAU .04992 RRT .7699 RRF .7534 RTF .9808 CRT .9719 CRS -.9384 CST -.9933
FDE 1.7411 FRA 2.3253 FC3-2.3638 BSP 19701 SGB 6105.7 R23 -.0074 R13 .9808 LSA 3679.0 MSA 193.6 SSA 14.1
BDE 2.4116 BRA 2.3293 BC3 3.7577 FSP -1554 SGI 6093.9 SGT 379.3 THA 4.34 EL1 3452.7 EL2 128.3 ALF 8.94

LAUNCH DATE JAN 3 1969 FLIGHT TIME 198.00 ARRIVAL DATE JUL 20 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.383 GAL 5.64 AZL 86.66 HCA 258.84 SMA 125.84 ECC .19473 INC 3.3441 V1 30.288  
 RP 108.88 LAP -3.28 LOP 1.27 VP 37.252 GAP 8.07 AZP 90.65 TAL 155.33 TAP 54.18 RCA 101.33 APO 150.34 V2 34.870  
 RC 143.344 GL 21.23 GP -9.61 ZAL 52.21 ZAP 157.63 ETS 337.70 ZAE 127.42 ETE 186.43 ZAC 117.53 ETC 170.89 CLP-159.70

Distance 556.645

Planetary Conic  
 CS 19.275 VHL 4.390 DLA 39.08 RAL 44.48 RAD 6567.8 VEL 11.860 PTH 2.10 VHP 5.850 DPA -2.96 RAP 24.86 ECC 1.3172

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
61.85	22 12 58	4132.67	-26.82	182.13	275.99	60.44	23 21 51	3532.7	-30.54	174.46
118.15	4 43 13	2922.61	-26.81	90.33	275.98	60.43	5 31 56	2322.6	-30.53	82.67
61.85	22 12 58	4132.67	-26.82	182.13	275.99	60.44	23 21 51	3532.7	-30.54	174.46
118.15	4 43 13	2922.61	-26.81	90.33	275.98	60.43	5 31 56	2322.6	-30.53	82.67
61.85	22 12 58	4132.67	-26.82	182.13	275.99	60.44	23 21 51	3532.7	-30.54	174.46
118.15	4 43 13	2922.61	-26.81	90.33	275.98	60.43	5 31 56	2322.6	-30.53	82.67

Differential Corrections  
 TDE 2.3545 TRA 2.5501 TC3-3.6080 BAU .9297  
 RDE .4115 RRA .1369 RC3 -.0203 FAU .04538  
 FDE 1.5917 FRA 2.3276 FC3-2.0382 BSP 19915  
 BDE 2.3902 BRA 2.5538 BC3 3.6080 FSP -1452

Mid-Course Execution Accuracy  
 SGT 6153.1 SGR 584.5 SG3 412.9  
 RRT .7489 RRF .7333 RTF .9806  
 SGB 6180.8 R23 -.0060 R13 .9806  
 SGI 6168.7 SGI 386.3 THA 4.09

Orbit Determination Accuracy  
 ST 3332.4 SR 541.4 SS 1206.4  
 CRT .9638 CR3 -.9260 CST -.9930  
 LSA 3579.6 HSA 200.3 SSA 14.2  
 EL1 3373.1 EL2 142.6 ALF 8.92

LAUNCH DATE JAN 3 1969 FLIGHT TIME 200.00 ARRIVAL DATE JUL 22 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.358 GAL 6.03 AZL 86.74 HCA 262.02 SMA 125.67 ECC .19940 INC 3.2591 V1 30.288  
 RP 108.85 LAP -3.23 LOP 4.45 VP 37.245 GAP 8.49 AZP 90.45 TAL 154.24 TAP 56.26 RCA 100.62 APO 150.73 V2 34.880  
 RC 145.608 GL 20.02 GP -9.13 ZAL 50.51 ZAP 159.12 ETS 337.15 ZAE 127.00 ETE 185.99 ZAC 119.12 ETC 170.82 CLP-161.15

Distance 562.429

Planetary Conic  
 CS 20.414 VHL 4.518 DLA 38.35 RAL 46.65 RAD 6567.8 VEL 11.908 PTH 2.12 VHP 6.089 DPA -1.84 RAP 26.24 ECC 1.3360

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
62.98	22 27 6	4130.66	-25.91	181.38	278.78	60.68	23 35 56	3530.7	-29.61	173.78
117.02	4 46 27	2951.92	-25.90	92.19	278.77	60.67	5 35 39	2351.9	-29.60	84.58
62.98	22 27 6	4130.66	-25.91	181.38	278.78	60.68	23 35 56	3530.7	-29.61	173.78
117.02	4 46 27	2951.92	-25.90	92.19	278.77	60.67	5 35 39	2351.9	-29.60	84.58
62.98	22 27 6	4130.66	-25.91	181.38	278.78	60.68	23 35 56	3530.7	-29.61	173.78
117.02	4 46 27	2951.92	-25.90	92.19	278.77	60.67	5 35 39	2351.9	-29.60	84.58

Differential Corrections  
 TDE 2.3256 TRA 2.7842 TC3-3.4497 BAU .9415  
 RDE .4166 RRA .1399 RC3 -.0119 FAU .04135  
 FDE 1.4524 FRA 2.3263 FC3-1.7535 BSP 20202  
 BDE 2.3626 BRA 2.7877 BC3 3.4497 FSP -1366

Mid-Course Execution Accuracy  
 SGT 6219.4 SGR 574.8 SG3 386.9  
 RRT .7302 RRF .7154 RTF .9804  
 SGB 6245.9 R23 -.0049 R13 .9804  
 SGI 6235.6 SGI 391.8 THA 3.88

Orbit Determination Accuracy  
 ST 3245.0 SR 532.6 SS 1136.7  
 CRT .9545 CR3 -.9121 CST -.9928  
 LSA 3473.1 HSA 207.9 SSA 14.1  
 EL1 3284.7 EL2 156.9 ALF 8.92

LAUNCH DATE JAN 3 1969 FLIGHT TIME 202.00 ARRIVAL DATE JUL 24 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.333 GAL 6.45 AZL 86.82 HCA 265.20 SMA 125.51 ECC .20443 INC 3.1754 V1 30.288  
 RP 108.81 LAP -3.16 LOP 7.64 VP 37.235 GAP 8.93 AZP 90.27 TAL 153.14 TAP 58.34 RCA 99.85 APO 151.17 V2 34.891  
 RC 147.857 GL 18.83 GP -8.70 ZAL 48.83 ZAP 160.55 ETS 336.48 ZAE 126.62 ETE 185.60 ZAC 120.76 ETC 170.73 CLP-162.54

Distance 568.176

Planetary Conic  
 CS 21.719 VHL 4.660 DLA 37.61 RAL 48.77 RAD 6567.9 VEL 11.962 PTH 2.13 VHP 6.340 DPA -.74 RAP 27.70 ECC 1.3574

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
64.15	22 41 23	4128.59	-24.97	180.63	281.60	60.91	23 50 12	3528.6	-28.64	173.08
115.85	4 49 4	2983.75	-24.95	94.22	281.59	60.90	5 38 48	2383.7	-28.63	86.67
64.15	22 41 23	4128.59	-24.97	180.63	281.60	60.91	23 50 12	3528.6	-28.64	173.08
115.85	4 49 4	2983.75	-24.95	94.22	281.59	60.90	5 38 48	2383.7	-28.63	86.67
64.15	22 41 23	4128.59	-24.97	180.63	281.60	60.91	23 50 12	3528.6	-28.64	173.08
115.85	4 49 4	2983.75	-24.95	94.22	281.59	60.90	5 38 48	2383.7	-28.63	86.67

Differential Corrections  
 TDE 2.2944 TRA 3.0322 TC3-3.2765 BAU .9514  
 RDE .4233 RRA .1446 RC3 -.0062 FAU .03756  
 FDE 1.3264 FRA 2.3257 FC3-1.4973 BSP 20469  
 BDE 2.3331 BRA 3.0356 BC3 3.2766 FSP -1285

Mid-Course Execution Accuracy  
 SGT 6279.0 SGR 566.8 SG3 362.8  
 RRT .7141 RRF .7002 RTF .9802  
 SGB 6304.5 R23 -.0037 R13 .9802  
 SGI 6292.1 SGI 395.9 THA 3.70

Orbit Determination Accuracy  
 ST 3155.6 SR 524.8 SS 1072.5  
 CRT .9439 CR3 -.9970 CST -.9925  
 LSA 3367.0 HSA 216.1 SSA 14.0  
 EL1 3194.4 EL2 171.2 ALF 8.95

LAUNCH DATE JAN 3 1969 FLIGHT TIME 204.00 ARRIVAL DATE JUL 26 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 102.45 VL 27.308 GAL 6.89 AZL 86.91 HCA 268.38 SMA 125.35 ECC .20987 INC 3.0923 V1 30.288  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.227 GAP 9.39 AZP 90.09 TAL 152.03 TAP 60.41 RCA 99.04 APO 151.66 V2 34.902  
 RC 150.092 GL 17.67 GP -8.31 ZAL 47.17 ZAP 161.92 ETS 335.67 ZAE 126.26 ETE 185.27 ZAC 122.46 ETC 170.63 CLP-163.88

Distance 573.880

Planetary Conic  
 CS 23.211 VHL 4.818 DLA 36.86 RAL 50.83 RAD 6567.9 VEL 12.025 PTH 2.15 VHP 6.605 DPA .33 RAP 29.21 ECC 1.3820

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
65.35	22 55 49	4126.44	-23.99	179.86	284.44	61.13	24 4 35	3526.4	-27.64	172.37
114.65	4 51 2	3018.14	-23.97	96.42	284.43	61.12	5 41 20	2418.1	-27.63	88.93
65.35	22 55 49	4126.44	-23.99	179.86	284.44	61.13	24 4 35	3526.4	-27.64	172.37
114.65	4 51 2	3018.14	-23.97	96.42	284.43	61.12	5 41 20	2418.1	-27.63	88.93
65.35	22 55 49	4126.44	-23.99	179.86	284.44	61.13	24 4 35	3526.4	-27.64	172.37
114.65	4 51 2	3018.14	-23.97	96.42	284.43	61.12	5 41 20	2418.1	-27.63	88.93

Differential Corrections  
 TDE 2.2615 TRA 3.2954 TC3-3.0908 BAU .9590  
 RDE .4315 RRA .1509 RC3 -.0024 FAU .03400  
 FDE 1.2125 FRA 2.3263 FC3-1.2680 BSP 20705  
 BDE 2.3023 BRA 3.2989 BC3 3.0908 FSP -1209

Mid-Course Execution Accuracy  
 SGT 6332.1 SGR 560.0 SG3 340.5  
 RRT .7009 RRF .6880 RTF .9800  
 SGB 6356.8 R23 -.0024 R13 .9800  
 SGI 6344.3 SGI 398.7 THA 3.56

Orbit Determination Accuracy  
 ST 3066.1 SR 517.6 SS 1013.9  
 CRT .9320 CR3 -.8806 CST -.9923  
 LSA 3262.9 HSA 224.8 SSA 13.9  
 EL1 3104.0 EL2 185.2 ALF 8.97

LAUNCH DATE JAN 3 1969 FLIGHT TIME 206.00 ARRIVAL DATE JUL 28 1969

MELIOCENTRIC CONIC DISTANCE 579.538
RL 147.09 LAL -.00 LOL 102.45 VL 27.283 GAL 7.36 AZL 86.99 HCA 271.56 SMA 125.19 ECC .21574 INC 3.0095 V1 30.288
RP 108.54 LAP -3.01 LOP 14.01 VP 37.220 GAP 9.87 AZP 89.92 TAL 150.92 TAP 62.48 RCA 98.18 APO 152.19 V2 34.914
RC 152.312 GL 16.54 GP -7.96 ZAL 45.54 ZAP 165.23 ETS 334.69 ZAE 125.93 ETE 184.98 ZAC 124.21 ETC 170.50 CLP-165.19
PLANETOCENTRIC CONIC
C3 24.915 VML 4.991 DLA 36.11 RAL 52.86 RAD 6568.0 VEL 12.095 PTH 2.16 VHP 6.884 DPA 1.38 RAP 30.79 ECC 1.4100
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.59 23 10 24 4124.14 -22.98 179.07 287.29 61.34 24 19 8 3524.1 -26.62 171.64
113.41 4 52 20 3055.16 -22.97 98.79 287.29 61.34 5 43 15 2455.2 -26.61 91.36
66.59 23 10 24 4124.14 -22.98 179.07 287.29 61.34 24 19 8 3524.1 -26.62 171.64
113.41 4 52 20 3055.16 -22.97 98.79 287.29 61.34 5 43 15 2455.2 -26.61 91.36
66.59 23 10 24 4124.14 -22.98 179.07 287.29 61.34 24 19 8 3524.1 -26.62 171.64
113.41 4 52 20 3055.16 -22.97 98.79 287.29 61.34 5 43 15 2455.2 -26.61 91.36
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.2310 TRA 3.5790 TC3-2.8893 BAU .9824 SGT 6382.5 SGR 554.5 SCS 320.0 ST 2982.1 SR 510.9 SS 962.6
RDE .4411 RRA .1591 RC3 .0003 FAU .03049 RRT .6909 RRF .6791 RTF .9798 CRT .9191 CRS -.8635 CST -.9923
FDE 1.1124 FRA 2.3312 FC3-1.0595 BSP 20816 SGB 6406.5 R23 -.0007 R13 .9798 LSA 3166.4 MSA 233.6 SSA 13.7
BDE 2.2742 BRA 3.5825 BC3 2.8893 FSP -1131 SGI 6394.0 SGI 400.1 THA 3.45 EL1 3019.0 EL2 198.9 ALF 8.99

LAUNCH DATE JAN 3 1969 FLIGHT TIME 208.00 ARRIVAL DATE JUL 30 1969

MELIOCENTRIC CONIC DISTANCE 585.142
RL 147.09 LAL -.00 LOL 102.45 VL 27.257 GAL 7.87 AZL 87.07 HCA 274.75 SMA 125.02 ECC .22209 INC 2.9264 V1 30.288
RP 108.50 LAP -2.92 LOP 17.20 VP 37.212 GAP 10.38 AZP 89.76 TAL 149.81 TAP 64.56 RCA 97.26 APO 152.79 V2 34.926
RC 154.516 GL 15.43 GP -7.64 ZAL 43.95 ZAP 164.49 ETS 333.50 ZAE 125.62 ETE 184.73 ZAC 126.00 ETC 170.34 CLP-166.46
PLANETOCENTRIC CONIC
C3 26.861 VML 5.183 DLA 35.36 RAL 54.74 RAD 6568.1 VEL 12.175 PTH 2.18 VHP 7.180 DPA 2.40 RAP 32.42 ECC 1.4421
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.88 23 25 14 4121.31 -21.94 178.23 290.16 61.55 24 33 55 3521.3 -25.56 170.86
112.12 4 52 50 3095.19 -21.93 101.37 290.15 61.54 5 44 25 2495.2 -25.55 94.00
67.88 23 25 14 4121.31 -21.94 178.23 290.16 61.55 24 33 55 3521.3 -25.56 170.86
112.12 4 52 50 3095.19 -21.93 101.37 290.15 61.54 5 44 25 2495.2 -25.55 94.00
67.88 23 25 14 4121.31 -21.94 178.23 290.16 61.55 24 33 55 3521.3 -25.56 170.86
112.12 4 52 50 3095.19 -21.93 101.37 290.15 61.54 5 44 25 2495.2 -25.55 94.00
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.1939 TRA 3.8743 TC3-2.8905 BAU .9682 SGT 6421.9 SGR 548.7 SCS 300.7 ST 2893.4 SR 503.6 SS 913.6
RDE .4513 RRA .1685 RC3 .0012 FAU .02739 RRT .6829 RRF .6719 RTF .9797 CRT .9045 CRS -.8450 CST -.9922
FDE 1.0182 FRA 2.3338 FC3 -.8828 BSP 21033 SGB 6445.3 R23 .0004 R13 .9797 LSA 3066.1 MSA 242.6 SSA 13.5
BDE 2.2399 BRA 3.8779 BC3 2.8905 FSP -1067 SGI 6432.8 SGI 400.2 THA 3.35 EL1 2929.2 EL2 212.1 ALF 8.99

LAUNCH DATE JAN 3 1969 FLIGHT TIME 210.00 ARRIVAL DATE AUG 1 1969

MELIOCENTRIC CONIC DISTANCE 590.686
RL 147.09 LAL -.00 LOL 102.45 VL 27.232 GAL 8.41 AZL 87.16 HCA 277.93 SMA 124.86 ECC .22897 INC 2.8425 V1 30.288
RP 108.47 LAP -2.82 LOP 20.39 VP 37.205 GAP 10.91 AZP 89.61 TAL 148.71 TAP 66.64 RCA 96.27 APO 153.45 V2 34.938
RC 156.704 GL 14.34 GP -7.35 ZAL 42.40 ZAP 165.71 ETS 332.07 ZAE 125.33 ETE 184.52 ZAC 127.82 ETC 170.16 CLP-167.71
PLANETOCENTRIC CONIC
C3 29.085 VML 5.393 DLA 34.61 RAL 56.59 RAD 6568.2 VEL 12.266 PTH 2.21 VHP 7.495 DPA 3.39 RAP 34.09 ECC 1.4787
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.22 23 40 18 4117.91 -20.88 177.35 293.04 61.75 24 48 56 3517.9 -24.48 170.02
110.78 4 52 30 3138.24 -20.87 104.15 293.04 61.75 5 44 49 2538.2 -24.47 96.83
69.22 23 40 18 4117.91 -20.88 177.35 293.04 61.75 24 48 56 3517.9 -24.48 170.02
110.78 4 52 30 3138.24 -20.87 104.15 293.04 61.75 5 44 49 2538.2 -24.47 96.83
69.22 23 40 18 4117.91 -20.88 177.35 293.04 61.75 24 48 56 3517.9 -24.48 170.02
110.78 4 52 30 3138.24 -20.87 104.15 293.04 61.75 5 44 49 2538.2 -24.47 96.83
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.1561 TRA 4.1889 TC3-2.4872 BAU .9671 SGT 6455.8 SGR 543.1 SCS 282.8 ST 2808.0 SR 496.0 SS 869.7
RDE .4622 RRA .1796 RC3 .0014 FAU .02446 RRT .6773 RRF .6670 RTF .9796 CRT .8887 CRS -.8255 CST -.9923
FDE .9332 FRA 2.3390 FC3 -.7279 BSP 21219 SGB 6478.7 R23 .0014 R13 .9796 LSA 2970.5 MSA 251.3 SSA 13.2
BDE 2.2051 BRA 4.1928 BC3 2.4872 FSP -1005 SGI 6466.4 SGI 398.9 THA 3.27 EL1 2842.6 EL2 224.6 ALF 8.98

LAUNCH DATE JAN 3 1969 FLIGHT TIME 212.00 ARRIVAL DATE AUG 3 1969

MELIOCENTRIC CONIC DISTANCE 596.160
RL 147.09 LAL -.00 LOL 102.45 VL 27.206 GAL 8.99 AZL 87.24 HCA 281.12 SMA 124.69 ECC .23644 INC 2.7572 V1 30.288
RP 108.43 LAP -2.71 LOP 23.58 VP 37.198 GAP 11.47 AZP 89.47 TAL 147.62 TAP 68.74 RCA 95.21 APO 154.18 V2 34.951
RC 158.875 GL 13.29 GP -7.08 ZAL 40.89 ZAP 166.88 ETS 330.34 ZAE 125.04 ETE 184.33 ZAC 129.67 ETC 169.94 CLP-168.93
PLANETOCENTRIC CONIC
C3 31.630 VML 5.824 DLA 33.86 RAL 58.36 RAD 6568.3 VEL 12.369 PTH 2.23 VHP 7.829 DPA 4.37 RAP 35.81 ECC 1.5205
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.82 23 55 44 4113.49 -19.79 176.39 295.93 61.96 25 4 18 3513.5 -23.39 169.11
109.38 4 51 13 3184.75 -19.78 107.17 295.92 61.95 5 44 18 2584.7 -23.37 99.90
70.82 23 55 44 4113.49 -19.79 176.39 295.93 61.96 25 4 18 3513.5 -23.39 169.11
109.38 4 51 13 3184.75 -19.78 107.17 295.92 61.95 5 44 18 2584.7 -23.37 99.90
110.00 5 30 51 3063.72 -23.35 99.69 297.87 64.30 6 21 55 2463.7 -26.61 92.04
110.00 4 19 13 3282.52 -16.30 112.74 293.87 59.53 5 13 55 2682.5 -20.22 105.81
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.1182 TRA 4.5242 TC3-2.2819 BAU .9649 SGT 6484.6 SGR 537.3 SCS 233.2 ST 2726.8 SR 487.9 SS 830.7
RDE .4738 RRA .1924 RC3 .0012 FAU .02168 RRT .6740 RRF .6643 RTF .9796 CRT .8717 CRS -.8053 CST -.9924
FDE .8587 FRA 2.3465 FC3 -.5933 BSP 21383 SGB 6506.8 R23 .0022 R13 .9797 LSA 2680.2 MSA 259.6 SSA 13.0
BDE 2.1706 BRA 4.5283 BC3 2.2819 FSP -948 SGI 6494.7 SGI 396.3 THA 3.21 EL1 2760.0 EL2 236.2 ALF 8.93

LAUNCH DATE JAN 3 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 5 1969

Heliocentric Conic

DISTANCE 601.555

RL 147.09 LAL -.00 LOL 102.45 VL 27.180 GAL 9.62 AZL 87.33 HCA 284.31 SMA 124.53 ECC .24457 INC 2.6699 V1 30.288  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.191 GAP 12.07 A2P 89.34 TAL 146.54 TAP 70.85 RCA 94.07 APO 154.99 V2 34.984  
 RC 161.027 GL 12.26 GP -6.84 ZAL 39.43 ZAP 168.01 ETS 328.22 ZAE 124.77 ETE 184.16 ZAC 131.54 ETC 169.68 CLP-170.13

Planetocentric Conic

C3 34.548 VHL 5.878 DLA 33.11 RAL 60.06 RAD 6568.4 VEL 12.487 PTH 2.26 VHP 8.187 DPA 5.31 RAP 37.57 ECC 1.5686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.08 0 15 32 4107.78 -18.69 175.32 298.82 62.16 1 24 0 3507.8 -22.27 168.10  
 107.92 4 48 54 3234.93 -18.68 110.44 298.81 62.15 5 42 48 2634.9 -22.25 103.21  
 72.08 0 15 32 4107.78 -18.69 175.32 298.82 62.16 1 24 0 3507.8 -22.27 168.10  
 107.92 4 48 54 3234.93 -18.68 110.44 298.81 62.15 5 42 48 2634.9 -22.25 103.21  
 110.00 6 6 32 2996.53 -25.27 95.41 302.25 66.17 6 56 28 2396.5 -22.27 87.52  
 110.00 3 57 4 3394.19 -12.35 118.97 295.03 57.87 4 53 39 2794.2 -16.50 112.33

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0795 TRA 4.8812 TC3-2.0777 BAU .9596 SGT 6507.1 SGR 531.2 SCS 250.8 ST 2649.3 SR 479.0 SS 796.1  
 RDE .4858 RRA .2068 RC3 .0008 FAU .01905 RRT .6728 RRF .6635 RTF .9798 CRT .8534 CRS -.7845 CST -.9926  
 FDE .7878 FRA 2.3568 FC3 -.4775 BSP 21529 SGB 6528.8 R23 .0029 R13 .9798 LSA 2794.7 MSA 267.2 SSA 12.7  
 BDE 2.1355 BRA 4.8856 BC3 2.0777 FSP -.894 SGI 6516.9 SGT 392.5 THA 3.15 EL1 2680.9 EL2 246.8 ALF 8.85

LAUNCH DATE JAN 3 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 7 1969

Heliocentric Conic

DISTANCE 606.857

RL 147.09 LAL -.00 LOL 102.45 VL 27.155 GAL 10.29 AZL 87.42 HCA 287.51 SMA 124.37 ECC .25342 INC 2.5800 V1 30.288  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.185 GAP 12.71 A2P 89.22 TAL 145.48 TAP 72.99 RCA 92.83 APO 155.88 V2 34.977  
 RC 163.161 GL 11.27 GP -6.82 ZAL 38.03 ZAP 169.10 ETS 325.81 ZAE 124.49 ETE 184.02 ZAC 133.43 ETC 169.37 CLP-171.33

Planetocentric Conic

C3 37.901 VHL 6.156 DLA 32.37 RAL 61.67 RAD 6568.5 VEL 12.620 PTH 2.29 VHP 8.571 DPA 6.23 RAP 39.35 ECC 1.6238  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.63 0 31 59 4100.21 -17.57 174.12 301.72 62.37 1 40 20 3500.2 -21.13 166.95  
 106.37 4 45 21 3289.32 -17.56 113.99 301.71 62.36 5 40 10 2689.3 -21.12 108.81  
 73.63 0 31 59 4100.21 -17.57 174.12 301.72 62.37 1 40 20 3500.2 -21.13 166.95  
 106.37 4 45 21 3289.32 -17.56 113.99 301.71 62.36 5 40 10 2689.3 -21.12 108.81  
 110.00 6 32 15 2959.28 -26.27 92.98 306.11 67.30 7 21 34 2359.3 -29.11 84.95  
 110.00 3 44 16 3478.25 -9.26 123.53 296.72 56.95 4 42 14 2878.2 -13.55 117.06

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0447 TRA 5.2888 TC3-1.8719 BAU .9485 SGT 6527.8 SGR 524.9 SCS 236.7 ST 2580.1 SR 469.6 SS 767.2  
 RDE .4984 RRA .2231 RC3 .0007 FAU .01647 RRT .6733 RRF .6649 RTF .9800 CRT .8343 CRS -.7641 CST -.9930  
 FDE .7273 FRA 2.3723 FC3 -.3762 BSP 21564 SGB 6548.9 R23 .0036 R13 .9800 LSA 2718.7 MSA 273.7 SSA 12.4  
 BDE 2.1045 BRA 5.2715 BC3 1.8719 FSP -.859 SGI 6537.4 SGT 387.5 THA 3.11 EL1 2610.0 EL2 255.9 ALF 8.72

LAUNCH DATE JAN 3 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 9 1969

Heliocentric Conic

DISTANCE 612.051

RL 147.09 LAL -.00 LOL 102.45 VL 27.129 GAL 11.01 AZL 87.51 HCA 290.70 SMA 124.21 ECC .26309 INC 2.4889 V1 30.288  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.178 GAP 13.40 A2P 89.12 TAL 144.45 TAP 75.15 RCA 91.53 APO 156.88 V2 34.990  
 RC 165.276 GL 10.30 GP -6.42 ZAL 36.88 ZAP 170.15 ETS 322.58 ZAE 124.22 ETE 183.89 ZAC 135.32 ETC 169.02 CLP-172.51

Planetocentric Conic

C3 41.766 VHL 6.463 DLA 31.63 RAL 63.21 RAD 6568.6 VEL 12.772 PTH 2.32 VHP 8.984 DPA 7.12 RAP 41.16 ECC 1.6874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.28 0 49 15 4089.96 -16.44 172.73 304.60 62.59 1 57 28 3490.0 -19.98 165.59  
 104.72 4 40 20 3348.62 -16.43 117.89 304.60 62.58 5 36 9 2748.6 -19.97 110.75  
 75.28 0 49 15 4089.96 -16.44 172.73 304.60 62.59 1 57 25 3490.0 -19.98 165.59  
 104.72 4 40 20 3348.62 -16.43 117.89 304.60 62.58 5 36 9 2748.6 -19.97 110.75  
 110.00 6 53 46 2934.57 -26.91 91.34 309.77 68.08 7 42 40 2334.6 -29.64 83.22  
 110.00 3 35 0 3552.01 -6.50 127.48 298.84 56.37 4 34 12 2952.0 -10.88 121.10

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0057 TRA 5.6740 TC3-1.6754 BAU .9355 SGT 6538.9 SGR 517.6 SCS 223.4 ST 2511.5 SR 459.1 SS 740.8  
 RDE .5109 RRA .2407 RC3 .0003 FAU .01412 RRT .6751 RRF .6670 RTF .9803 CRT .8140 CRS -.7429 CST -.9934  
 FDE .6708 FRA 2.3889 FC3 -.2927 BSP 21696 SGB 6559.4 R23 .0039 R13 .9803 LSA 2643.7 MSA 279.2 SSA 12.1  
 BDE 2.0697 BRA 5.6791 BC3 1.6754 FSP -.793 SGI 6548.3 SGT 381.3 THA 3.07 EL1 2539.5 EL2 263.7 ALF 8.56

LAUNCH DATE JAN 3 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 11 1969

Heliocentric Conic

DISTANCE 617.117

RL 147.09 LAL -.00 LOL 102.45 VL 27.104 GAL 11.80 AZL 87.61 HCA 293.90 SMA 124.05 ECC .27369 INC 2.3897 V1 30.288  
 RP 108.28 LAP -2.18 LOP 36.37 VP 37.172 GAP 14.14 A2P 89.03 TAL 143.45 TAP 77.35 RCA 90.10 APO 158.00 V2 35.003  
 RC 167.370 GL 9.36 GP -6.24 ZAL 35.40 ZAP 171.14 ETS 318.31 ZAE 123.94 ETE 183.78 ZAC 137.22 ETC 168.82 CLP-173.70

Planetocentric Conic

C3 46.237 VHL 6.800 DLA 30.90 RAL 64.66 RAD 6568.7 VEL 12.946 PTH 2.36 VHP 9.431 DPA 7.99 RAP 43.00 ECC 1.7609  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.07 1 7 40 4075.82 -15.30 171.05 307.48 62.82 2 15 36 3475.8 -18.82 163.95  
 102.93 4 33 31 3413.95 -15.29 122.20 307.48 62.81 5 30 25 2813.9 -18.81 115.11  
 77.07 1 7 40 4075.82 -15.30 171.05 307.48 62.82 2 15 36 3475.8 -18.82 163.95  
 102.93 4 33 31 3413.95 -15.29 122.20 307.48 62.81 5 30 25 2813.9 -18.81 115.11  
 110.00 7 12 39 2917.59 -27.34 90.20 313.29 68.63 8 1 16 2317.6 -29.99 82.02  
 110.00 3 27 43 3820.17 -3.92 131.04 300.68 56.02 4 28 3 3020.2 -8.35 124.76

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9683 TRA 6.1120 TC3-1.4836 BAU .9171 SGT 6545.8 SGR 509.7 SCS 211.0 ST 2448.8 SR 447.8 SS 716.5  
 RDE .3236 RRA .2800 RC3 .0003 FAU .01186 RRT .6784 RRF .6705 RTF .9808 CRT .7931 CRS -.7220 CST -.9939  
 FDE .6206 FRA 2.4100 FC3 -.2220 BSP 21793 SGB 6565.6 R23 .0041 R13 .9809 LSA 2575.5 MSA 283.3 SSA 11.7  
 BDE 2.0367 BRA 6.1175 BC3 1.4836 FSP -.749 SGI 6554.9 SGT 374.0 THA 3.03 EL1 2474.7 EL2 269.9 ALF 8.35



LAUNCH DATE JAN 4 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 15 1969

HELIOCENTRIC CONIC

DISTANCE 148.536

RL 147.09 LAL -.00 LOL 103.46 VL 20.539 GAL 10.81 AZL 85.91 HCA 55.33 SMA 95.99 ECC .55561 INC 4.0913 V1 30.288  
 RP 107.56 LAP 3.36 LOP 150.73 VP 32.941 GAP -33.12 AZP 87.67 TAL 171.08 TAP 226.41 RCA 42.66 APO 149.32 V2 35.232  
 RC 54.021 GL 7.55 GP 2.63 ZAL 69.48 ZAP 23.06 ETS 187.09 ZAE 154.05 ETE 196.86 ZAC 95.41 ETC 166.33 CLP 22.92

PLANETOCENTRIC CONIC

C3 120.164 VML 10.982 DLA 20.00 RAL 29.21 RAD 6570.3 VEL 15.540 PTH 2.77 VHP 19.681 DPA .06 RAP 1.76 ECC 2.9776  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 34 46 3320.59 -24.20 119.07 290.21 74.83 4 30 7 2720.6 -26.05 110.89  
 90.00 21 11 47 4809.21 12.84 195.23 276.73 64.54 22 28 37 4009.2 9.31 168.33  
 100.00 5 8 55 3017.02 -26.26 97.35 290.82 75.18 5 59 12 2417.0 -28.04 89.00  
 100.00 22 20 20 4388.01 14.76 178.01 275.77 63.71 23 33 28 3788.0 11.11 171.12  
 110.00 6 44 36 2717.68 -31.50 76.15 292.36 75.98 7 29 53 2117.7 -33.10 67.29  
 110.00 23 1 9 4260.12 19.56 165.70 275.16 61.39 24 12 9 3660.1 15.59 158.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5046 TRA-1.3594 TC3 -.0992 BAU .1653 SGT 829.8 SGR 439.4 SCS 37.1 ST 347.9 SR 414.2 SS 322.0  
 RDE -.7883 RRA .2525 RC3 -.0273 FAU .01496 RRT .0425 RRF -.0448 RTF -.6532 CRT .6878 CRS .8066 CST .9821  
 FDE .3125 FRA .5726 FC3 -.1078 B&P 2267 SGB 939.0 R23 -.0063 R13 -.6534 LSA 587.7 MSA 225.3 SSA 13.7  
 BDE .9360 BRA 1.3827 BC3 .1029 F&P -80 SGT 830.1 SGR 438.9 THA 1.79 EL1 498.6 EL2 209.8 ALF 52.15

LAUNCH DATE JAN 4 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 17 1969

HELIOCENTRIC CONIC

DISTANCE 154.805

RL 147.09 LAL -.00 LOL 103.46 VL 21.106 GAL 10.33 AZL 86.03 HCA 58.57 SMA 97.66 ECC .52936 INC 3.9669 V1 30.288  
 RP 107.58 LAP 3.38 LOP 161.97 VP 33.291 GAP -31.48 AZP 87.93 TAL 170.53 TAP 229.10 RCA 45.96 APO 149.35 V2 35.226  
 RC 52.393 GL 7.95 GP 2.73 ZAL 68.69 ZAP 21.53 ETS 187.93 ZAE 155.43 ETE 198.14 ZAC 97.02 ETC 166.29 CLP 21.36

PLANETOCENTRIC CONIC

C3 107.978 VML 10.591 DLA 20.66 RAL 29.88 RAD 6570.1 VEL 15.143 PTH 2.72 VHP 18.820 DPA .85 RAP 3.26 ECC 2.7771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 29 46 3326.93 -24.09 119.50 289.41 74.84 4 25 13 2726.9 -25.96 111.33  
 90.00 21 22 4 4559.33 11.36 192.31 276.18 63.89 22 38 4 3959.3 7.76 185.48  
 100.00 5 4 45 3020.66 -26.20 97.60 290.04 75.06 5 55 6 2420.7 -27.99 89.26  
 100.00 22 29 47 4340.83 13.32 175.25 275.18 62.99 23 42 8 3740.8 9.59 168.44  
 110.00 6 41 59 2716.47 -31.52 76.06 291.61 76.03 7 27 15 2116.5 -33.12 67.20  
 110.00 23 9 2 4217.79 18.16 163.22 272.48 60.53 24 19 20 3617.8 14.10 156.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5031 TRA-1.3511 TC3 -.1007 BAU .1516 SGT 868.7 SGR 443.2 SCS 40.5 ST 366.1 SR 418.7 SS 357.7  
 RDE -.7557 RRA .2337 RC3 -.0299 FAU .01536 RRT .0492 RRF -.0519 RTF -.6730 CRT .6897 CRS .8090 CST .9819  
 FDE .3251 FRA .5918 FC3 -.1232 B&P 2427 SGB 975.2 R23 -.0073 R13 -.6733 LSA 608.3 MSA 230.7 SSA 13.9  
 BDE .9078 BRA 1.3712 BC3 .1050 F&P -89 SGT 869.1 SGR 442.5 THA 1.94 EL1 512.3 EL2 216.7 ALF 50.52

LAUNCH DATE JAN 4 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 19 1969

HELIOCENTRIC CONIC

DISTANCE 161.143

RL 147.09 LAL -.00 LOL 103.46 VL 21.634 GAL 9.86 AZL 86.15 HCA 61.81 SMA 99.30 ECC .50412 INC 3.8508 V1 30.288  
 RP 107.60 LAP 3.39 LOP 165.22 VP 33.621 GAP -29.93 AZP 88.18 TAL 170.00 TAP 231.81 RCA 49.24 APO 149.36 V2 35.219  
 RC 50.852 GL 8.35 GP 2.84 ZAL 67.98 ZAP 20.02 ETS 188.90 ZAE 156.97 ETE 199.62 ZAC 98.63 ETC 166.23 CLP 19.82

PLANETOCENTRIC CONIC

C3 97.088 VML 9.853 DLA 21.30 RAL 30.48 RAD 6569.9 VEL 14.779 PTH 2.67 VHP 17.993 DPA 1.65 RAP 4.76 ECC 2.5978  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 24 24 3332.51 -23.98 119.87 288.47 74.48 4 19 57 2732.5 -25.88 111.72  
 90.00 21 32 7 4508.68 9.83 189.38 275.56 63.31 22 47 16 3908.7 6.17 182.61  
 100.00 5 0 17 3023.36 -26.15 97.78 289.12 74.97 5 50 40 2423.4 -27.96 89.45  
 100.00 22 38 56 4293.07 11.83 172.49 274.52 62.35 23 50 29 3693.1 8.03 165.75  
 110.00 6 39 7 2714.13 -31.56 75.89 290.71 76.12 7 24 21 2114.1 -33.14 67.02  
 110.00 23 16 35 4175.05 16.71 160.75 271.73 59.74 24 26 10 3575.0 12.57 154.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5044 TRA-1.3439 TC3 -.1018 BAU .1388 SGT 911.0 SGR 448.3 SCS 44.2 ST 386.5 SR 422.6 SS 354.3  
 RDE -.7235 RRA .2155 RC3 -.0326 FAU .01580 RRT .0578 RRF -.0802 RTF -.6915 CRT .6934 CRS .8119 CST .9820  
 FDE .3386 FRA .6113 FC3 -.1409 B&P 2541 SGB 1014.4 R23 -.0077 R13 -.6918 LSA 630.8 MSA 235.5 SSA 14.1  
 BDE .8820 BRA 1.3611 BC3 .1069 F&P -98 SGT 911.4 SGR 445.3 THA 2.13 EL1 527.5 EL2 223.2 ALF 48.68

LAUNCH DATE JAN 4 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC

DISTANCE 167.541

RL 147.09 LAL -.00 LOL 103.46 VL 22.125 GAL 9.39 AZL 86.26 HCA 65.05 SMA 100.92 ECC .47991 INC 3.7417 V1 30.288  
 RP 107.62 LAP 3.39 LOP 168.47 VP 33.930 GAP -28.45 AZP 88.42 TAL 169.52 TAP 234.57 RCA 52.49 APO 149.36 V2 35.211  
 RC 49.405 GL 8.77 GP 2.95 ZAL 67.35 ZAP 18.52 ETS 190.04 ZAE 158.67 ETE 201.38 ZAC 100.25 ETC 166.15 CLP 18.29

PLANETOCENTRIC CONIC

C3 87.342 VML 9.346 DLA 21.91 RAL 30.97 RAD 6569.7 VEL 14.446 PTH 2.62 VHP 17.197 DPA 2.46 RAP 6.27 ECC 2.4374  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 18 40 3337.40 -23.90 120.20 287.38 74.34 4 14 17 2737.4 -25.82 112.06  
 90.00 21 41 56 4497.32 8.25 186.44 274.86 62.81 22 56 14 3857.3 4.54 179.72  
 100.00 4 55 30 3025.17 -26.12 97.91 288.05 74.91 5 45 55 2425.2 -27.93 89.58  
 100.00 22 47 47 4244.78 10.28 169.73 273.78 61.78 23 58 32 3644.8 6.43 163.06  
 110.00 6 38 0 2710.72 -31.61 75.64 289.86 76.28 7 21 11 2110.7 -33.18 66.76  
 110.00 23 25 46 4132.00 15.22 158.31 270.90 59.02 24 32 38 3532.0 11.00 151.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5043 TRA-1.3358 TC3 -.1006 BAU .1245 SGT 952.8 SGR 448.7 SCS 48.2 ST 406.9 SR 426.0 SS 371.4  
 RDE -.6919 RRA .1978 RC3 -.0353 FAU .01629 RRT .0663 RRF -.0892 RTF -.7098 CRT .6969 CRS .8151 CST .9820  
 FDE .3527 FRA .6309 FC3 -.1614 B&P 2713 SGB 1053.2 R23 -.0088 R13 -.7101 LSA 633.6 MSA 239.8 SSA 14.3  
 BDE .8962 BRA 1.3484 BC3 .1066 F&P -109 SGT 953.4 SGR 447.5 THA 2.30 EL1 542.7 EL2 229.0 ALF 46.89

LAUNCH DATE JAN 4 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC

DISTANCE 173.994

RL 147.09 LAL -0.00 LOL 103.46 VL 22.561 GAL 8.92 AZL 86.36 HCA 68.28 SMA 102.51 ECC .45676 INC 3.6381 V1 30.288
RP 107.65 LAP 3.38 LOP 171.71 VP 34.221 GAP -27.04 AZP 88.65 TAL 169.07 TAP 237.36 RCA 55.69 APO 149.34 V2 35.202
RC 48.084 GL 9.19 GP 3.08 ZAL 66.80 ZAP 17.04 ETS 191.39 ZAE 160.52 ETE 203.52 ZAC 101.87 ETC 186.04 CLP 16.77

PLANETOCENTRIC CONIC

C3 78.619 VHL 8.067 DLA 22.50 RAL 31.41 RAD 6569.5 VEL 14.141 PTH 2.58 VHP 16.432 DPA 3.29 RAP 7.77 ECC 2.2939
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 12 32 3341.71 -23.82 120.50 286.15 74.21 4 8 14 2741.7 -25.75 112.36
90.00 21 51 31 4403.31 6.62 183.48 274.09 62.40 23 4 56 3605.3 2.87 176.81
100.00 4 50 24 3026.16 -26.10 97.98 286.84 74.88 5 40 50 2426.2 -27.92 89.65
100.00 22 56 20 4196.10 8.70 166.98 272.97 61.29 24 6 16 3596.1 4.81 160.36
110.00 6 32 38 2706.28 -31.68 75.31 288.47 76.44 7 17 45 2106.3 -33.22 66.42
110.00 23 30 35 4088.74 13.69 155.89 270.01 58.37 24 38 44 3488.7 9.41 149.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5049 TRA-1.3227 TC3 -.0977 BAU .1102 SGT 996.2 SCR 450.4 SCS 52.7 ST 428.4 SR 426.7 SS 389.2
RDE -.6809 RRA .1808 RC3 -.0380 FAU .01883 RRT .0760 RRF -.0793 RTF -.7273 CRT .7014 CRS .8187 CST .9822
FDE .3675 FRA .6508 FC3 -.1853 B8P 2886 SGB 1093.3 R23 -.0099 R13 -.7276 LSA 677.8 MSA 243.3 SSA 14.5
BDE .8317 BRA 1.3350 BC3 .1048 F8P -122 SGI 997.0 SGI 448.8 THA 2.47 EL1 559.0 EL2 234.2 ALF 45.03

LAUNCH DATE JAN 4 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

DISTANCE 180.498

RL 147.09 LAL -0.00 LOL 103.46 VL 23.005 GAL 8.47 AZL 86.46 HCA 71.52 SMA 104.07 ECC .43465 INC 3.5393 V1 30.288
RP 107.68 LAP 3.38 LOP 174.95 VP 34.493 GAP -25.69 AZP 88.88 TAL 168.66 TAP 240.18 RCA 58.83 APO 149.30 V2 35.194
RC 46.839 GL 9.61 GP 3.22 ZAL 66.33 ZAP 15.58 ETS 193.02 ZAE 162.50 ETE 206.18 ZAC 103.49 ETC 165.91 CLP 15.25

PLANETOCENTRIC CONIC

C3 70.809 VHL 8.415 DLA 23.07 RAL 31.76 RAD 6569.4 VEL 13.862 PTH 2.53 VHP 15.695 DPA 4.13 RAP 9.28 ECC 2.1653
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 6 1 3345.50 -23.75 120.75 284.79 74.10 4 1 46 2745.5 -25.70 112.63
90.00 22 0 51 4352.77 4.95 180.52 273.25 62.08 23 13 24 3752.8 1.18 173.87
100.00 4 44 59 3026.38 -26.09 97.99 285.51 74.88 5 35 26 2426.4 -27.92 89.66
100.00 23 4 34 4147.13 7.09 164.24 272.08 60.89 24 13 41 3547.1 3.16 157.66
110.00 6 29 2 2700.85 -31.77 74.91 287.15 76.66 7 14 3 2100.9 -33.28 66.01
110.00 23 37 0 4045.41 12.13 153.50 289.05 57.79 24 44 25 3445.4 7.79 147.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5082 TRA-1.3104 TC3 -.0925 BAU .0956 SGT 1040.9 SCR 451.4 SCS 57.5 ST 451.1 SR 430.9 SS 407.9
RDE -.6306 RRA .1641 RC3 -.0406 FAU .01744 RRT .0870 RRF -.0907 RTF -.7440 CRT .7069 CRS .8228 CST .9824
FDE .3834 FRA .6711 FC3 -.2132 B8P 3087 SGB 1134.6 R23 -.0112 R13 -.7444 LSA 703.4 MSA 246.0 SSA 14.7
BDE .8087 BRA 1.3206 BC3 .1010 F8P -135 SGI 1041.8 SGI 449.3 THA 2.65 EL1 576.4 EL2 238.5 ALF 43.15

LAUNCH DATE JAN 4 1969

FLIGHT TIME 82.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 187.047

RL 147.09 LAL -0.00 LOL 103.46 VL 23.399 GAL 8.02 AZL 86.56 HCA 74.75 SMA 105.58 ECC .41360 INC 3.4440 V1 30.288
RP 107.71 LAP 3.32 LOP 178.19 VP 34.747 GAP -24.41 AZP 89.09 TAL 168.30 TAP 243.05 RCA 61.91 APO 149.25 V2 35.184
RC 45.742 GL 10.03 GP 3.38 ZAL 65.94 ZAP 14.14 ETS 195.01 ZAE 164.61 ETE 209.62 ZAC 105.11 ETC 165.74 CLP 13.74

PLANETOCENTRIC CONIC

C3 63.813 VHL 7.988 DLA 23.82 RAL 32.03 RAD 6569.2 VEL 13.608 PTH 2.49 VHP 14.985 DPA 4.98 RAP 10.79 ECC 2.0502
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 59 7 3348.86 -23.68 120.98 283.30 74.01 3 54 56 2748.9 -25.65 112.86
90.00 22 9 55 4299.81 3.26 177.55 272.34 61.86 23 21 35 3699.8 -5.3 170.92
100.00 4 39 18 3025.86 -26.10 97.96 284.04 74.89 5 29 43 2425.9 -27.92 89.63
100.00 23 12 26 4098.04 5.46 161.51 271.12 60.56 24 20 44 3498.0 1.50 154.97
110.00 6 25 13 2694.48 -31.87 74.44 285.69 76.93 7 10 7 2094.5 -33.34 65.52
110.00 23 43 0 4002.19 10.55 151.15 288.02 57.30 24 49 42 3402.2 6.17 144.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5081 TRA-1.2969 TC3 -.0847 BAU .0811 SGT 1087.2 SCR 451.7 SCS 62.9 ST 475.0 SR 432.6 SS 427.5
RDE -.6011 RRA .1481 RC3 -.0430 FAU .01811 RRT .0993 RRF -.1036 RTF -.7599 CRT .7133 CRS .8273 CST .9826
FDE .4004 FRA .6918 FC3 -.2457 B8P 3250 SGB 1177.3 R23 -.0126 R13 -.7604 LSA 730.6 MSA 248.0 SSA 14.9
BDE .7871 BRA 1.3054 BC3 .0950 F8P -150 SGI 1088.3 SGI 449.0 THA 2.85 EL1 595.1 EL2 242.0 ALF 41.26

LAUNCH DATE JAN 4 1969

FLIGHT TIME 84.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 193.635

RL 147.09 LAL -0.00 LOL 103.46 VL 23.765 GAL 7.59 AZL 86.65 HCA 77.99 SMA 107.05 ECC .39359 INC 3.3518 V1 30.288
RP 107.74 LAP 3.28 LOP 181.43 VP 34.985 GAP -23.10 AZP 89.30 TAL 167.98 TAP 245.97 RCA 64.92 APO 149.19 V2 35.174
RC 44.782 GL 10.46 GP 3.55 ZAL 65.83 ZAP 12.73 ETS 197.49 ZAE 166.80 ETE 214.27 ZAC 106.71 ETC 165.55 CLP 12.23

PLANETOCENTRIC CONIC

C3 57.547 VHL 7.586 DLA 24.14 RAL 32.22 RAD 6569.0 VEL 13.376 PTH 2.44 VHP 14.302 DPA 5.85 RAP 12.29 ECC 1.9471
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 51 51 3351.84 -23.83 121.18 281.69 73.92 3 47 43 2751.8 -25.61 113.07
90.00 22 18 43 4246.59 1.54 174.58 271.35 61.72 23 29 30 3646.6 -2.25 167.95
100.00 4 33 20 3024.84 -26.13 97.87 282.46 74.93 5 23 44 2424.6 -27.94 89.54
100.00 23 19 55 4049.03 3.81 158.80 270.09 60.33 24 27 24 3449.0 -.17 152.28
110.00 6 21 11 2687.19 -31.98 73.90 284.11 77.23 7 5 59 2087.2 -33.41 64.96
110.00 23 48 33 3959.24 8.96 148.84 286.93 58.87 24 54 32 3359.2 4.54 142.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5133 TRA-1.2847 TC3 -.0756 BAU .0678 SGT 1137.5 SCR 451.4 SCS 68.8 ST 502.0 SR 433.7 SS 448.6
RDE -.5728 RRA .1328 RC3 -.0452 FAU .01884 RRT .1148 RRF -.1188 RTF -.7744 CRT .7217 CRS .8324 CST .9832
FDE .4191 FRA .7133 FC3 -.2834 B8P 3380 SGB 1223.8 R23 -.0136 R13 -.7749 LSA 761.0 MSA 248.9 SSA 15.1
BDE .7689 BRA 1.2915 BC3 .0881 F8P -168 SGI 1138.9 SGI 447.9 THA 3.08 EL1 616.8 EL2 244.3 ALF 39.23

LAUNCH DATE JAN 4 1969

FLIGHT TIME 86.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 200.258

RL 147.09 LAL -.00 LOL 103.46 VL 24.105 GAL 7.17 AZL 86.74 HCA 81.22 SMA 108.48 ECC .37461 INC 3.2618 V1 30.288  
 RP 107.77 LAP 3.22 LOP 184.67 VP 35.206 GAP -22.00 AZP 89.50 TAL 167.71 TAP 248.93 RCA 67.84 APO 149.11 V2 35.164  
 RC 43.971 GL 10.88 GP 3.74 ZAL 65.41 ZAP 11.34 ETS 200.85 ZAE 169.02 ETE 220.90 ZAC 108.31 ETC 165.32 CLP 10.72

PLANETOCENTRIC CONIC

C3 51.934 VHL 7.206 DLA 24.62 RAL 32.33 RAD 6568.9 VEL 13.164 PTH 2.40 VHP 13.644 DPA 6.73 RAP 13.78 ECC 1.8547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 14 3354.44 -23.58 121.35 279.96 73.85 3 40 8 2754.4 -25.57 113.25  
 90.00 22 27 12 4193.35 -1.18 171.61 270.28 61.68 23 37 5 3593.3 -3.96 164.97  
 100.00 4 27 8 3022.68 -26.16 97.74 280.76 74.99 5 17 30 2422.7 -27.96 89.40  
 100.00 23 26 59 4000.34 2.17 156.13 268.98 60.18 24 33 40 3400.3 -1.82 149.61  
 110.00 6 16 59 2678.98 -32.10 73.29 282.42 77.57 7 1 38 2079.0 -33.48 64.33  
 110.00 23 53 37 3916.80 7.38 146.58 265.76 56.53 24 58 54 3316.8 2.92 140.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5163 TRA-1.2689 TC3 -.0615 BAU .0538 SGT 1186.6 SGR 450.4 SCS 75.3 ST 528.5 SR 434.4 SS 470.2  
 RDE -.5449 RRA .1177 RC3 -.0470 FAU .01966 RRT .1503 RRF -.1349 RTF -.7887 CRT .7299 CRS .8377 CST .9837  
 FDE .4387 FRA .7354 FC3 -.3278 BSP 3575 SGB 1269.2 R23 -.0154 R13 -.7892 LSA 791.7 MSA 249.1 SSA 15.2  
 BDE .7507 BRA 1.2744 BC3 .0774 FSP -185 SGI 1188.3 SGT 446.0 THA 3.30 EL1 638.4 EL2 245.8 ALF 37.43

LAUNCH DATE JAN 4 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 206.910

RL 147.09 LAL -.00 LOL 103.46 VL 24.421 GAL 6.76 AZL 86.83 HCA 84.44 SMA 109.85 ECC .35664 INC 3.1734 V1 30.288  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.412 GAP -20.87 AZP 89.69 TAL 167.49 TAP 251.93 RCA 70.68 APO 149.03 V2 35.153  
 RC 43.319 GL 11.30 GP 3.95 ZAL 65.27 ZAP 10.00 ETS 204.76 ZAE 171.15 ETE 230.94 ZAC 109.88 ETC 165.06 CLP 9.20

PLANETOCENTRIC CONIC

C3 46.906 VHL 6.849 DLA 25.08 RAL 32.36 RAD 6568.8 VEL 12.972 PTH 2.37 VHP 13.011 DPA 7.62 RAP 15.26 ECC 1.7720  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 19 3356.63 -23.54 121.50 278.14 73.78 3 32 16 2756.6 -25.54 113.40  
 90.00 22 35 20 4140.33 -1.89 168.65 269.14 61.74 23 44 20 3540.3 -5.65 161.99  
 100.00 4 20 45 3019.93 -26.21 97.55 278.96 75.08 5 11 5 2419.9 -28.00 89.20  
 100.00 23 33 35 3932.26 .54 153.49 267.79 60.11 24 39 27 3352.3 -3.44 146.96  
 110.00 6 12 39 2669.85 -32.23 72.61 280.61 77.95 6 57 9 2069.8 -33.56 63.63  
 110.00 0 2 6 3675.11 5.80 144.37 284.92 56.25 1 6 41 3275.1 1.33 138.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5201 TRA-1.2518 TC3 -.0434 BAU .0406 SGT 1236.8 SGR 448.9 SCS 82.4 ST 556.4 SR 434.6 SS 493.2  
 RDE -.5183 RRA .1033 RC3 -.0482 FAU .02059 RRT .1482 RRF -.1536 RTF -.8023 CRT .7392 CRS .8436 CST .9843  
 FDE .4800 FRA .7582 FC3 -.3800 BSP 3766 SGB 1315.8 R23 -.0174 R13 -.8028 LSA 824.5 MSA 248.4 SSA 15.4  
 BDE .7343 BRA 1.2561 BC3 .0648 FSP -205 SGI 1238.9 SGT 443.2 THA 3.53 EL1 661.7 EL2 246.1 ALF 35.67

LAUNCH DATE JAN 4 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 213.586

RL 147.09 LAL -.00 LOL 103.46 VL 24.714 GAL 6.36 AZL 86.91 HCA 87.67 SMA 111.18 ECC .33966 INC 3.0860 V1 30.288  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.404 GAP -19.78 AZP 89.87 TAL 167.32 TAP 254.99 RCA 73.42 APO 148.94 V2 35.141  
 RC 42.834 GL 11.72 GP 4.18 ZAL 65.21 ZAP 8.75 ETS 210.22 ZAE 172.95 ETE 246.86 ZAC 111.44 ETC 164.76 CLP 7.67

PLANETOCENTRIC CONIC

C3 42.403 VHL 6.512 DLA 25.50 RAL 32.30 RAD 6568.6 VEL 12.797 PTH 2.33 VHP 12.400 DPA 8.53 RAP 16.73 ECC 1.6979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 28 11 3358.32 -23.50 121.61 276.22 73.74 3 24 10 2756.3 -25.51 113.52  
 90.00 22 43 1 4087.89 -3.57 165.72 267.92 61.89 23 51 9 3487.9 -7.31 159.03  
 100.00 4 14 17 3016.29 -26.27 97.29 277.07 75.20 5 4 33 2416.3 -28.05 88.94  
 100.00 23 39 37 3905.16 -1.06 150.90 266.32 60.12 24 44 42 3305.2 -5.03 144.36  
 110.00 6 8 14 2659.76 -32.37 71.86 278.71 78.38 6 52 34 2059.8 -33.64 62.85  
 110.00 0 6 5 3634.45 4.28 142.24 283.21 56.05 1 9 59 3234.5 -2.22 136.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5247 TRA-1.2338 TC3 -.0211 BAU .0300 SGT 1288.6 SGR 446.8 SCS 90.3 ST 585.9 SR 434.4 SS 517.5  
 RDE -.4928 RRA .0894 RC3 -.0485 FAU .02160 RRT .1687 RRF -.1749 RTF -.8150 CRT .7494 CRS .8499 CST .9849  
 FDE .4832 FRA .7819 FC3 -.4410 BSP 3955 SGB 1363.9 R23 -.0196 R13 -.8157 LSA 859.5 MSA 246.8 SSA 15.6  
 BDE .7199 BRA 1.2371 BC3 .0529 FSP -228 SGI 1291.1 SGT 439.5 THA 3.79 EL1 686.9 EL2 245.4 ALF 33.97

LAUNCH DATE JAN 4 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 220.283

RL 147.09 LAL -.00 LOL 103.46 VL 24.986 GAL 5.98 AZL 87.00 HCA 90.89 SMA 112.45 ECC .32365 INC 2.9990 V1 30.288  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.782 GAP -18.74 AZP 90.05 TAL 167.20 TAP 258.09 RCA 76.06 APO 148.84 V2 35.129  
 RC 42.524 GL 12.12 GP 4.43 ZAL 65.23 ZAP 7.56 ETS 217.64 ZAE 173.99 ETE 270.90 ZAC 112.97 ETC 164.41 CLP 6.13

PLANETOCENTRIC CONIC

C3 38.372 VHL 6.195 DLA 25.88 RAL 32.17 RAD 6568.5 VEL 12.639 PTH 2.29 VHP 11.813 DPA 9.45 RAP 18.17 ECC 1.6315  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 19 56 3359.28 -23.49 121.80 274.22 73.71 3 15 56 2759.3 -25.50 113.58  
 90.00 22 50 11 4036.50 -5.22 162.84 268.61 62.13 23 57 27 3436.5 -8.91 156.10  
 100.00 4 7 48 3013.56 -26.35 96.97 275.09 75.36 4 57 59 2411.6 -28.11 88.60  
 100.00 23 45 1 3859.44 -2.61 148.39 265.17 60.21 24 49 20 3259.4 -6.55 141.83  
 110.00 6 3 47 2648.63 -32.52 71.03 276.72 78.85 6 47 56 2048.6 -33.72 62.00  
 110.00 0 9 28 3795.13 2.76 140.18 281.83 55.92 1 12 41 3195.1 -1.73 133.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5293 TRA-1.2143 TC3 .0070 BAU .0248 SGT 1340.9 SGR 444.3 SCS 99.0 ST 616.4 SR 434.0 SS 543.1  
 RDE -.4685 RRA .0759 RC3 -.0478 FAU .02275 RRT .1917 RRF -.1989 RTF -.8271 CRT .7603 CRS .8566 CST .9856  
 FDE .5081 FRA .8067 FC3 -.5132 BSP 4152 SGB 1412.6 R23 -.0221 R13 -.8279 LSA 896.2 MSA 244.4 SSA 15.7  
 BDE .7069 BRA 1.2167 BC3 .0483 FSP -253 SGI 1343.9 SGT 435.1 THA 4.06 EL1 713.4 EL2 243.6 ALF 32.39

LAUNCH DATE JAN 4 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 226.996

RL 147.09 LAL -.00 LOL 103.46 VL 25.237 GAL 5.62 AZL 87.09 HCA 94.12 SMA 113.67 ECC .30858 INC 2.9120 V1 30.288  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.946 GAP -17.75 AZP 90.21 TAL 167.13 TAP 261.25 RCA 78.59 APO 148.74 V2 35.117  
 RC 42.392 GL 12.50 GP 4.72 ZAL 65.34 ZAP 6.56 ETS 227.77 ZAE 173.78 ETE 298.63 ZAC 114.46 ETC 164.02 CLP 4.57

PLANETOCENTRIC CONIC

C3 34.764 VHL 5.898 DLA 26.22 RAL 31.95 RAD 6568.4 VEL 12.495 PTH 2.26 VHP 11.248 DPA 10.39 RAP 19.60 ECC 1.5721  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 11 44 3359.12 -23.49 121.67 272.15 73.71 3 7 43 2759.1 -25.50 113.57  
 90.00 22 56 40 3986.75 -6.79 160.03 265.22 62.44 24 3 7 3386.8 -10.43 153.24  
 100.00 4 1 26 3005.46 -26.46 96.54 273.05 75.55 4 51 31 2405.5 -28.18 88.17  
 100.00 23 49 39 3815.63 -4.09 145.98 263.74 60.36 24 53 15 3215.6 -8.00 139.38  
 110.00 5 59 24 2636.37 -32.68 70.10 274.64 79.37 6 43 20 2036.4 -33.80 61.05  
 110.00 0 12 7 3757.50 1.33 138.21 260.38 55.84 1 14 44 3157.5 -3.16 132.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5341 TRA-1.1936 TC3 .0408 BAU .0285 9GT 1394.0 9GR 441.5 9G3 108.6 ST 647.9 SR 433.3 SS 569.9  
 RDE -.4454 RRA .0629 RC3 -.0458 FAU .02402 RRT .2177 RRF -.2261 RTF -.8385 CRT .7719 CRS .8636 CST .9864  
 FDE .5350 FRA .8328 FC3 -.5981 B8P 4357 9GB 1462.2 R23 -.0250 R13 -.8393 LSA 934.9 MSA 241.1 SSA 15.9  
 BDE .6955 BRA 1.1953 BC3 .0613 F8P -281 9G1 1397.6 9G2 429.8 THA 4.36 EL1 741.4 EL2 240.8 ALF 30.92

LAUNCH DATE JAN 4 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 233.720

RL 147.09 LAL -.00 LOL 103.46 VL 25.471 GAL 5.28 AZL 87.18 HCA 97.34 SMA 114.83 ECC .29444 INC 2.8243 V1 30.288  
 RP 107.95 LAP 2.80 LOP 200.81 VP 36.098 GAP -16.79 AZP 90.36 TAL 167.11 TAP 264.45 RCA 81.02 APO 148.64 V2 35.105  
 RC 42.442 GL 12.86 GP 5.03 ZAL 65.52 ZAP 5.85 ETS 241.24 ZAE 172.41 ETE 320.45 ZAC 115.92 ETC 163.58 CLP 2.99

PLANETOCENTRIC CONIC

C3 31.936 VHL 5.616 DLA 26.50 RAL 31.66 RAD 6568.3 VEL 12.366 PTH 2.23 VHP 10.703 DPA 11.34 RAP 20.99 ECC 1.5190  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 49 3357.26 -23.52 121.54 270.03 73.77 2 59 46 2757.3 -25.53 113.44  
 90.00 23 2 18 3939.47 -8.27 157.35 263.75 62.82 24 7 56 3339.5 -11.85 150.50  
 100.00 3 55 22 2907.65 -26.59 96.00 270.95 75.81 4 45 19 2397.7 -26.28 87.61  
 100.00 23 53 24 3774.32 -5.47 143.70 262.23 60.57 24 56 19 3174.3 -9.35 137.06  
 110.00 5 55 10 2622.81 -32.85 69.08 272.90 79.96 6 38 52 2022.8 -33.88 60.00  
 110.00 0 14 2 3721.93 -0.03 136.36 258.85 55.82 1 16 4 3121.9 -4.52 130.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5393 TRA-1.1722 TC3 .0805 BAU .0383 9GT 1448.1 9GR 438.6 9G3 119.3 ST 680.8 SR 432.6 SS 598.4  
 RDE -.4237 RRA .0502 RC3 -.0420 FAU .02542 RRT .2475 RRF -.2372 RTF -.8491 CRT .7842 CRS .8710 CST .9872  
 FDE .5643 FRA .8604 FC3 -.6879 B8P 4551 9GB 1513.0 R23 -.0283 R13 -.8501 LSA 975.8 MSA 237.1 SSA 16.1  
 BDE .6858 BRA 1.1732 BC3 .0907 F8P -313 9G1 1452.5 9G2 423.6 THA 4.69 EL1 771.0 EL2 237.0 ALF 29.55

LAUNCH DATE JAN 4 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 240.432

RL 147.09 LAL -.00 LOL 103.46 VL 25.686 GAL 4.93 AZL 87.26 HCA 100.55 SMA 115.94 ECC .28118 INC 2.7355 V1 30.288  
 RP 107.99 LAP 2.69 LOP 204.03 VP 36.238 GAP -15.86 AZP 90.50 TAL 167.15 TAP 267.70 RCA 83.34 APO 148.54 V2 35.092  
 RC 42.671 GL 13.19 GP 5.38 ZAL 65.78 ZAP 5.56 ETS 237.60 ZAE 170.40 ETE 334.55 ZAC 117.33 ETC 163.08 CLP 1.39

PLANETOCENTRIC CONIC

C3 28.648 VHL 5.332 DLA 26.74 RAL 31.30 RAD 6568.2 VEL 12.248 PTH 2.20 VHP 10.180 DPA 12.31 RAP 22.35 ECC 1.4715  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 29 3352.85 -23.61 121.25 267.88 73.89 2 52 21 2752.9 -25.59 113.59  
 90.00 23 6 42 3893.73 -9.82 154.84 262.17 63.24 24 11 38 3295.7 -13.14 147.93  
 100.00 3 49 47 2987.60 -26.75 95.30 268.81 76.15 4 39 34 2387.6 -26.40 86.88  
 100.00 0 0 1 3736.21 -6.74 141.58 260.63 60.81 1 2 17 3136.2 -10.59 134.90  
 110.00 5 51 10 2807.76 -33.02 67.94 270.30 80.61 6 34 38 2007.8 -33.96 58.83  
 110.00 0 15 7 3688.82 -1.30 134.63 257.26 55.84 1 28 36 3088.8 -5.77 128.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5442 TRA-1.1488 TC3 .1269 BAU .0305 9GT 1302.4 9GR 435.8 9G3 131.2 ST 714.4 SR 431.9 SS 628.1  
 RDE -.4033 RRA .0377 RC3 -.0359 FAU .02700 RRT .2810 RRF -.2923 RTF -.8589 CRT .7969 CRS .8787 CST .9879  
 FDE .5959 FRA .8697 FC3 -.8159 B8P 4743 9GB 1564.3 R23 -.0323 R13 -.8600 LSA 1018.4 MSA 232.5 SSA 16.3  
 BDE .8773 BRA 1.1504 BC3 .1319 F8P -348 9G1 1507.8 9G2 416.7 THA 5.05 EL1 801.8 EL2 232.5 ALF 28.32

LAUNCH DATE JAN 4 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 247.188

RL 147.09 LAL -.00 LOL 103.46 VL 25.886 GAL 4.60 AZL 87.36 HCA 103.77 SMA 116.99 ECC .26878 INC 2.6448 V1 30.288  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.368 GAP -14.97 AZP 90.63 TAL 167.23 TAP 271.00 RCA 85.54 APO 148.43 V2 35.080  
 RC 43.078 GL 13.49 GP 5.78 ZAL 66.11 ZAP 5.78 ETS 274.58 ZAE 168.13 ETE 343.65 ZAC 118.89 ETC 162.52 CLP -.24

PLANETOCENTRIC CONIC

C3 28.085 VHL 5.105 DLA 26.91 RAL 30.88 RAD 6568.1 VEL 12.143 PTH 2.18 VHP 9.877 DPA 13.31 RAP 23.67 ECC 1.4290  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 9 3344.73 -23.78 120.70 265.71 74.12 2 45 53 2744.7 -25.71 112.57  
 90.00 23 9 36 3836.86 -10.81 152.60 260.49 63.67 24 13 53 3256.9 -14.26 143.62  
 100.00 3 44 55 2974.73 -26.96 94.40 266.64 76.58 4 34 30 2374.7 -28.54 85.95  
 100.00 0 1 28 3702.09 -7.87 139.88 258.93 61.07 1 3 8 3102.1 -11.67 132.95  
 110.00 5 47 33 2590.98 -33.20 66.66 268.04 81.35 6 30 44 1991.0 -34.04 57.52  
 110.00 0 15 17 3658.61 -2.45 133.05 255.80 55.89 1 16 16 3058.6 -6.91 126.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5483 TRA-1.1253 TC3 .1826 BAU .0645 9GT 1555.5 9GR 433.4 9G3 144.5 ST 747.7 SR 431.4 SS 659.1  
 RDE -.3843 RRA .0255 RC3 -.0271 FAU .02877 RRT .3188 RRF -.3323 RTF -.8685 CRT .8100 CRS .8865 CST .9888  
 FDE .8298 FRA .9211 FC3 -.9555 B8P 4957 9GB 1614.5 R23 -.0368 R13 -.8697 LSA 1062.0 MSA 227.2 SSA 16.4  
 BDE .6895 BRA 1.1256 BC3 .1848 F8P -387 9G1 1581.8 9G2 409.0 THA 5.45 EL1 832.8 EL2 227.1 ALF 27.24

LAUNCH DATE JAN 4 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 26.069 GAL 4.29 AZL 87.45 HCA 106.98 SMA 117.98 ECC .25721 INC 2.5516 V1 30.288
RP 108.07 LAP 2.44 LOP 210.46 VP 36.486 GAP -14.12 AZP 90.75 TAL 167.37 TAP 274.35 RCA 87.64 APO 148.33 V2 35.067
RC 43.650 GL 13.74 GP 6.22 ZAL 66.50 ZAP 6.51 ETS 289.35 ZAE 165.79 ETE 349.93 ZAC 119.98 ETC 161.90 CLP -1.91

DISTANCE 253.926

PLANETOCENTRIC CONIC

C3 23.756 VHL 4.874 DLA 27.01 RAL 30.37 RAD 6568.0 VEL 12.047 PTH 2.15 VHP 9.194 DPA 14.33 RAP 24.94 ECC 1.3910
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 17 3331.53 -24.00 119.81 263.55 74.51 2 40 49 2731.5 -25.90 111.65
90.00 23 10 32 3624.40 -11.78 150.71 258.70 64.06 24 14 16 3224.4 -15.17 143.68
100.00 3 41 2 2958.39 -27.21 93.25 264.45 77.13 4 30 20 2358.4 -28.71 84.77
100.00 0 1 24 3672.77 -8.83 138.03 257.16 61.53 1 2 37 3072.8 -12.60 131.26
110.00 5 44 27 2572.19 -33.38 65.23 265.75 82.18 6 27 19 1972.2 -34.10 56.06
110.00 0 14 28 3831.75 -3.48 131.65 255.88 55.97 1 15 0 3031.7 -7.92 125.38

DIFFERENTIAL CORRECTIONS

TDE -.5525 TRA-1.1011 TC3 .2452 BAU .0780
RDE -.3668 RRA .0132 RC3 -.0148 FAU .03073
FDE .6666 FRA .9553 FC3-1.1198 BSP 5144
BDE .6652 BRA 1.1012 BC3 .2456 FSP -431

MID-COURSE EXECUTION ACCURACY

SGT 1609.2 SGR 431.8 SCS 159.2
RRT .3616 RRF -.3773 RTF -.8773
SGB 1686.2 R23 -.0420 R13 -.8787
SGI 1617.3 SGT 400.6 THA 5.91

ORBIT DETERMINATION ACCURACY

ST 782.2 SR 431.3 SS 691.6
CRT .8235 CRS .8946 CST .9896
LSA 1107.6 HSA 221.3 SSA 16.6
EL1 865.4 EL2 221.2 ALF 26.27

LAUNCH DATE JAN 4 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 26.239 GAL 4.00 AZL 87.34 HCA 110.19 SMA 118.92 ECC .24643 INC 2.4553 V1 30.288
RP 108.11 LAP 2.30 LOP 213.67 VP 36.595 GAP -13.30 AZP 90.85 TAL 167.55 TAP 277.74 RCA 89.61 APO 148.22 V2 35.053
RC 44.405 GL 13.93 GP 6.72 ZAL 66.97 ZAP 7.63 ETS 300.69 ZAE 163.48 ETE 354.61 ZAC 121.20 ETC 161.21 CLP -3.61

DISTANCE 260.661

PLANETOCENTRIC CONIC

C3 21.892 VHL 4.657 DLA 27.04 RAL 29.83 RAD 6567.9 VEL 11.961 PTH 2.13 VHP 8.730 DPA 15.38 RAP 26.15 ECC 1.3570
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 42 23 3311.85 -24.35 118.47 261.40 75.09 2 37 35 2711.9 -26.17 110.27
90.00 23 9 6 3799.89 -12.50 149.28 256.80 64.39 24 12 25 3199.9 -15.85 142.20
100.00 3 38 23 2937.91 -27.52 91.80 262.25 77.84 4 27 21 2337.9 -28.92 83.28
100.00 23 55 47 3649.07 -9.61 136.70 255.30 61.56 24 58 36 3049.1 -13.33 129.89
110.00 5 42 0 2551.10 -33.57 63.81 263.43 83.12 6 24 31 1951.1 -34.15 54.42
110.00 0 12 35 3808.84 -4.36 130.44 252.10 56.06 1 12 44 3008.6 -8.78 124.15

DIFFERENTIAL CORRECTIONS

TDE -.5532 TRA-1.0737 TC3 .3202 BAU .0889
RDE -.3508 RRA .0010 RC3 .0021 FAU .03297
FDE .7049 FRA .9914 FC3-1.3157 BSP 5394
BDE .6551 BRA 1.0737 BC3 .3202 FSP -482

MID-COURSE EXECUTION ACCURACY

SGT 1638.7 SGR 431.6 SCS 175.6
RRT .4081 RRF -.4272 RTF -.8860
SGB 1713.9 R23 -.0484 R13 -.8876
SGI 1668.6 SGT 391.7 THA 6.42

ORBIT DETERMINATION ACCURACY

ST 813.1 SR 431.6 SS 724.2
CRT .8364 CRS .9026 CST .9903
LSA 1151.2 HSA 215.2 SSA 16.7
EL1 895.1 EL2 214.9 ALF 25.51

LAUNCH DATE JAN 4 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 26.395 GAL 3.73 AZL 87.65 HCA 113.40 SMA 119.80 ECC .23643 INC 2.3549 V1 30.288
RP 108.15 LAP 2.16 LOP 216.88 VP 36.694 GAP -12.51 AZP 90.94 TAL 167.77 TAP 281.17 RCA 91.48 APO 148.13 V2 35.040
RC 45.309 GL 14.06 GP 7.29 ZAL 67.49 ZAP 9.05 ETS 308.94 ZAE 161.28 ETE 358.33 ZAC 122.33 ETC 160.44 CLP -5.37

DISTANCE 267.391

PLANETOCENTRIC CONIC

C3 19.848 VHL 4.455 DLA 26.97 RAL 29.24 RAD 6567.8 VEL 11.884 PTH 2.11 VHP 8.285 DPA 16.47 RAP 27.29 ECC 1.3266
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 41 49 3284.69 -24.82 116.62 259.29 75.91 2 38 34 2684.7 -26.51 108.36
90.00 23 4 59 3784.48 -12.96 148.37 254.80 64.60 24 8 4 3184.5 -16.27 141.26
100.00 3 37 13 2912.89 -27.87 90.01 260.06 78.72 4 23 46 2312.7 -29.14 81.44
100.00 23 52 17 3631.70 -10.17 135.71 253.36 61.74 24 52 48 3031.7 -13.87 128.88
110.00 5 40 21 2527.37 -33.74 61.78 261.09 84.19 6 22 29 1927.4 -34.18 52.56
110.00 0 9 34 3589.79 -5.07 129.45 250.27 56.15 1 9 23 2989.8 -9.48 123.14

DIFFERENTIAL CORRECTIONS

TDE -.5545 TRA-1.0478 TC3 .4013 BAU .1067
RDE -.3384 RRA -.0114 RC3 .0241 FAU .03544
FDE .7459 FRA 1.0315 FC3-1.5457 BSP 5587
BDE .6486 BRA 1.0478 BC3 .4021 FSP -538

MID-COURSE EXECUTION ACCURACY

SGT 1709.3 SGR 433.5 SCS 193.8
RRT .4604 RRF -.4825 RTF -.8936
SGB 1763.4 R23 -.0556 R13 -.8955
SGI 1721.5 SGT 382.1 THA 7.01

ORBIT DETERMINATION ACCURACY

ST 845.2 SR 432.7 SS 758.0
CRT .8498 CRS .9107 CST .9911
LSA 1196.8 HSA 208.6 SSA 16.8
EL1 926.4 EL2 208.0 ALF 24.85

LAUNCH DATE JAN 4 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 26.539 GAL 3.46 AZL 87.75 HCA 116.60 SMA 120.63 ECC .22716 INC 2.2497 V1 30.288
RP 108.19 LAP 2.01 LOP 220.09 VP 36.785 GAP -11.74 AZP 91.01 TAL 168.04 TAP 284.64 RCA 93.23 APO 148.03 V2 35.027
RC 46.384 GL 14.11 GP 7.94 ZAL 68.06 ZAP 10.69 ETS 314.86 ZAE 159.21 ETE 369.14 ZAC 123.37 ETC 159.59 CLP -7.18

DISTANCE 274.114

PLANETOCENTRIC CONIC

C3 18.199 VHL 4.266 DLA 26.82 RAL 28.83 RAD 6567.7 VEL 11.814 PTH 2.09 VHP 7.859 DPA 17.61 RAP 28.36 ECC 1.2995
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 43 45 3249.85 -25.38 114.20 257.22 78.99 2 37 55 2649.6 -26.92 105.87
90.00 22 58 9 3778.83 -13.13 148.03 252.72 64.68 24 1 7 3178.6 -16.43 140.91
100.00 3 37 43 2882.29 -28.25 87.83 257.88 79.80 4 25 45 2282.3 -29.37 79.21
100.00 23 46 53 3621.22 -10.50 135.12 251.37 61.85 24 47 14 3021.2 -14.19 128.26
110.00 5 39 40 2500.68 -33.91 59.71 258.74 85.40 6 21 21 1900.7 -34.17 50.48
110.00 0 5 20 3575.60 -5.81 128.70 248.41 56.23 1 4 56 2975.6 -10.01 122.37

DIFFERENTIAL CORRECTIONS

TDE -.5549 TRA-1.0217 TC3 .4892 BAU .1197
RDE -.3237 RRA -.0244 RC3 .0527 FAU .03817
FDE .7897 FRA 1.0782 FC3-1.8157 BSP 5760
BDE .6424 BRA 1.0220 BC3 .4920 FSP -600

MID-COURSE EXECUTION ACCURACY

SGT 1758.9 SGR 438.6 SCS 214.2
RRT .5175 RRF -.5427 RTF -.9005
SGB 1812.7 R23 -.0641 R13 -.9027
SGI 1774.1 SGT 372.1 THA 7.69

ORBIT DETERMINATION ACCURACY

ST 876.5 SR 434.9 SS 792.8
CRT .8633 CRS .9188 CST .9919
LSA 1243.0 HSA 201.7 SSA 17.0
EL1 957.6 EL2 200.9 ALF 24.33

LAUNCH DATE JAN 4 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 280.827

RL 147.09 LAL -.00 LOL 103.46 VL 26.671 GAL 3.22 AZL 87.86 HCA 119.81 SMA 121.40 ECC .21860 INC 2.1385 V1 30.288  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.868 GAP -11.01 AZP 91.06 TAL 168.34 TAP 288.15 RCA 94.87 APO 147.94 V2 35.013  
 RC 47.558 GL 14.06 GP 8.67 ZAL 68.67 ZAP 12.51 ETS 319.12 ZAE 157.31 ETE 4.32 ZAC 124.28 ETC 158.65 CLP -9.06

PLANETOCENTRIC CONIC

C3 16.726 VHL 4.090 DLA 26.55 RAL 28.00 RAD 6567.7 VEL 11.752 PTH 2.07 VHP 7.453 DPA 18.80 RAP 29.33 ECC 1.2753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 48 9 3207.00 -26.00 111.23 255.17 78.36 2 41 36 2607.0 -27.34 102.82  
 90.00 22 48 43 3782.16 -13.02 148.23 250.58 64.63 23 51 45 3182.2 -16.33 141.12  
 100.00 3 40 0 2846.41 -28.66 85.24 255.71 81.11 4 27 26 2246.4 -29.59 76.56  
 100.00 23 39 33 3617.98 -10.61 134.93 249.33 61.89 24 39 51 3018.0 -14.29 128.07  
 110.00 5 40 5 2470.67 -34.05 57.38 256.38 86.78 6 21 16 1870.7 -34.12 48.13  
 110.00 23 55 57 3566.49 -5.96 128.22 246.52 56.28 24 55 23 2966.5 -10.35 121.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5522 TRA -.9947 TC3 .5871 BAU .1328 SGT 1804.4 SGR 448.0 SCS 237.0 ST 903.9 SR 438.3 SS 826.7  
 RDE -.3126 RRA -.0380 RC3 .0896 FAU .04125 RRT .5773 RRF -.8061 RTF -.9069 CRT .8762 CRS .9266 CST .9927  
 FDE .8343 FRA 1.1253 FC3-2.1351 BSP 5946 SGB 1859.2 R23 -.0742 R13 -.9095 LSA 1286.3 MSA 194.7 SSA 17.1  
 BDE .6345 BRA .9955 BC3 .5939 FSP -670 SGI 1825.6 SGI 361.9 THA 8.49 EL1 985.7 EL2 193.7 ALF 24.01

LAUNCH DATE JAN 4 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 287.528

RL 147.09 LAL -.00 LOL 103.46 VL 26.792 GAL 2.98 AZL 87.98 HCA 123.01 SMA 122.13 ECC .21071 INC 2.0200 V1 30.288  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.943 GAP -10.30 AZP 91.10 TAL 168.68 TAP 291.68 RCA 96.39 APO 147.86 V2 35.000  
 RC 48.883 GL 13.90 GP 9.51 ZAL 69.33 ZAP 14.51 ETS 322.21 ZAE 155.58 ETE 6.99 ZAC 125.06 ETC 157.62 CLP -11.00

PLANETOCENTRIC CONIC

C3 15.408 VHL 3.925 DLA 26.15 RAL 27.36 RAD 6567.6 VEL 11.696 PTH 2.06 VHP 7.064 DPA 20.06 RAP 30.19 ECC 1.2536  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 54 90 3157.44 -28.63 107.74 253.15 80.00 2 47 27 2557.4 -27.74 99.25  
 90.00 22 36 59 3794.41 -12.67 148.95 248.41 64.46 23 40 13 3194.4 -16.00 141.87  
 100.00 3 44 10 2804.96 -29.06 82.23 253.57 82.65 4 30 55 2205.0 -29.77 73.49  
 100.00 23 30 20 3822.12 -10.48 135.17 247.28 61.84 24 30 42 3022.1 -14.16 128.32  
 110.00 5 41 45 2437.02 -34.15 54.76 254.04 88.33 6 22 22 1837.0 -34.00 45.51  
 110.00 23 49 14 3562.83 -6.09 128.03 244.63 56.30 24 48 37 2962.8 -10.48 121.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5478 TRA -.9683 TC3 .8911 BAU .1451 SGT 1847.4 SGR 463.4 SCS 262.3 ST 928.8 SR 443.4 SS 860.6  
 RDE -.3033 RRA -.0527 RC3 .1384 FAU .04465 RRT .6388 RRF -.6712 RTF -.9128 CRT .8890 CRS .9342 CST .9934  
 FDE .8807 FRA 1.1807 FC3-2.5090 BSP 6103 SGB 1904.6 R23 -.0860 R13 -.9159 LSA 1328.3 MSA 187.4 SSA 17.3  
 BDE .6261 BRA .9687 BC3 .7045 FSP -748 SGI 1871.8 SGI 351.9 THA 9.44 EL1 1012.2 EL2 186.3 ALF 23.85

LAUNCH DATE JAN 4 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 294.216

RL 147.09 LAL -.00 LOL 103.46 VL 26.902 GAL 2.77 AZL 88.11 HCA 126.20 SMA 122.80 ECC .20346 INC 1.8927 V1 30.288  
 RP 108.31 LAP 1.53 LOP 229.68 VP 37.010 GAP -9.61 AZP 91.12 TAL 169.04 TAP 295.24 RCA 97.81 APO 147.78 V2 34.987  
 RC 50.327 GL 13.61 GP 10.48 ZAL 70.01 ZAP 16.87 ETS 324.46 ZAE 154.03 ETE 9.62 ZAC 125.68 ETC 156.50 CLP -13.03

PLANETOCENTRIC CONIC

C3 14.230 VHL 3.772 DLA 25.82 RAL 26.75 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 6.695 DPA 21.40 RAP 30.93 ECC 1.2342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 37 3101.68 -27.23 103.77 251.14 81.90 2 55 18 2501.7 -28.07 95.20  
 90.00 22 23 18 3814.70 -12.07 150.14 246.25 64.19 23 26 53 3214.7 -15.44 143.09  
 100.00 3 50 14 2757.90 -29.42 78.77 251.44 84.43 4 36 12 2157.9 -29.88 70.00  
 100.00 23 19 21 3633.70 -10.10 135.83 245.23 61.72 24 19 55 3033.7 -13.81 128.99  
 110.00 5 44 50 2399.36 -34.18 51.82 251.71 90.07 6 24 49 1799.4 -33.80 42.59  
 110.00 23 41 15 3565.00 -6.01 128.14 242.75 56.29 24 40 40 2965.0 -10.40 121.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5400 TRA -.9416 TC3 .8015 BAU .1570 SGT 1885.3 SGR 486.5 SCS 290.5 ST 948.4 SR 450.3 SS 892.2  
 RDE -.2958 RRA -.0687 RC3 .1957 FAU .04843 RRT .6989 RRF -.7349 RTF -.9180 CRT .9011 CRS .9414 CST .9941  
 FDE .9284 FRA 1.2428 FC3-2.9465 BSP 6264 SGB 1947.0 R23 -.0998 R13 -.9218 LSA 1365.8 MSA 180.1 SSA 17.5  
 BDE .6156 BRA .9441 BC3 .8251 FSP -835 SGI 1916.7 SGI 342.3 THA 10.56 EL1 1034.5 EL2 179.0 ALF 23.92

LAUNCH DATE JAN 4 1969

FLIGHT TIME 116.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 300.888

RL 147.09 LAL -.00 LOL 103.46 VL 27.003 GAL 2.57 AZL 88.25 HCA 129.40 SMA 123.42 ECC .19682 INC 1.7546 V1 30.288  
 RP 108.36 LAP 1.38 LOP 232.88 VP 37.071 GAP -8.95 AZP 91.11 TAL 169.42 TAP 298.82 RCA 99.13 APO 147.71 V2 34.974  
 RC 51.881 GL 13.15 GP 11.61 ZAL 70.70 ZAP 19.00 ETS 326.07 ZAE 152.65 ETE 12.33 ZAC 126.12 ETC 155.27 CLP -15.15

PLANETOCENTRIC CONIC

C3 13.178 VHL 3.630 DLA 24.93 RAL 26.17 RAD 6567.5 VEL 11.600 PTH 2.03 VHP 6.346 DPA 22.84 RAP 31.51 ECC 1.2168  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 21 3040.20 -27.74 99.35 249.16 84.06 3 5 2 2440.2 -28.27 90.72  
 90.00 22 7 57 3842.51 -11.24 151.77 244.14 63.84 23 11 59 3242.5 -14.66 144.77  
 100.00 3 58 16 2705.22 -29.70 74.88 249.34 86.46 4 43 21 2105.2 -29.88 66.08  
 100.00 23 6 44 3652.73 -9.49 136.90 243.22 61.52 24 7 36 3052.7 -13.22 130.10  
 110.00 5 49 28 2357.31 -34.13 48.53 249.41 92.01 6 28 45 1757.3 -33.48 39.35  
 110.00 23 32 1 3573.40 -5.89 128.59 240.91 56.24 24 31 34 2973.4 -10.09 122.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5263 TRA -.8130 TC3 .9252 BAU .1698 SGT 1914.8 SGR 519.6 SCS 321.8 ST 958.0 SR 458.9 SS 918.9  
 RDE -.2893 RRA -.0864 RC3 .2716 FAU .05273 RRT .7546 RRF -.7942 RTF -.9234 CRT .9121 CRS .9479 CST .9947  
 FDE .9879 FRA 1.3110 FC3-3.4847 BSP 6465 SGB 1984.1 R23 -.1130 R13 -.9282 LSA 1393.8 MSA 172.8 SSA 17.6  
 BDE .6006 BRA .9170 BC3 .9642 FSP -937 SGI 1955.8 SGI 333.8 THA 11.92 EL1 1048.3 EL2 172.0 ALF 24.29

LAUNCH DATE JAN 4 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 2 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -0.00 LOL 103.46 VL 27.093 GAL 2.38 AZL 88.40 HCA 132.59 SMA 123.99 ECC .19076 INC 1.6034 V1 30.288  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.126 GAP -8.31 AZP 91.09 TAL 169.82 TAP 302.41 RCA 100.34 APO 147.64 V2 34.961  
 RC 53.536 GL 12.51 GP 12.91 ZAL 71.41 ZAP 21.53 ETS 327.20 ZAE 151.43 ETE 15.20 ZAC 126.34 ETC 153.94 CLP -17.37

DISTANCE 307.543

PLANETOCENTRIC CONIC

C3 12.232 VHL 3.497 DLA 24.05 RAL 25.66 RAD 6567.5 VEL 11.559 PTH 2.02 VHP 6.017 DPA 24.42 RAP 31.91 ECC 1.2013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 27 1 2973.30 -28.11 94.49 247.19 86.47 3 16 35 2373.3 -28.31 85.83  
 90.00 21 51 10 3877.61 -10.18 153.80 242.11 63.43 22 55 47 3277.6 -13.66 146.86  
 100.00 4 8 17 2646.84 -29.87 70.55 247.28 88.73 4 52 23 2046.8 -29.72 61.75  
 100.00 22 52 35 3679.30 -8.62 138.40 241.29 61.27 23 53 55 3079.3 -12.39 131.64  
 110.00 5 55 48 2310.44 -33.96 44.88 247.16 94.16 6 34 19 1710.4 -33.01 35.77  
 110.00 23 21 33 3588.47 -5.12 129.38 239.15 56.16 24 21 22 2988.5 -9.53 123.07

DIFFERENTIAL CORRECTIONS

TDE -.5108 TRA -.8866 TC3 1.0436 BAU .1809  
 RDE -.2847 RRA -.1069 RC3 .3663 FAU .05735  
 FDE 1.0063 FRA 1.3896 FC3-4.0588 BSP 6590  
 BOE .5848 BRA .8930 BC3 1.1060 FSP -1044

MID-COURSE EXECUTION ACCURACY

SGT 1939.9 SGR 565.7 SG3 356.2  
 RRT .8041 RRF -.8467 RTF -.9275  
 SGB 2020.6 R23 -.1329 R13 -.9335  
 SGI 1994.0 SG2 327.2 THA 13.57

ORBIT DETERMINATION ACCURACY

ST 963.6 SR 470.0 SS 942.1  
 CRT .9228 CRS .9540 CST .9955  
 LSA 1417.5 MSA 165.3 SSA 17.9  
 EL1 1059.4 EL2 164.7 ALF 24.88

LAUNCH DATE JAN 4 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 4 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -0.00 LOL 103.46 VL 27.178 GAL 2.20 AZL 88.56 HCA 135.78 SMA 124.51 ECC .18524 INC 1.4360 V1 30.288  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.175 GAP -7.70 AZP 91.03 TAL 170.22 TAP 306.00 RCA 101.45 APO 147.58 V2 34.948  
 RC 55.282 GL 11.83 GP 14.44 ZAL 72.12 ZAP 24.26 ETS 327.95 ZAE 150.34 ETE 18.34 ZAC 126.31 ETC 152.51 CLP -19.71

DISTANCE 314.180

PLANETOCENTRIC CONIC

C3 11.389 VHL 3.375 DLA 22.95 RAL 25.23 RAD 6567.4 VEL 11.523 PTH 2.01 VHP 5.709 DPA 26.14 RAP 32.10 ECC 1.1874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 41 40 2900.80 -28.30 89.19 245.27 89.12 3 30 1 2300.8 -28.13 80.53  
 90.00 21 33 5 3920.15 -8.87 156.24 240.20 63.00 22 38 25 3320.1 -12.42 149.36  
 100.00 4 20 23 2582.46 -29.87 65.77 245.26 91.25 5 3 26 1982.5 -29.38 57.00  
 100.00 22 37 3 3713.72 -7.49 140.33 239.46 60.98 23 38 56 3113.7 -11.30 133.62  
 110.00 6 4 3 2258.17 -33.63 40.84 244.96 96.53 6 41 41 1658.2 -32.36 31.83  
 110.00 23 9 53 3610.77 -4.28 130.55 237.48 56.05 24 10 3 3010.8 -8.70 124.26

DIFFERENTIAL CORRECTIONS

TDE -.4902 TRA -.8807 TC3 1.1627 BAU .1919  
 RDE -.2814 RRA -.1308 RC3 .4857 FAU .06238  
 FDE 1.0355 FRA 1.4789 FC3-4.7422 BSP 6707  
 BOE .5653 BRA .8706 BC3 1.2601 FSP -1162

MID-COURSE EXECUTION ACCURACY

SGT 1956.3 SGR 627.6 SG3 393.8  
 RRT .8451 RRF -.8904 RTF -.9312  
 SGB 2054.5 R23 -.1519 R13 -.9389  
 SGI 2028.9 SG2 323.5 THA 15.58

ORBIT DETERMINATION ACCURACY

ST 959.2 SR 483.3 SS 957.6  
 CRT .9326 CRS .9592 CST .9962  
 LSA 1430.2 MSA 157.7 SSA 18.2  
 EL1 1062.4 EL2 157.5 ALF 25.78

LAUNCH DATE JAN 4 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 6 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -0.00 LOL 103.46 VL 27.253 GAL 2.05 AZL 88.75 HCA 138.97 SMA 125.00 ECC .18025 INC 1.2483 V1 30.288  
 RP 108.47 LAP .82 LOP 242.44 VP 37.218 GAP -7.10 AZP 90.94 TAL 170.62 TAP 309.59 RCA 102.47 APO 147.53 V2 34.936  
 RC 57.109 GL 10.48 GP 16.23 ZAL 72.81 ZAP 27.24 ETS 328.41 ZAE 149.33 ETE 21.84 ZAC 125.98 ETC 150.98 CLP -22.19

DISTANCE 320.798

PLANETOCENTRIC CONIC

C3 10.635 VHL 3.261 DLA 21.60 RAL 24.91 RAD 6567.4 VEL 11.490 PTH 2.00 VHP 5.424 DPA 28.06 RAP 32.03 ECC 1.1750  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 58 26 2822.15 -28.25 83.44 243.39 92.00 3 45 29 2222.2 -27.68 74.82  
 90.00 21 13 47 3970.69 -7.30 159.12 238.46 62.56 22 19 58 3370.7 -10.92 152.31  
 100.00 4 34 47 2511.51 -29.65 60.51 243.31 94.01 5 16 38 1911.5 -28.78 51.81  
 100.00 22 20 8 3756.56 -6.07 142.71 237.79 60.67 23 22 45 3156.6 -9.93 136.06  
 110.00 6 14 26 2199.75 -33.09 36.36 242.85 99.13 6 51 6 1599.7 -31.47 27.51  
 110.00 22 56 59 3641.09 -3.12 132.14 235.96 55.94 23 57 40 3041.1 -7.57 125.88

DIFFERENTIAL CORRECTIONS

TDE -.4651 TRA -.8353 TC3 1.2756 BAU .2026  
 RDE -.2790 RRA -.1594 RC3 .6357 FAU .06775  
 FDE 1.0516 FRA 1.5799 FC3-5.5146 BSP 6808  
 BOE .5424 BRA .8504 BC3 1.4252 FSP -1290

MID-COURSE EXECUTION ACCURACY

SGT 1962.5 SGR 709.2 SG3 434.3  
 RRT .8773 RRF -.9247 RTF -.9342  
 SGB 2086.7 R23 -.1711 R13 -.9442  
 SGI 2061.4 SG2 324.1 THA 18.05

ORBIT DETERMINATION ACCURACY

ST 944.8 SR 498.7 SS 963.6  
 CRT .9418 CRS .9637 CST .9969  
 LSA 1430.7 MSA 149.7 SSA 18.6  
 EL1 1057.7 EL2 149.7 ALF 27.02

LAUNCH DATE JAN 4 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 8 1969

MELIOCENTRIC CONIC

RL 147.09 LAL -0.00 LOL 103.46 VL 27.321 GAL 1.90 AZL 88.96 HCA 142.15 SMA 125.43 ECC .17574 INC 1.0353 V1 30.288  
 RP 108.51 LAP .84 LOP 245.62 VP 37.257 GAP -6.53 AZP 90.82 TAL 171.02 TAP 313.17 RCA 103.39 APO 147.48 V2 34.923  
 RC 59.010 GL 8.99 GP 18.34 ZAL 73.49 ZAP 30.50 ETS 328.62 ZAE 148.35 ETE 25.80 ZAC 125.30 ETC 149.38 CLP -24.80

DISTANCE 327.396

PLANETOCENTRIC CONIC

C3 9.986 VHL 3.157 DLA 19.94 RAL 24.74 RAD 6567.4 VEL 11.461 PTH 1.99 VHP 5.166 DPA 30.22 RAP 31.64 ECC 1.1640  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 17 39 2736.37 -27.89 77.19 241.60 95.11 4 3 16 2136.4 -26.89 68.67  
 90.00 20 53 14 4030.31 -5.41 162.49 236.92 62.16 22 0 24 3430.3 -9.10 155.75  
 100.00 4 51.43 2433.05 -29.13 54.73 241.45 97.01 5 32 16 1833.1 -27.86 46.16  
 100.00 22 1 51 3808.86 -4.32 145.61 236.32 60.39 23 5 20 3208.9 -8.23 139.00  
 110.00 6 27 15 2134.16 -32.27 31.42 240.84 101.95 7 2 49 1534.2 -30.29 22.77  
 110.00 22 42 49 3680.51 -1.82 134.20 234.64 55.85 23 44 9 3080.5 -6.09 127.96

DIFFERENTIAL CORRECTIONS

TDE -.4325 TRA -.8081 TC3 1.3867 BAU .2150  
 RDE -.2763 RRA -.1937 RC3 .8260 FAU .07350  
 FDE 1.0435 FRA 1.6896 FC3-6.3850 BSP 6959  
 BOE .5132 BRA .8310 BC3 1.6141 FSP -1433

MID-COURSE EXECUTION ACCURACY

SGT 1953.6 SGR 814.4 SG3 477.0  
 RRT .9011 RRF -.9501 RTF -.9369  
 SGB 2116.6 R23 -.1867 R13 -.9501  
 SGI 2090.7 SG2 330.0 THA 21.14

ORBIT DETERMINATION ACCURACY

ST 914.3 SR 514.0 SS 953.0  
 CRT .9501 CRS .9669 CST .9978  
 LSA 1409.9 MSA 141.4 SSA 19.2  
 EL1 1039.4 EL2 141.1 ALF 28.69

LAUNCH DATE JAN 4 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 333.973

RL 147.09 LAL -.00 LOL 103.46 VL 27.382 GAL 1.77 AZL 89.21 HCA 145.33 SMA 125.83 ECC .17170 INC .7894 V1 30.288  
 RP 108.55 LAP .45 LOP 248.80 VP 37.290 GAP -5.97 AZP 90.65 TAL 171.41 TAP 316.74 RCA 104.23 APO 147.44 V2 34.911  
 RC 60.976 GL 7.07 GP 20.85 ZAL 74.14 ZAP 34.07 ETS 328.66 ZAE 147.28 ETE 30.31 ZAC 124.21 ETC 147.70 CLP -27.57

PLANETOCENTRIC CONIC

C3 9.378 VHL 3.062 DLA 17.88 RAL 24.76 RAD 6567.3 VEL 11.435 PTH 1.98 VHP 4.937 DPA 32.67 RAP 30.87 ECC 1.1543  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 39 45 2641.92 -27.13 70.39 239.94 98.44 4 23 47 2041.9 -25.68 62.02  
 90.00 20 31 17 4100.72 -3.16 166.44 235.66 61.85 21 39 38 3500.7 -6.90 159.76  
 100.00 5 11 38 2345.65 -28.24 48.39 239.74 100.23 5 50 44 1745.6 -26.54 40.00  
 100.00 21 42 5 3872.23 -2.16 149.10 235.12 60.18 22 46 38 3272.2 -6.13 142.54  
 110.00 6 42 56 2059.98 -31.09 25.96 239.00 104.98 7 17 16 1460.0 -28.72 17.56  
 110.00 22 27 17 3730.66 .30 136.81 233.57 55.82 23 29 27 3130.7 -4.19 130.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3937 TRA -.7836 TC3 1.4716 BAU .2275 SGT 1932.4 SGR 948.6 SCS 520.5 ST 873.3 SR 528.8 SS 925.9  
 RDE -.2723 RRA -2.3669 RC3 1.0623 FAU .07913 RRT .9172 RRF -.9681 RTF -.9383 CRT .9582 CRS .9689 CST .9987  
 FDE 1.0069 FRA 1.8144 FC3-7.3065 BSP 7051 SGB 2152.7 R23 -.1987 R13 -.9559 LSA 1371.7 MSA 132.6 SSA 20.1  
 BDE .4804 BRA .8187 BC3 1.8150 FSP -1572 SGI 2125.1 SGI 343.7 THA 24.94 EL1 1012.5 EL2 130.5 ALF 30.69

LAUNCH DATE JAN 4 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 340.529

RL 147.09 LAL -.00 LOL 103.46 VL 27.437 GAL 1.65 AZL 89.50 HCA 148.51 SMA 126.19 ECC .16808 INC .5008 V1 30.288  
 RP 108.58 LAP .26 LOP 251.98 VP 37.319 GAP -5.43 AZP 90.43 TAL 171.77 TAP 320.28 RCA 104.98 APO 147.40 V2 34.900  
 RC 63.000 GL 4.82 GP 23.84 ZAL 74.77 ZAP 38.00 ETS 328.57 ZAE 145.99 ETE 35.42 ZAC 122.62 ETC 146.00 CLP -30.52

PLANETOCENTRIC CONIC

C3 8.869 VHL 2.978 DLA 15.34 RAL 25.01 RAD 6567.3 VEL 11.413 PTH 1.98 VHP 4.743 DPA 35.48 RAP 29.62 ECC 1.1460  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 5 25 2536.53 -25.86 62.94 238.48 101.97 4 47 41 1936.5 -23.95 54.79  
 90.00 20 7 38 4184.82 -.46 171.12 234.77 61.69 21 17 23 3584.6 -4.24 164.48  
 100.00 5 35 8 2247.17 -26.85 41.40 238.23 103.66 6 12 35 1647.2 -24.71 33.26  
 100.00 21 20 36 3949.21 .43 153.32 234.27 60.11 22 26 25 3349.2 -3.55 146.79  
 110.00 7 2 3 1975.22 -29.44 19.91 237.39 108.21 7 34 59 1375.2 -26.67 11.82  
 110.00 22 10 10 3793.93 2.72 140.12 232.85 55.91 23 13 24 3193.9 -1.77 133.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3529 TRA -.7591 TC3 1.5319 BAU .2426 SGT 1893.9 SGR 1118.0 SCS 562.7 ST 817.3 SR 538.1 SS 875.0  
 RDE -.2643 RRA -.2915 RC3 1.3568 FAU .08449 RRT .9273 RRF -.9802 RTF -.9387 CRT .9666 CRS .9691 CST .9993  
 FDE .9267 FRA 1.9483 FC3-8.2468 BSP 7185 SGB 2199.2 R23 -.2022 R13 -.9624 LSA 1306.7 MSA 123.7 SSA 21.4  
 BDE .4409 BRA .8132 BC3 2.0463 FSP -1710 SGI 2168.6 SGI 365.6 THA 29.62 EL1 971.7 EL2 116.1 ALF 33.00

LAUNCH DATE JAN 4 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 347.062

RL 147.09 LAL -.00 LOL 103.46 VL 27.486 GAL 1.55 AZL 89.84 HCA 151.69 SMA 126.51 ECC .16488 INC .1532 V1 30.288  
 RP 108.62 LAP .07 LOP 255.16 VP 37.345 GAP -4.91 AZP 90.14 TAL 172.11 TAP 323.80 RCA 105.65 APO 147.37 V2 34.889  
 RC 65.076 GL 1.47 GP 27.40 ZAL 75.38 ZAP 42.35 ETS 328.42 ZAE 144.30 ETE 41.11 ZAC 120.47 ETC 144.32 CLP -33.65

PLANETOCENTRIC CONIC

C3 8.435 VHL 2.908 DLA 12.17 RAL 25.56 RAD 6567.3 VEL 11.395 PTH 1.97 VHP 4.593 DPA 38.72 RAP 27.75 ECC 1.1392  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 35 38 2416.94 -23.91 54.72 237.34 105.64 5 15 53 1816.9 -21.53 46.86  
 90.00 19 41 48 4286.05 2.81 176.78 234.37 61.81 20 53 14 3686.0 -.98 170.15  
 100.00 8 3 9 2134.56 -24.81 33.66 237.04 107.24 6 38 44 1534.6 -22.21 25.82  
 100.00 20 56 55 4043.67 3.63 158.51 233.92 60.31 22 4 19 3443.7 -.35 151.98  
 110.00 7 25 26 1877.09 -27.16 13.19 236.12 111.60 7 56 43 1277.1 -23.99 5.46  
 110.00 21 51 8 3873.90 5.76 144.31 232.60 56.25 22 55 42 3273.9 1.28 138.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3033 TRA -.7323 TC3 1.5555 BAU .2618 SGT 1831.5 SGR 1328.0 SCS 598.9 ST 744.3 SR 535.4 SS 795.6  
 RDE -.2476 RRA -.3610 RC3 1.7161 FAU .08892 RRT .9327 RRF -.9880 RTF -.9382 CRT .9764 CRS .9661 CST .9981  
 FDE .7877 FRA 2.0817 FC3-9.1045 BSP 7392 SGB 2262.3 R23 -.1940 R13 -.9699 LSA 1208.0 MSA 117.3 SSA 22.6  
 BDE .3915 BRA .8165 BC3 2.3161 FSP -1836 SGI 2227.7 SGI 393.8 THA 35.34 EL1 912.0 EL2 94.4 ALF 35.52

LAUNCH DATE JAN 4 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 353.572

RL 147.09 LAL -.00 LOL 103.46 VL 27.528 GAL 1.46 AZL 90.27 HCA 154.86 SMA 126.80 ECC .16205 INC .2694 V1 30.288  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.366 GAP -4.41 AZP 89.76 TAL 172.41 TAP 327.28 RCA 106.25 APO 147.34 V2 34.878  
 RC 67.198 GL -2.60 GP 31.67 ZAL 75.98 ZAP 47.15 ETS 328.29 ZAE 141.97 ETE 47.29 ZAC 117.66 ETC 142.71 CLP -36.96

PLANETOCENTRIC CONIC

C3 8.162 VHL 2.857 DLA 8.16 RAL 26.47 RAD 6567.3 VEL 11.382 PTH 1.97 VHP 4.501 DPA 42.48 RAP 25.07 ECC 1.1343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 11 48 2278.51 -21.07 45.57 236.68 109.37 5 49 46 1678.5 -18.23 38.04  
 90.00 19 12 54 4411.26 6.80 183.82 234.69 62.45 20 26 25 3811.3 3.06 177.14  
 100.00 6 37 5 2003.44 -21.88 25.02 236.36 110.89 7 10 28 1403.4 -18.85 17.54  
 100.00 20 30 18 4161.56 7.57 165.04 234.28 61.00 21 39 40 3561.6 3.64 158.46  
 110.00 7 54 19 1761.73 -24.05 5.67 235.36 115.06 8 23 41 1161.7 -20.47 358.35  
 110.00 21 29 33 3976.04 9.59 149.74 233.05 57.03 22 35 49 3376.0 5.18 143.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2502 TRA -.7083 TC3 1.5241 BAU .2867 SGT 1748.7 SGR 1587.7 SCS 624.4 ST 660.9 SR 513.7 SS 693.6  
 RDE -.2158 RRA -.4521 RC3 2.1396 FAU .09164 RRT .9338 RRF -.9929 RTF -.9357 CRT .9895 CRS .9579 CST .9874  
 FDE .9794 FRA 2.2090 FC3-9.7194 BSP 7680 SGB 2361.9 R23 -.1753 R13 -.9776 LSA 1079.9 MSA 122.7 SSA 22.2  
 BDE .3303 BRA .8386 BC3 2.6270 FSP -1927 SGI 2322.9 SGI 427.7 THA 42.04 EL1 835.0 EL2 58.7 ALF 37.78



LAUNCH DATE JAN 4 1969 FLIGHT TIME 134.00 ARRIVAL DATE MAY 18 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.566 GAL 1.38 AZL 90.81 HCA 158.03 SMA 127.05 ECC .15950 INC .8078 V1 30.288  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.384 GAP -3.92 AZP 89.25 TAL 172.68 TAP 330.72 RCA 106.77 APO 147.32 V2 34.867  
 RC 89.380 GL -7.88 GP 36.76 ZAL 76.62 ZAP 52.44 ETS 328.30 ZAE 138.74 ETE 53.72 ZAC 114.10 ETC 141.28 CLP -40.45

Distance 360.059

Planetary Centric Conic: C3 8.050 VHL 2.837 DLA 3.04 RAL 27.86 RAD 6567.3 VEL 11.377 PTH 1.96 VHP 4.489 DPA 46.81 RAP 21.29 ECC 1.1325  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 56 20 2114.52 -17.02 35.24 236.83 112.98 6 31 34 1514.5 -13.76 28.08  
 90.00 18 39 27 4570.09 11.69 192.94 236.09 64.02 19 55 38 3970.1 8.10 186.09  
 100.00 7 19 5 1847.58 -17.78 15.26 236.48 114.43 7 49 53 1247.6 -14.34 8.16  
 100.00 19 59 23 4312.27 12.43 173.59 235.70 62.59 21 11 15 3712.3 8.66 166.83  
 110.00 8 30 35 1623.80 -19.81 357.21 235.42 118.44 8 57 39 1025.8 -15.86 350.32  
 110.00 21 4 22 4108.81 14.40 157.01 234.56 58.66 22 12 51 3508.8 10.15 150.49

Differential Corrections: TDE -.1948 TRA -.8773 TC3 1.4208 BAU .3188 SGT 1637.3 SGR 1901.3 SCS 630.2 ST 569.4 SR 472.0 SS 593.1  
 RDE -.1568 RRA -.5723 RC3 2.5993 FAU .09138 RRT .9312 RRF -.9958 RTF -.9309 CRT .9984 CRS .9440 CST .9334  
 FDE .2942 FRA 2.3060 FC3 -9.8276 BSP 8123 SGB 2509.2 R23 -.1465 R13 -.9851 LSA 933.7 MSA 163.1 SSA 17.2  
 BDE .2501 BRA .8667 BC3 2.9822 FSP -1959 SGI 2466.6 SGT 460.1 THA 49.58 EL1 739.3 EL2 20.6 ALF 39.65

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 136.00 ARRIVAL DATE MAY 20 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.599 GAL 1.32 AZL 91.52 HCA 161.20 SMA 127.27 ECC .15744 INC 1.5176 V1 30.288  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.399 GAP -3.45 AZP 88.56 TAL 172.90 TAP 334.10 RCA 107.23 APO 147.30 V2 34.858  
 RC 71.560 GL -14.74 GP 42.81 ZAL 77.39 ZAP 58.19 ETS 328.57 ZAE 134.35 ETE 60.08 ZAC 109.74 ETC 140.15 CLP -44.08

Distance 366.922

Planetary Centric Conic: C3 8.251 VHL 2.872 DLA -3.54 RAL 29.88 RAD 6567.3 VEL 11.386 PTH 1.97 VHP 4.593 DPA 51.75 RAP 15.92 ECC 1.1358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 53 12 1915.08 -11.36 23.34 238.55 116.11 7 25 7 1315.1 -7.75 16.51  
 90.00 17 58 40 4778.72 17.55 205.44 239.24 67.42 19 18 19 4178.7 14.34 198.24  
 100.00 8 12 54 1658.00 -12.11 4.05 237.97 117.54 8 40 32 1058.0 -8.33 357.30  
 100.00 19 21 40 4511.02 18.33 185.40 238.89 65.96 20 36 51 3911.0 14.93 178.26  
 110.00 9 17 21 1456.24 -14.10 347.58 236.81 121.47 9 41 37 856.2 -9.83 341.08  
 110.00 20 33 42 4265.54 20.38 167.22 237.82 61.95 21 45 8 3685.5 16.47 160.28

Differential Corrections: TDE -.1435 TRA -.6466 TC3 1.2127 BAU .3578 SGT 1495.7 SGR 2269.4 SCS 606.4 ST 482.3 SR 456.3 SS 563.7  
 RDE -.0540 RRA -.7345 RC3 3.0069 FAU .08658 RRT .9224 RRF -.9976 RTF -.9208 CRT .9206 CRS .9504 CST .7550  
 FDE -.0554 FRA 2.3474 FC3 -9.0850 BSP 8728 SGB 2718.0 R23 -.1143 R13 -.9910 LSA 832.4 MSA 256.2 SSA 10.6  
 BDE .1533 BRA .9785 BC3 3.2423 FSP -1895 SGI 2673.4 SGT 490.3 THA 57.47 EL1 650.7 EL2 132.1 ALF 43.27

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 138.00 ARRIVAL DATE MAY 22 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.627 GAL 1.27 AZL 92.50 HCA 164.36 SMA 127.46 ECC .15561 INC 2.5011 V1 30.288  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.411 GAP -2.99 AZP 87.59 TAL 173.07 TAP 337.43 RCA 107.62 APO 147.29 V2 34.848  
 RC 73.792 GL -23.59 GP 49.92 ZAL 78.44 ZAP 64.34 ETS 329.27 ZAE 128.58 ETE 66.04 ZAC 104.55 ETC 139.44 CLP -47.74

Distance 372.958

Planetary Centric Conic: C3 9.076 VHL 3.013 DLA -11.93 RAL 32.73 RAD 6567.3 VEL 11.422 PTH 1.98 VHP 4.880 DPA 57.24 RAP 8.09 ECC 1.1494  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 10 25 1663.43 -3.50 9.03 242.34 118.12 8 38 8 1063.4 .29 2.39  
 90.00 17 4 14 5066.58 24.01 224.05 245.41 74.52 18 28 40 4466.6 21.66 216.17  
 100.00 9 25 41 1420.59 -4.34 350.71 241.88 119.61 9 49 21 820.6 -3.36 344.18  
 100.00 18 31 39 4784.85 24.93 203.02 245.11 72.94 19 51 23 4184.7 22.36 195.17  
 110.00 10 20 12 1249.84 -6.51 336.41 240.54 123.63 10 41 2 649.8 -2.05 330.17  
 110.00 19 53 37 4528.17 27.34 182.61 244.18 68.63 21 9 5 3928.2 24.19 174.86

Differential Corrections: TDE -.1027 TRA -.6101 TC3 .9106 BAU .4030 SGT 1321.2 SGR 2686.5 SCS 545.1 ST 406.2 SR 606.1 SS 664.7  
 RDE .1204 RRA -.9572 RC3 3.1936 FAU .07627 RRT .9065 RRF -.9986 RTF -.9041 CRT .6291 CRS .9870 CST .4965  
 FDE -.4323 FRA 2.2954 FC3 -7.2756 BSP 9563 SGB 2993.8 R23 -.0820 R13 -.9953 LSA 929.1 MSA 333.0 SSA 6.0  
 BDE .1582 BRA 1.1351 BC3 3.3209 FSP -1715 SGI 2950.4 SGT 507.8 THA 65.19 EL1 671.7 EL2 284.9 ALF 61.58

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 140.00 ARRIVAL DATE MAY 24 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.651 GAL 1.24 AZL 93.97 HCA 167.51 SMA 127.62 ECC .15408 INC 3.9669 V1 30.288  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.421 GAP -2.55 AZP 86.13 TAL 173.19 TAP 340.70 RCA 107.96 APO 147.28 V2 34.839  
 RC 76.053 GL -34.60 GP 58.16 ZAL 79.96 ZAP 70.67 ETS 330.51 ZAE 121.29 ETE 71.28 ZAC 98.61 ETC 139.27 CLP -51.15

Distance 379.365

Planetary Centric Conic: C3 11.345 VHL 3.368 DLA -22.27 RAL 36.72 RAD 6567.4 VEL 11.521 PTH 2.01 VHP 5.484 DPA 62.98 RAP 356.17 ECC 1.1867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 11 31 1308.80 7.86 349.15 251.34 117.29 10 33 20 708.8 11.45 342.32  
 90.00 15 34 58 5510.56 28.31 255.64 256.46 89.82 17 6 47 4910.6 27.96 246.99  
 100.00 11 16 45 1098.22 6.54 332.97 250.63 119.23 11 35 4 498.2 10.39 326.29  
 100.00 17 12 22 5198.38 29.80 232.48 256.42 87.58 18 58 59 4596.4 29.15 223.74  
 110.00 11 51 43 988.65 3.44 322.74 248.72 124.03 12 8 11 388.6 7.89 316.48  
 110.00 18 53 55 4878.71 33.43 207.99 256.05 82.41 20 15 13 4278.7 32.02 199.04

Differential Corrections: TDE -.0891 TRA -.5862 TC3 .5428 BAU .4481 SGT 1113.4 SGR 3127.8 SCS 443.7 ST 347.2 SR 986.2 SS 825.0  
 RDE .4055 RRA -1.2738 RC3 2.9039 FAU .06014 RRT .8750 RRF -.9992 RTF -.8721 CRT .3369 CRS .9983 CST .2819  
 FDE -.7573 FRA 2.1180 FC3 -4.5890 BSP 10597 SGB 3320.1 R23 -.0545 R13 -.9977 LSA 1290.2 MSA 330.4 SSA 3.4  
 BDE .4152 BRA 1.3938 BC3 2.9542 FSP -1412 SGI 3280.0 SGT 514.1 THA 72.25 EL1 993.9 EL2 324.4 ALF 82.42

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 26 1969

Heliocentric Conic

DISTANCE 385.736

RL 147.09 LAL -.00 LOL 103.46 VL 27.671 GAL 1.22 AZL 96.40 HCA 170.65 SMA 127.75 ECC .15282 INC 6.3977 V1 30.288  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.428 GAP -2.12 AZP 83.69 TAL 173.24 TAP 343.88 RCA 108.23 APO 147.28 V2 34.831  
 RC 78.340 GL -47.20 GP 67.59 ZAL 82.09 ZAP 76.85 ETS 332.17 ZAE 112.39 ETE 75.42 ZAC 92.07 ETC 139.56 CLP -53.38

Planetocentric Conic

C3 17.854 VHL 4.202 DLA -33.94 RAL 42.15 RAD 6567.7 VEL 11.791 PTH 2.08 VHP 6.710 DPA 68.23 RAP 336.99 ECC 1.2905  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.46 10 48 1 1330.76 24.13 358.96 270.40 114.62 11 10 12 730.8 27.24 351.20  
 109.54 15 41 46 5683.33 24.14 267.14 270.40 114.61 17 16 29 5083.3 27.25 259.38  
 70.46 10 48 1 1330.76 24.13 358.96 270.40 114.62 11 10 12 730.8 27.24 351.20  
 109.54 15 41 46 5683.33 24.14 267.14 270.40 114.61 17 16 29 5083.3 27.25 259.38  
 110.00 15 13 28 5769.70 21.47 272.46 268.99 117.26 16 49 38 5169.7 24.95 265.04  
 110.00 16 15 29 5580.43 26.86 260.42 271.70 111.98 17 48 30 4980.4 29.60 252.30

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1260 TRA -.5144 TC3 .2244 BAU .4763 SGT 883.2 SGR 3552.8 SG3 314.3 ST 306.5 SR 1461.4 SS 899.5  
 RDE .8604 RRA-1.7638 RC3 2.0056 FAU .03973 RRT .8183 RRF -.9995 RTF -.8159 CRT .0430 CRS .9998 CST .0223  
 FDE -.9274 FRA 1.8204 FC3-1.9482 B3P 11748 SGB 3660.9 R23 -.0518 R13 -.9990 LSA 1716.0 MSA 306.6 SSA 2.0  
 BDE .8696 BRA 1.8373 BC3 2.0181 F3P -1017 SGT 3627.0 SG2 497.3 THA 78.28 EL1 1461.4 EL2 306.2 ALF 89.46

LAUNCH DATE JAN 4 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 28 1969

Heliocentric Conic

DISTANCE 392.043

RL 147.09 LAL -.00 LOL 103.46 VL 27.687 GAL 1.21 AZL 101.23 HCA 173.75 SMA 127.86 ECC .15183 INC11.2304 V1 30.288  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.433 GAP -1.71 AZP 78.83 TAL 173.19 TAP 346.95 RCA 108.45 APO 147.28 V2 34.824  
 RC 80.651 GL -59.39 GP 78.43 ZAL 84.71 ZAP 82.41 ETS 332.35 ZAE 101.49 ETE 76.53 ZAC 85.12 ETC 138.64 CLP -48.80

Planetocentric Conic

C3 39.239 VHL 6.264 DLA -45.03 RAL 48.79 RAD 6568.5 VEL 12.673 PTH 2.30 VHP 9.457 DPA 71.19 RAP 305.87 ECC 1.6458  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.39 9 52 10 1763.26 23.12 34.29 293.53 129.79 10 21 34 1163.3 28.08 27.75  
 128.61 17 30 33 5643.81 23.13 263.18 293.54 129.78 19 4 37 5043.8 28.09 256.63  
 53.39 9 52 10 1763.26 23.12 34.29 293.53 129.79 10 21 34 1163.3 28.08 27.75  
 128.61 17 30 33 5643.81 23.13 263.18 293.54 129.78 19 4 37 5043.8 28.09 256.63  
 53.39 9 52 10 1763.26 23.12 34.29 293.53 129.79 10 21 34 1163.3 28.08 27.75  
 128.61 17 30 33 5643.81 23.13 263.18 293.54 129.78 19 4 37 5043.8 28.09 256.63

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1865 TRA -.4977 TC3 .0915 BAU .4511 SGT 676.2 SGR 3875.9 SG3 183.9 ST 257.8 SR 1834.0 SS 826.6  
 RDE 1.8662 RRA-2.6280 RC3 .8551 FAU .01955 RRT .7831 RRF -.9997 RTF -.7850 CRT -.1328 CRS 1.0000 CST -.1310  
 FDE -.9179 FRA 1.4527 FC3 -.4314 B3P 13943 SGB 3934.4 R23 -.0114 R13 -.9997 LSA 2011.9 MSA 255.5 SSA 1.2  
 BDE 1.8766 BRA 2.6727 BC3 .8600 F3P -864 SGT 3912.3 SG2 416.6 THA 82.13 EL1 1834.3 EL2 255.5 ALF 91.09

LAUNCH DATE JAN 4 1969

FLIGHT TIME 146.00

ARRIVAL DATE MAY 30 1969

Heliocentric Conic

DISTANCE 398.198

RL 147.09 LAL -.00 LOL 103.46 VL 27.700 GAL 1.25 AZL 115.09 HCA 176.73 SMA 127.95 ECC .15116 INC25.0940 V1 30.288  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.436 GAP -1.35 AZP 64.94 TAL 172.93 TAP 349.65 RCA 108.61 APO 147.29 V2 34.816  
 RC 82.981 GL -65.94 GP 83.29 ZAL 87.34 ZAP 86.76 ETS 213.61 ZAE 85.92 ETE 317.57 ZAC 77.46 ETC 20.18 CLP 61.09

Planetocentric Conic

C3 185.434 VHL 12.862 DLA -51.47 RAL 52.06 RAD 6570.8 VEL 16.934 PTH 2.92 VHP 17.783 DPA 67.67 RAP 261.89 ECC 3.7226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.04 9 36 41 2154.07 9.26 57.59 314.58 140.87 10 12 35 1554.1 15.42 52.78  
 134.96 18 12 7 606.41 9.28 294.86 314.60 140.86 18 22 13 6.4 15.44 290.05  
 45.04 9 36 41 2154.07 9.26 57.59 314.58 140.87 10 12 35 1554.1 15.42 52.78  
 134.96 18 12 7 606.41 9.28 294.86 314.60 140.86 18 22 13 6.4 15.44 290.05  
 45.04 9 36 41 2154.07 9.26 57.59 314.58 140.87 10 12 35 1554.1 15.42 52.78  
 134.96 18 12 7 606.41 9.28 294.86 314.60 140.86 18 22 13 6.4 15.44 290.05

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.6312 TRA-2.7050 TC3 -.0463 BAU .1495 SGT 2524.4 SGR 3288.8 SG3 93.0 ST 1718.5 SR 1002.3 SS 762.6  
 RDE -.4252 RRA 4.5878 RC3 .0492 FAU-.00464 RRT -.8032 RRF .9494 RTF -.9495 CRT -.5095 CRS -.7437 CST .9542  
 FDE -.8881 FRA 1.3972 FC3 .0243 B3P 12218 SGB 4145.9 R23 .0948 R13 .9954 LSA 1965.6 MSA 822.2 SSA .6  
 BDE 3.6560 BRA 5.3259 BC3 .0676 F3P -283 SGT 3952.6 SG2 1251.4 THA 125.79 EL1 1813.9 EL2 817.1 ALF 158.99

LAUNCH DATE JAN 4 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 1 1969

Heliocentric Conic

DISTANCE 406.416

RL 147.09 LAL -.00 LOL 103.46 VL 27.709 GAL .91 AZL 7.24 HCA 181.57 SMA 128.02 ECC .14984 INC82.7501 V1 30.288  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.437 GAP -.47 AZP 172.75 TAL 174.84 TAP 356.41 RCA 108.84 APO 147.20 V2 34.810  
 RC 85.328 GL 45.73 GP -52.62 ZAL 89.36 ZAP 89.49 ETS 177.00 ZAE 53.09 ETE 71.45 ZAC 91.07 ETC 20.03 CLP 89.15

Planetocentric Conic

C31473.383 VHL 38.383 DLA 46.55 RAL 349.46 RAD 6573.2 VEL 39.933 PTH 3.56 VHP 46.354 DPA -48.39 RAP 163.48 ECC25.2482  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.38 17 46 16 4942.31 1.03 229.08 260.46 43.46 19 8 38 4342.3 -4.77 223.99  
 128.62 1 43 10 3497.32 1.05 116.54 260.44 43.46 2 41 28 2897.3 -4.76 111.44  
 51.38 17 46 16 4942.31 1.03 229.08 260.46 43.46 19 8 38 4342.3 -4.77 223.99  
 128.62 1 43 10 3497.32 1.05 116.54 260.44 43.46 2 41 28 2897.3 -4.76 111.44  
 51.38 17 46 16 4942.31 1.03 229.08 260.46 43.46 19 8 38 4342.3 -4.77 223.99  
 128.62 1 43 10 3497.32 1.05 116.54 260.44 43.46 2 41 28 2897.3 -4.76 111.44

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -6.4287 TRA 2.7614 TC3 -.1213 BAU 5.2056 SGT 1465.0 SGR 3210.7 SG3 63.1 ST 976.3 SR 2657.4 SS 2412.0  
 RD-17.7990 RRA .1383 RC3 -.2348 FAU-.09136 RRT .9024 RRF -.9999 RTF -.9087 CRT .9835 CRS 1.0000 CST .9844  
 FDE 4.0337 FRA -.0794 FC3 .0537 B3P 9419 SGB 3529.1 R23 -.0563 R13 -.9984 LSA 3715.4 MSA 168.8 SSA .4  
 BDE18.9234 BRA 2.7649 BC3 .2643 F3P -177 SGT 3480.8 SG2 582.2 THA 66.94 EL1 2826.1 EL2 166.2 ALF 70.06

LAUNCH DATE JAN 4 1969 FLIGHT TIME 150.00 ARRIVAL DATE JUN 3 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.716 GAL 1.13 AZL 62.87 HCA 183.77 SMA 128.06 ECC .14990 INC27.1347 V1 30.288  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.436 GAP -.35 AZP 117.08 TAL 173.55 TAP 357.32 RCA 108.87 APO 147.26 V2 34.804  
 RC 87.691 GL 65.90 GP -87.29 ZAL 87.77 ZAP 88.78 ETS 151.23 ZAE 87.42 ETE 50.65 ZAC 104.46 ETC 353.36 CLP 63.29

Distance 411.666

Planetocentric Conic: C3 191.686 VHL 13.845 DLA 62.90 RAL 327.97 RAD 6571.0 VEL 17.692 PTH 2.98 VHP 15.337 DPA -64.63 RAP 104.04 ECC 4.1547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.16 15 21 54 4897.54 -9.10 238.29 233.28 27.48 16 43 32 4297.5 -16.17 234.87  
 148.84 1 16 4 3199.61 -9.09 97.40 233.26 27.47 2 9 24 2599.6 -16.16 93.98  
 31.16 15 21 54 4897.54 -9.10 238.29 233.28 27.48 16 43 32 4297.5 -16.17 234.87  
 148.84 1 16 4 3199.61 -9.09 97.40 233.26 27.47 2 9 24 2599.6 -16.16 93.98  
 31.16 15 21 54 4897.54 -9.10 238.29 233.28 27.48 16 43 32 4297.5 -16.17 234.87  
 148.84 1 16 4 3199.61 -9.09 97.40 233.26 27.47 2 9 24 2599.6 -16.16 93.98

Differential Corrections: TDE-3.5287 TRA 2.0389 TC3 -.0725 BAU .2779 SGT 2365.7 SGR 3671.5 SG3 106.8  
 RDE-8.6075 RRA .9479 RC3 -.0806 FAU-.00538 RRT .7875 RRF -.9742 RTF -.9058  
 FDE 2.6681 FRA -.6096 FC3 .0243 BSP 13675 SGB 4367.6 R23 .0513 R13 -.9985  
 BDE 9.3027 BRA 2.2467 BC3 .1084 FSP -350 SG1 4175.2 SG2 1282.2 THA 59.98

Orbit Determination Accuracy: ST 1562.3 SR 3571.5 SS 1478.6  
 CRT .9580 CRS .9970 CST .9772  
 LSA 4148.5 MSA 415.1 SSA 1.0  
 EL1 3876.3 EL2 412.8 ALF 66.99

LAUNCH DATE JAN 4 1969 FLIGHT TIME 152.00 ARRIVAL DATE JUN 5 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.720 GAL 1.20 AZL 73.89 HCA 186.79 SMA 128.09 ECC .14982 INC16.1136 V1 30.288  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.434 GAP -.01 AZP 106.01 TAL 173.16 TAP 359.95 RCA 108.90 APO 147.28 V2 34.799  
 RC 90.065 GL 64.26 GP -79.05 ZAL 86.16 ZAP 89.41 ETS 16.96 ZAE 100.67 ETE 277.91 ZAC 109.09 ETC 218.71 CLP -86.88

Distance 417.797

Planetocentric Conic: C3 72.909 VHL 8.539 DLA 63.14 RAL 332.73 RAD 6569.4 VEL 13.938 PTH 2.54 VHP 8.693 DPA -60.72 RAP 76.05 ECC 2.1999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.88 15 40 14 4706.07 -20.70 232.92 231.71 28.89 16 58 40 4106.1 -27.65 228.99  
 149.12 1 35 43 3005.95 -20.69 91.71 231.69 28.88 2 25 49 2405.9 -27.64 87.77  
 30.88 15 40 14 4706.07 -20.70 232.92 231.71 28.89 16 58 40 4106.1 -27.65 228.99  
 149.12 1 35 43 3005.95 -20.69 91.71 231.69 28.88 2 25 49 2405.9 -27.64 87.77  
 30.88 15 40 14 4706.07 -20.70 232.92 231.71 28.89 16 58 40 4106.1 -27.65 228.99  
 149.12 1 35 43 3005.95 -20.69 91.71 231.69 28.88 2 25 49 2405.9 -27.64 87.77

Differential Corrections: TDE 1.2849 TRA -.2952 TC3 -.0364 BAU .2903 SGT 969.2 SGR 4298.7 SG3 210.5  
 RDE 5.8407 RRA-1.1396 RC3 -.2956 FAU .01696 RRT .9966 RRF .9992 RTF .9926  
 FDE 3.3458 FRA -.5953 FC3 -.2014 BSP 13604 SGB 4406.6 R23 .0438 R13 .9990  
 BDE 5.9803 BRA 1.1772 BC3 .2978 FSP -687 SG1 4405.9 SG2 77.6 THA 77.33

Orbit Determination Accuracy: ST 872.1 SR 3951.9 SS 1697.0  
 CRT .9997 CRS -.9999 CST -.9994  
 LSA 4388.3 MSA 27.2 SSA .5  
 EL1 4047.0 EL2 19.2 ALF 77.56

LAUNCH DATE JAN 4 1969 FLIGHT TIME 154.00 ARRIVAL DATE JUN 7 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.721 GAL 1.26 AZL 78.09 HCA 189.89 SMA 128.10 ECC .14989 INC11.9139 V1 30.288  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.431 GAP .36 AZP 101.74 TAL 172.84 TAP 2.73 RCA 108.89 APO 147.30 V2 34.795  
 RC 92.449 GL 60.57 GP -69.64 ZAL 84.77 ZAP 91.46 ETS 2.13 ZAE 109.88 ETE 263.56 ZAC 111.43 ETC 203.47 CLP -94.19

Distance 424.016

Planetocentric Conic: C3 43.148 VHL 6.569 DLA 61.54 RAL 340.13 RAD 6568.6 VEL 12.826 PTH 2.33 VHP 6.261 DPA -55.51 RAP 61.00 ECC 1.7101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.78 16 14 18 4569.77 -27.84 226.74 233.50 32.62 17 30 28 3969.8 -34.48 221.94  
 147.22 2 0 41 2885.22 -27.83 87.75 233.49 32.61 2 48 46 2285.2 -34.47 82.95  
 32.78 16 14 18 4569.77 -27.84 226.74 233.50 32.62 17 30 28 3969.8 -34.48 221.94  
 147.22 2 0 41 2885.22 -27.83 87.75 233.49 32.61 2 48 46 2285.2 -34.47 82.95  
 32.78 16 14 18 4569.77 -27.84 226.74 233.50 32.62 17 30 28 3969.8 -34.48 221.94  
 147.22 2 0 41 2885.22 -27.83 87.75 233.49 32.61 2 48 46 2285.2 -34.47 82.95

Differential Corrections: TDE 1.7261 TRA -.4353 TC3 -.2648 BAU .4318 SGT 1738.7 SGR 3991.8 SG3 351.6  
 RDE 4.3055 RRA -.5421 RC3 -.7002 FAU .03994 RRT .9747 RRF .9994 RTF .9687  
 FDE 4.3805 FRA -.5038 FC3 -.8014 BSP 13635 SGB 4354.0 R23 .0591 R13 .9979  
 BDE 4.6387 BRA .6954 BC3 .7486 FSP -1176 SG1 4339.3 SG2 357.4 THA 66.83

Orbit Determination Accuracy: ST 1524.5 SR 3767.4 SS 2072.3  
 CRT .9969 CRS-1.0000 CST -.9964  
 LSA 4560.5 MSA 115.5 SSA 1.7  
 EL1 4062.6 EL2 110.7 ALF 68.01

LAUNCH DATE JAN 4 1969 FLIGHT TIME 156.00 ARRIVAL DATE JUN 9 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 103.46 VL 27.719 GAL 1.32 AZL 80.29 HCA 193.03 SMA 128.09 ECC .15013 INC 9.7138 V1 30.288  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.427 GAP .72 AZP 99.47 TAL 172.48 TAP 5.51 RCA 108.86 APO 147.32 V2 34.791  
 RC 94.840 GL 56.98 GP -61.79 ZAL 83.51 ZAP 94.62 ETS 355.33 ZAE 117.18 ETE 256.01 ZAC 112.45 ETC 195.99 CLP -99.80

Distance 430.245

Planetocentric Conic: C3 31.101 VHL 5.577 DLA 59.58 RAL 346.43 RAD 6568.2 VEL 12.348 PTH 2.23 VHP 5.076 DPA -50.42 RAP 50.92 ECC 1.5118  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.11 16 45 15 4476.59 -31.84 220.93 235.06 36.58 17 59 51 3876.6 -38.12 215.29  
 144.89 2 19 57 2813.17 -31.83 84.77 235.04 36.58 3 6 51 2213.2 -38.11 79.14  
 35.11 16 45 15 4476.59 -31.84 220.93 235.06 36.58 17 59 51 3876.6 -38.12 215.29  
 144.89 2 19 57 2813.17 -31.83 84.77 235.04 36.58 3 6 51 2213.2 -38.11 79.14  
 35.11 16 45 15 4476.59 -31.84 220.93 235.06 36.58 17 59 51 3876.6 -38.12 215.29  
 144.89 2 19 57 2813.17 -31.83 84.77 235.04 36.58 3 6 51 2213.2 -38.11 79.14

Differential Corrections: TDE 1.8930 TRA -.3799 TC3 -.5672 BAU .4801 SGT 2185.6 SGR 3676.2 SG3 504.1  
 RDE 3.3786 RRA -.2246 RC3-1.0050 FAU .06329 RRT .9722 RRF .9993 RTF .9670  
 FDE 5.3148 FRA -.2998 FC3-1.7617 BSP 13300 SGB 4276.9 R23 .0803 R13 .9962  
 BDE 3.8728 BRA .4413 BC3 1.1547 FSP -1693 SG1 4254.0 SG2 441.9 THA 59.61

Orbit Determination Accuracy: ST 1958.7 SR 3474.0 SS 2396.3  
 CRT .9969 CRS-1.0000 CST -.9964  
 LSA 4650.4 MSA 144.1 SSA 2.2  
 EL1 3985.8 EL2 134.7 ALF 60.62

LAUNCH DATE JAN 4 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 436.466

RL 147.09 LAL -.00 LOL 103.46 VL 27.716 GAL 1.40 AZL 81.64 HCA 196.17 SMA 120.06 ECC .15054 INC 8.3570 V1 30.288  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.421 GAP 1.08 AZP 98.03 TAL 172.08 TAP 8.25 RCA 108.78 APO 147.34 V2 34.788  
 RC 97.236 GL 53.77 GP -54.97 ZAL 82.34 ZAP 98.53 ETS 350.65 ZAE 123.02 ETE 249.27 ZAC 112.56 ETC 190.43 CLP-104.98

PLANETOCENTRIC CONIC

C3 24.924 VHL 4.992 DLA 57.67 RAL 351.51 RAD 6568.0 VEL 12.095 PTH 2.16 VHP 4.420 DPA -45.68 RAP 43.39 ECC 1.4102  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.40 17 11 31 4409.99 -34.03 215.80 236.23 40.18 18 25 1 3810.0 -39.96 209.49  
 142.60 2 34 17 2769.49 -34.02 82.54 236.21 40.18 3 20 26 2169.5 -39.95 76.23  
 37.40 17 11 31 4409.99 -34.03 215.80 236.23 40.18 18 25 1 3810.0 -39.96 209.49  
 142.60 2 34 17 2769.49 -34.02 82.54 236.21 40.18 3 20 26 2169.5 -39.95 76.23  
 37.40 17 11 31 4409.99 -34.03 215.80 236.23 40.18 18 25 1 3810.0 -39.96 209.49  
 142.60 2 34 17 2769.49 -34.02 82.54 236.21 40.18 3 20 26 2169.5 -39.95 76.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0070 TRA -.2996 TC3 -.9181 BAU .5025 SGT 2561.1 SGR 3339.3 SG3 645.4 ST 2311.6 SR 3117.4 SS 2623.0  
 RDE 2.7181 RRA -.0393 RC3-1.1965 FAU .08474 RRT .9739 RRF .9991 RTF .9690 CRT .9972 CRS-1.0000 CST -.9967  
 FDE 5.9839 FRA -.0185 FC3-2.9435 BSP 13033 SGB 4208.4 R23 .1019 R13 .9940 LSA 4681.6 MSA 157.4 SSA 2.7  
 BDE 3.3771 BRA .3022 BC3 1.5082 FSP -2185 SGI 4182.7 S62 463.6 THA 52.71 EL1 3878.5 EL2 140.0 ALF 53.47

LAUNCH DATE JAN 4 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 442.676

RL 147.09 LAL -.00 LOL 103.46 VL 27.710 GAL 1.48 AZL 82.57 HCA 199.32 SMA 128.02 ECC .15112 INC 7.4328 V1 30.288  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.415 GAP 1.43 AZP 97.02 TAL 171.64 TAP 10.96 RCA 108.68 APO 147.37 V2 34.786  
 RC 99.636 GL 50.95 GP -48.96 ZAL 81.19 ZAP 102.89 ETS 347.21 ZAE 127.55 ETE 242.56 ZAC 112.08 ETC 186.02 CLP-109.86

PLANETOCENTRIC CONIC

C3 21.291 VHL 4.614 DLA 55.93 RAL 355.72 RAD 6567.9 VEL 11.944 PTH 2.13 VHP 4.038 DPA -41.34 RAP 37.49 ECC 1.3504  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.52 17 34 0 4360.12 -35.19 211.39 237.25 43.27 18 46 40 3760.1 -40.81 204.57  
 140.48 2 45 21 2742.63 -35.18 80.90 237.24 43.26 3 31 4 2142.6 -40.80 74.08  
 39.52 17 34 0 4360.12 -35.19 211.39 237.25 43.27 18 46 40 3760.1 -40.81 204.57  
 140.48 2 45 21 2742.63 -35.18 80.90 237.24 43.26 3 31 4 2142.6 -40.80 74.08  
 39.52 17 34 0 4360.12 -35.19 211.39 237.25 43.27 18 46 40 3760.1 -40.81 204.57  
 140.48 2 45 21 2742.63 -35.18 80.90 237.24 43.26 3 31 4 2142.6 -40.80 74.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0991 TRA -.2102 TC3-1.2928 BAU .5173 SGT 2904.2 SGR 2998.5 SG3 761.3 ST 2610.5 SR 2752.5 SS 2759.2  
 RDE 2.2181 RRA .0785 RC3-1.2775 FAU .10205 RRT .9761 RRF .9987 RTF .9712 CRT .9974 CRS-1.0000 CST -.9968  
 FDE 6.3666 FRA .3120 FC3-4.1495 BSP 12786 SGB 4174.4 R23 .1223 R13 .9913 LSA 4688.0 MSA 165.4 SSA 3.3  
 BDE 3.0525 BRA .2237 BC3 1.8175 FSP -2574 SGI 4149.4 S62 456.2 THA 45.94 EL1 3791.1 EL2 136.5 ALF 46.52

LAUNCH DATE JAN 4 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 448.869

RL 147.09 LAL -.00 LOL 103.46 VL 27.703 GAL 1.58 AZL 83.24 HCA 202.47 SMA 127.97 ECC .15186 INC 6.7595 V1 30.288  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.408 GAP 1.78 AZP 96.25 TAL 171.14 TAP 13.61 RCA 108.54 APO 147.41 V2 34.784  
 RC 102.038 GL 48.46 GP -43.67 ZAL 80.05 ZAP 107.42 ETS 344.66 ZAE 130.90 ETE 235.84 ZAC 111.28 ETC 182.50 CLP-114.45

PLANETOCENTRIC CONIC

C3 18.984 VHL 4.355 DLA 54.38 RAL 359.33 RAD 6567.8 VEL 11.847 PTH 2.10 VHP 3.816 DPA -37.39 RAP 32.75 ECC 1.3121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.42 17 53 45 4321.27 -35.76 207.63 238.28 45.87 19 5 46 3721.3 -41.10 200.43  
 138.58 2 54 24 2726.33 -35.75 79.73 238.27 45.86 3 39 50 2126.3 -41.08 72.53  
 41.42 17 53 45 4321.27 -35.76 207.63 238.28 45.87 19 5 46 3721.3 -41.10 200.43  
 138.58 2 54 24 2726.33 -35.75 79.73 238.27 45.86 3 39 50 2126.3 -41.08 72.53  
 41.42 17 53 45 4321.27 -35.76 207.63 238.28 45.87 19 5 46 3721.3 -41.10 200.43  
 138.58 2 54 24 2726.33 -35.75 79.73 238.27 45.86 3 39 50 2126.3 -41.08 72.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1733 TRA -.1179 TC3-1.6767 BAU .5348 SGT 3221.8 SGR 2665.5 SG3 844.5 ST 2860.9 SR 2401.5 SS 2813.0  
 RDE 1.8236 RRA .1435 RC3-1.2803 FAU .11495 RRT .9785 RRF .9981 RTF .9734 CRT .9977 CRS -.9999 CST -.9969  
 FDE 6.4753 FRA .6365 FC3-5.2476 BSP 12803 SGB 4181.5 R23 .1384 R13 .9885 LSA 4673.0 MSA 169.0 SSA 4.0  
 BDE 2.6370 BRA .1857 BC3 2.1096 FSP -2882 SGI 4159.7 S62 426.3 THA 39.49 EL1 3733.1 EL2 125.9 ALF 40.00

LAUNCH DATE JAN 4 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 455.046

RL 147.09 LAL -.00 LOL 103.46 VL 27.694 GAL 1.68 AZL 83.76 HCA 205.63 SMA 127.91 ECC .15276 INC 6.2445 V1 30.288  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.400 GAP 2.13 AZP 95.63 TAL 170.60 TAP 16.22 RCA 108.37 APO 147.45 V2 34.783  
 RC 104.441 GL 46.23 GP -39.02 ZAL 78.88 ZAP 111.95 ETS 342.79 ZAE 133.18 ETE 229.25 ZAC 110.35 ETC 179.74 CLP-118.76

PLANETOCENTRIC CONIC

C3 17.389 VHL 4.170 DLA 53.00 RAL 2.55 RAD 6567.7 VEL 11.780 PTH 2.08 VHP 3.698 DPA -33.82 RAP 28.93 ECC 1.2862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.13 18 11 33 4290.17 -35.97 204.43 239.41 48.04 19 23 3 3690.2 -41.07 196.95  
 136.87 3 2 16 2718.91 -35.95 78.93 239.40 48.03 3 47 33 2116.9 -41.05 71.46  
 43.13 18 11 33 4290.17 -35.97 204.43 239.41 48.04 19 23 3 3690.2 -41.07 196.95  
 136.87 3 2 16 2718.91 -35.95 78.93 239.40 48.03 3 47 33 2116.9 -41.05 71.46  
 43.13 18 11 33 4290.17 -35.97 204.43 239.41 48.04 19 23 3 3690.2 -41.07 196.95  
 136.87 3 2 16 2718.91 -35.95 78.93 239.40 48.03 3 47 33 2116.9 -41.05 71.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2335 TRA -.0218 TC3-2.0549 BAU .5561 SGT 3517.7 SGR 2354.9 SG3 895.9 ST 3072.1 SR 2084.6 SS 2807.3  
 RDE 1.5143 RRA .1823 RC3-1.2246 FAU .12311 RRT .9803 RRF .9970 RTF .9750 CRT .9979 CRS -.9999 CST -.9969  
 FDE 6.3770 FRA .9422 FC3-6.1294 BSP 12963 SGB 4233.2 R23 .1486 R13 .9860 LSA 4651.3 MSA 171.2 SSA 4.7  
 BDE 2.7001 BRA .1836 BC3 2.3921 FSP -3077 SGI 4215.3 S62 388.2 THA 33.60 EL1 3710.9 EL2 111.8 ALF 34.14

LAUNCH DATE JAN 4 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC DISTANCE 461.206  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.683 GAL 1.80 AZL 84.16 HCA 208.78 SMA 127.84 ECC .15382 INC 5.8357 V1 30.288  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.392 GAP 2.48 AZP 95.12 TAL 170.00 TAP 18.78 RCA 108.17 APO 147.50 V2 34.783  
 RC 106.844 GL 44.19 GP -34.94 ZAL 77.67 ZAP 116.34 ETS 341.45 ZAE 134.58 ETE 223.02 ZAC 109.45 ETC 177.60 CLP-122.77

PLANETOCENTRIC CONIC  
 C3 16.287 VHL 4.036 DLA 51.77 RAL 5.51 RAD 6567.7 VEL 11.733 PTH 2.07 VHP 3.649 DPA -30.60 RAP 25.87 ECC 1.2680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.66 18 27 58 4264.76 -35.95 201.68 240.68 49.85 19 39 3 3664.8 -40.85 194.01  
 135.34 3 9 27 2712.25 -35.94 78.41 240.67 49.84 3 54 39 2112.2 -40.84 70.75  
 44.66 18 27 58 4264.76 -35.95 201.68 240.68 49.85 19 39 3 3664.8 -40.85 194.01  
 135.34 3 9 27 2712.25 -35.94 78.41 240.67 49.84 3 54 39 2112.2 -40.84 70.75  
 44.66 18 27 58 4264.76 -35.95 201.68 240.68 49.85 19 39 3 3664.8 -40.85 194.01  
 135.34 3 9 27 2712.25 -35.94 78.41 240.67 49.84 3 54 39 2112.2 -40.84 70.75

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.2881 TRA .0786 TC3-2.4143 BAU .5803 SGT 3792.3 SGR 2072.5 SCS 919.2 ST 3249.3 SR 1808.0 SS 2758.9  
 RDE 1.2696 RRA .2026 RC3-1.1290 FAU .12678 RRT .9815 RRF .9954 RTF .9763 CRT .9982 CRS -.9998 CST -.9969  
 FDE 6.1338 FRA 1.2143 FC3-6.7390 BSP 13252 SGB 4321.7 R23 .1513 R13 .9839 LSA 4627.0 MSA 172.3 SSA 5.4  
 BDE 2.6167 BRA .2174 BC3 2.6652 FSP -3169 SGI 4307.6 SGI 349.0 THA 28.41 EL1 3717.2 EL2 95.8 ALF 29.07

LAUNCH DATE JAN 4 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC DISTANCE 467.348  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.670 GAL 1.93 AZL 84.50 HCA 211.94 SMA 127.75 ECC .15503 INC 5.5015 V1 30.288  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.384 GAP 2.82 AZP 94.67 TAL 169.36 TAP 21.30 RCA 107.95 APO 147.56 V2 34.784  
 RC 109.246 GL 42.32 GP -31.38 ZAL 76.42 ZAP 120.52 ETS 340.50 ZAE 135.26 ETE 217.33 ZAC 108.67 ETC 175.96 CLP-126.50

PLANETOCENTRIC CONIC  
 C3 15.506 VHL 3.938 DLA 50.67 RAL 8.29 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 3.652 DPA -27.68 RAP 23.46 ECC 1.2552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.05 18 43 25 4243.62 -35.80 199.31 242.10 51.39 19 54 9 3643.6 -40.51 191.51  
 133.95 3 16 15 2711.09 -35.78 78.13 242.08 51.37 4 1 26 2111.1 -40.50 70.33  
 46.05 18 43 25 4243.62 -35.80 199.31 242.10 51.39 19 54 9 3643.6 -40.51 191.51  
 133.95 3 16 15 2711.09 -35.78 78.13 242.08 51.37 4 1 26 2111.1 -40.50 70.33  
 46.05 18 43 25 4243.62 -35.80 199.31 242.10 51.39 19 54 9 3643.6 -40.51 191.51  
 133.95 3 16 15 2711.09 -35.78 78.13 242.08 51.37 4 1 26 2111.1 -40.50 70.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3312 TRA .1826 TC3-2.7493 BAU .6074 SGT 4045.9 SGR 1821.1 SCS 919.6 ST 3395.0 SR 1571.2 SS 2680.2  
 RDE 1.0751 RRA .2105 RC3-1.0125 FAU .12687 RRT .9820 RRF .9930 RTF .9772 CRT .9985 CRS -.9997 CST -.9968  
 FDE 5.7972 FRA 1.4448 FC3-7.0835 BSP 13658 SGB 4436.9 R23 .1455 R13 .9823 LSA 4598.7 MSA 172.8 SSA 6.2  
 BDE 2.5672 BRA .2787 BC3 2.9288 FSP -3183 SGI 4425.7 SGI 314.7 THA 23.97 EL1 3740.1 EL2 79.1 ALF 24.81

LAUNCH DATE JAN 4 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC DISTANCE 473.472  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.657 GAL 2.08 AZL 84.78 HCA 215.09 SMA 127.66 ECC .15641 INC 5.2216 V1 30.288  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.373 GAP 3.16 AZP 94.28 TAL 168.67 TAP 23.77 RCA 107.69 APO 147.62 V2 34.785  
 RC 111.645 GL 40.57 GP -28.27 ZAL 75.11 ZAP 124.45 ETS 339.85 ZAE 135.40 ETE 212.28 ZAC 108.08 ETC 174.72 CLP-129.97

PLANETOCENTRIC CONIC  
 C3 14.956 VHL 3.867 DLA 49.67 RAL 10.98 RAD 6567.6 VEL 11.676 PTH 2.05 VHP 3.691 DPA -25.05 RAP 21.60 ECC 1.2461  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.32 18 58 11 4225.90 -35.54 197.26 243.66 52.68 20 8 37 3625.9 -40.11 189.35  
 132.68 3 22 52 2712.56 -35.53 78.04 243.65 52.67 4 8 5 2112.6 -40.10 70.14  
 47.32 18 58 11 4225.90 -35.54 197.26 243.66 52.68 20 8 37 3625.9 -40.11 189.35  
 132.68 3 22 52 2712.56 -35.53 78.04 243.65 52.67 4 8 5 2112.6 -40.10 70.14  
 47.32 18 58 11 4225.90 -35.54 197.26 243.66 52.68 20 8 37 3625.9 -40.11 189.35  
 132.68 3 22 52 2712.56 -35.53 78.04 243.65 52.67 4 8 5 2112.6 -40.10 70.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3691 TRA .2928 TC3-3.0493 BAU .6349 SGT 4281.6 SGR 1603.1 SCS 903.7 ST 3516.5 SR 1374.0 SS 2586.3  
 RDE .9221 RRA .2115 RC3 -.8856 FAU .12399 RRT .9813 RRF .9894 RTF .9779 CRT .9988 CRS -.9994 CST -.9966  
 FDE 5.4192 FRA 1.6410 FC3-7.1776 BSP 14086 SGB 4571.9 R23 .1320 R13 .9813 LSA 4573.0 MSA 173.2 SSA 7.1  
 BDE 2.5423 BRA .3613 BC3 3.1753 FSP -3121 SGI 4562.7 SGI 289.9 THA 20.26 EL1 3774.9 EL2 62.7 ALF 21.33

LAUNCH DATE JAN 4 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC DISTANCE 479.578  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.641 GAL 2.23 AZL 85.02 HCA 218.25 SMA 127.56 ECC .15795 INC 4.9824 V1 30.288  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.365 GAP 3.49 AZP 93.92 TAL 167.94 TAP 26.19 RCA 107.41 APO 147.70 V2 34.787  
 RC 114.042 GL 38.92 GP -25.56 ZAL 73.75 ZAP 128.12 ETS 339.41 ZAE 135.18 ETE 207.90 ZAC 107.69 ETC 173.79 CLP-133.18

PLANETOCENTRIC CONIC  
 C3 14.580 VHL 3.818 DLA 48.78 RAL 13.59 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 3.760 DPA -22.66 RAP 20.21 ECC 1.2400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.49 19 12 29 4210.88 -35.21 195.45 245.38 53.79 20 22 40 3610.9 -39.65 187.48  
 131.51 3 29 24 2716.25 -35.19 78.10 245.37 53.78 4 14 41 2116.3 -39.64 70.14  
 48.49 19 12 29 4210.88 -35.21 195.45 245.38 53.79 20 22 40 3610.9 -39.65 187.48  
 131.51 3 29 24 2716.25 -35.19 78.10 245.37 53.78 4 14 41 2116.3 -39.64 70.14  
 48.49 19 12 29 4210.88 -35.21 195.45 245.38 53.79 20 22 40 3610.9 -39.65 187.48  
 131.51 3 29 24 2716.25 -35.19 78.10 245.37 53.78 4 14 41 2116.3 -39.64 70.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3972 TRA .4058 TC3-3.3217 BAU .6644 SGT 4497.4 SGR 1414.4 SCS 875.5 ST 3608.4 SR 1208.1 SS 2476.1  
 RDE .7995 RRA .2065 RC3 -.7642 FAU .11972 RRT .9793 RRF .9844 RTF .9785 CRT .9992 CRS -.9990 CST -.9964  
 FDE 5.0130 FRA 1.7917 FC3-7.1087 BSP 14810 SGB 4714.5 R23 .1112 R13 .9807 LSA 4536.7 MSA 172.8 SSA 7.8  
 BDE 2.5270 BRA .4553 BC3 3.4085 FSP -3033 SGI 4706.6 SGI 273.5 THA 17.18 EL1 3805.0 EL2 46.5 ALF 18.50

LAUNCH DATE JAN 4 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 485.666

RL 147.09 LAL -.00 LOL 103.46 VL 27.625 GAL 2.40 AZL 85.23 HCA 221.41 SMA 127.44 ECC .15965 INC 4.7745 V1 30.288  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.356 GAP 3.83 AZP 93.58 TAL 167.17 TAP 28.58 RCA 107.10 APO 147.79 V2 34.790  
 RC 118.435 GL 37.34 GP -23.21 ZAL 72.33 ZAP 131.52 ETS 339.12 ZAE 134.71 ETE 204.16 ZAC 107.52 ETC 173.10 CLP-136.16

PLANETOCENTRIC CONIC

C3 14.345 VHL 3.787 DLA 47.90 RAL 16.16 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 3.851 DPA -20.48 RAP 19.24 ECC 1.2361  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.60 19 26 29 4198.12 -34.82 193.86 247.24 54.74 20 36 27 3598.1 -39.15 185.85  
 130.40 3 35 55 2721.80 -34.81 78.31 247.23 54.73 4 21 17 2121.8 -39.14 70.30  
 49.60 19 26 29 4198.12 -34.82 193.86 247.24 54.74 20 36 27 3598.1 -39.15 185.85  
 130.40 3 35 55 2721.80 -34.81 78.31 247.23 54.73 4 21 17 2121.8 -39.14 70.30  
 49.60 19 26 29 4198.12 -34.82 193.86 247.24 54.74 20 36 27 3598.1 -39.15 185.85  
 130.40 3 35 55 2721.80 -34.81 78.31 247.23 54.73 4 21 17 2121.8 -39.14 70.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4198 TRA .9237 TC3-3.5563 BAU .6933 SGT 4895.8 SGR 1253.7 S63 839.4 ST 3678.3 SR 1071.7 SS 2360.6  
 RDE .7028 RRA .1985 RC3 -.6479 FAU .11407 RRT .9755 RRF .9773 RTF .9790 CRT .9995 CRS -.9983 CST -.9963  
 FDE 4.6105 FRA 1.9089 FC3-6.8844 BSP 15151 SGB 4860.3 R23 .0870 R13 .9804 LSA 4496.8 MSA 172.1 SSA 8.6  
 BDE 2.5198 BRA .5600 BC3 3.6149 FSP -2917 SGI 4853.0 S62 267.0 THA 14.64 EL1 3831.1 EL2 31.2 ALF 16.24

LAUNCH DATE JAN 4 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 491.735

RL 147.09 LAL -.00 LOL 103.46 VL 27.608 GAL 2.59 AZL 85.41 HCA 224.57 SMA 127.33 ECC .16152 INC 4.5910 V1 30.288  
 RP 108.91 LAP -3.22 LOP 327.94 VP 37.346 GAP 4.17 AZP 93.27 TAL 166.35 TAP 30.93 RCA 106.76 APO 147.89 V2 34.794  
 RC 118.823 GL 35.82 GP -21.16 ZAL 70.85 ZAP 134.68 ETS 338.93 ZAE 134.09 ETE 201.01 ZAC 107.58 ETC 172.59 CLP-138.93

PLANETOCENTRIC CONIC

C3 14.227 VHL 3.772 DLA 47.10 RAL 18.70 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 3.960 DPA -18.47 RAP 18.63 ECC 1.2341  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.64 19 40 17 4187.24 -34.38 192.44 249.24 55.57 20 50 4 3587.2 -38.62 184.41  
 129.36 3 42 26 2729.04 -34.37 78.64 249.23 55.56 4 27 55 2129.0 -38.61 70.61  
 50.64 19 40 17 4187.24 -34.38 192.44 249.24 55.57 20 50 4 3587.2 -38.62 184.41  
 129.36 3 42 26 2729.04 -34.37 78.64 249.23 55.56 4 27 55 2129.0 -38.61 70.61  
 50.64 19 40 17 4187.24 -34.38 192.44 249.24 55.57 20 50 4 3587.2 -38.62 184.41  
 129.36 3 42 26 2729.04 -34.37 78.64 249.23 55.56 4 27 55 2129.0 -38.61 70.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4388 TRA .6484 TC3-3.7533 BAU .7213 SGT 4879.5 SGR 1119.0 S63 799.4 ST 3727.6 SR 960.4 SS 2243.7  
 RDE .8287 RRA .1897 RC3 -.5413 FAU .10770 RRT .9692 RRF .9678 RTF .9794 CRT .9998 CRS -.9973 CST -.9960  
 FDE 4.2244 FRA 2.0029 FC3-6.5536 BSP 15670 SGB 5006.2 R23 .0635 R13 .9803 LSA 4452.2 MSA 171.6 SSA 9.4  
 BDE 2.5159 BRA .8758 BC3 3.7921 FSP -2779 SGI 4998.9 S62 268.9 THA 12.57 EL1 3849.3 EL2 17.5 ALF 14.45

LAUNCH DATE JAN 4 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 497.786

RL 147.09 LAL -.00 LOL 103.46 VL 27.589 GAL 2.78 AZL 85.57 HCA 227.73 SMA 127.20 ECC .16357 INC 4.4269 V1 30.288  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.337 GAP 4.51 AZP 92.98 TAL 165.50 TAP 33.24 RCA 106.40 APO 148.01 V2 34.798  
 RC 121.206 GL 34.35 GP -19.36 ZAL 69.32 ZAP 137.60 ETS 338.81 ZAE 133.40 ETE 198.35 ZAC 107.83 ETC 172.21 CLP-141.51

PLANETOCENTRIC CONIC

C3 14.213 VHL 3.770 DLA 46.34 RAL 21.23 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 4.085 DPA -16.62 RAP 18.33 ECC 1.2339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.65 19 53 58 4177.91 -33.90 191.16 251.35 56.29 21 3 36 3577.9 -38.06 183.12  
 128.35 3 48 55 2737.92 -33.89 79.09 251.34 56.28 4 34 33 2137.9 -38.05 71.05  
 51.65 19 53 58 4177.91 -33.90 191.16 251.35 56.29 21 3 36 3577.9 -38.06 183.12  
 128.35 3 48 55 2737.92 -33.89 79.09 251.34 56.28 4 34 33 2137.9 -38.05 71.05  
 51.65 19 53 58 4177.91 -33.90 191.16 251.35 56.29 21 3 36 3577.9 -38.06 183.12  
 128.35 3 48 55 2737.92 -33.89 79.09 251.34 56.28 4 34 33 2137.9 -38.05 71.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4479 TRA .7790 TC3-3.9139 BAU .7485 SGT 5048.7 SGR 1006.5 S63 757.1 ST 3756.7 SR 869.7 SS 2126.2  
 RDE .5668 RRA .1803 RC3 -.4464 FAU .10106 RRT .9601 RRF .9535 RTF .9798 CRT .9999 CRS -.9957 CST -.9958  
 FDE 3.8588 FRA 2.0738 FC3-6.1561 BSP 16194 SGB 5148.0 R23 .0428 R13 .9803 LSA 4400.1 MSA 171.2 SSA 10.1  
 BDE 2.5126 BRA .7998 BC3 3.9393 FSP -2637 SGI 5140.8 S62 276.3 THA 10.87 EL1 3856.1 EL2 10.1 ALF 13.03

LAUNCH DATE JAN 4 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 503.817

RL 147.09 LAL -.00 LOL 103.46 VL 27.570 GAL 3.00 AZL 85.72 HCA 230.90 SMA 127.07 ECC .16579 INC 4.2786 V1 30.288  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.327 GAP 4.85 AZP 92.70 TAL 164.62 TAP 35.51 RCA 106.01 APO 148.14 V2 34.803  
 RC 123.581 GL 32.91 GP -17.80 ZAL 67.75 ZAP 140.31 ETS 338.72 ZAE 132.67 ETE 196.12 ZAC 108.29 ETC 171.94 CLP-143.92

PLANETOCENTRIC CONIC

C3 14.292 VHL 3.781 DLA 45.60 RAL 23.75 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 4.223 DPA -14.90 RAP 18.31 ECC 1.2352  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.64 20 7 38 4169.91 -33.38 189.99 253.58 56.92 21 17 8 3569.9 -37.46 181.96  
 127.36 3 55 21 2748.39 -33.37 79.66 253.57 56.91 4 41 10 2148.4 -37.45 71.63  
 52.64 20 7 38 4169.91 -33.38 189.99 253.58 56.92 21 17 8 3569.9 -37.46 181.96  
 127.36 3 55 21 2748.39 -33.37 79.66 253.57 56.91 4 41 10 2148.4 -37.45 71.63  
 52.64 20 7 38 4169.91 -33.38 189.99 253.58 56.92 21 17 8 3569.9 -37.46 181.96  
 127.36 3 55 21 2748.39 -33.37 79.66 253.57 56.91 4 41 10 2148.4 -37.45 71.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4540 TRA .9158 TC3-4.0384 BAU .7744 SGT 5204.0 SGR 913.4 S63 714.1 ST 3767.6 SR 796.3 SS 2010.7  
 RDE .5203 RRA .1711 RC3 -.3830 FAU .09432 RRT .9478 RRF .9401 RTF .9801 CRT .9997 CRS -.9935 CST -.9955  
 FDE 3.5189 FRA 2.1261 FC3-5.7133 BSP 16700 SGB 5283.5 R23 .0262 R13 .9803 LSA 4340.8 MSA 170.9 SSA 10.9  
 BDE 2.5086 BRA .9318 BC3 4.0327 FSP -2492 SGI 5275.7 S62 287.3 THA 9.47 EL1 3850.8 EL2 18.1 ALF 11.93

LAUNCH DATE JAN 4 1969 FLIGHT TIME 182.00 ARRIVAL DATE JUL 5 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.550 GAL 3.22 AZL 85.86 HCA 234.06 SMA 126.94 ECC .16820 INC 4.1429 V1 30.288  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.317 GAP 5.19 AZP 92.43 TAL 163.70 TAP 37.76 RCA 105.59 APO 148.29 V2 34.808  
 RC 125.948 GL 31.50 GP -16.42 ZAL 66.12 ZAP 142.82 ETS 336.64 ZAE 131.94 ETE 194.24 ZAC 108.92 ETC 171.74 CLP-146.17

PLANETOCENTRIC CONIC  
 C3 14.462 VHL 3.803 DLA 44.87 RAL 26.26 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 4.373 DPA -13.28 RAP 18.52 ECC 1.2380  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.61 20 21 18 4163.02 -32.82 188.92 255.90 57.49 21 30 41 3563.0 -36.84 180.91  
 126.39 4 1 42 2760.50 -32.80 80.34 255.90 57.47 4 47 43 2160.5 -36.83 72.33  
 53.61 20 21 18 4163.02 -32.82 188.92 255.90 57.49 21 30 41 3563.0 -36.84 180.91  
 126.39 4 1 42 2760.50 -32.80 80.34 255.90 57.47 4 47 43 2160.5 -36.83 72.33  
 53.61 20 21 18 4163.02 -32.82 188.92 255.90 57.49 21 30 41 3563.0 -36.84 180.91  
 126.39 4 1 42 2760.50 -32.80 80.34 255.90 57.47 4 47 43 2160.5 -36.83 72.33

DIFFERENTIAL CORRECTIONS  
 TDE 2.4579 TRA 1.0627 TC3-4.1154 BAU .7976 SGT 5349.3 SGR 838.1 SCS 672.3 ST 3765.8 SR 738.0 SS 1901.1  
 RDE .4849 RRA .1631 RC3 -.2297 FAU .08745 RRT .9320 RRF .9217 RTF .9802 CRT .9991 CRS -.9905 CST -.9954  
 FDE 3.2102 FRA 2.1706 FC3-5.2348 BSP 17121 SGB 5414.6 R23 .0145 R13 .9804 LSA 4279.1 MSA 171.3 SSA 11.5  
 BDE 2.5053 BRA 1.0752 BC3 4.1256 FSP -2339 SGI 5408.2 SGT 300.7 THA 8.33 EL1 3837.3 EL2 30.9 ALF 11.08

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 184.00 ARRIVAL DATE JUL 7 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.529 GAL 3.46 AZL 85.98 HCA 237.22 SMA 126.80 ECC .17081 INC 4.0177 V1 30.288  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.307 GAP 5.54 AZP 92.18 TAL 162.75 TAP 39.97 RCA 105.14 APO 148.46 V2 34.815  
 RC 128.306 GL 30.12 GP -15.21 ZAL 64.47 ZAP 145.17 ETS 338.56 ZAE 131.23 ETE 192.66 ZAC 109.71 ETC 171.60 CLP-148.28

PLANETOCENTRIC CONIC  
 C3 14.719 VHL 3.837 DLA 44.16 RAL 28.76 RAD 6567.6 VEL 11.666 PTH 2.05 VHP 4.532 DPA -11.75 RAP 18.94 ECC 1.2422  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.58 20 35 0 4157.14 -32.21 187.93 258.32 57.99 21 44 17 3557.1 -36.18 179.94  
 125.42 4 7 56 2774.22 -32.20 81.14 258.31 57.97 4 54 10 2174.2 -36.17 73.16  
 54.58 20 35 0 4157.14 -32.21 187.93 258.32 57.99 21 44 17 3557.1 -36.18 179.94  
 125.42 4 7 56 2774.22 -32.20 81.14 258.31 57.97 4 54 10 2174.2 -36.17 73.16  
 54.58 20 35 0 4157.14 -32.21 187.93 258.32 57.99 21 44 17 3557.1 -36.18 179.94  
 125.42 4 7 56 2774.22 -32.20 81.14 258.31 57.97 4 54 10 2174.2 -36.17 73.16

DIFFERENTIAL CORRECTIONS  
 TDE 2.4545 TRA 1.2149 TC3-4.1657 BAU .8210 SGT 5481.7 SGR 776.5 SCS 631.4 ST 3744.5 SR 690.5 SS 1792.4  
 RDE .4578 RRA .1553 RC3 -.2290 FAU .08106 RRT .9129 RRF .9003 RTF .9804 CRT .9979 CRS -.9865 CST -.9949  
 FDE 2.9226 FRA 2.1996 FC3-4.7676 BSP 17583 SGB 5536.4 R23 .0056 R13 .9805 LSA 4204.9 MSA 172.0 SSA 12.2  
 BDE 2.4988 BRA 1.2248 BC3 4.1719 FSP -2201 SGI 5527.5 SGT 314.3 THA 7.39 EL1 3807.4 EL2 44.5 ALF 10.43

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 186.00 ARRIVAL DATE JUL 9 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.507 GAL 3.72 AZL 86.10 HCA 240.39 SMA 126.65 ECC .17363 INC 3.9010 V1 30.288  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.298 GAP 5.90 AZP 91.93 TAL 161.77 TAP 42.16 RCA 104.66 APO 148.64 V2 34.821  
 RC 130.653 GL 28.76 GP -14.15 ZAL 62.77 ZAP 147.35 ETS 338.46 ZAE 130.56 ETE 191.33 ZAC 110.65 ETC 171.49 CLP-150.26

PLANETOCENTRIC CONIC  
 C3 15.086 VHL 3.881 DLA 43.45 RAL 31.24 RAD 6567.6 VEL 11.681 PTH 2.05 VHP 4.702 DPA -10.31 RAP 19.54 ECC 1.2479  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.56 20 48 46 4152.08 -31.56 187.00 260.82 58.44 21 57 58 3552.1 -35.48 179.05  
 124.44 4 13 59 2789.66 -31.55 82.06 260.81 58.42 5 0 29 2189.7 -35.47 74.11  
 55.56 20 48 46 4152.08 -31.56 187.00 260.82 58.44 21 57 58 3552.1 -35.48 179.05  
 124.44 4 13 59 2789.66 -31.55 82.06 260.81 58.42 5 0 29 2189.7 -35.47 74.11  
 55.56 20 48 46 4152.08 -31.56 187.00 260.82 58.44 21 57 58 3552.1 -35.48 179.05  
 124.44 4 13 59 2789.66 -31.55 82.06 260.81 58.42 5 0 29 2189.7 -35.47 74.11

DIFFERENTIAL CORRECTIONS  
 TDE 2.4472 TRA 1.3762 TC3-4.1790 BAU .8425 SGT 5603.9 SGR 727.1 SCS 592.2 ST 3710.0 SR 652.7 SS 1688.4  
 RDE .4378 RRA .1491 RC3 -.1779 FAU .07489 RRT .8911 RRF .8766 RTF .9805 CRT .9959 CRS -.9814 CST -.9946  
 FDE 2.8606 FRA 2.2214 FC3-4.3038 BSP 18008 SGB 5650.8 R23 -.0004 R13 .9805 LSA 4124.4 MSA 173.5 SSA 12.7  
 BDE 2.4861 BRA 1.3842 BC3 4.1828 FSP -2069 SGI 5641.3 SGT 327.7 THA 6.62 EL1 3766.5 EL2 58.2 ALF 9.94

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969 FLIGHT TIME 188.00 ARRIVAL DATE JUL 11 1969

Heliocentric Conic  
 RL 147.09 LAL -.00 LOL 103.46 VL 27.485 GAL 3.99 AZL 86.21 HCA 243.56 SMA 126.50 ECC .17667 INC 3.7914 V1 30.288  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.288 GAP 6.25 AZP 91.69 TAL 160.77 TAP 44.33 RCA 104.15 APO 148.85 V2 34.829  
 RC 132.989 GL 27.42 GP -13.20 ZAL 61.06 ZAP 149.40 ETS 338.32 ZAE 129.93 ETE 190.20 ZAC 111.72 ETC 171.42 CLP-152.14

PLANETOCENTRIC CONIC  
 C3 15.503 VHL 3.937 DLA 42.74 RAL 33.70 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 4.881 DPA -8.92 RAP 20.30 ECC 1.2551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.55 21 2 35 4147.76 -30.87 186.13 263.40 58.84 22 11 43 3547.8 -34.75 178.21  
 123.45 4 19 49 2806.86 -30.86 83.10 263.39 58.83 5 6 36 2206.9 -34.74 75.19  
 56.55 21 2 35 4147.76 -30.87 186.13 263.40 58.84 22 11 43 3547.8 -34.75 178.21  
 123.45 4 19 49 2806.86 -30.86 83.10 263.39 58.83 5 6 36 2206.9 -34.74 75.19  
 56.55 21 2 35 4147.76 -30.87 186.13 263.40 58.84 22 11 43 3547.8 -34.75 178.21  
 123.45 4 19 49 2806.86 -30.86 83.10 263.39 58.83 5 6 36 2206.9 -34.74 75.19

DIFFERENTIAL CORRECTIONS  
 TDE 2.4351 TRA 1.5460 TC3-4.1604 BAU .8628 SGT 5715.9 SGR 687.7 SCS 555.1 ST 3662.0 SR 622.5 SS 1588.7  
 RDE .4237 RRA .1439 RC3 -.1360 FAU .06908 RRT .8673 RRF .8513 RTF .9806 CRT .9931 CRS -.9751 CST -.9943  
 FDE 2.4213 FRA 2.2364 FC3-3.8576 BSP 18415 SGB 5757.2 R23 -.0043 R13 .9806 LSA 4036.2 MSA 175.8 SSA 13.2  
 BDE 2.4717 BRA 1.5527 BC3 4.1627 FSP -1944 SGI 5747.1 SGT 340.5 THA 5.98 EL1 3713.8 EL2 72.2 ALF 9.58

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 4 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 533.657

RL 147.09 LAL -.00 LOL 103.46 VL 27.462 GAL 4.29 AZL 86.31 HCA 246.72 SMA 126.35 ECC .17995 INC 3.6876 V1 30.288  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.279 GAP 6.62 AZP 91.46 TAL 159.74 TAP 46.47 RCA 103.62 APO 149.09 V2 34.837  
 RC 135.313 GL 26.09 GP -12.36 ZAL 59.32 ZAP 151.32 ETS 338.13 ZAE 129.34 ETE 189.24 ZAC 112.91 ETC 171.35 CLP-153.91

PLANETOCENTRIC CONIC

CS 16.038 VHL 4.005 DLA 42.02 RAL 36.14 RAD 6567.6 VEL 11.723 PTH 2.07 VHP 5.070 DPA -7.60 RAP 21.20 ECC 1.2639  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.55 21 16 31 4143.97 -30.14 185.29 266.03 59.22 22 25 35 3544.0 -33.98 177.41  
 122.45 4 25 19 2825.99 -30.13 84.28 266.02 59.20 5 12 25 2226.0 -33.97 76.41  
 57.55 21 16 31 4143.97 -30.14 185.29 266.03 59.22 22 25 35 3544.0 -33.98 177.41  
 122.45 4 25 19 2825.99 -30.13 84.28 266.02 59.20 5 12 25 2226.0 -33.97 76.41  
 57.55 21 16 31 4143.97 -30.14 185.29 266.03 59.22 22 25 35 3544.0 -33.98 177.41  
 122.45 4 25 19 2825.99 -30.13 84.28 266.02 59.20 5 12 25 2226.0 -33.97 76.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4223 TRA 1.7285 TC3-4.1034 BAU .8801 SGT 5821.8 SGR 657.3 SCS 520.5 ST 3608.0 SR 599.1 SS 1497.0  
 RDE .4148 RRA .1405 RC3 -.1010 FAU .06338 RRT .8424 RRF .8258 RTF .9805 CRT .9893 CRS -.9676 CST -.9940  
 FDE 2.2082 FRA 2.2512 FC3-3.4213 BSP 18728 SGB 5858.7 R23 -.0059 R13 .9805 LSA 3947.9 MSA 170.0 SSA 13.6  
 BDE 2.4576 BRA 1.7342 BC3 4.1047 FSP -1818 SGI 5848.1 SGT 352.6 THA 5.45 EL1 3656.4 EL2 86.3 ALF 9.33

LAUNCH DATE JAN 4 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 539.555

RL 147.09 LAL -.00 LOL 103.46 VL 27.438 GAL 4.60 AZL 86.41 HCA 249.89 SMA 126.20 ECC .18347 INC 3.5886 V1 30.288  
 RP 108.75 LAP -3.57 LOP 353.32 VP 37.270 GAP 7.00 AZP 91.24 TAL 158.70 TAP 48.59 RCA 103.04 APO 149.35 V2 34.846  
 RC 137.625 GL 24.79 GP -11.82 ZAL 57.57 ZAP 153.13 ETS 337.89 ZAE 128.79 ETE 188.42 ZAC 114.21 ETC 171.30 CLP-155.60

PLANETOCENTRIC CONIC

CS 16.675 VHL 4.083 DLA 41.30 RAL 38.55 RAD 6567.7 VEL 11.750 PTH 2.07 VHP 5.268 DPA -6.32 RAP 22.23 ECC 1.2744  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.59 21 30 32 4140.71 -29.37 184.48 268.72 59.56 22 39 33 3540.7 -33.17 176.65  
 121.41 4 30 30 2847.06 -29.36 85.58 268.71 59.54 5 17 57 2247.1 -33.16 77.76  
 58.59 21 30 32 4140.71 -29.37 184.48 268.72 59.56 22 39 33 3540.7 -33.17 176.65  
 121.41 4 30 30 2847.06 -29.36 85.58 268.71 59.54 5 17 57 2247.1 -33.16 77.76  
 58.59 21 30 32 4140.71 -29.37 184.48 268.72 59.56 22 39 33 3540.7 -33.17 176.65  
 121.41 4 30 30 2847.06 -29.36 85.58 268.71 59.54 5 17 57 2247.1 -33.16 77.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4023 TRA 1.9180 TC3-4.0258 BAU .8976 SGT 5916.2 SGR 632.7 SCS 487.5 ST 3539.2 SR 579.8 SS 1407.3  
 RDE .4098 RRA .1381 RC3 -.0740 FAU .05824 RRT .8172 RRF .8003 RTF .9805 CRT .9845 CRS -.9586 CST -.9936  
 FDE 2.0100 FRA 2.2583 FC3-3.0238 BSP 19090 SGB 5949.9 R23 -.0070 R13 .9805 LSA 3848.3 MSA 183.2 SSA 13.9  
 BDE 2.4370 BRA 1.9230 BC3 4.0283 FSP -1709 SGI 5938.8 SGT 363.3 THA 5.01 EL1 3585.0 EL2 100.5 ALF 9.17

LAUNCH DATE JAN 4 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 545.426

RL 147.09 LAL -.00 LOL 103.46 VL 27.414 GAL 4.93 AZL 86.51 HCA 253.07 SMA 126.04 ECC .18727 INC 3.4934 V1 30.288  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.261 GAP 7.38 AZP 91.02 TAL 157.63 TAP 50.70 RCA 102.44 APO 149.64 V2 34.855  
 RC 139.923 GL 23.50 GP -10.95 ZAL 55.82 ZAP 154.83 ETS 337.58 ZAE 128.29 ETE 187.72 ZAC 115.60 ETC 171.25 CLP-157.20

PLANETOCENTRIC CONIC

CS 17.424 VHL 4.174 DLA 40.57 RAL 40.91 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.475 DPA -5.08 RAP 23.37 ECC 1.2868  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.65 21 44 38 4137.84 -28.56 183.69 271.45 59.87 22 53 36 3537.8 -32.33 175.91  
 120.35 4 35 15 2870.19 -28.54 87.02 271.44 59.86 5 23 5 2270.2 -32.31 79.25  
 59.65 21 44 38 4137.84 -28.56 183.69 271.45 59.87 22 53 36 3537.8 -32.33 175.91  
 120.35 4 35 15 2870.19 -28.54 87.02 271.44 59.86 5 23 5 2270.2 -32.31 79.25  
 59.65 21 44 38 4137.84 -28.56 183.69 271.45 59.87 22 53 36 3537.8 -32.33 175.91  
 120.35 4 35 15 2870.19 -28.54 87.02 271.44 59.86 5 23 5 2270.2 -32.31 79.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3789 TRA 2.1184 TC3-3.9214 BAU .9138 SGT 6002.6 SGR 613.6 SCS 456.8 ST 3462.7 SR 564.5 SS 1323.1  
 RDE .4077 RRA .1371 RC3 -.0530 FAU .05342 RRT .7929 RRF .7760 RTF .9804 CRT .9785 CRS -.9483 CST -.9933  
 FDE 1.8304 FRA 2.2635 FC3-2.6543 BSP 19430 SGB 6033.9 R23 -.0072 R13 .9804 LSA 3744.8 MSA 188.4 SSA 14.1  
 BDE 2.4135 BRA 2.1229 BC3 3.9218 FSP -1606 SGI 6022.3 SGT 372.6 THA 4.65 EL1 3506.5 EL2 115.0 ALF 9.07

LAUNCH DATE JAN 4 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 551.267

RL 147.09 LAL -.00 LOL 103.46 VL 27.390 GAL 5.28 AZL 86.60 HCA 256.24 SMA 125.88 ECC .19135 INC 3.4014 V1 30.288  
 RP 108.89 LAP -3.30 LOP 359.68 VP 37.252 GAP 7.78 AZP 90.81 TAL 156.55 TAP 52.79 RCA 101.79 APO 149.97 V2 34.865  
 RC 142.207 GL 22.23 GP -10.35 ZAL 54.07 ZAP 156.45 ETS 337.18 ZAE 127.82 ETE 187.12 ZAC 117.07 ETC 171.19 CLP-158.74

PLANETOCENTRIC CONIC

CS 18.298 VHL 4.277 DLA 39.83 RAL 43.23 RAD 6567.7 VEL 11.819 PTH 2.09 VHP 5.693 DPA -3.89 RAP 24.60 ECC 1.3011  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.74 21 58 50 4133.30 -27.70 182.91 274.23 60.16 23 7 45 3535.3 -31.44 175.19  
 119.26 4 39 34 2895.45 -27.69 88.61 274.22 60.15 5 27 50 2295.5 -31.43 80.90  
 60.74 21 58 50 4133.30 -27.70 182.91 274.23 60.16 23 7 45 3535.3 -31.44 175.19  
 119.26 4 39 34 2895.45 -27.69 88.61 274.22 60.15 5 27 50 2295.5 -31.43 80.90  
 60.74 21 58 50 4133.30 -27.70 182.91 274.23 60.16 23 7 45 3535.3 -31.44 175.19  
 119.26 4 39 34 2895.45 -27.69 88.61 274.22 60.15 5 27 50 2295.5 -31.43 80.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3524 TRA 2.3308 TC3-3.7931 BAU .9278 SGT 6081.5 SGR 598.5 SCS 428.0 ST 3380.2 SR 552.0 SS 1244.4  
 RDE .4086 RRA .1377 RC3 -.0588 FAU .04888 RRT .7701 RRF .7536 RTF .9803 CRT .9714 CRS -.9366 CST -.9929  
 FDE 1.8674 FRA 2.2673 FC3-2.3131 BSP 19737 SGB 6110.9 R23 -.0068 R13 .9803 LSA 3638.8 MSA 194.6 SSA 14.2  
 BDE 2.3876 BRA 2.3349 BC3 3.7932 FSP -1509 SGI 6099.1 SGT 380.7 THA 4.35 EL1 3422.6 EL2 129.5 ALF 9.03



LAUNCH DATE JAN 4 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 27.365 GAL 5.65 AZL 86.69 HCA 259.41 SMA 125.72 ECC .19575 INC 3.3118 V1 30.288
RP 108.66 LAP -3.26 LOP 2.86 VP 37.244 GAP 8.19 AZP 90.61 TAL 155.45 TAP 54.86 RCA 101.11 APO 150.33 V2 34.875
RC 144.478 GL 20.98 GP -9.02 ZAL 52.32 ZAP 157.99 ETS 336.70 ZAE 127.39 ETE 186.61 ZAC 118.62 ETC 171.12 CLP-160.21

DISTANCE 557.077

PLANETOCENTRIC CONIC

C3 19.303 VHL 4.394 DLA 39.08 RAL 45.50 RAD 6567.8 VEL 11.861 PTH 2.10 VHP 5.922 DPA -2.72 RAP 25.93 ECC 1.3177
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.86 22 13 10 4132.87 -26.81 182.13 277.03 60.43 23 22 3 3532.9 -30.53 174.47
118.14 4 43 20 2923.10 -26.80 90.36 277.02 60.42 5 32 3 2323.1 -30.51 82.70
61.86 22 13 10 4132.87 -26.81 182.13 277.03 60.43 23 22 3 3532.9 -30.53 174.47
118.14 4 43 20 2923.10 -26.80 90.36 277.02 60.42 5 32 3 2323.1 -30.51 82.70
61.86 22 13 10 4132.87 -26.81 182.13 277.03 60.43 23 22 3 3532.9 -30.53 174.47
118.14 4 43 20 2923.10 -26.80 90.36 277.02 60.42 5 32 3 2323.1 -30.51 82.70

DIFFERENTIAL CORRECTIONS

TDE 2.3263 TRA 2.5587 TC3-3.6378 BAU .9388
RDE .4121 RRA .1401 RC3 -.0241 FAU .04447
FDE 1.5230 FRA 2.2739 FC3-1.9943 BSP 19942
BDE 2.3625 BRA 2.5626 BC3 3.6378 FSP -1412

MID-COURSE EXECUTION ACCURACY

S6T 6156.1 S6R 587.1 S63 401.6
RRT .7498 RRF .7342 RTF .9801
S6B 6184.1 R23 -.0054 R13 .9801
S6I 6171.9 S62 387.5 THA 4.11

ORBIT DETERMINATION ACCURACY

ST 3297.8 SR 542.1 SS 1173.5
CRT .9630 CRS -.9237 CST -.9926
LSA 3536.3 MSA 201.7 SSA 14.3
EL1 3338.9 EL2 144.2 ALF 9.01

LAUNCH DATE JAN 4 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 27.340 GAL 6.05 AZL 86.78 HCA 262.59 SMA 125.56 ECC .20048 INC 3.2240 V1 30.288
RP 108.63 LAP -3.20 LOP 6.05 VP 37.235 GAP 8.61 AZP 90.42 TAL 154.34 TAP 56.93 RCA 100.39 APO 150.73 V2 34.885
RC 146.734 GL 19.76 GP -9.34 ZAL 50.59 ZAP 159.46 ETS 336.10 ZAE 127.00 ETE 186.16 ZAC 120.23 ETC 171.04 CLP-161.62

DISTANCE 562.852

PLANETOCENTRIC CONIC

C3 20.461 VHL 4.523 DLA 38.32 RAL 47.71 RAD 6567.8 VEL 11.910 PTH 2.12 VHP 6.162 DPA -1.59 RAP 27.33 ECC 1.3367
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.02 22 27 35 4130.63 -25.88 181.36 279.87 60.69 23 36 26 3530.6 -29.57 173.76
116.98 4 46 33 2953.04 -25.87 92.26 279.86 60.68 5 35 46 2353.0 -29.56 84.66
63.02 22 27 35 4130.63 -25.88 181.36 279.87 60.69 23 36 26 3530.6 -29.57 173.76
116.98 4 46 33 2953.04 -25.87 92.26 279.86 60.68 5 35 46 2353.0 -29.56 84.66
63.02 22 27 35 4130.63 -25.88 181.36 279.87 60.69 23 36 26 3530.6 -29.57 173.76
116.98 4 46 33 2953.04 -25.87 92.26 279.86 60.68 5 35 46 2353.0 -29.56 84.66

DIFFERENTIAL CORRECTIONS

TDE 2.2935 TRA 2.7960 TC3-3.4730 BAU .9500
RDE .4173 RRA .1437 RC3 -.0156 FAU .04052
FDE 1.3882 FRA 2.2784 FC3-1.7144 BSP 20222
BDE 2.3311 BRA 2.7997 BC3 3.4730 FSP -1329

MID-COURSE EXECUTION ACCURACY

S6T 6220.2 S6R 577.4 S63 376.7
RRT .7316 RRF .7167 RTF .9799
S6B 6246.9 R23 -.0044 R13 .9799
S6I 6234.5 S62 392.7 THA 3.90

ORBIT DETERMINATION ACCURACY

ST 3206.6 SR 533.1 SS 1105.2
CRT .9534 CRS -.9091 CST -.9923
LSA 3426.9 MSA 209.6 SSA 14.2
EL1 3246.7 EL2 158.9 ALF 9.03

LAUNCH DATE JAN 4 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 27.315 GAL 6.47 AZL 86.86 HCA 265.77 SMA 125.39 ECC .20559 INC 3.1374 V1 30.288
RP 108.59 LAP -3.13 LOP 9.23 VP 37.227 GAP 9.05 AZP 90.23 TAL 153.23 TAP 59.00 RCA 99.61 APO 151.17 V2 34.897
RC 148.977 GL 18.56 GP -8.90 ZAL 48.89 ZAP 160.86 ETS 335.38 ZAE 126.83 ETE 185.78 ZAC 121.90 ETC 170.95 CLP-162.99

DISTANCE 568.588

PLANETOCENTRIC CONIC

C3 21.788 VHL 4.668 DLA 37.56 RAL 49.86 RAD 6567.9 VEL 11.965 PTH 2.13 VHP 6.414 DPA -.48 RAP 28.81 ECC 1.3586
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.21 22 42 9 4128.36 -24.92 180.58 282.72 60.93 23 50 57 3528.4 -28.59 173.03
115.79 4 49 8 2985.52 -24.90 94.33 282.72 60.92 5 38 54 2385.5 -28.58 86.79
64.21 22 42 9 4128.36 -24.92 180.58 282.72 60.93 23 50 57 3528.4 -28.59 173.03
115.79 4 49 8 2985.52 -24.90 94.33 282.72 60.92 5 38 54 2385.5 -28.58 86.79
64.21 22 42 9 4128.36 -24.92 180.58 282.72 60.93 23 50 57 3528.4 -28.59 173.03
115.79 4 49 8 2985.52 -24.90 94.33 282.72 60.92 5 38 54 2385.5 -28.58 86.79

DIFFERENTIAL CORRECTIONS

TDE 2.2587 TRA 3.0477 TC3-3.2935 BAU .9594
RDE .4240 RRA .1489 RC3 -.0097 FAU .03680
FDE 1.2665 FRA 2.2796 FC3-1.4623 BSP 20468
BDE 2.2982 BRA 3.0514 BC3 3.2935 FSP -1251

MID-COURSE EXECUTION ACCURACY

S6T 6278.0 S6R 589.4 S63 333.5
RRT .7160 RRF .7021 RTF .9798
S6B 6303.8 R23 -.0032 R13 .9797
S6I 6291.3 S62 396.6 THA 3.73

ORBIT DETERMINATION ACCURACY

ST 3114.5 SR 525.1 SS 1042.7
CRT .9424 CRS -.8932 CST -.9921
LSA 3318.9 MSA 218.2 SSA 14.1
EL1 3153.6 EL2 173.5 ALF 9.06

LAUNCH DATE JAN 4 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 103.46 VL 27.290 GAL 6.92 AZL 86.95 HCA 268.95 SMA 125.23 ECC .21111 INC 3.0514 V1 30.288
RP 108.56 LAP -3.05 LOP 12.42 VP 37.219 GAP 9.52 AZP 90.06 TAL 152.11 TAP 61.06 RCA 98.79 APO 151.67 V2 34.908
RC 151.204 GL 17.38 GP -8.51 ZAL 47.20 ZAP 162.21 ETS 334.51 ZAE 126.30 ETE 185.45 ZAC 123.63 ETC 170.83 CLP-164.32

DISTANCE 574.282

PLANETOCENTRIC CONIC

C3 23.307 VHL 4.828 DLA 36.80 RAL 51.94 RAD 6567.9 VEL 12.029 PTH 2.15 VHP 6.681 DPA .59 RAP 30.34 ECC 1.3836
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.45 22 56 51 4125.94 -23.92 179.78 285.60 61.16 24 5 37 3525.9 -27.57 172.29
114.55 4 51 3 3020.67 -23.90 96.58 285.59 61.15 5 41 24 2420.7 -27.56 89.10
65.45 22 56 51 4125.94 -23.92 179.78 285.60 61.16 24 5 37 3525.9 -27.57 172.29
114.55 4 51 3 3020.67 -23.90 96.58 285.59 61.15 5 41 24 2420.7 -27.56 89.10
65.45 22 56 51 4125.94 -23.92 179.78 285.60 61.16 24 5 37 3525.9 -27.57 172.29
114.55 4 51 3 3020.67 -23.90 96.58 285.59 61.15 5 41 24 2420.7 -27.56 89.10

DIFFERENTIAL CORRECTIONS

TDE 2.2215 TRA 3.3142 TC3-3.1029 BAU .9669
RDE .4321 RRA .1557 RC3 -.0059 FAU .03333
FDE 1.1558 FRA 2.2834 FC3-1.2379 BSP 20702
BDE 2.2632 BRA 3.3179 BC3 3.1029 FSP -1178

MID-COURSE EXECUTION ACCURACY

S6T 6329.0 S6R 582.4 S63 332.0
RRT .7032 RRF .6901 RTF .9796
S6B 6353.9 R23 -.0020 R13 .9796
S6I 6341.4 S62 399.1 THA 3.59

ORBIT DETERMINATION ACCURACY

ST 3021.7 SR 517.5 SS 985.3
CRT .9299 CRS -.8760 CST -.9919
LSA 3212.1 MSA 227.3 SSA 13.9
EL1 3059.9 EL2 187.9 ALF 9.08

LAUNCH DATE JAN 4 1969

FLIGHT TIME 206.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 579.927

RL 147.09 LAL -.00 LOL 103.46 VL 27.264 GAL 7.40 AZL 87.03 HCA 272.14 SMA 125.06 ECC .21706 INC 2.9656 V1 30.288  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.211 GAP 10.00 AZP 89.89 TAL 150.99 TAP 63.12 RCA 97.92 APO 152.21 V2 34.920  
 RC 153.416 GL 16.23 GP -8.15 ZAL 45.56 ZAP 163.50 ETS 333.45 ZAE 125.98 ETE 185.16 ZAC 125.39 ETC 170.68 CLP-165.60

PLANETOCENTRIC CONIC

C3 25.043 VHL 5.004 DLA 36.03 RAL 53.96 RAD 6568.0 VEL 12.100 PTH 2.17 VHP 6.962 DPA 1.64 RAP 31.94 ECC 1.4121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.73 23 11 45 4123.22 -22.89 178.94 288.49 61.38 24 20 28 3523.2 -26.53 171.51  
 113.27 4 52 13 3058.62 -22.88 99.02 288.48 61.37 5 43 12 2458.6 -26.51 91.59  
 66.73 23 11 45 4123.22 -22.89 178.94 288.49 61.38 24 20 28 3523.2 -26.53 171.51  
 113.27 4 52 13 3058.62 -22.88 99.02 288.48 61.37 5 43 12 2458.6 -26.51 91.59  
 66.73 23 11 45 4123.22 -22.89 178.94 288.49 61.38 24 20 28 3523.2 -26.53 171.51  
 113.27 4 52 13 3058.62 -22.88 99.02 288.48 61.37 5 43 12 2458.6 -26.51 91.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1868 TRA 3.6000 TC3-2.6975 BAU .9701 SGT 6377.1 SGR 556.7 SCS 312.2 ST 2935.1 SR 510.5 SS 935.2  
 RDE .4417 RRA .1644 RC3 -.0031 FAU .02992 RRT .6934 RRF .6815 RTF .9794 CRT .9163 CRS -.8579 CST -.9918  
 FDE 1.0586 FRA 2.2909 FC3-1.0343 BSP 20821 SGB 6401.3 R23 -.0004 R13 .9794 LSA 3113.5 MSA 236.5 SSA 13.7  
 BDE 2.2309 BRA 3.6046 BC3 2.6975 FSP -1104 SGI 6388.8 SGT 400.4 THA 3.48 EL1 2972.3 EL2 201.9 ALF 9.10

LAUNCH DATE JAN 4 1969

FLIGHT TIME 208.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 585.518

RL 147.09 LAL -.00 LOL 103.46 VL 27.238 GAL 7.92 AZL 87.12 HCA 275.32 SMA 124.90 ECC .22351 INC 2.8794 V1 30.288  
 RP 108.46 LAP -2.87 LOP 18.79 VP 37.204 GAP 10.51 AZP 89.73 TAL 149.87 TAP 65.19 RCA 96.98 APO 152.81 V2 34.932  
 RC 155.812 GL 15.11 GP -7.83 ZAL 43.94 ZAP 164.74 ETS 332.18 ZAE 125.68 ETE 184.91 ZAC 127.20 ETC 170.51 CLP-166.86

PLANETOCENTRIC CONIC

C3 27.028 VHL 5.199 DLA 35.26 RAL 55.90 RAD 6568.1 VEL 12.182 PTH 2.19 VHP 7.261 DPA 2.67 RAP 33.59 ECC 1.4448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.05 23 26 52 4120.01 -21.84 178.07 291.39 61.60 24 35 32 3520.0 -25.45 170.70  
 111.95 4 52 35 3099.56 -21.82 101.66 291.38 61.59 5 44 15 2499.6 -25.44 94.29  
 68.05 23 26 52 4120.01 -21.84 178.07 291.39 61.60 24 35 32 3520.0 -25.45 170.70  
 111.95 4 52 35 3099.56 -21.82 101.66 291.38 61.59 5 44 15 2499.6 -25.44 94.29  
 68.05 23 26 52 4120.01 -21.84 178.07 291.39 61.60 24 35 32 3520.0 -25.45 170.70  
 111.95 4 52 35 3099.56 -21.82 101.66 291.38 61.59 5 44 15 2499.6 -25.44 94.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1458 TRA 3.9006 TC3-2.6938 BAU .9734 SGT 6415.3 SGR 550.6 SCS 293.6 ST 2845.1 SR 502.8 SS 887.7  
 RDE .4517 RRA .1744 RC3 -.0020 FAU .02887 RRT .6856 RRF .6745 RTF .9793 CRT .9009 CRS -.8382 CST -.9917  
 FDE .9874 FRA 2.2970 FC3 -.8607 BSP 21028 SGB 6438.9 R23 .0006 R13 .9793 LSA 3012.5 MSA 245.8 SSA 13.5  
 BDE 2.1929 BRA 3.9045 BC3 2.6938 FSP -1041 SGI 6426.5 SGT 400.2 THA 3.38 EL1 2881.1 EL2 215.5 ALF 9.10

LAUNCH DATE JAN 4 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 591.047

RL 147.09 LAL -.00 LOL 103.46 VL 27.212 GAL 8.47 AZL 87.21 HCA 278.51 SMA 124.73 ECC .23050 INC 2.7921 V1 30.288  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.197 GAP 11.05 AZP 89.59 TAL 148.76 TAP 67.27 RCA 95.98 APO 153.48 V2 34.945  
 RC 157.792 GL 14.02 GP -7.54 ZAL 42.38 ZAP 165.93 ETS 330.65 ZAE 125.40 ETE 184.70 ZAC 129.03 ETC 170.31 CLP-168.09

PLANETOCENTRIC CONIC

C3 29.297 VHL 5.413 DLA 34.49 RAL 57.76 RAD 6568.2 VEL 12.275 PTH 2.21 VHP 7.578 DPA 3.67 RAP 35.28 ECC 1.4822  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.42 23 42 16 4118.04 -20.76 177.13 294.30 61.81 24 50 52 3516.0 -24.36 169.81  
 110.58 4 52 3 3143.76 -20.74 104.52 294.29 61.80 5 44 27 2543.8 -24.35 97.20  
 69.42 23 42 16 4118.04 -20.76 177.13 294.30 61.81 24 50 52 3516.0 -24.36 169.81  
 110.58 4 52 3 3143.76 -20.74 104.52 294.29 61.80 5 44 27 2543.8 -24.35 97.20  
 69.42 23 42 16 4118.04 -20.76 177.13 294.30 61.81 24 50 52 3516.0 -24.36 169.81  
 110.58 4 52 3 3143.76 -20.74 104.52 294.29 61.80 5 44 27 2543.8 -24.35 97.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1041 TRA 4.2194 TC3-2.4863 BAU .9738 SGT 6447.7 SGR 544.7 SCS 276.3 ST 2758.7 SR 494.8 SS 845.3  
 RDE .4625 RRA .1859 RC3 -.0015 FAU .02399 RRT .6802 RRF .6697 RTF .9792 CRT .8842 CRS -.8176 CST -.9917  
 FDE .8851 FRA 2.3049 FC3 -.7088 BSP 21212 SGB 6470.6 R23 .0015 R13 .9793 LSA 2916.3 MSA 254.9 SSA 13.2  
 BDE 2.1543 BRA 4.2235 BC3 2.4863 FSP -983 SGI 6458.4 SGT 398.6 THA 3.30 EL1 2793.4 EL2 228.3 ALF 9.07

LAUNCH DATE JAN 4 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 596.506

RL 147.09 LAL -.00 LOL 103.46 VL 27.186 GAL 9.06 AZL 87.30 HCA 281.70 SMA 124.57 ECC .23808 INC 2.7034 V1 30.288  
 RP 108.41 LAP -2.65 LOP 23.18 VP 37.190 GAP 11.61 AZP 89.45 TAL 147.65 TAP 69.35 RCA 94.91 APO 154.23 V2 34.957  
 RC 159.953 GL 12.96 GP -7.27 ZAL 40.86 ZAP 167.09 ETS 328.80 ZAE 125.13 ETE 184.51 ZAC 130.90 ETC 170.07 CLP-169.30

PLANETOCENTRIC CONIC

C3 31.897 VHL 5.648 DLA 33.73 RAL 59.55 RAD 6568.3 VEL 12.380 PTH 2.23 VHP 7.916 DPA 4.64 RAP 37.01 ECC 1.5249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.86 0 1 57 4111.09 -19.66 176.12 297.22 62.02 1 10 28 3511.1 -23.24 168.85  
 109.14 4 50 33 3191.38 -19.65 107.61 297.21 62.01 5 43 45 2591.4 -23.23 100.34  
 70.86 0 1 57 4111.09 -19.66 176.12 297.22 62.02 1 10 28 3511.1 -23.24 168.85  
 109.14 4 50 33 3191.38 -19.65 107.61 297.21 62.01 5 43 45 2591.4 -23.23 100.34  
 110.00 5 37 59 3046.42 -23.86 98.80 299.48 64.76 6 28 45 2446.4 -27.05 90.89  
 110.00 4 13 42 3304.05 -15.55 113.96 294.79 59.17 5 8 46 2704.0 -19.53 107.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0821 TRA 4.5593 TC3-2.2775 BAU .9712 SGT 6475.0 SGR 538.6 SCS 260.3 ST 2677.0 SR 486.2 SS 807.8  
 RDE .4739 RRA .1991 RC3 -.0014 FAU .02126 RRT .6769 RRF .6671 RTF .9793 CRT .8661 CRS -.7962 CST -.9919  
 FDE .8109 FRA 2.3153 FC3 -.5770 BSP 21362 SGB 6497.3 R23 .0023 R13 .9793 LSA 2825.9 MSA 263.4 SSA 12.9  
 BDE 2.1159 BRA 4.5636 BC3 2.2775 FSP -926 SGI 6485.3 SGT 395.9 THA 3.23 EL1 2710.2 EL2 240.1 ALF 9.01

LAUNCH DATE JAN 4 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 601.882

RL 147.09 LAL -0.00 LOL 103.46 VL 27.161 GAL 9.69 AZL 87.39 HCA 284.89 SMA 124.40 ECC .24634 INC 2.6125 V1 30.288  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.183 GAP 12.22 AZP 89.33 TAL 146.57 TAP 71.46 RCA 93.76 APO 155.05 V2 34.970  
 RC 182.067 GL 11.92 GP -7.03 ZAL 39.39 ZAP 168.20 ETS 326.53 ZAE 124.86 ETE 184.34 ZAC 132.78 ETC 169.79 CLP-170.49

PLANETOCENTRIC CONIC

C3 34.880 VHL 5.906 DLA 32.97 RAL 61.25 RAD 6568.4 VEL 12.500 PTH 2.26 VHP 8.277 DPA 5.58 RAP 36.78 ECC 1.5740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.36 0 18 11 4104.63 -18.54 175.00 300.13 62.24 1 26 36 3504.6 -22.11 167.78  
 107.64 4 47 56 3242.93 -18.53 110.97 300.13 62.23 5 41 59 2642.9 -22.10 103.75  
 72.36 0 18 11 4104.63 -18.54 175.00 300.13 62.24 1 26 36 3504.6 -22.11 167.78  
 107.64 4 47 56 3242.93 -18.53 110.97 300.13 62.23 5 41 59 2642.9 -22.10 103.75  
 110.00 6 11 26 2986.24 -25.55 94.74 303.76 66.48 7 1 12 2386.2 -26.50 86.81  
 110.00 3 53 52 3409.31 -11.80 119.80 296.10 57.68 4 50 41 2809.3 -15.98 113.19

DIFFERENTIAL CORRECTIONS

TDE 2.0195 TRA 4.9214 TC3-2.0699 BAU .9652  
 RDE .4857 RRA .2140 RC3 -.0015 FAU .01867  
 FDE .7440 FRA 2.3284 FC3 -.4635 BSP 21500  
 BDE 2.0770 BRA 4.9260 BC3 2.0699 FSP -874

MID-COURSE EXECUTION ACCURACY

SGT 6496.3 SGR 532.2 SG3 245.4  
 RRT .6755 RRF .6662 RTF .9794  
 SGB 6518.1 R23 .0029 R13 .9794  
 SGI 6506.3 SGT 391.8 THA 3.18

ORBIT DETERMINATION ACCURACY

ST 2599.7 SR 477.0 SS 774.8  
 CRT .8466 CRS -.7741 CST -.9921  
 LSA 2740.9 MSA 271.2 SSA 12.6  
 EL1 2631.2 EL2 250.8 ALF 8.91

LAUNCH DATE JAN 4 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 607.164

RL 147.09 LAL -0.00 LOL 103.46 VL 27.135 GAL 10.38 AZL 87.48 HCA 288.09 SMA 124.24 ECC .25533 INC 2.5188 V1 30.288  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.178 GAP 12.87 AZP 89.22 TAL 145.50 TAP 73.59 RCA 92.52 APO 155.96 V2 34.983  
 RC 184.221 GL 10.92 GP -6.81 ZAL 37.97 ZAP 169.26 ETS 323.75 ZAE 124.59 ETE 184.19 ZAC 134.68 ETC 169.46 CLP-171.68

PLANETOCENTRIC CONIC

C3 38.311 VHL 6.190 DLA 32.21 RAL 62.88 RAD 6568.5 VEL 12.636 PTH 2.29 VHP 8.666 DPA 6.50 RAP 40.58 ECC 1.6305  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.96 0 35 3 4096.13 -17.41 173.72 303.05 62.46 1 43 19 3496.1 -20.96 166.55  
 108.04 4 44 2 3298.85 -17.40 114.63 303.04 62.45 5 39 1 2698.8 -20.95 107.46  
 73.96 0 35 3 4096.13 -17.41 173.72 303.05 62.46 1 43 19 3496.1 -20.96 166.55  
 108.04 4 44 2 3298.85 -17.40 114.63 303.04 62.45 5 39 1 2698.8 -20.95 107.46  
 110.00 6 36 32 2931.11 -26.48 92.44 307.60 67.55 7 25 44 2351.1 -29.29 84.38  
 110.00 3 41 43 3491.86 -8.76 124.26 297.85 56.82 4 39 54 2891.9 -13.06 117.81

DIFFERENTIAL CORRECTIONS

TDE 1.9804 TRA 5.3117 TC3-1.8619 BAU .9556  
 RDE .4988 RRA .2308 RC3 -.0013 FAU .01614  
 FDE .6855 FRA 2.3461 FC3 -.3647 BSP 21543  
 BDE 2.0420 BRA 5.3187 BC3 1.8619 FSP -821

MID-COURSE EXECUTION ACCURACY

SGT 6515.2 SGR 525.5 SG3 231.8  
 RRT .6761 RRF .6674 RTF .9797  
 SGB 6536.3 R23 .0036 R13 .9797  
 SGI 6524.9 SGT 388.6 THA 3.13

ORBIT DETERMINATION ACCURACY

ST 2530.8 SR 467.2 SS 747.1  
 CRT .8264 CRS -.7525 CST -.9926  
 LSA 2665.4 MSA 277.8 SSA 12.3  
 EL1 2560.4 EL2 260.0 ALF 8.76

LAUNCH DATE JAN 4 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 612.334

RL 147.09 LAL -0.00 LOL 103.46 VL 27.109 GAL 11.12 AZL 87.58 HCA 291.28 SMA 124.08 ECC .26517 INC 2.4216 V1 30.288  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.170 GAP 13.56 AZP 89.12 TAL 144.46 TAP 75.75 RCA 91.18 APO 156.98 V2 34.996  
 RC 186.326 GL 9.95 GP -6.80 ZAL 36.62 ZAP 170.28 ETS 320.30 ZAE 124.33 ETE 184.07 ZAC 136.58 ETC 169.08 CLP-172.65

PLANETOCENTRIC CONIC

C3 42.271 VHL 6.502 DLA 31.47 RAL 64.42 RAD 6568.6 VEL 12.792 PTH 2.33 VHP 9.084 DPA 7.39 RAP 42.41 ECC 1.6937  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.67 0 52 49 4084.56 -16.27 172.23 305.96 62.69 2 0 54 3484.6 -19.80 165.09  
 104.33 4 38 32 3360.08 -16.25 118.66 305.95 62.68 5 34 32 2760.1 -19.78 111.53  
 75.67 0 52 49 4084.56 -16.27 172.23 305.96 62.69 2 0 54 3484.6 -19.80 165.09  
 104.33 4 38 32 3360.08 -16.25 118.66 305.95 62.68 5 34 32 2760.1 -19.78 111.53  
 110.00 6 57 45 2927.56 -27.09 90.87 311.26 68.30 7 46 32 2327.6 -29.78 82.72  
 110.00 3 32 47 3585.07 -6.01 128.15 299.81 56.29 4 32 12 2965.1 -10.40 121.81

DIFFERENTIAL CORRECTIONS

TDE 1.9373 TRA 5.7232 TC3-1.6627 BAU .9396  
 RDE .5103 RRA .2485 RC3 -.0014 FAU .01381  
 FDE .6307 FRA 2.3654 FC3 -.2829 BSP 21667  
 BDE 2.0033 BRA 5.7308 BC3 1.6627 FSP -777

MID-COURSE EXECUTION ACCURACY

SGT 6525.3 SGR 517.9 SG3 218.9  
 RRT .6778 RRF .6694 RTF .9801  
 SGB 6545.9 R23 .0038 R13 .9801  
 SGI 6534.8 SGT 380.2 THA 3.09

ORBIT DETERMINATION ACCURACY

ST 2463.3 SR 456.3 SS 722.2  
 CRT .8047 CRS -.7300 CST -.9930  
 LSA 2591.8 MSA 283.2 SSA 12.0  
 EL1 2490.9 EL2 267.9 ALF 8.58

LAUNCH DATE JAN 4 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 617.372

RL 147.09 LAL -0.00 LOL 103.46 VL 27.083 GAL 11.92 AZL 87.68 HCA 294.48 SMA 123.92 ECC .27594 INC 2.3199 V1 30.288  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.164 GAP 14.31 AZP 89.04 TAL 143.46 TAP 77.95 RCA 89.72 APO 158.11 V2 35.010  
 RC 188.410 GL 9.02 GP -6.42 ZAL 35.33 ZAP 171.24 ETS 315.98 ZAE 124.05 ETE 183.95 ZAC 138.49 ETC 168.65 CLP-174.03

PLANETOCENTRIC CONIC

C3 46.855 VHL 6.845 DLA 30.73 RAL 65.87 RAD 6568.8 VEL 12.970 PTH 2.36 VHP 9.536 DPA 8.25 RAP 44.25 ECC 1.7711  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.54 1 11 52 4068.66 -15.12 170.41 308.86 62.92 2 19 41 3468.7 -18.63 163.32  
 102.46 4 31 5 3427.76 -15.11 123.15 308.85 62.92 5 28 13 2827.8 -18.62 116.05  
 77.54 1 11 52 4068.66 -15.12 170.41 308.86 62.92 2 19 41 3468.7 -18.63 163.32  
 102.46 4 31 5 3427.76 -15.11 123.15 308.85 62.92 5 28 13 2827.8 -18.62 116.05  
 110.00 7 16 26 2911.38 -27.49 89.79 314.79 68.83 8 4 58 2311.4 -30.11 81.58  
 110.00 3 25 42 3633.04 -3.43 131.72 301.89 55.97 4 26 15 3033.0 -7.87 125.45

DIFFERENTIAL CORRECTIONS

TDE 1.8953 TRA 6.1690 TC3-1.4694 BAU .9204  
 RDE .5227 RRA .2680 RC3 -.0012 FAU .01159  
 FDE .5819 FRA 2.3889 FC3 -.2141 BSP 21765  
 BDE 1.9681 BRA 6.1748 BC3 1.4694 FSP -734

MID-COURSE EXECUTION ACCURACY

SGT 6530.7 SGR 509.5 SG3 206.9  
 RRT .6808 RRF .6727 RTF .9807  
 SGB 6550.5 R23 .0039 R13 .9807  
 SGI 6539.9 SGT 372.6 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 2401.7 SR 444.5 SS 701.2  
 CRT .7824 CRS -.7078 CST -.9936  
 LSA 2524.9 MSA 287.2 SSA 11.7  
 EL1 2427.1 EL2 273.9 ALF 8.35

LAUNCH DATE JAN 5 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 16 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 104.48 VL 20.685 GAL 10.33 AZL 85.92 HCA 55.93 SMA 96.41 ECC .54742 INC 4.0757 V1 30.288  
 RP 107.57 LAP 3.38 LOP 160.35 VP 33.030 GAP -32.59 AZP 87.71 TAL 171.21 TAP 227.14 RCA 43.63 APO 149.18 V2 35.229  
 RC 53.197 GL 7.73 GP 2.77 ZAL 69.92 ZAP 22.66 ETS 187.60 ZAE 155.09 ETE 197.52 ZAC 96.54 ETC 166.30 CLP 22.50

Distance 149.222

Planocentric Conic: C3 115.488 VHL 10.747 DLA 20.36 RAL 29.72 RAD 6570.2 VEL 15.389 PTH 2.75 VHP 19.405 DPA .68 RAP 2.80 ECC 2.9006  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 30 3328.75 -24.05 119.62 290.21 74.59 4 23 58 2728.8 -25.94 111.46  
 90.00 21 14 16 4585.10 12.13 193.81 276.82 64.22 22 30 41 3985.1 8.56 186.95  
 100.00 5 3 7 3023.66 -26.14 97.80 290.83 74.96 5 53 30 2423.7 -27.95 89.47  
 100.00 22 22 20 4365.43 14.07 176.68 275.84 63.35 23 35 6 3765.4 10.39 169.84  
 110.00 6 39 40 2721.55 -31.43 76.43 292.41 75.82 7 25 2 2121.6 -33.06 67.59  
 110.00 23 2 16 4240.30 18.91 164.54 273.18 60.98 24 12 56 3640.3 14.90 157.72

Differential Corrections: TDE -.4940 TRA-1.3327 TC3 -.0967 BAU .1554 SGT 828.9 SGR 438.9 S63 37.7 ST 348.0 SR 414.5 S5 321.0  
 RDE -.7735 RRA .2424 RC3 -.0279 FAU .01513 RRT .0456 RRF -.0482 RTF -.6544 CRT .6879 CR8 .8082 CST .9816  
 FDE .3099 FRA .5653 FC3 -.1134 B5P 2282 SGB 938.0 R23 -.0068 R13 -.6547 LSA 587.5 MSA 225.0 S3A 13.7  
 BDE .9178 BRA 1.3545 BC3 .1007 F5P -81 S61 829.3 S62 438.3 THA 1.92 EL1 498.9 EL2 209.9 ALF 52.16

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 5 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 18 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 104.48 VL 21.245 GAL 9.87 AZL 86.05 HCA 59.17 SMA 98.08 ECC .52133 INC 3.9487 V1 30.288  
 RP 107.59 LAP 3.39 LOP 163.60 VP 33.376 GAP -30.97 AZP 87.97 TAL 170.68 TAP 229.85 RCA 46.95 APO 149.21 V2 35.222  
 RC 51.611 GL 8.14 GP 2.87 ZAL 69.16 ZAP 21.12 ETS 188.51 ZAE 156.54 ETE 198.90 ZAC 98.14 ETC 166.24 CLP 20.94

Distance 155.512

Planocentric Conic: C3 103.891 VHL 10.183 DLA 21.03 RAL 30.35 RAD 6570.0 VEL 15.001 PTH 2.70 VHP 18.551 DPA 1.47 RAP 4.29 ECC 2.7065  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 23 19 3334.65 -23.95 120.02 289.33 74.42 4 18 54 2734.7 -25.85 111.87  
 90.00 21 24 29 4534.64 10.62 190.88 276.24 63.60 22 40 4 3934.6 6.99 184.08  
 100.00 4 58 48 3026.74 -26.09 98.02 289.98 74.86 5 49 15 2426.7 -27.91 89.69  
 100.00 22 31 41 4317.78 12.60 173.91 275.21 62.67 23 43 39 3717.8 8.84 167.14  
 110.00 6 36 37 2719.68 -31.47 76.29 291.58 75.90 7 22 17 2119.7 -33.08 67.44  
 110.00 23 10 2 4197.61 17.48 162.05 272.46 60.15 24 19 59 3597.6 13.38 155.34

Differential Corrections: TDE -.4948 TRA-1.3258 TC3 -.0985 BAU .1429 SGT 869.7 SGR 442.7 S63 41.2 ST 367.5 SR 418.9 S5 337.0  
 RDE -.7411 RRA .2240 RC3 -.0305 FAU .01554 RRT .0536 RRF -.0559 RTF -.6737 CRT .6911 CR8 .8109 CST .9817  
 FDE .3228 FRA .5843 FC3 -.1297 B5P 2389 SGB 975.9 R23 -.0072 R13 -.6739 LSA 609.0 MSA 230.4 S3A 13.9  
 BDE .8911 BRA 1.3446 BC3 .1031 F5P -90 S61 870.2 S62 441.8 THA 2.11 EL1 513.4 EL2 216.7 ALF 50.38

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 5 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 20 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 104.48 VL 21.765 GAL 9.41 AZL 86.17 HCA 62.41 SMA 99.73 ECC .49628 INC 3.8301 V1 30.288  
 RP 107.61 LAP 3.39 LOP 166.84 VP 33.701 GAP -29.44 AZP 88.22 TAL 170.18 TAP 232.59 RCA 50.24 APO 149.22 V2 35.215  
 RC 50.116 GL 8.55 GP 2.98 ZAL 68.48 ZAP 19.61 ETS 189.56 ZAE 158.15 ETE 200.53 ZAC 99.74 ETC 166.16 CLP 19.39

Distance 161.866

Planocentric Conic: C3 93.155 VHL 9.852 DLA 21.65 RAL 30.91 RAD 6569.8 VEL 14.646 PTH 2.65 VHP 17.731 DPA 2.27 RAP 5.78 ECC 2.5331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 17 46 3339.78 -23.85 120.37 288.31 74.27 4 13 26 2739.8 -25.78 112.23  
 90.00 21 34 28 4483.43 9.05 187.93 275.58 63.06 22 49 11 3883.4 5.37 181.19  
 100.00 4 54 11 3028.88 -26.05 98.16 288.98 74.80 5 44 40 2428.9 -27.88 89.84  
 100.00 22 40 44 4269.57 11.08 171.14 274.51 62.06 23 51 53 3669.6 7.26 164.44  
 110.00 6 33 59 2718.66 -31.52 76.07 290.60 76.02 7 19 16 2118.7 -33.11 67.21  
 110.00 23 17 25 4154.55 16.01 159.58 271.67 59.39 24 26 40 3554.6 11.83 152.97

Differential Corrections: TDE -.4943 TRA-1.3157 TC3 -.0981 BAU .1289 SGT 910.1 SGR 445.7 S63 44.9 ST 386.9 SR 422.9 S5 353.4  
 RDE -.7092 RRA .2061 RC3 -.0331 FAU .01600 RRT .0617 RRF -.0643 RTF -.6927 CRT .6943 CR8 .8139 CST .9817  
 FDE .3380 FRA .6032 FC3 -.1487 B5P 2551 SGB 1013.3 R23 -.0082 R13 -.6930 LSA 630.8 MSA 235.1 S3A 14.1  
 BDE .8645 BRA 1.3318 BC3 .1035 F5P -100 S61 910.6 S62 444.6 THA 2.27 EL1 528.0 EL2 223.0 ALF 48.65

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 5 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 22 1969

Heliocentric Conic: RL 147.09 LAL -.00 LOL 104.48 VL 22.248 GAL 8.95 AZL 86.28 HCA 65.65 SMA 101.35 ECC .47227 INC 3.7184 V1 30.288  
 RP 107.64 LAP 3.39 LOP 170.09 VP 34.007 GAP -27.97 AZP 89.47 TAL 169.71 TAP 235.36 RCA 53.48 APO 149.21 V2 35.207  
 RC 48.721 GL 8.96 GP 3.11 ZAL 67.89 ZAP 18.12 ETS 190.80 ZAE 159.91 ETE 202.48 ZAC 101.35 ETC 166.06 CLP 17.86

Distance 168.281

Planocentric Conic: C3 83.737 VHL 9.151 DLA 22.26 RAL 31.39 RAD 6569.6 VEL 14.321 PTH 2.60 VHP 16.941 DPA 3.09 RAP 7.28 ECC 2.3781  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 11 50 3344.24 -23.77 120.67 287.14 74.14 4 7 34 2744.2 -25.72 112.54  
 90.00 21 44 12 4431.55 7.44 184.97 274.84 62.60 22 58 3 3831.5 3.71 178.28  
 100.00 4 49 16 3030.11 -26.03 98.25 287.83 74.76 5 39 46 2430.1 -27.87 89.93  
 100.00 22 49 28 4220.91 9.51 168.38 273.73 61.53 23 59 49 3620.9 5.64 161.74  
 110.00 6 30 46 2712.55 -31.58 75.77 289.48 76.19 7 15 58 2112.5 -33.16 66.90  
 110.00 23 24 27 4111.24 14.49 157.14 270.81 58.70 24 32 58 3511.2 10.24 150.62

Differential Corrections: TDE -.4944 TRA-1.3050 TC3 -.0980 BAU .1148 SGT 951.9 SGR 448.1 S63 49.1 ST 407.4 SR 426.2 S5 370.6  
 RDE -.6779 RRA .1888 RC3 -.0358 FAU .01651 RRT .0707 RRF -.0737 RTF -.7111 CRT .6983 CR8 .8173 CST .9817  
 FDE .3501 FRA .8224 FC3 -.1707 B5P 2721 SGB 1052.1 R23 -.0093 R13 -.7114 LSA 653.9 MSA 239.2 S3A 14.3  
 BDE .8391 BRA 1.3188 BC3 .1025 F5P -112 S61 952.6 S62 446.7 THA 2.44 EL1 543.4 EL2 228.7 ALF 46.85

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 5 1969 FLIGHT TIME 78.00 ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC DISTANCE 174.749  
 RL 147.09 LAL -.00 LOL 104.48 VL 22.697 GAL 8.51 AZL 86.39 HCA 68.89 SMA 102.93 ECC .44933 INC 3.6122 V1 30.288  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.294 GAP -26.58 AZP 88.70 TAL 169.29 TAP 238.17 RCA 56.68 APO 149.19 V2 35.198  
 RC 47.437 GL 9.38 GP 3.25 ZAL 67.37 ZAP 16.64 ETS 192.27 ZAE 161.82 ETE 204.89 ZAC 102.96 ETC 165.94 CLP 16.33

PLANETOCENTRIC CONIC  
 C3 75.316 VHL 8.678 DLA 22.84 RAL 31.78 RAD 6569.5 VEL 14.024 PTH 2.56 VHP 16.182 DPA 3.92 RAP 8.78 ECC 2.2395  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 5 31 3348.09 -23.70 120.92 285.83 74.03 4 1 20 2748.1 -25.66 112.81  
 90.00 21 53 40 4379.08 5.79 182.00 274.03 62.23 23 6 39 3779.1 2.03 175.34  
 100.00 4 44 1 3030.50 -26.02 98.28 286.55 74.74 5 34 32 2430.5 -27.86 89.96  
 100.00 22 57 51 4171.90 7.91 165.62 272.87 61.08 24 7 23 3571.9 3.99 159.03  
 110.00 6 27 18 2707.38 -31.67 75.39 288.21 76.40 7 12 26 2107.4 -33.21 66.51  
 110.00 23 31 4 4067.79 12.94 154.73 269.87 58.08 24 38 52 3467.8 8.63 148.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4950 TRA-1.2928 TC3 -.0919 BAU .1003 SGT 994.9 SGR 449.8 SCS 53.7 ST 429.0 SR 429.0 SS 388.4  
 RDE -.6473 RRA .1721 RC3 -.0384 FAU .01708 RRT .0808 RRF -.0844 RTF -.7286 CRT .7032 CRS .8211 CST .9819  
 FDE .3650 FRA .6418 FC3 -.1964 BSP 2901 SGB 1091.9 R23 -.0106 R13 -.7290 LSA 678.1 MSA 242.5 SSA 14.5  
 BDE .8149 BRA 1.3042 BC3 .0996 FSP -124 SGI 995.8 SGT 447.9 THA 2.62 EL1 559.8 EL2 233.7 ALF 45.00

LAUNCH DATE JAN 5 1969 FLIGHT TIME 80.00 ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC DISTANCE 181.266  
 RL 147.09 LAL -.00 LOL 104.48 VL 23.115 GAL 8.06 AZL 86.49 HCA 72.12 SMA 104.48 ECC .42746 INC 3.5107 V1 30.288  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.562 GAP -25.25 AZP 88.92 TAL 168.91 TAP 241.03 RCA 59.82 APO 149.15 V2 35.189  
 RC 46.274 GL 9.80 GP 3.40 ZAL 66.94 ZAP 15.18 ETS 194.06 ZAE 163.86 ETE 207.96 ZAC 104.57 ETC 165.78 CLP 14.81

PLANETOCENTRIC CONIC  
 C3 67.783 VHL 8.233 DLA 23.39 RAL 32.10 RAD 6569.3 VEL 13.753 PTH 2.51 VHP 15.451 DPA 4.77 RAP 10.28 ECC 2.1155  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 58 30 3351.42 -23.63 121.15 284.39 73.93 3 54 41 2751.4 -25.61 113.04  
 90.00 22 2 53 4326.15 4.10 179.03 273.14 61.96 23 14 59 3726.2 .32 172.39  
 100.00 4 38 29 3030.10 -26.03 98.25 285.13 74.76 5 28 59 2430.1 -27.87 89.93  
 100.00 23 5 54 4122.71 6.28 162.88 271.94 60.72 24 14 37 3522.7 2.33 156.32  
 110.00 6 23 37 2701.22 -31.76 74.94 286.80 76.65 7 8 38 2101.2 -33.27 66.04  
 110.00 23 37 16 4024.36 11.36 152.36 268.87 57.54 24 44 21 3424.4 7.00 145.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4964 TRA-1.2798 TC3 -.0854 BAU .0858 SGT 1039.6 SGR 450.7 SCS 58.6 ST 451.8 SR 431.2 SS 407.2  
 RDE -.8174 RRA .1559 RC3 -.0409 FAU .01772 RRT .0922 RRF -.0964 RTF -.7454 CRT .7091 CRS .8253 CST .9821  
 FDE .3809 FRA .6616 FC3 -.2263 BSP 3078 SGB 1133.1 R23 -.0120 R13 -.7458 LSA 703.9 MSA 245.1 SSA 14.7  
 BDE .7922 BRA 1.2893 BC3 .0947 FSP -138 SGI 1040.7 SGT 448.4 THA 2.81 EL1 577.4 EL2 237.9 ALF 43.11

LAUNCH DATE JAN 5 1969 FLIGHT TIME 82.00 ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC DISTANCE 187.826  
 RL 147.09 LAL -.00 LOL 104.48 VL 23.503 GAL 7.63 AZL 86.59 HCA 75.33 SMA 105.99 ECC .40665 INC 3.4129 V1 30.288  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.813 GAP -23.98 AZP 89.14 TAL 168.57 TAP 243.92 RCA 62.89 APO 149.09 V2 35.179  
 RC 45.244 GL 10.22 GP 3.56 ZAL 66.59 ZAP 13.75 ETS 196.26 ZAE 166.01 ETE 212.02 ZAC 106.18 ETC 165.60 CLP 13.29

PLANETOCENTRIC CONIC  
 C3 61.043 VHL 7.813 DLA 23.92 RAL 32.33 RAD 6569.1 VEL 13.506 PTH 2.47 VHP 14.748 DPA 5.63 RAP 11.77 ECC 2.0046  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 46 3354.29 -23.58 121.34 282.83 73.85 3 47 40 2754.3 -25.57 113.24  
 90.00 22 11 48 4272.91 2.39 176.05 272.17 61.78 23 23 1 3672.9 -1.40 169.42  
 100.00 4 32 41 3028.92 -26.05 98.17 283.59 74.79 5 23 10 2428.9 -27.88 89.85  
 100.00 23 13 34 4073.51 4.64 160.16 270.93 60.44 24 21 28 3473.5 .66 153.62  
 110.00 6 19 42 2694.07 -31.88 74.41 285.27 76.94 7 4 36 2094.1 -33.34 65.49  
 110.00 23 43 2 3981.13 9.77 150.02 267.79 57.08 24 49 23 3381.1 5.37 143.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5011 TRA-1.2681 TC3 -.0777 BAU .0726 SGT 1088.4 SGR 451.0 SCS 64.1 ST 477.7 SR 432.8 SS 427.3  
 RDE -.5884 RRA .1403 RC3 -.0432 FAU .01840 RRT .1064 RRF -.1103 RTF -.7605 CRT .7171 CRS .8302 CST .9827  
 FDE .3984 FRA .6822 FC3 -.2610 BSP 3203 SGB 1178.2 R23 -.0129 R13 -.7610 LSA 732.8 MSA 246.8 SSA 14.9  
 BDE .7729 BRA 1.2758 BC3 .0890 FSP -153 SGI 1089.7 SGT 448.0 THA 3.04 EL1 597.8 EL2 241.1 ALF 41.08

LAUNCH DATE JAN 5 1969 FLIGHT TIME 84.00 ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC DISTANCE 194.424  
 RL 147.09 LAL -.00 LOL 104.48 VL 23.863 GAL 7.21 AZL 86.68 HCA 78.58 SMA 107.46 ECC .38689 INC 3.3179 V1 30.288  
 RP 107.75 LAP 3.25 LOP 183.05 VP 35.046 GAP -22.76 AZP 89.34 TAL 168.28 TAP 246.86 RCA 65.88 APO 149.03 V2 35.169  
 RC 44.357 GL 10.65 GP 3.74 ZAL 66.33 ZAP 12.34 ETS 199.01 ZAE 168.21 ETE 217.69 ZAC 107.77 ETC 165.38 CLP 11.77

PLANETOCENTRIC CONIC  
 C3 55.011 VHL 7.417 DLA 24.42 RAL 32.48 RAD 6569.0 VEL 13.280 PTH 2.43 VHP 14.071 DPA 6.50 RAP 13.26 ECC 1.9053  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 21 3356.71 -23.53 121.50 281.14 73.78 3 40 17 2756.7 -25.53 113.41  
 90.00 22 20 24 4219.56 .67 173.07 271.13 61.69 23 30 44 3619.6 -3.12 166.44  
 100.00 4 28 37 3026.96 -26.08 98.03 281.93 74.86 5 17 4 2427.0 -27.91 89.70  
 100.00 23 20 48 4024.55 2.99 157.46 269.85 60.24 24 27 53 3424.5 -1.00 150.93  
 110.00 6 15 37 2685.96 -32.00 73.81 283.61 77.28 7 0 23 2086.0 -33.42 64.87  
 110.00 23 48 18 3958.30 8.18 147.72 268.84 56.69 24 53 57 3338.3 3.74 141.45

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5039 TRA-1.2527 TC3 -.0654 BAU .0585 SGT 1136.0 SGR 450.7 SCS 70.2 ST 503.2 SR 434.0 SS 448.1  
 RDE -.5803 RRA .1253 RC3 -.0452 FAU .01918 RRT .1211 RRF -.1256 RTF -.7756 CRT .7250 CRS .8353 CST .9831  
 FDE .4168 FRA .7029 FC3 -.3019 BSP 3390 SGB 1222.1 R23 -.0146 R13 -.7761 LSA 762.1 MSA 247.6 SSA 15.1  
 BDE .7535 BRA 1.2590 BC3 .0795 FSP -170 SGI 1137.5 SGT 446.8 THA 3.25 EL1 618.4 EL2 243.3 ALF 39.22

LAUNCH DATE JAN 5 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 201.055

RL 147.09 LAL -.00 LOL 104.48 VL 24.197 GAL 6.80 AZL 86.77 HCA 81.81 SMA 108.87 ECC .36816 INC 3.2251 V1 30.288
RP 107.79 LAP 3.19 LOP 186.28 VP 35.264 GAP -21.59 AZP 89.54 TAL 168.04 TAP 249.85 RCA 68.79 APO 148.96 V2 35.158
RC 43.625 GL 11.06 GP 3.94 ZAL 66.15 ZAP 10.97 ETS 202.53 ZAE 170.39 ETE 226.09 ZAC 109.35 ETC 165.13 CLP 10.25

PLANETOCENTRIC CONIC

C3 49.613 VHL 7.044 DLA 24.88 RAL 32.54 RAD 6568.8 VEL 13.076 PTH 2.39 VHP 13.419 DPA 7.39 RAP 14.75 ECC 1.8165
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 36 37 3358.68 -23.50 121.64 279.34 73.73 3 32 36 2758.7 -25.50 113.54
90.00 22 28 39 4166.35 -1.05 170.10 270.00 61.70 23 38 5 3566.4 -4.82 163.46
100.00 4 20 22 3024.18 -26.13 97.84 280.16 74.95 5 10 46 2424.2 -27.95 69.51
100.00 23 27 35 3976.08 1.35 154.79 268.68 60.14 24 33 51 3376.1 -2.64 148.27
110.00 6 11 22 2676.89 -32.13 73.14 281.83 77.66 6 55 59 2076.9 -33.50 64.17
110.00 23 53 4 3896.13 6.60 145.48 285.42 56.38 24 58 0 3296.1 2.13 139.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5075 TRA-1.2365 TC3 -.0495 BAU .0451 SGT 1185.2 SGR 449.7 SCS 76.6 ST 530.2 SR 434.7 SS 470.0
RDE -.5332 RRA .1108 RC3 -.0466 FAU .02004 RRT .1378 RRF -.1429 RTF -.7899 CRT .7338 CRS .8409 CST .9837
FDE .4366 FRA .7845 FC3 -.3497 BSP 3575 SGB 1267.7 R23 -.0164 R13 -.7905 LSA 793.4 MSA 247.6 SSA 15.3
BDE .7361 BRA 1.2415 BC3 .0679 FSP -189 SGI 1187.1 SGT 444.7 THA 3.48 EL1 640.6 EL2 244.4 ALF 37.39

LAUNCH DATE JAN 5 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 207.714

RL 147.09 LAL -.00 LOL 104.48 VL 24.507 GAL 6.40 AZL 88.87 HCA 85.04 SMA 110.24 ECC .35045 INC 3.1339 V1 30.288
RP 107.82 LAP 3.12 LOP 189.52 VP 35.467 GAP -20.48 AZP 89.73 TAL 167.84 TAP 252.89 RCA 71.61 APO 148.87 V2 35.147
RC 43.055 GL 11.48 GP 4.17 ZAL 66.06 ZAP 9.66 ETS 207.14 ZAE 172.36 ETE 239.27 ZAC 110.91 ETC 164.84 CLP 8.72

PLANETOCENTRIC CONIC

C3 44.784 VHL 6.692 DLA 25.32 RAL 32.52 RAD 6568.7 VEL 12.890 PTH 2.35 VHP 12.791 DPA 8.29 RAP 16.21 ECC 1.7370
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 28 39 3360.11 -23.47 121.73 277.45 73.69 3 24 39 2760.1 -25.48 113.64
90.00 22 36 28 4113.61 -2.75 167.16 268.80 61.81 23 45 1 3513.6 -6.50 160.49
100.00 4 13 59 3020.50 -26.20 97.59 278.29 75.07 5 4 19 2420.5 -27.99 69.24
100.00 23 33 48 3928.46 -.27 152.18 267.43 60.11 24 39 17 3328.5 -4.25 145.65
110.00 6 7 1 2666.84 -32.28 72.39 279.95 78.08 6 51 28 2066.8 -33.58 63.40
110.00 0 1 11 3854.88 5.04 143.31 284.13 56.15 1 5 26 3254.9 .56 137.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5113 TRA-1.2167 TC3 -.0290 BAU .0332 SGT 1235.1 SGR 448.2 SCS 84.2 ST 558.2 SR 435.0 SS 493.1
RDE -.5071 RRA .0968 RC3 -.0473 FAU .02101 RRT .1568 RRF -.1626 RTF -.8034 CRT .7435 CRS .8470 CST .9843
FDE .4580 FRA .7466 FC3 -.4061 BSP 3768 SGB 1313.9 R23 -.0186 R13 -.8041 LSA 826.3 MSA 246.7 SSA 15.4
BDE .7201 BRA 1.2225 BC3 .0555 FSP -210 SGI 1237.4 SGT 441.9 THA 3.73 EL1 664.1 EL2 244.5 ALF 35.64

LAUNCH DATE JAN 5 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 214.396

RL 147.09 LAL -.00 LOL 104.48 VL 24.795 GAL 6.02 AZL 86.96 HCA 88.27 SMA 111.56 ECC .33373 INC 3.0436 V1 30.288
RP 107.86 LAP 3.04 LOP 192.75 VP 35.655 GAP -19.41 AZP 89.91 TAL 167.70 TAP 255.97 RCA 74.33 APO 148.78 V2 35.135
RC 42.657 GL 11.88 GP 4.41 ZAL 66.05 ZAP 8.42 ETS 213.29 ZAE 173.78 ETE 260.11 ZAC 112.44 ETC 164.50 CLP 7.18

PLANETOCENTRIC CONIC

C3 40.464 VHL 6.361 DLA 25.71 RAL 32.42 RAD 6568.6 VEL 12.721 PTH 2.31 VHP 12.187 DPA 9.20 RAP 17.66 ECC 1.6659
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 20 31 3360.81 -23.46 121.78 275.46 73.67 3 16 32 2760.8 -25.47 113.69
90.00 22 43 46 4061.78 -4.41 164.26 267.51 62.00 23 51 27 3461.8 -8.12 157.55
100.00 4 7 33 3015.75 -26.28 97.26 276.33 75.22 4 57 49 2415.7 -28.05 68.90
100.00 23 39 25 3882.08 -1.84 149.64 266.09 60.16 24 44 7 3282.1 -5.80 143.09
110.00 6 2 37 2655.74 -32.43 71.56 277.97 78.55 6 46 53 2055.7 -33.67 62.54
110.00 0 4 46 3814.85 5.92 141.21 282.76 55.98 1 8 21 3214.9 -.97 135.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5156 TRA-1.1998 TC3 -.0037 BAU .0256 SGT 1286.2 SGR 446.2 SCS 92.3 ST 587.5 SR 435.0 SS 517.4
RDE -.4821 RRA .0833 RC3 -.0471 FAU .02208 RRT .1779 RRF -.1849 RTF -.8162 CRT .7540 CRS .8534 CST .9849
FDE .4811 FRA .7696 FC3 -.4723 BSP 3962 SGB 1361.4 R23 -.0210 R13 -.8169 LSA 861.3 MSA 244.9 SSA 15.6
BDE .7059 BRA 1.2027 BC3 .0473 FSP -233 SGI 1289.0 SGT 438.2 THA 3.99 EL1 689.3 EL2 243.5 ALF 33.98

LAUNCH DATE JAN 5 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 221.097

RL 147.09 LAL -.00 LOL 104.48 VL 25.062 GAL 5.65 AZL 87.05 HCA 91.49 SMA 112.82 ECC .31799 INC 2.9538 V1 30.288
RP 107.89 LAP 2.95 LOP 195.97 VP 35.829 GAP -18.38 AZP 90.08 TAL 167.62 TAP 259.10 RCA 76.94 APO 148.69 V2 35.123
RC 42.436 GL 12.26 GP 4.69 ZAL 66.12 ZAP 7.32 ETS 221.81 ZAE 174.10 ETE 287.81 ZAC 113.95 ETC 164.13 CLP 5.63

PLANETOCENTRIC CONIC

C3 36.601 VHL 6.050 DLA 26.06 RAL 32.23 RAD 6568.4 VEL 12.569 PTH 2.28 VHP 11.606 DPA 10.13 RAP 19.09 ECC 1.6024
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 12 23 3360.48 -23.46 121.76 273.40 73.67 3 8 24 2760.5 -25.48 113.67
90.00 22 50 25 4011.40 -6.01 161.42 266.14 62.28 23 57 16 3411.4 -9.68 154.66
100.00 4 1 12 3009.70 -26.39 96.84 274.29 75.42 4 51 22 2409.7 -28.13 68.47
100.00 23 44 17 3837.42 -3.35 147.18 264.88 60.28 24 48 15 3237.4 -7.28 140.60
110.00 5 58 14 2843.50 -32.59 70.64 275.90 79.07 6 42 18 2043.5 -33.75 61.60
110.00 0 7 40 3776.38 2.05 139.20 281.31 55.87 1 10 37 3176.4 -2.44 132.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5205 TRA-1.1798 TC3 .0273 BAU .0260 SGT 1338.3 SGR 443.9 SCS 101.3 ST 618.2 SR 434.7 SS 543.1
RDE -.4584 RRA .0702 RC3 -.0457 FAU .02327 RRT .2021 RRF -.2103 RTF -.8282 CRT .7654 CRS .8603 CST .9857
FDE .5083 FRA .7938 FC3 -.3904 BSP 4156 SGB 1410.0 R23 -.0237 R13 -.8290 LSA 898.4 MSA 242.3 SSA 15.8
BDE .6936 BRA 1.1819 BC3 .0532 FSP -259 SGI 1341.7 SGT 433.6 THA 4.28 EL1 716.1 EL2 241.5 ALF 32.42

LAUNCH DATE JAN 5 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 9 1969

MELIOCENTRIC CONIC

DISTANCE 227.812

RL 147.09 LAL -.00 LOL 104.48 VL 25.309 GAL 5.29 AZL 87.14 HCA 94.71 SMA 114.02 ECC .30319 INC 2.8637 V1 30.288  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.991 GAP -17.39 AZP 90.24 TAL 167.58 TAP 262.29 RCA 79.45 APO 148.59 V2 35.111  
 RC 42.394 GL 12.63 GP 4.99 ZAL 66.28 ZAP 6.43 ETS 232.83 ZAE 173.13 ETE 312.97 ZAC 115.42 ETC 163.70 CLP 4.06

PLANETOCENTRIC CONIC

C3 33.147 VHL 5.757 DLA 26.36 RAL 31.97 RAD 6568.3 VEL 12.431 PTH 2.25 VHP 11.046 DPA 11.08 RAP 20.50 ECC 1.5455  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 4 27 3358.60 -23.50 121.63 271.28 73.73 3 0 26 2758.6 -25.51 113.54  
 90.00 22 56 14 3963.23 -7.53 158.70 264.67 62.62 24 2 17 3363.2 -11.14 151.88  
 100.00 3 55 4 3002.00 -26.52 96.30 272.19 75.67 4 45 6 2402.0 -28.22 87.92  
 100.00 23 48 18 3795.06 -4.78 144.85 263.17 60.46 24 51 33 3195.1 -8.68 136.23  
 110.00 5 53 58 2630.00 -32.76 69.62 273.76 79.65 6 37 48 2030.0 -33.84 60.35  
 110.00 0 9 90 3739.83 .65 137.29 259.79 55.82 1 12 9 3139.8 -3.84 131.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5254 TRA-1.1587 TC3 .0640 BAU .0341 SGT 1391.1 96R 441.3 96S 111.2 ST 650.0 SR 434.3 SS 570.0  
 RDE -.4359 RRA .0575 RC3 -.0427 FAU .02459 RRT .2296 RRF -.2390 RTF -.8395 CRT .7774 CRS .8875 CST .9865  
 FDE .5333 FRA .8192 FC3 -.6424 BSP 4351 SGB 1459.4 R23 -.0267 R13 -.8404 LSA 937.4 MSA 238.8 SSA 16.0  
 BDE .6827 BRA 1.1601 BC3 .0770 FSP -289 SGI 1395.2 96Z 428.2 THA 4.60 EL1 744.4 EL2 238.5 ALF 30.97

LAUNCH DATE JAN 5 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 11 1969

MELIOCENTRIC CONIC

DISTANCE 234.558

RL 147.09 LAL -.00 LOL 104.48 VL 25.538 GAL 4.95 AZL 87.23 HCA 97.93 SMA 115.17 ECC .28931 INC 2.7728 V1 30.288  
 RP 107.97 LAP 2.75 LOP 202.42 VP 36.140 GAP -16.44 AZP 90.38 TAL 167.60 TAP 265.52 RCA 81.85 APO 148.49 V2 35.099  
 RC 42.534 GL 12.97 GP 5.33 ZAL 66.51 ZAP 5.87 ETS 247.23 ZAE 171.30 ETE 329.93 ZAC 116.85 ETC 163.22 CLP 2.46

PLANETOCENTRIC CONIC

C3 30.059 VHL 5.483 DLA 26.61 RAL 31.63 RAD 6568.2 VEL 12.306 PTH 2.22 VHP 10.508 DPA 12.04 RAP 21.87 ECC 1.4947  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 57 0 3354.41 -23.58 121.35 269.11 73.85 2 52 55 2754.4 -25.57 113.25  
 90.00 23 0 57 3918.25 -8.93 156.13 263.10 63.02 24 8 15 3318.2 -12.48 149.25  
 100.00 3 49 21 2992.22 -26.68 95.62 270.03 75.99 4 39 13 2392.2 -28.34 87.21  
 100.00 23 51 17 3755.67 -6.10 142.67 261.57 60.68 24 53 33 3155.7 -9.96 136.01  
 110.00 5 49 54 2615.05 -32.94 68.49 271.55 80.29 6 33 29 2015.0 -33.93 59.39  
 110.00 0 11 10 3705.61 -.68 135.51 258.20 55.82 1 12 56 3105.6 -5.14 129.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5302 TRA-1.1367 TC3 .1080 BAU .0460 SGT 1444.4 96R 438.8 96S 122.3 ST 682.6 SR 433.8 SS 598.3  
 RDE -.4148 RRA .0452 RC3 -.0377 FAU .02608 RRT .2607 RRF -.2718 RTF -.8901 CRT .7899 CRS .8750 CST .9873  
 FDE .5625 FRA .8462 FC3 -.7511 BSP 4549 SGB 1509.6 R23 -.0304 R13 -.8511 LSA 978.1 MSA 234.7 SSA 16.1  
 BDE .6752 BRA 1.1376 BC3 .1144 FSP -321 SGI 1449.4 96Z 422.0 THA 4.95 EL1 774.0 EL2 234.6 ALF 29.65

LAUNCH DATE JAN 5 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 13 1969

MELIOCENTRIC CONIC

DISTANCE 241.270

RL 147.09 LAL -.00 LOL 104.48 VL 25.749 GAL 4.62 AZL 87.32 HCA 101.14 SMA 116.27 ECC .27631 INC 2.6806 V1 30.288  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.277 GAP -15.53 AZP 90.52 TAL 167.67 TAP 268.81 RCA 84.14 APO 148.39 V2 35.086  
 RC 42.853 GL 13.28 GP 5.70 ZAL 66.82 ZAP 5.76 ETS 263.74 ZAE 169.09 ETE 340.68 ZAC 118.22 ETC 162.68 CLP .85

PLANETOCENTRIC CONIC

C3 27.301 VHL 5.225 DLA 26.81 RAL 31.21 RAD 6568.2 VEL 12.193 PTH 2.19 VHP 9.991 DPA 13.03 RAP 23.21 ECC 1.4493  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 24 3346.91 -23.72 120.85 266.92 74.06 2 46 11 2746.9 -25.68 112.72  
 90.00 23 4 15 3877.67 -10.17 153.80 261.43 63.43 24 8 53 3277.7 -13.66 146.86  
 100.00 3 44 16 2979.82 -26.88 94.76 267.84 76.41 4 33 56 2379.8 -28.48 86.32  
 100.00 23 53 4 3719.99 -7.28 140.68 259.88 60.93 24 55 4 3120.0 -11.10 133.98  
 110.00 5 46 9 2598.44 -33.12 67.23 269.28 81.02 6 29 28 1998.4 -34.01 55.18  
 110.00 0 11 37 3674.14 -1.88 133.87 256.54 55.86 1 12 51 3074.1 -6.33 127.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5344 TRA-1.1133 TC3 .1584 BAU .0588 SGT 1497.3 96R 436.3 96S 134.5 ST 715.4 SR 433.4 SS 627.9  
 RDE -.3951 RRA .0330 RC3 -.0302 FAU .02773 RRT .2957 RRF -.3086 RTF -.8596 CRT .8027 CRS .8827 CST .9881  
 FDE .5940 FRA .8747 FC3 -.8794 BSP 4740 SGB 1559.5 R23 -.0348 R13 -.8608 LSA 1020.2 MSA 230.0 SSA 16.3  
 BDE .8646 BRA 1.1138 BC3 .1612 FSP -358 SGI 1503.3 96Z 415.1 THA 5.33 EL1 804.2 EL2 229.9 ALF 28.47

LAUNCH DATE JAN 5 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 15 1969

MELIOCENTRIC CONIC

DISTANCE 248.008

RL 147.09 LAL -.00 LOL 104.48 VL 25.944 GAL 4.31 AZL 87.41 HCA 104.36 SMA 117.30 ECC .26418 INC 2.5863 V1 30.288  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.403 GAP -14.65 AZP 90.64 TAL 167.78 TAP 272.14 RCA 86.31 APO 148.29 V2 35.073  
 RC 43.347 GL 13.55 GP 6.13 ZAL 67.20 ZAP 6.18 ETS 279.76 ZAE 166.74 ETE 347.87 ZAC 119.54 ETC 162.08 CLP -.81

PLANETOCENTRIC CONIC

C3 24.837 VHL 4.984 DLA 26.93 RAL 30.73 RAD 6568.0 VEL 12.092 PTH 2.16 VHP 9.494 DPA 14.04 RAP 24.50 ECC 1.4088  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 5 3334.81 -23.94 120.03 264.72 74.41 2 40 40 2734.8 -25.85 111.88  
 90.00 23 5 44 3842.95 -11.22 151.79 259.64 63.83 24 9 47 3243.0 -14.65 144.79  
 100.00 3 40 4 2984.17 -27.13 95.66 265.62 76.93 4 29 28 2384.2 -28.65 85.19  
 100.00 23 53 27 3688.83 -8.31 138.94 258.11 61.18 24 54 56 3088.8 -12.09 132.19  
 110.00 5 42 52 2579.91 -33.31 65.82 266.96 81.84 6 25 52 1979.9 -34.08 56.66  
 110.00 0 11 4 3645.85 -2.94 132.39 254.81 55.93 1 11 50 3045.9 -7.39 126.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5384 TRA-1.0894 TC3 .2193 BAU .0731 SGT 1550.5 96R 434.5 96S 148.2 ST 748.8 SR 433.3 SS 658.9  
 RDE -.3788 RRA .0210 RC3 -.0194 FAU .02958 RRT .3352 RRF -.3506 RTF -.8695 CRT .8158 CRS .8906 CST .9889  
 FDE .6281 FRA .9038 FC3-1.0310 BSP 4953 SGB 1610.2 R23 -.0398 R13 -.8708 LSA 1063.9 MSA 224.6 SSA 16.5  
 BDE .6571 BRA 1.0896 BC3 .2201 FSP -396 SGI 1557.9 96Z 407.4 THA 5.76 EL1 835.5 EL2 224.6 ALF 27.41

LAUNCH DATE JAN 5 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 254.741

RL 147.09 LAL -.00 LOL 104.48 VL 26.124 GAL 4.01 AZL 87.51 HCA 107.57 SMA 118.28 ECC .25287 INC 2.4894 V1 30.288
RP 108.09 LAP 2.37 LOP 212.07 VP 36.519 GAP -13.80 AZP 90.75 TAL 167.95 TAP 275.52 RCA 88.37 APO 148.19 V2 35.060
RC 44.011 GL 13.76 GP 6.60 ZAL 67.65 ZAP 7.06 ETS 293.08 ZAE 184.39 ETE 353.04 ZAC 120.79 ETC 161.41 CLP -2.49

PLANETOCENTRIC CONIC

C3 22.637 VHL 4.758 DLA 26.98 RAL 30.20 RAD 6567.9 VEL 12.001 PTH 2.14 VHP 9.017 DPA 15.08 RAP 25.74 ECC 1.3725
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 41 32 3316.79 -24.27 118.81 262.53 74.94 2 36 49 2716.8 -26.10 110.62
90.00 23 5 0 3815.60 -12.04 150.20 257.75 64.18 24 8 35 3215.6 -15.42 143.15
100.00 3 36 59 2944.64 -27.42 92.28 263.39 77.60 4 26 4 2344.6 -28.85 83.77
100.00 23 32 14 3662.99 -9.15 137.48 256.24 61.42 24 53 17 3063.0 -12.90 130.70
110.00 5 40 10 2559.19 -33.50 64.23 264.61 82.76 6 22 49 1959.2 -34.14 55.05
110.00 0 9 29 3821.20 -3.88 151.10 253.02 56.01 1 9 50 3021.2 -8.52 124.82

DIFFERENTIAL CORRECTIONS

TDE -.5423 TRA-1.0642 TC3 .2869 BAU .0668
RDE -.3600 RRA .0091 RC3 -.0048 FAU .03164
FDE .6644 FRA .9599 FC3-1.2099 BSP 5137
BDE .6509 BRA 1.0643 BC3 .2869 FSP -444

MID-COURSE EXECUTION ACCURACY

86T 1802.8 86R 433.7 86S 163.4
RRT .3801 RRF -.3975 RTF -.8781
86B 1660.5 86Z -.0451 R13 -.8797
861 1611.9 86Z 398.9 THA 6.26

ORBIT DETERMINATION ACCURACY

ST 782.7 SR 433.6 SS 690.8
CRT .8296 CR8 .8986 CST .9899
LSA 1108.9 MSA 218.5 SSA 16.7
EL1 867.7 EL2 218.4 ALF 26.49

LAUNCH DATE JAN 5 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 261.474

RL 147.09 LAL -.00 LOL 104.48 VL 26.290 GAL 3.73 AZL 87.61 HCA 110.78 SMA 119.21 ECC .24235 INC 2.3890 V1 30.288
RP 108.13 LAP 2.23 LOP 215.28 VP 36.625 GAP -12.99 AZP 90.85 TAL 168.17 TAP 278.94 RCA 90.32 APO 148.09 V2 35.047
RC 44.838 GL 13.92 GP 7.14 ZAL 68.18 ZAP 8.29 ETS 303.13 ZAE 162.12 ETE 357.05 ZAC 121.97 ETC 160.67 CLP -4.23

PLANETOCENTRIC CONIC

C3 20.672 VHL 4.547 DLA 26.95 RAL 29.61 RAD 6567.8 VEL 11.919 PTH 2.12 VHP 8.559 DPA 16.15 RAP 26.92 ECC 1.3402
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 40 9 3291.72 -24.70 117.10 260.37 75.69 2 35 1 2691.7 -26.43 108.86
90.00 23 1 42 3796.87 -12.59 149.10 255.75 64.43 24 4 59 3196.9 -15.93 142.02
100.00 3 35 16 2920.80 -27.76 90.57 261.15 78.44 4 23 57 2320.6 -29.07 82.02
100.00 23 49 16 3643.22 -9.80 136.37 254.30 61.62 24 49 59 3043.2 -13.51 129.55
110.00 5 38 12 2535.96 -33.68 62.44 262.23 83.80 6 20 28 1936.0 -34.17 53.23
110.00 0 6 46 3800.65 -4.66 130.02 251.17 56.10 1 6 46 3000.6 -9.08 123.72

DIFFERENTIAL CORRECTIONS

TDE -.5441 TRA-1.0388 TC3 .3638 BAU .1006
RDE -.3447 RRA -.0030 RC3 .0147 FAU .03394
FDE .7026 FRA .9752 FC3-1.4215 BSP 5335
BDE .6441 BRA 1.0388 BC3 .3641 FSP -495

MID-COURSE EXECUTION ACCURACY

86T 1654.1 86R 434.7 86S 180.3
RRT .4292 RRF -.4496 RTF -.8862
86B 1710.3 86Z -.0519 R13 -.8880
861 1665.2 86Z 390.0 THA 6.81

ORBIT DETERMINATION ACCURACY

ST 815.1 SR 434.4 SS 723.2
CRT .8428 CR8 .9066 CST .9906
LSA 1153.6 MSA 212.3 SSA 16.8
EL1 898.9 EL2 212.0 ALF 25.73

LAUNCH DATE JAN 5 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 268.200

RL 147.09 LAL -.00 LOL 104.48 VL 26.442 GAL 3.46 AZL 87.72 HCA 113.98 SMA 120.07 ECC .23260 INC 2.2844 V1 30.288
RP 108.17 LAP 2.09 LOP 218.48 VP 36.722 GAP -12.21 AZP 90.93 TAL 168.42 TAP 282.41 RCA 92.14 APO 148.00 V2 35.033
RC 45.818 GL 14.00 GP 7.75 ZAL 68.74 ZAP 9.79 ETS 310.44 ZAE 159.98 ETE .37 ZAC 123.05 ETC 159.85 CLP -6.01

PLANETOCENTRIC CONIC

C3 18.918 VHL 4.350 DLA 26.82 RAL 28.98 RAD 6567.8 VEL 11.845 PTH 2.10 VHP 8.121 DPA 17.27 RAP 28.02 ECC 1.3113
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 41 9 3259.02 -25.23 114.85 258.24 76.70 2 35 28 2659.0 -26.81 106.54
90.00 22 55 42 3787.45 -12.87 148.55 253.65 64.56 23 58 50 3187.5 -16.19 141.44
100.00 3 35 8 2891.58 -28.14 88.50 258.92 79.47 4 23 19 2291.6 -29.30 79.89
100.00 23 44 25 3630.13 -10.22 135.62 252.28 61.76 24 44 55 3030.1 -13.92 128.79
110.00 5 37 7 2509.89 -33.86 60.43 259.83 84.98 6 18 57 1909.9 -34.18 51.20
110.00 0 2 51 3584.57 -5.27 129.17 249.28 56.18 1 2 36 2984.6 -9.68 122.86

DIFFERENTIAL CORRECTIONS

TDE -.5430 TRA-1.0107 TC3 .4540 BAU .1153
RDE -.3310 RRA -.0153 RC3 .0406 FAU .03657
FDE .7423 FRA 1.0140 FC3-1.6733 BSP 5576
BDE .6359 BRA 1.0108 BC3 .4558 FSP -555

MID-COURSE EXECUTION ACCURACY

86T 1700.9 86R 438.0 86S 199.2
RRT .4825 RRF -.5065 RTF -.8943
86B 1756.4 86Z -.0597 R13 -.8965
861 1714.7 86Z 380.6 THA 7.45

ORBIT DETERMINATION ACCURACY

ST 843.8 SR 436.0 SS 755.6
CRT .8558 CR8 .9145 CST .9914
LSA 1196.0 MSA 205.7 SSA 17.0
EL1 927.4 EL2 205.2 ALF 25.18

LAUNCH DATE JAN 5 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 274.919

RL 147.09 LAL -.00 LOL 104.48 VL 26.583 GAL 3.21 AZL 87.83 HCA 117.19 SMA 120.89 ECC .22357 INC 2.1745 V1 30.288
RP 108.21 LAP 1.93 LOP 221.69 VP 36.811 GAP -11.45 AZP 90.99 TAL 168.72 TAP 285.91 RCA 93.86 APO 147.91 V2 35.020
RC 46.944 GL 13.99 GP 8.44 ZAL 69.38 ZAP 11.51 ETS 315.72 ZAE 157.98 ETE 3.27 ZAC 124.02 ETC 158.94 CLP -7.85

PLANETOCENTRIC CONIC

C3 17.353 VHL 4.166 DLA 26.59 RAL 28.33 RAD 6567.7 VEL 11.779 PTH 2.08 VHP 7.702 DPA 18.43 RAP 29.04 ECC 1.2856
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 44 34 3218.78 -25.83 112.06 256.13 77.98 2 38 13 2618.8 -27.23 103.67
90.00 22 47 6 3787.34 -12.87 148.54 251.49 64.56 23 50 14 3187.3 -16.19 141.44
100.00 3 36 42 2857.27 -28.54 86.03 258.70 80.71 4 24 20 2257.3 -29.53 77.36
100.00 23 37 30 3624.08 -10.41 135.28 250.22 61.82 24 38 3 3024.1 -14.10 128.43
110.00 5 37 4 2480.69 -34.01 58.16 257.43 86.32 6 18 24 1880.7 -34.14 48.92
110.00 23 53 47 3573.43 -5.69 128.59 247.36 56.24 24 53 21 2973.4 -10.09 122.26

DIFFERENTIAL CORRECTIONS

TDE -.5419 TRA -.8848 TC3 .5486 BAU .1284
RDE -.3188 RRA -.0282 RC3 .0736 FAU .03945
FDE .7844 FRA 1.0580 FC3-1.9679 BSP 5746
BDE .6297 BRA .9850 BC3 .5535 FSP -619

MID-COURSE EXECUTION ACCURACY

86T 1748.7 86R 445.0 86S 220.3
RRT .3405 RRF -.5679 RTF -.9012
86B 1804.4 86Z -.0689 R13 -.9037
861 1765.9 86Z 370.8 THA 8.20

ORBIT DETERMINATION ACCURACY

ST 873.0 SR 438.8 SS 788.7
CRT .8689 CR8 .9223 CST .9922
LSA 1239.7 MSA 198.9 SSA 17.1
EL1 936.7 EL2 198.2 ALF 24.73



LAUNCH DATE JAN 5 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 281.625

RL 147.09 LAL -.00 LOL 104.48 VL 26.711 GAL 2.97 AZL 87.94 HCA 120.39 SMA 121.64 ECC .21525 INC 2.0582 V1 30.288  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.891 GAP -10.73 AZP 91.04 TAL 169.05 TAP 289.44 RCA 95.46 APO 147.83 V2 35.007  
 RC 48.205 GL 13.88 GP 9.23 ZAL 70.02 ZAP 13.40 ETS 319.56 ZAE 156.15 ETE 5.95 ZAC 124.86 ETC 157.95 CLP -9.76

PLANETOCENTRIC CONIC

C3 15.955 VHL 3.854 DLA 26.24 RAL 27.67 RAD 8567.6 VEL 11.719 PTH 2.06 VHP 7.301 DPA 19.66 RAP 29.97 ECC 1.2626  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 16 3171.56 -26.46 108.74 254.05 79.53 2 43 8 2571.6 -27.64 100.27  
 90.00 22 36 8 3796.05 -12.62 149.05 249.29 64.44 23 39 24 3196.1 -15.96 141.97  
 100.00 3 40 5 2817.52 -28.94 83.14 254.50 82.18 4 27 3 2217.5 -29.72 74.43  
 100.00 23 29 0 3625.32 -10.37 135.55 248.13 61.81 24 29 25 3025.3 -14.08 128.50  
 110.00 5 38 11 2448.02 -34.12 55.61 255.03 87.82 6 18 59 1848.0 -34.03 46.37  
 110.00 23 47 24 3567.59 -5.91 128.28 245.42 56.27 24 46 51 2967.6 -10.31 121.94

DIFFERENTIAL CORRECTIONS

TDE -.5393 TRA -.9589 TC3 .6494 BAU .1407  
 RDE -.3086 RRA -.0419 RC3 .1137 FAU .04262  
 FDE .8284 FRA 1.1073 FC3-2.3129 BSP 5905  
 BDE .6213 BRA .9598 BC3 .6596 FSP -690

MID-COURSE EXECUTION ACCURACY

86T 1794.1 86R 457.1 86S 243.8  
 RRT .6012 RRF -.8522 RTF -.9073  
 86B 1851.4 86Z -.0797 R13 -.9103  
 86I 1815.9 86Z 360.9 THA 9.07

ORBIT DETERMINATION ACCURACY

ST 900.1 SR 443.1 S8 821.9  
 CRT .8818 CRS .9299 CST .9930  
 LSA 1282.6 MSA 191.8 S8A 17.3  
 EL1 984.9 EL2 191.0 ALF 24.44

LAUNCH DATE JAN 5 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 288.322

RL 147.09 LAL -.00 LOL 104.48 VL 26.829 GAL 2.74 AZL 88.07 HCA 123.59 SMA 122.35 ECC .20760 INC 1.9342 V1 30.288  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.964 GAP -10.02 AZP 91.07 TAL 169.41 TAP 293.00 RCA 96.95 APO 147.75 V2 34.994  
 RC 49.590 GL 13.64 GP 10.14 ZAL 70.72 ZAP 15.46 ETS 322.36 ZAE 154.50 ETE 8.54 ZAC 125.56 ETC 156.86 CLP -11.74

PLANETOCENTRIC CONIC

C3 14.706 VHL 3.835 DLA 25.75 RAL 27.02 RAD 8567.8 VEL 11.646 PTH 2.05 VHP 6.920 DPA 20.96 RAP 30.77 ECC 1.2420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 58 5 3118.06 -27.06 104.84 251.98 81.34 2 50 3 2518.1 -27.98 96.40  
 90.00 22 23 7 3812.91 -12.12 150.04 247.08 64.21 23 26 40 3212.9 -15.49 142.99  
 100.00 3 45 19 2772.32 -29.32 79.84 252.31 83.88 4 31 31 2172.3 -29.85 71.07  
 100.00 23 18 34 3633.88 -10.10 135.84 246.03 61.72 24 19 8 3033.9 -13.80 129.00  
 110.00 5 40 37 2411.56 -34.18 52.77 252.65 89.50 6 20 49 1811.6 -33.87 43.54  
 110.00 23 39 45 3567.40 -5.92 128.27 243.50 56.27 24 39 12 2967.4 -10.31 121.93

DIFFERENTIAL CORRECTIONS

TDE -.5327 TRA -.9382 TC3 .7601 BAU .1531  
 RDE -.2997 RRA -.0566 RC3 .1093 FAU .04821  
 FDE .8713 FRA 1.1818 FC3-2.7201 BSP 6072  
 BDE .6112 BRA .9338 BC3 .7788 FSP -771

MID-COURSE EXECUTION ACCURACY

86T 1834.2 86R 475.7 86S 289.9  
 RRT .6618 RRF -.8986 RTF -.9131  
 86B 1894.9 86Z -.0923 R13 -.9167  
 86I 1862.1 86Z 351.2 THA 10.10

ORBIT DETERMINATION ACCURACY

ST 921.4 SR 448.7 S8 852.5  
 CRT .8938 CRS .9370 CST .9937  
 LSA 1320.1 MSA 184.7 S8A 17.5  
 EL1 1008.2 EL2 183.9 ALF 24.39

LAUNCH DATE JAN 5 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 295.002

RL 147.09 LAL -.00 LOL 104.48 VL 26.936 GAL 2.53 AZL 88.20 HCA 126.78 SMA 123.01 ECC .20057 INC 1.8006 V1 30.288  
 RP 108.33 LAP 1.44 LOP 231.28 VP 37.029 GAP -9.35 AZP 91.08 TAL 169.80 TAP 296.58 RCA 98.33 APO 147.68 V2 34.980  
 RC 51.091 GL 13.28 GP 11.18 ZAL 71.45 ZAP 17.70 ETS 324.41 ZAE 153.03 ETE 11.15 ZAC 126.09 ETC 155.67 CLP -13.81

PLANETOCENTRIC CONIC

C3 13.591 VHL 3.887 DLA 25.12 RAL 26.39 RAD 8567.5 VEL 11.618 PTH 2.04 VHP 6.558 DPA 22.35 RAP 31.44 ECC 1.2237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 50 3058.89 -27.60 100.70 249.93 83.40 2 58 49 2458.9 -28.23 92.09  
 90.00 22 8 22 3837.32 -11.39 151.46 244.91 63.90 23 12 19 3237.3 -14.81 144.45  
 100.00 3 52 25 2721.69 -29.63 76.10 250.15 85.82 4 37 47 2121.7 -29.89 67.31  
 100.00 23 6 28 3649.75 -9.58 136.74 243.96 61.55 24 7 17 3049.7 -13.31 129.93  
 110.00 5 44 31 2370.99 -34.16 49.60 250.28 91.38 6 24 2 1771.0 -33.59 40.40  
 110.00 23 30 52 3573.22 -5.70 128.58 241.60 56.24 24 30 25 2973.2 -10.10 122.24

DIFFERENTIAL CORRECTIONS

TDE -.3231 TRA -.9059 TC3 .8762 BAU .1649  
 RDE -.2925 RRA -.0729 RC3 .2373 FAU .05017  
 FDE .9132 FRA 1.2235 FC3-3.1934 BSP 6226  
 BDE .5994 BRA .9088 BC3 .9078 FSP -861

MID-COURSE EXECUTION ACCURACY

86T 1869.8 86R 503.0 86S 299.0  
 RRT .7202 RRF -.7588 RTF -.9182  
 86B 1936.3 86Z -.1071 R13 -.9227  
 86I 1905.7 86Z 342.4 THA 11.34

ORBIT DETERMINATION ACCURACY

ST 937.5 SR 456.2 S8 880.8  
 CRT .9054 CRS .9438 CST .9844  
 LSA 1353.2 MSA 177.5 S8A 17.8  
 EL1 1027.6 EL2 176.7 ALF 24.55

LAUNCH DATE JAN 5 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 301.667

RL 147.09 LAL -.00 LOL 104.48 VL 27.034 GAL 2.34 AZL 88.34 HCA 129.98 SMA 123.61 ECC .19415 INC 1.6555 V1 30.288  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.088 GAP -8.69 AZP 91.06 TAL 170.20 TAP 300.18 RCA 99.61 APO 147.61 V2 34.967  
 RC 52.897 GL 12.70 GP 12.39 ZAL 72.19 ZAP 20.12 ETS 325.88 ZAE 151.73 ETE 13.88 ZAC 126.42 ETC 154.38 CLP -15.98

PLANETOCENTRIC CONIC

C3 12.595 VHL 3.549 DLA 24.32 RAL 25.81 RAD 8567.5 VEL 11.575 PTH 2.02 VHP 6.217 DPA 23.86 RAP 31.94 ECC 1.2073  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 19 27 2994.40 -28.02 96.02 247.90 85.71 3 9 21 2394.4 -28.32 87.37  
 90.00 21 52 8 3868.93 -10.44 153.30 242.81 63.53 22 56 37 3268.9 -13.91 146.34  
 100.00 4 1 25 2885.80 -29.83 71.95 248.02 88.00 4 45 51 2085.6 -29.79 63.14  
 100.00 22 52 50 3672.97 -8.83 138.04 241.95 61.33 23 54 3 3073.0 -12.59 131.28  
 110.00 5 50 0 2325.91 -34.03 46.00 247.95 93.45 6 28 46 1725.9 -33.18 36.95  
 110.00 23 20 45 3585.42 -5.24 129.22 239.76 56.17 24 20 30 2985.4 -9.65 122.90

DIFFERENTIAL CORRECTIONS

TDE -.5075 TRA -.8774 TC3 1.0029 BAU .1774  
 RDE -.2886 RRA -.0911 RC3 .3233 FAU .05460  
 FDE .9498 FRA 1.2911 FC3-3.7533 BSP 6422  
 BDE .5829 BRA .8821 BC3 1.0537 FSP -965

MID-COURSE EXECUTION ACCURACY

86T 1895.8 86R 541.1 86S 331.0  
 RRT .7732 RRF -.8151 RTF -.9235  
 86B 1971.6 86Z -.1229 R13 -.9290  
 86I 1942.9 86Z 334.8 THA 12.83

ORBIT DETERMINATION ACCURACY

ST 943.0 SR 463.3 S8 903.3  
 CRT .9158 CRS .9498 CST .9950  
 LSA 1375.7 MSA 170.3 S8A 17.9  
 EL1 1037.8 EL2 169.8 ALF 25.04

LAUNCH DATE JAN 5 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 308.315

RL 147.09 LAL -.00 LOL 104.48 VL 27.123 GAL 2.16 AZL 88.50 HCA 133.17 SMA 124.17 ECC .18831 INC 1.4963 V1 30.288  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.141 GAP -8.06 AZP 91.02 TAL 170.61 TAP 303.78 RCA 100.79 APO 147.55 V2 34.954  
 RC 54.398 GL 11.94 GP 13.79 ZAL 72.93 ZAP 22.73 ETS 326.90 ZAE 150.57 ETE 16.81 ZAC 126.52 ETC 152.99 CLP -18.25

PLANETOCENTRIC CONIC

C3 11.705 VHL 3.421 DLA 23.31 RAL 25.31 RAD 6567.4 VEL 11.537 PTH 2.01 VHP 5.896 DPA 25.50 RAP 32.25 ECC 1.1926  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 32 55 2924.65 -28.27 90.94 245.90 88.25 3 21 40 2324.6 -28.21 82.27  
 90.00 21 34 37 3907.71 -9.25 155.53 240.81 63.12 22 39 44 3307.7 -12.79 148.63  
 100.00 4 12 24 2603.89 -29.89 67.36 245.93 90.41 4 55 48 2003.9 -29.51 58.58  
 100.00 22 37 49 3703.69 -7.82 139.77 240.04 61.06 23 39 32 3103.7 -11.62 133.04  
 110.00 5 57 15 2275.88 -33.76 42.20 245.68 95.74 6 35 11 1675.9 -32.59 33.16  
 110.00 23 9 27 3604.47 -4.52 130.22 238.01 56.08 24 9 32 3004.5 -8.94 123.92

DIFFERENTIAL CORRECTIONS

TDE -.4901 TRA -.8520 TC3 1.1251 BAU .1885  
 RDE -.2823 RRA -.1123 RC3 .4310 FAU .05940  
 FDE .9815 FRA 1.3701 FC3-4.3935 BSP 6542  
 BDE .5656 BRA .8593 BC3 1.2049 FSP -1076

MID-COURSE EXECUTION ACCURACY

SCT 1918.4 SCR 593.6 SCS 366.4  
 RRT .8194 RRF -.8641 RTF -.9275  
 SGB 2008.1 R23 -.1411 R13 -.9345  
 SGI 1980.9 S62 329.5 THA 14.64

ORBIT DETERMINATION ACCURACY

ST 944.2 SR 476.8 SS 921.4  
 CRT .9260 CRS .9553 CST .9958  
 LSA 1393.2 MSA 162.9 SSA 18.3  
 EL1 1045.2 EL2 162.6 ALF 25.73

LAUNCH DATE JAN 5 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 314.944

RL 147.09 LAL -.00 LOL 104.48 VL 27.204 GAL 1.99 AZL 88.88 HCA 136.36 SMA 124.68 ECC .18300 INC 1.3198 V1 30.288  
 RP 108.45 LAP .91 LOP 240.85 VP 37.188 GAP -7.46 AZP 90.96 TAL 171.03 TAP 307.39 RCA 101.86 APO 147.50 V2 34.942  
 RC 56.186 GL 10.93 GP 15.43 ZAL 73.87 ZAP 25.57 ETS 327.59 ZAE 149.52 ETE 20.06 ZAC 126.35 ETC 151.50 CLP -20.65

PLANETOCENTRIC CONIC

C3 10.911 VHL 3.303 DLA 22.07 RAL 24.90 RAD 6567.4 VEL 11.502 PTH 2.00 VHP 5.597 DPA 27.31 RAP 32.32 ECC 1.1796  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 48 23 2849.30 -28.30 85.43 243.95 91.01 3 35 52 2249.3 -27.86 76.79  
 90.00 21 15 54 3953.99 -7.82 158.17 238.95 62.70 22 21 48 3354.0 -11.42 151.34  
 100.00 4 25 29 2556.19 -29.75 62.35 243.90 93.05 5 7 45 1936.2 -29.01 53.61  
 100.00 22 21 29 3742.33 -8.54 141.92 238.26 60.77 23 23 51 3142.3 -10.39 135.25  
 110.00 6 8 27 2220.30 -33.30 37.93 243.48 98.22 6 43 28 1620.3 -31.80 29.02  
 110.00 22 57 0 3630.99 -3.51 131.61 236.38 55.98 23 57 31 3031.0 -7.95 125.34

DIFFERENTIAL CORRECTIONS

TDE -.4674 TRA -.8282 TC3 1.2447 BAU .1995  
 RDE -.2788 RRA -.1370 RC3 .5661 FAU .06458  
 FDE 1.0014 FRA 1.4582 FC3-5.1239 BSP 6660  
 BDE .5443 BRA .8374 BC3 1.3674 FSP -1198

MID-COURSE EXECUTION ACCURACY

SCT 1929.9 SCR 663.0 SCS 404.6  
 RRT .8588 RRF -.9039 RTF -.9309  
 SGB 2040.6 R23 -.1602 R13 -.9399  
 SGI 2014.2 S62 327.6 THA 16.86

ORBIT DETERMINATION ACCURACY

ST 934.4 SR 489.8 SS 929.9  
 CRT .9352 CRS .9599 CST .9965  
 LSA 1397.6 MSA 155.3 SSA 18.7  
 EL1 1043.5 EL2 155.3 ALF 26.76

LAUNCH DATE JAN 5 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 321.553

RL 147.09 LAL -.00 LOL 104.48 VL 27.277 GAL 1.84 AZL 88.88 HCA 139.54 SMA 125.15 ECC .17820 INC 1.1214 V1 30.288  
 RP 108.49 LAP .73 LOP 244.03 VP 37.230 GAP -6.87 AZP 90.85 TAL 171.45 TAP 310.99 RCA 102.85 APO 147.45 V2 34.929  
 RC 58.051 GL 9.61 GP 17.36 ZAL 74.40 ZAP 28.67 ETS 328.00 ZAE 148.54 ETE 23.70 ZAC 125.86 ETC 149.93 CLP -23.18

PLANETOCENTRIC CONIC

C3 10.205 VHL 3.195 DLA 20.56 RAL 24.62 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.323 DPA 29.33 RAP 32.12 ECC 1.1680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 6 2 2767.65 -28.06 79.47 242.08 93.99 3 52 9 2167.6 -27.21 70.90  
 90.00 20 56 1 4008.52 -6.10 161.26 237.29 62.30 22 2 50 3408.5 -9.77 154.50  
 100.00 4 40 53 2461.80 -29.35 56.84 241.95 95.92 5 21 55 1861.8 -28.22 48.22  
 100.00 22 3 51 3789.60 -4.96 144.55 236.66 60.48 23 7 1 3189.6 -8.86 137.92  
 110.00 6 17 52 2158.35 -32.59 33.23 241.39 100.92 6 53 51 1558.3 -30.75 24.50  
 110.00 22 43 21 3665.82 -2.18 133.43 234.93 55.88 23 44 27 3065.8 -6.64 127.19

DIFFERENTIAL CORRECTIONS

TDE -.4397 TRA -.8013 TC3 1.3583 BAU .2108  
 RDE -.2757 RRA -.1669 RC3 .7360 FAU .07010  
 FDE 1.0048 FRA 1.5583 FC3-5.9467 BSP 6773  
 BDE .5190 BRA .8185 BC3 1.5449 FSP -1329

MID-COURSE EXECUTION ACCURACY

SCT 1931.5 SCR 753.6 SCS 445.6  
 RRT .8854 RRF -.9346 RTF -.9337  
 SGB 2073.3 R23 -.1783 R13 -.9455  
 SGI 2046.8 S62 330.5 THA 19.59

ORBIT DETERMINATION ACCURACY

ST 913.5 SR 503.9 SS 927.0  
 CRT .9438 CRS .9635 CST .9973  
 LSA 1387.7 MSA 147.4 SSA 19.2  
 EL1 1032.9 EL2 147.3 ALF 28.13

LAUNCH DATE JAN 5 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 328.142

RL 147.09 LAL -.00 LOL 104.48 VL 27.342 GAL 1.70 AZL 89.10 HCA 142.73 SMA 125.57 ECC .17388 INC .8952 V1 30.288  
 RP 108.53 LAP .54 LOP 247.21 VP 37.287 GAP -6.30 AZP 90.71 TAL 171.85 TAP 314.58 RCA 103.74 APO 147.41 V2 34.917  
 RC 59.985 GL 7.93 GP 19.63 ZAL 75.11 ZAP 32.05 ETS 328.20 ZAE 147.53 ETE 27.83 ZAC 125.00 ETC 148.29 CLP -25.86

PLANETOCENTRIC CONIC

C3 9.581 VHL 3.095 DLA 18.71 RAL 24.50 RAD 6567.3 VEL 11.444 PTH 1.99 VHP 5.076 DPA 31.60 RAP 31.57 ECC 1.1577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 26 13 2678.52 -27.47 73.01 240.31 97.17 4 10 52 2078.5 -26.19 64.58  
 90.00 20 34 55 4072.60 -4.06 164.86 235.87 61.95 21 42 47 3472.6 -7.78 158.16  
 100.00 4 58 55 2379.62 -28.63 50.84 240.13 99.00 5 38 34 1779.6 -27.09 42.38  
 100.00 21 44 54 3846.73 -3.04 147.70 235.30 60.25 22 49 1 3246.7 -6.98 141.12  
 110.00 6 31 50 2088.91 -31.58 28.07 239.44 103.82 7 6 38 1488.9 -29.36 19.57  
 110.00 22 28 28 3710.20 -.48 135.75 233.70 55.82 23 30 19 3110.2 -4.96 129.53

DIFFERENTIAL CORRECTIONS

TDE -.4049 TRA -.7752 TC3 1.4610 BAU .2231  
 RDE -.2716 RRA -.2032 RC3 .9488 FAU .07579  
 FDE .9817 FRA 1.6680 FC3-6.8478 BSP 6904  
 BDE .4876 BRA .8014 BC3 1.7419 FSP -1468

MID-COURSE EXECUTION ACCURACY

SCT 1917.0 SCR 869.1 SCS 488.0  
 RRT .9061 RRF -.9570 RTF -.9360  
 SGB 2104.8 R23 -.1920 R13 -.9516  
 SGI 2077.3 S62 339.4 THA 22.98

ORBIT DETERMINATION ACCURACY

ST 877.0 SR 517.0 SS 906.8  
 CRT .9516 CRS .9658 CST .9982  
 LSA 1356.0 MSA 139.3 SSA 20.0  
 EL1 1008.6 EL2 138.1 ALF 29.91

LAUNCH DATE JAN 5 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 334.710

RL 147.09 LAL -.00 LOL 104.48 VL 27.401 GAL 1.58 AZL 89.37 HCA 145.91 SMA 125.96 ECC .17001 INC .6341 V1 30.288  
 RP 108.57 LAP .36 LOP 250.39 VP 37.299 GAP -5.75 AZP 90.53 TAL 172.24 TAP 318.15 RCA 104.54 APO 147.37 V2 34.906  
 RC 61.981 GL 5.79 GP 22.32 ZAL 75.79 ZAP 35.77 ETS 328.25 ZAE 146.40 ETE 32.51 ZAC 123.69 ETC 146.61 CLP -28.71

PLANETOCENTRIC CONIC

C3 9.039 VHL 3.006 DLA 16.44 RAL 24.59 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 4.861 DPA 34.18 RAP 30.61 ECC 1.1488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 49 27 2580.20 -26.44 66.00 238.72 100.54 4 32 28 1980.2 -24.71 57.76  
 90.00 20 12 23 4148.22 -1.63 169.09 234.76 61.73 21 21 31 3548.2 -5.40 162.44  
 100.00 5 20 3 2288.04 -27.48 44.28 238.48 102.26 5 58 11 1688.0 -25.51 36.03  
 100.00 21 24 28 3915.61 -.71 151.48 234.25 60.12 22 29 44 3315.6 -4.68 144.94  
 110.00 6 48 46 2010.45 -30.16 22.40 237.68 106.90 7 22 17 1410.5 -27.56 14.18  
 110.00 22 12 14 3765.96 1.65 138.65 232.77 55.85 23 15 0 3166.0 -2.84 132.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3653 TRA -.7511 TC3 1.5412 BAU .2370 SGT 1889.7 SGR 1015.7 SG3 530.8 ST 828.3 SR 526.6 SS 866.5  
 RDE -.2649 RRA -.2488 RC3 1.2135 FAU .08141 RRT .9199 RRF -.9726 RTF -.9372 CRT .9595 CRS .9664 CST .9990  
 FDE .9237 FRA 1.7902 FC3-7.7979 BSP 7025 SGB 2145.4 R23 -.2001 R13 -.9580 LSA 1302.5 MSA 130.9 SSA 21.1  
 BDE .4513 BRA .7913 BC3 1.9616 FSP -1608 SGI 2115.7 SG2 355.9 THA 27.14 EL1 973.3 EL2 126.2 ALF 31.99

LAUNCH DATE JAN 5 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 341.256

RL 147.09 LAL -.00 LOL 104.48 VL 27.454 GAL 1.47 AZL 89.67 HCA 149.08 SMA 126.30 ECC .16657 INC .3263 V1 30.288  
 RP 108.60 LAP .17 LOP 253.57 VP 37.327 GAP -5.22 AZP 90.28 TAL 172.61 TAP 321.69 RCA 105.26 APO 147.34 V2 34.894  
 RC 64.032 GL 3.06 GP 25.51 ZAL 76.45 ZAP 39.86 ETS 328.20 ZAE 144.99 ETE 37.79 ZAC 121.87 ETC 144.93 CLP -31.74

PLANETOCENTRIC CONIC

C3 8.582 VHL 2.929 DLA 13.64 RAL 24.94 RAD 6567.3 VEL 11.401 PTH 1.97 VHP 4.684 DPA 37.14 RAP 29.12 ECC 1.1412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 16 30 2470.17 -24.84 58.34 237.38 104.05 4 57 40 1870.2 -22.66 50.35  
 90.00 19 48 4 4238.42 1.28 174.12 234.08 61.71 20 58 43 3638.4 -2.51 167.50  
 100.00 5 45 0 2184.72 -25.77 37.07 237.10 105.69 6 21 25 1584.7 -23.37 29.10  
 100.00 21 2 15 3999.11 2.13 156.06 233.61 60.18 22 8 54 3399.1 -1.86 149.54  
 110.00 7 9 21 1920.82 -28.22 16.14 236.21 110.14 7 41 22 1320.8 -25.22 8.26  
 110.00 21 54 24 3835.77 4.31 142.31 232.24 56.06 22 58 19 3235.8 -1.17 136.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3216 TRA -.7275 TC3 1.5855 BAU .2534 SGT 1844.8 SGR 1199.2 SG3 570.7 ST 767.8 SR 528.8 SS 804.3  
 RDE -.2528 RRA -.3069 RC3 1.5379 FAU .08644 RRT .9279 RRF -.9830 RTF -.9370 CRT .9686 CRS .9645 CST .9990  
 FDE .8215 FRA 1.9207 FC3-8.7201 BSP 7176 SGB 2200.1 R23 -.1996 R13 -.9648 LSA 1224.8 MSA 123.2 SSA 22.5  
 BDE .4091 BRA .7896 BC3 2.2088 FSP -1740 SGI 2167.0 SG2 380.5 THA 32.21 EL1 925.8 EL2 109.0 ALF 34.25

LAUNCH DATE JAN 5 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 347.779

RL 147.09 LAL -.00 LOL 104.48 VL 27.500 GAL 1.37 AZL 90.04 HCA 152.26 SMA 126.61 ECC .16332 INC .0414 V1 30.288  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.351 GAP -4.70 AZP 89.96 TAL 172.94 TAP 325.20 RCA 105.91 APO 147.31 V2 34.883  
 RC 66.131 GL -.42 GP 29.30 ZAL 77.08 ZAP 44.38 ETS 328.14 ZAE 143.10 ETE 43.61 ZAC 119.46 ETC 143.30 CLP -34.95

PLANETOCENTRIC CONIC

C3 8.227 VHL 2.868 DLA 10.16 RAL 25.59 RAD 6567.3 VEL 11.385 PTH 1.97 VHP 4.555 DPA 40.54 RAP 26.95 ECC 1.1354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 48 26 2344.90 -22.50 49.91 236.43 107.66 5 27 31 1744.9 -19.88 42.22  
 90.00 19 21 24 4347.80 4.79 180.24 233.96 62.06 20 33 51 3747.8 1.02 173.60  
 100.00 6 14 48 2066.33 -23.35 29.11 236.12 109.21 6 49 15 1466.3 -20.52 21.47  
 100.00 20 37 42 4101.60 5.58 161.71 233.53 60.59 21 46 4 3501.6 1.62 155.16  
 110.00 7 34 29 1817.02 -25.60 9.22 235.16 113.47 8 4 46 1217.0 -22.20 1.71  
 110.00 21 34 32 3923.67 7.63 146.94 232.27 56.58 22 39 55 3323.7 3.18 140.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2695 TRA -.7005 TC3 1.5909 BAU .2750 SGT 1773.0 SGR 1424.3 SG3 602.8 ST 687.3 SR 512.9 SS 712.0  
 RDE -.2284 RRA -.3806 RC3 1.9286 FAU .09037 RRT .9319 RRF -.9897 RTF -.9361 CRT .9798 CRS .9573 CST .9944  
 FDE .6519 FRA 2.0451 FC3-9.5103 BSP 7438 SGB 2274.2 R23 -.1861 R13 -.9728 LSA 1107.7 MSA 121.5 SSA 23.3  
 BDE .3533 BRA .7972 BC3 2.5000 FSP -1857 SGI 2237.0 SG2 409.6 THA 38.34 EL1 853.6 EL2 82.6 ALF 36.57

LAUNCH DATE JAN 5 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 354.279

RL 147.09 LAL -.00 LOL 104.48 VL 27.541 GAL 1.29 AZL 90.50 HCA 155.43 SMA 126.88 ECC .16085 INC .5016 V1 30.288  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.371 GAP -4.21 AZP 89.54 TAL 173.24 TAP 328.67 RCA 106.47 APO 147.29 V2 34.873  
 RC 68.274 GL -4.89 GP 33.82 ZAL 77.71 ZAP 49.34 ETS 328.15 ZAE 140.50 ETE 49.82 ZAC 116.38 ETC 141.80 CLP -38.35

PLANETOCENTRIC CONIC

C3 8.009 VHL 2.830 DLA 5.78 RAL 26.65 RAD 6567.3 VEL 11.375 PTH 1.96 VHP 4.490 DPA 44.45 RAP 23.89 ECC 1.1318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 26 57 2199.37 -19.20 40.52 236.08 111.22 6 3 36 1599.4 -16.14 33.18  
 90.00 18 51 21 4483.37 9.05 187.92 234.68 63.05 20 6 4 3883.4 5.37 181.18  
 100.00 6 51 1 1928.19 -19.98 20.24 235.75 112.71 7 23 9 1328.2 -16.73 12.95  
 100.00 20 9 57 4229.79 9.80 168.88 234.28 61.62 21 20 27 3629.8 5.93 162.23  
 110.00 8 5 32 1695.00 -22.06 1.51 234.72 116.80 8 33 47 1095.0 -18.29 354.41  
 110.00 21 11 56 4035.74 11.78 152.98 233.10 57.68 22 19 12 3435.7 7.43 146.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2190 TRA -.6755 TC3 1.5182 BAU .3011 SGT 1680.8 SGR 1688.7 SG3 621.3 ST 606.0 SR 479.6 SS 613.7  
 RDE -.1868 RRA -.4784 RC3 2.3870 FAU .09189 RRT .9307 RRF -.9938 RTF -.9317 CRT .9950 CRS .9434 CST .9678  
 FDE .4222 FRA 2.1627 FC3-9.9329 BSP 7729 SGB 2389.8 R23 -.1648 R13 -.9802 LSA 976.6 MSA 140.1 SSA 21.0  
 BDE .2879 BRA .8278 BC3 2.8120 FSP -1920 SGI 2347.9 SG2 444.8 THA 45.33 EL1 771.9 EL2 37.8 ALF 38.32

LAUNCH DATE JAN 5 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 360.756

RL 147.09 LAL -.00 LOL 104.48 VL 27.577 GAL 1.22 AZL 91.09 HCA 158.60 SMA 127.12 ECC .15852 INC 1.0847 V1 30.288  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.388 GAP -3.72 AZP 88.99 TAL 173.50 TAP 332.09 RCA 106.97 APO 147.27 V2 34.862  
 RC 70.458 GL -10.63 GP 39.16 ZAL 78.39 ZAP 54.76 ETS 328.35 ZAE 136.95 ETE 56.17 ZAC 112.55 ETC 140.53 CLP -41.91

PLANETOCENTRIC CONIC

C3 8.006 VHL 2.830 DLA .23 RAL 28.23 RAD 6567.3 VEL 11.375 PTH 1.96 VHP 4.514 DPA 48.92 RAP 19.58 ECC 1.1318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 14 43 2026.36 -14.60 29.90 236.72 114.53 6 48 29 1426.4 -11.17 22.91  
 90.00 18 16 7 4656.25 14.20 190.01 236.66 65.24 19 33 44 4056.2 10.74 191.04  
 100.00 7 36 9 1763.64 -15.55 10.22 236.55 115.97 8 5 33 1163.6 -11.73 3.29  
 100.00 19 37 22 4394.20 14.95 178.38 236.29 63.81 20 50 36 3794.2 11.31 171.48  
 110.00 8 44 39 1549.26 -17.34 352.85 235.25 119.93 9 10 28 949.3 -13.23 346.15  
 110.00 20 45 22 4181.35 16.93 161.11 235.19 59.85 21 55 3 3581.3 12.80 154.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1649 TRA -.6464 TC3 1.3765 BAU .3359 SGT 1559.4 SGR 2027.2 SG3 618.2 ST 515.9 SR 434.8 SS 542.7  
 RDE -.1113 RRA -.6071 RC3 2.8204 FAU .09029 RRT .9261 RRF -.9964 RTF -.9253 CRT .9858 CRS .9293 CST .8578  
 FDE .1139 FRA 2.2423 FC3-9.7630 BSP 8260 SGB 2557.8 R23 -.1337 R13 -.9874 LSA 841.3 MSA 204.4 SSA 14.8  
 BDE .1989 BRA .8888 BC3 3.1384 FSP -1928 SGT 2513.2 SGT 474.4 THA 52.99 EL1 672.4 EL2 56.0 ALF 40.06

LAUNCH DATE JAN 5 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 367.207

RL 147.09 LAL -.00 LOL 104.48 VL 27.608 GAL 1.16 AZL 91.88 HCA 161.76 SMA 127.33 ECC .15651 INC 1.8593 V1 30.288  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.402 GAP -3.26 AZP 88.23 TAL 173.70 TAP 335.46 RCA 107.40 APO 147.26 V2 34.853  
 RC 72.672 GL -18.02 GP 45.44 ZAL 79.19 ZAP 80.60 ETS 328.89 ZAE 132.21 ETE 62.34 ZAC 107.95 ETC 139.60 CLP -45.60

PLANETOCENTRIC CONIC

C3 8.387 VHL 2.896 DLA -8.82 RAL 30.47 RAD 6567.3 VEL 11.392 PTH 1.97 VHP 4.669 DPA 53.93 RAP 13.49 ECC 1.1380  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 16 31 1815.03 -8.30 17.58 239.00 117.17 7 48 46 1215.0 -4.59 10.86  
 90.00 17 32 15 4884.92 20.20 212.11 240.71 69.72 18 53 40 4284.9 17.26 204.67  
 100.00 8 34 36 1563.12 -9.07 358.65 238.59 118.61 9 0 39 963.1 -5.18 352.02  
 100.00 18 56 50 4612.06 21.01 191.71 240.38 68.23 20 13 42 4012.1 17.87 184.32  
 110.00 9 35 24 1372.75 -11.09 342.99 237.38 122.54 9 58 17 772.7 -6.72 336.62  
 110.00 20 12 32 4375.20 23.15 172.70 239.36 64.12 21 25 27 3775.2 19.48 165.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1196 TRA -.6157 TC3 1.1183 BAU .3758 SGT 1407.3 SGR 2403.9 SG3 583.1 ST 438.0 SR 471.5 SS 581.1  
 RDE .0141 RRA -.7821 RC3 3.1597 FAU .08362 RRT .9136 RRF -.9979 RTF -.9116 CRT .8063 CRS .9624 CST .6164  
 FDE -.2387 FRA 2.2631 FC3-8.6310 BSP 8877 SGB 2785.5 R23 -.1019 R13 -.9927 LSA 812.4 MSA 302.9 SSA 8.9  
 BDE .1205 BRA .9954 BC3 3.3517 FSP -1821 SGT 2739.9 SGT 502.1 THA 60.78 EL1 611.8 EL2 199.7 ALF 47.62

LAUNCH DATE JAN 5 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 373.632

RL 147.09 LAL -.00 LOL 104.48 VL 27.634 GAL 1.12 AZL 92.95 HCA 164.92 SMA 127.51 ECC .15481 INC 2.9450 V1 30.288  
 RP 108.78 LAP -.77 LOP 269.42 VP 37.413 GAP -2.80 AZP 87.16 TAL 173.86 TAP 338.78 RCA 107.77 APO 147.25 V2 34.844  
 RC 74.919 GL -27.34 GP 52.73 ZAL 80.26 ZAP 66.73 ETS 329.91 ZAE 126.12 ETE 68.04 ZAC 102.59 ETC 139.16 CLP -49.28

PLANETOCENTRIC CONIC

C3 9.553 VHL 3.091 DLA -15.63 RAL 33.62 RAD 6567.3 VEL 11.443 PTH 1.98 VHP 5.032 DPA 59.36 RAP 4.59 ECC 1.1572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 42 42 1544.48 .33 2.39 244.28 118.32 9 8 26 944.5 4.12 355.75  
 90.00 18 31 8 5205.45 26.20 233.64 248.26 78.84 17 57 53 4605.4 24.39 225.43  
 100.00 9 55 26 1309.80 -.59 344.62 243.77 119.89 10 17 16 709.8 3.39 338.10  
 100.00 18 1 5 4915.37 27.23 212.05 248.01 77.16 19 23 0 4315.4 25.19 203.85  
 110.00 10 44 32 1155.97 -2.95 331.48 242.30 124.07 11 3 48 556.0 1.54 325.27  
 110.00 19 28 28 4641.96 29.91 190.46 247.19 72.63 20 45 50 4042.0 27.25 182.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0899 TRA -.5774 TC3 .7768 BAU .4204 SGT 1222.1 SGR 2820.3 SG3 510.8 ST 373.0 SR 720.0 SS 729.6  
 RDE .2197 RRA -1.0231 RC3 3.1988 FAU .07149 RRT .8908 RRF -.9988 RTF -.8881 CRT .4841 CRS .9936 CST .3829  
 FDE -.5928 FRA 2.1862 FC3-6.4789 BSP 9744 SGB 3073.7 R23 -.0714 R13 -.9962 LSA 1037.6 MSA 336.5 SSA 5.1  
 BDE .2374 BRA 1.1747 BC3 3.2917 FSP -1605 SGT 3030.0 SGT 516.8 THA 68.23 EL1 747.5 EL2 314.4 ALF 72.79

LAUNCH DATE JAN 5 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 380.026

RL 147.09 LAL -.00 LOL 104.48 VL 27.657 GAL 1.09 AZL 94.59 HCA 168.07 SMA 127.66 ECC .15340 INC 4.5880 V1 30.288  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.421 GAP -2.37 AZP 85.51 TAL 173.95 TAP 342.02 RCA 108.08 APO 147.24 V2 34.855  
 RC 77.194 GL -38.59 GP 61.07 ZAL 81.74 ZAP 72.91 ETS 331.50 ZAE 118.58 ETE 72.99 ZAC 96.57 ETC 139.28 CLP -52.58

PLANETOCENTRIC CONIC

C3 12.576 VHL 3.546 DLA -26.13 RAL 37.95 RAD 6567.5 VEL 11.574 PTH 2.02 VHP 5.760 DPA 64.82 RAP 351.02 ECC 1.2070  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 16 45 1107.45 13.91 337.46 256.16 114.91 11 35 13 507.4 17.16 330.29  
 90.00 14 31 38 5755.25 27.13 273.41 260.37 98.43 16 7 33 5155.2 28.02 264.85  
 100.00 12 10 14 934.76 11.86 323.74 255.11 117.64 12 25 48 334.8 15.47 316.81  
 100.00 16 20 51 5403.17 29.41 247.82 260.69 95.62 17 50 54 4803.2 29.88 239.05  
 110.00 12 29 15 875.05 7.74 316.76 252.65 123.40 12 43 50 275.1 12.08 310.35  
 110.00 18 18 18 5055.64 34.18 220.16 260.94 89.58 19 42 14 4455.6 33.74 210.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0913 TRA -.5259 TC3 .4188 BAU .4635 SGT 1002.9 SGR 3250.3 SG3 403.3 ST 320.1 SR 1157.2 SS 881.1  
 RDE .5510 RRA -1.3832 RC3 2.7249 FAU .05444 RRT .8492 RRF -.9993 RTF -.8461 CRT .2121 CRS .9991 CST .1718  
 FDE -.8711 FRA 1.9839 FC3-3.7476 BSP 10863 SGB 3401.5 R23 -.0456 R13 -.9982 LSA 1455.6 MSA 314.8 SSA 3.0  
 BDE .5585 BRA 1.4630 BC3 2.7369 FSP -1289 SGT 3362.7 SGT 511.8 THA 74.96 EL1 1159.4 EL2 312.2 ALF 88.38

LAUNCH DATE JAN 5 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 386.380

RL 147.09 LAL -.00 LOL 104.48 VL 27.675 GAL 1.08 AZL 97.38 HCA 171.20 SMA 127.79 ECC .15225 INC 7.3808 V1 30.288
RP 108.81 LAP -1.13 LOP 275.75 VP 37.428 GAP -1.95 AZP 82.71 TAL 173.97 TAP 345.17 RCA 108.33 APO 147.24 V2 34.827
RC 79.493 GL -50.88 GP 70.54 ZAL 83.69 ZAP 78.76 ETS 333.38 ZAE 109.50 ETE 76.74 ZAC 90.08 ETC 139.75 CLP -54.20

PLANETOCENTRIC CONIC

C3 20.994 VHL 4.582 DLA -37.42 RAL 43.71 RAD 6567.9 VEL 11.932 PTH 2.12 VHP 7.228 DPA 69.39 RAP 329.42 ECC 1.3455
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
84.45 10 16 44 1472.26 25.11 10.76 275.93 118.70 10 41 16 872.3 28.73 3.17
115.55 16 17 39 5623.73 25.12 262.94 275.93 118.69 17 51 23 5023.7 28.74 255.36
64.45 10 16 44 1472.26 25.11 10.76 275.93 118.70 10 41 16 872.3 28.73 3.17
115.55 16 17 39 5623.73 25.12 262.94 275.93 118.69 17 51 23 5023.7 28.74 255.36
64.45 10 16 44 1472.26 25.11 10.76 275.93 118.70 10 41 16 872.3 28.73 3.17
115.55 16 17 39 5623.73 25.12 262.94 275.93 118.69 17 51 23 5023.7 28.74 255.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1542 TRA -.4655 TC3 .1456 BAU .4807 SGT 769.5 SGR 3647.5 SCS 275.8 ST 292.4 SR 1613.7 SS 908.6
RDE 1.0684 RRA-1.9132 RC3 1.7066 FAU .03405 RRT .7691 RRF -.9995 RTF -.7668 CRT -.1244 CRS .9999 CST -.1393
FDE -.9730 FRA 1.6866 FC3-1.4040 BSP 11998 SGB 3727.8 R23 -.0248 R13 -.9992 LSA 1852.2 MSA 290.2 SSA 1.8
BDE 1.0795 BRA 1.9690 BC3 1.7128 FSP -898 SGT 3696.1 SGT 485.3 THA 80.62 EL1 1614.1 EL2 290.1 ALF 91.33

LAUNCH DATE JAN 5 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 392.659

RL 147.09 LAL -.00 LOL 104.48 VL 27.690 GAL 1.09 AZL 103.18 HCA 174.28 SMA 127.89 ECC .15137 INC13.1841 V1 30.288
RP 108.83 LAP -1.30 LOP 278.92 VP 37.432 GAP -1.55 AZP 76.88 TAL 173.88 TAP 348.17 RCA 108.53 APO 147.24 V2 34.820
RC 81.813 GL -81.90 GP 81.40 ZAL 85.93 ZAP 83.83 ETS 332.29 ZAE 98.31 ETE 76.09 ZAC 83.22 ETC 137.61 CLP -44.09

PLANETOCENTRIC CONIC

C3 51.236 VHL 7.158 DLA -47.37 RAL 50.25 RAD 6568.9 VEL 13.138 PTH 2.40 VHP 10.594 DPA 71.04 RAP 296.09 ECC 1.8432
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.30 9 42 50 1858.94 21.00 41.26 299.55 133.49 10 13 49 1258.9 26.38 35.21
129.70 17 43 44 5682.12 21.01 264.75 299.56 133.49 19 18 26 5082.1 26.39 258.69
50.30 9 42 50 1858.94 21.00 41.26 299.55 133.49 10 13 49 1258.9 26.38 35.21
129.70 17 43 44 5682.12 21.01 264.75 299.56 133.49 19 18 26 5082.1 26.39 258.69
50.30 9 42 50 1858.94 21.00 41.26 299.55 133.49 10 13 49 1258.9 26.38 35.21
129.70 17 43 44 5682.12 21.01 264.75 299.56 133.49 19 18 26 5082.1 26.39 258.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1872 TRA -.4797 TC3 .0673 BAU .4148 SGT 594.3 SGR 3922.4 SCS 156.2 ST 226.7 SR 1922.4 SS 807.2
RDE 2.0191 RRA-2.9349 RC3 .6018 FAU .01473 RRT .7753 RRF -.9997 RTF -.7795 CRT -.1495 CRS 1.0000 CST -.1414
FDE -.9213 FRA 1.3635 FC3 -.2489 BSP 14243 SGB 3987.2 R23 -.0042 R13 -.9997 LSA 2085.2 MSA 224.3 SSA 1.1
BDE 2.0277 BRA 2.9739 BC3 .6055 FSP -574 SGT 3949.6 SGT 372.7 THA 83.24 EL1 1922.7 EL2 224.1 ALF 91.02

LAUNCH DATE JAN 5 1969

FLIGHT TIME 146.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 398.721

RL 147.09 LAL -.00 LOL 104.48 VL 27.701 GAL 1.15 AZL 121.52 HCA 177.18 SMA 127.96 ECC .15081 INC31.5223 V1 30.288
RP 108.85 LAP -1.47 LOP 282.08 VP 37.434 GAP -1.22 AZP 58.51 TAL 173.50 TAP 350.68 RCA 108.67 APO 147.26 V2 34.813
RC 84.153 GL -85.17 GP 79.09 ZAL 88.07 ZAP 87.59 ETS 186.94 ZAE 80.93 ETE 290.37 ZAC 75.31 ETC 353.26 CLP 77.14

PLANETOCENTRIC CONIC

C3 254.576 VHL 15.955 DLA -51.08 RAL 50.83 RAD 6571.5 VEL 19.388 PTH 3.10 VHP 21.616 DPA 64.80 RAP 251.88 ECC 5.1897
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.53 9 29 23 2216.24 5.75 59.74 316.15 140.84 10 6 19 1616.2 11.92 55.00
134.47 18 1 45 675.64 5.77 297.75 316.16 140.84 18 13 0 75.6 11.94 293.02
45.53 9 29 23 2216.24 5.75 59.74 316.15 140.84 10 6 19 1616.2 11.92 55.00
134.47 18 1 45 675.64 5.77 297.75 316.16 140.84 18 13 0 75.6 11.94 293.02
45.53 9 29 23 2216.24 5.75 59.74 316.15 140.84 10 6 19 1616.2 11.92 55.00
134.47 18 1 45 675.64 5.77 297.75 316.16 140.84 18 13 0 75.6 11.94 293.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.6534 TRA-1.5557 TC3 -.0666 BAU .5333 SGT 1599.1 SGR 3779.6 SCS 80.9 ST 1338.8 SR 1562.3 SS 836.5
RDE-3.1822 RRA 6.2569 RC3 .1425 FAU-.01169 RRT -.7886 RRF .9950 RTF -.8460 CRT -.8492 CRS -.9888 CST .9184
FDE-1.0243 FRA 1.4906 FC3 .0398 BSP 12197 SGB 4103.9 R23 .0176 R13 .9998 LSA 2148.9 MSA 561.2 SSA .5
BDE 4.8319 BRA 6.4474 BC3 .1573 FSP -248 SGT 3997.3 SGT 929.7 THA 109.55 EL1 1980.4 EL2 557.8 ALF 129.83

LAUNCH DATE JAN 5 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 406.684

RL 147.09 LAL -.00 LOL 104.48 VL 27.709 GAL .86 AZL 24.88 HCA 181.81 SMA 128.02 ECC .14973 INC65.1212 V1 30.288
RP 108.87 LAP -1.64 LOP 285.24 VP 37.434 GAP -.40 AZP 155.11 TAL 175.14 TAP 356.94 RCA 108.85 APO 147.19 V2 34.807
RC 86.508 GL 53.45 GP -62.38 ZAL 89.28 ZAP 89.44 ETS 175.84 ZAE 62.56 ETE 72.81 ZAC 94.23 ETC 19.87 CLP 88.80

PLANETOCENTRIC CONIC

C3 979.071 VHL 31.290 DLA 53.24 RAL 343.33 RAD 6572.9 VEL 33.172 PTH 3.50 VHP 37.350 DPA -56.02 RAP 153.45 ECC17.1130
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.83 16 50 5 4992.49 .27 235.06 253.55 36.76 18 13 18 4392.5 -6.13 230.67
137.17 1 42 32 3415.40 .29 109.14 253.55 36.77 2 39 27 2815.4 -6.11 104.75
42.83 16 50 5 4992.49 .27 235.06 253.55 36.76 18 13 18 4392.5 -6.13 230.67
137.17 1 42 32 3415.40 .29 109.14 253.55 36.77 2 39 27 2815.4 -6.11 104.75
42.83 16 50 5 4992.49 .27 235.06 253.55 36.76 18 13 18 4392.5 -6.13 230.67
137.17 1 42 32 3415.40 .29 109.14 253.55 36.77 2 39 27 2815.4 -6.11 104.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.5082 TRA 2.8413 TC3 -.1186 BAU 3.5644 SGT 1490.1 SGR 3556.7 SCS 65.3 ST 1037.2 SR 3174.6 SS 2163.3
RD-17.3183 RRA 1.8112 RC3 -.2451 FAU-.05946 RRT .8932 RRF -.9997 RTF -.9047 CRT .9821 CRS 1.0000 CST .9837
FDE 3.8549 FRA -.4051 FC3 .0526 BSP 12085 SGB 3858.3 R23 -.0372 R13 -.9993 LSA 3974.8 MSA 186.7 SSA .4
BDE18.1707 BRA 3.0939 BC3 .2723 FSP -214 SGT 3805.1 SGT 626.3 THA 68.88 EL1 3334.6 EL2 186.0 ALF 72.15

LAUNCH DATE JAN 5 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 412.265

RL 147.09 LAL -.00 LOL 104.48 VL 27.715 GAL 1.02 AZL 65.32 HCA 184.32 SMA 128.06 ECC .14971 INC24.6832 V1 30.288  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.433 GAP -.20 AZP 114.62 TAL 174.18 TAP 358.50 RCA 108.88 APO 147.23 V2 34.802  
 RC 88.877 GL 66.09 GP -89.08 ZAL 87.84 ZAP 89.09 ETS 138.02 ZAE 89.70 ETE 38.26 ZAC 105.01 ETC 341.20 CLP 8.24

PLANETOCENTRIC CONIC

C3 160.243 VHL 12.659 DLA 63.30 RAL 328.07 RAD 6570.7 VEL 16.780 PTH 2.90 VHP 13.869 DPA -64.68 RAP 98.70 ECC 3.6372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.69 15 17 15 4869.56 -10.94 237.81 232.51 27.24 16 38 25 4269.6 -18.02 234.38  
 149.31 1 13 39 3167.93 -10.93 96.37 232.48 27.24 2 6 27 2567.9 -18.01 92.95  
 30.69 15 17 15 4869.56 -10.94 237.81 232.51 27.24 16 38 25 4269.6 -18.02 234.38  
 149.31 1 13 39 3167.93 -10.93 96.37 232.48 27.24 2 6 27 2567.9 -18.01 92.95  
 30.69 15 17 15 4869.56 -10.94 237.81 232.51 27.24 16 38 25 4269.6 -18.02 234.38  
 149.31 1 13 39 3167.93 -10.93 96.37 232.48 27.24 2 6 27 2567.9 -18.01 92.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.4992 TRA 2.0506 TC3 -.0444 BAU .1251 SGT 2605.2 SGR 3514.7 SG3 117.2 ST 1700.7 SR 3494.7 SS 1460.1  
 RDE -7.7169 RRA .3767 RC3 -.0379 FAU-.00161 RRT .6909 RRF -.9322 RTF -.9053 CRT .9426 CRS .9926 CST .9762  
 FDE 2.6602 FRA -.6201 FC3 .0087 BSP 13556 SGB 4374.9 R25 .1132 R13 -.9933 LSA 4118.9 MSA 521.3 SSA 1.1  
 BDE 8.4732 BRA 2.0849 BC3 .0584 FSP -381 SGI 4059.7 SG2 1630.5 THA 56.87 EL1 3852.3 EL2 515.0 ALF 64.88

LAUNCH DATE JAN 5 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 418.412

RL 147.09 LAL -.00 LOL 104.48 VL 27.717 GAL 1.09 AZL 74.52 HCA 187.35 SMA 128.07 ECC .14970 INC15.4845 V1 30.288  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.431 GAP .15 AZP 105.36 TAL 173.79 TAP 1.14 RCA 108.90 APO 147.25 V2 34.797  
 RC 91.236 GL 63.94 GP -78.00 ZAL 86.46 ZAP 90.12 ETS 11.31 ZAE 101.73 ETE 272.83 ZAC 109.12 ETC 214.22 CLP -90.59

PLANETOCENTRIC CONIC

C3 67.823 VHL 8.235 DLA 63.04 RAL 333.44 RAD 6569.3 VEL 13.754 PTH 2.51 VHP 6.340 DPA -60.46 RAP 73.81 ECC 2.1162  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.00 15 39 25 4688.52 -21.70 232.28 231.78 29.21 16 57 33 4088.5 -28.62 228.26  
 149.00 1 34 19 2989.34 -21.69 91.21 231.75 29.21 2 24 9 2389.3 -28.61 87.19  
 31.00 15 39 25 4688.52 -21.70 232.28 231.78 29.21 16 57 33 4088.5 -28.62 228.26  
 149.00 1 34 19 2989.34 -21.69 91.21 231.75 29.21 2 24 9 2389.3 -28.61 87.19  
 31.00 15 39 25 4688.52 -21.70 232.28 231.78 29.21 16 57 33 4088.5 -28.62 228.26  
 149.00 1 34 19 2989.34 -21.69 91.21 231.75 29.21 2 24 9 2389.3 -28.61 87.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6455 TRA -.3928 TC3 -.0716 BAU .3268 SGT 1299.1 SGR 4204.0 SG3 222.1 ST 1159.0 SR 3843.8 SS 1707.8  
 RDE 5.4773 RRA -1.0933 RC3 -.3532 FAU .01992 RRT .9964 RRF .9992 RTF .9922 CRT .9997 CRS -.9999 CST -.9993  
 FDE 3.3820 FRA -.8165 FC3 -.2543 BSP 13852 SGB 4400.1 R25 .0478 R13 .9989 LSA 4362.7 MSA 35.2 SSA .5  
 BDE 5.7191 BRA 1.1617 BC3 .3604 FSP -740 SGI 4398.9 SG2 104.6 THA 72.87 EL1 4014.6 EL2 28.2 ALF 73.22

LAUNCH DATE JAN 5 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 424.625

RL 147.09 LAL -.00 LOL 104.48 VL 27.717 GAL 1.15 AZL 78.31 HCA 190.46 SMA 128.07 ECC .14984 INC11.6852 V1 30.288  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.427 GAP .51 AZP 101.50 TAL 173.44 TAP 3.90 RCA 108.88 APO 147.26 V2 34.793  
 RC 93.844 GL 60.34 GP -69.01 ZAL 85.21 ZAP 92.47 ETS 359.24 ZAE 110.42 ETE 281.01 ZAC 111.23 ETC 201.76 CLP -96.90

PLANETOCENTRIC CONIC

C3 41.717 VHL 6.459 DLA 61.39 RAL 340.52 RAD 6568.6 VEL 12.770 PTH 2.32 VHP 6.156 DPA -55.36 RAP 59.72 ECC 1.6866  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.95 16 12 21 4560.51 -28.29 226.25 233.47 32.94 17 28 22 3960.5 -34.90 221.37  
 147.05 1 57 52 2877.48 -28.28 87.46 233.45 32.93 2 45 49 2277.5 -34.89 82.59  
 32.95 16 12 21 4560.51 -28.29 226.25 233.47 32.94 17 28 22 3960.5 -34.90 221.37  
 147.05 1 57 52 2877.48 -28.28 87.46 233.45 32.93 2 45 49 2277.5 -34.89 82.59  
 32.95 16 12 21 4560.51 -28.29 226.25 233.47 32.94 17 28 22 3960.5 -34.90 221.37  
 147.05 1 57 52 2877.48 -28.28 87.46 233.45 32.93 2 45 49 2277.5 -34.89 82.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8931 TRA -.4641 TC3 -.3182 BAU .4448 SGT 1930.9 SGR 3901.4 SG3 358.6 ST 1699.0 SR 5665.3 SS 2067.5  
 RDE 4.1181 RRA -.5353 RC3 -.7313 FAU .04196 RRT .9791 RRF .9993 RTF .9736 CRT .9975 CRS -1.0000 CST -.9970  
 FDE 4.3698 FRA -.5208 FC3 -.8707 BSP 13564 SGB 4353.1 R23 .0636 R13 .9976 LSA 4536.8 MSA 115.2 SSA 1.7  
 BDE 4.5323 BRA .7085 BC3 .7975 FSP -1196 SGI 4338.8 SG2 353.2 THA 63.96 EL1 4038.4 EL2 109.6 ALF 65.17

LAUNCH DATE JAN 5 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 430.846

RL 147.09 LAL -.00 LOL 104.48 VL 27.715 GAL 1.22 AZL 80.38 HCA 193.59 SMA 128.06 ECC .15014 INC 9.6191 V1 30.288  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.422 GAP .87 AZP 99.35 TAL 173.06 TAP 6.65 RCA 108.83 APO 147.29 V2 34.789  
 RC 98.038 GL 58.86 GP -81.41 ZAL 84.06 ZAP 95.82 ETS 353.06 ZAE 117.36 ETE 253.86 ZAC 112.14 ETC 194.91 CLP -102.22

PLANETOCENTRIC CONIC

C3 30.578 VHL 5.530 DLA 59.48 RAL 346.57 RAD 6568.2 VEL 12.327 PTH 2.22 VHP 5.055 DPA -50.38 RAP 50.05 ECC 1.5032  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.23 16 42 10 4471.78 -32.04 220.61 234.94 36.80 17 56 42 3871.8 -38.30 214.93  
 144.77 2 16 17 2809.47 -32.03 84.60 234.92 36.79 3 3 7 2209.5 -38.29 78.92  
 35.23 16 42 10 4471.78 -32.04 220.61 234.94 36.80 17 56 42 3871.8 -38.30 214.93  
 144.77 2 16 17 2809.47 -32.03 84.60 234.92 36.79 3 3 7 2209.5 -38.29 78.92  
 35.23 16 42 10 4471.78 -32.04 220.61 234.94 36.80 17 56 42 3871.8 -38.30 214.93  
 144.77 2 16 17 2809.47 -32.03 84.60 234.92 36.79 3 3 7 2209.5 -38.29 78.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0131 TRA -.4006 TC3 -.6340 BAU .4905 SGT 2347.5 SGR 3588.3 SG3 503.1 ST 2100.3 SR 5375.5 SS 2589.2  
 RDE 3.2546 RRA -.2374 RC3 -1.0188 FAU .06442 RRT .9758 RRF .9992 RTF .9709 CRT .9973 CRS -1.0000 CST -.9968  
 FDE 5.2517 FRA -.3297 FC3 -1.8239 BSP 13313 SGB 4288.0 R23 .0846 R13 .9958 LSA 4625.8 MSA 142.4 SSA 2.2  
 BDE 3.8289 BRA .4857 BC3 1.1999 FSP -1690 SGI 4266.2 SG2 431.4 THA 57.07 EL1 3973.4 EL2 151.8 ALF 58.14

LAUNCH DATE JAN 5 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 437.059

RL 147.09 LAL -.00 LOL 104.48 VL 27.711 GAL 1.30 AZL 81.68 HCA 196.73 SMA 128.03 ECC .15061 INC 8.3171 V1 30.288  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.416 GAP 1.22 AZP 97.97 TAL 172.64 TAP 9.37 RCA 108.75 APO 147.31 V2 34.787  
 RC 98.456 GL 55.74 GP -54.74 ZAL 82.94 ZAP 99.83 ETS 348.74 ZAE 122.93 ETE 247.31 ZAC 112.22 ETC 189.71 CLP-107.21

PLANETOCENTRIC CONIC

C3 24.701 VHL 4.970 DLA 57.63 RAL 351.53 RAD 6568.0 VEL 12.086 PTH 2.16 VHP 4.434 DPA -45.72 RAP 42.77 ECC 1.4085  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.45 17 7 45 4407.53 -34.13 215.63 236.10 40.29 18 21 13 3807.5 -40.05 209.30  
 142.55 2 30 16 2767.54 -34.11 82.44 236.08 40.29 3 16 24 2167.5 -40.04 76.11  
 37.45 17 7 45 4407.53 -34.13 215.63 236.10 40.29 18 21 13 3807.5 -40.05 209.30  
 142.55 2 30 16 2767.54 -34.11 82.44 236.08 40.29 3 16 24 2167.5 -40.04 76.11  
 37.45 17 7 45 4407.53 -34.13 215.63 236.10 40.29 18 21 13 3807.5 -40.05 209.30  
 142.55 2 30 16 2767.54 -34.11 82.44 236.08 40.29 3 16 24 2167.5 -40.04 76.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1017 TRA -.3185 TC3 -.9947 BAU .5141 SGT 2705.2 SGR 3255.0 SCS 635.1 ST 2431.8 SR 3027.3 SS 2577.5  
 RDE 2.8258 RRA -.0585 RC3-1.1977 FAU .08495 RRT .9763 RRF .9990 RTF .9716 CRT .9974 CR3-1.0000 CST -.9969  
 FDE 5.8350 FRA -.0643 FC3-2.9774 BSP 13113 SGB 4232.4 R23 .1060 R13 .9935 LSA 4658.1 MSA 155.8 SSA 2.8  
 BDE 3.3632 BRA .3238 BC3 1.5569 FSP -2154 SGI 4208.2 SGT 452.5 THA 50.40 EL1 3880.6 EL2 136.9 ALF 51.24

LAUNCH DATE JAN 5 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 443.260

RL 147.09 LAL -.00 LOL 104.48 VL 27.704 GAL 1.39 AZL 82.58 HCA 199.88 SMA 127.98 ECC .15124 INC 7.4176 V1 30.288  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.410 GAP 1.58 AZP 96.98 TAL 172.16 TAP 12.05 RCA 108.63 APO 147.34 V2 34.785  
 RC 100.837 GL 50.97 GP -48.85 ZAL 81.83 ZAP 104.22 ETS 345.55 ZAE 127.26 ETE 240.77 ZAC 111.77 ETC 185.55 CLP-111.92

PLANETOCENTRIC CONIC

C3 21.185 VHL 4.603 DLA 55.94 RAL 355.89 RAD 6567.9 VEL 11.940 PTH 2.12 VHP 4.070 DPA -41.41 RAP 37.05 ECC 1.3487  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.51 17 29 54 4358.97 -35.26 211.34 237.16 43.30 18 42 33 3759.0 -40.87 204.50  
 140.49 2 41 19 2741.38 -35.24 80.83 237.14 43.29 3 27 0 2141.4 -40.86 74.00  
 39.51 17 29 54 4358.97 -35.26 211.34 237.16 43.30 18 42 33 3759.0 -40.87 204.50  
 140.49 2 41 19 2741.38 -35.24 80.83 237.14 43.29 3 27 0 2141.4 -40.86 74.00  
 39.51 17 29 54 4358.97 -35.26 211.34 237.16 43.30 18 42 33 3759.0 -40.87 204.50  
 140.49 2 41 19 2741.38 -35.24 80.83 237.14 43.29 3 27 0 2141.4 -40.86 74.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1785 TRA -.2289 TC3-1.3760 BAU .5306 SGT 3033.8 SGR 2920.9 SCS 742.4 ST 2714.0 SR 2674.0 SS 2701.7  
 RDE 2.1477 RRA .0542 RC3-1.2713 FAU .10137 RRT .9778 RRF .9986 RTF .9730 CRT .9976 CR3-1.0000 CST -.9970  
 FDE 6.1699 FRA .2441 FC3-4.1424 BSP 12958 SGB 4211.4 R23 .1254 R13 .9908 LSA 4667.8 MSA 163.3 SSA 3.4  
 BDE 3.0578 BRA .2352 BC3 1.8734 FSP -2526 SGI 4188.0 SGT 443.4 THA 43.89 EL1 3807.6 EL2 132.9 ALF 44.57

LAUNCH DATE JAN 5 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 449.445

RL 147.09 LAL -.00 LOL 104.48 VL 27.696 GAL 1.49 AZL 83.24 HCA 203.04 SMA 127.93 ECC .15204 INC 6.7558 V1 30.288  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.402 GAP 1.92 AZP 96.22 TAL 171.64 TAP 14.68 RCA 108.48 APO 147.38 V2 34.784  
 RC 103.240 GL 48.51 GP -43.83 ZAL 80.70 ZAP 108.74 ETS 343.19 ZAE 130.45 ETE 234.25 ZAC 111.04 ETC 182.24 CLP-116.36

PLANETOCENTRIC CONIC

C3 18.906 VHL 4.348 DLA 54.43 RAL 359.30 RAD 6567.8 VEL 11.844 PTH 2.10 VHP 3.859 DPA -37.48 RAP 32.47 ECC 1.3111  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.36 17 49 32 4320.92 -35.82 207.66 238.24 45.84 19 1 33 3720.9 -41.16 200.46  
 138.64 2 50 31 2725.24 -35.80 79.68 238.23 45.83 3 35 57 2125.2 -41.15 72.48  
 41.36 17 49 32 4320.92 -35.82 207.66 238.24 45.84 19 1 33 3720.9 -41.16 200.46  
 138.64 2 50 31 2725.24 -35.80 79.68 238.23 45.83 3 35 57 2125.2 -41.15 72.48  
 41.36 17 49 32 4320.92 -35.82 207.66 238.24 45.84 19 1 33 3720.9 -41.16 200.46  
 138.64 2 50 31 2725.24 -35.80 79.68 238.23 45.83 3 35 57 2125.2 -41.15 72.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2386 TRA -.1356 TC3-1.7620 BAU .5485 SGT 3338.3 SGR 2596.9 SCS 818.9 ST 2951.7 SR 2336.8 SS 2750.7  
 RDE 1.7721 RRA .1229 RC3-1.2669 FAU .11324 RRT .9794 RRF .9979 RTF .9745 CRT .9978 CR3 -.9999 CST -.9970  
 FDE 6.2541 FRA .5560 FC3-5.1854 BSP 12969 SGB 4229.5 R23 .1406 R13 .9881 LSA 4659.6 MSA 167.3 SSA 4.1  
 BDE 2.8551 BRA .1830 BC3 2.1702 FSP -2800 SGI 4209.0 SGT 415.7 THA 37.74 EL1 3762.7 EL2 122.7 ALF 38.35

LAUNCH DATE JAN 5 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 455.613

RL 147.09 LAL -.00 LOL 104.48 VL 27.685 GAL 1.60 AZL 83.75 HCA 206.19 SMA 127.86 ECC .15299 INC 6.2458 V1 30.288  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.394 GAP 2.27 AZP 95.61 TAL 171.07 TAP 17.26 RCA 108.30 APO 147.42 V2 34.783  
 RC 103.843 GL 48.29 GP -39.04 ZAL 79.54 ZAP 113.22 ETS 341.48 ZAE 132.63 ETE 227.90 ZAC 110.22 ETC 179.63 CLP-120.51

PLANETOCENTRIC CONIC

C3 17.351 VHL 4.165 DLA 53.08 RAL 2.55 RAD 6567.7 VEL 11.779 PTH 2.08 VHP 3.746 DPA -33.90 RAP 28.80 ECC 1.2856  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.03 18 7 21 4290.31 -36.03 204.51 239.43 47.98 19 18 51 3690.3 -41.14 197.04  
 136.97 2 58 38 2715.77 -36.02 78.88 239.42 47.97 3 43 54 2115.8 -41.13 71.41  
 43.03 18 7 21 4290.31 -36.03 204.51 239.43 47.98 19 18 51 3690.3 -41.14 197.04  
 136.97 2 58 38 2715.77 -36.02 78.88 239.42 47.97 3 43 54 2115.8 -41.13 71.41  
 43.03 18 7 21 4290.31 -36.03 204.51 239.43 47.98 19 18 51 3690.3 -41.14 197.04  
 136.97 2 58 38 2715.77 -36.02 78.88 239.42 47.97 3 43 54 2115.8 -41.13 71.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2902 TRA -.0390 TC3-2.1407 BAU .5701 SGT 3621.1 SGR 2295.2 SCS 865.5 ST 3150.8 SR 2031.9 SS 2742.6  
 RDE 1.4748 RRA .1840 RC3-1.2075 FAU .12059 RRT .9807 RRF .9968 RTF .9756 CRT .9980 CR3 -.9999 CST -.9970  
 FDE 6.1442 FRA .8516 FC3-6.0167 BSP 13157 SGB 4287.2 R23 .1499 R13 .9855 LSA 4842.1 MSA 169.9 SSA 4.8  
 BDE 2.7240 BRA .1666 BC3 2.4578 FSP -2978 SGI 4270.3 SGT 380.4 THA 32.15 EL1 3747.5 EL2 109.3 ALF 32.79

LAUNCH DATE JAN 5 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 461.764

RL 147.09 LAL -.00 LOL 104.48 VL 27.674 GAL 1.73 AZL 84.16 HCA 209.34 SMA 127.78 ECC .15410 INC 5.8386 V1 30.288
RP 108.95 LAP -2.86 LOP 313.70 VP 37.386 GAP 2.61 AZP 95.09 TAL 170.45 TAP 19.79 RCA 108.09 APO 147.47 V2 34.783
RC 108.045 GL 44.26 GP -35.00 ZAL 78.32 ZAP 117.55 ETS 340.26 ZAE 135.97 ETE 221.92 ZAC 109.43 ETC 177.61 CLP-124.38

PLANETOCENTRIC CONIC

C3 16.257 VHL 4.032 DLA 51.87 RAL 5.56 RAD 6567.7 VEL 11.732 PTH 2.07 VHP 3.703 DPA -30.66 RAP 25.88 ECC 1.2676
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.54 18 23 53 4265.19 -36.03 201.80 240.76 49.77 19 34 58 3665.2 -40.93 194.14
135.46 3 6 6 2710.98 -36.02 78.36 240.75 49.76 3 51 17 2111.0 -40.92 70.69
44.54 18 23 53 4265.19 -36.03 201.80 240.76 49.77 19 34 58 3665.2 -40.93 194.14
135.46 3 6 6 2710.98 -36.02 78.36 240.75 49.76 3 51 17 2111.0 -40.92 70.69
44.54 18 23 53 4265.19 -36.03 201.80 240.76 49.77 19 34 58 3665.2 -40.93 194.14
135.46 3 6 6 2710.98 -36.02 78.36 240.75 49.76 3 51 17 2111.0 -40.92 70.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3333 TRA .0611 TC3-2.5007 BAU .5949 SGT 3883.3 SGR 2021.3 SCS 885.7 ST 3316.4 SR 1765.0 SS 2693.2
RDE 1.2588 RRA .1859 RC3-1.1123 FAU .12583 RRT .9818 RRF .9951 RTF .9765 CRT .9982 CRS -.9998 CST -.9969
FDE 5.8984 FRA 1.1126 FC3-6.5941 BSP 13460 SGB 4377.8 R23 .1514 R13 .9835 LSA 4619.3 MSA 171.0 SSA 5.6
BDE 2.6417 BRA .1957 BC3 2.7370 FSP -3059 SGI 4364.3 S62 343.3 THA 27.25 EL1 3755.7 EL2 93.7 ALF 28.00

LAUNCH DATE JAN 5 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 467.898

RL 147.09 LAL -.00 LOL 104.48 VL 27.661 GAL 1.86 AZL 84.50 HCA 212.50 SMA 127.69 ECC .15536 INC 5.5041 V1 30.288
RP 108.94 LAP -2.95 LOP 316.87 VP 37.377 GAP 2.95 AZP 94.65 TAL 169.78 TAP 22.28 RCA 107.85 APO 147.52 V2 34.784
RC 110.446 GL 42.38 GP -31.47 ZAL 77.05 ZAP 121.66 ETS 339.40 ZAE 134.64 ETE 216.47 ZAC 108.77 ETC 176.06 CLP-127.98

PLANETOCENTRIC CONIC

C3 15.478 VHL 3.934 DLA 50.78 RAL 8.41 RAD 6567.6 VEL 11.699 PTH 2.06 VHP 3.708 DPA -27.73 RAP 23.60 ECC 1.2547
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.91 18 39 29 4244.28 -35.88 199.46 242.25 51.29 19 50 14 3644.3 -40.61 191.66
134.09 3 13 14 2709.61 -35.87 78.06 242.24 51.28 3 58 24 2109.6 -40.60 70.26
45.91 18 39 29 4244.28 -35.88 199.46 242.25 51.29 19 50 14 3644.3 -40.61 191.66
134.09 3 13 14 2709.61 -35.87 78.06 242.24 51.28 3 58 24 2109.6 -40.60 70.26
45.91 18 39 29 4244.28 -35.88 199.46 242.25 51.29 19 50 14 3644.3 -40.61 191.66
134.09 3 13 14 2709.61 -35.87 78.06 242.24 51.28 3 58 24 2109.6 -40.60 70.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3688 TRA .1653 TC3-2.8356 BAU .6221 SGT 4125.8 SGR 1778.8 SCS 885.1 ST 3452.0 SR 1537.0 SS 2615.8
RDE 1.0512 RRA .1959 RC3 -.9981 FAU .12378 RRT .9817 RRF .9925 RTF .9772 CRT .9985 CRS -.9997 CST -.9968
FDE 5.5692 FRA 1.3378 FC3-8.9220 BSP 13866 SGB 4492.9 R23 .1448 R13 .9819 LSA 4592.6 MSA 171.6 SSA 6.4
BDE 2.5914 BRA .2563 BC3 3.0062 FSP -3067 SGI 4482.1 S62 311.5 THA 23.06 EL1 3777.9 EL2 77.6 ALF 23.98

LAUNCH DATE JAN 5 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 474.014

RL 147.09 LAL -.00 LOL 104.48 VL 27.646 GAL 2.01 AZL 84.78 HCA 215.66 SMA 127.59 ECC .15678 INC 5.2229 V1 30.288
RP 108.94 LAP -3.04 LOP 320.03 VP 37.368 GAP 3.29 AZP 94.25 TAL 169.06 TAP 24.72 RCA 107.58 APO 147.59 V2 34.786
RC 112.844 GL 40.62 GP -28.40 ZAL 75.72 ZAP 125.51 ETS 338.82 ZAE 134.80 ETE 211.63 ZAC 108.29 ETC 174.88 CLP-131.32

PLANETOCENTRIC CONIC

C3 14.927 VHL 3.864 DLA 49.79 RAL 11.16 RAD 6567.6 VEL 11.675 PTH 2.05 VHP 3.750 DPA -25.07 RAP 21.85 ECC 1.2457
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.16 18 54 29 4226.66 -35.63 197.42 243.89 52.58 20 4 55 3626.7 -40.21 189.51
132.84 3 20 10 2710.94 -35.62 77.96 243.87 52.57 4 5 21 2110.9 -40.20 70.06
47.16 18 54 29 4226.66 -35.63 197.42 243.89 52.58 20 4 55 3626.7 -40.21 189.51
132.84 3 20 10 2710.94 -35.62 77.96 243.87 52.57 4 5 21 2110.9 -40.20 70.06
47.16 18 54 29 4226.66 -35.63 197.42 243.89 52.58 20 4 55 3626.7 -40.21 189.51
132.84 3 20 10 2710.94 -35.62 77.96 243.87 52.57 4 5 21 2110.9 -40.20 70.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3975 TRA .2738 TC3-3.1398 BAU .6506 SGT 4350.0 SGR 1567.4 SCS 868.9 ST 3561.2 SR 1345.4 SS 2520.4
RDE .9025 RRA .1978 RC3 -.8769 FAU .12119 RRT .9809 RRF .9887 RTF .9778 CRT .9988 CRS -.9994 CST -.9966
FDE 5.1961 FRA 1.3235 FC3-7.0291 BSP 14344 SGB 4623.8 R23 .1300 R13 .9810 LSA 4562.3 MSA 171.5 SSA 7.2
BDE 2.5617 BRA .3378 BC3 3.2600 FSP -3022 SGI 4614.9 S62 287.3 THA 19.54 EL1 3806.3 EL2 61.4 ALF 28.68

LAUNCH DATE JAN 5 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 480.113

RL 147.09 LAL -.00 LOL 104.48 VL 27.630 GAL 2.18 AZL 85.02 HCA 218.82 SMA 127.48 ECC .15837 INC 4.9818 V1 30.288
RP 108.93 LAP -3.12 LOP 323.20 VP 37.358 GAP 3.62 AZP 93.89 TAL 168.31 TAP 27.12 RCA 107.29 APO 147.67 V2 34.789
RC 115.239 GL 38.95 GP -25.71 ZAL 74.32 ZAP 129.10 ETS 338.44 ZAE 134.61 ETE 207.44 ZAC 108.01 ETC 173.99 CLP-134.42

PLANETOCENTRIC CONIC

C3 14.550 VHL 3.814 DLA 48.88 RAL 13.84 RAD 6567.6 VEL 11.659 PTH 2.05 VHP 3.820 DPA -22.65 RAP 20.58 ECC 1.2395
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.33 19 9 2 4211.73 -35.30 195.82 245.67 53.69 20 19 13 3611.7 -39.76 187.65
131.67 3 27 1 2714.48 -35.29 78.01 245.66 53.68 4 12 16 2114.5 -39.75 70.04
48.33 19 9 2 4211.73 -35.30 195.82 245.67 53.69 20 19 13 3611.7 -39.76 187.65
131.67 3 27 1 2714.48 -35.29 78.01 245.66 53.68 4 12 16 2114.5 -39.75 70.04
48.33 19 9 2 4211.73 -35.30 195.82 245.67 53.69 20 19 13 3611.7 -39.76 187.65
131.67 3 27 1 2714.48 -35.29 78.01 245.66 53.68 4 12 16 2114.5 -39.75 70.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4221 TRA .3888 TC3-3.4036 BAU .6781 SGT 4557.6 SGR 1386.5 SCS 842.1 ST 3648.9 SR 1187.4 SS 2417.1
RDE .7854 RRA .1960 RC3 -.7532 FAU .11645 RRT .9784 RRF .9833 RTF .9782 CRT .9992 CRS -.9990 CST -.9964
FDE 4.8129 FRA 1.6833 FC3-8.9292 BSP 14790 SGB 4763.8 R23 .1099 R13 .9802 LSA 4531.8 MSA 171.8 SSA 8.0
BDE 2.5463 BRA .4363 BC3 3.4859 FSP -2918 SGI 4755.9 S62 274.5 THA 16.63 EL1 3837.0 EL2 45.9 ALF 18.01



LAUNCH DATE JAN 5 1969 FLIGHT TIME 174.00 ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC DISTANCE 486.192  
 RL 147.09 LAL -.00 LOL 104.48 VL 27.613 GAL 2.35 AZL 85.23 HCA 221.98 SMA 127.37 ECC .16011 INC 4.7717 V1 30.208  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.349 GAP 3.96 AZP 93.55 TAL 167.51 TAP 29.49 RCA 106.97 APO 147.76 V2 34.792  
 RC 117.830 GL 37.35 GP -23.37 ZAL 72.87 ZAP 132.43 ETS 338.20 ZAE 134.19 ETE 205.85 ZAC 107.95 ETC 173.33 CLP-137.30

PLANETOCENTRIC CONIC  
 C3 14.312 VHL 3.783 DLA 48.03 RAL 16.48 RAD 6567.6 VEL 11.649 PTH 2.04 VHP 3.913 DPA -20.45 RAP 19.71 ECC 1.2355  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.43 19 23 17 4199.01 -34.92 194.03 247.60 54.64 20 33 16 3599.0 -39.26 186.02  
 130.57 3 33 51 2719.91 -34.91 78.21 247.59 54.63 4 19 10 2119.9 -39.25 70.20  
 49.43 19 23 17 4199.01 -34.92 194.03 247.60 54.64 20 33 16 3599.0 -39.26 186.02  
 130.57 3 33 51 2719.91 -34.91 78.21 247.59 54.63 4 19 10 2119.9 -39.25 70.20  
 49.43 19 23 17 4199.01 -34.92 194.03 247.60 54.64 20 33 16 3599.0 -39.26 186.02  
 130.57 3 33 51 2719.91 -34.91 78.21 247.59 54.63 4 19 10 2119.9 -39.25 70.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4396 TRA .5093 TC3-3.6367 BAU .7065 SGT 4749.0 SGR 1232.3 SCS 808.1 ST 3711.8 SR 1056.3 SS 2305.2  
 RDE .6921 RRA .1901 RC3 -.6398 FAU .11100 RRT .9743 RRF .9759 RTF .9786 CRT .9995 CRS -.9983 CST -.9962  
 FDE 4.4277 FRA 1.8050 FC3-6.7143 BSP 15299 SGB 4906.3 R23 .0861 R13 .9799 LSA 4492.0 MSA 171.3 SSA 8.8  
 BDE 2.5359 BRA .5436 BC3 3.6925 FSP -2802 SGI 4898.9 SGT 269.2 THA 14.23 EL1 3859.1 EL2 30.9 ALF 15.88

LAUNCH DATE JAN 5 1969 FLIGHT TIME 176.00 ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC DISTANCE 492.254  
 RL 147.09 LAL -.00 LOL 104.48 VL 27.595 GAL 2.54 AZL 85.41 HCA 225.14 SMA 127.24 ECC .16203 INC 4.5858 V1 30.208  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.339 GAP 4.29 AZP 93.24 TAL 166.67 TAP 31.81 RCA 106.63 APO 147.86 V2 34.796  
 RC 120.015 GL 35.81 GP -21.53 ZAL 71.36 ZAP 135.51 ETS 338.04 ZAE 133.63 ETE 200.81 ZAC 108.09 ETC 172.84 CLP-139.98

PLANETOCENTRIC CONIC  
 C3 14.193 VHL 3.767 DLA 47.23 RAL 19.10 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 4.024 DPA -18.42 RAP 19.18 ECC 1.2336  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.48 19 37 22 4188.13 -34.48 192.81 249.66 55.47 20 47 10 3588.1 -38.73 184.57  
 129.52 3 40 39 2727.09 -34.47 78.53 249.65 55.46 4 26 6 2127.1 -38.72 70.50  
 50.48 19 37 22 4188.13 -34.48 192.81 249.66 55.47 20 47 10 3588.1 -38.73 184.57  
 129.52 3 40 39 2727.09 -34.47 78.53 249.65 55.46 4 26 6 2127.1 -38.72 70.50  
 50.48 19 37 22 4188.13 -34.48 192.81 249.66 55.47 20 47 10 3588.1 -38.73 184.57  
 129.52 3 40 39 2727.09 -34.47 78.53 249.65 55.46 4 26 6 2127.1 -38.72 70.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4509 TRA .6341 TC3-3.8323 BAU .7342 SGT 4924.3 SGR 1102.0 SCS 789.7 ST 3752.7 SR 948.5 SS 2189.9  
 RDE .6184 RRA .1828 RC3 -.5355 FAU .10484 RRT .9677 RRF .9681 RTF .9790 CRT .9998 CRS -.9972 CST -.9959  
 FDE 4.0550 FRA 1.9000 FC3-6.3948 BSP 15820 SGB 5046.1 R23 .0630 R13 .9798 LSA 4444.0 MSA 170.8 SSA 9.6  
 BDE 2.5277 BRA .6598 BC3 3.8696 FSP -2675 SGI 5038.8 SGT 271.6 THA 12.26 EL1 3870.7 EL2 17.5 ALF 14.18

LAUNCH DATE JAN 5 1969 FLIGHT TIME 178.00 ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 498.296  
 RL 147.09 LAL -.00 LOL 104.48 VL 27.576 GAL 2.74 AZL 85.58 HCA 228.30 SMA 127.12 ECC .16411 INC 4.4192 V1 30.208  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.329 GAP 4.63 AZP 92.94 TAL 165.80 TAP 34.10 RCA 106.25 APO 147.98 V2 34.800  
 RC 122.394 GL 34.31 GP -19.55 ZAL 69.79 ZAP 138.37 ETS 337.94 ZAE 132.99 ETE 198.25 ZAC 108.44 ETC 172.48 CLP-142.48

PLANETOCENTRIC CONIC  
 C3 14.177 VHL 3.765 DLA 46.46 RAL 21.70 RAD 6567.6 VEL 11.643 PTH 2.04 VHP 4.149 DPA -16.54 RAP 18.96 ECC 1.2333  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.49 19 51 20 4178.82 -34.00 191.32 251.84 56.20 21 0 59 3578.8 -38.17 183.28  
 128.51 3 47 26 2735.91 -33.99 78.98 251.84 56.19 4 33 2 2135.9 -38.16 70.94  
 51.49 19 51 20 4178.82 -34.00 191.32 251.84 56.20 21 0 59 3578.8 -38.17 183.28  
 128.51 3 47 26 2735.91 -33.99 78.98 251.84 56.19 4 33 2 2135.9 -38.16 70.94  
 51.49 19 51 20 4178.82 -34.00 191.32 251.84 56.20 21 0 59 3578.8 -38.17 183.28  
 128.51 3 47 26 2735.91 -33.99 78.98 251.84 56.19 4 33 2 2135.9 -38.16 70.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4580 TRA .7858 TC3-3.9911 BAU .7611 SGT 5087.7 SGR 994.1 SCS 729.7 ST 3775.6 SR 861.1 SS 2075.8  
 RDE .5607 RRA .1747 RC3 -.4429 FAU .09846 RRT .9583 RRF .9535 RTF .9793 CRT .9999 CRS -.9956 CST -.9957  
 FDE 3.7057 FRA 1.9755 FC3-6.0122 BSP 16333 SGB 5183.9 R23 .0427 R13 .9798 LSA 4390.5 MSA 170.4 SSA 10.3  
 BDE 2.5211 BRA .7855 BC3 4.0156 FSP -2541 SGI 5176.3 SGT 279.3 THA 10.64 EL1 3872.5 EL2 10.3 ALF 12.85

LAUNCH DATE JAN 5 1969 FLIGHT TIME 180.00 ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC DISTANCE 504.320  
 RL 147.09 LAL -.00 LOL 104.48 VL 27.556 GAL 2.96 AZL 85.73 HCA 231.46 SMA 126.98 ECC .16638 INC 4.2682 V1 30.208  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.319 GAP 4.97 AZP 92.66 TAL 164.89 TAP 36.35 RCA 105.85 APO 148.11 V2 34.805  
 RC 124.786 GL 32.85 GP -17.99 ZAL 68.18 ZAP 141.01 ETS 337.86 ZAE 132.31 ETE 196.09 ZAC 108.97 ETC 172.22 CLP-144.81

PLANETOCENTRIC CONIC  
 C3 14.257 VHL 3.776 DLA 45.71 RAL 24.29 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 4.288 DPA -14.79 RAP 19.01 ECC 1.2346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.49 20 5 18 4170.79 -33.47 190.15 254.14 56.84 21 14 49 3570.8 -37.57 182.11  
 127.51 3 54 8 2746.41 -33.46 79.55 254.13 56.83 4 39 55 2146.4 -37.56 71.51  
 52.49 20 5 18 4170.79 -33.47 190.15 254.14 56.84 21 14 49 3570.8 -37.57 182.11  
 127.51 3 54 8 2746.41 -33.46 79.55 254.13 56.83 4 39 55 2146.4 -37.56 71.51  
 52.49 20 5 18 4170.79 -33.47 190.15 254.14 56.84 21 14 49 3570.8 -37.57 182.11  
 127.51 3 54 8 2746.41 -33.46 79.55 254.13 56.83 4 39 55 2146.4 -37.56 71.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4625 TRA .9070 TC3-4.1032 BAU .7851 SGT 5239.1 SGR 905.4 SCS 689.4 ST 3784.2 SR 791.1 SS 1966.0  
 RDE .5184 RRA .1874 RC3 -.3590 FAU .09163 RRT .9455 RRF .9378 RTF .9794 CRT .9997 CRS -.9933 CST -.9954  
 FDE 3.3847 FRA 2.0391 FC3-5.5640 BSP 16760 SGB 5316.8 R23 .0275 R13 .9797 LSA 4333.9 MSA 170.6 SSA 11.0  
 BDE 2.5160 BRA .9225 BC3 4.1189 FSP -2392 SGI 5308.8 SGT 291.1 THA 9.31 EL1 3866.0 EL2 18.1 ALF 11.81

LAUNCH DATE JAN 5 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 510.323

RL 147.09 LAL -.00 LOL 104.48 VL 27.535 GAL 3.19 AZL 85.87 HCA 234.62 SMA 126.84 ECC .16884 INC 4.1299 V1 30.288  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.310 GAP 5.31 AZP 92.39 TAL 163.95 TAP 38.58 RCA 105.43 APO 148.26 V2 34.811  
 RC 127.128 GL 31.42 GP -16.62 ZAL 66.52 ZAP 143.47 ETS 357.79 ZAE 131.64 ETE 194.27 ZAC 109.67 ETC 172.03 CLP-147.00

PLANETOCENTRIC CONIC

C3 14.427 VHL 3.798 DLA 44.98 RAL 26.87 RAD 6567.6 VEL 11.654 PTH 2.05 VHP 4.438 DPA -13.15 RAP 19.28 ECC 1.2374  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.47 20 19 15 4163.92 -32.90 189.07 256.53 57.41 21 28 39 3563.9 -36.93 181.05  
 126.53 4 0 45 2758.54 -32.89 80.23 256.52 57.40 4 46 44 2158.5 -36.92 72.21  
 53.47 20 19 15 4163.92 -32.90 189.07 256.53 57.41 21 28 39 3563.9 -36.93 181.05  
 126.53 4 0 45 2758.54 -32.89 80.23 256.52 57.40 4 46 44 2158.5 -36.92 72.21  
 53.47 20 19 15 4163.92 -32.90 189.07 256.53 57.41 21 28 39 3563.9 -36.93 181.05  
 126.53 4 0 45 2758.54 -32.89 80.23 256.52 57.40 4 46 44 2158.5 -36.92 72.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4596 TRA 1.0530 TC3-4.1850 BAU .8091 SGT 5377.2 SGR 832.1 S63 649.2 ST 3772.0 SR 733.8 SS 1855.6  
 RDE .4817 RRA .1599 RC3 -.2887 FAU .08523 RRT .9295 RRF .9191 RTF .9797 CRT .9991 CRS -.9902 CST -.9951  
 FDE 3.0832 FRA 2.0831 FC3-5.1141 BSP 17221 SGB 5441.2 R23 .0152 R13 .9798 LSA 4263.9 MSA 170.8 SSA 11.7  
 BDE 2.5063 BRA 1.0651 BC3 4.1950 FSP -2256 S61 5432.8 S62 303.8 THA 8.21 EL1 3842.6 EL2 30.9 ALF 11.00

LAUNCH DATE JAN 5 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 516.306

RL 147.09 LAL -.00 LOL 104.48 VL 27.514 GAL 3.44 AZL 86.00 HCA 237.79 SMA 126.70 ECC .17149 INC 4.0020 V1 30.288  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.300 GAP 5.66 AZP 92.14 TAL 162.98 TAP 40.77 RCA 104.97 APO 148.43 V2 34.818  
 RC 129.481 GL 30.01 GP -15.41 ZAL 64.82 ZAP 145.77 ETS 357.71 ZAE 130.98 ETE 192.73 ZAC 110.52 ETC 171.88 CLP-149.05

PLANETOCENTRIC CONIC

C3 14.687 VHL 3.832 DLA 44.25 RAL 29.44 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 4.599 DPA -11.61 RAP 19.75 ECC 1.2417  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.45 20 33 16 4157.98 -32.29 188.07 259.01 57.92 21 42 34 3558.0 -36.26 180.07  
 125.55 4 7 13 2772.39 -32.28 81.04 259.00 57.91 4 53 25 2172.4 -36.25 73.05  
 54.45 20 33 16 4157.98 -32.29 188.07 259.01 57.92 21 42 34 3558.0 -36.26 180.07  
 125.55 4 7 13 2772.39 -32.28 81.04 259.00 57.91 4 53 25 2172.4 -36.25 73.05  
 54.45 20 33 16 4157.98 -32.29 188.07 259.01 57.92 21 42 34 3558.0 -36.26 180.07  
 125.55 4 7 13 2772.39 -32.28 81.04 259.00 57.91 4 53 25 2172.4 -36.25 73.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4524 TRA 1.2073 TC3-4.2303 BAU .8318 SGT 5505.1 SGR 772.8 S63 610.3 ST 3744.9 SR 687.8 SS 1749.1  
 RDE .4556 RRA .1534 RC3 -.2291 FAU .07903 RRT .9104 RRF .8977 RTF .9798 CRT .9978 CRS -.9861 CST -.9947  
 FDE 2.8069 FRA 2.1172 FC3-4.6584 BSP 17665 SGB 5559.0 R23 .0064 R13 .9799 LSA 4186.5 MSA 171.7 SSA 12.3  
 BDE 2.4943 BRA 1.2170 BC3 4.2365 FSP -2125 S61 5550.0 S62 317.1 THA 7.31 EL1 3807.2 EL2 44.5 ALF 10.39

LAUNCH DATE JAN 5 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 522.267

RL 147.09 LAL -.00 LOL 104.48 VL 27.492 GAL 3.70 AZL 86.12 HCA 240.96 SMA 126.55 ECC .17435 INC 3.8827 V1 30.288  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.290 GAP 6.01 AZP 91.89 TAL 161.99 TAP 42.94 RCA 104.49 APO 148.62 V2 34.825  
 RC 131.823 GL 28.63 GP -14.35 ZAL 63.09 ZAP 147.91 ETS 357.60 ZAE 130.35 ETE 191.43 ZAC 111.52 ETC 171.78 CLP-150.98

PLANETOCENTRIC CONIC

C3 15.036 VHL 3.878 DLA 43.53 RAL 31.98 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 4.769 DPA -10.14 RAP 20.40 ECC 1.2475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.45 20 47 20 4152.83 -31.63 187.12 261.57 58.38 21 56 33 3552.8 -35.55 179.16  
 124.55 4 13 27 2788.05 -31.62 81.97 261.56 58.37 4 59 55 2188.0 -35.54 74.01  
 55.45 20 47 20 4152.83 -31.63 187.12 261.57 58.38 21 56 33 3552.8 -35.55 179.16  
 124.55 4 13 27 2788.05 -31.62 81.97 261.56 58.37 4 59 55 2188.0 -35.54 74.01  
 55.45 20 47 20 4152.83 -31.63 187.12 261.57 58.38 21 56 33 3552.8 -35.55 179.16  
 124.55 4 13 27 2788.05 -31.62 81.97 261.56 58.37 4 59 55 2188.0 -35.54 74.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4409 TRA 1.3704 TC3-4.2402 BAU .8531 SGT 5623.2 SGR 725.2 S63 573.1 ST 3703.9 SR 651.1 SS 1646.8  
 RDE .4384 RRA .1479 RC3 -.1791 FAU .07309 RRT .8887 RRF .8741 RTF .9799 CRT .9958 CRS -.9809 CST -.9944  
 FDE 2.5544 FRA 2.1441 FC3-4.2084 BSP 18085 SGB 5669.8 R23 .0004 R13 .9800 LSA 4101.8 MSA 173.3 SSA 12.9  
 BDE 2.4796 BRA 1.3784 BC3 4.2439 FSP -2001 S61 5660.2 S62 330.3 THA 6.56 EL1 3760.3 EL2 58.4 ALF 9.93

LAUNCH DATE JAN 5 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 528.207

RL 147.09 LAL -.00 LOL 104.48 VL 27.469 GAL 3.98 AZL 86.23 HCA 244.12 SMA 126.40 ECC .17744 INC 3.7704 V1 30.288  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.281 GAP 6.37 AZP 91.65 TAL 160.97 TAP 45.09 RCA 103.97 APO 148.83 V2 34.833  
 RC 134.155 GL 27.26 GP -13.41 ZAL 61.33 ZAP 149.91 ETS 357.44 ZAE 129.76 ETE 190.32 ZAC 112.64 ETC 171.69 CLP-152.81

PLANETOCENTRIC CONIC

C3 15.479 VHL 3.934 DLA 42.80 RAL 34.51 RAD 6567.6 VEL 11.699 PTH 2.06 VHP 4.949 DPA -8.74 RAP 21.21 ECC 1.2547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.45 21 1 29 4148.39 -30.93 186.22 264.20 58.80 22 10 37 3548.4 -34.81 178.31  
 123.55 4 19 26 2805.52 -30.92 83.02 264.19 58.79 5 6 12 2205.5 -34.80 75.11  
 56.45 21 1 29 4148.39 -30.93 186.22 264.20 58.80 22 10 37 3548.4 -34.81 178.31  
 123.55 4 19 26 2805.52 -30.92 83.02 264.19 58.79 5 6 12 2205.5 -34.80 75.11  
 56.45 21 1 29 4148.39 -30.93 186.22 264.20 58.80 22 10 37 3548.4 -34.81 178.31  
 123.55 4 19 26 2805.52 -30.92 83.02 264.19 58.79 5 6 12 2205.5 -34.80 75.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4284 TRA 1.5453 TC3-4.2085 BAU .8714 SGT 5734.2 SGR 687.9 S63 538.0 ST 3655.5 SR 622.4 SS 1552.1  
 RDE .4233 RRA .1440 RC3 -.1386 FAU .06723 RRT .8651 RRF .8494 RTF .9800 CRT .9930 CRS -.9745 CST -.9940  
 FDE 2.3288 FRA 2.1682 FC3-3.7599 BSP 18399 SGB 5775.3 R23 -.0028 R13 .9800 LSA 4016.0 MSA 175.8 SSA 13.4  
 BDE 2.4650 BRA 1.5520 BC3 4.2108 FSP -1871 S61 5765.1 S62 343.2 THA 5.95 EL1 3707.4 EL2 72.5 ALF 9.60

LAUNCH DATE JAN 5 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 534.121

RL 147.09 LAL -0.00 LOL 104.48 VL 27.445 GAL 4.28 AZL 86.34 HCA 247.29 SMA 126.25 ECC .18076 INC 3.6840 V1 30.288
RP 108.77 LAP -3.38 LOP 351.73 VP 37.271 GAP 6.74 AZP 91.42 TAL 159.92 TAP 47.21 RCA 103.43 APO 149.07 V2 34.841
RC 136.471 GL 25.91 GP -12.57 ZAL 59.56 ZAP 151.79 ETS 337.24 ZAE 129.20 ETE 189.38 ZAC 113.87 ETC 171.63 CLP-154.54

PLANETOCENTRIC CONIC

C3 16.020 VHL 4.002 DLA 42.07 RAL 37.00 RAD 6567.6 VEL 11.722 PTH 2.07 VHP 5.138 DPA -7.40 RAP 22.15 ECC 1.2636
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.48 21 15 42 4144.53 -30.19 185.36 266.89 59.18 22 24 47 3544.5 -34.02 177.49
122.52 4 25 7 2824.92 -30.17 84.21 266.88 59.17 5 12 11 2224.9 -34.01 76.34
57.48 21 15 42 4144.53 -30.19 185.36 266.89 59.18 22 24 47 3544.5 -34.02 177.49
122.52 4 25 7 2824.92 -30.17 84.21 266.88 59.17 5 12 11 2224.9 -34.01 76.34
57.48 21 15 42 4144.53 -30.19 185.36 266.89 59.18 22 24 47 3544.5 -34.02 177.49
122.52 4 25 7 2824.92 -30.17 84.21 266.88 59.17 5 12 11 2224.9 -34.01 76.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4083 TRA 1.7272 TC3-4.1543 BAU .8900 SGT 5834.3 SGR 657.8 SCS 504.6 ST 3590.8 SR 598.9 SS 1458.8
RDE .4144 RRA .1409 RC3 -.1034 FAU .06193 RRT .8408 RRF .8240 RTF .9800 CRT .9892 CRS -.9667 CST -.9937
FDE 2.1185 FRA 2.1835 FC3-3.3468 BSP 18775 SGB 5871.3 R23 -.0052 R13 .9800 LSA 3917.7 MSA 179.2 SSA 13.8
BDE 2.4437 BRA 1.7330 BC3 4.1556 FSP -1760 SGI 5860.5 SGT 354.7 THA 5.43 EL1 3639.4 EL2 86.8 ALF 9.37

LAUNCH DATE JAN 5 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 540.011

RL 147.09 LAL -0.00 LOL 104.48 VL 27.422 GAL 4.59 AZL 86.44 HCA 250.46 SMA 126.09 ECC .18434 INC 3.5623 V1 30.288
RP 108.74 LAP -3.38 LOP 354.91 VP 37.262 GAP 7.11 AZP 91.19 TAL 158.86 TAP 49.32 RCA 102.85 APO 149.33 V2 34.850
RC 136.775 GL 24.58 GP -11.82 ZAL 57.77 ZAP 153.57 ETS 336.98 ZAE 128.69 ETE 188.57 ZAC 115.20 ETC 171.57 CLP-156.18

PLANETOCENTRIC CONIC

C3 16.665 VHL 4.082 DLA 41.33 RAL 39.45 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 5.337 DPA -6.10 RAP 23.21 ECC 1.2743
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.54 21 30 0 4141.18 -29.40 184.53 269.63 59.53 22 39 2 3541.2 -33.20 176.71
121.46 4 30 24 2846.32 -29.38 85.53 269.62 59.52 5 17 50 2246.3 -33.19 77.71
58.54 21 30 0 4141.18 -29.40 184.53 269.63 59.53 22 39 2 3541.2 -33.20 176.71
121.46 4 30 24 2846.32 -29.38 85.53 269.62 59.52 5 17 50 2246.3 -33.19 77.71
58.54 21 30 0 4141.18 -29.40 184.53 269.63 59.53 22 39 2 3541.2 -33.20 176.71
121.46 4 30 24 2846.32 -29.38 85.53 269.62 59.52 5 17 50 2246.3 -33.19 77.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3848 TRA 1.9193 TC3-4.0713 BAU .9073 SGT 5926.2 SGR 634.1 SCS 473.2 ST 3517.0 SR 580.1 SS 1370.9
RDE .4095 RRA .1392 RC3 -.0770 FAU .05696 RRT .8160 RRF .7991 RTF .9800 CRT .9842 CRS -.9575 CST -.9933
FDE 1.9277 FRA 2.1953 FC3-2.9588 BSP 19128 SGB 5960.0 R23 -.0063 R13 .9800 LSA 3814.6 MSA 183.7 SSA 14.0
BDE 2.4195 BRA 1.9244 BC3 4.0720 FSP -1656 SGI 5948.8 SGT 365.1 THA 5.01 EL1 3563.1 EL2 101.3 ALF 9.23

LAUNCH DATE JAN 5 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 545.873

RL 147.09 LAL -0.00 LOL 104.48 VL 27.397 GAL 4.93 AZL 86.54 HCA 253.64 SMA 125.93 ECC .18819 INC 3.4645 V1 30.288
RP 108.71 LAP -3.32 LOP 358.09 VP 37.253 GAP 7.50 AZP 90.98 TAL 157.77 TAP 51.41 RCA 102.23 APO 149.63 V2 34.860
RC 141.067 GL 23.28 GP -11.13 ZAL 55.99 ZAP 155.24 ETS 336.64 ZAE 128.21 ETE 187.88 ZAC 116.63 ETC 171.50 CLP-157.76

PLANETOCENTRIC CONIC

C3 17.425 VHL 4.174 DLA 40.58 RAL 41.87 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.545 DPA -4.86 RAP 24.38 ECC 1.2868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.62 21 44 25 4138.13 -28.57 183.72 272.42 59.86 22 53 23 3538.1 -32.34 175.94
120.38 4 35 14 2869.93 -28.55 87.01 272.41 59.84 5 23 4 2269.9 -32.33 79.24
59.62 21 44 25 4138.13 -28.57 183.72 272.42 59.86 22 53 23 3538.1 -32.34 175.94
120.38 4 35 14 2869.93 -28.55 87.01 272.41 59.84 5 23 4 2269.9 -32.33 79.24
59.62 21 44 25 4138.13 -28.57 183.72 272.42 59.86 22 53 23 3538.1 -32.34 175.94
120.38 4 35 14 2869.93 -28.55 87.01 272.41 59.84 5 23 4 2269.9 -32.33 79.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3575 TRA 2.1228 TC3-3.9605 BAU .9227 SGT 6009.9 SGR 615.4 SCS 443.7 ST 3435.8 SR 564.9 SS 1288.2
RDE .4079 RRA .1390 RC3 -.0562 FAU .05225 RRT .7923 RRF .7754 RTF .9799 CRT .9781 CRS -.9468 CST -.9929
FDE 1.7541 FRA 2.2047 FC3-2.3958 BSP 19453 SGB 6041.3 R23 -.0065 R13 .9799 LSA 3707.7 MSA 189.2 SSA 14.2
BDE 2.3925 BRA 2.1271 BC3 3.9609 FSP -1558 SGI 6029.7 SGT 374.3 THA 4.66 EL1 3480.0 EL2 116.0 ALF 9.15

LAUNCH DATE JAN 5 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 551.706

RL 147.09 LAL -0.00 LOL 104.48 VL 27.373 GAL 5.28 AZL 86.63 HCA 256.81 SMA 125.77 ECC .19233 INC 3.3698 V1 30.288
RP 108.88 LAP -3.28 LOP 357.44 VP 37.244 GAP 7.90 AZP 90.77 TAL 156.67 TAP 53.48 RCA 101.58 APO 149.96 V2 34.870
RC 143.344 GL 21.99 GP -10.55 ZAL 54.20 ZAP 156.83 ETS 336.22 ZAE 127.78 ETE 187.29 ZAC 118.14 ETC 171.44 CLP-159.26

PLANETOCENTRIC CONIC

C3 18.310 VHL 4.279 DLA 39.82 RAL 44.23 RAD 6567.7 VEL 11.819 PTH 2.09 VHP 5.764 DPA -3.65 RAP 25.64 ECC 1.3013
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.74 21 58 55 4135.42 -27.69 182.91 275.24 60.16 23 7 50 3535.4 -31.44 175.20
119.26 4 39 36 2895.70 -27.68 88.63 275.23 60.15 5 27 52 2295.7 -31.43 80.91
60.74 21 58 55 4135.42 -27.69 182.91 275.24 60.16 23 7 50 3535.4 -31.44 175.20
119.26 4 39 36 2895.70 -27.68 88.63 275.23 60.15 5 27 52 2295.7 -31.43 80.91
60.74 21 58 55 4135.42 -27.69 182.91 275.24 60.16 23 7 50 3535.4 -31.44 175.20
119.26 4 39 36 2895.70 -27.68 88.63 275.23 60.15 5 27 52 2295.7 -31.43 80.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3268 TRA 2.3376 TC3-3.8268 BAU .9368 SGT 6086.2 SGR 600.8 SCS 416.1 ST 3348.3 SR 552.4 SS 1210.8
RDE .4089 RRA .1402 RC3 -.0403 FAU .04784 RRT .7701 RRF .7536 RTF .9798 CRT .9708 CRS -.9346 CST -.9925
FDE 1.5963 FRA 2.2127 FC3-2.2620 BSP 19757 SGB 6115.8 R23 -.0061 R13 .9798 LSA 3597.8 MSA 195.7 SSA 14.3
BDE 2.3625 BRA 2.3418 BC3 3.8271 FSP -1466 SGI 6103.8 SGT 382.1 THA 4.36 EL1 3391.1 EL2 130.9 ALF 9.11

LAUNCH DATE JAN 5 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 557.506

RL 147.09 LAL -.00 LOL 104.48 VL 27.347 GAL 5.66 AZL 86.72 HCA 259.99 SMA 125.61 ECC .19679 INC 3.2775 V1 30.288
RP 108.85 LAP -3.23 LOP 4.45 VP 37.235 GAP 8.31 AZP 90.57 TAL 155.56 TAP 35.55 RCA 100.89 APO 150.32 V2 34.880
RC 145.808 GL 20.72 GP -10.02 ZAL 52.43 ZAP 158.35 ETS 335.69 ZAE 127.37 ETE 186.78 ZAC 119.71 ETC 171.36 CLP-160.70

PLANETOCENTRIC CONIC

C3 19.353 VHL 4.397 DLA 39.06 RAL 46.54 RAD 6567.8 VEL 11.862 PTH 2.10 VHP 5.993 DPA -2.47 RAP 27.00 ECC 1.3182
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.89 22 13 31 4132.85 -26.78 182.11 278.09 60.44 23 22 24 3532.9 -30.50 174.46
118.11 4 43 24 2923.86 -26.77 90.41 278.08 60.43 5 32 8 2323.9 -30.49 82.75
61.89 22 13 31 4132.85 -26.78 182.11 278.09 60.44 23 22 24 3532.9 -30.50 174.46
118.11 4 43 24 2923.86 -26.77 90.41 278.08 60.43 5 32 8 2323.9 -30.49 82.75
61.89 22 13 31 4132.85 -26.78 182.11 278.09 60.44 23 22 24 3532.9 -30.50 174.46
118.11 4 43 24 2923.86 -26.77 90.41 278.08 60.43 5 32 8 2323.9 -30.49 82.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2985 TRA 2.5685 TC3-3.6657 BAU .9475 SGT 6158.2 SCR 589.4 SCS 390.8 ST 3261.3 SR 542.4 SS 1141.1
RDE .4128 RRA .1432 RC3 -.0277 FAU .04355 RRT .7503 RRF .7547 RTF .9796 CRT .9622 CRS -.9210 CST -.9922
FDE 1.4582 FRA 2.2228 FC3-1.9500 BSP 19980 SGB 6186.4 R23 -.0049 R13 .9796 LSA 3491.6 MSA 203.2 SSA 14.3
BDE 2.3333 BRA 2.5725 BC3 3.6658 FSP -1373 SGI 6174.2 S62 388.6 THA 4.12 EL1 3302.9 EL2 145.9 ALF 9.11

LAUNCH DATE JAN 5 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 563.271

RL 147.09 LAL -.00 LOL 104.48 VL 27.322 GAL 6.07 AZL 86.81 HCA 263.16 SMA 125.44 ECC .20160 INC 3.1869 V1 30.288
RP 108.81 LAP -3.16 LOP 7.64 VP 37.227 GAP 8.73 AZP 90.38 TAL 154.44 TAP 57.60 RCA 100.15 APO 150.73 V2 34.891
RC 147.897 GL 19.48 GP -9.53 ZAL 50.87 ZAP 159.79 ETS 335.05 ZAE 127.00 ETE 186.34 ZAC 121.35 ETC 171.27 CLP-162.09

PLANETOCENTRIC CONIC

C3 20.511 VHL 4.529 DLA 36.28 RAL 48.78 RAD 6567.8 VEL 11.912 PTH 2.12 VHP 6.235 DPA -1.33 RAP 28.42 ECC 1.3376
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.08 22 28 14 4130.35 -25.83 181.31 280.96 60.71 23 37 4 3530.4 -29.53 173.71
116.92 4 46 36 2954.48 -25.82 92.35 280.95 60.70 5 35 50 2354.5 -29.52 84.75
63.08 22 28 14 4130.35 -25.83 181.31 280.96 60.71 23 37 4 3530.4 -29.53 173.71
116.92 4 46 36 2954.48 -25.82 92.35 280.95 60.70 5 35 50 2354.5 -29.52 84.75
63.08 22 28 14 4130.35 -25.83 181.31 280.96 60.71 23 37 4 3530.4 -29.53 173.71
116.92 4 46 36 2954.48 -25.82 92.35 280.95 60.70 5 35 50 2354.5 -29.52 84.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2597 TRA 2.8088 TC3-3.4958 BAU .9588 SGT 6220.3 SCR 579.7 SCS 366.8 ST 3166.4 SR 533.2 SS 1074.1
RDE .4177 RRA .1474 RC3 -.0195 FAU .03971 RRT .7328 RRF .7177 RTF .9794 CRT .9521 CRS -.9058 CST -.9918
FDE 1.3256 FRA 2.2287 FC3-1.6761 BSP 20235 SGB 6247.3 R23 -.0040 R13 .9794 LSA 3379.2 MSA 211.5 SSA 14.3
BDE 2.2980 BRA 2.8127 BC3 3.4958 FSP -1294 SGI 6234.9 S62 395.6 THA 3.92 EL1 3207.0 EL2 161.0 ALF 9.13

LAUNCH DATE JAN 5 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 568.997

RL 147.09 LAL -.00 LOL 104.48 VL 27.297 GAL 6.50 AZL 86.90 HCA 266.34 SMA 125.28 ECC .20678 INC 3.0974 V1 30.288
RP 108.58 LAP -3.09 LOP 10.82 VP 37.219 GAP 9.18 AZP 90.20 TAL 153.31 TAP 59.66 RCA 99.37 APO 151.18 V2 34.902
RC 150.092 GL 18.27 GP -9.10 ZAL 48.94 ZAP 161.17 ETS 334.27 ZAE 126.65 ETE 185.96 ZAC 123.05 ETC 171.16 CLP-163.44

PLANETOCENTRIC CONIC

C3 21.862 VHL 4.676 DLA 37.50 RAL 50.96 RAD 6567.9 VEL 11.968 PTH 2.13 VHP 6.489 DPA -.22 RAP 29.92 ECC 1.3598
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.31 22 43 6 4127.73 -24.85 180.49 283.86 60.96 23 51 54 3527.7 -28.52 172.95
115.89 4 49 7 2987.77 -24.84 94.48 283.85 60.95 5 38 55 2387.8 -28.51 86.94
64.31 22 43 6 4127.73 -24.85 180.49 283.86 60.96 23 51 54 3527.7 -28.52 172.95
115.89 4 49 7 2987.77 -24.84 94.48 283.85 60.95 5 38 55 2387.8 -28.51 86.94
64.31 22 43 6 4127.73 -24.85 180.49 283.86 60.96 23 51 54 3527.7 -28.52 172.95
115.89 4 49 7 2987.77 -24.84 94.48 283.85 60.95 5 38 55 2387.8 -28.51 86.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2209 TRA 3.0637 TC3-3.3109 BAU .9677 SGT 6276.0 SCR 571.6 SCS 344.5 ST 3070.9 SR 525.0 SS 1012.9
RDE .4245 RRA .1531 RC3 -.0134 FAU .03609 RRT .7175 RRF .7035 RTF .9793 CRT .9406 CRS -.8890 CST -.9916
FDE 1.2075 FRA 2.2352 FC3-1.4290 BSP 20482 SGB 6302.0 R23 -.0028 R13 .9793 LSA 3268.5 MSA 220.5 SSA 14.1
BDE 2.2611 BRA 3.0675 BC3 3.3109 FSP -1219 SGI 6289.5 S62 397.3 THA 3.75 EL1 3110.5 EL2 176.0 ALF 9.16

LAUNCH DATE JAN 5 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 574.680

RL 147.09 LAL -.00 LOL 104.48 VL 27.271 GAL 6.96 AZL 86.99 HCA 269.53 SMA 125.11 ECC .21237 INC 3.0085 V1 30.288
RP 108.54 LAP -3.01 LOP 14.01 VP 37.211 GAP 9.64 AZP 90.02 TAL 152.18 TAP 61.71 RCA 98.54 APO 151.68 V2 34.914
RC 152.312 GL 17.08 GP -8.70 ZAL 47.23 ZAP 162.49 ETS 333.34 ZAE 126.33 ETE 185.63 ZAC 124.79 ETC 171.03 CLP-164.74

PLANETOCENTRIC CONIC

C3 23.408 VHL 4.858 DLA 36.72 RAL 53.07 RAD 6568.0 VEL 12.033 PTH 2.15 VHP 6.757 DPA .86 RAP 31.48 ECC 1.3852
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.58 22 58 6 4125.02 -23.84 179.85 286.77 61.20 24 6 51 3525.0 -27.49 172.17
114.42 4 50 57 3023.69 -23.82 96.78 286.76 61.19 5 41 21 2423.7 -27.47 89.29
65.58 22 58 6 4125.02 -23.84 179.85 286.77 61.20 24 6 51 3525.0 -27.49 172.17
114.42 4 50 57 3023.69 -23.82 96.78 286.76 61.19 5 41 21 2423.7 -27.47 89.29
65.58 22 58 6 4125.02 -23.84 179.85 286.77 61.20 24 6 51 3525.0 -27.49 172.17
114.42 4 50 57 3023.69 -23.82 96.78 286.76 61.19 5 41 21 2423.7 -27.47 89.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1802 TRA 3.3340 TC3-3.1142 BAU .9746 SGT 6325.4 SCR 564.5 SCS 323.8 ST 2976.3 SR 517.2 SS 957.3
RDE .4328 RRA .1605 RC3 -.0094 FAU .03267 RRT .7051 RRF .6920 RTF .9791 CRT .9276 CRS -.8709 CST -.9913
FDE 1.1008 FRA 2.2423 FC3-1.2083 BSP 20699 SGB 6350.5 R23 -.0016 R13 .9791 LSA 3160.5 MSA 230.0 SSA 14.0
BDE 2.2227 BRA 3.3379 BC3 3.1143 FSP -1148 SGI 6358.0 S62 399.5 THA 3.62 EL1 3014.8 EL2 190.8 ALF 9.19

LAUNCH DATE JAN 5 1969

FLIGHT TIME 206.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 104.48 VL 27.245 GAL 7.45 AZL 87.08 HCA 272.71 SMA 124.94 ECC .21842 INC 2.9197 V1 30.288
RF 108.50 LAP -2.92 LOP 17.20 VP 37.203 GAP 10.13 AZP 89.86 TAL 151.05 TAP 63.76 RCA 97.65 APO 152.23 V2 34.926
RC 154.516 GL 15.92 GP -0.34 ZAL 45.56 ZAP 163.76 ETS 332.21 ZAE 126.03 ETE 185.34 ZAC 126.58 ETC 170.87 CLP-166.01

DISTANCE 580.313

PLANETOCENTRIC CONIC

C3 25.178 VHL 5.018 DLA 35.94 RAL 55.11 RAD 6568.0 VEL 12.106 PTH 2.17 VHP 7.041 DPA 1.92 RAP 33.10 ECC 1.4144
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.89 23 13 16 4121.97 -22.79 178.79 289.69 61.43 24 21 58 3522.0 -26.42 171.36
113.11 4 52 1 3062.51 -22.78 99.27 289.68 61.42 5 43 3 2462.5 -26.41 91.85
66.89 23 13 16 4121.97 -22.79 178.79 289.69 61.43 24 21 58 3522.0 -26.42 171.36
113.11 4 52 1 3062.51 -22.78 99.27 289.68 61.42 5 43 3 2462.5 -26.41 91.85
66.89 23 13 16 4121.97 -22.79 178.79 289.69 61.43 24 21 58 3522.0 -26.42 171.36
113.11 4 52 1 3062.51 -22.78 99.27 289.68 61.42 5 43 3 2462.5 -26.41 91.85

DIFFERENTIAL CORRECTIONS

TDE 2.1413 TRA 3.6245 TC3-2.9041 BAU .9775
RDE .4420 RRA .1607 RC3 -.0064 FAU .02934
FDE 1.0064 FRA 2.2530 FC3-1.0088 BSP 20813
BDE 2.1864 BRA 3.6285 BC3 2.9041 FSP -1077

MID-COURSE EXECUTION ACCURACY

S6T 6371.9 SGR 558.6 S63 304.7
RRT .6956 RRF .6836 RTF .9789
S6B 6396.3 R23 -.0001 R13 .9790
S6I 6383.8 S62 400.5 THA 3.50

ORBIT DETERMINATION ACCURACY

ST 2887.5 SR 509.8 SS 908.5
CRT .9131 CRS -.8517 CST -.9912
LSA 3060.3 MSA 239.6 SSA 13.8
EL1 2924.9 EL2 205.1 ALF 9.20

LAUNCH DATE JAN 5 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 104.48 VL 27.219 GAL 7.97 AZL 87.17 HCA 275.90 SMA 124.78 ECC .22496 INC 2.8303 V1 30.288
RP 108.47 LAP -2.82 LOP 20.39 VP 37.196 GAP 10.64 AZP 89.71 TAL 149.92 TAP 65.82 RCA 96.71 APO 152.85 V2 34.938
RC 156.704 GL 14.79 GP -0.02 ZAL 43.93 ZAP 164.98 ETS 330.85 ZAE 125.75 ETE 185.09 ZAC 128.40 ETC 170.68 CLP-167.25

DISTANCE 585.891

PLANETOCENTRIC CONIC

C3 27.202 VHL 5.218 DLA 35.15 RAL 57.07 RAD 6568.1 VEL 12.189 PTH 2.19 VHP 7.342 DPA 2.94 RAP 34.76 ECC 1.4477
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.24 23 28 43 4118.24 -21.72 177.86 292.63 61.66 24 37 21 3518.2 -25.33 170.49
111.76 4 52 11 3104.53 -21.71 101.98 292.62 61.65 5 43 56 2504.5 -25.32 94.62
66.24 23 28 43 4118.24 -21.72 177.86 292.63 61.66 24 37 21 3518.2 -25.33 170.49
111.76 4 52 11 3104.53 -21.71 101.98 292.62 61.65 5 43 56 2504.5 -25.32 94.62
66.24 23 28 43 4118.24 -21.72 177.86 292.63 61.66 24 37 21 3518.2 -25.33 170.49
111.76 4 52 11 3104.53 -21.71 101.98 292.62 61.65 5 43 56 2504.5 -25.32 94.62

DIFFERENTIAL CORRECTIONS

TDE 2.0965 TRA 3.9283 TC3-2.6957 BAU .9803
RDE .4519 RRA .1801 RC3 -.0050 FAU .02634
FDE .9180 FRA 2.2818 FC3 -.8384 BSP 21014
BDE 2.1446 BRA 3.9324 BC3 2.6957 FSP -1016

MID-COURSE EXECUTION ACCURACY

S6T 6408.4 SGR 552.3 S63 286.8
RRT .6880 RRF .6767 RTF .9789
S6B 6432.1 R23 .0009 R13 .9789
S6I 6419.7 S62 400.1 THA 3.41

ORBIT DETERMINATION ACCURACY

ST 2796.1 SR 501.7 SS 862.6
CRT .8969 CRS -.8309 CST -.9912
LSA 2958.4 MSA 249.2 SSA 13.5
EL1 2832.3 EL2 219.0 ALF 9.20

LAUNCH DATE JAN 5 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 104.48 VL 27.193 GAL 8.53 AZL 87.26 HCA 279.09 SMA 124.61 ECC .23205 INC 2.7398 V1 30.288
RP 108.43 LAP -2.71 LOP 23.58 VP 37.188 GAP 11.18 AZP 89.57 TAL 148.80 TAP 67.88 RCA 95.69 APO 153.52 V2 34.951
RC 158.875 GL 13.69 GP -7.72 ZAL 42.35 ZAP 166.15 ETS 329.21 ZAE 125.47 ETE 184.87 ZAC 130.25 ETC 170.46 CLP-166.47

DISTANCE 591.405

PLANETOCENTRIC CONIC

C3 29.519 VHL 5.433 DLA 34.37 RAL 58.94 RAD 6568.2 VEL 12.284 PTH 2.21 VHP 7.662 DPA 3.94 RAP 36.47 ECC 1.4858
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.66 23 44 25 4113.79 -20.63 176.88 295.56 61.88 24 52 59 3513.0 -24.22 169.57
110.34 4 51 28 3149.78 -20.61 104.92 295.56 61.87 5 43 58 2549.8 -24.21 97.60
69.66 23 44 25 4113.79 -20.63 176.88 295.56 61.88 24 52 59 3513.0 -24.22 169.57
110.34 4 51 28 3149.78 -20.61 104.92 295.56 61.87 5 43 58 2549.8 -24.21 97.60
69.66 23 44 25 4113.79 -20.63 176.88 295.56 61.88 24 52 59 3513.0 -24.22 169.57
110.34 4 51 28 3149.78 -20.61 104.92 295.56 61.87 5 43 58 2549.8 -24.21 97.60

DIFFERENTIAL CORRECTIONS

TDE 2.0508 TRA 4.2511 TC3-2.4845 BAU .9805
RDE .4826 RRA .1921 RC3 -.0043 FAU .02353
FDE .8382 FRA 2.2723 FC3 -.6900 BSP 21196
BDE 2.1023 BRA 4.2555 BC3 2.4845 FSP -960

MID-COURSE EXECUTION ACCURACY

S6T 6439.3 SGR 546.1 S63 270.1
RRT .6827 RRF .6721 RTF .9789
S6B 6462.4 R23 .0017 R13 .9789
S6I 6450.1 S62 398.4 THA 3.33

ORBIT DETERMINATION ACCURACY

ST 2709.0 SR 493.3 SS 821.6
CRT .8792 CRS -.8090 CST -.9912
LSA 2861.8 MSA 256.6 SSA 13.2
EL1 2743.7 EL2 232.1 ALF 9.16

LAUNCH DATE JAN 5 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

RL 147.09 LAL -.00 LOL 104.48 VL 27.166 GAL 9.13 AZL 87.35 HCA 282.28 SMA 124.44 ECC .23976 INC 2.6476 V1 30.288
RP 108.39 LAP -2.59 LOP 26.78 VP 37.181 GAP 11.78 AZP 89.44 TAL 147.69 TAP 69.96 RCA 94.61 APO 154.28 V2 34.964
RC 161.027 GL 12.82 GP -7.45 ZAL 40.81 ZAP 167.28 ETS 327.23 ZAE 125.21 ETE 184.66 ZAC 132.13 ETC 170.20 CLP-169.67

DISTANCE 596.847

PLANETOCENTRIC CONIC

C3 32.175 VHL 5.872 DLA 33.59 RAL 60.74 RAD 6568.3 VEL 12.391 PTH 2.24 VHP 8.003 DPA 4.91 RAP 38.22 ECC 1.5295
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.13 0 4 28 4108.13 -19.51 175.81 298.51 62.10 1 12 56 3508.1 -23.09 168.55
108.87 4 49 42 3198.71 -19.50 108.10 298.50 62.09 5 43 1 2598.7 -23.08 100.83
71.13 0 4 28 4108.13 -19.51 175.81 298.51 62.10 1 12 56 3508.1 -23.09 168.55
108.87 4 49 42 3198.71 -19.50 108.10 298.50 62.09 5 43 1 2598.7 -23.08 100.83
110.00 5 44 53 3029.85 -24.34 97.55 301.08 65.22 6 35 23 2429.8 -27.47 89.78
110.00 4 8 27 3324.99 -14.82 115.14 295.73 58.84 5 3 52 2725.0 -18.84 108.33

DIFFERENTIAL CORRECTIONS

TDE 2.0047 TRA 4.5958 TC3-2.2715 BAU .9771
RDE .4738 RRA .2058 RC3 -.0039 FAU .02083
FDE .7863 FRA 2.2854 FC3 -.5608 BSP 21334
BDE 2.0600 BRA 4.6004 BC3 2.2715 FSP -905

MID-COURSE EXECUTION ACCURACY

S6T 6464.9 SGR 539.7 S63 254.6
RRT .6795 RRF .6694 RTF .9789
S6B 6487.4 R23 .0024 R13 .9790
S6I 6475.3 S62 395.3 THA 3.26

ORBIT DETERMINATION ACCURACY

ST 2627.0 SR 484.4 SS 785.6
CRT .8599 CRS -.7862 CST -.9914
LSA 2771.5 MSA 267.4 SSA 12.9
EL1 2660.1 EL2 244.2 ALF 9.09

LAUNCH DATE JAN 5 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 602.205

RL 147.09 LAL -.00 LOL 104.48 VL 27.140 GAL 9.78 AZL 87.45 HCA 285.47 SMA 124.28 ECC .24814 INC 2.5550 V1 30.288
RP 108.35 LAP -2.46 LOP 29.97 VP 37.174 GAP 12.37 AZP 89.32 TAL 146.59 TAP 72.07 RCA 93.44 APO 155.12 V2 34.977
RC 163.161 GL 11.58 GP -7.21 ZAL 39.33 ZAP 168.37 ETS 324.82 ZAE 124.95 ETE 184.51 ZAC 134.02 ETC 169.89 CLP-170.85

PLANETOCENTRIC CONIC

C3 35.226 VHL 5.935 DLA 32.81 RAL 62.46 RAD 6568.4 VEL 12.514 PTH 2.27 VHP 8.369 DPA 5.85 RAP 40.01 ECC 1.5797
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.68 0 21 5 4100.83 -18.38 174.62 301.45 62.33 1 29 26 3500.8 -21.94 167.40
107.32 4 46 46 3251.71 -18.37 111.56 301.44 62.32 5 40 57 2651.7 -21.93 104.34
72.68 0 21 5 4100.83 -18.38 174.62 301.45 62.33 1 29 26 3500.8 -21.94 167.40
107.32 4 46 46 3251.71 -18.37 111.56 301.44 62.32 5 40 57 2651.7 -21.93 104.34
110.00 6 16 30 2975.52 -25.84 94.04 305.27 66.80 7 6 6 2375.5 -28.75 86.07
110.00 3 30 31 3425.01 -11.23 120.66 297.16 57.50 4 47 36 2825.0 -15.43 114.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9581 TRA 4.9830 TC3-2.0609 BAU .9705 SGT 6485.2 SCR 532.9 SCS 240.2 ST 2550.2 SR 474.7 SS 754.0
RDE .4854 RRA .2210 RC3 -.0037 FAU .01829 RRT .6781 RRF .6685 RTF .9791 CRT .8392 CRS -.7629 CST -.9917
FDE .7014 FRA 2.3011 FC3 -.4495 BSP 21473 SGB 6507.0 R23 .0030 R13 .9791 LSA 2687.3 HSA 275.3 SSA 12.6
BDE 2.0174 BRA 4.9679 BC3 2.0609 FSP -855 SGI 6495.2 SGI 391.1 THA 3.20 EL1 2581.4 EL2 255.0 ALF 8.97

LAUNCH DATE JAN 5 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 607.465

RL 147.09 LAL -.00 LOL 104.48 VL 27.114 GAL 10.47 AZL 87.54 HCA 288.67 SMA 124.11 ECC .25728 INC 2.4555 V1 30.288
RP 108.31 LAP -2.33 LOP 33.17 VP 37.168 GAP 13.03 AZP 89.21 TAL 143.52 TAP 74.19 RCA 92.18 APO 156.05 V2 34.990
RC 165.276 GL 10.58 GP -6.98 ZAL 37.91 ZAP 169.41 ETS 321.86 ZAE 124.69 ETE 184.36 ZAC 135.93 ETC 169.54 CLP-172.02

PLANETOCENTRIC CONIC

C3 38.758 VHL 6.224 DLA 32.05 RAL 64.08 RAD 6568.5 VEL 12.653 PTH 2.30 VHP 8.761 DPA 6.77 RAP 41.82 ECC 1.6375
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.33 0 38 24 4091.20 -17.24 173.26 304.39 62.56 1 46 36 3491.2 -20.78 166.08
105.87 4 42 26 3309.37 -17.23 115.34 304.38 62.55 5 37 36 2709.4 -20.76 108.17
74.33 0 38 24 4091.20 -17.24 173.26 304.39 62.56 1 46 36 3491.2 -20.78 166.08
105.87 4 42 26 3309.37 -17.23 115.34 304.38 62.55 5 37 36 2709.4 -20.76 108.17
110.00 6 41 1 2942.47 -26.71 91.87 309.10 67.83 7 30 3 2342.5 -29.47 83.77
110.00 3 39 0 3506.10 -8.23 125.02 298.88 56.70 4 37 27 2906.1 -12.55 118.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9147 TRA 5.3586 TC3-1.8505 BAU .9583 SGT 6502.8 SCR 525.9 SCS 227.0 ST 2481.9 SR 464.5 SS 727.8
RDE .4975 RRA .2380 RC3 -.0032 FAU .01580 RRT .6786 RRF .6696 RTF .9794 CRT .8176 CRS -.7399 CST -.9921
FDE .8446 FRA 2.3212 FC3 -.3531 BSP 21508 SGB 6525.8 R23 .0036 R13 .9794 LSA 2612.6 HSA 281.9 SSA 12.3
BDE 1.9783 BRA 5.3839 BC3 1.8505 FSP -804 SGI 6512.4 SGI 385.7 THA 3.15 EL1 2511.1 EL2 264.3 ALF 8.80

LAUNCH DATE JAN 5 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 612.610

RL 147.09 LAL -.00 LOL 104.48 VL 27.088 GAL 11.23 AZL 87.65 HCA 291.87 SMA 123.95 ECC .26728 INC 2.3541 V1 30.288
RP 108.26 LAP -2.18 LOP 36.37 VP 37.161 GAP 13.73 AZP 89.12 TAL 144.48 TAP 76.35 RCA 90.82 APO 157.08 V2 35.003
RC 167.370 GL 9.60 GP -6.78 ZAL 36.55 ZAP 170.40 ETS 318.19 ZAE 124.43 ETE 184.23 ZAC 137.84 ETC 169.14 CLP-173.19

PLANETOCENTRIC CONIC

C3 42.795 VHL 6.542 DLA 31.29 RAL 65.63 RAD 6568.6 VEL 12.813 PTH 2.33 VHP 9.185 DPA 7.65 RAP 43.66 ECC 1.7043
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.10 0 58 43 4078.22 -16.09 171.65 307.32 62.79 2 4 41 3478.2 -19.61 164.52
103.90 4 36 26 3372.63 -16.07 119.51 307.31 62.79 5 32 38 2772.6 -19.59 112.38
78.10 0 58 43 4078.22 -16.09 171.65 307.32 62.79 2 4 41 3478.2 -19.61 164.52
103.90 4 36 26 3372.63 -16.07 119.51 307.31 62.79 5 32 38 2772.6 -19.59 112.38
110.00 7 1 54 2920.12 -27.27 90.37 312.75 68.55 7 50 34 2320.1 -29.93 82.20
110.00 3 30 26 3578.72 -5.48 128.87 300.98 56.21 4 30 5 2978.7 -9.89 122.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8674 TRA 5.7777 TC3-1.6493 BAU .9436 SGT 6511.4 SCR 517.8 SCS 214.5 ST 2415.6 SR 453.2 SS 704.2
RDE .5095 RRA .2582 RC3 -.0030 FAU .01351 RRT .6802 RRF .6715 RTF .9799 CRT .7946 CRS -.7161 CST -.9926
FDE .5915 FRA 2.3429 FC3 -.2733 BSP 21626 SGB 6532.0 R23 .0038 R13 .9799 LSA 2540.4 HSA 287.3 SSA 12.0
BDE 1.9357 BRA 5.7834 BC3 1.6493 FSP -780 SGI 6521.0 SGI 379.0 THA 3.11 EL1 2442.7 EL2 272.1 ALF 8.59

LAUNCH DATE JAN 5 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 617.620

RL 147.09 LAL -.00 LOL 104.48 VL 27.063 GAL 12.04 AZL 87.75 HCA 295.07 SMA 123.79 ECC .27824 INC 2.2479 V1 30.288
RP 108.22 LAP -2.04 LOP 39.57 VP 37.155 GAP 14.49 AZP 89.05 TAL 143.47 TAP 78.54 RCA 89.35 APO 158.23 V2 35.016
RC 169.445 GL 8.66 GP -6.59 ZAL 35.28 ZAP 171.34 ETS 313.62 ZAE 124.16 ETE 184.12 ZAC 139.75 ETC 168.67 CLP-174.36

PLANETOCENTRIC CONIC

C3 47.498 VHL 6.892 DLA 30.54 RAL 67.08 RAD 6568.8 VEL 12.995 PTH 2.37 VHP 9.643 DPA 8.50 RAP 45.51 ECC 1.7817
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.05 1 18 32 4080.15 -14.93 169.88 310.24 63.04 2 24 12 3460.1 -18.43 162.58
101.95 4 28 13 3443.08 -14.91 124.19 310.23 63.03 5 25 36 2843.1 -18.41 117.10
78.05 1 18 32 4080.15 -14.93 169.88 310.24 63.04 2 24 12 3460.1 -18.43 162.58
101.95 4 28 13 3443.08 -14.91 124.19 310.23 63.03 5 25 36 2843.1 -18.41 117.10
110.00 7 20 22 2904.78 -27.85 89.34 316.29 69.05 8 8 47 2304.8 -30.24 81.11
110.00 3 23 33 3646.45 -2.92 132.42 303.09 55.93 4 24 20 3046.4 -7.37 126.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8213 TRA 6.2282 TC3-1.4542 BAU .9234 SGT 6515.7 SCR 509.0 SCS 202.9 ST 2355.7 SR 441.0 SS 684.8
RDE .5217 RRA .2780 RC3 -.0025 FAU .01130 RRT .6830 RRF .6746 RTF .9805 CRT .7709 CRS -.6927 CST -.9932
FDE .5442 FRA 2.3691 FC3 -.2080 BSP 21718 SGB 6535.6 R23 .0038 R13 .9805 LSA 2475.4 HSA 291.2 SSA 11.6
BDE 1.8945 BRA 6.2343 BC3 1.4542 FSP -719 SGI 6525.0 SGI 371.3 THA 3.06 EL1 2380.4 EL2 278.0 ALF 8.33

LAUNCH DATE JAN 6 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 17 1969

HELIOCENTRIC CONIC

DISTANCE 149.914  
RL 147.10 LAL -.00 LOL 105.50 VL 20.832 GAL 9.85 AZL 85.94 HCA 56.54 SMA 96.84 ECC .53922 INC 4.0575 V1 30.287  
RP 107.58 LAP 3.38 LOP 161.97 VP 33.118 GAP -32.07 AZP 87.76 TAL 171.35 TAP 227.89 RCA 44.62 APO 149.05 V2 35.226  
RC 52.393 GL 7.93 GP 2.90 ZAL 70.38 ZAP 22.25 ETS 188.15 ZAE 156.16 ETE 198.24 ZAC 97.65 ETC 166.25 CLP 22.07

PLANETOCENTRIC CONIC

C3 110.933 VHL 10.532 DLA 20.75 RAL 30.21 RAD 6570.1 VEL 15.240 PTH 2.73 VHP 19.131 DPA 1.29 RAP 3.83 ECC 2.8257  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 3 22 7 3338.58 -23.91 120.15 290.16 74.36 4 17 44 2736.6 -25.83 112.00  
90.00 21 18 39 4560.85 11.41 192.40 276.89 63.91 22 32 40 3960.8 7.81 185.57  
100.00 4 57 14 3029.90 -26.03 98.23 290.80 74.76 5 47 44 2429.9 -27.87 89.92  
100.00 22 24 14 4342.75 13.38 175.36 275.88 63.02 23 36 36 3742.8 9.65 168.55  
110.00 6 34 41 2725.00 -31.38 76.68 292.41 75.68 7 20 6 2125.0 -33.02 67.85  
110.00 23 3 15 4220.43 18.25 163.37 273.17 60.58 24 13 36 3620.4 14.19 156.61

DIFFERENTIAL CORRECTIONS

TDE -.4860 TRA-1.3082 TC3 -.0948 BAU .1468  
RDE -.7586 RRA .2326 RC3 -.0284 FAU .01529  
FDE .3076 FRA .5581 FC3 -.1193 B9P 2240  
BDE .9010 BRA 1.3287 BC3 .0990 F9P -82

MID-COURSE EXECUTION ACCURACY

SGT 830.1 SGR 438.4 S63 38.3  
RRT .0498 RRF -.0519 RTF -.6551  
SGB 938.7 R23 -.0067 R13 -.6553  
S61 830.5 S62 437.7 THA 2.09

ORBIT DETERMINATION ACCURACY

ST 349.4 SR 414.7 S8 320.3  
CRT .6892 CRS .8101 CST .9814  
LSA 588.1 MSA 224.7 SSA 13.7  
EL1 500.0 EL2 210.0 ALF 52.01

LAUNCH DATE JAN 6 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 19 1969

HELIOCENTRIC CONIC

DISTANCE 156.223  
RL 147.10 LAL -.00 LOL 105.50 VL 21.383 GAL 9.41 AZL 86.07 HCA 59.78 SMA 98.51 ECC .51330 INC 3.9281 V1 30.287  
RP 107.60 LAP 3.39 LOP 165.22 VP 33.460 GAP -30.47 AZP 88.02 TAL 170.84 TAP 230.62 RCA 47.95 APO 149.08 V2 35.219  
RC 50.852 GL 8.33 GP 3.01 ZAL 69.68 ZAP 20.72 ETS 189.12 ZAE 157.68 ETE 199.75 ZAC 99.25 ETC 166.18 CLP 20.50

PLANETOCENTRIC CONIC

C3 99.517 VHL 9.976 DLA 21.39 RAL 30.81 RAD 6569.9 VEL 14.861 PTH 2.68 VHP 18.283 DPA 2.09 RAP 5.31 ECC 2.6378  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 3 16 46 3342.00 -23.81 120.51 289.20 74.20 4 12 28 2742.0 -25.75 112.38  
90.00 21 26 47 4509.82 9.87 189.44 276.26 63.32 22 41 57 3909.8 6.21 182.68  
100.00 4 52 47 3032.41 -25.99 98.41 288.87 74.68 5 43 19 2432.4 -27.84 90.09  
100.00 22 33 28 4294.65 11.88 172.58 275.21 62.37 23 45 2 3694.6 8.08 165.84  
110.00 6 31 52 2722.42 -31.42 76.50 291.50 75.79 7 17 14 2122.4 -33.05 67.65  
110.00 23 10 52 4177.40 16.79 160.89 272.41 59.78 24 20 29 3577.4 12.65 154.23

DIFFERENTIAL CORRECTIONS

TDE -.4847 TRA-1.2982 TC3 -.0951 BAU .1331  
RDE -.7285 RRA .2145 RC3 -.0310 FAU .01573  
FDE .3201 FRA .5764 FC3 -.1369 B9P 2403  
BDE .8734 BRA 1.3158 BC3 .1000 F9P -92

MID-COURSE EXECUTION ACCURACY

SGT 888.7 SGR 442.1 S63 41.9  
RRT .0571 RRF -.0597 RTF -.6749  
SGB 974.8 R23 -.0077 R13 -.6752  
S61 869.2 S62 441.1 THA 2.24

ORBIT DETERMINATION ACCURACY

ST 367.7 SR 419.2 S8 336.0  
CRT .6918 CRS .8128 CST .9813  
LSA 608.9 MSA 230.0 SSA 13.9  
EL1 513.8 EL2 216.6 ALF 50.37

LAUNCH DATE JAN 6 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC

DISTANCE 162.595  
RL 147.10 LAL -.00 LOL 105.50 VL 21.895 GAL 8.96 AZL 86.19 HCA 63.01 SMA 100.16 ECC .48844 INC 3.8070 V1 30.287  
RP 107.62 LAP 3.39 LOP 166.47 VP 33.782 GAP -28.95 AZP 88.27 TAL 170.36 TAP 233.38 RCA 51.24 APO 149.08 V2 35.211  
RC 49.405 GL 8.74 GP 3.13 ZAL 69.01 ZAP 19.20 ETS 190.26 ZAE 159.35 ETE 201.54 ZAC 100.84 ETC 166.08 CLP 18.95

PLANETOCENTRIC CONIC

C3 89.331 VHL 9.452 DLA 22.00 RAL 31.33 RAD 6569.7 VEL 14.515 PTH 2.63 VHP 17.469 DPA 2.90 RAP 6.79 ECC 2.4702  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 3 11 2 3346.67 -23.72 120.83 288.10 74.07 4 6 49 2746.7 -25.68 112.71  
90.00 21 36 41 4458.08 8.27 186.48 275.56 62.82 22 50 59 3858.1 4.56 179.76  
100.00 4 48 1 3033.95 -25.96 98.51 288.79 74.63 5 38 35 2433.9 -27.82 90.20  
100.00 22 42 23 4246.03 10.33 169.80 274.47 61.79 23 53 9 3646.0 6.47 163.13  
110.00 6 28 47 2718.69 -31.48 76.22 290.44 75.94 7 14 6 2118.7 -33.09 67.37  
110.00 23 18 6 4134.05 15.29 158.43 271.58 59.05 24 27 0 3534.0 11.08 151.86

DIFFERENTIAL CORRECTIONS

TDE -.4843 TRA-1.2874 TC3 -.0938 BAU .1191  
RDE -.6950 RRA .1971 RC3 -.0337 FAU .01621  
FDE .3334 FRA .5949 FC3 -.1571 B9P 2567  
BDE .8471 BRA 1.3024 BC3 .0997 F9P -102

MID-COURSE EXECUTION ACCURACY

SGT 909.0 SGR 445.1 S63 45.7  
RRT .0655 RRF -.0685 RTF -.6941  
SGB 1012.1 R23 -.0088 R13 -.6944  
S61 909.6 S62 443.9 THA 2.41

ORBIT DETERMINATION ACCURACY

ST 387.3 SR 423.1 S8 352.5  
CRT .6953 CRS .8160 CST .9813  
LSA 630.9 MSA 234.6 SSA 14.1  
EL1 528.5 EL2 222.8 ALF 48.63

LAUNCH DATE JAN 6 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC

DISTANCE 169.025  
RL 147.10 LAL -.00 LOL 105.50 VL 22.371 GAL 8.52 AZL 86.31 HCA 66.25 SMA 101.78 ECC .48464 INC 3.6927 V1 30.287  
RP 107.65 LAP 3.38 LOP 171.71 VP 34.084 GAP -27.50 AZP 88.51 TAL 169.92 TAP 236.17 RCA 54.49 APO 149.07 V2 35.202  
RC 48.064 GL 9.15 GP 3.27 ZAL 68.46 ZAP 17.71 ETS 191.61 ZAE 161.18 ETE 203.73 ZAC 102.45 ETC 165.96 CLP 17.41

PLANETOCENTRIC CONIC

C3 80.236 VHL 8.957 DLA 22.59 RAL 31.77 RAD 6569.6 VEL 14.198 PTH 2.59 VHP 16.686 DPA 3.72 RAP 8.29 ECC 2.3205  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 3 4 55 3350.64 -23.65 121.10 286.85 73.96 4 0 46 2750.6 -25.62 112.98  
90.00 21 46 18 4405.72 6.63 183.51 274.78 62.41 22 59 44 3805.7 2.88 176.83  
100.00 4 42 57 3034.57 -25.95 98.56 287.56 74.61 5 33 31 2434.6 -27.81 90.25  
100.00 22 50 58 4197.02 8.73 187.03 273.64 61.30 24 0 55 3597.0 4.84 160.41  
110.00 6 25 28 2713.85 -31.56 75.87 289.23 76.13 7 10 42 2113.9 -33.14 67.00  
110.00 23 24 56 4090.51 13.75 155.99 270.67 58.39 24 33 7 3490.5 9.47 149.51

DIFFERENTIAL CORRECTIONS

TDE -.4845 TRA-1.2757 TC3 -.0908 BAU .1049  
RDE -.8841 RRA .1802 RC3 -.0363 FAU .01675  
FDE .3475 FRA .6136 FC3 -.1807 B9P 2737  
BDE .8220 BRA 1.2884 BC3 .0978 F9P -114

MID-COURSE EXECUTION ACCURACY

SGT 950.6 SGR 447.5 S63 50.0  
RRT .0750 RRF -.0784 RTF -.7124  
SGB 1050.7 R23 -.0100 R13 -.7128  
S61 951.4 S62 445.9 THA 2.59

ORBIT DETERMINATION ACCURACY

ST 407.9 SR 426.4 S8 369.7  
CRT .6998 CRS .8196 CST .9814  
LSA 654.1 MSA 238.5 SSA 14.3  
EL1 544.1 EL2 228.3 ALF 46.82

LAUNCH DATE JAN 6 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

DISTANCE 175.507

RL 147.10 LAL -.00 LOL 105.50 VL 22.814 GAL 8.09 AZL 86.42 HCA 69.49 SMA 103.36 ECC .44193 INC 3.5841 V1 30.287
RP 107.60 LAP 3.36 LOP 174.95 VP 34.366 GAP -26.13 AZP 88.74 TAL 169.52 TAP 239.01 RCA 57.68 APO 149.04 V2 35.194
RC 46.859 GL 9.57 GP 3.41 ZAL 67.98 ZAP 16.24 ETS 193.22 ZAE 163.15 ETE 206.48 ZAC 104.05 ETC 165.82 CLP 15.88

PLANETOCENTRIC CONIC

C3 72.110 VHL 8.492 DLA 23.16 RAL 32.13 RAD 6569.4 VEL 13.909 PTH 2.54 VHP 15.933 DPA 4.56 RAP 9.78 ECC 2.1868
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 58 26 3354.01 -23.59 121.32 285.46 73.86 3 54 20 2754.0 -25.57 113.22
90.00 21 55 39 4352.84 4.95 160.53 273.92 62.08 23 8 12 3752.0 1.18 173.88
100.00 4 37 35 3034.32 -25.95 98.54 286.20 74.62 5 28 9 2434.3 -27.81 90.23
100.00 22 59 11 4147.76 7.11 164.27 272.74 60.89 24 8 19 3547.8 3.18 157.70
110.00 6 21 54 2707.94 -31.66 75.43 287.88 76.37 7 7 2 2107.9 -33.21 66.55
110.00 23 31 21 4046.91 12.18 153.59 269.70 57.81 24 38 48 3446.9 7.85 147.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4855 TRA-1.2629 TC3 -.0855 BAU .0905 SGT 993.6 SGR 449.1 SCS 54.7 ST 429.7 SR 429.2 SS 367.7
RDE -.6338 RRA .1639 RC3 -.0388 FAU .01735 RRT .0856 RRF -.0896 RTF -.7300 CRT .7053 CRS .8236 CST .9816
FDE .3625 FRA .6325 FC3 -.2083 BSP 2912 SGB 1090.4 R23 -.0113 R13 -.7304 LSA 678.6 HSA 241.7 SSA 14.5
BDE .7984 BRA 1.2735 BC3 .0939 FSP -127 SGT 994.5 SGR 447.0 THA 2.78 EL1 560.8 EL2 233.1 ALF 44.95

LAUNCH DATE JAN 6 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 182.037

RL 147.10 LAL -.00 LOL 105.50 VL 23.224 GAL 7.66 AZL 86.52 HCA 72.72 SMA 104.91 ECC .42029 INC 3.4799 V1 30.287
RP 107.71 LAP 3.32 LOP 178.19 VP 34.631 GAP -24.81 AZP 88.97 TAL 169.17 TAP 241.89 RCA 60.81 APO 149.00 V2 35.184
RC 45.742 GL 9.99 GP 3.57 ZAL 67.59 ZAP 14.78 ETS 195.18 ZAE 165.24 ETE 210.06 ZAC 105.64 ETC 165.64 CLP 14.35

PLANETOCENTRIC CONIC

C3 64.850 VHL 8.053 DLA 23.70 RAL 32.40 RAD 6569.2 VEL 13.646 PTH 2.49 VHP 15.208 DPA 5.41 RAP 11.27 ECC 2.0673
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 51 34 3356.83 -23.53 121.51 283.94 73.78 3 47 31 2756.8 -25.53 113.41
90.00 22 4 42 4299.59 3.25 177.54 272.99 61.85 23 16 22 3699.6 -.54 170.91
100.00 4 31 55 3033.24 -25.97 98.46 284.70 74.66 5 22 29 2433.2 -27.82 90.15
100.00 23 7 2 4098.41 5.47 161.53 271.76 60.57 24 15 20 3498.4 1.51 154.99
110.00 6 18 7 2700.99 -31.77 74.92 286.39 76.66 7 3 8 2101.0 -33.27 66.02
110.00 23 37 19 4003.43 10.60 151.22 268.64 57.31 24 44 3 3403.4 6.21 144.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4894 TRA-1.2515 TC3 -.0791 BAU .0773 SGT 1040.7 SGR 450.1 SCS 59.8 ST 454.3 SR 451.4 SS 406.9
RDE -.6044 RRA .1481 RC3 -.0412 FAU .01799 RRT .0888 RRF -.1025 RTF -.7459 CRT .7127 CRS .8281 CST .9821
FDE .3788 FRA .6521 FC3 -.2402 BSP 3036 SGB 1135.9 R23 -.0122 R13 -.7464 LSA 705.9 HSA 244.0 SSA 14.7
BDE .7777 BRA 1.2603 BC3 .0892 FSP -141 SGT 1041.9 SGR 447.4 THA 3.00 EL1 579.9 EL2 237.1 ALF 42.93

LAUNCH DATE JAN 6 1969

FLIGHT TIME 82.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 188.608

RL 147.10 LAL -.00 LOL 105.50 VL 23.606 GAL 7.24 AZL 86.62 HCA 75.95 SMA 106.41 ECC .39973 INC 3.3795 V1 30.287
RP 107.74 LAP 3.28 LOP 181.43 VP 34.878 GAP -23.55 AZP 89.18 TAL 168.86 TAP 244.81 RCA 63.87 APO 148.94 V2 35.174
RC 44.782 GL 10.41 GP 3.75 ZAL 67.29 ZAP 13.36 ETS 197.60 ZAE 167.41 ETE 214.96 ZAC 107.23 ETC 165.43 CLP 12.83

PLANETOCENTRIC CONIC

C3 58.359 VHL 7.639 DLA 24.20 RAL 32.59 RAD 6569.1 VEL 13.406 PTH 2.45 VHP 14.511 DPA 6.28 RAP 12.75 ECC 1.9804
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 44 20 3359.14 -23.49 121.67 282.30 73.71 3 40 20 2759.1 -25.50 113.57
90.00 22 13 26 4246.16 1.53 174.55 271.97 61.72 23 24 12 3646.2 -2.26 167.93
100.00 4 28 1 3031.33 -26.01 98.33 283.08 74.72 5 16 32 2431.3 -27.85 90.02
100.00 23 14 27 4049.20 3.82 158.81 270.70 60.33 24 21 56 3449.2 -.16 152.29
110.00 6 14 9 2693.03 -31.89 74.33 284.78 76.99 6 59 2 2093.0 -33.35 65.41
110.00 23 42 48 3960.27 9.00 148.90 267.52 56.88 24 48 49 3360.3 4.58 142.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4919 TRA-1.2368 TC3 -.0685 BAU .0632 SGT 1087.0 SGR 490.4 SCS 65.4 ST 478.8 SR 433.1 SS 426.7
RDE -.5758 RRA .1329 RC3 -.0432 FAU .01872 RRT .1125 RRF -.1168 RTF -.7618 CRT .7202 CRS .8331 CST .9825
FDE .3960 FRA .6718 FC3 -.2777 BSP 3213 SGB 1176.6 R23 -.0137 R13 -.7623 LSA 733.8 HSA 245.6 SSA 14.9
BDE .7573 BRA 1.2440 BC3 .0810 FSP -156 SGT 1088.4 SGR 446.9 THA 3.21 EL1 599.3 EL2 240.1 ALF 41.03

LAUNCH DATE JAN 6 1969

FLIGHT TIME 84.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 195.216

RL 147.10 LAL -.00 LOL 105.50 VL 23.960 GAL 6.83 AZL 86.72 HCA 79.18 SMA 107.87 ECC .38022 INC 3.2819 V1 30.287
RP 107.77 LAP 3.22 LOP 184.67 VP 35.108 GAP -22.35 AZP 89.38 TAL 168.59 TAP 247.78 RCA 66.85 APO 148.88 V2 35.164
RC 43.971 GL 10.83 GP 3.94 ZAL 67.07 ZAP 11.96 ETS 200.66 ZAE 169.60 ETE 222.04 ZAC 108.81 ETC 165.19 CLP 11.30

PLANETOCENTRIC CONIC

C3 52.358 VHL 7.250 DLA 24.68 RAL 32.89 RAD 6568.9 VEL 13.188 PTH 2.41 VHP 13.840 DPA 7.16 RAP 14.23 ECC 1.8650
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 36 48 3360.92 -23.45 121.79 280.53 73.66 3 32 49 2760.9 -25.47 113.70
90.00 22 21 48 4192.79 -1.19 171.58 270.86 61.68 23 31 41 3592.8 -3.98 164.94
100.00 4 19 57 3028.56 -28.06 98.13 281.34 74.81 5 10 25 2428.6 -27.89 89.80
100.00 23 21 24 4000.38 2.17 158.13 269.55 60.18 24 28 5 3400.4 -1.82 149.61
110.00 6 10 0 2684.06 -32.03 75.87 283.03 77.36 6 54 44 2084.1 -33.43 64.72
110.00 23 47 47 3917.65 7.41 146.82 266.31 56.53 24 53 5 3317.7 2.96 140.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4948 TRA-1.2207 TC3 -.0542 BAU .0494 SGT 1134.2 SGR 490.0 SCS 71.6 ST 504.4 SR 434.3 SS 447.6
RDE -.5482 RRA .1183 RC3 -.0449 FAU .01954 RRT .1279 RRF -.1329 RTF -.7769 CRT .7285 CRS .8385 CST .9830
FDE .4145 FRA .6920 FC3 -.3219 BSP 3398 SGB 1220.2 R23 -.0156 R13 -.7774 LSA 763.3 HSA 246.2 SSA 15.1
BDE .7385 BRA 1.2264 BC3 .0704 FSP -174 SGT 1135.9 SGR 445.6 THA 3.43 EL1 620.1 EL2 242.0 ALF 39.18



LAUNCH DATE JAN 6 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 201.854

RL 147.10 LAL -.00 LOL 105.50 VL 24.289 GAL 6.44 AZL 86.81 HCA 82.41 SMA 109.27 ECC .36175 INC 3.1864 V1 30.287
RP 107.80 LAP 3.16 LOP 187.90 VP 35.322 GAP -21.19 AZP 89.58 TAL 168.38 TAP 250.79 RCA 69.74 APO 148.80 V2 35.153
RC 43.319 GL 11.24 GP 4.16 ZAL 66.94 ZAP 10.61 ETS 204.59 ZAE 171.68 ETE 232.94 ZAC 110.37 ETC 164.91 CLP 9.77

PLANETOCENTRIC CONIC

C3 47.372 VHL 6.883 DLA 25.13 RAL 32.71 RAD 6568.8 VEL 12.990 PTH 2.37 VHP 13.194 DPA 8.05 RAP 15.70 ECC 1.7796
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 28 59 3362.14 -23.43 121.87 278.66 73.63 3 25 1 2762.1 -25.45 113.78
90.00 22 29 45 4139.78 -1.90 168.62 269.68 61.74 23 38 45 3539.8 -5.57 161.96
100.00 4 13 36 3024.86 -26.12 97.89 279.50 74.92 5 4 1 2424.9 -27.94 89.56
100.00 23 27 50 3952.29 .54 153.49 268.32 60.11 24 33 42 3352.3 -3.44 146.96
110.00 6 5 43 2674.07 -32.17 72.93 261.18 77.77 6 30 17 2074.1 -33.52 63.96
110.00 23 52 12 3675.85 5.83 144.41 265.03 56.26 24 56 48 3275.8 1.36 138.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4984 TRA-1.2036 TC3 -.0360 BAU .0370 SGT 1102.9 SGR 449.1 SCS 78.5 ST 531.4 SR 435.1 SS 469.6
RDE -.5215 RRA .1042 RC3 -.0459 FAU .02045 RRT .1453 RRF -.1511 RTF -.7911 CRT .7378 CRS .8442 CST .9836
FDE .4344 FRA .7129 FC3 -.3737 BSP 3585 SGB 1265.3 R23 -.0175 R13 -.7917 LSA 794.6 MSA 246.0 SSA 15.3
BDE .7214 BRA 1.2081 BC3 .0583 FSP -193 SGI 1185.0 SGI 443.5 THA 3.67 EL1 642.4 EL2 243.0 ALF 37.37

LAUNCH DATE JAN 6 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 208.520

RL 147.10 LAL -.00 LOL 105.50 VL 24.594 GAL 6.05 AZL 86.91 HCA 85.64 SMA 110.63 ECC .34431 INC 3.0924 V1 30.287
RP 107.84 LAP 3.08 LOP 191.13 VP 35.321 GAP -20.09 AZP 89.76 TAL 168.22 TAP 253.86 RCA 72.54 APO 148.72 V2 35.141
RC 42.834 GL 11.64 GP 4.39 ZAL 66.89 ZAP 9.32 ETS 209.75 ZAE 173.38 ETE 250.43 ZAC 111.91 ETC 164.59 CLP 8.23

PLANETOCENTRIC CONIC

C3 42.737 VHL 6.537 DLA 25.53 RAL 32.64 RAD 6568.6 VEL 12.810 PTH 2.33 VHP 12.573 DPA 8.96 RAP 17.15 ECC 1.7033
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 21 0 3362.63 -23.42 121.90 276.70 73.61 3 17 3 2762.6 -25.45 113.82
90.00 22 37 12 4087.54 -3.58 165.70 268.41 61.89 23 45 19 3487.5 -7.32 159.01
100.00 4 7 14 3020.11 -26.20 97.56 277.55 75.08 4 57 35 2420.1 -28.00 89.22
100.00 23 33 39 3905.29 -1.06 150.91 267.00 60.12 24 38 44 3305.3 -5.02 144.37
110.00 6 1 22 2663.02 -32.33 72.10 279.22 78.24 6 45 45 2063.0 -33.61 63.10
110.00 23 56 0 3635.15 4.29 142.27 263.68 56.05 24 59 55 3235.1 -1.20 136.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5026 TRA-1.1854 TC3 -.0130 BAU .0274 SGT 1232.9 SGR 447.6 SCS 86.0 ST 559.8 SR 435.5 SS 492.8
RDE -.4980 RRA .0907 RC3 -.0482 FAU .02145 RRT .1651 RRF -.1718 RTF -.8047 CRT .7480 CRS .8505 CST .9843
FDE .4359 FRA .7345 FC3 -.4345 BSP 3775 SGB 1311.6 R23 -.0198 R13 -.8054 LSA 828.0 MSA 244.9 SSA 15.5
BDE .7061 BRA 1.1889 BC3 .0480 FSP -215 SGI 1235.4 SGI 440.6 THA 3.93 EL1 666.4 EL2 242.8 ALF 35.64

LAUNCH DATE JAN 6 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 215.207

RL 147.10 LAL -.00 LOL 105.50 VL 24.876 GAL 5.68 AZL 87.00 HCA 88.86 SMA 111.94 ECC .32786 INC 2.9993 V1 30.287
RP 107.87 LAP 3.00 LOP 194.36 VP 35.706 GAP -19.03 AZP 89.94 TAL 168.11 TAP 256.97 RCA 75.24 APO 148.64 V2 35.129
RC 42.524 GL 12.03 GP 4.66 ZAL 66.93 ZAP 8.14 ETS 216.65 ZAE 174.20 ETE 276.27 ZAC 113.43 ETC 164.23 CLP 6.68

PLANETOCENTRIC CONIC

C3 38.596 VHL 6.213 DLA 25.90 RAL 32.49 RAD 6568.5 VEL 12.648 PTH 2.30 VHP 11.975 DPA 9.88 RAP 18.59 ECC 1.6352
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 12 57 3362.12 -23.43 121.87 274.64 73.63 3 9 0 2762.1 -25.45 113.78
90.00 22 44 1 4036.58 -5.21 162.84 267.04 62.13 23 51 18 3436.6 -8.90 156.11
100.00 4 0 55 3014.10 -26.31 97.14 275.53 75.27 4 51 9 2414.1 -28.07 88.79
100.00 23 38 45 3859.84 -2.60 148.42 265.60 60.21 24 43 5 3259.8 -6.54 141.85
110.00 5 57 1 2650.83 -32.50 71.19 277.16 78.76 6 41 12 2050.8 -33.70 62.17
110.00 0 3 4 3795.88 2.79 140.22 262.24 55.92 1 6 20 3195.9 -1.70 134.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5067 TRA-1.1656 TC3 .0154 BAU .0247 SGT 1283.3 SGR 445.7 SCS 94.4 ST 589.0 SR 435.6 SS 517.1
RDE -.4716 RRA .0778 RC3 -.0453 FAU .02257 RRT .1873 RRF -.1952 RTF -.8174 CRT .7589 CRS .8571 CST .9850
FDE .4791 FRA .7568 FC3 -.5064 BSP 3975 SGB 1358.5 R23 -.0224 R13 -.8182 LSA 863.0 MSA 242.9 SSA 15.7
BDE .6923 BRA 1.1682 BC3 .0479 FSP -240 SGI 1286.4 SGI 436.8 THA 4.21 EL1 691.6 EL2 241.6 ALF 34.01

LAUNCH DATE JAN 6 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 221.911

RL 147.10 LAL -.00 LOL 105.50 VL 25.138 GAL 5.32 AZL 87.09 HCA 92.08 SMA 113.19 ECC .31239 INC 2.9064 V1 30.287
RP 107.91 LAP 2.90 LOP 197.59 VP 35.877 GAP -18.01 AZP 90.11 TAL 168.06 TAP 260.14 RCA 77.83 APO 148.54 V2 35.117
RC 42.392 GL 12.41 GP 4.95 ZAL 67.06 ZAP 7.11 ETS 225.94 ZAE 173.72 ETE 303.96 ZAC 114.91 ETC 163.82 CLP 5.11

PLANETOCENTRIC CONIC

C3 34.896 VHL 5.907 DLA 26.22 RAL 32.25 RAD 6568.4 VEL 12.501 PTH 2.26 VHP 11.400 DPA 10.82 RAP 20.00 ECC 1.5743
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 5 3 3360.20 -23.47 121.74 272.52 73.68 3 1 3 2760.2 -25.48 113.65
90.00 22 50 3 3987.59 -6.76 160.08 265.59 62.44 23 56 30 3387.6 -10.40 153.29
100.00 3 54 45 3006.52 -26.44 96.82 273.42 75.52 4 44 51 2406.5 -28.17 88.24
100.00 23 43 1 3816.50 -4.06 146.03 264.10 60.36 24 46 38 3216.5 -7.98 139.43
110.00 5 52 44 2637.39 -32.67 70.18 275.02 79.33 6 36 41 2037.4 -33.80 61.13
110.00 0 5 28 3758.40 1.36 138.26 260.73 55.84 1 8 6 3158.4 -3.13 132.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5117 TRA-1.1453 TC3 .0494 BAU .0306 SGT 1335.2 SGR 443.5 SCS 103.6 ST 619.9 SR 435.5 SS 542.8
RDE -.4485 RRA .0649 RC3 -.0431 FAU .02382 RRT .2128 RRF -.2219 RTF -.8293 CRT .7707 CRS .8641 CST .9858
FDE .5043 FRA .7803 FC3 -.5910 BSP 4184 SGB 1407.0 R23 -.0253 R13 -.8303 LSA 900.4 MSA 240.1 SSA 15.8
BDE .6804 BRA 1.1471 BC3 .0656 FSP -266 SGI 1338.9 SGI 432.2 THA 4.52 EL1 718.8 EL2 239.3 ALF 32.47

LAUNCH DATE JAN 6 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 226.629

RL 147.10 LAL -.00 LOL 105.50 VL 25.380 GAL 4.97 AZL 87.19 HCA 95.30 SMA 114.38 ECC .29786 INC 2.8133 V1 30.287  
 RP 107.95 LAP 2.80 LOP 200.81 VP 36.035 GAP -17.04 AZP 90.26 TAL 168.06 TAP 263.36 RCA 80.31 APO 148.45 V2 35.105  
 RC 42.442 GL 12.76 GP 5.27 ZAL 67.26 ZAP 6.34 ETS 236.20 ZAE 172.16 ETE 324.30 ZAC 116.35 ETC 163.36 CLP 3.53

PLANETOCENTRIC CONIC

C3 31.593 VHL 5.821 DLA 26.48 RAL 31.94 RAD 6568.3 VEL 12.368 PTH 2.23 VHP 10.846 DPA 11.77 RAP 21.39 ECC 1.5199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 57 30 3356.18 -23.54 121.47 270.35 73.80 2 53 27 2756.2 -25.54 113.37  
 90.00 22 55 3 3941.47 -8.21 157.46 264.03 62.80 24 0 44 3341.5 -11.79 150.61  
 100.00 3 48 56 2996.99 -26.60 95.95 271.26 75.83 4 38 53 2397.0 -28.29 87.56  
 100.00 23 48 19 3775.89 -5.42 143.79 262.52 60.56 24 49 15 3175.9 -9.30 137.15  
 110.00 5 48 36 2622.54 -32.85 69.06 272.80 79.97 6 32 19 2022.5 -33.89 59.98  
 110.00 0 7 4 3723.11 .01 136.42 259.14 55.82 1 9 7 3123.1 -4.47 130.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5168 TRA-1.1239 TC3 .0897 BAU .0413 SGT 1387.8 SCR 441.2 SCS 113.9 ST 651.9 SR 435.3 SS 569.9  
 RDE -.4267 RRA .0525 RC3 -.0390 FAU .02520 RRT .2419 RRF -.2523 RTF -.8405 CRT .7831 CRS .8715 CST .9867  
 FDE .5318 FRA .8052 FC3 -.6907 BSP 4351 SGB 1456.3 R23 -.0288 R13 -.8415 LSA 939.8 MSA 236.4 SSA 16.0  
 BDE .6702 BRA 1.1251 BC3 .0978 FSP -296 SGI 1392.4 SGI 426.7 THA 4.85 EL1 747.5 EL2 236.1 ALF 31.04

LAUNCH DATE JAN 6 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 235.356

RL 147.10 LAL -.00 LOL 105.50 VL 25.604 GAL 4.64 AZL 87.28 HCA 98.52 SMA 115.52 ECC .28425 INC 2.7192 V1 30.287  
 RP 107.99 LAP 2.89 LOP 204.03 VP 36.181 GAP -16.10 AZP 90.40 TAL 168.11 TAP 266.63 RCA 82.68 APO 148.35 V2 35.092  
 RC 42.671 GL 13.07 GP 5.63 ZAL 67.55 ZAP 5.95 ETS 253.28 ZAE 170.04 ETE 337.16 ZAC 117.75 ETC 162.84 CLP 1.92

PLANETOCENTRIC CONIC

C3 28.643 VHL 5.352 DLA 26.69 RAL 31.54 RAD 6568.2 VEL 12.248 PTH 2.20 VHP 10.314 DPA 12.75 RAP 22.74 ECC 1.4714  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 41 3349.18 -23.68 121.00 266.14 74.00 2 46 30 2749.2 -25.65 112.88  
 90.00 22 58 44 3899.33 -9.31 155.05 262.36 63.20 24 3 43 3299.3 -13.03 148.14  
 100.00 3 43 39 2985.01 -26.80 95.12 269.05 76.25 4 33 24 2385.0 -26.43 86.69  
 100.00 23 48 27 3758.75 -8.66 141.72 260.83 60.79 24 50 46 3158.7 -10.50 135.04  
 110.00 5 44 45 2806.09 -33.04 67.81 270.52 80.68 6 28 11 2006.1 -33.97 58.70  
 110.00 0 7 46 3690.42 -1.24 134.71 257.48 55.84 1 9 17 3090.4 -5.71 128.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5214 TRA-1.1011 TC3 .1380 BAU .0543 SGT 1440.3 SCR 438.9 SCS 125.3 ST 684.3 SR 435.1 SS 598.0  
 RDE -.4062 RRA .0405 RC3 -.0327 FAU .02676 RRT .2744 RRF -.2866 RTF -.8511 CRT .7959 CRS .8790 CST .9875  
 FDE .5807 FRA .8314 FC3 -.8088 BSP 4348 SGB 1505.7 R23 -.0324 R13 -.8523 LSA 980.4 MSA 232.1 SSA 16.2  
 BDE .6609 BRA 1.1019 BC3 .1418 FSP -330 SGI 1445.8 SGI 420.5 THA 5.22 EL1 777.0 EL2 232.0 ALF 29.76

LAUNCH DATE JAN 6 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 242.089

RL 147.10 LAL -.00 LOL 105.50 VL 25.811 GAL 4.32 AZL 87.38 HCA 101.73 SMA 116.60 ECC .27152 INC 2.6236 V1 30.287  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.315 GAP -15.19 AZP 90.53 TAL 168.21 TAP 269.94 RCA 84.94 APO 148.25 V2 35.080  
 RC 43.078 GL 13.38 GP 6.04 ZAL 67.91 ZAP 6.04 ETS 269.54 ZAE 167.71 ETE 345.50 ZAC 119.09 ETC 162.26 CLP .28

PLANETOCENTRIC CONIC

C3 26.011 VHL 5.100 DLA 26.84 RAL 31.08 RAD 6568.1 VEL 12.140 PTH 2.18 VHP 9.803 DPA 13.75 RAP 24.05 ECC 1.4281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 44 59 3338.03 -23.88 120.25 265.91 74.32 2 40 37 2738.0 -25.81 112.11  
 90.00 23 0 43 3862.53 -10.63 152.93 260.59 63.60 24 5 6 3262.5 -14.10 145.96  
 100.00 3 39 9 2969.98 -27.04 94.07 266.81 76.74 4 28 39 2370.0 -28.59 85.61  
 100.00 23 49 14 3705.82 -7.75 139.89 259.06 61.04 24 51 0 3105.8 -11.56 133.17  
 110.00 5 41 17 2587.80 -33.23 66.42 268.19 81.49 6 24 25 1987.8 -34.05 57.28  
 110.00 0 7 31 3660.76 -2.37 133.17 255.75 55.89 1 8 32 3060.8 -6.83 126.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5267 TRA-1.0803 TC3 .1845 BAU .0647 SGT 1495.2 SCR 437.0 SCS 137.9 ST 718.8 SR 435.0 SS 627.4  
 RDE -.3871 RRA .0287 RC3 -.0235 FAU .02850 RRT .3117 RRF -.3253 RTF -.8576 CRT .8088 CRS .8868 CST .9883  
 FDE .5921 FRA .8593 FC3 -.9485 BSP 4741 SGB 1557.7 R23 -.0377 R13 -.8589 LSA 1023.5 MSA 227.3 SSA 16.6  
 BDE .6537 BRA 1.0807 BC3 .1860 FSP -368 SGI 1501.9 SGI 413.4 THA 5.63 EL1 808.8 EL2 227.3 ALF 28.54

LAUNCH DATE JAN 6 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 248.823

RL 147.10 LAL -.00 LOL 105.50 VL 26.002 GAL 4.02 AZL 87.47 HCA 104.95 SMA 117.62 ECC .25965 INC 2.5258 V1 30.287  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.439 GAP -14.33 AZP 90.65 TAL 168.36 TAP 273.31 RCA 87.08 APO 148.16 V2 35.067  
 RC 43.658 GL 13.59 GP 6.49 ZAL 68.35 ZAP 6.63 ETS 284.40 ZAE 165.34 ETE 351.31 ZAC 120.37 ETC 161.61 CLP -1.39

PLANETOCENTRIC CONIC

C3 23.663 VHL 4.864 DLA 26.91 RAL 30.55 RAD 6568.0 VEL 12.043 PTH 2.15 VHP 9.312 DPA 14.78 RAP 25.32 ECC 1.3894  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 40 51 3321.47 -24.18 119.13 263.68 74.80 2 36 13 2721.5 -26.04 110.95  
 90.00 23 0 37 3832.54 -11.54 151.19 258.70 63.96 24 4 30 3232.5 -14.95 144.17  
 100.00 3 35 41 2951.30 -27.32 92.75 264.55 77.37 4 24 52 2351.3 -28.79 84.25  
 100.00 23 48 29 3677.94 -8.67 138.32 257.19 61.28 24 49 47 3077.9 -12.43 131.56  
 110.00 5 38 22 2567.41 -33.43 64.86 265.81 82.39 6 21 9 1967.4 -34.12 55.69  
 110.00 0 6 13 3634.59 -3.37 131.80 253.94 55.96 1 6 48 3034.6 -7.81 125.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5291 TRA-1.0330 TC3 .2592 BAU .0821 SGT 1544.9 SCR 435.9 SCS 152.0 ST 750.0 SR 435.2 SS 657.9  
 RDE -.3695 RRA .0170 RC3 -.0106 FAU .03043 RRT .3525 RRF -.3692 RTF -.8705 CRT .8222 CRS .8947 CST .9892  
 FDE .6258 FRA .8894 FC3 -1.1133 BSP 4949 SGB 1605.2 R23 -.0423 R13 -.8720 LSA 1065.5 MSA 221.7 SSA 16.6  
 BDE .6453 BRA 1.0331 BC3 .2594 FSP -410 SGI 1533.1 SGI 405.7 THA 6.10 EL1 838.4 EL2 221.6 ALF 27.60

LAUNCH DATE JAN 6 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 255.557

RL 147.10 LAL -.00 LOL 105.50 VL 26.178 GAL 3.73 AZL 87.57 HCA 108.16 SMA 118.58 ECC .24860 INC 2.4251 V1 30.287  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.552 GAP -13.49 AZP 90.76 TAL 168.57 TAP 276.72 RCA 89.10 APO 148.06 V2 35.053  
 RC 44.405 GL 13.77 GP 7.00 ZAL 68.86 ZAP 7.65 ETS 296.33 ZAE 163.01 ETE 355.68 ZAC 121.58 ETC 160.90 CLP -3.10

PLANETOCENTRIC CONIC

C3 21.588 VHL 4.644 DLA 26.91 RAL 29.96 RAD 6567.9 VEL 11.956 PTH 2.13 VHP 8.841 DPA 15.84 RAP 26.52 ECC 1.3550  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 43 3298.32 -24.59 117.55 261.47 75.49 2 33 41 2698.3 -26.34 109.32  
 90.00 22 58 6 3810.67 -12.19 149.91 256.70 64.24 24 1 37 3210.7 -15.55 142.85  
 100.00 3 33 28 2928.35 -27.65 91.13 262.27 78.17 4 22 17 2328.4 -29.00 82.58  
 100.00 23 46 1 3855.86 -9.39 137.08 255.23 61.49 24 46 57 3055.9 -13.12 130.28  
 110.00 5 36 6 2544.63 -33.62 63.11 263.40 83.41 6 18 31 1944.6 -34.16 53.91  
 110.00 0 3 49 3612.35 -4.22 130.63 252.08 56.05 1 4 1 3012.4 -8.65 124.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5319 TRA-1.0279 TC3 .3321 BAU .0958 SGT 1596.3 SGR 436.0 SCS 167.7 ST 782.8 SR 435.9 SS 689.1  
 RDE -.3534 RRA .0092 RC3 .0067 FAU .03259 RRT .3989 RRF -.4182 RTF -.8790 CRT .8356 CRS .9026 CST .9901  
 FDE .6615 FRA .9219 FC3-1.3082 BSP 5141 SGB 1654.8 R23 -.0484 R13 -.8808 LSA 1109.4 MSA 215.7 SSA 16.8  
 BDE .6386 BRA 1.0280 BC3 .3321 FSP -457 SGI 1608.4 SGI 397.3 THA 6.63 EL1 869.7 EL2 215.6 ALF 26.73

LAUNCH DATE JAN 6 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 282.286

RL 147.10 LAL -.00 LOL 105.50 VL 26.340 GAL 3.43 AZL 87.68 HCA 111.36 SMA 119.49 ECC .25834 INC 2.3207 V1 30.287  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.655 GAP -12.89 AZP 90.85 TAL 168.81 TAP 280.18 RCA 91.01 APO 147.97 V2 35.040  
 RC 45.309 GL 13.88 GP 7.57 ZAL 69.42 ZAP 8.99 ETS 305.24 ZAE 160.79 ETE 359.20 ZAC 122.70 ETC 160.10 CLP -4.86

PLANETOCENTRIC CONIC

C3 19.701 VHL 4.439 DLA 26.81 RAL 29.33 RAD 6567.8 VEL 11.878 PTH 2.11 VHP 8.390 DPA 16.93 RAP 27.67 ECC 1.3242  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 50 3267.85 -25.09 115.46 259.29 76.43 2 33 18 2667.9 -26.71 107.17  
 90.00 22 52 56 3797.78 -12.57 149.15 254.59 64.41 23 56 14 3197.8 -15.91 142.07  
 100.00 3 32 45 2900.84 -28.02 99.15 260.00 79.15 4 21 5 2300.6 -29.24 80.56  
 100.00 23 41 43 3640.22 -9.89 136.20 253.21 61.85 24 42 23 3040.2 -13.61 129.37  
 110.00 5 34 40 2519.15 -33.80 61.14 260.96 84.56 6 18 39 1919.1 -34.18 51.92  
 110.00 0 0 13 3594.48 -4.90 129.70 250.17 56.13 1 0 8 2994.5 -9.31 123.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5336 TRA-1.0025 TC3 .4136 BAU .1092 SGT 1646.8 SGR 438.2 SCS 185.3 ST 814.7 SR 437.4 SS 721.1  
 RDE -.3388 RRA -.0087 RC3 .0294 FAU .03500 RRT .4501 RRF -.4724 RTF -.8869 CRT .8490 CRS .9105 CST .9909  
 FDE .6994 FRA .9576 FC3-1.5380 BSP 5325 SGB 1704.1 R23 -.0556 R13 -.8889 LSA 1153.7 MSA 209.3 SSA 17.0  
 BDE .6321 BRA 1.0028 BC3 .4146 FSP -510 SGI 1659.2 SGI 388.4 THA 7.23 EL1 900.8 EL2 209.0 ALF 26.01

LAUNCH DATE JAN 6 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 269.009

RL 147.10 LAL -.00 LOL 105.50 VL 26.489 GAL 3.19 AZL 87.79 HCA 114.57 SMA 120.34 ECC .22884 INC 2.2117 V1 30.287  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.750 GAP -11.91 AZP 90.92 TAL 169.10 TAP 283.67 RCA 92.80 APO 147.88 V2 35.027  
 RC 46.364 GL 13.91 GP 8.23 ZAL 70.05 ZAP 10.57 ETS 311.74 ZAE 158.71 ETE 2.21 ZAC 123.72 ETC 159.23 CLP -6.67

PLANETOCENTRIC CONIC

C3 18.035 VHL 4.247 DLA 26.61 RAL 28.67 RAD 6567.7 VEL 11.808 PTH 2.09 VHP 7.958 DPA 18.07 RAP 28.73 ECC 1.2968  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 41 19 3229.95 -25.67 112.84 257.13 77.62 2 35 9 2629.9 -27.12 104.47  
 90.00 22 45 10 3794.09 -12.67 148.94 252.41 64.47 23 48 24 3194.1 -16.01 141.85  
 100.00 3 33 39 2867.81 -28.42 96.79 257.73 80.33 4 21 27 2267.8 -29.47 78.14  
 100.00 23 35 31 3631.47 -10.17 135.70 251.12 61.74 24 36 2 3031.5 -13.87 128.86  
 110.00 5 34 11 2490.67 -33.96 58.93 258.51 85.86 6 15 41 1890.7 -34.16 49.70  
 110.00 23 51 28 3581.38 -5.39 129.01 248.22 56.19 24 51 10 2981.4 -9.80 122.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5335 TRA -.9767 TC3 .5047 BAU .1225 SGT 1695.4 SGR 443.3 SCS 204.8 ST 844.8 SR 439.7 SS 753.1  
 RDE -.3258 RRA -.0189 RC3 .0590 FAU .03769 RRT .5056 RRF -.5312 RTF -.8942 CRT .8621 CRS .9182 CST .9917  
 FDE .7390 FRA .9968 FC3-1.8095 BSP 5501 SGB 1752.4 R23 -.0641 R13 -.8966 LSA 1197.0 MSA 202.7 SSA 17.2  
 BDE .6251 BRA .9769 BC3 .5082 FSP -569 SGI 1710.9 SGI 379.0 THA 7.92 EL1 930.7 EL2 202.3 ALF 25.45

LAUNCH DATE JAN 6 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 275.723

RL 147.10 LAL -.00 LOL 105.50 VL 26.826 GAL 2.95 AZL 87.90 HCA 117.77 SMA 121.14 ECC .22007 INC 2.0971 V1 30.287  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.836 GAP -11.17 AZP 90.98 TAL 169.43 TAP 287.20 RCA 94.48 APO 147.80 V2 35.013  
 RC 47.558 GL 13.84 GP 8.97 ZAL 70.72 ZAP 12.36 ETS 316.48 ZAE 156.79 ETE 4.92 ZAC 124.63 ETC 158.27 CLP -8.54

PLANETOCENTRIC CONIC

C3 16.550 VHL 4.068 DLA 26.30 RAL 27.98 RAD 6567.7 VEL 11.744 PTH 2.07 VHP 7.545 DPA 19.27 RAP 29.71 ECC 1.2724  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 46 4 3185.02 -26.29 109.89 254.98 79.08 2 39 9 2585.0 -27.53 101.24  
 90.00 22 34 58 3799.29 -12.52 149.24 250.18 64.39 23 38 17 3199.3 -15.87 142.16  
 100.00 3 36 17 2829.88 -28.83 84.03 255.47 81.73 4 23 27 2229.7 -29.67 75.33  
 100.00 23 27 25 3629.86 -10.23 135.81 248.99 61.76 24 27 55 3029.9 -13.92 128.77  
 110.00 5 34 47 2458.89 -34.09 56.46 256.06 87.32 6 15 46 1858.9 -34.09 47.22  
 110.00 23 45 24 3573.42 -5.89 128.59 246.24 56.24 24 44 58 2973.4 -10.09 122.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5307 TRA -.9503 TC3 .6054 BAU .1356 SGT 1740.7 SGR 452.5 SCS 226.5 ST 871.5 SR 443.0 SS 784.3  
 RDE -.3144 RRA -.0318 RC3 .0969 FAU .04071 RRT .5641 RRF -.5934 RTF -.9011 CRT .8746 CRS .9257 CST .9925  
 FDE .7792 FRA 1.0399 FC3-2.1295 BSP 5680 SGB 1798.8 R23 -.0741 R13 -.9039 LSA 1237.8 MSA 193.9 SSA 17.4  
 BDE .6168 BRA .9508 BC3 .6131 FSP -636 SGI 1760.2 SGI 369.5 THA 8.73 EL1 957.9 EL2 193.4 ALF 25.09

LAUNCH DATE JAN 6 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 282.425

RL 147.10 LAL -.00 LOL 105.50 VL 26.751 GAL 2.72 AZL 88.02 HCA 120.97 SMA 121.89 ECC .21199 INC 1.9756 V1 30.287  
 RP 106.27 LAP 1.69 LOP 226.49 VP 36.914 GAP -10.45 AZP 91.02 TAL 169.79 TAP 290.76 RCA 96.05 APO 147.72 V2 35.000  
 RC 48.883 GL 13.66 GP 9.82 ZAL 71.44 ZAP 14.32 ETS 319.95 ZAE 155.04 ETE 7.49 ZAC 125.40 ETC 157.21 CLP -10.48

PLANETOCENTRIC CONIC

C3 15.225 VHL 3.902 DLA 25.87 RAL 27.30 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 7.152 DPA 20.54 RAP 30.57 ECC 1.2506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 55 3133.72 -26.90 106.06 232.86 80.80 2 45 9 2533.7 -27.90 97.53  
 90.00 22 22 37 3612.75 -12.12 150.03 247.93 64.21 23 26 10 3212.7 -15.50 142.98  
 100.00 3 40 42 2786.21 -29.21 80.85 253.22 83.35 4 27 9 2186.2 -29.82 72.10  
 100.00 23 17 31 3635.49 -10.05 135.93 246.85 61.70 24 18 7 3035.5 -13.75 129.10  
 110.00 5 38 38 2423.51 -34.17 55.70 253.61 88.95 6 17 1 1823.5 -33.94 44.46  
 110.00 23 38 5 3570.96 -5.79 128.46 244.27 56.25 24 37 36 2971.0 -10.18 122.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5240 TRA -.9219 TC3 .7185 BAU .1492  
 RDE -.3044 RRA -.0453 RC3 .1457 FAU .04412  
 FDE .8192 FRA 1.0870 FC3-2.5086 BSP 5899  
 BDE .6060 BRA .9230 BC3 .7332 FSP -713

SGT 1780.5 SGR 467.1 SCS 250.8  
 RRT .8240 RRF -.6574 RTF -.9079  
 SGB 1840.7 R23 -.0854 R13 -.9113  
 SGI 1805.2 SGI 360.0 THA 9.69

ST 892.2 SR 447.6 SS 813.6  
 CRT .8865 CRS .9328 CST .9932  
 LSA 1273.7 MSA 189.1 SSA 17.5  
 EL1 980.2 EL2 188.5 ALF 24.96

LAUNCH DATE JAN 6 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 289.114

RL 147.10 LAL -.00 LOL 105.50 VL 26.865 GAL 2.50 AZL 88.15 HCA 124.17 SMA 122.58 ECC .20457 INC 1.8458 V1 30.287  
 RP 106.31 LAP 1.53 LOP 229.68 VP 36.984 GAP -9.75 AZP 91.04 TAL 170.17 TAP 294.34 RCA 97.50 APO 147.65 V2 34.987  
 RC 50.327 GL 13.34 GP 10.79 ZAL 72.18 ZAP 16.46 ETS 322.49 ZAE 153.47 ETE 10.03 ZAC 126.01 ETC 156.06 CLP -12.50

PLANETOCENTRIC CONIC

C3 14.044 VHL 3.747 DLA 25.29 RAL 26.63 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.778 DPA 21.88 RAP 31.31 ECC 1.2311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 1 43 3076.72 -27.45 101.98 230.74 82.77 2 52 59 2476.7 -26.17 93.39  
 90.00 22 8 29 3833.83 -11.50 151.26 245.71 63.94 23 12 22 3233.8 -14.91 144.24  
 100.00 3 48 56 2737.47 -29.54 77.27 250.99 85.21 4 32 34 2137.5 -29.89 68.48  
 100.00 23 5 36 3648.32 -9.63 136.85 244.73 61.56 24 6 44 3048.3 -13.36 129.85  
 110.00 5 39 50 2384.24 -34.18 50.63 251.19 90.77 6 19 35 1784.2 -33.69 41.42  
 110.00 23 29 51 3574.31 -5.66 128.63 242.31 56.23 24 29 6 2974.3 -10.06 122.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5165 TRA -.8956 TC3 .8341 BAU .1613  
 RDE -.2982 RRA -.0882 RC3 .2069 FAU .04785  
 FDE .8596 FRA 1.1410 FC3-2.9496 BSP 6049  
 BDE .5953 BRA .8978 BC3 .8594 FSP -796

SGT 1818.7 SGR 489.3 SCS 277.8  
 RRT .6839 RRF -.7210 RTF -.9135  
 SGB 1883.4 R23 -.0988 R13 -.9177  
 SGI 1850.4 SGI 350.9 THA 10.82

ST 911.2 SR 453.9 SS 841.8  
 CRT .8983 CRS .9398 CST .9939  
 LSA 1308.2 MSA 182.0 SSA 17.8  
 EL1 1001.7 EL2 181.4 ALF 24.98

LAUNCH DATE JAN 6 1969

FLIGHT TIME 114.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 295.788

RL 147.10 LAL -.00 LOL 105.50 VL 26.970 GAL 2.30 AZL 88.29 HCA 127.36 SMA 123.22 ECC .19777 INC 1.7059 V1 30.287  
 RP 106.38 LAP 1.36 LOP 232.88 VP 37.048 GAP -9.08 AZP 91.04 TAL 170.58 TAP 297.94 RCA 98.85 APO 147.59 V2 34.974  
 RC 51.881 GL 12.88 GP 11.91 ZAL 72.95 ZAP 18.77 ETS 324.35 ZAE 152.08 ETE 12.64 ZAC 126.45 ETC 154.81 CLP -14.62

PLANETOCENTRIC CONIC

C3 12.990 VHL 3.604 DLA 24.55 RAL 25.99 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 6.424 DPA 23.33 RAP 31.91 ECC 1.2138  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 12 20 3014.49 -27.91 97.48 248.65 84.98 3 2 35 2414.5 -28.31 88.84  
 90.00 21 52 47 3862.09 -10.65 152.90 243.53 63.61 22 57 10 3262.1 -14.11 145.93  
 100.00 3 55 0 2883.47 -29.78 75.27 248.80 87.30 4 39 44 2083.5 -29.84 64.47  
 100.00 22 52 48 3688.35 -8.98 137.78 242.65 61.37 23 53 57 3068.3 -12.73 131.01  
 110.00 5 44 33 2340.76 -34.08 47.24 248.79 92.77 6 23 34 1740.8 -33.32 38.08  
 110.00 23 19 45 3583.82 -5.30 129.13 240.40 56.18 24 19 29 2983.8 -9.71 122.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5060 TRA -.8707 TC3 .9523 BAU .1726  
 RDE -.2895 RRA -.0789 RC3 .2837 FAU .05194  
 FDE .8979 FRA 1.2031 FC3-3.4011 BSP 6177  
 BDE .5830 BRA .8741 BC3 .9937 FSP -888

SGT 1853.1 SGR 521.2 SCS 307.7  
 RRT .7404 RRF -.7810 RTF -.9183  
 SGB 1925.0 R23 -.1145 R13 -.9235  
 SGI 1894.2 SGI 342.8 THA 12.17

ST 925.2 SR 462.0 SS 867.2  
 CRT .9095 CRS .9459 CST .9947  
 LSA 1338.1 MSA 174.8 SSA 18.1  
 EL1 1019.3 EL2 174.4 ALF 25.22

LAUNCH DATE JAN 6 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 302.445

RL 147.10 LAL -.00 LOL 105.50 VL 27.065 GAL 2.12 AZL 88.45 HCA 130.55 SMA 123.81 ECC .19157 INC 1.5536 V1 30.287  
 RP 106.40 LAP 1.18 LOP 236.07 VP 37.105 GAP -8.44 AZP 91.01 TAL 171.01 TAP 301.56 RCA 100.09 APO 147.53 V2 34.961  
 RC 53.536 GL 12.20 GP 13.21 ZAL 73.74 ZAP 21.27 ETS 325.70 ZAE 150.85 ETE 15.41 ZAC 126.66 ETC 153.46 CLP -16.83

PLANETOCENTRIC CONIC

C3 12.050 VHL 3.471 DLA 23.63 RAL 25.41 RAD 6567.5 VEL 11.552 PTH 2.02 VHP 6.090 DPA 24.89 RAP 32.32 ECC 1.1983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 24 45 2947.20 -28.21 92.58 246.58 87.42 3 13 52 2347.2 -28.27 83.92  
 90.00 21 35 47 3897.36 -9.57 154.94 241.45 63.22 22 40 44 3297.4 -13.09 148.02  
 100.00 4 4 57 2824.14 -29.89 68.87 248.63 89.62 4 48 41 2024.1 -29.62 60.07  
 100.00 22 38 16 3685.65 -8.08 139.32 240.65 61.12 23 39 52 3095.6 -11.88 132.58  
 110.00 5 50 53 2292.68 -33.86 43.50 248.44 94.97 6 29 6 1692.7 -32.80 34.43  
 110.00 23 8 49 3599.88 -4.69 129.98 238.57 56.10 24 8 48 2999.9 -9.11 123.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4878 TRA -.8422 TC3 1.0859 BAU .1854  
 RDE -.2837 RRA -.0954 RC3 .3818 FAU .05880  
 FDE .9275 FRA 1.2697 FC3-4.0864 BSP 6390  
 BDE .5641 BRA .8478 BC3 1.1510 FSP -997

SGT 1875.7 SGR 564.8 SCS 340.7  
 RRT .7904 RRF -.8344 RTF -.9237  
 SGB 1958.9 R23 -.1305 R13 -.9301  
 SGI 1929.8 SGI 336.3 THA 13.82

ST 924.9 SR 471.2 SS 883.9  
 CRT .9191 CRS .9513 CST .9953  
 LSA 1332.8 MSA 167.9 SSA 18.3  
 EL1 1024.3 EL2 167.6 ALF 25.83

LAUNCH DATE JAN 6 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.151 GAL 1.94 AZL 88.61 HCA 133.74 SMA 124.35 ECC .18594 INC 1.3862 V1 30.287  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.156 GAP -7.82 AZP 90.96 TAL 171.44 TAP 305.18 RCA 101.23 APO 147.47 V2 34.948  
 RC 55.282 GL 11.31 GP 14.71 ZAL 74.52 ZAP 23.99 ETS 326.64 ZAE 149.74 ETE 18.43 ZAC 126.63 ETC 152.01 CLP -19.16

DISTANCE 309.084

PLANETOCENTRIC CONIC  
 C3 11.213 VHL 3.349 DLA 22.49 RAL 24.92 RAD 6567.4 VEL 11.515 PTH 2.01 VHP 5.778 DPA 26.61 RAP 32.53 ECC 1.1845  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 39 0 2874.73 -28.32 87.29 244.56 90.08 3 26 55 2274.7 -28.01 78.63  
 90.00 21 17 36 3939.76 -8.26 157.36 239.49 62.82 22 23 15 3339.8 -11.84 150.51  
 100.00 4 16 50 2559.26 -29.82 64.04 244.52 92.16 4 59 30 1959.3 -29.20 55.29  
 100.00 22 22 26 3730.46 -6.94 141.26 238.78 60.85 23 24 37 3130.5 -10.77 134.57  
 110.00 5 59 3 2239.53 -33.47 39.40 244.16 97.37 6 36 22 1639.5 -32.09 30.44  
 110.00 22 56 44 3622.96 -3.81 131.19 236.85 56.00 23 57 7 3023.0 -8.25 124.91

DIFFERENTIAL CORRECTIONS  
 TDE -.4678 TRA -.8163 TC3 1.2111 BAU .1966 SGT 1893.1 SGR 623.9 SG3 376.7  
 RDE -.2793 RRA -.1171 RC3 .5037 FAU .06157 RRT .8331 RRF -.8797 RTF -.9276  
 FDE .9512 FRA 1.3467 FC3-4.7541 BSP 6516 SGB 1993.2 R23 -.1487 R13 -.9558  
 BDE .5449 BRA .8246 BC3 1.3117 FSP -1111 SGI 1965.3 SG2 332.4 THA 15.82

MID-COURSE EXECUTION ACCURACY  
 ST 920.4 SR 482.4 SS 895.5  
 CRT .9286 CRS .9562 CST .9961  
 LSA 1362.2 MSA 160.5 SSA 18.7  
 EL1 1026.7 EL2 160.5 ALF 26.66

ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 6 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.229 GAL 1.78 AZL 88.80 HCA 136.93 SMA 124.85 ECC .18083 INC 1.2001 V1 30.287  
 RP 108.47 LAP .82 LOP 242.44 VP 37.201 GAP -7.21 AZP 90.88 TAL 171.87 TAP 308.80 RCA 102.27 APO 147.42 V2 34.936  
 RC 57.109 GL 10.15 GP 16.48 ZAL 75.30 ZAP 26.94 ETS 327.26 ZAE 148.73 ETE 21.79 ZAC 126.31 ETC 150.48 CLP -21.62

DISTANCE 315.705

PLANETOCENTRIC CONIC  
 C3 10.468 VHL 3.235 DLA 21.10 RAL 24.54 RAD 6567.4 VEL 11.483 PTH 2.00 VHP 5.489 DPA 28.50 RAP 32.49 ECC 1.1723  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 55 16 2796.60 -28.18 81.58 242.60 92.93 3 41 52 2196.6 -27.47 72.98  
 90.00 20 58 18 3989.80 -6.70 160.20 237.71 62.42 22 4 48 3389.8 -10.34 153.42  
 100.00 4 30 52 2488.34 -29.52 58.79 242.49 94.90 5 12 20 1888.3 -28.53 50.13  
 100.00 22 5 23 3773.29 -5.51 143.64 237.06 60.57 23 8 17 3173.3 -9.39 137.00  
 110.00 6 9 12 2180.66 -32.87 34.92 241.98 99.96 6 45 33 1580.7 -31.15 28.12  
 110.00 22 43 32 3653.73 -2.64 132.80 235.28 55.91 23 44 26 3053.7 -7.10 126.55

DIFFERENTIAL CORRECTIONS  
 TDE -.4437 TRA -.7924 TC3 1.3260 BAU .2070 SGT 1901.6 SGR 701.2 SG3 415.4  
 RDE -.2755 RRA -.1431 RC3 .6554 FAU .06681 RRT .8668 RRF -.9159 RTF -.9304  
 FDE .9619 FRA 1.4362 FC3-5.5256 BSP 6614 SGB 2026.8 R23 -.1681 R13 -.9410  
 BDE .5223 BRA .8052 BC3 1.4791 FSP -1233 SGI 1999.3 SG2 332.6 THA 18.25

MID-COURSE EXECUTION ACCURACY  
 ST 906.5 SR 494.9 SS 897.5  
 CRT .9374 CRS .9600 CST .9969  
 LSA 1359.6 MSA 153.0 SSA 19.3  
 EL1 1021.4 EL2 153.0 ALF 27.78

ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 6 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.300 GAL 1.64 AZL 89.01 HCA 140.12 SMA 125.30 ECC .17623 INC .9906 V1 30.287  
 RP 108.51 LAP .64 LOP 245.62 VP 37.241 GAP -6.63 AZP 90.76 TAL 172.29 TAP 312.41 RCA 103.22 APO 147.38 V2 34.923  
 RC 59.010 GL 8.66 GP 18.54 ZAL 76.06 ZAP 30.15 ETS 327.64 ZAE 147.76 ETE 25.59 ZAC 125.65 ETC 148.88 CLP -24.22

DISTANCE 322.306

PLANETOCENTRIC CONIC  
 C3 9.809 VHL 3.132 DLA 19.42 RAL 24.31 RAD 6567.4 VEL 11.454 PTH 1.99 VHP 5.226 DPA 30.62 RAP 32.14 ECC 1.1614  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 47 2711.95 -27.73 75.43 240.73 95.99 3 58 59 2112.0 -26.61 66.94  
 90.00 20 37 54 4048.41 -4.84 163.51 236.14 62.07 21 45 22 3448.4 -8.54 156.78  
 100.00 4 47 15 2410.56 -28.94 53.09 240.57 97.85 5 27 26 1810.6 -27.55 44.56  
 100.00 21 47 7 3825.04 -3.77 146.50 235.55 60.32 22 50 52 3225.0 -7.69 139.91  
 110.00 6 21 39 2115.21 -31.99 30.01 239.92 102.74 6 36 54 1515.2 -29.91 21.42  
 110.00 22 29 12 3693.15 -1.13 134.86 233.91 55.83 23 30 45 3093.2 -5.61 128.63

DIFFERENTIAL CORRECTIONS  
 TDE -.4133 TRA -.7678 TC3 1.4363 BAU .2186 SGT 1897.3 SGR 801.0 SG3 456.5  
 RDE -.2714 RRA -.1742 RC3 .8461 FAU .07241 RRT .8920 RRF -.9432 RTF -.9329  
 FDE .9513 FRA 1.5349 FC3-6.3910 BSP 6706 SGB 2059.4 R23 -.1849 R13 -.9468  
 BDE .4944 BRA .7874 BC3 1.6670 FSP -1363 SGI 2031.5 SG2 336.1 THA 21.25

MID-COURSE EXECUTION ACCURACY  
 ST 878.7 SR 506.9 SS 884.8  
 CRT .9454 CRS .9627 CST .9978  
 LSA 1338.1 MSA 145.3 SSA 20.0  
 EL1 1004.1 EL2 144.6 ALF 29.27

ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 6 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.363 GAL 1.51 AZL 89.25 HCA 143.30 SMA 125.71 ECC .17210 INC .7511 V1 30.287  
 RP 108.55 LAP .45 LOP 248.80 VP 37.277 GAP -6.07 AZP 90.60 TAL 172.70 TAP 316.00 RCA 104.08 APO 147.34 V2 34.911  
 RC 60.976 GL 6.78 GP 20.97 ZAL 76.80 ZAP 33.67 ETS 327.84 ZAE 146.72 ETE 29.89 ZAC 124.59 ETC 147.22 CLP -26.97

DISTANCE 328.885

PLANETOCENTRIC CONIC  
 C3 9.231 VHL 3.038 DLA 17.38 RAL 24.25 RAD 6567.3 VEL 11.429 PTH 1.98 VHP 4.991 DPA 33.01 RAP 31.42 ECC 1.1519  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 34 58 2619.44 -28.89 68.78 239.02 99.21 4 18 37 2019.4 -25.35 60.46  
 90.00 20 16 15 4117.12 -2.63 167.36 234.85 61.80 21 24 53 3517.1 -6.39 160.69  
 100.00 5 6 22 2324.68 -27.98 46.89 238.80 100.98 5 45 7 1724.7 -26.18 38.55  
 100.00 21 27 32 3887.12 -1.67 149.91 234.32 60.15 22 32 19 3287.1 -5.63 143.37  
 110.00 6 36 44 2041.94 -30.77 24.65 238.04 105.89 7 10 46 1441.9 -28.31 16.32  
 110.00 22 13 40 3742.62 .76 137.44 232.80 55.82 23 16 2 3142.6 -3.73 131.23

DIFFERENTIAL CORRECTIONS  
 TDE -.3766 TRA -.7430 TC3 1.5354 BAU .2320 SGT 1878.9 SGR 927.9 SG3 498.9  
 RDE -.2634 RRA -.2126 RC3 1.0842 FAU .07813 RRT .9102 RRF -.9829 RTF -.9352  
 FDE .9116 FRA 1.6442 FC3-7.3277 BSP 6864 SGB 2095.5 R23 -.1955 R13 -.9535  
 BDE .4607 BRA .7728 BC3 1.8796 FSP -1505 SGI 2066.2 SG2 349.5 THA 24.97

MID-COURSE EXECUTION ACCURACY  
 ST 836.2 SR 516.5 SS 854.2  
 CRT .9529 CRS .9637 CST .9986  
 LSA 1294.7 MSA 137.5 SSA 20.9  
 EL1 973.5 EL2 134.6 ALF 31.14

ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 6 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 335.444

RL 147.10 LAL -.00 LOL 105.50 VL 27.420 GAL 1.39 AZL 89.53 HCA 146.48 SMA 126.08 ECC .16841 INC .4735 V1 30.287  
 RP 108.58 LAP .26 LOP 251.98 VP 37.307 GAP -5.53 AZP 90.39 TAL 173.09 TAP 319.57 RCA 104.85 APO 147.31 V2 34.900  
 RC 83.000 GL 4.40 GP 23.84 ZAL 77.50 ZAP 37.54 ETS 327.91 ZAE 145.50 ETE 34.75 ZAC 123.07 ETC 145.55 CLP -29.90

PLANETOCENTRIC CONIC

C3 8.738 VHL 2.956 DLA 14.88 RAL 24.41 RAD 6567.3 VEL 11.407 PTH 1.97 VHP 4.791 DPA 35.73 RAP 30.25 ECC 1.1438  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 59 23 2517.16 -25.58 61.59 237.51 102.59 4 41 20 1917.2 -23.59 55.48  
 90.00 19 53 10 4198.21 -.02 171.88 233.93 61.68 21 3 8 3598.2 -3.80 165.25  
 100.00 5 28 46 2228.90 -26.55 40.13 237.26 104.26 6 5 55 1628.9 -24.33 32.03  
 100.00 21 6 28 3961.69 .86 154.01 233.44 60.12 22 12 29 3361.7 -3.12 147.48  
 110.00 6 54 58 1959.20 -29.10 18.79 236.40 108.79 7 27 37 1359.2 -26.25 10.76  
 110.00 21 56 45 3804.16 3.11 140.65 232.03 55.94 23 0 9 3204.2 -1.38 134.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3356 TRA -.7193 TC3 1.6002 BAU .2465 SGT 1843.7 SGR 1086.6 SG3 540.0 ST 781.8 SR 520.1 SS 802.4  
 RDE -.2555 RRA -.2607 RC3 1.3764 FAU .08353 RRT .9215 RRF -.9764 RTF -.9357 CRT .9610 CRS .9624 CST .9992  
 FDE .8336 FRA 1.7631 FC3-8.2778 B9P 7011 SGB 2140.1 R23 -.2003 R13 -.9601 LSA 1228.1 MSA 129.7 SSA 22.2  
 BDE .4217 BRA .7651 BC3 2.1107 F9P -1843 SGI 2108.0 SG2 369.0 THA 29.50 EL1 931.2 EL2 120.8 ALF 33.22

LAUNCH DATE JAN 6 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 341.980

RL 147.10 LAL -.00 LOL 105.50 VL 27.470 GAL 1.29 AZL 89.85 HCA 149.65 SMA 126.41 ECC .16513 INC .1430 V1 30.287  
 RP 108.62 LAP .07 LOP 255.16 VP 37.334 GAP -5.00 AZP 90.13 TAL 173.46 TAP 323.11 RCA 105.54 APO 147.29 V2 34.889  
 RC 85.076 GL 1.39 GP 27.24 ZAL 78.18 ZAP 41.79 ETS 327.93 ZAE 143.94 ETE 40.18 ZAC 121.02 ETC 143.90 CLP -33.00

PLANETOCENTRIC CONIC

C3 8.332 VHL 2.886 DLA 11.82 RAL 24.86 RAD 6567.3 VEL 11.390 PTH 1.97 VHP 4.632 DPA 38.83 RAP 28.50 ECC 1.1371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 27 53 2402.37 -23.64 53.74 236.33 106.06 5 7 56 1802.4 -21.21 45.91  
 90.00 19 28 11 4295.09 3.10 177.29 233.48 61.84 20 39 46 3693.1 -.69 170.66  
 100.00 5 55 14 2120.67 -24.52 32.73 236.04 107.65 6 30 35 1520.7 -21.88 24.93  
 100.00 20 43 31 4052.01 3.91 158.97 233.03 60.34 21 51 3 3452.0 -.07 152.44  
 110.00 7 17 3 1864.67 -26.85 12.36 235.11 112.00 7 48 7 1264.7 -23.62 4.68  
 110.00 21 38 12 3880.78 6.02 144.67 231.72 56.29 22 42 53 3280.8 1.55 138.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2904 TRA -.6984 TC3 1.6223 BAU .2640 SGT 1790.0 SGR 1283.3 SG3 576.8 ST 715.9 SR 512.7 SS 728.9  
 RDE -.2382 RRA -.3225 RC3 1.7284 FAU .08806 RRT .9276 RRF -.9853 RTF -.9347 CRT .9711 CRS .9572 CST .9975  
 FDE .7072 FRA 1.8898 FC3-9.1505 B9P 7163 SGB 2202.5 R23 -.1955 R13 -.9673 LSA 1136.1 MSA 124.5 SSA 23.5  
 BDE .3758 BRA .7675 BC3 2.3705 F9P -1763 SGI 2166.5 SG2 396.1 THA 34.96 EL1 874.9 EL2 100.1 ALF 35.35

LAUNCH DATE JAN 6 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 348.493

RL 147.10 LAL -.00 LOL 105.50 VL 27.514 GAL 1.20 AZL 90.25 HCA 152.83 SMA 126.71 ECC .16224 INC .2506 V1 30.287  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.357 GAP -4.50 AZP 89.78 TAL 173.79 TAP 326.61 RCA 106.15 APO 147.26 V2 34.878  
 RC 87.198 GL -2.44 GP 31.27 ZAL 78.83 ZAP 46.46 ETS 327.97 ZAE 141.84 ETE 46.09 ZAC 118.35 ETC 142.33 CLP -36.30

PLANETOCENTRIC CONIC

C3 8.040 VHL 2.835 DLA 8.02 RAL 25.64 RAD 6567.3 VEL 11.377 PTH 1.96 VHP 4.526 DPA 42.38 RAP 26.00 ECC 1.1323  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 1 42 2271.24 -20.90 45.10 235.62 109.55 5 39 33 1671.2 -18.05 37.59  
 90.00 19 0 37 4412.92 6.86 183.91 233.69 62.46 20 14 10 3812.9 3.11 177.23  
 100.00 6 26 54 1996.40 -21.71 24.57 235.30 111.07 7 0 11 1396.4 -18.65 17.11  
 100.00 20 18 8 4162.99 7.62 165.12 235.27 61.01 21 27 29 3563.0 3.69 158.54  
 110.00 7 43 59 1755.20 -23.86 5.26 234.30 115.24 8 13 14 1155.2 -20.26 357.96  
 110.00 21 17 30 3976.96 9.62 149.79 232.06 57.04 22 23 47 3377.0 5.21 143.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2384 TRA -.6702 TC3 1.6043 BAU .2880 SGT 1711.7 SGR 1524.3 SG3 604.6 ST 633.3 SR 484.0 SS 631.4  
 RDE -.2056 RRA -.4009 RC3 2.1464 FAU .09137 RRT .9299 RRF -.9911 RTF -.9329 CRT .9848 CRS .9438 CST .9846  
 FDE .5121 FRA 2.0064 FC3-9.8391 B9P 7468 SGB 2292.1 R23 -.1777 R13 -.9755 LSA 1008.1 MSA 130.7 SSA 23.3  
 BDE .3148 BRA .7809 BC3 2.6798 F9P -1867 SGI 2252.1 SG2 426.1 THA 41.44 EL1 794.2 EL2 67.1 ALF 37.27

LAUNCH DATE JAN 6 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 354.983

RL 147.10 LAL -.00 LOL 105.50 VL 27.553 GAL 1.12 AZL 90.74 HCA 156.00 SMA 126.97 ECC .15972 INC .7429 V1 30.287  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.378 GAP -4.00 AZP 89.32 TAL 174.07 TAP 330.07 RCA 106.69 APO 147.25 V2 34.867  
 RC 89.360 GL -7.30 GP 36.01 ZAL 79.49 ZAP 51.57 ETS 328.14 ZAE 138.96 ETE 52.30 ZAC 115.00 ETC 140.98 CLP -39.78

PLANETOCENTRIC CONIC

C3 7.907 VHL 2.812 DLA 3.27 RAL 26.85 RAD 6567.3 VEL 11.371 PTH 1.96 VHP 4.490 DPA 46.43 RAP 22.51 ECC 1.1301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 42 43 2118.41 -17.12 35.48 235.64 112.90 6 18 1 1518.4 -13.88 28.31  
 90.00 18 29 18 4559.58 11.37 192.32 234.85 63.89 19 45 17 3959.6 7.77 185.49  
 100.00 7 5 35 1851.11 -17.88 15.48 235.30 114.36 7 36 26 1251.1 -14.45 8.37  
 100.00 19 49 7 4302.11 12.11 173.01 234.47 62.46 21 0 49 3702.1 8.33 166.26  
 110.00 8 17 20 1826.56 -19.90 357.37 234.24 118.38 8 44 26 1026.6 -15.95 350.47  
 110.00 20 53 51 4099.43 14.07 156.49 233.33 58.52 22 2 11 3499.4 9.80 149.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1882 TRA -.6459 TC3 1.4935 BAU .3162 SGT 1809.5 SGR 1812.7 SG3 615.6 ST 551.5 SR 439.4 SS 545.6  
 RDE -.1515 RRA -.5058 RC3 2.5921 FAU .09171 RRT .9267 RRF -.9946 RTF -.9270 CRT .9985 CRS .9223 CST .9246  
 FDE .2573 FRA 2.1136 FC-10.0414 B9P 7807 SGB 2424.1 R23 -.1531 R13 -.9829 LSA 875.4 MSA 168.0 SSA 19.0  
 BDE .2418 BRA .8204 BC3 2.9916 F9P -1906 SGI 2379.9 SG2 460.8 THA 48.66 EL1 704.9 EL2 19.1 ALF 38.54

LAUNCH DATE JAN 6 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 361.449

RL 147.10 LAL -.00 LOL 105.50 VL 27.587 GAL 1.06 AZL 91.37 HCA 159.16 SMA 127.20 ECC .15753 INC 1.3748 V1 30.287
RP 108.72 LAP -.49 LOP 264.67 VP 37.391 GAP -3.53 AZP 88.71 TAL 174.32 TAP 333.48 RCA 107.16 APO 147.23 V2 34.858
RC 71.560 GL -13.51 GP 41.59 ZAL 80.18 ZAP 57.10 ETS 328.56 ZAE 135.09 ETE 58.54 ZAC 110.93 ETC 139.88 CLP -43.43

PLANETOCENTRIC CONIC

C3 8.030 VHL 2.834 DLA -2.70 RAL 28.62 RAD 6567.3 VEL 11.376 PTH 1.96 VHP 4.553 DPA 51.00 RAP 17.64 ECC 1.1321
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 34 4 1936.10 -11.98 24.57 236.84 115.85 7 6 20 1336.1 -8.41 17.71
90.00 17 52 2 4747.58 16.73 203.53 237.50 66.82 19 11 10 4147.6 13.45 196.39
100.00 7 54 9 1677.77 -12.73 5.19 236.46 117.28 8 22 7 1077.8 -8.97 358.41
100.00 19 14 38 4481.15 17.49 183.58 237.15 65.36 20 29 19 3881.2 14.02 176.51
110.00 8 59 30 1473.17 -14.70 348.53 235.32 121.21 9 24 3 873.2 -10.46 341.99
110.00 20 25 46 4258.51 19.51 165.61 236.08 61.36 21 36 45 3658.5 15.54 158.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1384 TRA -.6166 TC3 1.3041 BAU .3528 SGT 1477.3 SGR 2152.5 SCS 602.8 ST 468.0 SR 411.3 SS 525.9
RDE -.0582 RRA -.6434 RC3 3.0168 FAU .08854 RRT .9189 RRF -.9968 RTF -.9176 CRT .9371 CRS .9258 CST .7379
FDE -.0643 FRA 2.1750 FC3-9.5463 BSP .8362 SGB 2610.7 R23 -.1213 R13 -.9894 LSA 774.7 MSA 253.9 SSA 12.6
BDE .1502 BRA .8912 BC3 3.2866 FSP -1879 SGI 2964.4 SGI 489.1 THA 56.38 EL1 613.3 EL2 109.5 ALF 41.06

LAUNCH DATE JAN 6 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 367.889

RL 147.10 LAL -.00 LOL 105.50 VL 27.617 GAL 1.01 AZL 92.22 HCA 162.32 SMA 127.39 ECC .15565 INC 2.2205 V1 30.287
RP 108.74 LAP -.67 LOP 267.84 VP 37.404 GAP -3.07 AZP 87.88 TAL 174.51 TAP 336.83 RCA 107.56 APO 147.22 V2 34.848
RC 73.792 GL -21.37 GP 48.06 ZAL 80.99 ZAP 62.98 ETS 329.38 ZAE 130.03 ETE 64.51 ZAC 106.12 ETC 139.19 CLP -47.17

PLANETOCENTRIC CONIC

C3 8.623 VHL 2.937 DLA -10.18 RAL 31.11 RAD 6567.3 VEL 11.402 PTH 1.97 VHP 4.763 DPA 56.03 RAP 10.74 ECC 1.1419
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 41 34 1712.01 -5.05 11.75 240.01 117.90 8 10 6 1112.0 -1.28 5.10
90.00 17 4 22 4998.40 22.70 219.49 242.57 72.60 18 27 40 4398.4 20.10 211.78
100.00 8 57 52 1465.85 -5.85 353.21 239.57 119.37 9 22 18 865.8 -1.90 346.66
100.00 18 30 45 4719.80 23.58 198.89 242.26 71.09 19 49 25 4119.8 20.76 191.02
110.00 9 54 40 1287.99 -7.95 338.44 238.29 123.36 10 16 8 688.0 -3.50 332.16
110.00 19 50 27 4470.42 25.85 178.79 241.29 66.81 21 4 57 3870.4 22.48 171.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0983 TRA -.5817 TC3 1.0177 BAU .3955 SGT 1312.9 SGR 2537.1 SCS 557.4 ST 396.0 SR 528.9 SS 629.8
RDE .0936 RRA -.8289 RC3 3.2767 FAU .08045 RRT .9038 RRF -.9981 RTF -.9012 CRT .6519 CRS .9786 CST .4827
FDE -.4166 FRA 2.1675 FC3-8.0767 BSP 9132 SGB 2856.7 R23 -.0890 R13 -.9941 LSA 852.3 MSA 326.8 SSA 7.5
BDE .1358 BRA 1.0127 BC3 3.4311 FSP -1753 SGI 2811.2 SGI 507.5 THA 64.03 EL1 606.6 EL2 261.8 ALF 57.12

LAUNCH DATE JAN 6 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 374.302

RL 147.10 LAL -.00 LOL 105.50 VL 27.641 GAL .97 AZL 93.42 HCA 165.48 SMA 127.56 ECC .15407 INC 3.4200 V1 30.287
RP 108.77 LAP -.86 LOP 271.01 VP 37.414 GAP -2.62 AZP 86.69 TAL 174.64 TAP 340.12 RCA 107.91 APO 147.21 V2 34.839
RC 76.053 GL -31.08 GP 55.49 ZAL 82.03 ZAP 69.04 ETS 330.74 ZAE 123.65 ETE 69.96 ZAC 100.62 ETC 139.02 CLP -50.85

PLANETOCENTRIC CONIC

C3 10.200 VHL 3.194 DLA -19.31 RAL 34.55 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.210 DPA 61.33 RAP .66 ECC 1.1679
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 19 28 1416.84 4.44 355.25 246.82 118.00 9 43 5 816.8 8.15 348.54
90.00 15 53 56 5359.10 27.75 244.60 251.53 84.12 17 23 15 4759.1 26.65 236.11
100.00 10 28 49 1193.05 3.36 338.21 246.23 119.72 10 48 42 593.1 7.30 331.63
100.00 17 27 16 5058.12 28.97 222.30 251.36 82.28 18 51 34 4458.1 27.60 213.76
110.00 11 11 9 1060.41 .70 326.49 244.57 124.18 11 28 49 460.4 5.18 320.27
110.00 19 1 25 4763.53 32.06 199.28 250.72 77.44 20 20 49 4163.5 30.00 190.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0811 TRA -.5402 TC3 .6489 BAU .4389 SGT 1117.0 SGR 2949.1 SCS 475.7 ST 341.0 SR 864.6 SS 801.0
RDE .3337 RRA -1.0887 RC3 3.1529 FAU .06673 RRT .8721 RRF -.9989 RTF -.8690 CRT .3558 CRS .9970 CST .2827
FDE -.7401 FRA 2.0688 FC3-5.6645 BSP 10008 SGB 3153.5 R23 -.0609 R13 -.9970 LSA 1183.3 MSA 324.5 SSA 4.5
BDE .3434 BRA 1.2153 BC3 3.2190 FSP -1502 SGI 3110.6 SGI 518.1 THA 71.18 EL1 874.3 EL2 315.1 ALF 80.81

LAUNCH DATE JAN 6 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 380.682

RL 147.10 LAL -.00 LOL 105.50 VL 27.682 GAL .95 AZL 95.27 HCA 168.62 SMA 127.70 ECC .15277 INC 5.2652 V1 30.287
RP 108.80 LAP -1.04 LOP 274.17 VP 37.422 GAP -2.19 AZP 84.84 TAL 174.71 TAP 343.33 RCA 108.19 APO 147.21 V2 34.831
RC 78.340 GL -42.40 GP 63.91 ZAL 83.40 ZAP 75.01 ETS 332.67 ZAE 115.91 ETE 74.63 ZAC 94.58 ETC 139.42 CLP -53.99

PLANETOCENTRIC CONIC

C3 14.168 VHL 3.764 DLA -29.81 RAL 39.23 RAD 6567.6 VEL 11.643 PTH 2.04 VHP 6.079 DPA 66.41 RAP 345.32 ECC 1.2332
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.29 11 36 8 1068.85 22.54 338.40 262.77 110.03 11 53 56 468.9 25.07 330.52
99.71 14 14 35 5845.60 22.55 278.72 262.77 110.02 15 52 1 5245.6 25.08 270.84
100.00 13 57 31 612.11 21.12 304.28 262.19 111.66 14 7 43 12.1 23.88 296.57
100.00 14 35 53 5777.57 23.99 274.21 263.32 108.39 16 12 11 5177.6 26.28 266.16
110.00 13 15 19 745.37 12.52 309.76 257.64 122.07 13 27 44 145.4 16.67 303.10
110.00 17 34 35 5217.08 33.37 234.25 265.81 97.86 19 1 32 4617.1 34.10 225.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1037 TRA -.4824 TC3 .3032 BAU .4760 SGT 890.7 SGR 3361.5 SCS 364.2 ST 299.1 SR 1327.8 SS 923.2
RDE .7091 RRA -1.4654 RC3 2.4948 FAU .04873 RRT .8129 RRF -.9993 RTF -.8093 CRT .0649 CRS .9995 CST .0346
FDE -.9586 FRA 1.8571 FC3-2.9775 BSP 11051 SGB 3477.5 R23 -.0376 R13 -.9986 LSA 1617.1 MSA 299.5 SSA 2.7
BDE .7166 BRA 1.5427 BC3 2.5130 FSP -1163 SGI 3440.4 SGI 506.8 THA 77.57 EL1 1327.9 EL2 298.4 ALF 89.12

LAUNCH DATE JAN 6 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 387.018

RL 147.10 LAL -.00 LOL 105.50 VL 27.679 GAL .95 AZL 98.49 HCA 171.74 SMA 127.82 ECC .15173 INC 8.4874 V1 30.287  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.427 GAP -1.78 AZP 81.80 TAL 174.70 TAP 346.44 RCA 108.42 APO 147.21 V2 34.824  
 RC 80.851 GL -54.19 GP 73.40 ZAL 85.10 ZAP 80.51 ETS 334.70 ZAE 106.67 ETE 77.98 ZAC 88.16 ETC 140.01 CLP -54.73

PLANETOCENTRIC CONIC

C3 25.368 VHL 5.037 DLA -40.52 RAL 45.28 RAD 6568.0 VEL 12.114 PTH 2.17 VMP 7.830 DPA 70.18 RAP 321.40 ECC 1.4175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.71 9 56 17 1583.52 25.32 20.17 281.66 122.77 10 22 41 983.5 29.44 12.86  
 120.29 16 42 42 5604.66 25.33 261.49 281.67 122.76 18 16 7 5004.7 29.45 254.19  
 59.71 9 56 17 1583.52 25.32 20.17 281.66 122.77 10 22 41 983.5 29.44 12.86  
 120.29 16 42 42 5604.66 25.33 261.49 281.67 122.76 18 16 7 5004.7 29.45 254.19  
 59.71 9 56 17 1583.52 25.32 20.17 281.66 122.77 10 22 41 983.5 29.44 12.86  
 120.29 16 42 42 5604.66 25.33 261.49 281.67 122.76 18 16 7 5004.7 29.45 254.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1956 TRA -.4099 TC3 .0835 BAU .4781 9GT 657.9 3GR 3728.4 3G3 240.8 ST 288.8 SR 1744.4 SS 903.5  
 RDE 1.2936 RRA-2.0839 RC3 1.4072 FAU .02865 RRT .6950 RRF -.9995 RTF -.6928 CRT -.3081 CRS .9999 CST -.3183  
 FDE -.9971 FRA 1.5686 FC3 -.9779 BSP 12186 9GB 3786.0 R23 -.0181 R13 -.9994 LSA 1966.5 MSA 274.4 SSA 1.7  
 BDE 1.3083 BRA 2.1238 BC3 1.4097 FSP -786 9C1 3756.8 3G2 469.5 THA 82.90 EL1 1746.7 EL2 274.3 ALF 92.99

LAUNCH DATE JAN 6 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 393.268

RL 147.10 LAL -.00 LOL 105.50 VL 27.692 GAL .96 AZL 105.52 HCA 174.81 SMA 127.91 ECC .15096 INC15.5238 V1 30.287  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.431 GAP -1.39 AZP 74.54 TAL 174.56 TAP 349.37 RCA 108.60 APO 147.21 V2 34.816  
 RC 82.981 GL -63.87 GP 84.15 ZAL 86.95 ZAP 85.07 ETS 330.87 ZAE 95.08 ETE 73.99 ZAC 81.36 ETC 135.04 CLP -32.58

PLANETOCENTRIC CONIC

C3 68.134 VHL 8.254 DLA -49.18 RAL 51.48 RAD 6589.3 VEL 13.765 PTH 2.51 VMP 11.974 DPA 70.45 RAP 286.57 ECC 2.1213  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.95 9 35 49 1947.99 18.23 47.05 304.94 136.51 10 8 17 1348.0 23.93 41.46  
 132.05 17 52 40 5732.04 18.24 266.70 304.95 136.51 19 28 12 5132.0 23.95 261.11  
 47.95 9 35 49 1947.99 18.23 47.05 304.94 136.51 10 8 17 1348.0 23.93 41.46  
 132.05 17 52 40 5732.04 18.24 266.70 304.95 136.51 19 28 12 5132.0 23.95 261.11  
 47.95 9 35 49 1947.99 18.23 47.05 304.94 136.51 10 8 17 1348.0 23.93 41.46  
 132.05 17 52 40 5732.04 18.24 266.70 304.95 136.51 19 28 12 5132.0 23.95 261.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1262 TRA -.5181 TC3 .0426 BAU .3312 9GT 559.4 3GR 3977.4 3G3 133.0 ST 186.3 SR 1981.1 SS 784.3  
 RDE 2.4035 RRA-3.3555 RC3 .3611 FAU .00930 RRT .8303 RRF -.9996 RTF -.8381 CRT .0801 CRS .9998 CST .0979  
 FDE -.9090 FRA 1.3190 FC3 -.1191 BSP 13411 9GB 4016.5 R23 .0056 R13 -.9997 LSA 2150.7 MSA 186.1 SSA 1.0  
 BDE 2.4068 BRA 3.3930 BC3 .3636 FSP -459 9C1 4004.6 3G2 309.7 THA 83.30 EL1 1981.2 EL2 185.7 ALF 89.56

LAUNCH DATE JAN 6 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 399.188

RL 147.10 LAL -.00 LOL 105.50 VL 27.702 GAL 1.06 AZL 130.25 HCA 177.59 SMA 127.97 ECC .15053 INC40.2443 V1 30.287  
 RP 108.86 LAP -1.56 LOP 283.86 VP 37.432 GAP -1.10 AZP 49.78 TAL 174.02 TAP 351.61 RCA 108.71 APO 147.24 V2 34.810  
 RC 85.328 GL -82.90 GP 73.51 ZAL 88.62 ZAP 88.23 ETS 180.71 ZAE 75.00 ETE 283.69 ZAC 72.95 ETC 347.24 CLP 83.76

PLANETOCENTRIC CONIC

C3 404.084 VHL 20.102 DLA -49.38 RAL 48.43 RAD 6572.1 VEL 22.921 PTH 3.27 VMP 26.737 DPA 60.75 RAP 242.47 ECC 7.6502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.69 9 22 46 2252.87 2.88 60.05 315.93 139.32 10 0 19 1652.9 8.93 55.19  
 132.31 17 41 21 744.75 2.90 301.38 315.95 139.32 17 53 45 144.7 8.95 296.53  
 47.69 9 22 46 2252.87 2.88 60.05 315.93 139.32 10 0 19 1652.9 8.93 55.19  
 132.31 17 41 21 744.75 2.90 301.38 315.95 139.32 17 53 45 144.7 8.95 296.53  
 47.69 9 22 46 2252.87 2.88 60.05 315.93 139.32 10 0 19 1652.9 8.93 55.19  
 132.31 17 41 21 744.75 2.90 301.38 315.95 139.32 17 53 45 144.7 8.95 296.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.0537 TRA-1.4838 TC3 -.0785 BAU 1.1843 9GT 1362.6 3GR 3789.9 3G3 72.5 ST 1171.8 SR 1746.5 SS 959.4  
 RDE-4.9586 RRA 7.8084 RC3 .2047 FAU-.02211 RRT -.7966 RRF .9986 RTF -.8269 CRT -.8958 CRS -.9978 CST .9230  
 FDE-1.2328 FRA 1.6890 FC3 .0474 BSP 11436 9GB 4027.4 R23 -.0080 R13 1.0000 LSA 2268.0 MSA 446.8 SSA .4  
 BDE 6.4047 BRA 7.9481 BC3 .2192 FSP -212 9C1 3949.1 3G2 790.4 THA 106.67 EL1 2056.1 EL2 442.5 ALF 122.71

LAUNCH DATE JAN 6 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 407.091

RL 147.10 LAL -.00 LOL 105.50 VL 27.709 GAL .78 AZL 37.54 HCA 182.17 SMA 128.02 ECC .14960 INC52.4622 V1 30.287  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.432 GAP -.29 AZP 142.44 TAL 175.58 TAP 357.75 RCA 108.87 APO 147.17 V2 34.804  
 RC 87.691 GL 58.80 GP -69.74 ZAL 89.22 ZAP 89.45 ETS 174.37 ZAE 69.79 ETE 72.96 ZAC 98.68 ETC 19.26 CLP 88.42

PLANETOCENTRIC CONIC

C3 862.928 VHL 25.740 DLA 57.53 RAL 338.14 RAD 8572.6 VEL 27.997 PTH 3.41 VMP 30.346 DPA -60.92 RAP 142.85 ECC11.9035  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.58 16 10 45 5001.74 -.95 237.90 247.55 32.48 17 34 7 4401.7 -7.69 234.00  
 142.42 1 32 38 3362.99 -.94 104.86 247.53 32.48 2 28 41 2763.0 -7.68 100.95  
 37.58 16 10 45 5001.74 -.95 237.90 247.55 32.48 17 34 7 4401.7 -7.69 234.00  
 142.42 1 32 38 3362.99 -.94 104.86 247.53 32.48 2 28 41 2763.0 -7.68 100.95  
 37.58 16 10 45 5001.74 -.95 237.90 247.55 32.48 17 34 7 4401.7 -7.69 234.00  
 142.42 1 32 38 3362.99 -.94 104.86 247.53 32.48 2 28 41 2763.0 -7.68 100.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-4.5151 TRA 8.4203 TC3 -.1149 BAU 2.3377 9GT 1538.5 3GR 3751.2 3G3 69.3 ST 1049.3 SR 3459.9 SS 1904.2  
 RD-15.4043 RRA 2.1804 RC3 -.2376 FAU-.03913 RRT .8797 RRF -.9992 RTF -.8983 CRT .9778 CRS .9999 CST .9804  
 FDE 3.2484 FRA -.5418 FC3 .0511 BSP 12472 9GB 4054.4 R23 -.0234 R13 -.9997 LSA 4063.8 MSA 211.8 SSA .6  
 BDE16.0524 BRA 3.2576 BC3 .2639 FSP -223 9C1 3995.8 3G2 686.8 THA 69.55 EL1 3590.1 EL2 211.7 ALF 73.34



LAUNCH DATE JAN 6 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 105.50 VL 27.713 GAL .91 AZL 67.23 HCA 184.86 SMA 128.05 ECC .14958 INC22.7670 V1 30.287
RP 108.90 LAP -1.88 LOP 289.99 VP 37.430 GAP -.04 AZP 112.69 TAL 174.82 TAP 359.68 RCA 108.90 APO 147.20 V2 34.799
RC 90.065 GL 66.09 GP -88.11 ZAL 87.98 ZAP 89.49 ETS 112.92 ZAE 91.65 ETE 13.93 ZAC 105.44 ETC 317.19 CLP -74.35

DISTANCE 412.868

PLANETOCENTRIC CONIC

C3 137.594 VHL 11.730 DLA 63.53 RAL 328.40 RAD 6570.5 VEL 16.091 PTH 2.83 VHP 12.726 DPA -64.60 RAP 94.12 ECC 3.2645
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.42 15 14 0 4843.03 -12.63 237.25 232.01 27.18 16 34 43 4243.0 -19.72 233.79
149.58 1 11 42 3139.23 -12.63 95.50 231.99 27.18 2 4 1 2539.2 -19.71 92.05
30.42 15 14 0 4843.03 -12.63 237.25 232.01 27.18 16 34 43 4243.0 -19.72 233.79
149.58 1 11 42 3139.23 -12.63 95.50 231.99 27.18 2 4 1 2539.2 -19.71 92.05
30.42 15 14 0 4843.03 -12.63 237.25 232.01 27.18 16 34 43 4243.0 -19.72 233.79
149.58 1 11 42 3139.23 -12.63 95.50 231.99 27.18 2 4 1 2539.2 -19.71 92.05

DIFFERENTIAL CORRECTIONS

TDE -3.6005 TRA 1.8981 TC3 -.0016 BAU .0223
RDE -6.9251 RRA -.5000 RC3 -.0120 FAU .00185
FDE 2.6898 FRA -.6344 FC3 -.0116 BSP 13684
BDE 7.8052 BRA 1.9629 BC3 .0121 FSP -418

MID-COURSE EXECUTION ACCURACY

SGT 2723.8 SGR 3426.8 SG3 127.7
RRF .5153 RRF -.7956 RTF -.9288
SGB 4377.4 R23 .3100 R13 -.9505
SG1 3854.1 SGT 2075.6 THA 57.10

ORBIT DETERMINATION ACCURACY

ST 1866.1 SR 3366.6 SS 1452.1
CRT .9251 CRS .9786 CST .9834
LSA 4078.9 MSA 649.7 SSA 1.1
EL1 3815.2 EL2 629.0 ALF 62.17

LAUNCH DATE JAN 6 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 105.50 VL 27.713 GAL .98 AZL 75.06 HCA 187.91 SMA 128.06 ECC .14962 INC14.9349 V1 30.287
RP 108.91 LAP -2.03 LOP 293.15 VP 37.427 GAP .30 AZP 104.80 TAL 174.42 TAP 2.33 RCA 108.90 APO 147.22 V2 34.795
RC 92.449 GL 63.63 GP -77.00 ZAL 86.79 ZAP 90.89 ETS 6.47 ZAE 102.70 ETE 268.53 ZAC 109.12 ETC 210.55 CLP -93.96

DISTANCE 419.024

PLANETOCENTRIC CONIC

C3 63.543 VHL 7.971 DLA 62.91 RAL 334.11 RAD 6569.2 VEL 13.598 PTH 2.49 VHP 8.038 DPA -60.20 RAP 71.72 ECC 2.0457
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.15 15 38 30 4672.32 -22.60 231.65 231.83 29.55 16 56 22 4072.3 -29.49 227.54
148.85 1 32 43 2974.30 -22.59 90.74 231.81 29.55 2 22 17 2374.3 -29.48 86.64
31.15 15 38 30 4672.32 -22.60 231.65 231.83 29.55 16 56 22 4072.3 -29.49 227.54
148.85 1 32 43 2974.30 -22.59 90.74 231.81 29.55 2 22 17 2374.3 -29.48 86.64
31.15 15 38 30 4672.32 -22.60 231.65 231.83 29.55 16 56 22 4072.3 -29.49 227.54
148.85 1 32 43 2974.30 -22.59 90.74 231.81 29.55 2 22 17 2374.3 -29.48 86.64

DIFFERENTIAL CORRECTIONS

TDE 1.9229 TRA -.4733 TC3 -.1121 BAU .3529
RDE 5.1528 RRA -1.0375 RC3 -.4000 FAU .02243
FDE 3.4191 FRA -.8290 FC3 -.3056 BSP 13771
BDE 5.4999 BRA 1.1403 BC3 .4154 FSP -773

MID-COURSE EXECUTION ACCURACY

SGT 1581.2 SGR 4099.4 SG3 232.8
RRF .9980 RRF .9992 RTF .9916
SGB 4393.8 R23 .0517 R13 .9986
SG1 4391.9 SGT 131.8 THA 68.96

ORBIT DETERMINATION ACCURACY

ST 1400.2 SR 3736.2 SS 1719.3
CRT .9996 CRS -.9999 CST -.9992
LSA 4344.3 MSA 44.6 SSA .5
EL1 3989.7 EL2 37.9 ALF 69.46

LAUNCH DATE JAN 6 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 105.50 VL 27.714 GAL 1.05 AZL 78.53 HCA 191.02 SMA 128.05 ECC .14982 INC11.4728 V1 30.287
RP 108.92 LAP -2.18 LOP 296.31 VP 37.423 GAP .66 AZP 101.27 TAL 174.04 TAP 5.07 RCA 108.87 APO 147.24 V2 34.791
RC 94.840 GL 60.11 GP -68.39 ZAL 85.68 ZAP 93.50 ETS 356.46 ZAE 110.92 ETE 258.53 ZAC 111.03 ETC 200.16 CLP -99.54

DISTANCE 425.232

PLANETOCENTRIC CONIC

C3 40.414 VHL 6.357 DLA 61.24 RAL 340.90 RAD 6568.6 VEL 12.719 PTH 2.31 VHP 6.063 DPA -55.20 RAP 58.46 ECC 1.6651
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.13 16 10 21 4551.72 -28.70 225.76 233.42 33.26 17 26 13 3951.7 -35.29 220.81
146.87 1 55 0 2870.25 -28.69 87.19 233.40 33.26 2 42 50 2270.2 -35.27 82.24
33.13 16 10 21 4551.72 -28.70 225.76 233.42 33.26 17 26 13 3951.7 -35.29 220.81
146.87 1 55 0 2870.25 -28.69 87.19 233.40 33.26 2 42 50 2270.2 -35.27 82.24
33.13 16 10 21 4551.72 -28.70 225.76 233.42 33.26 17 26 13 3951.7 -35.29 220.81
146.87 1 55 0 2870.25 -28.69 87.19 233.40 33.26 2 42 50 2270.2 -35.27 82.24

DIFFERENTIAL CORRECTIONS

TDE 2.0379 TRA -.4951 TC3 -.3765 BAU .4587
RDE 3.9314 RRA -.5313 RC3 -.7610 FAU .04397
FDE 4.3463 FRA -.5406 FC3 -.9418 BSP 13599
BDE 4.4282 BRA .7262 BC3 .8490 FSP -1220

MID-COURSE EXECUTION ACCURACY

SGT 2112.5 SGR 3805.5 SG3 364.6
RRF .9820 RRF .9993 RTF .9768
SGB 4352.5 R23 .0680 R13 .9973
SG1 4338.4 SGT 350.5 THA 61.20

ORBIT DETERMINATION ACCURACY

ST 1857.7 SR 3555.9 SS 2058.2
CRT .9978 CRS -1.0000 CST -.9973
LSA 4507.6 MSA 115.6 SSA 1.7
EL1 4010.5 EL2 109.1 ALF 62.45

LAUNCH DATE JAN 6 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 105.50 VL 27.710 GAL 1.12 AZL 80.47 HCA 194.16 SMA 128.05 ECC .15019 INC 9.5258 V1 30.287
RP 108.93 LAP -2.32 LOP 299.47 VP 37.417 GAP 1.02 AZP 99.24 TAL 173.64 TAP 7.79 RCA 108.80 APO 147.26 V2 34.788
RC 97.236 GL 56.73 GP -61.00 ZAL 84.61 ZAP 97.02 ETS 350.86 ZAE 117.54 ETE 251.75 ZAC 111.84 ETC 193.88 CLP -104.60

DISTANCE 431.444

PLANETOCENTRIC CONIC

C3 30.075 VHL 5.484 DLA 59.38 RAL 346.72 RAD 6568.2 VEL 12.306 PTH 2.22 VHP 5.037 DPA -50.31 RAP 49.18 ECC 1.4950
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.36 16 39 11 4467.00 -32.22 220.28 234.83 37.02 17 53 38 3867.0 -38.47 214.56
144.64 2 12 38 2805.92 -32.21 84.44 234.81 37.02 2 59 24 2205.9 -38.45 78.71
35.36 16 39 11 4467.00 -32.22 220.28 234.83 37.02 17 53 38 3867.0 -38.47 214.56
144.64 2 12 38 2805.92 -32.21 84.44 234.81 37.02 2 59 24 2205.9 -38.45 78.71
35.36 16 39 11 4467.00 -32.22 220.28 234.83 37.02 17 53 38 3867.0 -38.47 214.56
144.64 2 12 38 2805.92 -32.21 84.44 234.81 37.02 2 59 24 2205.9 -38.45 78.71

DIFFERENTIAL CORRECTIONS

TDE 2.1197 TRA -.4240 TC3 -.7043 BAU .5024
RDE 3.1271 RRA -.2496 RC3 -1.0320 FAU .06563
FDE 5.1386 FRA -.3595 FC3 -1.8893 BSP 13384
BDE 3.7778 BRA .4920 BC3 1.2494 FSP -1692

MID-COURSE EXECUTION ACCURACY

SGT 2501.5 SGR 3495.3 SG3 501.3
RRF .9784 RRF .9992 RTF .9737
SGB 4298.2 R23 .0890 R13 .9954
SG1 4277.4 SGT 422.3 THA 54.60

ORBIT DETERMINATION ACCURACY

ST 2250.1 SR 3270.9 SS 2338.5
CRT .9975 CRS -1.0000 CST -.9971
LSA 4595.7 MSA 141.3 SSA 2.3
EL1 3956.7 EL2 129.5 ALF 55.74

LAUNCH DATE JAN 6 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 437.649

RL 147.10 LAL -.00 LOL 105.50 VL 27.705 GAL 1.21 AZL 81.73 HCA 197.30 SMA 127.99 ECC .15072 INC 8.2743 V1 30.287  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.411 GAP 1.37 AZP 97.90 TAL 173.18 TAP 10.48 RCA 108.70 APO 147.28 V2 34.786  
 RC 99.636 GL 33.66 GP -54.47 ZAL 83.55 ZAP 101.12 ETS 346.87 ZAE 122.86 ETE 245.39 ZAC 111.91 ETC 189.02 CLP-109.39

PLANETOCENTRIC CONIC

C3 24.478 VHL 4.947 DLA 57.58 RAL 351.57 RAD 6568.0 VEL 12.077 PTH 2.16 VHP 4.450 DPA -45.71 RAP 42.15 ECC 1.4028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.52 17 4 9 4404.96 -34.22 215.45 235.99 40.42 18 17 34 3805.0 -40.13 209.09  
 142.48 2 26 20 2765.60 -34.21 82.33 235.97 40.41 3 12 26 2165.6 -40.12 75.98  
 37.52 17 4 9 4404.96 -34.22 215.45 235.99 40.42 18 17 34 3805.0 -40.13 209.09  
 142.48 2 26 20 2765.60 -34.21 82.33 235.97 40.41 3 12 26 2165.6 -40.12 75.98  
 37.52 17 4 9 4404.96 -34.22 215.45 235.99 40.42 18 17 34 3805.0 -40.13 209.09  
 142.48 2 26 20 2765.60 -34.21 82.33 235.97 40.41 3 12 26 2165.6 -40.12 75.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1896 TRA -.3376 TC3-1.0709 BAU .5242 SGT 2843.5 SGR 3169.1 SG3 624.9 ST 2545.5 SR 2938.0 SS 2534.9  
 RDE 2.5384 RRA -.0737 RC3-1.1914 FAU .08478 RRT .9781 RRF .9990 RTF .9735 CRT .9976 CRS -1.0000 CST -.9971  
 FDE 5.6920 FRA -.1021 FC3-2.9988 B8P 13134 SGB 4257.8 R23 .1100 R13 .9930 LSA 4638.2 MSA 154.7 SSA 2.8  
 BDE 3.3508 BRA .3457 BC3 1.6019 F8P -2112 SG1 4234.7 SG2 442.9 THA 48.17 EL1 3885.0 EL2 134.3 ALF 49.10

LAUNCH DATE JAN 6 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 443.841

RL 147.10 LAL -.00 LOL 105.50 VL 27.697 GAL 1.30 AZL 82.60 HCA 200.45 SMA 127.94 ECC .15141 INC 7.3984 V1 30.287  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.404 GAP 1.72 AZP 96.94 TAL 172.68 TAP 13.13 RCA 108.57 APO 147.31 V2 34.784  
 RC 102.038 GL 30.96 GP -48.68 ZAL 82.47 ZAP 105.53 ETS 343.93 ZAE 126.99 ETE 239.03 ZAC 111.50 ETC 185.12 CLP-113.93

PLANETOCENTRIC CONIC

C3 21.071 VHL 4.590 DLA 55.93 RAL 355.69 RAD 6567.9 VEL 11.935 PTH 2.12 VHP 4.103 DPA -41.43 RAP 36.62 ECC 1.3468  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.52 17 26 0 4357.61 -35.32 211.26 237.08 43.35 18 38 38 3757.6 -40.92 204.41  
 140.48 2 37 21 2740.15 -35.30 80.77 237.06 43.35 3 23 1 2140.1 -40.91 73.92  
 39.52 17 26 0 4357.61 -35.32 211.26 237.08 43.35 18 38 38 3757.6 -40.92 204.41  
 140.48 2 37 21 2740.15 -35.30 80.77 237.06 43.35 3 23 1 2140.1 -40.91 73.92  
 39.52 17 26 0 4357.61 -35.32 211.26 237.08 43.35 18 38 38 3757.6 -40.92 204.41  
 140.48 2 37 21 2740.15 -35.30 80.77 237.06 43.35 3 23 1 2140.1 -40.91 73.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2478 TRA -.2481 TC3-1.4579 BAU .5426 SGT 3157.1 SGR 2841.3 SG3 723.9 ST 2810.6 SR 2594.8 SS 2646.4  
 RDE 2.0786 RRA .0351 RC3-1.2586 FAU .10035 RRT .9790 RRF .9985 RTF .9744 CRT .9977 CRS -1.0000 CST -.9971  
 FDE 5.9794 FRA .1863 FC3-4.1229 B8P 13065 SGB 4247.4 R23 .1285 R13 .9903 LSA 4648.7 MSA 161.8 SSA 3.5  
 BDE 3.0814 BRA .2505 BC3 1.9260 F8P -2464 SG1 4225.3 SG2 432.8 THA 41.92 EL1 3823.1 EL2 129.8 ALF 42.71

LAUNCH DATE JAN 6 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 450.017

RL 147.10 LAL -.00 LOL 105.50 VL 27.688 GAL 1.41 AZL 83.25 HCA 203.60 SMA 127.88 ECC .15225 INC 6.7478 V1 30.287  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.397 GAP 2.06 AZP 96.19 TAL 172.13 TAP 15.73 RCA 108.41 APO 147.35 V2 34.783  
 RC 104.441 GL 48.53 GP -43.54 ZAL 81.35 ZAP 110.04 ETS 341.76 ZAE 130.03 ETE 232.72 ZAC 110.85 ETC 181.99 CLP-118.21

PLANETOCENTRIC CONIC

C3 18.840 VHL 4.341 DLA 54.45 RAL 359.31 RAD 6567.8 VEL 11.842 PTH 2.10 VHP 3.902 DPA -37.51 RAP 32.21 ECC 1.3101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.33 17 45 31 4320.32 -35.87 207.66 238.21 45.84 18 57 31 3720.3 -41.21 200.45  
 138.67 2 46 43 2724.20 -35.86 79.63 238.20 45.83 3 32 7 2124.2 -41.20 72.42  
 41.33 17 45 31 4320.32 -35.87 207.66 238.21 45.84 18 57 31 3720.3 -41.21 200.45  
 138.67 2 46 43 2724.20 -35.86 79.63 238.20 45.83 3 32 7 2124.2 -41.20 72.42  
 41.33 17 45 31 4320.32 -35.87 207.66 238.21 45.84 18 57 31 3720.3 -41.21 200.45  
 138.67 2 46 43 2724.20 -35.86 79.63 238.20 45.83 3 32 7 2124.2 -41.20 72.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2972 TRA -.1546 TC3-1.8480 BAU .5622 SGT 3448.4 SGR 2526.7 SG3 794.3 ST 3034.5 SR 2270.1 SS 2689.0  
 RDE 1.7187 RRA .1040 RC3-1.2519 FAU .11156 RRT .9801 RRF .9977 RTF .9753 CRT .9978 CRS -.9999 CST -.9971  
 FDE 6.0368 FRA .4834 FC3-5.1261 B8P 13134 SGB 4275.0 R23 .1427 R13 .9876 LSA 4643.7 MSA 165.9 SSA 4.2  
 BDE 2.8690 BRA .1863 BC3 2.2321 F8P -2721 SG1 4255.7 SG2 405.9 THA 36.06 EL1 3787.7 EL2 119.8 ALF 36.78

LAUNCH DATE JAN 6 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 456.177

RL 147.10 LAL -.00 LOL 105.50 VL 27.877 GAL 1.52 AZL 83.78 HCA 206.75 SMA 127.80 ECC .15325 INC 6.2429 V1 30.287  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.388 GAP 2.40 AZP 95.58 TAL 171.53 TAP 18.29 RCA 108.22 APO 147.39 V2 34.783  
 RC 106.844 GL 46.32 GP -39.01 ZAL 80.19 ZAP 114.47 ETS 340.20 ZAE 132.12 ETE 226.60 ZAC 110.12 ETC 179.54 CLP-122.21

PLANETOCENTRIC CONIC

C3 17.307 VHL 4.160 DLA 53.13 RAL 2.59 RAD 6567.7 VEL 11.777 PTH 2.08 VHP 3.796 DPA -33.93 RAP 28.69 ECC 1.2848  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.96 18 3 21 4290.17 -36.09 204.56 239.46 47.94 19 14 52 3690.2 -41.20 197.09  
 137.04 2 55 3 2714.73 -36.08 78.83 239.45 47.93 3 40 18 2114.7 -41.19 71.36  
 42.96 18 3 21 4290.17 -36.09 204.56 239.46 47.94 19 14 52 3690.2 -41.20 197.09  
 137.04 2 55 3 2714.73 -36.08 78.83 239.45 47.93 3 40 18 2114.7 -41.19 71.36  
 42.96 18 3 21 4290.17 -36.09 204.56 239.46 47.94 19 14 52 3690.2 -41.20 197.09  
 137.04 2 55 3 2714.73 -36.08 78.83 239.45 47.93 3 40 18 2114.7 -41.19 71.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3385 TRA -.0578 TC3-2.2275 BAU .5844 SGT 3718.2 SGR 2233.5 SG3 836.1 ST 3221.4 SR 1976.4 SS 2677.4  
 RDE 1.4330 RRA .1460 RC3-1.1904 FAU .11824 RRT .9811 RRF .9965 RTF .9761 CRT .9980 CRS -.9999 CST -.9970  
 FDE 5.9139 FRA .7651 FC3-5.9148 B8P 13338 SGB 4337.4 R23 .1508 R13 .9851 LSA 4628.6 MSA 168.3 SSA 4.9  
 BDE 2.7428 BRA .1570 BC3 2.2528 F8P -2881 SG1 4321.5 SG2 371.9 THA 30.76 EL1 3777.8 EL2 106.6 ALF 31.51

LAUNCH DATE JAN 6 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUN 21 1969

MELIOCENTRIC CONIC DISTANCE 462.320  
 RL 147.10 LAL -.00 LOL 103.50 VL 27.664 GAL 1.65 AZL 84.16 HCA 209.91 SMA 127.72 ECC .15441 INC 5.6375 V1 30.267  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.380 GAP 2.74 AZP 95.06 TAL 170.88 TAP 20.79 RCA 108.00 APO 147.44 V2 34.784  
 RC 109.246 GL 44.29 GP -35.02 ZAL 78.96 ZAP 118.75 ETS 339.09 ZAE 133.41 ETE 220.86 ZAC 109.45 ETC 177.63 CLP-125.94

PLANETOCENTRIC CONIC  
 C3 16.222 VHL 4.028 DLA 51.95 RAL 5.64 RAD 6567.7 VEL 11.731 PTH 2.07 VHP 3.757 DPA -30.67 RAP 25.91 ECC 1.2670  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.44 18 20 0 4265.35 -36.09 201.89 240.86 49.71 19 31 5 3665.3 -41.00 194.22  
 135.56 3 2 48 2709.82 -36.08 78.30 240.85 49.70 3 47 58 2109.8 -40.99 70.64  
 44.44 18 20 0 4265.35 -36.09 201.89 240.86 49.71 19 31 5 3665.3 -41.00 194.22  
 135.56 3 2 48 2709.82 -36.08 78.30 240.85 49.70 3 47 58 2109.8 -40.99 70.64  
 44.44 18 20 0 4265.35 -36.09 201.89 240.86 49.71 19 31 5 3665.3 -41.00 194.22  
 135.56 3 2 48 2709.82 -36.08 78.30 240.85 49.70 3 47 58 2109.8 -40.99 70.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3757 TRA .0430 TC3-2.5874 BAU .6094 SGT 3969.4 SGR 1969.6 SCS 854.0 ST 3377.4 SR 1720.6 SS 2628.6  
 RDE 1.2065 RRA .1701 RC3-1.0957 FAU .12107 RRT .9816 RRF .9946 RTF .9767 CRT .9982 CRS -.9998 CST -.9969  
 FDE 5.6701 FRA 1.0198 FC3-6.4614 BSP 13648 SGB 4431.1 R23 .1514 R13 .9831 LSA 4609.6 MSA 169.7 SSA 5.7  
 BDE 2.6827 BRA .1755 BC3 2.8098 FSP -2952 SGI 4418.3 SGT 337.6 THA 26.13 EL1 3789.3 EL2 91.6 ALF 26.97

LAUNCH DATE JAN 6 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUN 23 1969

MELIOCENTRIC CONIC DISTANCE 468.446  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.650 GAL 1.80 AZL 84.50 HCA 213.07 SMA 127.62 ECC .15572 INC 5.5030 V1 30.287  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.371 GAP 3.08 AZP 94.62 TAL 170.19 TAP 23.25 RCA 107.75 APO 147.49 V2 34.785  
 RC 111.645 GL 42.41 GP -31.53 ZAL 77.67 ZAP 122.76 ETS 338.33 ZAE 134.06 ETE 215.63 ZAC 108.90 ETC 176.16 CLP-129.41

PLANETOCENTRIC CONIC  
 C3 15.445 VHL 3.930 DLA 50.87 RAL 6.55 RAD 6567.6 VEL 11.697 PTH 2.06 VHP 3.765 DPA -27.72 RAP 23.75 ECC 1.2542  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.79 18 35 47 4244.60 -35.95 199.57 242.41 51.22 19 46 32 3644.6 -40.69 191.76  
 134.21 3 10 13 2708.32 -35.94 78.00 242.40 51.21 3 55 21 2108.3 -40.68 70.20  
 45.79 18 35 47 4244.60 -35.95 199.57 242.41 51.22 19 46 32 3644.6 -40.69 191.76  
 134.21 3 10 13 2708.32 -35.94 78.00 242.40 51.21 3 55 21 2108.3 -40.68 70.20  
 45.79 18 35 47 4244.60 -35.95 199.57 242.41 51.22 19 46 32 3644.6 -40.69 191.76  
 134.21 3 10 13 2708.32 -35.94 78.00 242.40 51.21 3 55 21 2108.3 -40.68 70.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4021 TRA .1483 TC3-2.9206 BAU .6363 SGT 4201.4 SGR 1735.8 SCS 852.4 ST 3504.2 SR 1501.9 SS 2553.0  
 RDE 1.0264 RRA .1825 RC3 -.9822 FAU .12088 RRT .9814 RRF .9919 RTF .9771 CRT .9985 CRS -.9997 CST -.9968  
 FDE 5.3495 FRA 1.2419 FC3-6.7644 BSP 14047 SGB 4545.8 R23 .1441 R13 .9815 LSA 4585.2 MSA 170.8 SSA 6.5  
 BDE 2.6122 BRA .2351 BC3 3.0813 FSP -2953 SGI 4535.3 SGT 308.6 THA 22.18 EL1 3811.8 EL2 76.1 ALF 23.18

LAUNCH DATE JAN 6 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUN 25 1969

MELIOCENTRIC CONIC DISTANCE 474.554  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.635 GAL 1.95 AZL 84.78 HCA 216.22 SMA 127.52 ECC .15719 INC 5.2208 V1 30.287  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.361 GAP 3.41 AZP 94.22 TAL 169.45 TAP 25.67 RCA 107.47 APO 147.56 V2 34.787  
 RC 114.042 GL 40.83 GP -28.49 ZAL 76.31 ZAP 126.54 ETS 337.82 ZAE 134.24 ETE 211.01 ZAC 108.53 ETC 175.05 CLP-132.64

PLANETOCENTRIC CONIC  
 C3 14.894 VHL 3.859 DLA 49.89 RAL 11.37 RAD 6567.6 VEL 11.674 PTH 2.05 VHP 3.810 DPA -25.05 RAP 22.13 ECC 1.2451  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.04 18 50 58 4227.13 -35.71 197.54 244.12 52.50 20 1 25 3627.1 -40.30 189.64  
 132.96 3 17 28 2709.49 -35.70 77.89 244.11 52.49 4 2 38 2109.5 -40.29 69.98  
 47.04 18 50 58 4227.13 -35.71 197.54 244.12 52.50 20 1 25 3627.1 -40.30 189.64  
 132.96 3 17 28 2709.49 -35.70 77.89 244.11 52.49 4 2 38 2109.5 -40.29 69.98  
 47.04 18 50 58 4227.13 -35.71 197.54 244.12 52.50 20 1 25 3627.1 -40.30 189.64  
 132.96 3 17 28 2709.49 -35.70 77.89 244.11 52.49 4 2 38 2109.5 -40.29 69.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4246 TRA .2573 TC3-3.2237 BAU .6645 SGT 4415.9 SGR 1532.3 SCS 836.3 ST 3604.8 SR 1317.9 SS 2460.0  
 RDE .8834 RRA .1863 RC3 -.8630 FAU .11802 RRT .9802 RRF .9878 RTF .9776 CRT .9988 CRS -.9994 CST -.9966  
 FDE 4.9891 FRA 1.4257 FC3-6.8602 BSP 14511 SGB 4674.2 R23 .1289 R13 .9805 LSA 4555.6 MSA 170.7 SSA 7.3  
 BDE 2.5805 BRA .3177 BC3 3.3372 FSP -2904 SGI 4665.4 SGT 286.9 THA 18.86 EL1 3837.6 EL2 60.4 ALF 20.07

LAUNCH DATE JAN 6 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUN 27 1969

MELIOCENTRIC CONIC DISTANCE 480.644  
 RL 147.10 LAL -.00 LOL 105.50 VL 27.618 GAL 2.12 AZL 85.02 HCA 219.38 SMA 127.41 ECC .15881 INC 4.9780 V1 30.287  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.352 GAP 3.75 AZP 93.85 TAL 168.67 TAP 28.05 RCA 107.17 APO 147.64 V2 34.790  
 RC 116.435 GL 38.95 GP -25.83 ZAL 74.89 ZAP 130.05 ETS 337.49 ZAE 134.08 ETE 206.99 ZAC 108.36 ETC 174.21 CLP-135.63

PLANETOCENTRIC CONIC  
 C3 14.518 VHL 3.810 DLA 48.99 RAL 14.12 RAD 6567.6 VEL 11.658 PTH 2.05 VHP 3.882 DPA -22.61 RAP 20.96 ECC 1.2389  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.20 19 5 45 4212.32 -35.39 195.76 245.98 53.61 20 15 57 3612.3 -39.85 187.78  
 131.80 3 24 39 2712.85 -35.38 77.93 245.97 53.60 4 9 52 2112.9 -39.84 69.96  
 48.20 19 5 45 4212.32 -35.39 195.76 245.98 53.61 20 15 57 3612.3 -39.85 187.78  
 131.80 3 24 39 2712.85 -35.38 77.93 245.97 53.60 4 9 52 2112.9 -39.84 69.96  
 48.20 19 5 45 4212.32 -35.39 195.76 245.98 53.61 20 15 57 3612.3 -39.85 187.78  
 131.80 3 24 39 2712.85 -35.38 77.93 245.97 53.60 4 9 52 2112.9 -39.84 69.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4438 TRA .3759 TC3-3.4862 BAU .6917 SGT 4614.7 SGR 1358.1 SCS 810.5 ST 3684.7 SR 1166.0 SS 2359.1  
 RDE .7706 RRA .1861 RC3 -.7420 FAU .11358 RRT .9775 RRF .9822 RTF .9778 CRT .9992 CRS -.9989 CST -.9963  
 FDE 4.6199 FRA 1.5841 FC3-6.7618 BSP 14954 SGB 4810.4 R23 .1087 R13 .9798 LSA 4524.6 MSA 170.9 SSA 8.2  
 BDE 2.5622 BRA .4177 BC3 3.5643 FSP -2806 SGI 4802.5 SGT 275.5 THA 16.10 EL1 3864.5 EL2 45.3 ALF 17.55

LAUNCH DATE JAN 6 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 486.716

RL 147.10 LAL -.00 LOL 105.50 VL 27.601 GAL 2.30 AZL 85.23 HCA 222.54 SMA 127.29 ECC .16060 INC 4.7658 V1 30.287
RP 108.91 LAP -3.22 LOP 327.95 VP 37.342 GAP 4.08 AZP 93.52 TAL 167.85 TAP 30.39 RCA 106.84 APO 147.73 V2 34.794
RC 118.823 GL 37.33 GP -23.51 ZAL 73.40 ZAP 133.30 ETS 337.29 ZAE 133.71 ETE 203.55 ZAC 108.39 ETC 173.58 CLP-138.41

PLANETOCENTRIC CONIC

C3 14.277 VHL 3.779 DLA 48.14 RAL 16.83 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 3.976 DPA -20.38 RAP 20.19 ECC 1.2350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.29 19 20 16 4199.65 -35.01 194.17 247.97 54.56 20 30 15 3599.7 -39.36 186.15
130.71 3 31 47 2718.18 -35.00 78.12 247.96 54.55 4 17 5 2118.2 -39.35 70.10
49.29 19 20 16 4199.65 -35.01 194.17 247.97 54.56 20 30 15 3599.7 -39.36 186.15
130.71 3 31 47 2718.18 -35.00 78.12 247.96 54.55 4 17 5 2118.2 -39.35 70.10
49.29 19 20 16 4199.65 -35.01 194.17 247.97 54.56 20 30 15 3599.7 -39.36 186.15
130.71 3 31 47 2718.18 -35.00 78.12 247.96 54.55 4 17 5 2118.2 -39.35 70.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4554 TRA .4937 TC3-3.7181 BAU .7198 SGT 4797.5 SGR 1209.5 SCS 777.8 ST 3739.4 SR 1039.5 SS 2249.1
RDE .6806 RRA .1816 RC3 -.6313 FAU .10807 RRT .9730 RRF .9744 RTF .9782 CRT .9995 CRS -.9982 CST -.9961
FDE 4.2484 FRA 1.7057 FC3-6.5533 BSP 15469 SGB 4947.8 R23 .0849 R13 .9794 LSA 4482.5 MSA 170.4 SSA 9.0
BOE 2.5480 BRA .5260 BC3 3.7713 FSP -2701 SGI 4940.2 SGT 271.2 THA 13.82 EL1 3881.1 EL2 30.6 ALF 15.53

LAUNCH DATE JAN 6 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 492.770

RL 147.10 LAL -.00 LOL 105.50 VL 27.582 GAL 2.49 AZL 85.42 HCA 225.70 SMA 127.16 ECC .16255 INC 4.5776 V1 30.287
RP 108.90 LAP -3.27 LOP 331.11 VP 37.332 GAP 4.42 AZP 93.20 TAL 166.99 TAP 32.69 RCA 106.49 APO 147.83 V2 34.798
RC 121.206 GL 35.77 GP -21.49 ZAL 71.86 ZAP 136.32 ETS 337.16 ZAE 133.19 ETE 200.62 ZAC 108.63 ETC 173.11 CLP-141.00

PLANETOCENTRIC CONIC

C3 14.157 VHL 3.763 DLA 47.33 RAL 19.52 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.087 DPA -18.33 RAP 19.75 ECC 1.2330
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.34 19 34 37 4188.78 -34.57 192.74 250.10 55.40 20 44 26 3588.8 -38.83 184.71
129.66 3 38 53 2725.30 -34.56 78.44 250.09 55.38 4 24 18 2125.3 -38.82 70.40
50.34 19 34 37 4188.78 -34.57 192.74 250.10 55.40 20 44 26 3588.8 -38.83 184.71
129.66 3 38 53 2725.30 -34.56 78.44 250.09 55.38 4 24 18 2125.3 -38.82 70.40
50.34 19 34 37 4188.78 -34.57 192.74 250.10 55.40 20 44 26 3588.8 -38.83 184.71
129.66 3 38 53 2725.30 -34.56 78.44 250.09 55.38 4 24 18 2125.3 -38.82 70.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4829 TRA .8201 TC3-3.9115 BAU .7470 SGT 4967.0 SGR 1084.8 SCS 741.6 ST 3774.8 SR 936.2 SS 2137.9
RDE .6098 RRA .1758 RC3 -.5292 FAU .10208 RRT .9660 RRF .9642 RTF .9785 CRT .9998 CRS -.9971 CST -.9958
FDE 3.8934 FRA 1.8050 FC3-6.2424 BSP 15985 SGB 5084.1 R23 .0624 R13 .9793 LSA 4434.7 MSA 170.0 SSA 9.7
BOE 2.5373 BRA .6446 BC3 3.9471 FSP -2577 SGI 5076.7 SGT 274.5 THA 11.95 EL1 3889.1 EL2 17.4 ALF 13.93

LAUNCH DATE JAN 6 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 498.805

RL 147.10 LAL -.00 LOL 105.50 VL 27.562 GAL 2.70 AZL 85.59 HCA 228.86 SMA 127.03 ECC .16468 INC 4.4086 V1 30.287
RP 108.89 LAP -3.32 LOP 334.28 VP 37.322 GAP 4.75 AZP 92.90 TAL 166.09 TAP 34.95 RCA 106.11 APO 147.95 V2 34.803
RC 123.581 GL 34.25 GP -19.72 ZAL 70.26 ZAP 139.11 ETS 337.07 ZAE 132.60 ETE 198.14 ZAC 109.06 ETC 172.76 CLP-143.42

PLANETOCENTRIC CONIC

C3 14.140 VHL 3.760 DLA 46.58 RAL 22.19 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.214 DPA -16.43 RAP 19.60 ECC 1.2327
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.36 19 48 54 4179.46 -34.09 191.45 252.35 56.13 20 58 33 3579.5 -38.26 183.41
128.64 3 45 56 2734.12 -34.08 78.88 252.34 56.11 4 31 31 2134.1 -38.25 70.84
51.36 19 48 54 4179.46 -34.09 191.45 252.35 56.13 20 58 33 3579.5 -38.26 183.41
128.64 3 45 56 2734.12 -34.08 78.88 252.34 56.11 4 31 31 2134.1 -38.25 70.84
51.36 19 48 54 4179.46 -34.09 191.45 252.35 56.13 20 58 33 3579.5 -38.26 183.41
128.64 3 45 56 2734.12 -34.08 78.88 252.34 56.11 4 31 31 2134.1 -38.25 70.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4854 TRA .7534 TC3-4.0662 BAU .7731 SGT 5123.5 SGR 980.9 SCS 703.4 ST 3790.8 SR 851.9 SS 2025.9
RDE .5542 RRA .1692 RC3 -.4380 FAU .09583 RRT .9562 RRF .9512 RTF .9787 CRT .9999 CRS -.9954 CST -.9955
FDE 3.5972 FRA 1.8844 FC3-5.8670 BSP 16452 SGB 5216.5 R23 .0427 R13 .9792 LSA 4378.5 MSA 169.7 SSA 10.5
BOE 2.5269 BRA .7722 BC3 4.0897 FSP -2448 SGI 5208.9 SGT 282.4 THA 10.40 EL1 3885.3 EL2 10.5 ALF 12.66

LAUNCH DATE JAN 6 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 504.821

RL 147.10 LAL -.00 LOL 105.50 VL 27.542 GAL 2.92 AZL 85.74 HCA 232.03 SMA 126.89 ECC .16699 INC 4.2552 V1 30.287
RP 108.87 LAP -3.35 LOP 337.45 VP 37.312 GAP 5.09 AZP 92.82 TAL 165.16 TAP 37.19 RCA 105.70 APO 148.08 V2 34.808
RC 125.948 GL 32.77 GP -18.17 ZAL 68.60 ZAP 141.70 ETS 337.01 ZAE 131.98 ETE 196.05 ZAC 109.66 ETC 172.50 CLP-145.68

PLANETOCENTRIC CONIC

C3 14.220 VHL 3.771 DLA 45.80 RAL 24.85 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 4.353 DPA -14.66 RAP 19.72 ECC 1.2340
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.36 20 3 8 4171.45 -35.58 190.27 254.71 56.77 21 12 40 3571.4 -37.66 182.24
127.64 3 52 56 2744.82 -35.55 79.44 254.70 56.76 4 38 40 2144.6 -37.65 71.41
52.36 20 3 8 4171.45 -35.58 190.27 254.71 56.77 21 12 40 3571.4 -37.66 182.24
127.64 3 52 56 2744.82 -35.55 79.44 254.70 56.76 4 38 40 2144.6 -37.65 71.41
52.36 20 3 8 4171.45 -35.58 190.27 254.71 56.77 21 12 40 3571.4 -37.66 182.24
127.64 3 52 56 2744.82 -35.55 79.44 254.70 56.76 4 38 40 2144.6 -37.65 71.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4856 TRA .8959 TC3-4.1768 BAU .7969 SGT 5269.7 SGR 895.8 SCS 665.2 ST 3792.9 SR 784.4 SS 1918.3
RDE .5114 RRA .1631 RC3 -.3565 FAU .08930 RRT .9431 RRF .9353 RTF .9789 CRT .9997 CRS -.9931 CST -.9952
FDE 3.2491 FRA 1.9513 FC3-5.4365 BSP 16888 SGB 5345.3 R23 .0277 R13 .9792 LSA 4318.8 MSA 169.9 SSA 11.2
BOE 2.5181 BRA .8108 BC3 4.1920 FSP -2306 SGI 5337.2 SGT 294.1 THA 9.14 EL1 3873.1 EL2 18.3 ALF 11.68

LAUNCH DATE JAN 6 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 510.816

RL 147.10 LAL -.00 LOL 105.50 VL 27.521 GAL 3.16 AZL 85.89 HCA 235.19 SMA 126.75 ECC .16949 INC 4.1143 V1 30.287  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.302 GAP 5.43 AZP 92.35 TAL 184.20 TAP 39.39 RCA 105.27 APO 148.23 V2 34.815  
 RC 128.306 GL 31.31 GP -16.80 ZAL 66.90 ZAP 144.11 ETS 336.94 ZAE 131.35 ETE 194.28 ZAC 110.43 ETC 172.31 CLP-147.80

PLANETOCENTRIC CONIC

C3 14.392 VHL 3.794 DLA 45.06 RAL 27.50 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 4.504 DPA -13.00 RAP 20.05 ECC 1.2369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.35 20 17 24 4164.51 -32.98 189.18 257.17 57.35 21 26 49 3564.5 -37.02 181.16  
 126.65 3 59 47 2756.86 -32.97 80.13 257.16 57.34 4 45 43 2156.9 -37.01 72.11  
 53.35 20 17 24 4164.51 -32.98 189.18 257.17 57.35 21 26 49 3564.5 -37.02 181.16  
 126.65 3 59 47 2756.86 -32.97 80.13 257.16 57.34 4 45 43 2156.9 -37.01 72.11  
 53.35 20 17 24 4164.51 -32.98 189.18 257.17 57.35 21 26 49 3564.5 -37.02 181.16  
 126.65 3 59 47 2756.86 -32.97 80.13 257.16 57.34 4 45 43 2156.9 -37.01 72.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4589 TRA 1.0439 TC3-4.2554 BAU .8206 SGT 5403.5 SCR 825.5 963 627.1 ST 3774.8 SR 729.0 SS 1810.3  
 RDE 4.781 RRA 1.568 RC3 -.2678 FAU .08312 RRT .9270 RRF .9164 RTF .9791 CRT .9991 CRS -.9899 CST -.9949  
 FDE 2.9598 FRA 2.0008 FC3-5.0003 BSP 17318 SGB 5466.2 R23 .0156 R13 .9793 LSA 4246.0 MSA 170.3 SSA 11.9  
 BDE 2.5049 BRA 1.0556 BC3 4.2651 FSP -2178 SGI 5457.6 SGI 306.6 THA 8.09 EL1 3844.4 EL2 31.0 ALF 10.92

LAUNCH DATE JAN 6 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 516.791

RL 147.10 LAL -.00 LOL 105.50 VL 27.499 GAL 3.41 AZL 86.02 HCA 238.36 SMA 126.60 ECC .17219 INC 3.9839 V1 30.287  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.292 GAP 5.78 AZP 92.09 TAL 183.21 TAP 41.57 RCA 104.80 APO 148.40 V2 34.821  
 RC 130.653 GL 29.88 GP -15.60 ZAL 65.17 ZAP 146.35 ETS 336.86 ZAE 130.74 ETE 192.79 ZAC 111.34 ETC 172.17 CLP-149.80

PLANETOCENTRIC CONIC

C3 14.654 VHL 3.828 DLA 44.33 RAL 30.13 RAD 6567.6 VEL 11.664 PTH 2.05 VHP 4.665 DPA -11.44 RAP 20.58 ECC 1.2412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.35 20 31 43 4158.50 -32.36 188.16 259.71 57.87 21 41 2 3558.5 -36.34 180.17  
 125.65 4 6 27 2770.86 -32.34 80.95 259.70 57.86 4 52 38 2170.9 -36.32 72.95  
 54.35 20 31 43 4158.50 -32.36 188.16 259.71 57.87 21 41 2 3558.5 -36.34 180.17  
 125.65 4 6 27 2770.86 -32.34 80.95 259.70 57.86 4 52 38 2170.9 -36.32 72.95  
 54.35 20 31 43 4158.50 -32.36 188.16 259.71 57.87 21 41 2 3558.5 -36.34 180.17  
 125.65 4 6 27 2770.86 -32.34 80.95 259.70 57.86 4 52 38 2170.9 -36.32 72.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4478 TRA 1.2001 TC3-4.2966 BAU .8429 SGT 5527.1 SCR 788.6 863 590.1 ST 3741.7 SR 684.7 SS 1706.0  
 RDE 4.550 RRA 1.513 RC3 -.2291 FAU .07711 RRT .9077 RRF .8949 RTF .9792 CRT .9978 CRS -.9857 CST -.9945  
 FDE 2.8944 FRA 2.0401 FC3-4.5556 BSP 17748 SGB 5580.3 R23 .0071 R13 .9793 LSA 4165.3 MSA 171.3 SSA 12.5  
 BDE 2.4893 BRA 1.2096 BC3 4.3027 FSP -2053 SGI 5571.1 SGI 319.9 THA 7.22 EL1 3803.5 EL2 44.6 ALF 10.35

LAUNCH DATE JAN 6 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 522.745

RL 147.10 LAL -.00 LOL 105.50 VL 27.476 GAL 3.68 AZL 86.14 HCA 241.52 SMA 126.45 ECC .17510 INC 3.8620 V1 30.287  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.282 GAP 6.13 AZP 91.84 TAL 182.20 TAP 43.72 RCA 104.31 APO 148.59 V2 34.829  
 RC 132.989 GL 28.47 GP -14.54 ZAL 63.40 ZAP 148.44 ETS 336.74 ZAE 130.15 ETE 191.51 ZAC 112.39 ETC 172.06 CLP-151.68

PLANETOCENTRIC CONIC

C3 15.007 VHL 3.874 DLA 43.59 RAL 32.74 RAD 6567.6 VEL 11.679 PTH 2.05 VHP 4.836 DPA -9.95 RAP 21.27 ECC 1.2470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.36 20 46 5 4153.34 -31.69 187.21 262.33 58.34 21 55 18 3553.3 -35.61 179.25  
 124.64 4 12 55 2786.65 -31.68 81.88 262.32 58.33 4 59 21 2186.6 -35.61 73.92  
 55.36 20 46 5 4153.34 -31.69 187.21 262.33 58.34 21 55 18 3553.3 -35.61 179.25  
 124.64 4 12 55 2786.65 -31.68 81.88 262.32 58.33 4 59 21 2186.6 -35.61 73.92  
 55.36 20 46 5 4153.34 -31.69 187.21 262.33 58.34 21 55 18 3553.3 -35.61 179.25  
 124.64 4 12 55 2786.65 -31.68 81.88 262.32 58.33 4 59 21 2186.6 -35.61 73.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4325 TRA 1.3651 TC3-4.3018 BAU .8638 SGT 5641.2 SCR 722.7 363 554.6 ST 3695.0 SR 649.0 SS 1605.5  
 RDE 4.346 RRA 1.467 RC3 -.1802 FAU .07136 RRT .8861 RRF .8713 RTF .9794 CRT .9958 CRS -.9804 CST -.9942  
 FDE 2.4514 FRA 2.0709 FC3-4.1170 BSP 18155 SGB 5687.3 R23 .0010 R13 .9794 LSA 4077.0 MSA 173.1 SSA 13.1  
 BDE 2.4710 BRA 1.3729 BC3 4.3056 FSP -1934 SGI 5677.5 SGI 332.8 THA 6.50 EL1 3751.1 EL2 58.6 ALF 9.92

LAUNCH DATE JAN 6 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 528.676

RL 147.10 LAL -.00 LOL 105.50 VL 27.453 GAL 3.96 AZL 86.25 HCA 244.69 SMA 126.30 ECC .17823 INC 3.7472 V1 30.287  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.273 GAP 6.49 AZP 91.80 TAL 181.15 TAP 45.85 RCA 103.79 APO 148.81 V2 34.837  
 RC 135.313 GL 27.08 GP -13.60 ZAL 61.60 ZAP 150.41 ETS 336.58 ZAE 129.60 ETE 190.43 ZAC 113.56 ETC 171.98 CLP-153.46

PLANETOCENTRIC CONIC

C3 15.454 VHL 3.931 DLA 42.85 RAL 35.32 RAD 6567.6 VEL 11.698 PTH 2.06 VHP 5.017 DPA -8.54 RAP 22.12 ECC 1.2543  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.39 21 0 32 4148.79 -30.97 186.29 265.02 58.77 22 9 41 3548.8 -34.86 178.37  
 123.61 4 19 3 2804.41 -30.96 82.96 265.01 58.75 5 5 47 2204.4 -34.84 75.04  
 56.39 21 0 32 4148.79 -30.97 186.29 265.02 58.77 22 9 41 3548.8 -34.86 178.37  
 123.61 4 19 3 2804.41 -30.96 82.96 265.01 58.75 5 5 47 2204.4 -34.84 75.04  
 56.39 21 0 32 4148.79 -30.97 186.29 265.02 58.77 22 9 41 3548.8 -34.86 178.37  
 123.61 4 19 3 2804.41 -30.96 82.96 265.01 58.75 5 5 47 2204.4 -34.84 75.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4163 TRA 1.5428 TC3-4.2651 BAU .8817 SGT 5749.2 SCR 687.0 363 521.3 ST 3641.2 SR 621.2 SS 1512.6  
 RDE 4.221 RRA 1.437 RC3 -.1385 FAU .06567 RRT .8628 RRF .8470 RTF .9794 CRT .9929 CRS -.9737 CST -.9938  
 FDE 2.2342 FRA 2.1004 FC3-3.6788 BSP 18462 SGB 5790.1 R23 -.0021 R13 .9794 LSA 3987.7 MSA 175.9 SSA 13.5  
 BDE 2.4529 BRA 1.5494 BC3 4.2673 FSP -1811 SGI 5779.8 SGI 345.5 THA 5.91 EL1 3693.1 EL2 72.9 ALF 9.82

LAUNCH DATE JAN 6 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 534.583

RL 147.10 LAL -.00 LOL 105.50 VL 27.429 GAL 4.26 AZL 86.36 HCA 247.86 SMA 126.14 ECC .18160 INC 3.6382 V1 30.287  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.263 GAP 6.86 AZP 91.37 TAL 160.09 TAP 47.95 RCA 103.23 APO 149.05 V2 34.846  
 RC 137.625 GL 25.71 GP -12.76 ZAL 59.79 ZAP 152.25 ETS 336.36 ZAE 129.08 ETE 189.51 ZAC 114.84 ETC 171.90 CLP-155.15

PLANETOCENTRIC CONIC

CS 16.002 VHL 4.000 DLA 42.10 RAL 37.87 RAD 6567.6 VEL 11.721 PTH 2.07 VHP 5.206 DPA -7.18 RAP 23.10 ECC 1.2634  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.44 21 15 4 4144.82 -30.21 185.41 267.76 59.16 22 24 9 3544.8 -34.06 177.53  
 122.56 4 24 51 2824.14 -30.20 84.16 267.76 59.15 5 11 56 2224.1 -34.04 76.29  
 57.44 21 15 4 4144.82 -30.21 185.41 267.76 59.16 22 24 9 3544.8 -34.06 177.53  
 122.56 4 24 51 2824.14 -30.20 84.16 267.76 59.15 5 11 56 2224.1 -34.04 76.29  
 57.44 21 15 4 4144.82 -30.21 185.41 267.76 59.16 22 24 9 3544.8 -34.06 177.53  
 122.56 4 24 51 2824.14 -30.20 84.16 267.76 59.15 5 11 56 2224.1 -34.04 76.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3922 TRA 1.7267 TC3-4.2057 BAU .9000 SGT 5845.8 86R 857.9 863 489.3 ST 3570.8 SR 598.3 SS 1420.9  
 RDE .4138 RRA .1413 RC3 -.1059 FAU .06055 RRT .8386 RRF .8220 RTF .9794 CRT .9890 CRS -.9857 CST -.9934  
 FDE 2.0314 FRA 2.1193 FC3-3.2757 BSP 18827 SGB 5882.7 R23 -.0045 R13 .9794 LSA 3685.2 MSA 179.5 SSA 13.9  
 BDE 2.4278 BRA 1.7325 BC3 4.2071 FSP -1706 SGI 5871.9 862 356.8 THA 5.41 EL1 3619.5 EL2 87.4 ALF 9.41

LAUNCH DATE JAN 6 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 540.464

RL 147.10 LAL -.00 LOL 105.50 VL 27.404 GAL 4.59 AZL 86.47 HCA 251.03 SMA 125.98 ECC .18523 INC 3.5339 V1 30.287  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.254 GAP 7.23 AZP 91.15 TAL 159.01 TAP 50.04 RCA 102.64 APO 149.32 V2 34.855  
 RC 139.925 GL 24.37 GP -12.01 ZAL 57.97 ZAP 153.99 ETS 336.07 ZAE 128.60 ETE 188.72 ZAC 116.21 ETC 171.83 CLP-156.76

PLANETOCENTRIC CONIC

CS 16.657 VHL 4.081 DLA 41.35 RAL 40.38 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 5.406 DPA -5.88 RAP 24.20 ECC 1.2741  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.52 21 29 41 4141.30 -29.41 184.55 270.56 59.52 22 38 42 3541.3 -33.22 176.73  
 121.48 4 30 15 2845.97 -29.40 85.51 270.55 59.51 5 17 41 2246.0 -33.20 77.69  
 58.52 21 29 41 4141.30 -29.41 184.55 270.56 59.52 22 38 42 3541.3 -33.22 176.73  
 121.48 4 30 15 2845.97 -29.40 85.51 270.55 59.51 5 17 41 2246.0 -33.20 77.69  
 58.52 21 29 41 4141.30 -29.41 184.55 270.56 59.52 22 38 42 3541.3 -33.22 176.73  
 121.48 4 30 15 2845.97 -29.40 85.51 270.55 59.51 5 17 41 2246.0 -33.20 77.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3647 TRA 1.9213 TC3-4.1166 BAU .9169 SGT 5934.8 86R 834.9 863 459.2 ST 3491.8 SR 579.8 SS 1334.4  
 RDE .4092 RRA .1403 RC3 -.0800 FAU .05571 RRT .8145 RRF .7975 RTF .9794 CRT .9859 CRS -.9561 CST -.9929  
 FDE 1.8469 FRA 2.1352 FC3-2.8957 BSP 19174 SGB 5968.5 R23 -.0057 R13 .9794 LSA 3778.2 MSA 184.2 SSA 14.2  
 BDE 2.3998 BRA 1.9265 BC3 4.1173 FSP -1607 SGI 5957.2 862 366.9 THA 5.00 EL1 3538.1 EL2 102.2 ALF 9.29

LAUNCH DATE JAN 6 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 546.318

RL 147.10 LAL -.00 LOL 105.50 VL 27.380 GAL 4.93 AZL 86.57 HCA 254.21 SMA 125.82 ECC .18914 INC 3.4334 V1 30.287  
 RP 108.89 LAP -3.30 LOP 359.68 VP 37.245 GAP 7.62 AZP 90.94 TAL 157.91 TAP 52.12 RCA 102.02 APO 149.62 V2 34.865  
 RC 142.207 GL 23.04 GP -11.34 ZAL 56.15 ZAP 155.64 ETS 335.70 ZAE 128.15 ETE 188.04 ZAC 117.67 ETC 171.76 CLP-158.30

PLANETOCENTRIC CONIC

CS 17.428 VHL 4.175 DLA 40.58 RAL 42.84 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.615 DPA -4.62 RAP 25.40 ECC 1.2868  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.63 21 44 22 4138.16 -28.56 183.72 273.39 59.86 22 53 20 3538.2 -32.33 175.95  
 120.37 4 35 11 2869.96 -28.55 87.01 273.38 59.84 5 23 1 2270.0 -32.32 79.24  
 59.63 21 44 22 4138.16 -28.56 183.72 273.39 59.86 22 53 20 3538.2 -32.33 175.95  
 120.37 4 35 11 2869.96 -28.55 87.01 273.38 59.84 5 23 1 2270.0 -32.32 79.24  
 59.63 21 44 22 4138.16 -28.56 183.72 273.39 59.86 22 53 20 3538.2 -32.33 175.95  
 120.37 4 35 11 2869.96 -28.55 87.01 273.38 59.84 5 23 1 2270.0 -32.32 79.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3338 TRA 2.1276 TC3-3.9997 BAU .9320 SGT 6018.0 86R 816.8 863 431.0 ST 3405.9 SR 564.9 SS 1253.2  
 RDE .4078 RRA .1408 RC3 -.0594 FAU .05113 RRT .7914 RRF .7744 RTF .9794 CRT .9777 CRS -.9450 CST -.9925  
 FDE 1.6792 FRA 2.1489 FC3-2.5399 BSP 19483 SGB 6047.6 R23 -.0059 R13 .9793 LSA 3667.9 MSA 190.1 SSA 14.3  
 BDE 2.3692 BRA 2.1322 BC3 4.0001 FSP -1512 SGI 6035.9 862 375.8 THA 4.66 EL1 3450.4 EL2 117.2 ALF 9.22

LAUNCH DATE JAN 6 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 552.142

RL 147.10 LAL -.00 LOL 105.50 VL 27.355 GAL 5.29 AZL 86.66 HCA 257.38 SMA 125.66 ECC .19334 INC 3.3361 V1 30.287  
 RP 108.86 LAP -3.26 LOP 362.86 VP 37.236 GAP 8.02 AZP 90.73 TAL 156.80 TAP 54.18 RCA 101.36 APO 149.95 V2 34.875  
 RC 144.478 GL 21.73 GP -10.74 ZAL 54.33 ZAP 157.20 ETS 335.25 ZAE 127.74 ETE 187.45 ZAC 119.21 ETC 171.69 CLP-159.77

PLANETOCENTRIC CONIC

CS 18.326 VHL 4.281 DLA 39.80 RAL 45.24 RAD 6567.7 VEL 11.820 PTH 2.09 VHP 5.835 DPA -3.40 RAP 26.69 ECC 1.3016  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.77 21 59 11 4135.17 -27.68 182.88 276.26 60.17 23 8 6 3535.2 -31.42 175.17  
 119.23 4 39 33 2896.37 -27.66 88.67 276.25 60.16 5 27 49 2296.4 -31.40 80.96  
 60.77 21 59 11 4135.17 -27.68 182.88 276.26 60.17 23 8 6 3535.2 -31.42 175.17  
 119.23 4 39 33 2896.37 -27.66 88.67 276.25 60.16 5 27 49 2296.4 -31.40 80.96  
 60.77 21 59 11 4135.17 -27.68 182.88 276.26 60.17 23 8 6 3535.2 -31.42 175.17  
 119.23 4 39 33 2896.37 -27.66 88.67 276.25 60.16 5 27 49 2296.4 -31.40 80.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2995 TRA 2.3456 TC3-3.8599 BAU .9450 SGT 6090.3 86R 802.3 863 404.6 ST 3314.3 SR 552.5 SS 1177.3  
 RDE .4090 RRA .1426 RC3 -.0438 FAU .04684 RRT .7898 RRF .7532 RTF .9793 CRT .9701 CRS -.9323 CST -.9921  
 FDE 1.5268 FRA 2.1605 FC3-2.2128 BSP 19774 SGB 6120.0 R23 -.0056 R13 .9793 LSA 3554.8 MSA 197.0 SSA 14.4  
 BDE 2.3356 BRA 2.3499 BC3 3.8602 FSP -1424 SGI 6108.0 862 383.4 THA 4.37 EL1 3357.4 EL2 132.4 ALF 9.20

LAUNCH DATE JAN 6 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 557.933

RL 147.10 LAL -.00 LOL 105.50 VL 27.329 GAL 5.68 AZL 86.76 HCA 260.56 SMA 125.49 ECC .19786 INC 3.2410 V1 30.287  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.227 GAP 8.43 AZP 90.53 TAL 155.67 TAP 56.23 RCA 100.66 APO 150.32 V2 34.885  
 RC 148.734 GL 20.45 GP -10.20 ZAL 52.52 ZAP 158.69 ETS 334.68 ZAE 127.36 ETE 186.95 ZAC 120.81 ETC 171.60 CLP-161.19

PLANETOCENTRIC CONIC

C3 19.366 VHL 4.401 DLA 39.02 RAL 47.59 RAD 6567.8 VEL 11.864 PTH 2.10 VHP 6.066 DPA -2.22 RAP 28.07 ECC 1.3187  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.95 22 14 4 4132.45 -26.74 182.06 279.15 60.46 23 22 56 3532.5 -30.46 174.40  
 118.05 4 43 23 2925.06 -26.73 90.48 279.14 60.45 5 32 8 2325.1 -30.45 82.83  
 61.95 22 14 4 4132.45 -26.74 182.06 279.15 60.46 23 22 56 3532.5 -30.46 174.40  
 118.05 4 43 23 2925.06 -26.73 90.48 279.14 60.45 5 32 8 2325.1 -30.45 82.83  
 61.95 22 14 4 4132.45 -26.74 182.06 279.15 60.46 23 22 56 3532.5 -30.46 174.40  
 118.05 4 43 23 2925.06 -26.73 90.48 279.14 60.45 5 32 8 2325.1 -30.45 82.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2652 TRA 2.5793 TC3-3.6929 BAU .9562 SGT 6160.0 SCR 591.3 SCS 300.3 ST 3223.2 SR 542.4 SS 1109.2  
 RDE .4128 RRA .1462 RC3 -.0313 FAU .04265 RRT .7505 RRF .7549 RTF .9791 CRT .9611 CRS -.9181 CST -.9917  
 FDE 1.3915 FRA 2.1741 FC3-1.9066 BSP 19974 SGB 6188.3 RZ3 -.0043 R13 .9791 LSA 3445.5 MSA 204.8 SSA 14.4  
 BDE 2.3025 BRA 2.5835 BC3 3.6931 FSP -1335 SGI 6178.0 SGT 389.8 THA 4.14 EL1 3265.2 EL2 147.8 ALF 9.21

LAUNCH DATE JAN 6 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 563.688

RL 147.10 LAL -.00 LOL 105.50 VL 27.303 GAL 6.09 AZL 86.85 HCA 263.74 SMA 125.32 ECC .20274 INC 3.1476 V1 30.287  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.219 GAP 8.86 AZP 90.34 TAL 154.53 TAP 58.27 RCA 99.92 APO 150.73 V2 34.897  
 RC 148.977 GL 19.19 GP -9.72 ZAL 50.74 ZAP 160.11 ETS 333.99 ZAE 127.01 ETE 186.51 ZAC 122.48 ETC 171.49 CLP-162.56

PLANETOCENTRIC CONIC

C3 20.564 VHL 4.535 DLA 38.23 RAL 49.87 RAD 6567.8 VEL 11.914 PTH 2.12 VHP 6.308 DPA -1.07 RAP 29.52 ECC 1.3384  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.17 22 29 4 4129.70 -25.78 181.22 282.07 60.74 23 37 54 3529.7 -29.47 173.62  
 116.83 4 46 33 2956.37 -25.77 92.47 282.06 60.73 5 35 50 2356.4 -29.46 84.88  
 63.17 22 29 4 4129.70 -25.78 181.22 282.07 60.74 23 37 54 3529.7 -29.47 173.62  
 116.83 4 46 33 2956.37 -25.77 92.47 282.06 60.73 5 35 50 2356.4 -29.46 84.88  
 63.17 22 29 4 4129.70 -25.78 181.22 282.07 60.74 23 37 54 3529.7 -29.47 173.62  
 116.83 4 46 33 2956.37 -25.77 92.47 282.06 60.73 5 35 50 2356.4 -29.46 84.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2248 TRA 2.8229 TC3-3.5169 BAU .9669 SGT 6219.8 SCR 581.6 SCS 357.2 ST 3124.8 SR 533.1 SS 1043.7  
 RDE .4180 RRA .1510 RC3 -.0226 FAU .03890 RRT .7533 RRF .7185 RTF .9789 CRT .9506 CRS -.9021 CST -.9913  
 FDE 1.2650 FRA 2.1835 FC3-1.6375 BSP 20238 SGB 6247.1 RZ3 -.0034 R13 .9789 LSA 3330.5 MSA 213.6 SSA 14.3  
 BDE 2.2635 BRA 2.8269 BC3 3.5170 FSP -1258 SGI 6234.6 SGT 394.5 THA 3.94 EL1 3165.8 EL2 163.3 ALF 9.24

LAUNCH DATE JAN 6 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 569.404

RL 147.10 LAL -.00 LOL 105.50 VL 27.278 GAL 6.53 AZL 86.94 HCA 266.92 SMA 125.16 ECC .20799 INC 3.0553 V1 30.287  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.211 GAP 9.30 APL 90.16 TAL 153.39 TAP 60.31 RCA 99.13 APO 151.19 V2 34.908  
 RC 151.204 GL 17.96 GP -9.28 ZAL 48.98 ZAP 161.46 ETS 333.16 ZAE 126.68 ETE 186.13 ZAC 124.20 ETC 171.37 CLP-163.88

PLANETOCENTRIC CONIC

C3 21.939 VHL 4.684 DLA 37.43 RAL 52.08 RAD 6567.9 VEL 11.972 PTH 2.13 VHP 6.564 DPA .05 RAP 31.04 ECC 1.3611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.43 22 44 14 4126.79 -24.78 180.37 285.00 61.00 23 53 1 3526.8 -28.44 172.83  
 115.57 4 49 1 2990.43 -24.76 94.65 284.99 60.99 5 38 51 2390.4 -28.43 87.11  
 64.43 22 44 14 4126.79 -24.78 180.37 285.00 61.00 23 53 1 3526.8 -28.44 172.83  
 115.57 4 49 1 2990.43 -24.76 94.65 284.99 60.99 5 38 51 2390.4 -28.43 87.11  
 64.43 22 44 14 4126.79 -24.78 180.37 285.00 61.00 23 53 1 3526.8 -28.44 172.83  
 115.57 4 49 1 2990.43 -24.76 94.65 284.99 60.99 5 38 51 2390.4 -28.43 87.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1818 TRA 3.0814 TC3-3.3263 BAU .9756 SGT 6274.0 SCR 573.5 SCS 335.8 ST 3026.5 SR 524.6 SS 984.0  
 RDE .4247 RRA .1573 RC3 -.0168 FAU .03536 RRT .7187 RRF .7047 RTF .9788 CRT .9386 CRS -.8845 CST -.9910  
 FDE 1.1507 FRA 2.1932 FC3-1.3953 BSP 20475 SGB 6300.1 RZ3 -.0023 R13 .9788 LSA 3217.6 MSA 223.0 SSA 14.2  
 BDE 2.2228 BRA 3.0854 BC3 3.3264 FSP -1186 SGI 6287.5 SGT 397.9 THA 3.77 EL1 3066.4 EL2 178.7 ALF 9.27

LAUNCH DATE JAN 6 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 575.075

RL 147.10 LAL -.00 LOL 105.50 VL 27.251 GAL 6.99 AZL 87.04 HCA 270.10 SMA 124.99 ECC .21367 INC 2.9635 V1 30.287  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.203 GAP 9.77 AZP 89.99 TAL 152.25 TAP 62.35 RCA 98.28 APO 151.69 V2 34.920  
 RC 153.416 GL 16.76 GP -8.88 ZAL 47.25 ZAP 162.76 ETS 332.16 ZAE 126.37 ETE 185.80 ZAC 125.96 ETC 171.23 CLP-165.17

PLANETOCENTRIC CONIC

C3 23.515 VHL 4.849 DLA 36.63 RAL 54.21 RAD 6568.0 VEL 12.037 PTH 2.15 VHP 6.834 DPA 1.13 RAP 32.62 ECC 1.3870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.73 22 59 31 4123.73 -23.75 179.49 287.95 61.25 24 8 15 3523.7 -27.39 172.01  
 114.27 4 50 45 3027.20 -23.73 97.01 287.94 61.24 5 41 12 2427.2 -27.38 89.53  
 65.73 22 59 31 4123.73 -23.75 179.49 287.95 61.25 24 8 15 3523.7 -27.39 172.01  
 114.27 4 50 45 3027.20 -23.73 97.01 287.94 61.24 5 41 12 2427.2 -27.38 89.53  
 65.73 22 59 31 4123.73 -23.75 179.49 287.95 61.25 24 8 15 3523.7 -27.39 172.01  
 114.27 4 50 45 3027.20 -23.73 97.01 287.94 61.24 5 41 12 2427.2 -27.38 89.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1370 TRA 3.3551 TC3-3.1247 BAU .9823 SGT 6321.4 SCR 568.3 SCS 315.8 ST 2929.1 SR 516.5 SS 929.6  
 RDE .4328 RRA .1852 RC3 -.0127 FAU .03203 RRT .7086 RRF .6934 RTF .9787 CRT .9249 CRS -.8652 CST -.9908  
 FDE 1.0469 FRA 2.2031 FC3-1.1791 BSP 20698 SGB 6346.7 RZ3 -.0012 R13 .9787 LSA 3107.5 MSA 232.9 SSA 14.0  
 BDE 2.1804 BRA 3.3592 BC3 3.1247 FSP -1119 SGI 6334.1 SGT 399.9 THA 3.64 EL1 2966.0 EL2 193.9 ALF 9.30

LAUNCH DATE JAN 6 1969

FLIGHT TIME 206.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 580.696

RL 147.10 LAL -.00 LOL 105.50 VL 27.225 GAL 7.49 AZL 87.13 HCA 273.29 SMA 124.82 ECC .21980 INC 2.8717 V1 30.287
RP 108.48 LAP -2.87 LOP 18.79 VP 37.195 GAP 10.26 AZP 89.84 TAL 151.11 YAP 64.39 RCA 97.39 APO 152.26 V2 34.932
RC 155.812 GL 15.59 GP -8.52 ZAL 45.56 ZAP 164.01 ETS 330.95 ZAE 126.09 ETE 185.51 ZAC 127.77 ETC 171.05 CLP-166.42

PLANETOCENTRIC CONIC

C3 25.319 VHL 5.032 DLA 35.83 RAL 56.27 RAD 6588.0 VEL 12.112 PTH 2.17 VHP 7.120 DPA 2.19 RAP 34.25 ECC 1.4167
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.07 23 15 0 4120.22 -22.68 178.58 290.90 61.50 24 23 41 3520.2 -26.31 171.16
112.93 4 51 39 3067.01 -22.67 99.57 290.89 61.48 5 42 46 2467.0 -26.30 92.15
67.07 23 15 0 4120.22 -22.68 178.58 290.90 61.50 24 23 41 3520.2 -26.31 171.16
112.93 4 51 39 3067.01 -22.67 99.57 290.89 61.48 5 42 46 2467.0 -26.30 92.15
67.07 23 15 0 4120.22 -22.68 178.58 290.90 61.50 24 23 41 3520.2 -26.31 171.16
112.93 4 51 39 3067.01 -22.67 99.57 290.89 61.48 5 42 46 2467.0 -26.30 92.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0940 TRA 3.8491 TC3-2.9097 BAU .9849 SGT 8365.7 36R 960.1 963 297.4 ST 2838.4 SR 508.7 SS 882.2
RDE .4421 RRA .1748 RC3 -.0096 FAU .02876 RRT .6974 RRF .6852 RTF .9785 CRT .9096 CRS -.8449 CST -.9906
FDE .9554 FRA 2.2164 FC3 -.9836 B8P 20802 SGB 8390.3 R23 .0002 R13 .9785 LSA 3005.8 MSA 242.8 SSA 13.8
BDE 2.1402 BRA 3.8533 BC3 2.9097 FSP -1050 SGI 8377.8 86Z 400.7 THA 3.53 EL1 2876.1 EL2 208.6 ALF 9.31

LAUNCH DATE JAN 6 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 588.260

RL 147.10 LAL -.00 LOL 105.50 VL 27.199 GAL 8.02 AZL 87.22 HCA 276.47 SMA 124.65 ECC .22644 INC 2.7791 V1 30.287
RP 108.45 LAP -2.76 LOP 21.99 VP 37.187 GAP 10.78 AZP 89.89 TAL 149.97 YAP 66.44 RCA 96.43 APO 152.88 V2 34.945
RC 157.792 GL 14.45 GP -8.20 ZAL 43.91 ZAP 165.21 ETS 329.50 ZAE 125.81 ETE 185.26 ZAC 129.60 ETC 170.85 CLP-167.64

PLANETOCENTRIC CONIC

C3 27.384 VHL 5.233 DLA 35.02 RAL 56.24 RAD 6586.1 VEL 12.197 PTH 2.19 VHP 7.424 DPA 3.22 RAP 35.94 ECC 1.4507
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.47 23 30 45 4116.07 -21.60 177.82 293.87 61.73 24 39 21 3516.1 -25.20 170.25
111.53 4 51 41 3110.02 -21.58 102.35 293.86 61.72 5 43 31 2510.0 -25.19 94.98
68.47 23 30 45 4116.07 -21.60 177.82 293.87 61.73 24 39 21 3516.1 -25.20 170.25
111.53 4 51 41 3110.02 -21.58 102.35 293.86 61.72 5 43 31 2510.0 -25.19 94.98
68.47 23 30 45 4116.07 -21.60 177.82 293.87 61.73 24 39 21 3516.1 -25.20 170.25
111.53 4 51 41 3110.02 -21.58 102.35 293.86 61.72 5 43 31 2510.0 -25.19 94.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0495 TRA 3.9573 TC3-2.6965 BAU .9872 SGT 8401.2 36R 953.7 963 280.1 ST 2746.4 SR 500.4 SS 837.9
RDE .4519 RRA .1858 RC3 -.0079 FAU .02583 RRT .6901 RRF .6786 RTF .9785 CRT .8925 CRS -.8228 CST -.9906
FDE .8699 FRA 2.2282 FC3 -.8166 B8P 20993 SGB 8425.1 R23 .0011 R13 .9785 LSA 2903.6 MSA 252.8 SSA 13.5
BDE 2.0949 BRA 3.9816 BC3 2.6965 FSP -992 SGI 8412.6 86Z 400.0 THA 3.43 EL1 2782.7 EL2 222.8 ALF 9.30

LAUNCH DATE JAN 6 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 591.759

RL 147.10 LAL -.00 LOL 105.50 VL 27.172 GAL 8.59 AZL 87.31 HCA 279.66 SMA 124.48 ECC .23364 INC 2.6833 V1 30.287
RP 108.41 LAP -2.65 LOP 25.18 VP 37.180 GAP 11.32 AZP 89.55 TAL 148.84 YAP 68.50 RCA 95.40 APO 153.57 V2 34.957
RC 159.953 GL 13.34 GP -7.90 ZAL 42.31 ZAP 168.36 ETS 327.76 ZAE 125.55 ETE 185.04 ZAC 131.47 ETC 170.80 CLP-168.85

PLANETOCENTRIC CONIC

C3 29.750 VHL 5.454 DLA 34.23 RAL 60.13 RAD 6588.2 VEL 12.293 PTH 2.21 VHP 7.747 DPA 4.22 RAP 37.66 ECC 1.4896
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.92 23 46 48 4110.99 -20.49 176.58 296.83 61.96 24 55 19 3511.0 -24.07 169.27
110.08 4 50 43 3156.49 -20.47 105.36 296.83 61.95 5 43 20 2556.5 -24.06 98.05
69.92 23 46 48 4110.99 -20.49 176.58 296.83 61.96 24 55 19 3511.0 -24.07 169.27
110.08 4 50 43 3156.49 -20.47 105.36 296.83 61.95 5 43 20 2556.5 -24.06 98.05
69.92 23 46 48 4110.99 -20.49 176.58 296.83 61.96 24 55 19 3511.0 -24.07 169.27
110.08 4 50 43 3156.49 -20.47 105.36 296.83 61.95 5 43 20 2556.5 -24.06 98.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9958 TRA 4.2847 TC3-2.4807 BAU .9867 SGT 8430.3 36R 947.2 963 264.0 ST 2658.8 SR 491.6 SS 798.4
RDE .4624 RRA .1982 RC3 -.0069 FAU .02305 RRT .6849 RRF .6714 RTF .9785 CRT .8736 CRS -.7995 CST -.9906
FDE .7924 FRA 2.2413 FC3 -.6708 B8P 21164 SGB 8453.7 R23 .0019 R13 .9785 LSA 2807.0 MSA 262.5 SSA 13.2
BDE 2.0487 BRA 4.2892 BC3 2.4807 FSP -937 SGI 8441.4 86Z 398.0 THA 3.35 EL1 2693.5 EL2 236.1 ALF 9.25

LAUNCH DATE JAN 6 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 597.184

RL 147.10 LAL -.00 LOL 105.50 VL 27.146 GAL 9.20 AZL 87.41 HCA 282.86 SMA 124.32 ECC .24146 INC 2.5897 V1 30.287
RP 108.37 LAP -2.52 LOP 28.37 VP 37.173 GAP 11.90 AZP 89.42 TAL 147.72 YAP 70.57 RCA 94.30 APO 154.34 V2 34.970
RC 162.097 GL 12.27 GP -7.63 ZAL 40.77 ZAP 167.47 ETS 325.65 ZAE 125.30 ETE 184.85 ZAC 133.36 ETC 170.32 CLP-170.03

PLANETOCENTRIC CONIC

C3 32.465 VHL 5.698 DLA 33.43 RAL 61.94 RAD 6588.3 VEL 12.403 PTH 2.24 VHP 8.091 DPA 5.19 RAP 39.43 ECC 1.5343
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.44 0 7 13 4104.55 -19.36 175.45 299.80 62.20 1 15 37 3504.6 -22.93 168.18
108.56 4 48 39 3208.80 -19.34 108.64 299.79 62.19 5 42 6 2606.8 -22.91 101.37
71.44 0 7 13 4104.55 -19.36 175.45 299.80 62.20 1 15 37 3504.6 -22.93 168.18
108.56 4 48 39 3208.80 -19.34 108.64 299.79 62.19 5 42 6 2606.8 -22.91 101.37
110.00 5 51 40 3013.78 -24.79 98.52 302.67 65.67 6 41 54 2413.8 -27.86 88.69
110.00 4 3 23 3345.58 -14.09 116.29 298.68 58.53 4 59 8 2745.6 -18.15 109.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9455 TRA 4.6334 TC3-2.2652 BAU .9832 SGT 8454.5 36R 940.5 963 249.0 ST 2576.6 SR 482.2 SS 763.8
RDE .4734 RRA .2123 RC3 -.0063 FAU .02043 RRT .6817 RRF .6714 RTF .9786 CRT .8531 CRS -.7753 CST -.9908
FDE .7225 FRA 2.2567 FC3 -.5447 B8P 21319 SGB 8477.1 R23 .0025 R13 .9786 LSA 2716.8 MSA 271.5 SSA 12.9
BDE 2.0023 BRA 4.6382 BC3 2.2652 FSP -885 SGI 8465.1 86Z 394.8 THA 3.28 EL1 2609.5 EL2 248.4 ALF 9.15



LAUNCH DATE JAN 6 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 602.523

RL 147.10 LAL -.00 LOL 105.50 VL 27.120 GAL 9.86 AZL 87.51 HCA 286.05 SMA 124.15 ECC .24998 INC 2.4915 V1 30.287
RP 108.33 LAP -2.39 LOP 31.57 VP 37.166 GAP 12.52 AZP 89.31 TAL 146.62 TAP 72.67 RCA 93.12 APO 155.19 V2 34.983
RC 164.221 GL 11.23 GP -7.38 ZAL 39.28 ZAP 160.54 ETS 323.08 ZAE 125.05 ETE 184.68 ZAC 135.26 ETC 169.99 CLP-171.20

PLANETOCENTRIC CONIC

C3 35.585 VHL 5.983 DLA 32.65 RAL 63.66 RAD 6568.4 VEL 12.528 PTH 2.27 VHP 8.461 DPA 6.12 RAP 41.23 ECC 1.5856
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.03 0 24 13 4096.40 -18.21 174.18 302.77 62.43 1 32 30 3496.4 -21.76 166.97
106.97 4 45 23 3261.27 -18.20 112.20 302.76 62.42 5 39 44 2661.3 -21.75 104.98
73.03 0 24 13 4096.40 -18.21 174.18 302.77 62.43 1 32 30 3496.4 -21.76 166.97
106.97 4 45 23 3261.27 -18.20 112.20 302.76 62.42 5 39 44 2661.3 -21.75 104.98
110.00 6 21 43 2964.44 -26.13 93.32 306.79 67.14 7 11 7 2364.4 -28.99 85.30
110.00 3 47 3 3441.23 -10.63 121.54 298.23 57.32 4 44 25 2841.2 -14.87 114.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8992 TRA 5.0098 TC3-2.0467 BAU .9737 SGT 6478.8 SGR 535.7 SCS 235.3 ST 2504.4 SR 472.4 SS 735.2
RDE .4851 RRA .2281 RC3 -.0055 FAU .01782 RRT .6807 RRF .6711 RTF .9788 CRT .8315 CRS -.7514 CST -.9912
FDE .6618 FRA 2.2768 FC3 -.4335 B8P 21341 SGB 6498.6 R23 .0032 R13 .9788 LSA 2637.7 HSA 279.3 SSA 12.6
BDE 1.9602 BRA 5.0150 BC3 2.0467 F8P -832 SGI 6488.8 SGE 390.4 THA 3.22 EL1 2535.3 EL2 259.2 ALF 9.01

LAUNCH DATE JAN 6 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 607.761

RL 147.10 LAL -.00 LOL 105.50 VL 27.093 GAL 10.57 AZL 87.61 HCA 289.25 SMA 123.99 ECC .25927 INC 2.3900 V1 30.287
RP 108.29 LAP -2.26 LOP 34.77 VP 37.159 GAP 13.18 AZP 89.21 TAL 145.54 TAP 74.79 RCA 91.84 APO 156.13 V2 34.996
RC 166.326 GL 10.22 GP -7.15 ZAL 37.85 ZAP 169.55 ETS 319.94 ZAE 124.80 ETE 184.53 ZAC 137.18 ETC 169.62 CLP-172.37

PLANETOCENTRIC CONIC

C3 39.182 VHL 6.260 DLA 31.87 RAL 65.29 RAD 6568.5 VEL 12.671 PTH 2.30 VHP 8.858 DPA 7.03 RAP 43.06 ECC 1.6448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.73 0 42 3 4085.47 -17.06 172.72 305.73 62.67 1 50 9 3485.5 -20.59 165.55
105.27 4 40 35 3320.86 -17.04 116.11 305.72 62.66 5 35 55 2720.9 -20.57 108.94
74.73 0 42 3 4085.47 -17.06 172.72 305.73 62.67 1 50 9 3485.5 -20.59 165.55
105.27 4 40 35 3320.86 -17.04 116.11 305.72 62.66 5 35 55 2720.9 -20.57 108.94
110.00 6 45 38 2933.42 -26.94 91.26 310.60 68.11 7 34 31 2333.4 -29.66 83.14
110.00 3 36 11 3520.90 -7.67 125.81 300.11 56.59 4 34 52 2920.9 -12.01 119.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8476 TRA 5.4070 TC3-1.8381 BAU .9628 SGT 6489.7 SGR 526.0 SCS 222.3 ST 2433.4 SR 461.5 SS 709.0
RDE .4967 RRA .2452 RC3 -.0050 FAU .01547 RRT .6808 RRF .6715 RTF .9792 CRT .8081 CRS -.7262 CST -.9917
FDE .6048 FRA 2.2975 FC3 -.3417 B8P 21470 SGB 6511.0 R23 .0035 R13 .9792 LSA 2560.3 HSA 286.2 SSA 12.3
BDE 1.9132 BRA 5.4125 BC3 1.8381 F8P -787 SGI 6499.6 SGE 384.7 THA 3.17 EL1 2462.1 EL2 268.7 ALF 8.82

LAUNCH DATE JAN 6 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 612.881

RL 147.10 LAL -.00 LOL 105.50 VL 27.087 GAL 11.33 AZL 87.72 HCA 292.45 SMA 123.82 ECC .26944 INC 2.2844 V1 30.287
RP 108.24 LAP -2.11 LOP 37.97 VP 37.153 GAP 13.90 AZP 89.13 TAL 144.49 TAP 76.94 RCA 90.46 APO 157.18 V2 35.013
RC 168.410 GL 9.25 GP -6.95 ZAL 36.49 ZAP 170.52 ETS 316.06 ZAE 124.54 ETE 184.40 ZAC 139.10 ETC 169.18 CLP-173.53

PLANETOCENTRIC CONIC

C3 43.339 VHL 6.583 DLA 31.10 RAL 66.84 RAD 6568.6 VEL 12.834 PTH 2.34 VHP 9.287 DPA 7.91 RAP 44.91 ECC 1.7133
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.57 1 0 58 4070.89 -15.90 171.00 308.68 62.91 2 8 48 3470.9 -19.40 163.86
103.43 4 34 0 3386.32 -15.88 120.44 308.68 62.91 5 30 26 2786.3 -19.39 113.31
76.57 1 0 58 4070.89 -15.90 171.00 308.68 62.91 2 8 48 3470.9 -19.40 163.86
103.43 4 34 0 3386.32 -15.88 120.44 308.68 62.91 5 30 26 2786.3 -19.39 113.31
110.00 7 6 11 2912.29 -27.47 89.85 314.25 68.80 7 54 43 2312.3 -30.09 81.64
110.00 3 27 57 3592.92 -4.95 129.61 302.15 56.13 4 27 50 2992.9 -9.37 123.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7963 TRA 5.8320 TC3-1.6348 BAU .9472 SGT 6497.3 SGR 517.5 SCS 210.2 ST 2368.7 SR 449.9 SS 687.0
RDE .5086 RRA .2638 RC3 -.0045 FAU .01320 RRT .6822 RRF .6733 RTF .9797 CRT .7836 CRS -.7011 CST -.9922
FDE .5533 FRA 2.3216 FC3 -.2637 B8P 21584 SGB 6517.9 R23 .0037 R13 .9797 LSA 2490.0 HSA 291.5 SSA 11.9
BDE 1.8669 BRA 5.8379 BC3 1.6348 F8P -745 SGI 6507.0 SGE 377.8 THA 3.12 EL1 2395.2 EL2 276.4 ALF 8.58

LAUNCH DATE JAN 6 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 617.880

RL 147.10 LAL -.00 LOL 105.50 VL 27.041 GAL 12.16 AZL 87.83 HCA 295.85 SMA 123.66 ECC .28059 INC 2.1737 V1 30.287
RP 108.20 LAP -1.96 LOP 41.17 VP 37.146 GAP 14.87 AZP 89.06 TAL 143.49 TAP 79.14 RCA 88.96 APO 158.36 V2 35.023
RC 170.474 GL 8.31 GP -6.78 ZAL 35.19 ZAP 171.41 ETS 311.25 ZAE 124.27 ETE 184.28 ZAC 141.02 ETC 168.68 CLP-174.69

PLANETOCENTRIC CONIC

C3 48.183 VHL 6.940 DLA 30.34 RAL 68.29 RAD 6568.8 VEL 13.020 PTH 2.38 VHP 9.752 DPA 8.76 RAP 46.78 ECC 1.7926
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.82 1 21 37 4050.36 -14.73 168.84 311.62 63.17 2 29 7 3450.4 -18.21 161.75
101.38 4 24 56 3459.85 -14.72 123.34 311.61 63.16 5 22 36 2859.9 -18.20 118.25
78.82 1 21 37 4050.36 -14.73 168.84 311.62 63.17 2 29 7 3450.4 -18.21 161.75
101.38 4 24 56 3459.85 -14.72 123.34 311.61 63.16 5 22 36 2859.9 -18.20 118.25
110.00 7 24 25 2897.84 -27.82 88.87 317.79 69.28 8 12 43 2297.8 -30.38 80.61
110.00 3 21 18 3660.36 -2.39 133.15 304.30 55.89 4 22 18 3060.4 -6.85 128.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7460 TRA 6.2889 TC3-1.4380 BAU .9259 SGT 6500.5 SGR 508.3 SCS 199.0 ST 2310.6 SR 437.3 SS 669.0
RDE .5205 RRA .2838 RC3 -.0037 FAU .01102 RRT .6848 RRF .6762 RTF .9803 CRT .7584 CRS -.6765 CST -.9929
FDE .5074 FRA 2.3501 FC3 -.1981 B8P 21668 SGB 6520.4 R23 .0037 R13 .9803 LSA 2427.1 HSA 295.2 SSA 11.6
BDE 1.8219 BRA 6.2933 BC3 1.4380 F8P -704 SGI 6509.9 SGE 369.9 THA 3.08 EL1 2334.7 EL2 282.1 ALF 8.29

LAUNCH DATE JAN 7 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 18 1969

HELIOCENTRIC CONIC

DISTANCE 150.811

RL 147.10 LAL -.00 LOL 106.52 VL 20.978 GAL 9.38 AZL 85.96 HCA 57.14 SMA 97.27 ECC .53100 INC 4.0369 V1 30.287
RP 107.59 LAP 3.39 LOP 163.60 VP 33.207 GAP -31.55 AZP 87.81 TAL 171.51 TAP 228.65 RCA 45.62 APO 148.93 V2 35.222
RC 51.811 GL 8.12 GP 3.04 ZAL 70.87 ZAP 21.83 ETS 188.72 ZAE 157.25 ETE 199.02 ZAC 98.76 ETC 166.19 CLP 21.63

PLANETOCENTRIC CONIC

C3 106.497 VHL 10.320 DLA 21.11 RAL 30.67 RAD 8570.0 VEL 15.094 PTH 2.71 VHP 18.856 DPA 1.91 RAP 4.85 ECC 2.7527
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 15 39 3344.02 -23.77 120.85 290.05 74.15 4 11 23 2744.0 -25.72 112.52
90.00 21 18 54 4536.48 10.68 190.98 276.92 63.62 22 34 31 3936.5 7.05 184.18
100.00 4 51 16 3035.73 -25.93 98.84 290.72 74.58 5 41 52 2435.7 -27.79 90.33
100.00 22 25 59 4320.01 12.67 174.04 275.89 62.70 23 37 59 3720.0 8.91 167.27
110.00 6 29 38 2727.98 -31.33 78.90 292.36 75.56 7 15 6 2128.0 -32.99 68.07
110.00 23 4 6 4200.51 17.58 162.22 273.12 60.20 24 14 6 3600.5 15.48 155.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4780 TRA-1.2812 TC3 -.0918 BAU .1370 SGT 829.0 SCR 437.9 SCS 39.0 ST 349.6 SR 414.9 SS 319.2
RDE -.7439 RRA .2230 RC3 -.0290 FAU .01547 RRT .0530 RRF -.0534 RTF -.6564 CRT .6897 CRS .8119 CST .9809
FDE .3050 FRA .5304 FC3 -.1258 BSP 2255 SGB 937.5 R23 -.0072 R13 -.6566 LSA 588.0 HSA 224.4 SSA 13.7
BDE .8831 BRA 1.3005 BC3 .0963 FSP -84 SGI 829.4 SGT 437.1 THA 2.22 EL1 500.3 EL2 209.9 ALF 52.01

LAUNCH DATE JAN 7 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC

DISTANCE 156.938

RL 147.10 LAL -.00 LOL 106.52 VL 21.521 GAL 8.95 AZL 86.09 HCA 60.38 SMA 98.95 ECC .50526 INC 3.9051 V1 30.287
RP 107.61 LAP 3.39 LOP 166.84 VP 33.545 GAP -29.97 AZP 88.07 TAL 171.02 TAP 231.40 RCA 48.95 APO 148.94 V2 35.215
RC 50.118 GL 8.52 GP 3.16 ZAL 70.18 ZAP 20.30 ETS 189.77 ZAE 158.84 ETE 200.68 ZAC 100.35 ETC 166.10 CLP 20.07

PLANETOCENTRIC CONIC

C3 95.457 VHL 9.770 DLA 21.74 RAL 31.23 RAD 8589.9 VEL 14.724 PTH 2.66 VHP 18.015 DPA 2.71 RAP 6.32 ECC 2.5710
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 10 7 3348.96 -23.68 120.98 289.02 74.00 4 5 56 2749.0 -25.65 112.87
90.00 21 28 57 4484.90 9.10 188.01 276.28 63.07 22 43 42 3884.9 5.42 181.27
100.00 4 46 40 3037.62 -25.89 98.77 289.71 74.52 5 37 18 2437.6 -27.77 90.47
100.00 22 35 9 4271.47 11.14 171.25 275.18 62.08 23 46 17 3671.5 7.32 164.55
110.00 6 28 42 2724.89 -31.58 78.86 291.37 75.70 7 12 7 2124.7 -33.03 67.82
110.00 23 11 33 4157.17 16.10 159.73 272.33 59.43 24 20 50 3557.2 11.92 153.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4748 TRA-1.2705 TC3 -.0912 BAU .1232 SGT 867.5 SCR 441.8 SCS 42.6 ST 368.0 SR 419.4 SS 335.0
RDE -.7121 RRA .2054 RC3 -.0315 FAU .01593 RRT .0807 RRF -.0835 RTF -.6763 CRT .6927 CRS .8148 CST .9808
FDE .3175 FRA .5683 FC3 -.1445 BSP 2417 SGB 973.5 R23 -.0083 R13 -.6767 LSA 608.9 HSA 229.5 SSA 13.9
BDE .8558 BRA 1.2870 BC3 .0965 FSP -94 SGI 868.1 SGT 440.5 THA 2.38 EL1 514.3 EL2 216.5 ALF 50.36

LAUNCH DATE JAN 7 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC

DISTANCE 163.327

RL 147.10 LAL -.00 LOL 106.52 VL 22.026 GAL 8.52 AZL 86.22 HCA 63.62 SMA 100.60 ECC .48060 INC 3.7815 V1 30.287
RP 107.64 LAP 3.39 LOP 170.09 VP 33.863 GAP -28.47 AZP 88.32 TAL 170.56 TAP 234.18 RCA 52.25 APO 148.94 V2 35.207
RC 48.721 GL 8.93 GP 3.29 ZAL 69.58 ZAP 18.79 ETS 191.00 ZAE 180.59 ETE 202.68 ZAC 101.94 ETC 163.99 CLP 18.51

PLANETOCENTRIC CONIC

C3 85.616 VHL 9.253 DLA 22.34 RAL 31.72 RAD 8569.7 VEL 14.386 PTH 2.61 VHP 17.207 DPA 3.53 RAP 7.80 ECC 2.4090
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 4 12 3353.12 -23.60 121.26 287.83 73.88 4 0 6 2753.1 -25.59 113.16
90.00 21 38 44 4432.66 7.48 185.03 275.51 62.61 22 52 37 3832.7 3.75 178.34
100.00 4 41 48 3038.53 -25.88 98.83 288.54 74.49 5 32 25 2438.5 -27.75 90.53
100.00 22 43 51 4222.48 9.56 168.47 274.39 61.54 23 54 14 3622.5 5.69 161.82
110.00 6 23 31 2720.22 -31.46 76.33 290.23 75.88 7 8 51 2120.2 -33.08 67.48
110.00 23 18 38 4113.56 14.57 157.28 271.45 58.73 24 27 10 3513.6 10.32 150.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4745 TRA-1.2590 TC3 -.0892 BAU .1093 SGT 907.7 SCR 444.8 SCS 46.6 ST 387.7 SR 423.3 SS 351.6
RDE -.6809 RRA .1883 RC3 -.0341 FAU .01643 RRT .0695 RRF -.0728 RTF -.6954 CRT .6967 CRS .8182 CST .9809
FDE .3308 FRA .5663 FC3 -.1662 BSP 2581 SGB 1010.7 R23 -.0094 R13 -.6957 LSA 631.0 HSA 234.0 SSA 14.1
BDE .8299 BRA 1.2730 BC3 .0955 FSP -105 SGI 908.4 SGT 443.2 THA 2.56 EL1 529.1 EL2 222.5 ALF 48.60

LAUNCH DATE JAN 7 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC

DISTANCE 169.773

RL 147.10 LAL -.00 LOL 106.52 VL 22.494 GAL 8.10 AZL 86.34 HCA 66.85 SMA 102.21 ECC .45703 INC 3.6648 V1 30.287
RP 107.66 LAP 3.37 LOP 173.33 VP 34.181 GAP -27.04 AZP 88.36 TAL 170.15 TAP 237.00 RCA 55.50 APO 148.93 V2 35.198
RC 47.437 GL 9.35 GP 3.43 ZAL 69.08 ZAP 17.30 ETS 192.47 ZAE 182.48 ETE 205.16 ZAC 103.53 ETC 165.85 CLP 16.97

PLANETOCENTRIC CONIC

C3 76.838 VHL 8.768 DLA 22.91 RAL 32.12 RAD 8569.5 VEL 14.078 PTH 2.57 VHP 16.431 DPA 4.36 RAP 9.28 ECC 2.2646
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 57 55 3356.59 -23.54 121.50 286.51 73.79 3 53 52 2756.6 -25.54 113.40
90.00 21 48 14 4379.86 5.81 182.05 274.68 62.24 23 1 14 3779.9 2.05 173.39
100.00 4 36 34 3038.51 -25.88 98.83 287.24 74.49 5 27 13 2438.5 -27.75 90.53
100.00 22 52 16 4173.17 7.95 165.89 273.52 61.09 24 1 49 3573.2 4.04 159.10
110.00 6 20 6 2714.81 -31.55 75.92 288.93 76.10 7 5 20 2114.6 -33.14 67.06
110.00 23 25 14 4069.84 13.01 154.85 270.50 58.11 24 33 4 3469.8 8.70 148.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4772 TRA-1.2487 TC3 -.0861 BAU .0962 SGT 951.5 SCR 448.9 SCS 50.9 ST 409.8 SR 426.6 SS 369.1
RDE -.6503 RRA .1719 RC3 -.0367 FAU .01698 RRT .0805 RRF -.0835 RTF -.7130 CRT .7026 CRS .8221 CST .9813
FDE .3452 FRA .6047 FC3 -.1913 BSP 2701 SGB 1051.2 R23 -.0101 R13 -.7135 LSA 655.3 HSA 237.7 SSA 14.4
BDE .8068 BRA 1.2605 BC3 .0936 FSP -118 SGI 952.4 SGT 445.0 THA 2.77 EL1 545.9 EL2 227.9 ALF 46.64

LAUNCH DATE JAN 7 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC

DISTANCE 176.269

RL 147.10 LAL -.00 LOL 106.52 VL 22.930 GAL 7.68 AZL 86.45 HCA 70.09 SMA 103.79 ECC .43455 INC 3.5537 V1 30.287  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.439 GAP -25.67 AZP 88.79 TAL 169.77 TAP 239.86 RCA 58.69 APO 148.90 V2 35.189  
 RC 46.274 GL 9.76 GP 3.59 ZAL 68.63 ZAP 15.83 ETS 194.23 ZAE 164.50 ETE 208.34 ZAC 105.12 ETC 165.68 CLP 15.43

PLANETOCENTRIC CONIC

C3 69.003 VHL 8.307 DLA 23.46 RAL 32.44 RAD 6569.3 VEL 13.797 PTH 2.52 VHP 15.684 DPA 5.20 RAP 10.77 ECC 2.1356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 15 3359.43 -23.48 121.69 285.04 73.70 3 47 14 2759.4 -25.49 113.59  
 90.00 21 57 26 4326.63 4.12 179.05 273.78 61.96 23 9 33 3726.6 .33 172.42  
 100.00 4 31 4 3037.58 -25.89 98.76 285.79 74.52 5 21 42 2437.6 -27.77 90.46  
 100.00 23 0 18 4123.71 6.31 162.94 272.57 60.72 24 9 2 3523.7 2.37 156.37  
 110.00 6 18 27 2707.91 -31.66 75.43 287.50 76.38 7 1 35 2107.9 -33.21 66.55  
 110.00 23 31 25 4026.14 11.43 152.45 269.48 57.56 24 38 31 3426.1 7.07 146.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4784 TRA-1.2354 TC3 -.0799 BAU .0820 SGT 994.7 SGR 448.5 SCS 55.7 ST 432.0 SR 429.4 SS 387.2  
 RDE -.6205 RRA .1560 RC3 -.0391 FAU .01760 RRT .0917 RRF -.0953 RTF -.7305 CRT .7086 CRS .8263 CST .9815  
 FDE .3603 FRA .6232 FC3 -.2209 BSP 2869 SGB 1091.1 R23 -.0115 R13 -.7309 LSA 680.2 MSA 240.7 SSA 14.6  
 BDE .7835 BRA 1.2452 BC3 .0889 FSP -129 SGT 995.8 SGR 448.1 THA 2.96 EL1 563.0 EL2 232.5 ALF 44.76

LAUNCH DATE JAN 7 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

DISTANCE 182.811

RL 147.10 LAL -.00 LOL 106.52 VL 23.334 GAL 7.26 AZL 86.55 HCA 73.32 SMA 105.33 ECC .41315 INC 3.4470 V1 30.287  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.700 GAP -24.37 AZP 89.01 TAL 169.44 TAP 242.76 RCA 61.81 APO 148.85 V2 35.179  
 RC 45.244 GL 10.18 GP 3.76 ZAL 68.28 ZAP 14.38 ETS 196.38 ZAE 166.63 ETE 212.60 ZAC 106.70 ETC 165.49 CLP 13.89

PLANETOCENTRIC CONIC

C3 62.009 VHL 7.875 DLA 23.98 RAL 32.67 RAD 6569.2 VEL 13.541 PTH 2.48 VHP 14.966 DPA 6.06 RAP 12.25 ECC 2.0205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 13 3361.67 -23.44 121.84 283.43 73.64 3 40 15 2761.7 -25.46 113.75  
 90.00 22 6 18 4273.15 2.40 178.06 272.78 61.78 23 17 31 3673.1 -1.39 169.43  
 100.00 4 25 18 3035.76 -25.93 98.84 284.21 74.57 5 15 54 2435.8 -27.79 90.33  
 100.00 23 7 54 4074.29 4.66 160.20 271.53 60.44 24 15 49 3474.3 .69 153.66  
 110.00 6 12 35 2700.14 -31.78 74.86 285.93 76.69 6 57 35 2100.1 -33.28 65.95  
 110.00 23 37 7 3982.68 9.83 150.10 268.37 57.10 24 43 30 3382.7 5.43 143.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4804 TRA-1.2211 TC3 -.0707 BAU .0879 SGT 1039.3 SGR 449.4 SCS 61.0 ST 455.3 SR 431.7 SS 406.2  
 RDE -.5915 RRA .1406 RC3 -.0413 FAU .01829 RRT .1044 RRF -.1086 RTF -.7472 CRT .7155 CRS .8310 CST .9819  
 FDE .3764 FRA .6420 FC3 -.2554 BSP 3048 SGB 1132.3 R23 -.0130 R13 -.7477 LSA 706.7 MSA 242.9 SSA 14.8  
 BDE .7820 BRA 1.2291 BC3 .0819 FSP -144 SGT 1040.6 SGR 446.4 THA 3.17 EL1 581.2 EL2 236.2 ALF 42.87

LAUNCH DATE JAN 7 1969

FLIGHT TIME 82.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 189.393

RL 147.10 LAL -.00 LOL 106.52 VL 23.709 GAL 6.86 AZL 86.66 HCA 76.55 SMA 106.83 ECC .39284 INC 3.5440 V1 30.287  
 RP 107.75 LAP 3.25 LOP 183.05 VP 34.943 GAP -23.13 AZP 89.22 TAL 169.16 TAP 245.71 RCA 64.86 APO 148.80 V2 35.169  
 RC 44.357 GL 10.60 GP 3.94 ZAL 68.02 ZAP 12.96 ETS 199.06 ZAE 168.81 ETE 218.62 ZAC 108.28 ETC 165.26 CLP 12.36

PLANETOCENTRIC CONIC

C3 55.764 VHL 7.488 DLA 24.47 RAL 32.81 RAD 6569.0 VEL 13.309 PTH 2.43 VHP 14.275 DPA 6.93 RAP 13.72 ECC 1.9177  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 52 3363.33 -23.41 121.95 281.71 73.59 3 32 55 2763.3 -25.43 113.86  
 90.00 22 14 49 4219.64 .67 173.08 271.71 61.69 23 25 8 3619.6 -3.12 166.45  
 100.00 4 19 19 3033.04 -25.98 98.45 282.51 74.66 5 9 52 2433.0 -27.83 90.14  
 100.00 23 15 3 4025.17 3.01 157.49 270.41 60.25 24 22 8 3425.2 -.98 150.97  
 110.00 6 8 32 2691.31 -31.92 74.21 284.22 77.06 6 53 24 2091.3 -33.37 65.28  
 110.00 23 42 19 3939.68 8.23 147.80 267.19 56.71 24 47 59 3339.7 3.79 141.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4831 TRA-1.2056 TC3 -.0583 BAU .0541 SGT 1085.3 SGR 449.7 SCS 66.8 ST 480.0 SR 433.4 SS 426.2  
 RDE -.5833 RRA .1259 RC3 -.0431 FAU .01906 RRT .1188 RRF -.1236 RTF -.7631 CRT .7236 CRS .8362 CST .9824  
 FDE .3937 FRA .6612 FC3 -.2959 BSP 3221 SGB 1174.8 R23 -.0147 R13 -.7636 LSA 734.8 MSA 244.2 SSA 15.0  
 BDE .7421 BRA 1.2121 BC3 .0725 FSP -160 SGT 1086.9 SGR 445.9 THA 3.39 EL1 600.9 EL2 238.9 ALF 40.98

LAUNCH DATE JAN 7 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 196.010

RL 147.10 LAL -.00 LOL 106.52 VL 24.057 GAL 6.46 AZL 86.76 HCA 79.78 SMA 108.28 ECC .37360 INC 3.2438 V1 30.287  
 RP 107.79 LAP 3.19 LOP 188.28 VP 35.189 GAP -21.94 AZP 89.42 TAL 168.93 TAP 248.71 RCA 67.83 APO 148.73 V2 35.158  
 RC 43.825 GL 11.01 GP 4.15 ZAL 67.85 ZAP 11.58 ETS 202.46 ZAE 170.94 ETE 227.69 ZAC 109.84 ETC 164.99 CLP 10.82

PLANETOCENTRIC CONIC

C3 50.188 VHL 7.084 DLA 24.93 RAL 32.87 RAD 6568.8 VEL 13.098 PTH 2.39 VHP 13.810 DPA 7.81 RAP 15.19 ECC 1.8260  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 14 3364.38 -23.39 122.02 279.67 73.56 3 25 18 2764.4 -25.42 113.94  
 90.00 22 22 54 4166.40 -1.05 170.11 270.54 61.70 23 32 20 3566.4 -4.82 163.46  
 100.00 4 13 8 3029.37 -26.04 98.20 280.70 74.78 5 3 38 2429.4 -27.88 89.88  
 100.00 23 21 40 3976.64 1.36 154.83 269.20 60.14 24 27 57 3376.6 -2.62 148.30  
 110.00 6 4 21 2681.42 -32.07 73.47 282.40 77.47 6 49 2 2081.4 -35.46 64.52  
 110.00 23 46 57 3897.35 6.64 145.55 289.93 56.39 24 51 54 3297.3 2.18 139.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4881 TRA-1.1887 TC3 -.0419 BAU .0410 SGT 1132.3 SGR 449.4 SCS 73.1 ST 505.7 SR 434.7 SS 447.1  
 RDE -.5362 RRA .1117 RC3 -.0444 FAU .01991 RRT .1348 RRF -.1405 RTF -.7782 CRT .7324 CRS .8417 CST .9829  
 FDE .4123 FRA .6808 FC3 -.3435 BSP 3412 SGB 1218.2 R23 -.0166 R13 -.7788 LSA 764.5 MSA 244.7 SSA 15.1  
 BDE .7237 BRA 1.1939 BC3 .0611 FSP -178 SGT 1134.2 SGR 444.5 THA 3.62 EL1 621.9 EL2 240.7 ALF 39.14



LAUNCH DATE JAN 7 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 11 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 25.451 GAL 4.65 AZL 87.24 HCA 95.89 SMA 114.74 ECC .29259 INC 2.7609 V1 30.287  
 RP 107.97 LAP 2.75 LOP 202.42 VP 36.079 GAP -16.68 AZP 90.28 TAL 168.56 TAP 264.45 RCA 81.17 APO 148.31 V2 35.099  
 RC 42.534 GL 12.87 GP 5.56 ZAL 68.30 ZAP 6.31 ETS 243.81 ZAE 170.97 ETE 332.93 ZAC 117.26 ETC 162.99 CLP 2.99

Distance 229.448

Planetary Centric Conic: C3 30.102 VHL 5.487 DLA 26.58 RAL 31.85 RAD 6568.2 VEL 12.308 PTH 2.22 VHP 10.647 DPA 12.47 RAP 22.26 ECC 1.4934  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 59 3351.56 -23.63 121.16 269.37 73.93 2 46 51 2751.6 -25.61 113.05  
 90.00 22 53 1 3921.82 -8.82 156.34 263.30 62.98 23 58 23 3321.8 -12.37 149.46  
 100.00 3 43 3 2990.28 -26.71 95.49 270.28 76.06 4 32 53 2390.3 -28.36 87.07  
 100.00 23 43 30 3758.32 -6.01 142.81 261.78 60.66 24 46 16 3158.3 -9.87 136.16  
 110.00 5 43 20 2613.92 -32.95 68.41 271.78 80.34 6 26 54 2013.9 -33.93 59.31  
 110.00 0 3 48 3707.45 -1.59 135.60 258.42 55.82 1 5 34 3107.5 -5.07 129.38

Differential Corrections: TDE -.3080 TRA-1.0890 TC3 .1180 BAU .0495 RDE -.4175 RRA .0479 RC3 -.0347 FAU .02583 FDE .5295 FRA .7905 FC3 -.7433 B8P 4355 BDE .6578 BRA 1.0901 BC3 .1230 F8P -304

Mid-Course Execution Accuracy: SGT 1383.9 SGR 441.3 S63 116.7 RRT .2542 RRF -.2659 RTF -.8417 SGB 1452.6 R23 -.0307 R13 -.8428 S61 1388.9 S62 423.2 THA 5.11

Orbit Determination Accuracy: ST 653.4 SR 436.4 S8 569.4 CRT .7888 CRS .8755 CST .9868 LSA 941.6 MSA 233.9 SSA 16.1 EL1 750.2 EL2 233.6 ALF 31.13

LAUNCH DATE JAN 7 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 13 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 25.670 GAL 4.33 AZL 87.34 HCA 99.11 SMA 115.86 ECC .27925 INC 2.6636 V1 30.287  
 RP 108.01 LAP 2.63 LOP 203.64 VP 36.222 GAP -15.76 AZP 90.42 TAL 168.65 TAP 267.75 RCA 83.51 APO 148.22 V2 35.086  
 RC 42.853 GL 13.16 GP 5.95 ZAL 68.65 ZAP 6.10 ETS 259.25 ZAE 168.69 ETE 342.75 ZAC 118.63 ETC 162.43 CLP 1.37

Distance 236.176

Planetary Centric Conic: C3 27.287 VHL 5.224 DLA 26.74 RAL 31.40 RAD 6568.1 VEL 12.193 PTH 2.19 VHP 10.121 DPA 13.46 RAP 23.59 ECC 1.4491  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 44 57 3341.21 -23.82 120.46 267.12 74.23 2 40 39 2741.2 -25.76 112.33  
 90.00 22 55 28 3883.11 -10.01 154.12 261.53 63.37 24 0 12 3283.1 -13.50 147.18  
 100.00 3 38 18 2975.82 -26.94 94.47 268.02 76.54 4 27 54 2375.8 -28.53 86.03  
 100.00 23 44 49 3723.74 -7.16 140.89 260.01 60.90 24 46 53 3123.7 -10.98 134.19  
 110.00 5 39 44 2593.85 -33.15 67.03 269.43 81.13 6 23 0 1993.8 -34.02 57.90  
 110.00 0 3 48 3676.48 -1.77 133.99 256.89 55.86 1 5 5 3076.5 -6.24 127.75

Differential Corrections: TDE -.5126 TRA-1.0661 TC3 .1708 BAU .0630 RDE -.3977 RRA .0362 RC3 -.0268 FAU .02748 FDE .5587 FRA .8159 FC3 -.8718 B8P 4552 BDE .6488 BRA 1.0667 BC3 .1727 F8P -339

Mid-Course Execution Accuracy: SGT 1436.1 SGR 439.4 S63 128.4 RRT .2885 RRF -.3020 RTF -.8522 SGB 1501.8 R23 -.0348 R13 -.8535 S61 1442.2 S62 418.9 THA 5.51

Orbit Determination Accuracy: ST 685.9 SR 436.4 S8 597.4 CRT .8018 CRS .8831 CST .9877 LSA 982.3 MSA 229.4 SSA 16.3 EL1 779.9 EL2 229.4 ALF 29.87

LAUNCH DATE JAN 7 1969 FLIGHT TIME 98.00 ARRIVAL DATE APR 15 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 25.873 GAL 4.02 AZL 87.44 HCA 102.32 SMA 116.93 ECC .26680 INC 2.5646 V1 30.287  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.353 GAP -14.86 AZP 90.55 TAL 168.78 TAP 271.10 RCA 85.73 APO 148.12 V2 35.073  
 RC 43.347 GL 13.41 GP 6.38 ZAL 69.07 ZAP 6.39 ETS 274.89 ZAE 166.30 ETE 349.36 ZAC 119.94 ETC 161.81 CLP -.29

Distance 242.908

Planetary Centric Conic: C3 24.778 VHL 4.978 DLA 26.84 RAL 30.88 RAD 6568.0 VEL 12.089 PTH 2.16 VHP 9.617 DPA 14.48 RAP 24.88 ECC 1.4078  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 40 19 3325.93 -24.10 119.43 264.86 74.67 2 35 45 2725.9 -25.98 111.26  
 90.00 22 55 59 3850.67 -10.99 152.24 259.65 63.74 24 0 10 3250.7 -14.43 145.25  
 100.00 3 34 29 2957.91 -27.22 93.22 265.73 77.15 4 23 47 2357.9 -28.72 84.73  
 100.00 23 44 31 3693.92 -8.14 139.22 258.14 61.14 24 46 5 3093.9 -11.93 132.48  
 110.00 5 38 36 2575.76 -33.35 65.50 267.03 82.02 6 19 32 1975.8 -34.09 56.34  
 110.00 0 2 48 3648.83 -2.83 132.54 254.88 55.92 1 3 37 3048.8 -7.28 126.29

Differential Corrections: TDE -.5152 TRA-1.0416 TC3 .2313 BAU .0768 RDE -.3793 RRA .0247 RC3 -.0157 FAU .02929 FDE .5900 FRA .8432 FC3-1.0235 B8P 4767 BDE .6398 BRA 1.0419 BC3 .2318 F8P -378

Mid-Course Execution Accuracy: SGT 1486.7 SGR 438.0 S63 141.5 RRT .3263 RRF -.3428 RTF -.8620 SGB 1549.9 R23 -.0403 R13 -.8635 S61 1494.1 S62 412.0 THA 5.95

Orbit Determination Accuracy: ST 717.1 SR 436.7 S8 626.5 CRT .8143 CRS .8909 CST .9884 LSA 1023.1 MSA 224.6 SSA 16.5 EL1 809.0 EL2 224.6 ALF 28.81

LAUNCH DATE JAN 7 1969 FLIGHT TIME 100.00 ARRIVAL DATE APR 17 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 26.059 GAL 3.73 AZL 87.54 HCA 105.53 SMA 117.94 ECC .25519 INC 2.4632 V1 30.287  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.474 GAP -14.00 AZP 90.66 TAL 168.97 TAP 274.30 RCA 87.84 APO 148.03 V2 35.060  
 RC 44.011 GL 13.61 GP 6.86 ZAL 69.56 ZAP 7.14 ETS 288.51 ZAE 163.93 ETE 354.19 ZAC 121.17 ETC 161.12 CLP -1.98

Distance 249.641

Planetary Centric Conic: C3 22.543 VHL 4.748 DLA 26.86 RAL 30.30 RAD 6567.9 VEL 11.997 PTH 2.14 VHP 9.132 DPA 15.52 RAP 26.12 ECC 1.3710  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 37 29 3304.52 -24.48 117.97 262.60 75.31 2 32 34 2704.5 -26.26 109.76  
 90.00 22 54 11 3625.84 -11.74 150.80 257.65 64.04 23 57 57 3225.8 -15.13 143.76  
 100.00 3 31 49 2935.98 -27.54 91.67 263.42 77.90 4 20 45 2336.0 -28.93 83.14  
 100.00 23 42 33 3689.62 -8.94 137.86 258.18 61.36 24 43 42 3069.6 -12.69 131.08  
 110.00 5 34 5 2553.39 -33.55 63.78 264.59 83.02 6 16 38 1953.4 -34.15 54.59  
 110.00 0 0 42 3624.97 -3.74 131.29 253.00 56.00 1 1 7 3025.0 -8.17 125.02

Differential Corrections: TDE -.5194 TRA-1.0172 TC3 .3014 BAU .0908 RDE -.3623 RRA .0133 RC3 -.0005 FAU .03133 FDE .6231 FRA .8724 FC3-1.2031 B8P 4947 BDE .6333 BRA 1.0173 BC3 .3014 F8P -422

Mid-Course Execution Accuracy: SGT 1538.8 SGR 437.6 S63 156.1 RRT .3701 RRF -.3885 RTF -.8713 SGB 1599.8 R23 -.0453 R13 -.8730 S61 1547.9 S62 404.2 THA 6.45

Orbit Determination Accuracy: ST 750.5 SR 437.3 S8 656.3 CRT .8283 CRS .8987 CST .9895 LSA 1066.3 MSA 218.8 SSA 16.7 EL1 840.6 EL2 218.8 ALF 27.81

LAUNCH DATE JAN 7 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 19 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 26.231 GAL 3.45 AZL 87.64 HCA 108.74 SMA 118.89 ECC .24441 INC 2.3587 V1 30.287  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.584 GAP -13.18 AZP 90.76 TAL 169.21 TAP 277.95 RCA 89.83 APO 147.94 V2 35.047  
 RC 44.838 GL 13.75 GP 7.41 ZAL 70.12 ZAP 8.28 ETS 299.16 ZAE 161.64 ETE 357.96 ZAC 122.33 ETC 160.35 CLP -3.72

Distance 256.372

Planetocentric Conic: C3 20.551 VHL 4.937 DLA 26.79 RAL 29.67 RAD 6567.8 VEL 11.913 PTH 2.12 VHP 8.667 DPA 16.60 RAP 27.29 ECC 1.3362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 36 47 3276.15 -24.96 116.03 260.37 76.17 2 31 24 2676.1 -26.62 107.76  
 90.00 22 49 50 3809.62 -12.22 149.85 255.54 64.25 23 53 20 3209.6 -15.58 142.79  
 100.00 3 30 32 2909.48 -27.91 89.78 261.10 78.83 4 19 1 2309.5 -29.16 81.20  
 100.00 23 38 47 3651.52 -9.53 136.84 254.14 61.53 24 39 38 3051.5 -13.26 130.03  
 110.00 5 32 18 2528.44 -33.74 61.86 262.11 84.14 6 14 27 1928.4 -34.18 52.65  
 110.00 23 53 30 3605.33 -4.48 130.26 251.07 56.08 24 53 35 3005.3 -8.91 123.97

Differential Corrections: TDE -.5213 TRA -.9917 TC3 .3807 BAU .1047 MID-COURSE EXECUTION ACCURACY: SGT 1588.9 SGR 438.8 SCS 172.3 ORBIT DETERMINATION ACCURACY: ST 782.1 SR 438.4 SS 686.7  
 RDE -.3469 RRA .0018 RC3 .0198 FAU .03360 RRT .4181 RRF -.4394 RTF -.8799 CRT .8415 CRS .9065 CST .9903  
 FDE .6582 FRA .9040 FC3-1.4155 B3P 5135 SGB 1648.4 R23 -.0519 R13 -.8819 LSA 1109.0 MSA 212.8 SSA 16.9  
 BDE .6262 BRA .9917 BC3 .3812 F3P -471 SGT 1600.2 SGT 395.8 THA 7.02 EL1 871.0 EL2 212.7 ALF 27.00

LAUNCH DATE JAN 7 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 21 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 26.390 GAL 3.18 AZL 87.75 HCA 111.95 SMA 119.78 ECC .23441 INC 2.2503 V1 30.287  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.685 GAP -12.38 AZP 90.84 TAL 169.49 TAP 281.43 RCA 91.70 APO 147.86 V2 35.033  
 RC 45.818 GL 13.81 GP 8.02 ZAL 70.75 ZAP 9.72 ETS 307.09 ZAE 159.48 ETE 1.11 ZAC 123.40 ETC 159.51 CLP -5.50

Distance 263.098

Planetocentric Conic: C3 18.777 VHL 4.333 DLA 26.63 RAL 29.00 RAD 6567.8 VEL 11.839 PTH 2.10 VHP 8.222 DPA 17.72 RAP 28.39 ECC 1.3090  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 22 3240.50 -25.51 113.57 258.15 77.28 2 32 22 2640.5 -27.01 105.22  
 90.00 22 42 53 3802.43 -12.43 149.43 253.35 64.35 23 46 15 3202.4 -15.78 142.35  
 100.00 3 30 48 2878.04 -28.30 87.53 258.78 79.96 4 18 46 2278.0 -29.40 78.89  
 100.00 23 33 8 3840.13 -9.90 136.19 252.03 61.65 24 33 48 3040.1 -13.61 129.37  
 110.00 5 31 25 2500.62 -33.91 59.71 259.62 85.41 6 13 6 1900.6 -34.17 50.47  
 110.00 23 49 0 3590.31 -5.05 129.48 249.09 56.15 24 48 50 2990.3 -9.47 123.16

Differential Corrections: TDE -.5223 TRA -.9665 TC3 .4677 BAU .1180 MID-COURSE EXECUTION ACCURACY: SGT 1638.5 SGR 442.4 SCS 190.4 ORBIT DETERMINATION ACCURACY: ST 813.0 SR 440.4 SS 717.7  
 RDE -.3330 RRA -.0100 RC3 .0461 FAU .03812 RRT .4710 RRF -.4954 RTF -.8876 CRT .8547 CRS .9142 CST .9912  
 FDE .6952 FRA .9390 FC3-1.6652 B3P 5314 SGB 1697.2 R23 -.0596 R13 -.8900 LSA 1152.0 MSA 206.4 SSA 17.1  
 BDE .6194 BRA .9665 BC3 .4699 F3P -526 SGT 1652.5 SGT 387.0 THA 7.67 EL1 901.3 EL2 206.2 ALF 26.32

LAUNCH DATE JAN 7 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 23 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 26.535 GAL 2.93 AZL 87.86 HCA 115.15 SMA 120.62 ECC .22517 INC 2.1369 V1 30.287  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.777 GAP -11.62 AZP 90.91 TAL 169.81 TAP 284.96 RCA 93.46 APO 147.78 V2 35.020  
 RC 46.944 GL 13.79 GP 8.72 ZAL 71.43 ZAP 11.38 ETS 312.89 ZAE 157.47 ETE 3.88 ZAC 124.36 ETC 158.58 CLP -7.34

Distance 269.817

Planetocentric Conic: C3 17.197 VHL 4.147 DLA 26.35 RAL 28.29 RAD 6567.7 VEL 11.772 PTH 2.08 VHP 7.797 DPA 18.89 RAP 29.42 ECC 1.2830  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 42 11 3197.81 -26.12 110.59 255.95 78.66 2 35 29 2597.8 -27.42 102.16  
 90.00 22 33 27 3804.14 -12.38 149.53 251.09 64.33 23 36 51 3204.1 -15.73 142.46  
 100.00 3 32 44 2841.44 -28.71 84.88 256.47 81.29 4 20 5 2241.4 -29.61 76.20  
 100.00 23 25 36 3635.74 -10.04 135.94 249.88 61.70 24 26 11 3035.7 -13.74 129.11  
 110.00 5 31 33 2469.65 -34.05 57.30 257.12 86.82 6 12 43 1869.6 -34.12 48.05  
 110.00 23 43 16 3580.30 -5.43 128.95 247.08 56.20 24 42 56 2980.3 -9.84 122.63

Differential Corrections: TDE -.5211 TRA -.9402 TC3 .5649 BAU .1312 MID-COURSE EXECUTION ACCURACY: SGT 1685.1 SGR 449.3 SCS 210.6 ORBIT DETERMINATION ACCURACY: ST 841.2 SR 443.1 SS 748.0  
 RDE -.3206 RRA -.0221 RC3 .0802 FAU .03895 RRT .5276 RRF -.5555 RTF -.8949 CRT .8676 CRS .9217 CST .9920  
 FDE .7332 FRA .9771 FC3-1.9609 B3P 5489 SGB 1743.9 R23 -.0686 R13 -.8976 LSA 1193.0 MSA 199.7 SSA 17.4  
 BDE .6118 BRA .9405 BC3 .5706 F3P -587 SGT 1702.5 SGT 377.7 THA 8.43 EL1 929.7 EL2 199.4 ALF 25.84

LAUNCH DATE JAN 7 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 25 1969

Heliocentric Conic: RL 147.10 LAL -.00 LOL 106.52 VL 26.668 GAL 2.89 AZL 87.98 HCA 118.35 SMA 121.40 ECC .21664 INC 2.0175 V1 30.287  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.861 GAP -10.88 AZP 90.96 TAL 170.16 TAP 288.52 RCA 95.10 APO 147.70 V2 35.007  
 RC 48.205 GL 13.65 GP 9.52 ZAL 72.15 ZAP 13.24 ETS 317.15 ZAE 155.63 ETE 6.46 ZAC 125.20 ETC 157.56 CLP -9.25

Distance 276.525

Planetocentric Conic: C3 15.789 VHL 3.974 DLA 25.96 RAL 27.58 RAD 6567.6 VEL 11.712 PTH 2.06 VHP 7.391 DPA 20.12 RAP 30.34 ECC 1.2599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 48 7 3148.68 -26.73 107.12 253.77 80.29 2 40 36 2548.7 -27.80 98.62  
 90.00 22 21 49 3814.21 -12.08 150.12 248.81 64.19 23 25 23 3214.2 -15.46 143.06  
 100.00 3 36 23 2799.62 -29.10 81.84 254.16 82.85 4 23 3 2199.6 -29.79 73.10  
 100.00 23 16 14 3638.50 -9.95 136.10 247.70 61.67 24 16 52 3038.5 -13.66 129.27  
 110.00 5 32 51 2435.24 -34.15 54.62 254.62 88.41 6 13 26 1835.2 -33.99 45.38  
 110.00 23 36 16 3575.64 -5.61 128.70 245.08 56.22 24 35 51 2975.6 -10.01 122.38

Differential Corrections: TDE -.5154 TRA -.9124 TC3 .6754 BAU .1450 MID-COURSE EXECUTION ACCURACY: SGT 1726.7 SGR 460.7 SCS 233.1 ORBIT DETERMINATION ACCURACY: ST 863.3 SR 446.9 SS 776.4  
 RDE -.3097 RRA -.0347 RC3 .1240 FAU .04214 RRT .5862 RRF -.6182 RTF -.9022 CRT .8794 CRS .9287 CST .9927  
 FDE .7707 FRA 1.0187 FC3-2.3106 B3P 5705 SGB 1787.1 R23 -.0791 R13 -.9055 LSA 1228.9 MSA 193.2 SSA 17.5  
 BDE .6013 BRA .9130 BC3 .6867 F3P -658 SGT 1748.7 SGT 368.5 THA 9.31 EL1 952.8 EL2 192.8 ALF 25.60

LAUNCH DATE JAN 7 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 283.222

RL 147.10 LAL -.00 LOL 106.52 VL 26.790 GAL 2.47 AZL 88.11 HCA 121.55 SMA 122.13 ECC .20880 INC 1.8907 V1 30.287
RP 108.29 LAP 1.61 LOP 228.09 VP 36.937 GAP -10.17 AZP 90.99 TAL 170.55 TAP 292.10 RCA 96.63 APO 147.63 V2 34.994
RC 49.590 GL 13.39 GP 10.43 ZAL 72.92 ZAP 15.28 ETS 320.29 ZAE 153.97 ETE 8.95 ZAC 125.89 ETC 156.44 CLP -11.23

PLANETOCENTRIC CONIC

C3 14.536 VHL 3.813 DLA 25.43 RAL 26.87 RAD 6567.6 VEL 11.659 PTH 2.05 VHP 7.005 DPA 21.42 RAP 31.15 ECC 1.2392
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 35 59 3093.78 -27.30 103.21 251.59 82.18 2 47 33 2493.8 -28.10 94.63
90.00 22 8 17 3832.01 -11.55 151.16 246.53 63.97 23 12 9 3232.0 -14.96 144.14
100.00 3 41 48 2752.64 -29.45 78.39 251.87 84.63 4 27 41 2152.6 -29.88 69.61
100.00 23 5 9 3648.39 -9.63 136.68 245.52 61.56 24 5 57 3048.4 -13.35 129.85
110.00 5 35 25 2397.15 -34.18 51.64 252.13 90.17 6 15 23 1797.1 -35.78 42.42
110.00 23 28 1 3576.64 -5.57 128.76 243.05 56.22 24 27 38 2976.6 -9.97 122.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5093 TRA -.8861 TC3 .7895 BAU .1573 SGT 1767.1 SGR 478.6 SCS 258.1 ST 884.2 SR 452.2 SS 804.3
RDE -.3004 RRA -.0484 RC3 .1792 FAU .04565 RRT .6465 RRF -.6623 RTF -.9083 CRT .8913 CRS .9356 CST .9934
FDE .8093 FRA 1.0661 FC3-2.7188 BSP 5873 SGB 1830.7 R25 -.0913 R13 -.9123 LSA 1264.2 MSA 186.2 SSA 17.8
BDE .5913 BRA .8874 BC3 .8096 FSP -736 SGI 1795.1 SGI 359.4 THA 10.35 EL1 975.6 EL2 185.8 ALF 25.49

LAUNCH DATE JAN 7 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 289.904

RL 147.10 LAL -.00 LOL 106.52 VL 26.902 GAL 2.26 AZL 88.24 HCA 124.75 SMA 122.80 ECC .20162 INC 1.7551 V1 30.287
RP 108.33 LAP 1.44 LOP 231.28 VP 37.005 GAP -9.48 AZP 91.00 TAL 170.96 TAP 295.71 RCA 98.04 APO 147.56 V2 34.980
RC 51.091 GL 12.99 GP 11.47 ZAL 73.72 ZAP 17.49 ETS 322.61 ZAE 152.49 ETE 11.48 ZAC 126.41 ETC 155.23 CLP -13.29

PLANETOCENTRIC CONIC

C3 13.420 VHL 3.863 DLA 24.75 RAL 26.18 RAD 6567.5 VEL 11.611 PTH 2.03 VHP 6.638 DPA 22.82 RAP 31.82 ECC 1.2209
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 5 40 3033.66 -27.78 98.87 249.43 84.30 2 56 14 2433.7 -28.28 90.24
90.00 21 53 8 3837.03 -10.80 152.61 244.29 63.66 22 57 25 3257.0 -14.25 145.63
100.00 3 48 59 2700.55 -29.72 74.54 249.61 86.64 4 34 0 2100.6 -29.87 65.74
100.00 22 52 30 3685.37 -9.08 137.62 243.58 61.40 23 53 36 3065.4 -12.83 130.84
110.00 5 39 24 2355.08 -34.13 48.36 249.67 92.11 6 18 39 1755.1 -33.46 39.18
110.00 23 18 34 3583.61 -5.31 129.12 241.08 56.18 24 18 18 2983.6 -9.71 122.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4896 TRA -.8599 TC3 .9118 BAU .1696 SGT 1802.7 SGR 504.6 SCS 285.9 ST 899.1 SR 458.8 SS 828.5
RDE -.2926 RRA -.0634 RC3 .2490 FAU .04958 RRT .7049 RRF -.7444 RTF -.9139 CRT .9024 CRS .9419 CST .9942
FDE .8452 FRA 1.1180 FC3-3.1982 BSP 6034 SGB 1872.0 R25 -.1054 R13 -.9187 LSA 1293.3 MSA 179.3 SSA 18.1
BDE .5789 BRA .8622 BC3 .9452 FSP -823 SGI 1838.9 SGI 350.9 THA 11.59 EL1 993.4 EL2 178.9 ALF 25.62

LAUNCH DATE JAN 7 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 296.571

RL 147.10 LAL -.00 LOL 106.52 VL 27.003 GAL 2.07 AZL 88.39 HCA 127.94 SMA 123.43 ECC .19506 INC 1.6086 V1 30.287
RP 108.38 LAP 1.27 LOP 234.47 VP 37.067 GAP -8.82 AZP 90.99 TAL 171.39 TAP 299.33 RCA 99.35 APO 147.50 V2 34.967
RC 52.697 GL 12.41 GP 12.67 ZAL 74.53 ZAP 19.88 ETS 324.31 ZAE 151.17 ETE 14.11 ZAC 126.74 ETC 153.92 CLP -15.45

PLANETOCENTRIC CONIC

C3 12.426 VHL 3.525 DLA 23.90 RAL 25.54 RAD 6567.5 VEL 11.568 PTH 2.02 VHP 6.291 DPA 24.32 RAP 32.34 ECC 1.2045
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 17 5 2988.63 -28.13 94.15 247.30 86.64 3 6 33 2368.6 -28.30 85.49
90.00 21 36 38 3888.96 -9.83 154.45 242.13 63.31 22 41 27 3289.0 -13.34 147.53
100.00 3 57 57 2643.38 -29.87 70.30 247.38 88.87 4 42 1 2043.4 -29.71 61.50
100.00 22 38 26 3689.43 -8.29 138.97 241.31 61.18 23 39 56 3089.4 -12.07 132.22
110.00 5 44 55 2308.72 -33.95 44.75 247.25 94.24 6 23 24 1708.7 -32.99 35.64
110.00 23 7 57 3598.86 -4.80 129.82 239.17 56.12 24 7 54 2996.9 -9.22 123.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4867 TRA -.8353 TC3 1.0340 BAU .1806 SGT 1833.7 SGR 541.2 SCS 316.7 ST 908.2 SR 467.1 SS 849.1
RDE -.2861 RRA -.0804 RC3 .3362 FAU .05384 RRT .7588 RRF -.8018 RTF -.9185 CRT .9127 CRS .9476 CST .9949
FDE .8781 FRA 1.1806 FC3-3.7507 BSP 6153 SGB 1911.9 R25 -.1219 R13 -.9245 LSA 1316.8 MSA 172.4 SSA 18.4
BDE .5646 BRA .8391 BC3 1.0873 FSP -917 SGI 1880.8 SGI 343.7 THA 13.07 EL1 1006.7 EL2 172.2 ALF 25.96

LAUNCH DATE JAN 7 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 303.221

RL 147.10 LAL -.00 LOL 106.52 VL 27.095 GAL 1.89 AZL 88.55 HCA 131.13 SMA 124.00 ECC .18908 INC 1.4489 V1 30.287
RP 108.42 LAP 1.09 LOP 237.66 VP 37.122 GAP -8.19 AZP 90.95 TAL 171.83 TAP 302.97 RCA 100.56 APO 147.45 V2 34.954
RC 54.398 GL 11.63 GP 14.06 ZAL 75.35 ZAP 22.48 ETS 325.53 ZAE 150.00 ETE 16.94 ZAC 126.84 ETC 152.51 CLP -17.72

PLANETOCENTRIC CONIC

C3 11.542 VHL 3.397 DLA 22.86 RAL 24.98 RAD 6567.4 VEL 11.529 PTH 2.01 VHP 5.966 DPA 25.95 RAP 32.66 ECC 1.1899
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 30 14 2898.71 -28.31 89.04 245.20 89.20 3 18 33 2298.7 -28.12 80.38
90.00 21 58 56 3927.77 -8.63 158.68 240.08 62.93 22 24 23 3327.8 -12.20 149.81
100.00 4 8 46 2581.00 -29.87 65.66 245.19 91.31 4 51 47 1981.0 -29.37 56.89
100.00 22 23 5 3720.71 -7.26 140.72 239.34 60.92 23 25 5 3120.7 -11.08 134.02
110.00 5 52 7 2257.69 -33.62 40.80 244.89 96.56 6 29 45 1657.7 -32.35 31.80
110.00 22 56 13 3616.79 -4.05 130.87 237.36 56.03 23 56 30 3016.8 -8.48 124.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4684 TRA -.8096 TC3 1.1610 BAU .1919 SGT 1855.9 SGR 591.0 SCS 350.4 ST 908.2 SR 476.8 SS 863.0
RDE -.2808 RRA -.0996 RC3 .4458 FAU .05855 RRT .8060 RRF -.8521 RTF -.9229 CRT .9224 CRS .9526 CST .9957
FDE .9041 FRA 1.2485 FC3-4.3916 BSP 6299 SGB 1947.7 R25 -.1396 R13 -.9304 LSA 1330.1 MSA 165.3 SSA 18.8
BDE .5469 BRA .8157 BC3 1.2437 FSP -1024 SGI 1918.1 SGI 338.5 THA 14.87 EL1 1012.3 EL2 165.2 ALF 26.60

LAUNCH DATE JAN 7 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 309.852

RL 147.10 LAL -.00 LOL 106.52 VL 27.179 GAL 1.73 AZL 88.73 HCA 134.32 SMA 124.53 ECC .18365 INC 1.2731 V1 30.287
RP 108.45 LAP .91 LOP 240.85 VP 37.171 GAP -7.57 AZP 90.89 TAL 172.28 TAP 306.60 RCA 101.66 APO 147.40 V2 34.942
RC 56.186 GL 10.61 GP 15.68 ZAL 76.18 ZAP 25.29 ETS 326.40 ZAE 148.95 ETE 20.07 ZAC 126.67 ETC 151.02 CLP -20.10

PLANETOCENTRIC CONIC

C3 10.755 VHL 3.280 DLA 21.58 RAL 24.50 RAD 6567.4 VEL 11.495 PTH 2.00 VHP 5.663 DPA 27.74 RAP 32.76 ECC 1.1770
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 45 15 2823.62 -28.26 83.55 243.16 91.95 3 32 18 2223.6 -27.69 74.93
90.00 21 0 9 3973.77 -7.20 159.30 238.18 62.54 22 6 23 3373.8 -10.82 152.49
100.00 4 21 34 2513.07 -29.65 60.62 243.07 93.95 5 3 27 1913.1 -28.79 51.92
100.00 22 6 31 3759.56 -5.97 142.88 237.51 60.66 23 9 11 3159.6 -9.83 136.23
110.00 6 1 10 2201.46 -33.10 36.49 242.61 99.05 6 37 51 1601.5 -31.50 27.64
110.00 22 43 25 3643.93 -3.01 132.29 235.60 55.93 23 44 9 3043.9 -7.46 126.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4453 TRA -.7624 TC3 1.2925 BAU .2039 SGT 1866.8 SGR 856.7 SG3 387.0 ST 894.7 SR 467.0 SS 865.9
RDE -.2739 RRA -.1218 RC3 .5837 FAU .06373 RRT .8450 RRF -.8937 RTF -.9271 CRT .9308 CRS .9565 CST .9964
FDE .9168 FRA 1.3253 FC3-5.1296 BSP 6459 SGB 1979.0 R23 -.1569 R13 -.9367 LSA 1327.4 MSA 158.2 SSA 19.3
BDE .5239 BRA .7919 BC3 1.4182 FSP -1144 SG1 1950.2 SG2 336.1 THA 17.08 EL1 1006.3 EL2 158.2 ALF 27.61

LAUNCH DATE JAN 7 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 316.464

RL 147.10 LAL -.00 LOL 106.52 VL 27.254 GAL 1.58 AZL 88.92 HCA 137.50 SMA 125.01 ECC .17875 INC 1.0771 V1 30.287
RP 108.49 LAP .73 LOP 244.03 VP 37.214 GAP -6.98 AZP 90.79 TAL 172.72 TAP 310.23 RCA 102.67 APO 147.36 V2 34.929
RC 58.031 GL 9.29 GP 17.57 ZAL 76.99 ZAP 28.35 ETS 326.97 ZAE 147.96 ETE 23.56 ZAC 126.19 ETC 149.45 CLP -22.62

PLANETOCENTRIC CONIC

C3 10.059 VHL 3.172 DLA 20.04 RAL 24.16 RAD 6567.4 VEL 11.465 PTH 1.99 VHP 5.384 DPA 29.73 RAP 32.59 ECC 1.1655
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 2 18 2742.76 -27.93 77.66 241.20 94.88 3 48 1 2142.8 -26.96 69.13
90.00 20 40 20 4027.62 -5.50 162.34 236.48 62.18 21 47 28 3427.6 -9.18 155.59
100.00 4 36 30 2439.02 -29.18 55.17 241.05 96.78 5 17 9 1839.0 -27.94 46.59
100.00 21 48 49 3806.59 -4.39 145.48 235.87 60.40 22 52 16 3206.6 -8.30 138.88
110.00 6 12 17 2139.35 -32.34 31.81 240.46 101.73 6 47 56 1539.4 -30.39 23.14
110.00 22 29 32 3679.02 -1.67 134.12 234.18 55.85 23 30 51 3079.0 -6.14 127.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4182 TRA -.7591 TC3 1.4094 BAU .2150 SGT 1871.0 SGR 742.4 SG3 426.4 ST 873.7 SR 497.7 SS 858.9
RDE -.2713 RRA -.1488 RC3 .7547 FAU .06914 RRT .8753 RRF -.9264 RTF -.9300 CRT .9388 CRS .9594 CST .9973
FDE .9150 FRA 1.4120 FC3-5.9511 BSP 6574 SGB 2013.0 R23 -.1750 R13 -.9424 LSA 1313.6 MSA 151.1 SSA 19.9
BDE .4985 BRA .7735 BC3 1.5988 FSP -1270 SG1 1984.3 SG2 338.5 THA 19.75 EL1 994.1 EL2 150.7 ALF 28.86

LAUNCH DATE JAN 7 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 323.056

RL 147.10 LAL -.00 LOL 106.52 VL 27.322 GAL 1.44 AZL 89.14 HCA 140.69 SMA 125.45 ECC .17434 INC .8560 V1 30.287
RP 108.53 LAP .34 LOP 247.21 VP 37.233 GAP -6.40 AZP 90.66 TAL 173.16 TAP 313.84 RCA 103.58 APO 147.32 V2 34.917
RC 59.985 GL 7.63 GP 19.78 ZAL 77.78 ZAP 31.70 ETS 327.33 ZAE 146.98 ETE 27.51 ZAC 125.36 ETC 147.82 CLP -25.29

PLANETOCENTRIC CONIC

C3 9.446 VHL 3.073 DLA 18.19 RAL 23.97 RAD 6567.3 VEL 11.438 PTH 1.98 VHP 5.132 DPA 31.95 RAP 32.09 ECC 1.1555
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 21 42 2655.11 -27.26 71.33 239.37 97.99 4 5 57 2055.1 -25.87 62.94
90.00 20 19 26 4090.43 -3.49 185.86 235.03 61.88 21 27 37 3490.4 -7.23 159.17
100.00 4 53 52 2357.90 -28.39 49.27 239.17 99.79 5 33 10 1757.9 -26.74 40.85
100.00 21 29 57 3862.88 -2.49 148.58 234.48 60.20 22 34 20 3262.9 -6.44 142.02
110.00 6 25 45 2070.42 -31.27 26.72 238.46 104.56 7 0 15 1470.4 -28.96 18.28
110.00 22 14 34 3723.11 .01 136.42 232.91 55.82 23 16 37 3123.1 -4.47 130.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3885 TRA -.7354 TC3 1.5149 BAU .2270 SGT 1862.4 SGR 852.2 SG3 467.6 ST 841.0 SR 507.2 SS 837.4
RDE -.2650 RRA -.1814 RC3 .9679 FAU .07479 RRT .8977 RRF -.9507 RTF -.9322 CRT .9465 CRS .9609 CST .9982
FDE .8912 FRA 1.5100 FC3-6.8544 BSP 6686 SGB 2048.1 R23 -.1898 R13 -.9485 LSA 1282.5 MSA 143.5 SSA 20.8
BDE .4691 BRA .7575 BC3 1.7977 FSP -1403 SG1 2018.6 SG2 346.5 THA 23.05 EL1 971.8 EL2 141.7 ALF 30.44

LAUNCH DATE JAN 7 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 329.627

RL 147.10 LAL -.00 LOL 106.52 VL 27.383 GAL 1.32 AZL 89.40 HCA 143.87 SMA 125.85 ECC .17040 INC .6030 V1 30.287
RP 108.57 LAP .36 LOP 250.39 VP 37.287 GAP -5.85 AZP 90.49 TAL 173.57 TAP 317.44 RCA 104.40 APO 147.29 V2 34.906
RC 61.981 GL 5.54 GP 22.37 ZAL 78.54 ZAP 35.36 ETS 327.54 ZAE 145.90 ETE 31.99 ZAC 124.10 ETC 146.16 CLP -28.12

PLANETOCENTRIC CONIC

C3 8.915 VHL 2.986 DLA 15.94 RAL 23.98 RAD 6567.3 VEL 11.415 PTH 1.98 VHP 4.911 DPA 34.46 RAP 31.19 ECC 1.1467
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 43 54 2559.17 -26.17 64.52 237.73 101.23 4 26 34 1959.2 -24.35 56.32
90.00 19 57 18 4183.96 -1.13 169.97 235.90 61.70 21 6 42 3564.0 -4.90 163.32
100.00 5 14 6 2268.32 -27.18 42.89 237.49 102.94 5 51 54 1668.3 -25.13 34.69
100.00 21 9 48 3930.04 -.22 152.27 235.39 60.11 22 15 18 3330.0 -4.19 145.74
110.00 6 41 59 1993.35 -29.82 21.19 238.67 107.54 7 15 12 1393.3 -27.13 13.03
110.00 21 58 24 3777.78 2.10 139.27 231.94 55.87 23 1 22 3177.8 -2.39 133.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3477 TRA -.7109 TC3 1.6034 BAU .2410 SGT 1837.1 SGR 990.2 SG3 509.1 ST 792.0 SR 511.6 SS 795.1
RDE -.2572 RRA -.2216 RC3 1.2320 FAU .08045 RRT .9132 RRF -.9679 RTF -.9339 CRT .9538 CRS .9602 CST .9990
FDE .8329 FRA 1.8166 FC3-7.8120 BSP 6837 SGB 2086.9 R23 -.1976 R13 -.9554 LSA 1225.6 MSA 136.1 SSA 21.9
BDE .4326 BRA .7447 BC3 2.0220 FSP -1542 SG1 2055.6 SG2 360.6 THA 27.11 EL1 935.8 EL2 130.4 ALF 32.35



LAUNCH DATE JAN 7 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 336.175

RL 147.10 LAL -.00 LOL 106.52 VL 27.438 GAL 1.21 AZL 89.69 HCA 147.05 SMA 126.20 ECC .16688 INC .3077 V1 30.287
RP 108.80 LAP .17 LOP 233.97 VP 37.316 GAP -5.31 AZP 90.26 TAL 173.96 TAP 321.01 RCA 105.14 APO 147.26 V2 34.894
RC 64.032 GL 2.91 GP 25.43 ZAL 79.27 ZAP 39.37 ETS 327.65 ZAE 144.58 ETE 37.02 ZAC 122.35 ETC 144.51 CLP -31.13

PLANETOCENTRIC CONIC

C3 8.469 VML 2.910 DLA 13.21 RAL 24.23 RAD 6567.3 VEL 11.396 PTH 1.97 VHP 4.727 DPA 37.30 RAP 29.78 ECC 1.1394
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 9 34 2452.84 -24.55 57.16 236.35 104.58 4 50 27 1652.8 -22.30 49.21
90.00 19 33 38 4250.75 1.68 174.81 233.17 61.73 20 44 29 3650.8 -2.12 168.18
100.00 3 37 47 2168.31 -25.47 35.95 236.07 106.21 6 13 56 1568.3 -23.00 26.02
100.00 20 48 6 4010.53 2.51 156.69 232.71 60.20 21 54 57 3410.5 -1.47 150.16
110.00 7 1 31 1906.33 -27.88 15.16 235.17 110.63 7 33 17 1306.3 -24.82 7.32
110.00 21 40 52 3645.27 4.67 142.80 231.36 56.10 22 44 57 3245.3 .19 136.59

DIFFERENTIAL CORRECTIONS

TDE -.3054 TRA -.6886 TC3 1.6493 BAU .2564
RDE -.2434 RRA -.2727 RC3 1.5511 FAU .08551
FDE .7341 FRA 1.7341 FC3-8.7413 BSP 6978
BOE .3905 BRA .7406 BC3 2.2641 FSP -1672

MID-COURSE EXECUTION ACCURACY

SGT 1795.1 SGR 1161.4 S63 548.3
RRT .9223 RRF -.9796 RTF -.9337
SGB 2138.0 R23 -.1988 R13 -.9624
SG1 2103.4 S62 383.1 THA 32.01

ORBIT DETERMINATION ACCURACY

ST 732.7 SR 507.7 SS 732.7
CRT .9624 CRS .9560 CST .9987
LSA 1146.3 MSA 129.8 SSA 23.4
EL1 884.0 EL2 114.2 ALF 34.35

LAUNCH DATE JAN 7 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 342.702

RL 147.10 LAL -.00 LOL 106.52 VL 27.486 GAL 1.11 AZL 90.04 HCA 150.22 SMA 126.52 ECC .16377 INC .0425 V1 30.287
RP 108.64 LAP -.02 LOP 256.74 VP 37.341 GAP -4.79 AZP 89.96 TAL 174.32 TAP 324.54 RCA 105.80 APO 147.24 V2 34.883
RC 66.131 GL -.40 GP 29.04 ZAL 79.97 ZAP 43.77 ETS 327.75 ZAE 142.85 ETE 42.58 ZAC 120.05 ETC 142.93 CLP -34.32

PLANETOCENTRIC CONIC

C3 8.121 VML 2.850 DLA 9.87 RAL 24.78 RAD 6567.3 VEL 11.380 PTH 1.97 VHP 4.587 DPA 40.54 RAP 27.75 ECC 1.1336
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 39 36 2335.17 -22.26 49.14 235.36 107.97 5 18 29 1733.2 -19.59 41.48
90.00 19 7 58 4354.70 5.01 180.63 232.99 62.09 20 20 33 3754.7 1.24 173.98
100.00 6 5 49 2055.12 -23.10 28.38 235.05 109.52 6 40 4 1455.1 -20.23 20.76
100.00 20 24 27 4107.99 5.79 162.06 232.56 60.62 21 32 55 3508.0 1.83 155.51
110.00 7 25 8 1806.92 -25.32 8.56 234.09 113.77 7 55 15 1206.9 -21.89 1.09
110.00 21 21 37 3928.95 7.83 147.23 231.31 56.62 22 27 6 3329.0 3.39 140.96

DIFFERENTIAL CORRECTIONS

TDE -.2388 TRA -.6864 TC3 1.6523 BAU .2760
RDE -.2194 RRA -.3381 RC3 1.9324 FAU .08965
FDE .5814 FRA 1.8549 FC3-9.5572 BSP 7184
BOE .3393 BRA .7472 BC3 2.5425 FSP -1786

MID-COURSE EXECUTION ACCURACY

SGT 1734.1 SGR 1372.4 S63 581.9
RRT .9285 RRF -.9873 RTF -.9320
SGB 2211.5 R23 -.1895 R13 -.9700
SG1 2172.7 S62 412.2 THA 37.85

ORBIT DETERMINATION ACCURACY

ST 661.8 SR 488.3 SS 649.1
CRT .9743 CRS .9452 CST .9928
LSA 1039.5 MSA 129.1 SSA 24.4
EL1 817.6 EL2 89.0 ALF 36.21

LAUNCH DATE JAN 7 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 349.205

RL 147.10 LAL -.00 LOL 106.52 VL 27.528 GAL 1.03 AZL 90.47 HCA 153.39 SMA 126.80 ECC .16104 INC .4656 V1 30.287
RP 108.67 LAP -.21 LOP 259.92 VP 37.382 GAP -4.29 AZP 89.58 TAL 174.64 TAP 328.03 RCA 106.38 APO 147.22 V2 34.873
RC 68.274 GL -4.57 GP 33.28 ZAL 80.64 ZAP 48.59 ETS 327.92 ZAE 140.52 ETE 48.55 ZAC 117.13 ETC 141.48 CLP -37.71

PLANETOCENTRIC CONIC

C3 7.898 VML 2.810 DLA 5.76 RAL 25.69 RAD 6567.3 VEL 11.371 PTH 1.96 VHP 4.505 DPA 44.23 RAP 24.90 ECC 1.1300
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 15 25 2196.06 -19.11 40.31 234.94 111.30 5 52 1 1596.1 -16.05 32.98
90.00 18 39 28 4481.51 9.00 187.82 233.56 63.04 19 54 10 3881.5 5.31 181.08
100.00 6 39 29 1924.91 -19.89 20.04 234.61 112.78 7 11 34 1324.9 -16.64 12.76
100.00 19 58 5 4227.89 9.74 168.77 233.16 61.60 21 8 33 3627.9 5.87 162.12
110.00 7 53 58 1891.81 -21.96 1.31 233.58 116.88 8 22 10 1091.8 -18.18 354.22
110.00 21 0 5 4033.78 11.71 152.87 231.99 57.65 22 7 19 3433.8 7.35 146.48

DIFFERENTIAL CORRECTIONS

TDE -.2104 TRA -.6431 TC3 1.5869 BAU .3004
RDE -.1790 RRA -.4229 RC3 2.3616 FAU .09177
FDE .3698 FRA 1.9693 FC-10.0599 BSP 7446
BDE .2762 BRA .7897 BC3 2.8453 FSP -1859

MID-COURSE EXECUTION ACCURACY

SGT 1648.0 SGR 1626.6 S63 603.7
RRT .9260 RRF -.9922 RTF -.9278
SGB 2315.6 R23 -.1699 R13 -.9778
SG1 2272.4 S62 445.4 THA 44.60

ORBIT DETERMINATION ACCURACY

ST 584.0 SR 449.8 SS 559.0
CRT .9913 CRS .9235 CST .9617
LSA 913.0 MSA 147.3 SSA 22.5
EL1 735.6 EL2 47.1 ALF 37.54

LAUNCH DATE JAN 7 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 355.684

RL 147.10 LAL -.00 LOL 106.52 VL 27.565 GAL .96 AZL 91.00 HCA 156.56 SMA 127.05 ECC .15866 INC .9952 V1 30.287
RP 108.70 LAP -.40 LOP 263.09 VP 37.380 GAP -3.80 AZP 89.09 TAL 174.92 TAP 331.48 RCA 106.89 APO 147.21 V2 34.862
RC 70.456 GL -9.83 GP 38.25 ZAL 81.30 ZAP 53.83 ETS 328.27 ZAE 137.36 ETE 54.73 ZAC 113.54 ETC 140.25 CLP -41.28

PLANETOCENTRIC CONIC

C3 7.858 VML 2.803 DLA .84 RAL 27.07 RAD 6567.3 VEL 11.369 PTH 1.96 VHP 4.501 DPA 48.40 RAP 20.94 ECC 1.1293
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 59 10 2035.72 -14.87 30.46 235.39 114.38 6 33 6 1435.7 -11.45 23.45
90.00 18 6 42 4840.02 13.74 197.05 235.24 64.99 19 24 2 4040.0 10.25 190.10
100.00 7 20 49 1772.38 -15.61 10.74 235.03 115.82 7 50 21 1172.4 -12.01 3.80
100.00 19 27 45 4378.60 14.48 177.46 234.87 63.56 20 40 43 3778.6 10.81 170.59
110.00 8 29 44 1556.63 -17.59 353.27 233.94 119.80 8 55 41 956.6 -13.49 346.56
110.00 20 35 18 4167.11 16.44 160.30 233.77 59.60 21 44 46 3567.1 12.28 153.66

DIFFERENTIAL CORRECTIONS

TDE -.1586 TRA -.6145 TC3 1.4558 BAU .3329
RDE -.1087 RRA -.5320 RC3 2.8139 FAU .09126
FDE .0865 FRA 2.0529 FC-10.0540 BSP 7942
BDE .1923 BRA .8128 BC3 3.1682 FSP -1891

MID-COURSE EXECUTION ACCURACY

SGT 1532.6 SGR 1929.0 S63 607.3
RRT .9220 RRF -.9953 RTF -.9216
SGB 2463.7 R23 -.1400 R13 -.9854
SG1 2417.7 S62 473.6 THA 52.06

ORBIT DETERMINATION ACCURACY

ST 497.6 SR 397.5 SS 498.7
CRT .9913 CRS .8983 CST .8395
LSA 781.7 MSA 207.3 SSA 16.8
EL1 635.6 EL2 41.0 ALF 38.56

LAUNCH DATE JAN 7 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 362.139

RL 147.10 LAL -.00 LOL 106.52 VL 27.597 GAL .90 AZL 91.68 HCA 159.73 SMA 127.27 ECC .15660 INC 1.6793 V1 30.287
RP 108.73 LAP -.58 LOP 266.26 VP 37.395 GAP -3.33 AZP 88.42 TAL 175.15 TAP 334.87 RCA 107.34 APO 147.20 V2 34.853
RC 72.872 GL -16.48 GP 44.03 ZAL 81.99 ZAP 59.44 ETS 328.94 ZAE 133.17 ETE 60.84 ZAC 109.24 ETC 139.36 CLP -45.00

PLANETOCENTRIC CONIC

C3 8.128 VHL 2.851 DLA -5.72 RAL 29.04 RAD 6567.3 VEL 11.381 PTH 1.97 VHP 4.606 DPA 53.03 RAP 15.44 ECC 1.1337
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 54 33 1843.74 -9.19 19.22 237.23 116.90 7 25 17 1243.7 -5.51 12.48
90.00 17 27 2 4844.37 19.22 209.54 236.64 66.80 18 47 47 4244.4 16.17 202.19
100.00 8 13 11 1590.07 -9.94 .17 236.83 118.34 8 39 41 990.1 -6.08 353.51
100.00 18 51 5 4573.27 20.01 189.26 236.30 67.32 20 7 19 3973.3 16.76 181.97
110.00 9 15 13 1395.83 -11.93 344.25 235.65 122.27 9 38 29 795.8 -7.58 337.85
110.00 20 5 32 4340.28 22.10 170.54 237.27 63.23 21 17 53 3740.3 18.33 163.44

DIFFERENTIAL CORRECTIONS

TDE -.1134 TRA -.5843 TC3 1.2242 BAU .3715
RDE .0046 RRA -.6787 RC3 3.1934 FAU .08658
FDE -.2431 FRA 2.0967 FC3-9.2239 BSP 8542
BDE .1135 BRA .8955 BC3 3.4200 FSP -1830

MID-COURSE EXECUTION ACCURACY

SGT 1390.0 SGR 2279.1 S63 584.9
RRT .9112 RRF -.9971 RTF -.9094
SGB 2669.5 R23 -.1078 R13 -.9913
SGI 2622.7 S62 497.6 THA 59.73

ORBIT DETERMINATION ACCURACY

ST 421.7 SR 415.0 SS 545.4
CRT .8266 CRS .9420 CST .5915
LSA 747.1 MSA 298.6 SSA 10.7
EL1 565.4 EL2 174.2 ALF 44.45

LAUNCH DATE JAN 7 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 368.568

RL 147.10 LAL -.00 LOL 106.52 VL 27.625 GAL .86 AZL 92.60 HCA 162.88 SMA 127.45 ECC .15486 INC 2.6031 V1 30.287
RP 108.76 LAP -.77 LOP 269.42 VP 37.407 GAP -2.88 AZP 87.51 TAL 175.32 TAP 338.20 RCA 107.72 APO 147.19 V2 34.844
RC 74.919 GL -24.77 GP 50.67 ZAL 82.77 ZAP 65.32 ETS 330.06 ZAE 127.81 ETE 66.61 ZAC 104.25 ETC 138.92 CLP -48.79

PLANETOCENTRIC CONIC

C3 8.970 VHL 2.995 DLA -13.57 RAL 31.78 RAD 6567.3 VEL 11.418 PTH 1.98 VHP 4.877 DPA 58.03 RAP 7.66 ECC 1.1476
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 8 50 1805.36 -1.63 5.78 241.42 118.27 8 35 36 1005.4 2.16 359.15
90.00 16 34 37 5120.12 24.94 227.70 244.81 76.13 17 59 57 4520.1 22.78 219.70
100.00 9 23 4 1365.89 -2.49 347.70 240.94 119.80 9 45 50 765.9 1.49 341.38
100.00 18 3 4 4834.83 25.89 206.45 244.54 74.50 19 23 39 4234.8 23.51 198.45
110.00 10 15 19 1202.23 -4.71 333.90 239.56 123.90 10 35 21 802.2 -.23 327.69
110.00 19 27 18 4571.25 28.37 185.54 243.63 70.08 20 43 30 3971.3 25.40 177.63

DIFFERENTIAL CORRECTIONS

TDE -.0826 TRA -.5484 TC3 .8938 BAU .4141
RDE .1835 RRA -.8785 RC3 3.3354 FAU .07669
FDE -.5818 FRA 2.0719 FC3-7.4019 BSP 9332
BDE .2012 BRA 1.0356 BC3 3.4531 FSP -1667

MID-COURSE EXECUTION ACCURACY

SGT 1215.0 SGR 2685.4 S63 529.2
RRT .8893 RRF -.9983 RTF -.8865
SGB 2929.2 R23 -.0774 R13 -.9953
SGI 2883.9 S62 513.5 THA 67.17

ORBIT DETERMINATION ACCURACY

ST 360.6 SR 629.2 SS 699.1
CRT .4999 CRS .9897 CST .3715
LSA 952.6 MSA 327.5 SSA 6.5
EL1 661.6 EL2 297.0 ALF 69.76

LAUNCH DATE JAN 7 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 374.968

RL 147.10 LAL -.00 LOL 106.52 VL 27.648 GAL .83 AZL 93.93 HCA 166.04 SMA 127.61 ECC .15340 INC 3.9297 V1 30.287
RP 108.78 LAP -.95 LOP 272.59 VP 37.416 GAP -2.44 AZP 86.19 TAL 175.43 TAP 341.47 RCA 108.03 APO 147.19 V2 34.835
RC 77.194 GL -34.75 GP 58.21 ZAL 83.73 ZAP 71.27 ETS 331.76 ZAE 121.20 ETE 71.81 ZAC 98.67 ETC 139.03 CLP -52.45

PLANETOCENTRIC CONIC

C3 11.046 VHL 3.324 DLA -22.90 RAL 35.53 RAD 6567.4 VEL 11.508 PTH 2.00 VHP 5.416 DPA 63.13 RAP 356.30 ECC 1.1818
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 3 40 1272.28 8.99 347.07 250.10 116.96 10 24 52 672.3 12.54 340.19
90.00 15 9 42 5536.05 28.31 257.50 255.07 90.56 16 41 58 4936.0 28.09 248.85
100.00 11 7 43 1065.53 7.63 331.14 249.37 118.99 11 25 29 465.5 11.44 324.43
100.00 16 48 20 5218.03 29.85 234.09 255.05 88.42 18 15 18 4618.0 29.32 225.33
110.00 11 40 43 982.09 4.45 321.35 247.41 123.93 11 56 45 362.1 8.88 315.06
110.00 18 31 49 4894.23 33.56 209.18 254.73 83.11 19 53 24 4294.2 32.25 200.19

DIFFERENTIAL CORRECTIONS

TDE -.0788 TRA -.5009 TC3 .5202 BAU .4570
RDE .4826 RRA -1.1565 RC3 3.0503 FAU .06188
FDE -.8717 FRA 1.9506 FC3-4.8496 BSP 10282
BDE .4892 BRA 1.2803 BC3 3.0944 FSP -1399

MID-COURSE EXECUTION ACCURACY

SGT 1008.3 SGR 3071.1 S63 440.3
RRT .8466 RRF -.9989 RTF -.8431
SGB 3232.3 R23 -.0512 R13 -.9976
SGI 3190.8 S62 516.5 THA 74.04

ORBIT DETERMINATION ACCURACY

ST 312.5 SR 1030.1 SS 871.3
CRT .2328 CRS .9985 CST .1803
LSA 1350.4 MSA 307.1 SSA 3.9
EL1 1032.9 EL2 303.1 ALF 85.58

LAUNCH DATE JAN 7 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 381.334

RL 147.10 LAL -.00 LOL 106.52 VL 27.667 GAL .81 AZL 96.01 HCA 169.17 SMA 127.74 ECC .15221 INC 6.0071 V1 30.287
RP 108.81 LAP -1.13 LOP 275.75 VP 37.423 GAP -2.01 AZP 84.10 TAL 175.47 TAP 344.65 RCA 108.30 APO 147.18 V2 34.827
RC 79.493 GL -45.99 GP 66.65 ZAL 84.93 ZAP 76.98 ETS 334.01 ZAE 113.29 ETE 76.24 ZAC 92.64 ETC 139.70 CLP -55.37

PLANETOCENTRIC CONIC

C3 16.205 VHL 4.026 DLA -33.24 RAL 40.55 RAD 6567.6 VEL 11.730 PTH 2.07 VHP 6.445 DPA 67.73 RAP 339.13 ECC 1.2667
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.82 10 38 12 1285.35 24.21 355.48 267.22 113.51 10 59 37 685.3 27.17 347.65
108.18 15 15 12 5689.34 24.22 267.65 267.22 113.49 16 50 1 5089.3 27.18 259.81
71.82 10 38 12 1285.35 24.21 355.48 267.22 113.51 10 59 37 685.3 27.17 347.65
108.18 15 15 12 5689.34 24.22 267.65 267.22 113.49 16 50 1 5089.3 27.18 259.81
110.00 14 25 36 5841.58 19.17 276.77 264.55 118.86 16 2 58 5241.6 22.87 269.59
110.00 16 26 58 5469.14 29.47 252.81 269.46 108.16 17 58 7 4869.1 31.66 244.29

DIFFERENTIAL CORRECTIONS

TDE -.1271 TRA -.4346 TC3 .1999 BAU .4861
RDE .8837 RRA -1.5725 RC3 2.2350 FAU .04323
FDE -1.0268 FRA 1.7357 FC3-2.3094 BSP 11282
BDE .8928 BRA 1.6314 BC3 2.2439 FSP -1049

MID-COURSE EXECUTION ACCURACY

SGT 778.2 SGR 3481.3 S63 326.9
RRT .7578 RRF -.9993 RTF -.7537
SGB 3547.7 R23 -.0302 R13 -.9989
SGI 3512.2 S62 500.4 THA 80.13

ORBIT DETERMINATION ACCURACY

ST 286.3 SR 1493.1 SS 952.1
CRT -.1150 CRS .9997 CST -.1379
LSA 1771.1 MSA 284.7 SSA 2.4
EL1 1493.5 EL2 284.3 ALF 91.31

LAUNCH DATE JAN 7 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 387.650

RL 147.10 LAL -.00 LOL 106.52 VL 27.682 GAL .81 AZL 99.74 HCA 172.29 SMA 127.84 ECC .15127 INC 9.7425 V1 30.287  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.427 GAP -1.61 AZP 80.34 TAL 175.43 TAP 347.71 RCA 108.51 APO 147.18 V2 34.820  
 RC 81.813 GL -57.13 GP 76.18 ZAL 86.33 ZAP 82.08 ETS 338.10 ZAE 103.88 ETE 79.15 ZAC 86.31 ETC 140.33 CLP -54.76

PLANETOCENTRIC CONIC

C3 31.105 VHL 5.577 DLA -43.24 RAL 46.81 RAD 6568.2 VEL 12.348 PTH 2.23 VHP 8.530 DPA 70.61 RAP 313.13 ECC 1.5119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.84 9 42 2 1679.46 24.77 28.11 287.42 126.66 10 10 1 1079.5 29.36 21.17  
 124.16 17 1 21 5610.37 24.78 261.57 287.43 126.65 18 34 51 5010.4 29.37 254.63  
 55.84 9 42 2 1679.46 24.77 28.11 287.42 126.66 10 10 1 1079.5 29.36 21.17  
 124.16 17 1 21 5610.37 24.78 261.57 287.43 126.65 18 34 51 5010.4 29.37 254.63  
 55.84 9 42 2 1679.46 24.77 28.11 287.42 126.66 10 10 1 1079.5 29.36 21.17  
 124.16 17 1 21 5610.37 24.78 261.57 287.43 126.65 18 34 51 5010.4 29.37 254.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2481 TRA -5.3438 TC3 .0392 BAU .4603 SGT 549.6 SGR 3797.3 SCS 209.6 ST 293.5 SR 1856.3 SS 890.1  
 RDE 1.5436 RRA-2.2708 RC3 1.1255 FAU .02368 RRT .5794 RRF -.9996 RTF -.5777 CRT -.4844 CRS 1.0000 CST -.4906  
 FDE -1.0086 FRA 1.4655 FC3 -.6591 BSP 12322 SGB 3836.9 R23 -.0117 R13 -.9995 LSA 2063.6 MSA 256.0 SSA 1.6  
 BDE 1.5634 BRA 2.3046 BC3 1.1261 FSP -.686 SGI 3810.8 SGI2 446.4 THA 85.14 EL1 1861.8 EL2 256.0 ALF 94.46

LAUNCH DATE JAN 7 1969

FLIGHT TIME 144.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 393.858

RL 147.10 LAL -.00 LOL 106.52 VL 27.694 GAL .84 AZL 108.37 HCA 175.32 SMA 127.93 ECC .15060 INC18.3696 V1 30.287  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.430 GAP -1.23 AZP 71.69 TAL 175.23 TAP 350.56 RCA 108.66 APO 147.19 V2 34.813  
 RC 84.153 GL -85.25 GP 88.14 ZAL 87.78 ZAP 86.14 ETS 323.37 ZAE 91.75 ETE 66.14 ZAC 79.52 ETC 126.85 CLP -2.17

PLANETOCENTRIC CONIC

C3 92.347 VHL 9.610 DLA -50.46 RAL 52.37 RAD 6569.8 VEL 14.618 PTH 2.65 VHP 13.668 DPA 69.41 RAP 277.49 ECC 2.5198  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.31 9 30 7 2030.27 15.05 51.75 309.53 138.76 10 3 57 1430.3 20.99 46.53  
 133.69 17 57 35 5789.12 15.06 268.84 309.55 138.76 19 34 4 5189.1 21.00 263.62  
 46.31 9 30 7 2030.27 15.05 51.75 309.53 138.76 10 3 57 1430.3 20.99 46.53  
 133.69 17 57 35 5789.12 15.06 268.84 309.55 138.76 19 34 4 5189.1 21.00 263.62  
 46.31 9 30 7 2030.27 15.05 51.75 309.53 138.76 10 3 57 1430.3 20.99 46.53  
 133.69 17 57 35 5789.12 15.06 268.84 309.55 138.76 19 34 4 5189.1 21.00 263.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3259 TRA -.7454 TC3 .0487 BAU .2397 SGT 730.8 SGR 3960.1 SCS 114.6 ST 285.7 SR 2032.6 SS 781.9  
 RDE 2.9060 RRA-3.7822 RC3 .1880 FAU .00523 RRT .9828 RRF -.9996 RTF -.9854 CRT .9631 CRS .9997 CST .9694  
 FDE -.9320 FRA 1.2815 FC3 -.0490 BSP 13736 SGB 4027.0 R23 .0108 R13 -.9997 LSA 2195.2 MSA 77.6 SSA 1.1  
 BDE 2.9242 BRA 3.8550 BC3 .1942 FSP -.403 SGI 4024.8 SGI2 133.0 THA 79.71 EL1 2051.2 EL2 76.3 ALF 82.28

LAUNCH DATE JAN 7 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 399.568

RL 147.10 LAL -.00 LOL 106.52 VL 27.703 GAL .98 AZL 142.08 HCA 177.92 SMA 127.98 ECC .15032 INC52.0810 V1 30.287  
 RP 108.87 LAP -1.64 LOP 285.24 VP 37.430 GAP -1.00 AZP 37.94 TAL 174.45 TAP 352.37 RCA 108.75 APO 147.22 V2 34.807  
 RC 86.508 GL -58.73 GP 66.43 ZAL 89.02 ZAP 88.71 ETS 178.77 ZAE 67.75 ETE 281.52 ZAC 70.34 ETC 346.25 CLP 86.77

PLANETOCENTRIC CONIC

C3 653.608 VHL 25.566 DLA -45.97 RAL 44.88 RAD 6572.6 VEL 27.837 PTH 3.41 VHP 33.462 DPA 55.15 RAP 233.77 ECC11.7567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.15 9 20 9 2253.19 .84 57.83 314.05 135.96 9 57 42 1653.2 6.58 52.66  
 127.85 17 7 49 821.73 .86 306.59 314.07 135.96 17 21 31 221.7 6.59 301.42  
 52.15 9 20 9 2253.19 .84 57.83 314.05 135.96 9 57 42 1653.2 6.58 52.66  
 127.85 17 7 49 821.73 .86 306.59 314.07 135.96 17 21 31 221.7 6.59 301.42  
 52.15 9 20 9 2253.19 .84 57.83 314.05 135.96 9 57 42 1653.2 6.58 52.66  
 127.85 17 7 49 821.73 .86 306.59 314.07 135.96 17 21 31 221.7 6.59 301.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.8565 TRA -1.6869 TC3 -.0876 BAU 2.1725 SGT 1296.8 SGR 3638.8 SCS 66.6 ST 1100.6 SR 1779.3 SS 1136.1  
 RDE -6.7792 RRA 9.5682 RC3 .2327 FAU -.03767 RRT -.8191 RRF .9995 RTF -.8368 CRT -.9217 CRS -.9994 CST .9349  
 FDE -1.5285 FRA 1.9887 FC3 .0499 BSP 11636 SGB 3862.9 R23 -.0254 R13 .9997 LSA 2351.0 MSA 375.5 SSA .3  
 BDE 8.3393 BRA 9.7158 BC3 .2486 FSP -.206 SGI 3796.5 SGI2 712.9 THA 106.88 EL1 2059.5 EL2 368.9 ALF 120.78

LAUNCH DATE JAN 7 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 407.577

RL 147.10 LAL -.00 LOL 106.52 VL 27.709 GAL .68 AZL 46.29 HCA 182.61 SMA 128.02 ECC .14948 INC43.7092 V1 30.287  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.429 GAP -.17 AZP 133.68 TAL 176.11 TAP 358.71 RCA 108.89 APO 147.16 V2 34.802  
 RC 88.877 GL 61.81 GP -75.18 ZAL 89.22 ZAP 89.55 ETS 172.69 ZAE 75.16 ETE 72.47 ZAC 98.49 ETC 18.45 CLP 88.22

PLANETOCENTRIC CONIC

C3 471.867 VHL 21.722 DLA 60.14 RAL 334.36 RAD 6572.3 VEL 24.355 PTH 3.32 VHP 25.299 DPA -63.80 RAP 132.86 ECC 8.7657  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.45 15 43 37 4991.76 -2.48 239.16 242.95 29.90 17 6 49 4391.8 -9.40 235.54  
 145.55 1 21 42 3322.10 -2.47 102.18 242.95 29.89 2 17 4 2722.1 -9.39 98.57  
 34.45 15 43 37 4991.76 -2.48 239.16 242.95 29.90 17 6 49 4391.8 -9.40 235.54  
 145.55 1 21 42 3322.10 -2.47 102.18 242.95 29.89 2 17 4 2722.1 -9.39 98.57  
 34.45 15 43 37 4991.76 -2.48 239.16 242.95 29.90 17 6 49 4391.8 -9.40 235.54  
 145.55 1 21 42 3322.10 -2.47 102.18 242.95 29.89 2 17 4 2722.1 -9.39 98.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.6975 TRA 2.2403 TC3 -.1077 BAU 1.5183 SGT 1605.7 SGR 3839.1 SCS 74.4 ST 1038.3 SR 3538.3 SS 1700.6  
 RDE -13.3426 RRA 2.2961 RC3 -.2152 FAU -.02620 RRT .8619 RRF -.9983 RTF -.8892 CRT .9697 CRS .9998 CST .9744  
 FDE 2.9271 FRA -.6027 FC3 .0481 BSP 13141 SGB 4161.4 R23 -.0134 R13 -.9999 LSA 4053.4 MSA 243.9 SSA .6  
 BDE13.8455 BRA 3.2079 BC3 .2407 FSP -.246 SGI 4090.6 SGI2 764.2 THA 69.43 EL1 3679.4 EL2 243.9 ALF 74.04

LAUNCH DATE JAN 7 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.711 GAL .80 AZL 68.77 HCA 185.41 SMA 128.04 ECC .14948 INC21.2264 V1 30.287
RP 108.90 LAP -1.96 LOP 291.57 VP 37.427 GAP .11 AZP 111.14 TAL 175.45 TAP .86 RCA 108.90 APO 147.18 V2 34.797
RC 91.256 GL 65.98 GP -86.49 ZAL 88.17 ZAP 89.97 ETS 69.61 ZAE 93.35 ETE 331.32 ZAC 105.78 ETC 274.98 CLP -89.52

DISTANCE 413.472

PLANETOCENTRIC CONIC

C3 120.635 VHL 10.983 DLA 63.65 RAL 326.88 RAD 6570.3 VEL 15.555 PTH 2.77 VHP 11.815 DPA -64.44 RAP 90.10 ECC 2.9853
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.28 15 11 37 4818.13 -14.19 236.65 231.69 27.25 16 31 55 4218.1 -21.26 233.15
149.72 1 9 59 3113.23 -14.18 94.74 231.68 27.25 2 1 53 2513.2 -21.26 91.24
30.28 15 11 37 4818.13 -14.19 236.65 231.69 27.25 16 31 55 4218.1 -21.26 233.15
149.72 1 9 59 3113.23 -14.18 94.74 231.68 27.25 2 1 53 2513.2 -21.26 91.24
30.28 15 11 37 4818.13 -14.19 236.65 231.69 27.25 16 31 55 4218.1 -21.26 233.15
149.72 1 9 59 3113.23 -14.18 94.74 231.68 27.25 2 1 53 2513.2 -21.26 91.24

DIFFERENTIAL CORRECTIONS

TDE 2.4438 TRA -1.1908 TC3 .0349 BAU .0897
RDE 6.8342 RRA -1.4377 RC3 -.0434 FAU .00504
FDE 2.6883 FRA -.6500 FC3 -.0382 BSP 13814
BDE 7.2580 BRA 1.8668 BC3 .0556 FSP -457

MID-COURSE EXECUTION ACCURACY

SGT 1894.5 SGR 3946.3 SCS 136.1
RRT .2908 RRF .9981 RTF .2354
SGB 4377.5 R23 .1356 R13 .9905
S61 3994.4 S62 1790.8 THA 80.03

ORBIT DETERMINATION ACCURACY

ST 1342.2 SR 3601.0 SS 1450.5
CRT .8964 CRS -.9998 CST -.8870
LSA 4067.6 MSA 571.9 SSA 1.1
EL1 3801.4 EL2 563.7 ALF 71.09

LAUNCH DATE JAN 7 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.712 GAL .87 AZL 75.55 HCA 188.47 SMA 128.04 ECC .14959 INC14.4492 V1 30.287
RP 108.92 LAP -2.11 LOP 294.73 VP 37.424 GAP .46 AZP 104.30 TAL 175.04 TAP 3.52 RCA 108.89 APO 147.20 V2 34.793
RC 93.644 GL 63.31 GP -76.05 ZAL 87.15 ZAP 91.71 ETS 2.22 ZAE 103.59 ETE 264.77 ZAC 109.09 ETC 207.46 CLP -97.10

DISTANCE 419.633

PLANETOCENTRIC CONIC

C3 59.884 VHL 7.738 DLA 62.77 RAL 334.75 RAD 6569.1 VEL 13.463 PTH 2.46 VHP 7.777 DPA -59.94 RAP 69.73 ECC 1.9855
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.32 15 37 30 4657.27 -23.42 231.02 231.88 29.91 16 55 7 4057.3 -30.28 226.83
148.68 1 30 55 2980.61 -23.40 90.32 231.86 29.91 2 20 16 2360.6 -30.27 86.12
31.32 15 37 30 4657.27 -23.42 231.02 231.88 29.91 16 55 7 4057.3 -30.28 226.83
148.68 1 30 55 2980.61 -23.40 90.32 231.86 29.91 2 20 16 2360.6 -30.27 86.12
31.32 15 37 30 4657.27 -23.42 231.02 231.88 29.91 16 55 7 4057.3 -30.28 226.83
148.68 1 30 55 2980.61 -23.40 90.32 231.86 29.91 2 20 16 2360.6 -30.27 86.12

DIFFERENTIAL CORRECTIONS

TDE 2.1371 TRA -.5411 TC3 -.1573 BAU .3776
RDE 4.8482 RRA -.9803 RC3 -.4446 FAU .02491
FDE 3.4445 FRA -.6441 FC3 -.3601 BSP 13756
BDE 5.2983 BRA 1.1285 BC3 .4716 FSP -807

MID-COURSE EXECUTION ACCURACY

SGT 1824.7 SGR 3990.8 SCS 242.9
RRT .9956 RRF .9992 RTF .9911
SGB 4388.2 R23 .0555 R13 .9984
S61 4385.5 S62 154.7 THA 65.49

ORBIT DETERMINATION ACCURACY

ST 1804.0 SR 3621.7 SS 1726.5
CRT .9995 CRS -.9999 CST -.9991
LSA 4320.6 MSA 52.8 SSA .9
EL1 3960.7 EL2 46.1 ALF 66.12

LAUNCH DATE JAN 7 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.709 GAL .94 AZL 78.73 HCA 191.59 SMA 128.03 ECC .14985 INC11.2735 V1 30.287
RP 108.93 LAP -2.25 LOP 297.89 VP 37.419 GAP .81 AZP 101.05 TAL 174.64 TAP 6.23 RCA 108.84 APO 147.21 V2 34.789
RC 96.038 GL 59.87 GP -67.75 ZAL 86.16 ZAP 94.56 ETS 353.79 ZAE 111.40 ETE 256.13 ZAC 110.83 ETC 198.65 CLP -102.12

DISTANCE 425.835

PLANETOCENTRIC CONIC

C3 39.219 VHL 6.263 DLA 61.09 RAL 341.26 RAD 6568.5 VEL 12.672 PTH 2.30 VHP 5.980 DPA -55.02 RAP 57.21 ECC 1.6454
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.31 16 8 20 4543.34 -29.08 225.27 233.38 33.59 17 24 4 3943.3 -35.64 220.25
146.69 1 52 4 2863.47 -29.07 86.92 233.36 33.59 2 39 47 2263.5 -35.63 81.91
33.31 16 8 20 4543.34 -29.08 225.27 233.38 33.59 17 24 4 3943.3 -35.64 220.25
146.69 1 52 4 2863.47 -29.07 86.92 233.36 33.59 2 39 47 2263.5 -35.63 81.91
33.31 16 8 20 4543.34 -29.08 225.27 233.38 33.59 17 24 4 3943.3 -35.64 220.25
146.69 1 52 4 2863.47 -29.07 86.92 233.36 33.59 2 39 47 2263.5 -35.63 81.91

DIFFERENTIAL CORRECTIONS

TDE 2.1685 TRA -.5248 TC3 -.4358 BAU .4705
RDE 3.7529 RRA -.5234 RC3 -.7845 FAU .04573
FDE 4.3188 FRA -.5561 FC3 -1.0094 BSP 13525
BDE 4.3343 BRA .7412 BC3 .8974 FSP -1232

MID-COURSE EXECUTION ACCURACY

SGT 2284.8 SGR 3706.1 SCS 369.8
RRT .9839 RRF .9993 RTF .9791
SGB 4355.8 R23 .0725 R13 .9970
S61 4339.8 S62 348.2 THA 58.53

ORBIT DETERMINATION ACCURACY

ST 2006.2 SR 3446.5 SS 2048.2
CRT .9980 CRS -1.0000 CST -.9976
LSA 4481.6 MSA 116.2 SSA 1.7
EL1 3986.4 EL2 108.8 ALF 59.82

LAUNCH DATE JAN 7 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.705 GAL 1.02 AZL 80.57 HCA 194.72 SMA 128.00 ECC .15028 INC 9.4335 V1 30.287
RP 108.94 LAP -2.39 LOP 301.05 VP 37.413 GAP 1.16 AZP 99.13 TAL 174.21 TAP 8.93 RCA 108.76 APO 147.23 V2 34.787
RC 98.436 GL 56.58 GP -60.56 ZAL 85.17 ZAP 98.22 ETS 348.71 ZAE 117.72 ETE 249.68 ZAC 111.56 ETC 192.90 CLP -106.92

DISTANCE 432.040

PLANETOCENTRIC CONIC

C3 29.589 VHL 5.440 DLA 59.26 RAL 346.89 RAD 6568.2 VEL 12.287 PTH 2.21 VHP 5.022 DPA -50.21 RAP 48.31 ECC 1.4870
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.50 16 36 17 4462.23 -32.40 219.95 234.72 37.26 17 50 39 3862.2 -38.62 214.17
144.50 2 9 1 2802.52 -32.39 84.27 234.71 37.25 2 55 43 2202.5 -38.61 78.50
35.50 16 36 17 4462.23 -32.40 219.95 234.72 37.26 17 50 39 3862.2 -38.62 214.17
144.50 2 9 1 2802.52 -32.39 84.27 234.71 37.25 2 55 43 2202.5 -38.61 78.50
35.50 16 36 17 4462.23 -32.40 219.95 234.72 37.26 17 50 39 3862.2 -38.62 214.17
144.50 2 9 1 2802.52 -32.39 84.27 234.71 37.25 2 55 43 2202.5 -38.61 78.50

DIFFERENTIAL CORRECTIONS

TDE 2.2159 TRA -.4482 TC3 -.7759 BAU .5136
RDE 3.0005 RRA -.2598 RC3 -1.0409 FAU .06667
FDE 5.0422 FRA -.3872 FC3 -1.9507 BSP 13441
BDE 3.7300 BRA .5180 BC3 1.2983 FSP -1690

MID-COURSE EXECUTION ACCURACY

SGT 2648.3 SGR 3399.6 SCS 498.9
RRT .9804 RRF .9992 RTF .9759
SGB 4309.4 R23 .0932 R13 .9950
S61 4289.5 S62 413.1 THA 52.22

ORBIT DETERMINATION ACCURACY

ST 2350.6 SR 3164.7 SS 2307.0
CRT .9977 CRS -1.0000 CST -.9973
LSA 4565.5 MSA 140.2 SSA 2.3
EL1 3940.1 EL2 127.1 ALF 53.41

LAUNCH DATE JAN 7 1969 FLIGHT TIME 158.00 ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC DISTANCE 438.236
RL 147.10 LAL -.00 LOL 106.52 VL 27.698 GAL 1.11 AZL 81.77 HCA 197.86 SMA 127.95 ECC .15086 INC 8.2289 V1 30.287
PLANETOCENTRIC CONIC
C3 24.248 VHL 4.924 DLA 57.51 RAL 351.63 RAD 6568.0 VEL 12.068 PTH 2.16 VHP 4.467 DPA -45.65 RAP 41.52 ECC 1.3991
DIFFERENTIAL CORRECTIONS
TDE 2.2650 TRA -.3603 TC3-1.1505 BAU .5366
MID-COURSE EXECUTION ACCURACY
SGT 2973.8 SGR 3079.3 SG3 614.3
ORBIT DETERMINATION ACCURACY
ST 2647.0 SR 2841.4 SS 2487.1

LAUNCH DATE JAN 7 1969 FLIGHT TIME 160.00 ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC DISTANCE 444.420
RL 147.10 LAL -.00 LOL 106.52 VL 27.690 GAL 1.21 AZL 82.82 HCA 201.01 SMA 127.90 ECC .15160 INC 7.3753 V1 30.287
PLANETOCENTRIC CONIC
C3 20.950 VHL 4.577 DLA 55.91 RAL 355.72 RAD 6567.9 VEL 11.930 PTH 2.12 VHP 4.137 DPA -41.40 RAP 36.19 ECC 1.3448
DIFFERENTIAL CORRECTIONS
TDE 2.3115 TRA -.2679 TC3-1.5399 BAU .5546
MID-COURSE EXECUTION ACCURACY
SGT 3273.7 SGR 2759.9 SG3 705.9
ORBIT DETERMINATION ACCURACY
ST 2899.3 SR 2513.7 SS 2591.1

LAUNCH DATE JAN 7 1969 FLIGHT TIME 162.00 ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC DISTANCE 450.587
RL 147.10 LAL -.00 LOL 106.52 VL 27.680 GAL 1.32 AZL 83.26 HCA 204.16 SMA 127.83 ECC .15250 INC 6.7358 V1 30.287
PLANETOCENTRIC CONIC
C3 18.768 VHL 4.332 DLA 54.46 RAL 359.34 RAD 6567.8 VEL 11.838 PTH 2.10 VHP 3.945 DPA -37.48 RAP 31.95 ECC 1.3089
DIFFERENTIAL CORRECTIONS
TDE 2.3493 TRA -.1740 TC3-1.9327 BAU .5753
MID-COURSE EXECUTION ACCURACY
SGT 3551.7 SGR 2454.2 SG3 770.1
ORBIT DETERMINATION ACCURACY
ST 3109.7 SR 2201.4 SS 2627.3

LAUNCH DATE JAN 7 1969 FLIGHT TIME 164.00 ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC DISTANCE 456.739
RL 147.10 LAL -.00 LOL 106.52 VL 27.668 GAL 1.45 AZL 83.76 HCA 207.32 SMA 127.75 ECC .15355 INC 6.2360 V1 30.287
PLANETOCENTRIC CONIC
C3 17.256 VHL 4.154 DLA 53.17 RAL 2.65 RAD 6567.7 VEL 11.774 PTH 2.08 VHP 3.846 DPA -33.90 RAP 28.59 ECC 1.2840
DIFFERENTIAL CORRECTIONS
TDE 2.3822 TRA -.0764 TC3-2.3128 BAU .5980
MID-COURSE EXECUTION ACCURACY
SGT 3810.4 SGR 2171.6 SG3 808.1
ORBIT DETERMINATION ACCURACY
ST 3286.7 SR 1920.8 SS 2614.7

LAUNCH DATE JAN 7 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 462.874

RL 147.10 LAL -.00 LOL 106.52 VL 27.655 GAL 1.58 AZL 84.17 HCA 210.47 SMA 127.65 ECC .15475 INC 5.8327 V1 30.287  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.374 GAP 2.88 AZP 95.03 TAL 171.32 TAP 21.79 RCA 107.90 APO 147.41 V2 34.784  
 RC 110.446 GL 44.30 GP -35.01 ZAL 79.59 ZAP 119.88 ETS 337.96 ZAE 132.88 ETE 219.83 ZAC 109.50 ETC 177.66 CLP-127.46

PLANETOCENTRIC CONIC

C3 16.180 VHL 4.022 DLA 52.00 RAL 5.76 RAD 6567.6 VEL 11.729 PTH 2.07 VHP 3.811 DPA -30.64 RAP 25.95 ECC 1.2663  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.37 18 16 19 4265.25 -36.15 201.94 240.97 49.68 19 27 24 3665.2 -41.06 194.27  
 135.63 2 59 32 2708.76 -36.14 78.25 240.96 49.67 3 44 41 2108.8 -41.05 70.58  
 44.37 18 16 19 4265.25 -36.15 201.94 240.97 49.68 19 27 24 3665.2 -41.06 194.27  
 135.63 2 59 32 2708.76 -36.14 78.25 240.96 49.67 3 44 41 2108.8 -41.05 70.58  
 44.37 18 16 19 4265.25 -36.15 201.94 240.97 49.68 19 27 24 3665.2 -41.06 194.27  
 135.63 2 59 32 2708.76 -36.14 78.25 240.96 49.67 3 44 41 2108.8 -41.05 70.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4083 TRA .0240 TC3-2.6739 BAU .6236 SGT 4049.4 SGR 1916.2 SCS 823.2 ST 3431.0 SR 1674.7 SS 2564.1  
 RDE 1.1732 RRA .1551 RC3-1.0769 FAU .11826 RRT .9815 RRF .9942 RTF .9767 CRT .9902 CRS -.9998 CST -.9969  
 FDE 5.4486 FRA .9342 FC3-6.3286 BSP 13839 SGB 4479.9 R23 .1513 R13 .9826 LSA 4595.9 MSA 168.5 SSA 5.9  
 BDE 2.6788 BRA .1570 BC3 2.8826 FSP -2051 SGI 4467.5 SGT 332.6 THA 25.06 EL1 3816.8 EL2 89.6 ALF 25.99

LAUNCH DATE JAN 7 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 468.991

RL 147.10 LAL -.00 LOL 106.52 VL 27.640 GAL 1.73 AZL 84.50 HCA 213.63 SMA 127.55 ECC .15611 INC 5.4984 V1 30.287  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.364 GAP 3.21 AZP 94.58 TAL 170.59 TAP 24.22 RCA 107.64 APO 147.47 V2 34.786  
 RC 112.844 GL 42.41 GP -31.56 ZAL 78.28 ZAP 123.84 ETS 337.29 ZAE 133.52 ETE 214.83 ZAC 109.06 ETC 176.28 CLP-130.80

PLANETOCENTRIC CONIC

C3 15.408 VHL 3.925 DLA 50.94 RAL 8.72 RAD 6567.6 VEL 11.696 PTH 2.06 VHP 3.823 DPA -27.67 RAP 23.93 ECC 1.2536  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.70 18 32 15 4244.73 -36.02 199.65 242.59 51.17 19 43 0 3644.7 -40.76 191.84  
 134.30 3 7 16 2707.10 -36.01 77.94 242.58 51.16 3 52 23 2107.1 -40.75 70.13  
 45.70 18 32 15 4244.73 -36.02 199.65 242.59 51.17 19 43 0 3644.7 -40.76 191.84  
 134.30 3 7 16 2707.10 -36.01 77.94 242.58 51.16 3 52 23 2107.1 -40.75 70.13  
 45.70 18 32 15 4244.73 -36.02 199.65 242.59 51.17 19 43 0 3644.7 -40.76 191.84  
 134.30 3 7 16 2707.10 -36.01 77.94 242.58 51.16 3 52 23 2107.1 -40.75 70.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4301 TRA .1301 TC3-3.0068 BAU .6505 SGT 4271.4 SGR 1691.4 SCS 820.8 ST 3549.0 SR 1485.1 SS 2489.6  
 RDE 1.0003 RRA .1693 RC3 -.9860 FAU .11776 RRT .9810 RRF .9912 RTF .9770 CRT .9985 CRS -.9996 CST -.9967  
 FDE 5.1334 FRA 1.1516 FC3-6.8169 BSP 14243 SGB 4594.1 R23 .1432 R13 .9811 LSA 4572.9 MSA 169.4 SSA 6.7  
 BDE 2.6280 BRA .2135 BC3 3.1582 FSP -2850 SGI 4584.0 SGT 305.7 THA 21.33 EL1 3838.8 EL2 74.6 ALF 22.41

LAUNCH DATE JAN 7 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 475.091

RL 147.10 LAL -.00 LOL 106.52 VL 27.624 GAL 1.89 AZL 84.76 HCA 216.79 SMA 127.45 ECC .15762 INC 5.2152 V1 30.287  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.355 GAP 3.54 AZP 94.18 TAL 169.83 TAP 26.62 RCA 107.36 APO 147.53 V2 34.789  
 RC 115.239 GL 40.62 GP -28.55 ZAL 76.90 ZAP 127.53 ETS 336.84 ZAE 133.71 ETE 210.40 ZAC 108.80 ETC 175.22 CLP-133.91

PLANETOCENTRIC CONIC

C3 14.857 VHL 3.855 DLA 49.97 RAL 11.60 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 3.870 DPA -24.98 RAP 22.42 ECC 1.2445  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.93 18 47 38 4227.40 -35.78 197.64 244.36 52.44 19 58 6 3627.4 -40.38 189.73  
 133.07 3 14 50 2708.12 -35.77 77.82 244.36 52.44 3 59 58 2108.1 -40.37 69.91  
 46.93 18 47 38 4227.40 -35.78 197.64 244.36 52.44 19 58 6 3627.4 -40.38 189.73  
 133.07 3 14 50 2708.12 -35.77 77.82 244.36 52.44 3 59 58 2108.1 -40.37 69.91  
 46.93 18 47 38 4227.40 -35.78 197.64 244.36 52.44 19 58 6 3627.4 -40.38 189.73  
 133.07 3 14 50 2708.12 -35.77 77.82 244.36 52.44 3 59 58 2108.1 -40.37 69.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4496 TRA .2425 TC3-3.3024 BAU .6771 SGT 4478.1 SGR 1496.9 SCS 805.3 ST 3645.8 SR 1290.7 SS 2402.8  
 RDE .8643 RRA .1782 RC3 -.8450 FAU .11462 RRT .9793 RRF .9869 RTF .9772 CRT .9988 CRS -.9994 CST -.9965  
 FDE 4.7931 FRA 1.3414 FC3-6.6788 BSP 14627 SGB 4721.7 R23 .1283 R13 .9799 LSA 4550.0 MSA 170.2 SSA 7.5  
 BDE 2.5976 BRA .2998 BC3 3.4088 FSP -2781 SGI 4712.9 SGT 287.9 THA 18.20 EL1 3867.1 EL2 59.6 ALF 19.48

LAUNCH DATE JAN 7 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 481.173

RL 147.10 LAL -.00 LOL 106.52 VL 27.606 GAL 2.06 AZL 85.03 HCA 219.93 SMA 127.33 ECC .15928 INC 4.9710 V1 30.287  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.345 GAP 3.87 AZP 93.81 TAL 169.02 TAP 28.97 RCA 107.05 APO 147.61 V2 34.792  
 RC 117.630 GL 38.92 GP -25.92 ZAL 75.45 ZAP 130.97 ETS 336.58 ZAE 133.59 ETE 206.55 ZAC 108.74 ETC 174.43 CLP-136.80

PLANETOCENTRIC CONIC

C3 14.479 VHL 3.805 DLA 49.07 RAL 14.42 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 3.943 DPA -22.52 RAP 21.36 ECC 1.2363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.09 19 2 39 4212.65 -35.46 195.86 246.29 53.54 20 12 52 3612.7 -39.93 187.88  
 131.91 3 22 18 2711.38 -35.45 77.85 246.28 53.54 4 7 30 2111.4 -39.93 69.88  
 48.09 19 2 39 4212.65 -35.46 195.86 246.29 53.54 20 12 52 3612.7 -39.93 187.88  
 131.91 3 22 18 2711.38 -35.45 77.85 246.28 53.54 4 7 30 2111.4 -39.93 69.88  
 48.09 19 2 39 4212.65 -35.46 195.86 246.29 53.54 20 12 52 3612.7 -39.93 187.88  
 131.91 3 22 18 2711.38 -35.45 77.85 246.28 53.54 4 7 30 2111.4 -39.93 69.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4613 TRA .3577 TC3-3.5689 BAU .7051 SGT 4667.8 SGR 1328.9 SCS 780.1 ST 3715.2 SR 1143.6 SS 2301.3  
 RDE .7551 RRA .1784 RC3 -.7303 FAU .11040 RRT .9764 RRF .9809 RTF .9775 CRT .9992 CRS -.9989 CST -.9963  
 FDE 4.4324 FRA 1.4914 FC3-6.6011 BSP 15122 SGB 4853.2 R23 .1072 R13 .9793 LSA 4514.2 MSA 169.9 SSA 8.3  
 BDE 2.5745 BRA .3988 BC3 3.6429 FSP -2704 SGI 4845.4 SGT -276.5 THA 15.59 EL1 3887.0 EL2 44.6 ALF 17.10

LAUNCH DATE JAN 7 1969 FLIGHT TIME 174.00 ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC DISTANCE 487.238
RL 147.10 LAL -.00 LOL 106.52 VL 27.588 GAL 2.24 AZL 85.24 HCA 225.11 SMA 127.21 ECC .16111 INC 4.7568 V1 30.287
RP 108.81 LAP -3.25 LOP 329.53 VP 37.335 GAP 4.21 AZP 93.48 TAL 168.18 TAP 31.28 RCA 106.71 APO 147.70 V2 34.796
RC 120.015 GL 37.20 GP -25.63 ZAL 75.95 ZAP 134.15 ETS 356.39 ZAE 133.25 ETE 203.24 ZAC 108.87 ETC 175.85 CLP-139.49
PLANETOCENTRIC CONIC
C3 14.239 VHL 3.775 DLA 48.23 RAL 17.21 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 4.039 DPA -20.28 RAP 20.68 ECC 1.2343
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.18 19 17 25 4200.04 -35.08 194.27 248.35 54.50 20 27 25 3600.0 -39.44 186.26
130.82 3 29 45 2716.61 -35.08 78.03 248.35 54.49 4 15 1 2116.6 -39.44 70.02
49.18 19 17 25 4200.04 -35.08 194.27 248.35 54.50 20 27 25 3600.0 -39.44 186.26
130.82 3 29 45 2716.61 -35.08 78.03 248.35 54.49 4 15 1 2116.6 -39.44 70.02
49.18 19 17 25 4200.04 -35.08 194.27 248.35 54.50 20 27 25 3600.0 -39.44 186.26
130.82 3 29 45 2716.61 -35.08 78.03 248.35 54.49 4 15 1 2116.6 -39.44 70.02
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.4688 TRA .4794 TC3-3.7906 BAU .7327 SGT 4844.0 SCR 1186.7 SCS 749.5 ST 3763.9 SR 1022.5 SS 2194.9
RDE .6688 RRA .1759 RC3 -.6217 FAU .10517 RRT .9715 RRF .9728 RTF .9777 CRT .9995 CRS -.9981 CST -.9960
FDE 4.0772 FRA 1.6173 FC3-6.3046 BSP 15601 SGB 4987.3 R25 .0843 R13 .9789 LSA 4472.3 MSA 169.8 SSA 9.1
BDE 2.5578 BRA .5089 BC3 3.8491 FSP -2596 SGI 4979.8 SGI 275.7 THA 13.43 EL1 3900.2 EL2 30.3 ALF 15.19

LAUNCH DATE JAN 7 1969 FLIGHT TIME 176.00 ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 493.283
RL 147.10 LAL -.00 LOL 106.52 VL 27.569 GAL 2.44 AZL 85.43 HCA 226.27 SMA 127.08 ECC .16311 INC 4.5666 V1 30.287
RP 108.89 LAP -3.30 LOP 332.70 VP 37.325 GAP 4.54 AZP 93.16 TAL 167.29 TAP 33.56 RCA 106.55 APO 147.80 V2 34.800
RC 122.394 GL 35.71 GP -21.82 ZAL 72.35 ZAP 137.10 ETS 356.29 ZAE 132.78 ETE 200.43 ZAC 109.19 ETC 173.38 CLP-142.00
PLANETOCENTRIC CONIC
C3 14.118 VHL 3.757 DLA 47.42 RAL 19.97 RAD 6567.6 VEL 11.641 PTH 2.04 VHP 4.151 DPA -18.21 RAP 20.33 ECC 1.2323
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.23 19 32 3 4189.19 -34.65 192.85 250.55 55.34 20 41 53 3589.2 -38.91 184.81
129.77 3 37 8 2723.68 -34.64 78.35 250.54 55.32 4 22 32 2123.7 -38.90 70.31
50.23 19 32 3 4189.19 -34.65 192.85 250.55 55.34 20 41 53 3589.2 -38.91 184.81
129.77 3 37 8 2723.68 -34.64 78.35 250.54 55.32 4 22 32 2123.7 -38.90 70.31
50.23 19 32 3 4189.19 -34.65 192.85 250.55 55.34 20 41 53 3589.2 -38.91 184.81
129.77 3 37 8 2723.68 -34.64 78.35 250.54 55.32 4 22 32 2123.7 -38.90 70.31
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.4712 TRA .6065 TC3-3.9915 BAU .7598 SGT 5006.5 SCR 1066.9 SCS 714.6 ST 3791.7 SR 922.9 SS 2085.4
RDE .6005 RRA .1692 RC3 -.5226 FAU .09943 RRT .9642 RRF .9622 RTF .9779 CRT .9998 CRS -.9970 CST -.9957
FDE 3.7349 FRA 1.7173 FC3-6.0974 BSP 16101 SGB 5118.9 R25 .0819 R13 .9787 LSA 4421.4 MSA 169.3 SSA 9.9
BDE 2.5432 BRA .6298 BC3 4.0253 FSP -2482 SGI 5111.4 SGI 277.2 THA 11.65 EL1 3902.4 EL2 17.3 ALF 13.68

LAUNCH DATE JAN 7 1969 FLIGHT TIME 178.00 ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC DISTANCE 499.311
RL 147.10 LAL -.00 LOL 106.52 VL 27.548 GAL 2.66 AZL 85.60 HCA 229.43 SMA 126.94 ECC .16528 INC 4.3953 V1 30.287
RP 108.88 LAP -3.34 LOP 335.87 VP 37.315 GAP 4.87 AZP 92.86 TAL 166.38 TAP 35.81 RCA 105.96 APO 147.92 V2 34.805
RC 124.766 GL 34.17 GP -19.86 ZAL 70.71 ZAP 139.83 ETS 356.22 ZAE 132.24 ETE 198.04 ZAC 109.70 ETC 175.04 CLP-144.34
PLANETOCENTRIC CONIC
C3 14.102 VHL 3.755 DLA 46.64 RAL 22.71 RAD 6567.6 VEL 11.640 PTH 2.04 VHP 4.279 DPA -16.29 RAP 20.26 ECC 1.2321
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.25 19 46 37 4179.86 -34.16 191.55 252.87 56.07 20 56 17 3579.9 -38.34 183.50
128.75 3 44 28 2732.51 -34.15 78.79 252.86 56.06 4 30 0 2132.5 -38.33 70.74
51.25 19 46 37 4179.86 -34.16 191.55 252.87 56.07 20 56 17 3579.9 -38.34 183.50
128.75 3 44 28 2732.51 -34.15 78.79 252.86 56.06 4 30 0 2132.5 -38.33 70.74
51.25 19 46 37 4179.86 -34.16 191.55 252.87 56.07 20 56 17 3579.9 -38.34 183.50
128.75 3 44 28 2732.51 -34.15 78.79 252.86 56.06 4 30 0 2132.5 -38.33 70.74
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.4700 TRA .7409 TC3-4.1435 BAU .7854 SGT 5157.3 SCR 967.3 SCS 678.4 ST 3802.0 SR 842.1 SS 1976.5
RDE .5472 RRA .1658 RC3 -.4334 FAU .09337 RRT .9540 RRF .9488 RTF .9782 CRT .9999 CRS -.9953 CST -.9954
FDE 3.4137 FRA 1.7990 FC3-5.7322 BSP 16576 SGB 5247.2 R25 .0426 R13 .9786 LSA 4363.7 MSA 169.0 SSA 10.7
BDE 2.5298 BRA .7588 BC3 4.1661 FSP -2360 SGI 5239.4 SGI 285.5 THA 10.17 EL1 3894.1 EL2 10.7 ALF 12.49

LAUNCH DATE JAN 7 1969 FLIGHT TIME 180.00 ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC DISTANCE 505.319
RL 147.10 LAL -.00 LOL 106.52 VL 27.527 GAL 2.88 AZL 85.76 HCA 232.59 SMA 126.80 ECC .16763 INC 4.2395 V1 30.287
RP 108.86 LAP -3.37 LOP 339.04 VP 37.305 GAP 5.21 AZP 92.58 TAL 165.43 TAP 38.02 RCA 105.54 APO 148.05 V2 34.811
RC 127.128 GL 32.66 GP -18.32 ZAL 69.02 ZAP 142.36 ETS 356.17 ZAE 131.67 ETE 196.01 ZAC 110.37 ETC 172.79 CLP-146.53
PLANETOCENTRIC CONIC
C3 14.182 VHL 3.766 DLA 45.88 RAL 25.44 RAD 6567.6 VEL 11.643 PTH 2.04 VHP 4.419 DPA -14.51 RAP 20.44 ECC 1.2334
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.26 20 1 10 4171.80 -33.63 190.37 255.29 56.73 21 10 42 3571.8 -37.74 182.32
127.74 3 51 42 2743.07 -33.62 79.36 255.28 56.71 4 37 25 2143.1 -37.72 71.32
52.26 20 1 10 4171.80 -33.63 190.37 255.29 56.73 21 10 42 3571.8 -37.74 182.32
127.74 3 51 42 2743.07 -33.62 79.36 255.28 56.71 4 37 25 2143.1 -37.72 71.32
52.26 20 1 10 4171.80 -33.63 190.37 255.29 56.73 21 10 42 3571.8 -37.74 182.32
127.74 3 51 42 2743.07 -33.62 79.36 255.28 56.71 4 37 25 2143.1 -37.72 71.32
DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY
TDE 2.4666 TRA .8056 TC3-4.2507 BAU .8087 SGT 5299.0 SCR 885.9 SCS 642.3 ST 3798.6 SR 777.2 SS 1871.7
RDE .5062 RRA .1590 RC3 -.3536 FAU .08704 RRT .9406 RRF .9326 RTF .9783 CRT .9997 CRS -.9929 CST -.9951
FDE 3.1187 FRA 1.8713 FC3-5.3136 BSP 16972 SGB 5372.6 R25 .0280 R13 .9786 LSA 4302.1 MSA 169.5 SSA 11.4
BDE 2.5180 BRA .8998 BC3 4.2654 FSP -2224 SGI 5364.3 SGI 297.2 THA 8.96 EL1 3877.3 EL2 18.4 ALF 11.56

LAUNCH DATE JAN 7 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 511.307

RL 147.10 LAL -.00 LOL 106.52 VL 27.505 GAL 3.12 AZL 85.90 HCA 235.76 SMA 126.65 ECC .17017 INC 4.0963 V1 30.287
RP 108.84 LAP -3.39 LOP 342.21 VP 37.295 GAP 5.55 AZP 92.31 TAL 164.44 TAP 40.20 RCA 105.10 APO 148.21 V2 34.818
RC 129.481 GL 31.19 GP -16.97 ZAL 67.28 ZAP 144.72 ETS 336.10 ZAE 131.09 ETE 194.30 ZAC 111.20 ETC 172.61 CLP-148.59

PLANETOCENTRIC CONIC

C3 14.355 VHL 3.789 DLA 45.13 RAL 28.16 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 4.570 DPA -12.83 RAP 20.83 ECC 1.2362
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.26 20 15 44 4164.86 -33.05 189.27 257.82 57.31 21 25 9 3564.9 -37.09 181.24
126.74 3 58 48 2755.38 -33.05 80.05 257.81 57.30 4 44 44 2155.4 -37.08 72.02
53.26 20 15 44 4164.86 -33.05 189.27 257.82 57.31 21 25 9 3564.9 -37.09 181.24
126.74 3 58 48 2755.38 -33.05 80.05 257.81 57.30 4 44 44 2155.4 -37.08 72.02
53.26 20 15 44 4164.86 -33.05 189.27 257.82 57.31 21 25 9 3564.9 -37.09 181.24
126.74 3 58 48 2755.38 -33.05 80.05 257.81 57.30 4 44 44 2155.4 -37.08 72.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4560 TRA 1.0355 TC3-4.3255 BAU .8319 SGT 5428.0 SGR 818.5 SCS 606.0 ST 3774.6 SR 723.9 SS 1765.8
RDE .4742 RRA .1537 RC3 -.2864 FAU .08107 RRT .9242 RRF .9134 RTF .9785 CRT .9990 CRS -.9896 CST -.9947
FDE 2.8407 FRA 1.9239 FC3-4.8894 BSP 17410 SGB 5489.4 R23 .0160 R13 .9787 LSA 4226.2 MSA 169.9 SSA 12.1
BDE 2.9014 BRA 1.0467 BC3 4.3349 FSP -2103 SGI 5480.8 SGT 309.6 THA 7.96 EL1 3843.3 EL2 31.2 ALF 10.85

LAUNCH DATE JAN 7 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 517.274

RL 147.10 LAL -.00 LOL 106.52 VL 27.483 GAL 3.38 AZL 86.04 HCA 238.92 SMA 126.50 ECC .17291 INC 3.9634 V1 30.287
RP 108.82 LAP -3.39 LOP 345.38 VP 37.285 GAP 5.90 AZP 92.05 TAL 163.43 TAP 42.36 RCA 104.63 APO 148.38 V2 34.825
RC 131.823 GL 29.73 GP -15.77 ZAL 65.50 ZAP 146.92 ETS 336.02 ZAE 130.52 ETE 192.84 ZAC 112.18 ETC 172.46 CLP-150.53

PLANETOCENTRIC CONIC

C3 14.619 VHL 3.824 DLA 44.39 RAL 30.85 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 4.732 DPA -11.25 RAP 21.41 ECC 1.2406
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.27 20 30 21 4158.80 -32.41 188.23 260.42 57.84 21 39 39 3558.8 -36.40 180.24
125.73 4 5 42 2769.53 -32.40 80.87 260.41 57.82 4 51 51 2169.5 -36.38 72.87
54.27 20 30 21 4158.80 -32.41 188.23 260.42 57.84 21 39 39 3558.8 -36.40 180.24
125.73 4 5 42 2769.53 -32.40 80.87 260.41 57.82 4 51 51 2169.5 -36.38 72.87
54.27 20 30 21 4158.80 -32.41 188.23 260.42 57.84 21 39 39 3558.8 -36.40 180.24
125.73 4 5 42 2769.53 -32.40 80.87 260.41 57.82 4 51 51 2169.5 -36.38 72.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4410 TRA 1.1933 TC3-4.3627 BAU .8539 SGT 5547.2 SGR 763.8 SCS 570.7 ST 3735.5 SR 681.0 SS 1663.2
RDE .4501 RRA .1491 RC3 -.2291 FAU .07526 RRT .9049 RRF .8918 RTF .9787 CRT .9978 CRS -.9853 CST -.9943
FDE 2.5853 FRA 1.9867 FC3-4.4568 BSP 17830 SGB 5599.5 R23 .0075 R13 .9788 LSA 4141.8 MSA 171.0 SSA 12.7
BDE 2.4822 BRA 1.2026 BC3 4.3687 FSP -1985 SGI 5590.2 SGT 322.6 THA 7.13 EL1 3796.8 EL2 44.9 ALF 10.31

LAUNCH DATE JAN 7 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 523.220

RL 147.10 LAL -.00 LOL 106.52 VL 27.460 GAL 3.66 AZL 86.16 HCA 242.09 SMA 126.35 ECC .17587 INC 3.8390 V1 30.287
RP 108.79 LAP -3.39 LOP 348.56 VP 37.275 GAP 6.25 AZP 91.80 TAL 162.40 TAP 44.49 RCA 104.13 APO 148.57 V2 34.833
RC 134.153 GL 28.30 GP -14.71 ZAL 63.69 ZAP 148.97 ETS 335.89 ZAE 129.97 ETE 191.60 ZAC 113.28 ETC 172.35 CLP-152.37

PLANETOCENTRIC CONIC

C3 14.977 VHL 3.870 DLA 43.64 RAL 33.52 RAD 6567.6 VEL 11.677 PTH 2.05 VHP 4.904 DPA -9.75 RAP 22.15 ECC 1.2465
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.30 20 45 1 4153.53 -31.73 187.26 263.10 58.32 21 54 15 3553.5 -35.66 179.29
124.70 4 12 20 2785.56 -31.72 81.82 263.09 58.30 4 58 45 2185.6 -35.65 73.86
55.30 20 45 1 4153.53 -31.73 187.26 263.10 58.32 21 54 15 3553.5 -35.66 179.29
124.70 4 12 20 2785.56 -31.72 81.82 263.09 58.30 4 58 45 2185.6 -35.65 73.86
55.30 20 45 1 4153.53 -31.73 187.26 263.10 58.32 21 54 15 3553.5 -35.66 179.29
124.70 4 12 20 2785.56 -31.72 81.82 263.09 58.30 4 58 45 2185.6 -35.65 73.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4219 TRA 1.3688 TC3-4.3634 BAU .8744 SGT 5657.8 SGR 719.8 SCS 536.9 ST 3683.1 SR 646.6 SS 1564.7
RDE .4325 RRA .1454 RC3 -.1810 FAU .06968 RRT .8833 RRF .8684 RTF .9788 CRT .9957 CRS -.9797 CST -.9939
FDE 2.3515 FRA 2.0022 FC3-4.0281 BSP 18227 SGB 5703.4 R23 .0017 R13 .9788 LSA 4049.8 MSA 173.0 SSA 13.2
BDE 2.4603 BRA 1.3683 BC3 4.3671 FSP -1873 SGI 5693.5 SGT 335.4 THA 6.43 EL1 3738.9 EL2 59.0 ALF 9.92

LAUNCH DATE JAN 7 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 529.143

RL 147.10 LAL -.00 LOL 106.52 VL 27.436 GAL 3.95 AZL 86.28 HCA 245.26 SMA 126.19 ECC .17905 INC 3.7216 V1 30.287
RP 108.77 LAP -3.38 LOP 351.73 VP 37.265 GAP 6.61 AZP 91.56 TAL 161.34 TAP 46.60 RCA 103.60 APO 148.79 V2 34.841
RC 136.471 GL 26.89 GP -13.77 ZAL 61.86 ZAP 150.89 ETS 335.71 ZAE 129.45 ETE 190.54 ZAC 114.50 ETC 172.26 CLP-154.10

PLANETOCENTRIC CONIC

C3 15.430 VHL 3.928 DLA 42.88 RAL 36.16 RAD 6567.6 VEL 11.697 PTH 2.06 VHP 5.085 DPA -8.32 RAP 23.04 ECC 1.2539
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.34 20 58 46 4148.95 -31.01 186.33 265.85 58.75 22 8 55 3549.0 -34.89 178.40
123.66 4 18 40 2803.53 -31.00 82.90 265.84 58.74 5 5 23 2203.5 -34.88 74.98
56.34 20 58 46 4148.95 -31.01 186.33 265.85 58.75 22 8 55 3549.0 -34.89 178.40
123.66 4 18 40 2803.53 -31.00 82.90 265.84 58.74 5 5 23 2203.5 -34.88 74.98
56.34 20 58 46 4148.95 -31.01 186.33 265.85 58.75 22 8 55 3549.0 -34.89 178.40
123.66 4 18 40 2803.53 -31.00 82.90 265.84 58.74 5 5 23 2203.5 -34.88 74.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4022 TRA 1.5411 TC3-4.3203 BAU .8917 SGT 5782.7 SGR 685.6 SCS 505.2 ST 3624.2 SR 619.7 SS 1473.8
RDE .4200 RRA .1433 RC3 -.1399 FAU .06413 RRT .8602 RRF .8443 RTF .9788 CRT .9927 CRS -.9729 CST -.9935
FDE 2.1427 FRA 2.0364 FC3-3.5981 BSP 18508 SGB 5803.5 R23 -.0013 R13 .9788 LSA 3957.2 MSA 176.0 SSA 13.7
BDE 2.4388 BRA 1.5478 BC3 4.3225 FSP -1752 SGI 5792.9 SGT 347.9 THA 5.86 EL1 3676.1 EL2 73.4 ALF 9.64



LAUNCH DATE JAN 7 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 16 1969

Heliocentric Conic

DISTANCE 555.042

RL 147.10 LAL -.00 LOL 106.52 VL 27.412 GAL 4.26 AZL 86.39 HCA 248.43 SMA 126.03 ECC .18247 INC 3.6101 V1 30.287  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.256 GAP 6.97 AZP 91.33 TAL 160.26 TAP 48.69 RCA 103.04 APO 149.03 V2 34.850  
 RC 136.775 GL 25.50 GP -12.94 ZAL 60.01 ZAP 152.70 ETS 335.47 ZAE 128.97 ETE 189.63 ZAC 115.81 ETC 172.18 CLP-155.75

Planetocentric Conic

C3 15.985 VHL 3.998 DLA 42.12 RAL 38.77 RAD 6567.6 VEL 11.720 PTH 2.07 VHP 5.275 DPA -6.95 RAP 24.06 ECC 1.2631  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.42 21 14 36 4144.83 -30.23 185.42 268.65 59.15 22 23 41 3544.8 -34.08 177.55  
 122.58 4 24 35 2823.64 -30.22 84.13 268.64 59.14 5 11 39 2223.6 -34.06 76.26  
 57.42 21 14 36 4144.83 -30.23 185.42 268.65 59.15 22 23 41 3544.8 -34.08 177.55  
 122.58 4 24 35 2823.64 -30.22 84.13 268.64 59.14 5 11 39 2223.6 -34.06 76.26  
 57.42 21 14 36 4144.83 -30.23 185.42 268.65 59.15 22 23 41 3544.8 -34.08 177.55  
 122.58 4 24 35 2823.64 -30.22 84.13 268.64 59.14 5 11 39 2223.6 -34.06 76.26

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3744 TRA 1.7271 TC3-4.2564 BAU .9099 SGT 5856.3 SCR 657.6 SCS 474.6 ST 3548.3 SR 597.3 SS 1383.6  
 RDE .4128 RRA .1418 RC3 -.1082 FAU .05918 RRT .8363 RRF .8197 RTF .9788 CRT .9887 CRS -.9645 CST -.9930  
 FDE 1.9470 FRA 2.0590 FC3-3.2050 BSP 18873 SGB 5893.1 R23 -.0037 R13 .9788 LSA 3850.9 MSA 179.8 SSA 14.1  
 BDE 2.4100 BRA 1.7329 BC3 4.2578 FSP -1653 SGI 5882.1 SGI 358.9 THA 5.39 EL1 3597.2 EL2 88.2 ALF 9.46

LAUNCH DATE JAN 7 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 18 1969

Heliocentric Conic

DISTANCE 540.915

RL 147.10 LAL -.00 LOL 106.52 VL 27.387 GAL 4.58 AZL 86.50 HCA 251.60 SMA 125.87 ECC .18615 INC 3.5033 V1 30.287  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.248 GAP 7.35 AZP 91.11 TAL 159.16 TAP 50.76 RCA 102.44 APO 149.30 V2 34.860  
 RC 141.067 GL 24.13 GP -12.19 ZAL 58.15 ZAP 154.41 ETS 335.16 ZAE 128.52 ETE 188.85 ZAC 117.23 ETC 172.10 CLP-157.33

Planetocentric Conic

C3 18.649 VHL 4.080 DLA 41.34 RAL 41.32 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 5.475 DPA -5.64 RAP 25.19 ECC 1.2740  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.52 21 29 30 4141.21 -29.41 184.55 271.49 59.52 22 38 31 3541.2 -33.22 176.72  
 121.48 4 30 5 2845.84 -29.40 85.50 271.48 59.51 5 17 31 2245.8 -33.21 77.68  
 58.52 21 29 30 4141.21 -29.41 184.55 271.49 59.52 22 38 31 3541.2 -33.22 176.72  
 121.48 4 30 5 2845.84 -29.40 85.50 271.48 59.51 5 17 31 2245.8 -33.21 77.68  
 58.52 21 29 30 4141.21 -29.41 184.55 271.49 59.52 22 38 31 3541.2 -33.22 176.72  
 121.48 4 30 5 2845.84 -29.40 85.50 271.48 59.51 5 17 31 2245.8 -33.21 77.68

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3428 TRA 1.9242 TC3-4.1817 BAU .9285 SGT 5942.3 SCR 635.3 SCS 445.8 ST 3464.0 SR 579.2 SS 1298.2  
 RDE .4088 RRA .1413 RC3 -.0828 FAU .05450 RRT .8128 RRF .7957 RTF .9789 CRT .9836 CRS -.9546 CST -.9926  
 FDE 1.7684 FRA 2.0783 FC3-2.8339 BSP 19210 SGB 5976.1 R23 -.0050 R13 .9789 LSA 3739.7 MSA 184.8 SSA 14.3  
 BDE 2.3782 BRA 1.9294 BC3 4.1825 FSP -1559 SGI 5964.7 SGI 368.7 THA 4.99 EL1 3510.5 EL2 103.2 ALF 9.35

LAUNCH DATE JAN 7 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 20 1969

Heliocentric Conic

DISTANCE 546.760

RL 147.10 LAL -.00 LOL 106.52 VL 27.362 GAL 4.93 AZL 86.60 HCA 254.78 SMA 125.71 ECC .19011 INC 3.4003 V1 30.287  
 RP 108.88 LAP -3.28 LOP 358.09 VP 37.237 GAP 7.74 AZP 90.89 TAL 158.04 TAP 52.82 RCA 101.81 APO 149.60 V2 34.870  
 RC 143.344 GL 22.78 GP -11.52 ZAL 56.30 ZAP 156.03 ETS 334.77 ZAE 128.10 ETE 188.19 ZAC 118.72 ETC 172.02 CLP-158.83

Planetocentric Conic

C3 17.432 VHL 4.175 DLA 40.56 RAL 43.83 RAD 6567.7 VEL 11.782 PTH 2.08 VHP 5.686 DPA -4.37 RAP 26.42 ECC 1.2869  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.65 21 44 31 4137.83 -28.55 183.68 274.37 59.87 22 53 29 3537.8 -32.32 175.91  
 120.35 4 35 3 2870.39 -28.54 87.04 274.36 59.86 5 22 54 2270.4 -32.31 79.27  
 59.65 21 44 31 4137.83 -28.55 183.68 274.37 59.87 22 53 29 3537.8 -32.32 175.91  
 120.35 4 35 3 2870.39 -28.54 87.04 274.36 59.86 5 22 54 2270.4 -32.31 79.27  
 59.65 21 44 31 4137.83 -28.55 183.68 274.37 59.87 22 53 29 3537.8 -32.32 175.91  
 120.35 4 35 3 2870.39 -28.54 87.04 274.36 59.86 5 22 54 2270.4 -32.31 79.27

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3079 TRA 2.1330 TC3-4.0394 BAU .9415 SGT 6021.0 SCR 617.7 SCS 418.8 ST 3373.0 SR 564.5 SS 1218.5  
 RDE .4075 RRA .1424 RC3 -.0626 FAU .05005 RRT .7901 RRF .7732 RTF .9788 CRT .9771 CRS -.9430 CST -.9921  
 FDE 1.6064 FRA 2.0955 FC3-2.4856 BSP 19521 SGB 6052.6 R23 -.0053 R13 .9788 LSA 3625.4 MSA 191.0 SSA 14.5  
 BDE 2.3436 BRA 2.1377 BC3 4.0399 FSP -1469 SGI 6040.8 SGI 377.4 THA 4.65 EL1 3417.9 EL2 116.6 ALF 9.30

LAUNCH DATE JAN 7 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 22 1969

Heliocentric Conic

DISTANCE 552.575

RL 147.10 LAL -.00 LOL 106.52 VL 27.336 GAL 5.30 AZL 86.70 HCA 257.95 SMA 125.54 ECC .19437 INC 3.3002 V1 30.287  
 RP 108.65 LAP -3.23 LOP 358.09 VP 37.228 GAP 8.14 AZP 90.69 TAL 156.91 TAP 54.87 RCA 101.14 APO 149.94 V2 34.880  
 RC 145.608 GL 21.46 GP -10.92 ZAL 54.45 ZAP 157.56 ETS 334.27 ZAE 127.71 ETE 187.61 ZAC 120.29 ETC 171.94 CLP-160.28

Planetocentric Conic

C3 18.345 VHL 4.283 DLA 39.77 RAL 46.27 RAD 6567.7 VEL 11.821 PTH 2.09 VHP 5.906 DPA -3.14 RAP 27.74 ECC 1.3019  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.83 21 59 36 4134.71 -27.64 182.82 277.29 60.19 23 8 31 3534.7 -31.38 175.11  
 119.17 4 39 29 2897.29 -27.63 88.73 277.28 60.18 5 27 46 2297.3 -31.37 81.01  
 60.83 21 59 36 4134.71 -27.64 182.82 277.29 60.19 23 8 31 3534.7 -31.38 175.11  
 119.17 4 39 29 2897.29 -27.63 88.73 277.28 60.18 5 27 46 2297.3 -31.37 81.01  
 60.83 21 59 36 4134.71 -27.64 182.82 277.29 60.19 23 8 31 3534.7 -31.38 175.11  
 119.17 4 39 29 2897.29 -27.63 88.73 277.28 60.18 5 27 46 2297.3 -31.37 81.01

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2703 TRA 2.3942 TC3-3.8923 BAU .9547 SGT 6093.2 SCR 603.7 SCS 393.5 ST 3277.8 SR 552.2 SS 1144.5  
 RDE .4088 RRA .1450 RC3 -.0471 FAU .04585 RRT .7891 RRF .7526 RTF .9787 CRT .9692 CRS -.9297 CST -.9916  
 FDE 1.4595 FRA 2.1109 FC3-2.1639 BSP 19794 SGB 6123.0 R23 -.0049 R13 .9787 LSA 3509.9 MSA 198.3 SSA 14.5  
 BDE 2.3068 BRA 2.3587 BC3 3.8926 FSP -1384 SGI 6110.9 SGI 384.7 THA 4.38 EL1 3321.3 EL2 134.1 ALF 9.29

LAUNCH DATE JAN 7 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.311 GAL 5.70 AZL 86.80 HCA 261.13 SMA 125.37 ECC .19895 INC 3.2025 V1 30.287  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.220 GAP 8.55 AZP 90.49 TAL 155.77 TAP 56.90 RCA 100.43 APO 150.32 V2 34.891  
 RC 147.857 GL 20.16 GP -10.38 ZAL 52.61 ZAP 159.02 ETS 335.67 ZAE 127.35 ETE 187.11 ZAC 121.92 ETC 171.84 CLP-161.67

DISTANCE 558.357

PLANETOCENTRIC CONIC

C3 19.402 VHL 4.405 DLA 38.96 RAL 48.65 RAD 6567.8 VEL 11.865 PTH 2.10 VHP 6.138 DPA -1.95 RAP 29.14 ECC 1.3193  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.04 22 14 48 4131.70 -26.70 181.96 280.22 60.50 23 23 39 3531.7 -30.41 174.31  
 117.96 4 43 17 2926.69 -26.68 90.59 280.21 60.49 5 32 4 2326.7 -30.39 82.93  
 62.04 22 14 48 4131.70 -26.70 181.96 280.22 60.50 23 23 39 3531.7 -30.41 174.31  
 117.96 4 43 17 2926.69 -26.68 90.59 280.21 60.49 5 32 4 2326.7 -30.39 82.93  
 62.04 22 14 48 4131.70 -26.70 181.96 280.22 60.50 23 23 39 3531.7 -30.41 174.31  
 117.96 4 43 17 2926.69 -26.68 90.59 280.21 60.49 5 32 4 2326.7 -30.39 82.93

DIFFERENTIAL CORRECTIONS

TDE 2.2321 TRA 2.5912 TC3-3.7196 BAU .9649  
 RDE .4128 RRA .1492 RC3 -.0347 FAU .04178  
 FDE 1.3282 FRA 2.1279 FC3-1.8642 BSP 19986  
 BDE 2.2699 BRA 2.5955 BC3 3.7197 FSP -1298

MID-COURSE EXECUTION ACCURACY

SGT 6161.0 SGR 592.9 SG3 370.1  
 RRT .7504 RRF .7348 RTF .9786  
 SGB 6189.5 R23 -.0038 R13 .9785  
 SG1 6177.1 SG2 390.8 THA 4.15

ORBIT DETERMINATION ACCURACY

ST 3182.9 SR 542.1 SS 1077.5  
 CRT .9599 CRS -.9149 CST -.9912  
 LSA 3397.5 MSA 206.6 SSA 14.5  
 EL1 3225.3 EL2 149.9 ALF 9.31

LAUNCH DATE JAN 7 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.285 GAL 6.11 AZL 86.89 HCA 264.31 SMA 125.21 ECC .20390 INC 3.1064 V1 30.287  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.211 GAP 8.98 AZP 90.31 TAL 154.62 TAP 58.93 RCA 99.68 APO 150.74 V2 34.902  
 RC 150.092 GL 18.89 GP -9.90 ZAL 50.80 ZAP 160.41 ETS 332.93 ZAE 127.02 ETE 186.68 ZAC 123.61 ETC 171.72 CLP-163.01

DISTANCE 564.102

PLANETOCENTRIC CONIC

C3 20.621 VHL 4.541 DLA 38.15 RAL 50.97 RAD 6567.8 VEL 11.916 PTH 2.12 VHP 6.383 DPA -.80 RAP 30.62 ECC 1.3394  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.29 22 30 6 4128.67 -25.71 181.10 283.18 60.78 23 38 54 3528.7 -29.40 173.50  
 116.71 4 46 25 2958.72 -25.70 92.62 283.17 60.77 5 35 44 2358.7 -29.38 85.03  
 63.29 22 30 6 4128.67 -25.71 181.10 283.18 60.78 23 38 54 3528.7 -29.40 173.50  
 116.71 4 46 25 2958.72 -25.70 92.62 283.17 60.77 5 35 44 2358.7 -29.38 85.03  
 63.29 22 30 6 4128.67 -25.71 181.10 283.18 60.78 23 38 54 3528.7 -29.40 173.50  
 116.71 4 46 25 2958.72 -25.70 92.62 283.17 60.77 5 35 44 2358.7 -29.38 85.03

DIFFERENTIAL CORRECTIONS

TDE 2.1873 TRA 2.8379 TC3-3.5382 BAU .9754  
 RDE .4180 RRA .1545 RC3 -.0264 FAU .03812  
 FDE 1.2056 FRA 2.1402 FC3-1.8006 BSP 20251  
 BDE 2.2269 BRA 2.8421 BC3 3.5383 FSP -1225

MID-COURSE EXECUTION ACCURACY

SGT 6219.0 SGR 583.3 SG3 348.0  
 RRT .7337 RRF .7188 RTF .9784  
 SGB 6246.3 R23 -.0029 R13 .9784  
 SG1 6233.8 SG2 395.3 THA 3.95

ORBIT DETERMINATION ACCURACY

ST 3080.9 SR 532.6 SS 1013.4  
 CRT .9490 CRS -.8980 CST -.9908  
 LSA 3279.6 MSA 215.8 SSA 14.4  
 EL1 3122.2 EL2 165.8 ALF 9.34

LAUNCH DATE JAN 7 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.258 GAL 6.56 AZL 86.99 HCA 267.49 SMA 125.04 ECC .20923 INC 3.0113 V1 30.287  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.203 GAP 9.43 AZP 90.13 TAL 153.47 TAP 60.96 RCA 98.88 APO 151.20 V2 34.914  
 RC 152.312 GL 17.65 GP -9.46 ZAL 49.01 ZAP 161.75 ETS 332.04 ZAE 126.71 ETE 186.30 ZAC 125.35 ETC 171.58 CLP-164.32

DISTANCE 569.807

PLANETOCENTRIC CONIC

C3 22.021 VHL 4.693 DLA 37.34 RAL 53.20 RAD 6567.9 VEL 11.975 PTH 2.13 VHP 6.640 DPA .32 RAP 32.16 ECC 1.3624  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.58 22 45 32 4125.51 -24.69 180.21 286.15 61.06 23 54 17 3525.5 -28.35 172.67  
 115.42 4 48 49 2993.50 -24.68 94.85 286.14 61.05 5 38 43 2393.5 -28.34 87.31  
 64.58 22 45 32 4125.51 -24.69 180.21 286.15 61.06 23 54 17 3525.5 -28.35 172.67  
 115.42 4 48 49 2993.50 -24.68 94.85 286.14 61.05 5 38 43 2393.5 -28.34 87.31  
 64.58 22 45 32 4125.51 -24.69 180.21 286.15 61.06 23 54 17 3525.5 -28.35 172.67  
 115.42 4 48 49 2993.50 -24.68 94.85 286.14 61.05 5 38 43 2393.5 -28.34 87.31

DIFFERENTIAL CORRECTIONS

TDE 2.1409 TRA 3.0996 TC3-3.3411 BAU .9836  
 RDE .4248 RRA .1614 RC3 -.0202 FAU .03465  
 FDE 1.0950 FRA 2.1527 FC3-1.3623 BSP 20476  
 BDE 2.1826 BRA 3.1038 BC3 3.3411 FSP -1156

MID-COURSE EXECUTION ACCURACY

SGT 6270.8 SGR 575.1 SG3 327.3  
 RRT .7195 RRF .7055 RTF .9783  
 SGB 6297.1 R23 -.0019 R13 .9783  
 SG1 6284.4 SG2 398.5 THA 3.79

ORBIT DETERMINATION ACCURACY

ST 2980.1 SR 523.9 SS 955.3  
 CRT .9363 CRS -.8794 CST -.9904  
 LSA 3164.9 MSA 225.6 SSA 14.2  
 EL1 3020.3 EL2 181.5 ALF 9.38

LAUNCH DATE JAN 7 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 106.52 VL 27.232 GAL 7.03 AZL 87.08 HCA 270.68 SMA 124.87 ECC .21498 INC 2.9166 V1 30.287  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.195 GAP 9.90 AZP 89.97 TAL 152.31 TAP 62.99 RCA 98.02 APO 151.71 V2 34.926  
 RC 154.516 GL 16.43 GP -9.06 ZAL 47.26 ZAP 163.02 ETS 330.97 ZAE 126.42 ETE 185.97 ZAC 127.14 ETC 171.42 CLP-165.58

DISTANCE 575.466

PLANETOCENTRIC CONIC

C3 23.627 VHL 4.861 DLA 36.52 RAL 55.36 RAD 6568.0 VEL 12.042 PTH 2.15 VHP 6.912 DPA 1.41 RAP 33.76 ECC 1.3888  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.91 23 1 7 4122.04 -23.64 179.30 289.13 61.32 24 9 50 3522.0 -27.28 171.82  
 114.09 4 50 26 3031.21 -23.63 97.27 289.12 61.31 5 40 57 2431.2 -27.27 89.79  
 65.91 23 1 7 4122.04 -23.64 179.30 289.13 61.32 24 9 50 3522.0 -27.28 171.82  
 114.09 4 50 26 3031.21 -23.63 97.27 289.12 61.31 5 40 57 2431.2 -27.27 89.79  
 65.91 23 1 7 4122.04 -23.64 179.30 289.13 61.32 24 9 50 3522.0 -27.28 171.82  
 114.09 4 50 26 3031.21 -23.63 97.27 289.12 61.31 5 40 57 2431.2 -27.27 89.79

DIFFERENTIAL CORRECTIONS

TDE 2.0924 TRA 3.3774 TC3-3.1338 BAU .9899  
 RDE .4327 RRA .1698 RC3 -.0160 FAU .03139  
 FDE .9945 FRA 2.1657 FC3-1.1503 BSP 20687  
 BDE 2.1367 BRA 3.3816 BC3 3.1338 FSP -1091

MID-COURSE EXECUTION ACCURACY

SGT 6316.9 SGR 567.8 SG3 308.1  
 RRT .7078 RRF .6946 RTF .9782  
 SGB 6342.4 R23 -.0009 R13 .9782  
 SG1 6329.7 SG2 400.3 THA 3.66

ORBIT DETERMINATION ACCURACY

ST 2881.0 SR 515.5 SS 902.4  
 CRT .9218 CRS -.8590 CST -.9901  
 LSA 3053.6 MSA 235.9 SSA 14.0  
 EL1 2920.1 EL2 197.1 ALF 9.41

LAUNCH DATE JAN 7 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -0.00 LOL 106.52 VL 27.205 GAL 7.54 AZL 87.18 HCA 275.86 SMA 124.70 ECC .22121 INC 2.8217 V1 30.287
RP 108.47 LAP -2.82 LOP 20.39 VP 37.187 GAP 10.39 AZP 89.81 TAL 151.16 TAP 65.02 RCA 97.11 APO 152.28 V2 34.938
RC 156.704 GL 15.25 GP -8.70 ZAL 45.55 ZAP 164.25 ETS 329.68 ZAE 126.14 ETE 185.69 ZAC 128.96 ETC 171.23 CLP-166.82

DISTANCE 581.075

PLANETOCENTRIC CONIC

C3 25.466 VHL 5.046 DLA 35.70 RAL 57.43 RAD 6568.0 VEL 12.118 PTH 2.17 VHP 7.200 DPA 2.47 RAP 35.42 ECC 1.4191
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.29 23 16 55 4118.08 -22.57 178.34 292.12 61.57 24 25 34 3518.1 -26.18 170.92
112.71 4 51 11 3072.02 -22.55 99.90 292.11 61.56 5 42 23 2472.0 -26.17 92.48
67.29 23 16 55 4118.08 -22.57 178.34 292.12 61.57 24 25 34 3518.1 -26.18 170.92
112.71 4 51 11 3072.02 -22.55 99.90 292.11 61.56 5 42 23 2472.0 -26.17 92.48
67.29 23 16 55 4118.08 -22.57 178.34 292.12 61.57 24 25 34 3518.1 -26.18 170.92
112.71 4 51 11 3072.02 -22.55 99.90 292.11 61.56 5 42 23 2472.0 -26.17 92.48

DIFFERENTIAL CORRECTIONS

TDE 2.0454 TRA 3.6750 TC3-2.9141 BAU .9921
RDE .4420 RRA .1799 RC3 -.0126 FAU .02820
FDE .9058 FRA 2.1815 FC3 -.9588 B8P 20795
BDE 2.0926 BRA 3.6794 BC3 2.9141 FSP -1025

MID-COURSE EXECUTION ACCURACY

S6T 6359.4 SGR 561.5 S63 290.4
RRR .6989 RRF .6866 RTF .9780
S6B 6384.1 R23 .0005 R13 .9781
S6I 6371.5 S62 400.8 THA 3.54

ORBIT DETERMINATION ACCURACY

ST 2788.6 SR 507.4 SS 856.5
CRT .9057 CRS -.8375 CST -.9900
LSA 2950.7 MSA 246.2 S3A 13.8
EL1 2826.5 EL2 212.2 ALF 9.41

LAUNCH DATE JAN 7 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -0.00 LOL 106.52 VL 27.179 GAL 8.08 AZL 87.27 HCA 277.05 SMA 124.53 ECC .22795 INC 2.7260 V1 30.287
RP 108.43 LAP -2.71 LOP 23.58 VP 37.179 GAP 10.91 AZP 89.67 TAL 150.01 TAP 67.06 RCA 96.14 APO 152.91 V2 34.951
RC 158.875 GL 14.11 GP -8.37 ZAL 43.89 ZAP 165.43 ETS 328.14 ZAE 125.88 ETE 185.43 ZAC 130.81 ETC 171.01 CLP-168.03

DISTANCE 586.625

PLANETOCENTRIC CONIC

C3 27.574 VHL 5.251 DLA 34.88 RAL 59.42 RAD 6568.1 VEL 12.204 PTH 2.19 VHP 7.506 DPA 3.50 RAP 37.12 ECC 1.4538
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.72 23 32 59 4113.39 -21.46 177.33 295.11 61.82 24 41 33 3513.4 -25.06 169.96
111.28 4 51 0 3116.15 -21.45 102.75 295.11 61.81 5 42 56 2516.1 -25.04 95.39
68.72 23 32 59 4113.39 -21.46 177.33 295.11 61.82 24 41 33 3513.4 -25.06 169.96
111.28 4 51 0 3116.15 -21.45 102.75 295.11 61.81 5 42 56 2516.1 -25.04 95.39
68.72 23 32 59 4113.39 -21.46 177.33 295.11 61.82 24 41 33 3513.4 -25.06 169.96
111.28 4 51 0 3116.15 -21.45 102.75 295.11 61.81 5 42 56 2516.1 -25.04 95.39

DIFFERENTIAL CORRECTIONS

TDE 1.9927 TRA 3.9869 TC3-2.6987 BAU .9941
RDE .4517 RRA .1913 RC3 -.0108 FAU .02533
FDE .8228 FRA 2.1956 FC3 -.7952 B8P 20985
BDE 2.0432 BRA 3.9915 BC3 2.6987 FSP -969

MID-COURSE EXECUTION ACCURACY

S6T 6393.0 SGR 554.7 S63 273.6
RRR .6917 RRF .6801 RTF .9780
S6B 6417.0 R23 .0013 R13 .9780
S6I 6404.5 S62 399.9 THA 3.45

ORBIT DETERMINATION ACCURACY

ST 2895.5 SR 498.7 SS 813.6
CRT .8875 CRS -.8139 CST -.9899
LSA 2847.8 MSA 256.6 S3A 13.5
EL1 2731.8 EL2 226.7 ALF 9.39

LAUNCH DATE JAN 7 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -0.00 LOL 106.52 VL 27.152 GAL 8.66 AZL 87.37 HCA 280.24 SMA 124.36 ECC .23526 INC 2.6289 V1 30.287
RP 108.39 LAP -2.59 LOP 26.78 VP 37.172 GAP 11.46 AZP 89.53 TAL 148.87 TAP 69.11 RCA 95.10 APO 153.62 V2 34.964
RC 161.027 GL 12.99 GP -8.07 ZAL 42.28 ZAP 166.56 ETS 326.28 ZAE 125.63 ETE 185.22 ZAC 132.69 ETC 170.75 CLP-169.22

DISTANCE 592.109

PLANETOCENTRIC CONIC

C3 29.991 VHL 5.476 DLA 34.07 RAL 61.33 RAD 6568.2 VEL 12.303 PTH 2.22 VHP 7.832 DPA 4.49 RAP 38.86 ECC 1.4936
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.21 23 49 23 4107.65 -20.34 176.24 298.11 62.06 24 57 51 3507.6 -23.91 168.93
109.79 4 49 48 3163.88 -20.32 105.85 298.10 62.05 5 42 31 2563.9 -23.90 98.54
70.21 23 49 23 4107.65 -20.34 176.24 298.11 62.06 24 57 51 3507.6 -23.91 168.93
109.79 4 49 48 3163.88 -20.32 105.85 298.10 62.05 5 42 31 2563.9 -23.90 98.54
110.00 5 12 14 3095.46 -22.40 101.66 298.25 63.48 6 3 50 2495.5 -25.77 94.13
110.00 4 30 3 3224.06 -18.29 109.37 298.92 60.60 5 23 47 2824.1 -22.06 102.27

DIFFERENTIAL CORRECTIONS

TDE 1.9393 TRA 4.3190 TC3-2.4767 BAU .9931
RDE .4620 RRA .2042 RC3 -.0096 FAU .02260
FDE .7476 FRA 2.2115 FC3 -.6524 B8P 21149
BDE 1.9936 BRA 4.3238 BC3 2.4767 FSP -916

MID-COURSE EXECUTION ACCURACY

S6T 6421.2 SGR 548.0 S63 258.1
RRR .6867 RRF .6737 RTF .9781
S6B 6444.5 R23 .0020 R13 .9781
S6I 6432.3 S62 397.7 THA 3.37

ORBIT DETERMINATION ACCURACY

ST 2607.9 SR 489.5 SS 775.8
CRT .8674 CRS -.7892 CST -.9900
LSA 2751.6 MSA 266.6 S3A 13.2
EL1 2642.6 EL2 240.4 ALF 9.33

LAUNCH DATE JAN 7 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -0.00 LOL 106.52 VL 27.125 GAL 9.28 AZL 87.47 HCA 283.44 SMA 124.19 ECC .24320 INC 2.5298 V1 30.287
RP 108.35 LAP -2.46 LOP 29.97 VP 37.164 GAP 12.05 AZP 89.41 TAL 147.75 TAP 71.18 RCA 93.99 APO 154.40 V2 34.977
RC 163.181 GL 11.91 GP -7.80 ZAL 40.72 ZAP 167.65 ETS 324.04 ZAE 125.39 ETE 185.02 ZAC 134.59 ETC 170.44 CLP-170.39

DISTANCE 597.517

PLANETOCENTRIC CONIC

C3 32.787 VHL 5.724 DLA 33.26 RAL 63.14 RAD 6568.3 VEL 12.415 PTH 2.24 VHP 8.181 DPA 5.46 RAP 40.64 ECC 1.5393
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.77 0 10 10 4100.47 -19.19 175.04 301.10 62.30 1 18 30 3500.5 -22.75 167.78
108.23 4 47 26 3215.55 -19.18 109.22 301.10 62.29 5 41 2 2615.5 -22.74 101.96
71.77 0 10 10 4100.47 -19.19 175.04 301.10 62.30 1 18 30 3500.5 -22.75 167.78
108.23 4 47 26 3215.55 -19.18 109.22 301.10 62.29 5 41 2 2615.5 -22.74 101.96
110.00 5 58 20 2998.09 -25.23 95.51 304.25 66.13 6 48 18 2398.1 -28.23 87.62
110.00 3 58 27 3365.93 -13.37 117.42 297.64 58.24 4 54 33 2765.9 -17.47 110.71

DIFFERENTIAL CORRECTIONS

TDE 1.8851 TRA 4.6725 TC3-2.2574 BAU .9889
RDE .4729 RRA .2187 RC3 -.0086 FAU .02001
FDE .6800 FRA 2.2294 FC3 -.5287 B8P 21292
BDE 1.9435 BRA 4.6776 BC3 2.2574 FSP -865

MID-COURSE EXECUTION ACCURACY

S6T 6443.9 SGR 541.0 S63 243.6
RRR .6836 RRF .6731 RTF .9782
S6B 6466.6 R23 .0026 R13 .9782
S6I 6454.6 S62 394.2 THA 3.30

ORBIT DETERMINATION ACCURACY

ST 2526.3 SR 479.8 SS 742.9
CRT .8436 CRS -.7836 CST -.9902
LSA 2662.3 MSA 275.8 S3A 12.9
EL1 2559.0 EL2 252.9 ALF 9.21

LAUNCH DATE JAN 7 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 602.836

RL 147.10 LAL -.00 LOL 106.52 VL 27.099 GAL 9.95 AZL 87.57 HCA 286.63 SMA 124.02 ECC .25185 INC 2.4279 V1 30.287  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.157 GAP 12.67 AZP 89.30 TAL 146.64 TAP 73.27 RCA 92.79 APO 155.26 V2 34.990  
 RC 165.276 GL 10.87 GP -7.55 ZAL 39.22 ZAP 168.69 ETS 321.32 ZAE 125.14 ETE 184.85 ZAC 136.51 ETC 170.09 CLP-171.55

PLANETOCENTRIC CONIC

C3 35.960 VHL 5.997 DLA 32.46 RAL 64.87 RAD 6568.4 VEL 12.543 PTH 2.27 VHP 8.554 DPA 6.40 RAP 42.46 ECC 1.5918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.42 0 27 40 4091.11 -18.04 173.68 304.10 62.54 1 35 51 3491.1 -21.57 166.47  
 106.58 4 43 43 3271.85 -18.02 112.91 304.09 62.53 5 38 15 2671.8 -21.56 105.70  
 73.42 0 27 40 4091.11 -18.04 173.68 304.10 62.54 1 35 51 3491.1 -21.57 166.47  
 106.58 4 43 43 3271.85 -18.02 112.91 304.09 62.53 5 38 15 2671.8 -21.56 105.70  
 110.00 6 27 2 2953.08 -26.43 92.57 308.32 67.49 7 16 15 2353.1 -29.24 84.51  
 110.00 3 43 31 3457.87 -10.02 122.44 299.30 57.15 4 41 9 2857.9 -14.28 115.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8344 TRA 5.0541 TC3-2.0361 BAU .9788 SGT 6464.6 SGR 533.9 SG3 230.4 ST 2454.7 SR 469.6 SS 715.6  
 RDE .4844 RRA .2350 RC3 -.0075 FAU .01745 RRT .6826 RRF .6727 RTF .9785 CRT .8225 CRS -.7381 CST -.9907  
 FDE .6209 FRA 2.2519 FC3 -.4201 BSP 21313 SGB 6486.6 R23 .0033 R13 .9785 LSA 2584.1 MSA 283.7 SSA 12.6  
 BDE 1.8973 BRA 5.0595 BC3 2.0361 FSP -813 SGI 6474.9 SG2 389.6 THA 3.24 EL1 2485.3 EL2 263.8 ALF 9.05

LAUNCH DATE JAN 7 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 608.052

RL 147.10 LAL -.00 LOL 106.52 VL 27.072 GAL 10.67 AZL 87.68 HCA 289.83 SMA 123.86 ECC .26130 INC 2.3224 V1 30.287  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.151 GAP 13.34 AZP 89.21 TAL 145.56 TAP 75.39 RCA 91.49 APO 156.22 V2 35.003  
 RC 167.370 GL 9.86 GP -7.32 ZAL 37.79 ZAP 169.68 ETS 318.00 ZAE 124.90 ETE 184.70 ZAC 138.43 ETC 169.68 CLP-172.71

PLANETOCENTRIC CONIC

C3 39.643 VHL 6.296 DLA 31.67 RAL 66.51 RAD 6568.5 VEL 12.689 PTH 2.31 VHP 8.956 DPA 7.30 RAP 44.30 ECC 1.6524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.18 0 46 0 4078.91 -16.87 172.12 307.08 62.79 1 53 59 3478.9 -20.39 164.95  
 104.82 4 38 27 3333.32 -16.86 116.96 307.07 62.78 5 34 0 2733.3 -20.37 109.79  
 75.18 0 46 0 4078.91 -16.87 172.12 307.08 62.79 1 53 59 3478.9 -20.39 164.95  
 104.82 4 38 27 3333.32 -16.86 116.96 307.07 62.78 5 34 0 2733.3 -20.37 109.79  
 110.00 6 50 22 2924.02 -27.18 90.84 312.11 68.42 7 39 6 2324.0 -29.86 82.47  
 110.00 3 33 15 3536.21 -7.10 126.62 301.24 56.47 4 32 11 2936.2 -11.46 120.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7786 TRA 5.4563 TC3-1.8251 BAU .9673 SGT 6476.1 SGR 525.7 SG3 217.8 ST 2384.9 SR 458.4 SS 690.9  
 RDE .4958 RRA .2523 RC3 -.0067 FAU .01513 RRT .6825 RRF .6730 RTF .9789 CRT .7976 CRS -.7115 CST -.9912  
 FDE .5854 FRA 2.2747 FC3 -.3304 BSP 21441 SGB 6497.5 R23 .0035 R13 .9789 LSA 2508.1 MSA 290.6 SSA 12.3  
 BDE 1.8464 BRA 5.4622 BC3 1.8251 FSP -770 SGI 6486.1 SG2 383.7 THA 3.18 EL1 2413.1 EL2 273.2 ALF 8.83

LAUNCH DATE JAN 7 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 613.145

RL 147.10 LAL -.00 LOL 106.52 VL 27.046 GAL 11.45 AZL 87.79 HCA 293.03 SMA 123.69 ECC .27163 INC 2.2125 V1 30.287  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.144 GAP 14.07 AZP 89.13 TAL 144.51 TAP 77.54 RCA 90.09 APO 157.29 V2 35.016  
 RC 169.445 GL 8.88 GP -7.11 ZAL 36.42 ZAP 170.61 ETS 313.91 ZAE 124.65 ETE 184.56 ZAC 140.36 ETC 169.21 CLP-173.86

PLANETOCENTRIC CONIC

C3 43.905 VHL 6.626 DLA 30.90 RAL 68.05 RAD 6568.7 VEL 12.856 PTH 2.34 VHP 9.390 DPA 8.17 RAP 46.16 ECC 1.7226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.09 1 5 37 4082.33 -15.70 170.25 310.05 63.04 2 13 19 3462.3 -19.19 163.12  
 102.91 4 31 9 3401.42 -15.69 121.48 310.04 63.04 5 27 51 2801.4 -19.18 114.35  
 77.09 1 5 37 4082.33 -15.70 170.25 310.05 63.04 2 13 19 3462.3 -19.19 163.12  
 102.91 4 31 9 3401.42 -15.69 121.48 310.04 63.04 5 27 51 2801.4 -19.18 114.35  
 110.00 7 10 35 2904.13 -27.67 89.30 315.75 69.07 7 58 59 2304.1 -30.25 81.06  
 110.00 3 25 22 3607.61 -4.40 130.38 303.32 56.07 4 25 29 3007.6 -8.82 124.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7231 TRA 5.8875 TC3-1.6199 BAU .9508 SGT 6482.7 SGR 516.9 SG3 206.1 ST 2322.1 SR 446.3 SS 670.4  
 RDE .5073 RRA .2712 RC3 -.0059 FAU .01290 RRT .6838 RRF .6747 RTF .9794 CRT .7715 CRS -.6850 CST -.9918  
 FDE .5155 FRA 2.3012 FC3 -.2544 BSP 21547 SGB 6503.3 R23 .0036 R13 .9795 LSA 2439.9 MSA 295.8 SSA 11.9  
 BDE 1.7962 BRA 5.8937 BC3 1.6199 FSP -729 SGI 6492.4 SG2 376.6 THA 3.13 EL1 2347.8 EL2 280.8 ALF 8.56

LAUNCH DATE JAN 7 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 618.094

RL 147.10 LAL -.00 LOL 106.52 VL 27.020 GAL 12.29 AZL 87.90 HCA 296.23 SMA 123.53 ECC .28298 INC 2.0973 V1 30.287  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.138 GAP 14.85 AZP 89.07 TAL 143.50 TAP 79.73 RCA 88.58 APO 158.49 V2 35.030  
 RC 171.498 GL 7.95 GP -6.92 ZAL 35.12 ZAP 171.48 ETS 308.85 ZAE 124.38 ETE 184.44 ZAC 142.28 ETC 168.68 CLP-175.02

PLANETOCENTRIC CONIC

C3 48.835 VHL 6.990 DLA 30.13 RAL 69.50 RAD 6568.8 VEL 13.047 PTH 2.38 VHP 9.862 DPA 9.01 RAP 48.04 ECC 1.8040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.25 1 27 14 4038.90 -14.53 167.88 313.01 63.31 2 34 33 3438.9 -17.99 160.78  
 100.75 4 21 7 3478.45 -14.51 126.62 313.00 63.30 5 19 5 2878.4 -17.98 119.53  
 79.25 1 27 14 4038.90 -14.53 167.88 313.01 63.31 2 34 33 3438.9 -17.99 160.78  
 100.75 4 21 7 3478.45 -14.51 126.62 313.00 63.30 5 19 5 2878.4 -17.98 119.53  
 110.00 7 28 35 2890.59 -27.99 86.38 319.29 69.53 8 16 45 2290.6 -30.51 80.09  
 110.00 3 18 56 3674.75 -1.84 133.90 305.51 55.86 4 20 11 3074.7 -6.30 127.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6885 TRA 6.3508 TC3-1.4216 BAU .9286 SGT 6484.7 SGR 507.3 SG3 195.2 ST 2266.0 SR 433.4 SS 653.8  
 RDE .5190 RRA .2914 RC3 -.0048 FAU .01075 RRT .6863 RRF .6775 RTF .9802 CRT .7448 CRS -.6591 CST -.9926  
 FDE .4711 FRA 2.3320 FC3 -.1904 BSP 21632 SGB 6504.5 R23 .0036 R13 .9802 LSA 2379.2 MSA 299.2 SSA 11.5  
 BDE 1.7474 BRA 6.3573 BC3 1.4217 FSP -691 SGI 6494.0 SG2 368.4 THA 3.08 EL1 2289.3 EL2 286.3 ALF 8.24

LAUNCH DATE JAN 8 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 19 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -0.00 LOL 107.54 VL 21.124 GAL 8.91 AZL 85.99 HCA 57.74 SMA 97.72 ECC .52277 INC 4.0137 V1 30.286  
 RP 107.60 LAP 3.39 LOP 165.22 VP 33.296 GAP -31.03 AZP 87.86 TAL 171.68 TAP 229.42 RCA 46.63 APO 148.80 V2 35.219  
 RC 50.852 GL 8.31 GP 3.19 ZAL 71.39 ZAP 21.42 ETS 189.32 ZAE 158.38 ETE 199.88 ZAC 99.86 ETC 166.12 CLP 21.19

DISTANCE 151.312

PLANETOCENTRIC CONIC  
 C3 102.181 VHL 10.108 DLA 21.46 RAL 31.10 RAD 6570.0 VEL 14.951 RTH 2.70 VHP 18.582 DPA 2.53 RAP 5.86 ECC 2.6816  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 9 6 3351.07 -23.64 121.13 289.90 73.94 4 4 57 2751.1 -25.62 113.01  
 90.00 21 21 1 4512.01 9.93 189.57 276.92 63.35 22 36 13 3912.0 6.28 182.80  
 100.00 4 45 14 3041.11 -25.83 99.01 290.58 74.40 5 35 55 2441.1 -27.72 90.71  
 100.00 22 27 35 4297.20 11.96 172.73 275.87 62.40 23 39 12 3697.2 8.17 165.99  
 110.00 6 24 31 2730.49 -31.28 77.09 292.25 75.46 7 10 1 2130.5 -32.96 68.26  
 110.00 23 4 47 4180.59 16.90 161.07 273.05 59.84 24 14 28 3580.6 12.77 154.40

DIFFERENTIAL CORRECTIONS  
 TDE -.4683 TRA-1.2544 TC3 -.0885 BAU .1274 SGT 827.9 SGR 437.4 SG3 39.6 ST 349.9 SR 415.2 SS 318.2  
 RDE -.7292 RRA .2138 RC3 -.0295 FAU .01666 RRT .0563 RRF -.0590 RTF -.6576 CRT .6905 CRS .8139 CST .9804  
 FDE .3025 FRA .5426 FC3 -.1326 BSP 2268 SGB 936.4 R23 -.0077 R13 -.6580 LSA 587.9 MSA 224.0 SSA 13.7  
 BDE .8655 BRA 1.2725 BC3 .0932 FSP -86 SG1 828.4 SG2 436.5 THA 2.36 EL1 500.7 EL2 209.8 ALF 51.99

LAUNCH DATE JAN 8 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -0.00 LOL 107.54 VL 21.659 GAL 8.50 AZL 86.12 HCA 60.98 SMA 99.39 ECC .49722 INC 3.8796 V1 30.286  
 RP 107.62 LAP 3.39 LOP 168.47 VP 33.630 GAP -29.47 AZP 88.12 TAL 171.21 TAP 232.19 RCA 49.97 APO 148.81 V2 35.211  
 RC 49.405 GL 8.71 GP 3.31 ZAL 70.74 ZAP 19.89 ETS 190.45 ZAE 160.04 ETE 201.72 ZAC 101.44 ETC 166.02 CLP 19.62

DISTANCE 157.658

PLANETOCENTRIC CONIC  
 C3 91.511 VHL 9.566 DLA 22.08 RAL 31.63 RAD 6569.8 VEL 14.590 PTH 2.64 VHP 17.748 DPA 3.33 RAP 7.33 ECC 2.5060  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 3 23 3355.49 -23.56 121.42 288.78 73.82 3 59 18 2755.5 -25.55 113.32  
 90.00 21 30 58 4459.91 8.33 186.58 276.21 62.84 22 45 18 3859.9 4.62 179.87  
 100.00 4 40 30 3042.36 -25.81 99.09 289.49 74.36 5 31 12 2442.4 -27.70 90.80  
 100.00 22 36 33 4248.26 10.40 169.93 275.11 61.82 23 47 21 3648.3 6.55 163.25  
 110.00 6 21 28 2726.44 -31.35 76.79 291.18 75.63 7 6 55 2126.4 -33.01 67.96  
 110.00 23 12 3 4136.95 15.39 158.59 272.21 59.10 24 21 0 3537.0 11.18 152.01

DIFFERENTIAL CORRECTIONS  
 TDE -.4653 TRA-1.2429 TC3 -.0871 BAU .1136 SGT 866.5 SGR 441.1 SG3 43.4 ST 368.5 SR 419.6 SS 334.1  
 RDE -.6977 RRA .1966 RC3 -.0320 FAU .01613 RRT .0644 RRF -.0676 RTF -.6776 CRT .6939 CRS .8170 CST .9804  
 FDE .3150 FRA .5600 FC3 -.1526 BSP 2427 SGB 972.3 R23 -.0088 R13 -.6780 LSA 609.0 MSA 228.9 SSA 13.9  
 BDE .8386 BRA 1.2584 BC3 .0929 FSP -96 SG1 867.1 SG2 439.8 THA 2.53 EL1 514.9 EL2 216.3 ALF 50.32

LAUNCH DATE JAN 8 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -0.00 LOL 107.54 VL 22.156 GAL 8.08 AZL 86.25 HCA 64.22 SMA 101.04 ECC .47277 INC 3.7537 V1 30.286  
 RP 107.65 LAP 3.38 LOP 171.71 VP 33.944 GAP -27.98 AZP 88.37 TAL 170.78 TAP 235.00 RCA 53.27 APO 148.81 V2 35.202  
 RC 48.064 GL 9.12 GP 3.45 ZAL 70.18 ZAP 18.38 ETS 191.79 ZAE 161.85 ETE 203.97 ZAC 103.02 ETC 165.88 CLP 18.06

DISTANCE 164.064

PLANETOCENTRIC CONIC  
 C3 82.009 VHL 9.056 DLA 22.66 RAL 32.07 RAD 6569.6 VEL 14.260 PTH 2.60 VHP 16.946 DPA 4.15 RAP 8.80 ECC 2.3497  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 57 17 3359.12 -23.49 121.67 287.51 73.71 3 53 17 2759.1 -25.50 113.57  
 90.00 21 40 38 4407.21 6.68 183.59 275.42 62.42 22 54 5 3807.2 2.93 176.91  
 100.00 4 35 27 3042.61 -25.80 99.11 288.24 74.36 5 26 10 2442.6 -27.70 90.82  
 100.00 22 45 9 4198.95 8.80 167.14 274.28 61.32 23 55 8 3599.0 4.90 160.52  
 110.00 6 18 11 2721.20 -31.44 76.41 289.95 75.84 7 3 32 2121.2 -33.07 67.56  
 110.00 23 18 54 4093.13 13.85 156.14 271.29 58.43 24 27 7 3493.1 9.57 149.65

DIFFERENTIAL CORRECTIONS  
 TDE -.4653 TRA-1.2307 TC3 -.0841 BAU .0996 SGT 906.5 SGR 444.0 SG3 47.4 ST 388.3 SR 423.5 SS 350.7  
 RDE -.6668 RRA .1799 RC3 -.0346 FAU .01666 RRT .0736 RRF -.0773 RTF -.6968 CRT .6984 CRS .8206 CST .9805  
 FDE .3284 FRA .5775 FC3 -.1759 BSP 2594 SGB 1009.4 R23 -.0100 R13 -.6972 LSA 631.3 MSA 233.3 SSA 14.1  
 BDE .8131 BRA 1.2437 BC3 .0909 FSP -107 SG1 907.3 SG2 442.4 THA 2.71 EL1 529.9 EL2 222.1 ALF 48.55

LAUNCH DATE JAN 8 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC  
 RL 147.10 LAL -0.00 LOL 107.54 VL 22.617 GAL 7.67 AZL 86.37 HCA 67.45 SMA 102.65 ECC .44943 INC 3.6346 V1 30.286  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.258 GAP -26.57 AZP 88.60 TAL 170.39 TAP 237.84 RCA 56.52 APO 148.79 V2 35.194  
 RC 46.839 GL 9.54 GP 3.60 ZAL 69.70 ZAP 16.89 ETS 193.39 ZAE 163.80 ETE 206.81 ZAC 104.60 ETC 165.72 CLP 16.51

DISTANCE 170.525

PLANETOCENTRIC CONIC  
 C3 73.542 VHL 8.576 DLA 23.22 RAL 32.43 RAD 6569.4 VEL 13.960 PTH 2.55 VHP 16.176 DPA 4.99 RAP 10.27 ECC 2.2103  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 50 50 3362.03 -23.43 121.86 286.10 73.63 3 46 52 2762.0 -25.45 113.77  
 90.00 21 49 59 4354.03 4.99 180.59 274.54 62.09 23 2 33 3754.0 1.22 173.94  
 100.00 4 30 7 3041.89 -25.81 99.06 286.85 74.38 5 20 49 2441.9 -27.71 90.77  
 100.00 22 53 22 4149.41 7.17 164.37 273.36 60.90 24 2 32 3549.4 3.23 157.79  
 110.00 6 14 40 2714.80 -31.55 75.94 288.57 76.10 6 59 55 2114.8 -33.13 67.07  
 110.00 23 25 19 4049.26 12.27 153.72 270.29 57.84 24 32 48 3449.3 7.94 147.50

DIFFERENTIAL CORRECTIONS  
 TDE -.4681 TRA-1.2197 TC3 -.0799 BAU .0866 SGT 950.2 SGR 446.3 SG3 51.9 ST 410.6 SR 426.9 SS 368.2  
 RDE -.6366 RRA .1639 RC3 -.0370 FAU .01723 RRT .0851 RRF -.0885 RTF -.7143 CRT .7048 CRS .8246 CST .9810  
 FDE .3427 FRA .5955 FC3 -.2029 BSP 2708 SGB 1049.8 R23 -.0108 R13 -.7148 LSA 655.8 MSA 236.8 SSA 14.4  
 BDE .7902 BRA 1.2307 BC3 .0881 FSP -118 SG1 951.2 SG2 444.2 THA 2.93 EL1 546.9 EL2 227.3 ALF 46.58

LAUNCH DATE JAN 8 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 177.035

RL 147.10 LAL -0.00 LOL 107.54 VL 23.045 GAL 7.27 AZL 86.48 HCA 70.69 SMA 104.23 ECC .42719 INC 3.5211 V1 30.286  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.512 GAP -25.22 AZP 88.83 TAL 170.04 TAP 240.73 RCA 59.70 APO 148.76 V2 35.184  
 RC 43.742 GL 9.95 GP 3.76 ZAL 69.31 ZAP 15.42 ETS 195.31 ZAE 165.87 ETE 210.56 ZAC 106.18 ETC 165.54 CLP 14.97

PLANETOCENTRIC CONIC

C3 65.993 VHL 8.124 DLA 23.76 RAL 32.71 RAD 6569.3 VEL 13.687 PTH 2.50 VHP 15.436 DPA 5.84 RAP 11.75 ECC 2.0861  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 0 3364.27 -23.39 122.01 284.55 73.57 3 40 4 2764.3 -25.42 113.93  
 90.00 21 59 0 4300.52 3.28 177.59 273.58 61.86 23 10 40 3700.5 -.51 170.96  
 100.00 4 24 30 3040.21 -25.85 98.94 285.32 74.43 5 15 11 2440.2 -27.73 90.65  
 100.00 23 1 10 4099.82 5.52 161.61 272.35 60.57 24 9 30 3499.8 1.56 155.06  
 110.00 6 10 56 2707.26 -31.67 75.38 287.05 76.40 6 56 3 2107.3 -33.21 66.50  
 110.00 23 31 14 4005.53 10.67 151.33 269.21 57.33 24 38 0 3405.5 6.29 144.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4696 TRA-1.2057 TC3 -.0722 BAU .0725 SGT 993.3 SGR 447.8 SG3 56.8 ST 432.9 SR 429.6 SS 386.4  
 RDE -.6072 RRA .1484 RC3 -.0393 PAU .01789 RRT .0969 RRF -.1008 RTF -.7318 CRT .7113 CRS .8291 CST .9813  
 FDE .3578 FRA .6134 FC3 -.2346 BSP 2881 SGB 1089.6 R23 -.0122 R13 -.7323 LSA 680.9 MSA 239.7 SSA 14.6  
 BDE .7676 BRA 1.2148 BC3 .0822 FSP -132 SG1 994.5 SG2 445.2 THA 3.13 EL1 564.2 EL2 231.7 ALF 44.70

LAUNCH DATE JAN 8 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 183.589

RL 147.10 LAL -0.00 LOL 107.54 VL 23.443 GAL 6.87 AZL 86.59 HCA 73.92 SMA 105.77 ECC .40605 INC 3.4119 V1 30.286  
 RP 107.74 LAP 3.28 LOP 181.43 VP 34.769 GAP -23.93 AZP 89.05 TAL 169.74 TAP 243.66 RCA 62.82 APO 148.71 V2 35.174  
 RC 44.782 GL 10.37 GP 3.94 ZAL 69.01 ZAP 13.98 ETS 197.68 ZAE 168.01 ETE 215.73 ZAC 107.75 ETC 165.31 CLP 13.43

PLANETOCENTRIC CONIC

C3 59.261 VHL 7.698 DLA 24.26 RAL 32.89 RAD 6569.1 VEL 13.439 PTH 2.46 VHP 14.724 DPA 6.70 RAP 13.22 ECC 1.9753  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 50 3365.87 -23.36 122.12 282.87 73.52 3 32 56 2765.9 -25.40 114.04  
 90.00 22 7 39 4246.91 1.55 174.80 272.53 61.72 23 18 26 3646.9 -2.24 167.97  
 100.00 4 18 39 3037.59 -25.89 98.76 283.66 74.52 5 9 17 2437.6 -27.77 90.46  
 100.00 23 8 31 4050.43 3.86 158.88 271.25 60.33 24 16 1 3450.4 -.12 152.35  
 110.00 6 7 0 2698.62 -31.80 74.75 285.39 76.76 6 51 58 2098.6 -33.30 65.84  
 110.00 23 36 39 3962.16 9.07 149.00 268.06 56.90 24 42 42 3362.2 4.65 142.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4719 TRA-1.1907 TC3 -.0616 BAU .0587 SGT 1037.9 SGR 448.8 SG3 62.2 ST 456.5 SR 431.9 SS 405.5  
 RDE -.5786 RRA .1335 RC3 -.0413 FAU .01860 RRT .1103 RRF -.1149 RTF -.7485 CRT .7189 CRS .8340 CST .9818  
 FDE .3741 FRA .6317 FC3 -.2718 BSP 3051 SGB 1130.8 R23 -.0138 R13 -.7490 LSA 707.7 MSA 241.7 SSA 14.8  
 BDE .7467 BRA 1.1982 BC3 .0741 FSP -147 SG1 1039.4 SG2 445.4 THA 3.34 EL1 582.8 EL2 235.2 ALF 42.79

LAUNCH DATE JAN 8 1969

FLIGHT TIME 82.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 190.181

RL 147.10 LAL -0.00 LOL 107.54 VL 23.812 GAL 6.47 AZL 86.69 HCA 77.15 SMA 107.26 ECC .38599 INC 3.3064 V1 30.286  
 RP 107.77 LAP 3.22 LOP 184.67 VP 35.008 GAP -22.70 AZP 89.26 TAL 169.49 TAP 246.64 RCA 65.86 APO 148.66 V2 35.164  
 RC 43.971 GL 10.76 GP 4.14 ZAL 68.79 ZAP 12.57 ETS 200.64 ZAE 170.17 ETE 223.32 ZAC 109.31 ETC 165.06 CLP 11.88

PLANETOCENTRIC CONIC

C3 53.256 VHL 7.298 DLA 24.73 RAL 32.99 RAD 6568.9 VEL 13.214 PTH 2.41 VHP 14.040 DPA 7.58 RAP 14.68 ECC 1.8765  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 22 3366.79 -23.34 122.18 281.06 73.50 3 25 29 2766.8 -25.38 114.10  
 90.00 22 15 53 4193.47 -.17 171.62 271.39 61.68 23 25 46 3593.5 -3.96 164.98  
 100.00 4 12 36 3033.97 -25.96 98.51 281.88 74.63 5 3 10 2434.0 -27.82 90.20  
 100.00 23 15 20 4001.52 2.21 156.19 270.07 60.18 24 22 2 3401.5 -1.78 149.67  
 110.00 6 2 54 2688.88 -31.95 74.03 283.60 77.16 6 47 43 2088.9 -33.39 65.09  
 110.00 23 41 31 3919.37 7.47 146.72 266.82 56.55 24 46 51 3319.4 3.02 140.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4744 TRA-1.1742 TC3 -.0470 BAU .0453 SGT 1083.3 SGR 449.1 SG3 68.2 ST 481.1 SR 433.7 SS 425.5  
 RDE -.5510 RRA .1192 RC3 -.0428 FAU .01941 RRT .1250 RRF -.1305 RTF -.7644 CRT .7271 CRS .8593 CST .9823  
 FDE .3914 FRA .6502 FC3 -.3155 BSP 3237 SGB 1172.7 R23 -.0157 R13 -.7650 LSA 735.8 MSA 242.8 SSA 15.0  
 BDE .7271 BRA 1.1803 BC3 .0636 FSP -164 SG1 1085.1 SG2 444.8 THA 3.57 EL1 602.5 EL2 237.7 ALF 40.94

LAUNCH DATE JAN 8 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 196.806

RL 147.10 LAL -0.00 LOL 107.54 VL 24.154 GAL 6.09 AZL 86.80 HCA 80.38 SMA 108.70 ECC .36701 INC 3.2036 V1 30.286  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.231 GAP -21.53 AZP 89.46 TAL 169.29 TAP 249.67 RCA 68.80 APO 148.59 V2 35.153  
 RC 43.319 GL 11.18 GP 4.36 ZAL 68.67 ZAP 11.21 ETS 204.41 ZAE 172.19 ETE 235.21 ZAC 110.85 ETC 164.76 CLP 10.34

PLANETOCENTRIC CONIC

C3 47.901 VHL 6.921 DLA 25.16 RAL 33.00 RAD 6568.8 VEL 13.010 PTH 2.37 VHP 13.381 DPA 8.47 RAP 16.14 ECC 1.7883  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 40 3366.95 -23.34 122.19 279.14 73.49 3 17 47 2766.9 -25.38 114.12  
 90.00 22 23 37 4140.53 -1.88 168.66 270.16 61.74 23 32 38 3540.5 -5.64 162.01  
 100.00 4 6 24 3029.29 -26.04 98.19 279.99 74.78 4 56 54 2429.3 -27.88 89.87  
 100.00 23 21 35 3953.43 .58 153.55 268.79 60.11 24 27 28 3353.4 -3.40 147.03  
 110.00 5 58 41 2678.02 -32.12 73.22 281.70 77.61 6 43 19 2078.0 -33.49 64.26  
 110.00 23 45 47 3877.46 5.89 144.50 265.49 56.27 24 50 25 3277.5 1.42 138.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4778 TRA-1.1569 TC3 -.0286 BAU .0335 SGT 1130.3 SGR 448.8 SG3 74.7 ST 507.2 SR 435.0 SS 446.5  
 RDE -.5243 RRA .1055 RC3 -.0438 FAU .02030 RRT .1420 RRF -.1483 RTF -.7794 CRT .7366 CRS .8452 CST .9829  
 FDE .4100 FRA .6691 FC3 -.3669 BSP 3417 SGB 1216.1 R23 -.0177 R13 -.7801 LSA 765.9 MSA 243.0 SSA 15.2  
 BDE .7094 BRA 1.1617 BC3 .0523 FSP -182 SG1 1132.4 SG2 443.4 THA 3.81 EL1 623.9 EL2 239.2 ALF 39.09

LAUNCH DATE JAN 8 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 203.460

RL 147.10 LAL -.00 LOL 107.54 VL 24.471 GAL 5.71 AZL 86.90 HCA 83.60 SMA 110.09 ECC .34909 INC 3.1028 V1 30.286  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.438 GAP -20.40 AZP 89.65 TAL 169.14 TAP 252.74 RCA 71.66 APO 148.52 V2 35.141  
 RC 42.834 GL 11.58 GP 4.60 ZAL 68.64 ZAP 9.91 ETS 209.31 ZAE 173.76 ETE 254.44 ZAC 112.38 ETC 164.43 CLP 8.79

PLANETOCENTRIC CONIC

C3 43.125 VHL 6.567 DLA 25.55 RAL 32.91 RAD 6568.6 VEL 12.825 PTH 2.33 VHP 12.748 DPA 9.37 RAP 17.58 ECC 1.7097  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 13 51 3366.16 -23.35 122.14 277.12 73.51 3 9 57 2766.2 -25.39 114.06  
 90.00 22 30 47 4088.56 -3.55 165.76 268.83 61.89 23 38 55 3488.6 -7.28 159.07  
 100.00 4 0 10 3023.38 -26.15 97.78 277.99 74.97 4 50 33 2423.4 -27.96 89.45  
 100.00 23 27 9 3906.57 -1.01 150.98 267.42 60.12 24 32 15 3306.6 -4.98 144.44  
 110.00 5 54 24 2665.99 -32.29 72.32 279.68 78.11 6 38 50 2066.0 -33.59 63.33  
 110.00 23 49 24 3836.74 4.35 142.36 264.09 56.06 24 53 21 3236.7 -1.14 136.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4815 TRA-1.1383 TC3 -.0053 BAU .0255 SGT 1178.3 SGR 447.9 S63 81.9 ST 534.4 SR 436.0 SS 468.6  
 RDE -.4988 RRA .0922 RC3 -.0439 FAU .02129 RRT .1611 RRF -.1684 RTF -.7936 CRT .7467 CRS .8513 CST .9836  
 FDE .4301 FRA .6887 FC3 -.4274 BSP 3605 SGB 1260.6 R23 -.0200 R13 -.7944 LSA 797.7 MSA 242.4 SSA 15.4  
 BDE .6933 BRA 1.1421 BC3 .0442 FSP -203 S61 1180.9 S62 441.1 THA 4.07 EL1 646.7 EL2 239.6 ALF 37.33

LAUNCH DATE JAN 8 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 210.138

RL 147.10 LAL -.00 LOL 107.54 VL 24.765 GAL 5.35 AZL 87.00 HCA 86.82 SMA 111.42 ECC .33219 INC 3.0033 V1 30.286  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.629 GAP -19.32 AZP 89.83 TAL 169.05 TAP 255.87 RCA 74.41 APO 148.44 V2 35.129  
 RC 42.524 GL 11.96 GP 4.87 ZAL 68.70 ZAP 8.71 ETS 215.77 ZAE 174.35 ETE 281.91 ZAC 113.88 ETC 164.05 CLP 7.23

PLANETOCENTRIC CONIC

C3 38.867 VHL 6.234 DLA 25.90 RAL 32.74 RAD 6568.5 VEL 12.658 PTH 2.30 VHP 12.139 DPA 10.30 RAP 19.00 ECC 1.6397  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 6 2 3364.11 -23.39 122.00 275.02 73.57 3 2 6 2764.1 -25.42 113.92  
 90.00 22 37 13 4038.14 -5.16 162.93 267.40 62.12 23 44 31 3438.1 -8.86 156.20  
 100.00 3 54 0 3016.04 -26.28 97.28 275.91 75.21 4 44 16 2416.0 -28.05 88.92  
 100.00 23 31 56 3861.45 -2.54 148.50 265.96 60.21 24 36 17 3261.4 -6.49 141.94  
 110.00 5 50 7 2652.71 -32.47 71.33 277.55 78.68 6 34 20 2052.7 -33.69 62.31  
 110.00 23 52 18 3797.53 2.86 140.30 262.60 55.92 24 55 36 3197.5 -1.64 134.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4859 TRA-1.1189 TC3 .0233 BAU .0253 SGT 1227.6 SGR 446.7 S63 90.0 ST 563.0 SR 436.6 SS 492.0  
 RDE -.4744 RRA .0795 RC3 -.0429 FAU .02239 RRT .1829 RRF -.1914 RTF -.8070 CRT .7579 CRS .8580 CST .9844  
 FDE .4519 FRA .7089 FC3 -.4988 BSP 3793 SGB 1306.3 R23 -.0226 R13 -.8079 LSA 831.5 MSA 240.8 SSA 15.6  
 BDE .6790 BRA 1.1217 BC3 .0488 FSP -227 S61 1230.7 S62 438.0 THA 4.36 EL1 671.2 EL2 238.9 ALF 35.63

LAUNCH DATE JAN 8 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 216.834

RL 147.10 LAL -.00 LOL 107.54 VL 25.037 GAL 5.00 AZL 87.10 HCA 90.05 SMA 112.71 ECC .31629 INC 2.9045 V1 30.286  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.807 GAP -18.28 AZP 90.00 TAL 169.01 TAP 259.05 RCA 77.06 APO 148.35 V2 35.117  
 RC 42.392 GL 12.32 GP 5.17 ZAL 68.85 ZAP 7.65 ETS 224.35 ZAE 173.60 ETE 309.03 ZAC 115.34 ETC 163.62 CLP 5.65

PLANETOCENTRIC CONIC

C3 35.071 VHL 5.922 DLA 26.20 RAL 32.48 RAD 6568.4 VEL 12.508 PTH 2.26 VHP 11.553 DPA 11.24 RAP 20.41 ECC 1.5772  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 58 25 3360.31 -23.47 121.75 272.84 73.68 2 54 26 2760.3 -25.48 113.66  
 90.00 22 42 44 3990.00 -6.69 160.22 265.87 62.42 23 49 14 3390.0 -10.33 153.43  
 100.00 3 48 2 3006.93 -26.43 96.65 273.74 75.51 4 38 9 2406.9 -28.16 88.27  
 100.00 23 35 49 3818.62 -3.99 146.15 264.39 60.35 24 39 27 3218.6 -7.91 139.55  
 110.00 5 45 55 2638.07 -32.66 70.23 275.34 79.30 6 29 54 2038.1 -33.79 61.18  
 110.00 23 54 25 3760.23 1.43 138.36 261.02 55.84 24 57 5 3160.2 -3.06 132.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4902 TRA-1.0981 TC3 .0582 BAU .0332 SGT 1277.4 SGR 445.0 S63 98.8 ST 592.6 SR 437.0 SS 516.3  
 RDE -.4512 RRA .0672 RC3 -.0404 FAU .02363 RRT .2075 RRF -.2173 RTF -.8198 CRT .7696 CRS .8649 CST .9852  
 FDE .4752 FRA .7299 FC3 -.5832 BSP 3987 SGB 1352.7 R23 -.0255 R13 -.8208 LSA 867.0 MSA 238.4 SSA 15.8  
 BDE .6662 BRA 1.1001 BC3 .0709 FSP -252 S61 1281.2 S62 434.1 THA 4.67 EL1 697.0 EL2 237.2 ALF 34.06

LAUNCH DATE JAN 8 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 223.545

RL 147.10 LAL -.00 LOL 107.54 VL 25.288 GAL 4.66 AZL 87.19 HCA 93.27 SMA 113.93 ECC .30137 INC 2.8058 V1 30.286  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.972 GAP -17.29 AZP 90.16 TAL 169.02 TAP 262.29 RCA 79.60 APO 148.27 V2 35.105  
 RC 42.442 GL 12.66 GP 5.50 ZAL 69.08 ZAP 6.83 ETS 235.60 ZAE 171.87 ETE 327.80 ZAC 116.77 ETC 163.14 CLP 4.06

PLANETOCENTRIC CONIC

C3 31.688 VHL 5.629 DLA 26.45 RAL 32.13 RAD 6568.3 VEL 12.372 PTH 2.23 VHP 10.990 DPA 12.19 RAP 21.78 ECC 1.5215  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 51 18 3354.05 -23.58 121.33 270.61 73.86 2 47 12 2754.0 -25.57 113.22  
 90.00 22 47 7 3945.12 -8.10 157.67 264.23 62.77 23 52 52 3345.1 -11.68 150.83  
 100.00 3 42 28 2995.64 -26.62 95.86 271.52 75.88 4 32 24 2395.6 -28.30 87.46  
 100.00 23 38 37 3778.76 -5.33 143.95 262.73 60.54 24 41 36 3178.8 -9.21 137.31  
 110.00 5 41 55 2621.92 -32.86 69.01 273.05 80.00 6 25 37 2021.9 -33.89 59.93  
 110.00 23 55 40 3725.24 .09 136.53 259.36 55.82 24 57 45 3125.2 -4.39 130.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4949 TRA-1.0786 TC3 .0995 BAU .0449 SGT 1328.2 SGR 443.2 S63 108.6 ST 623.4 SR 437.3 SS 541.8  
 RDE -.4292 RRA .0552 RC3 -.0362 FAU .02500 RRT .2355 RRF -.2467 RTF -.8315 CRT .7820 CRS .8721 CST .9861  
 FDE .5003 FRA .7519 FC3 -.6830 BSP 4172 SGB 1400.3 R23 -.0288 R13 -.8327 LSA 904.3 MSA 235.2 SSA 16.0  
 BDE .6551 BRA 1.0780 BC3 .1059 FSP -281 S61 1332.8 S62 429.3 THA 5.02 EL1 724.4 EL2 234.5 ALF 32.58

LAUNCH DATE JAN 8 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 230.267

RL 147.10 LAL -.00 LOL 107.54 VL 25.521 GAL 4.33 AZL 87.29 HCA 96.48 SMA 115.10 ECC .28739 INC 2.7065 V1 30.286
RP 107.99 LAP 2.69 LOP 204.03 VP 36.123 GAP -16.33 AZP 90.31 TAL 169.09 TAP 265.57 RCA 82.02 APO 148.18 V2 35.092
RC 42.671 GL 12.97 GP 5.87 ZAL 69.40 ZAP 6.35 ETS 249.55 ZAE 169.66 ETE 339.50 ZAC 118.16 ETC 162.60 CLP 2.44

PLANETOCENTRIC CONIC

C3 28.675 VHL 5.355 DLA 26.64 RAL 31.71 RAD 6568.2 VEL 12.249 PTH 2.20 VHP 10.449 DPA 13.17 RAP 23.13 ECC 1.4719
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 0 3344.39 -23.77 120.68 268.34 74.13 2 40 44 2744.4 -25.72 112.55
90.00 22 50 0 3904.66 -9.35 155.35 262.48 63.15 23 55 5 3304.7 -12.88 148.45
100.00 3 37 30 2981.69 -26.85 94.89 269.24 76.34 4 27 12 2381.7 -28.46 86.45
100.00 23 40 11 3742.60 -6.53 141.94 260.96 60.77 24 42 34 3142.6 -10.38 135.26
110.00 5 38 11 2604.06 -33.06 67.66 270.69 80.77 6 21 35 2004.1 -33.98 58.54
110.00 23 55 59 3692.99 -1.14 134.85 257.63 55.83 24 57 32 3093.0 -5.62 128.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4999 TRA-1.0543 TC3 .1480 BAU .0579 SGT 1379.9 SGR 441.5 SG3 119.6 ST 655.4 SR 437.6 SS 568.8
RDE -.4087 RRA .0436 RC3 -.0296 FAU .02651 RRT .2675 RRF -.2803 RTF -.8427 CRT .7950 CRS .8796 CST .9870
FDE .5276 FRA .7753 FC3 -.8005 B3P 4356 SGB 1448.8 R23 -.0326 R13 -.8440 LSA 943.8 MSA 231.2 SSA 16.2
BDE .6457 BRA 1.0553 BC3 .1509 F3P -313 SGI 1385.4 SG2 423.7 THA 5.40 EL1 753.4 EL2 230.9 ALF 31.22

LAUNCH DATE JAN 8 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 236.996

RL 147.10 LAL -.00 LOL 107.54 VL 25.736 GAL 4.02 AZL 87.39 HCA 99.70 SMA 116.21 ECC .27433 INC 2.6060 V1 30.286
RP 108.03 LAP 2.57 LOP 207.25 VP 36.263 GAP -15.41 AZP 90.44 TAL 169.21 TAP 268.91 RCA 84.33 APO 148.09 V2 35.080
RC 43.078 GL 13.24 GP 6.28 ZAL 69.80 ZAP 6.33 ETS 265.01 ZAE 167.29 ETE 347.15 ZAC 119.49 ETC 162.00 CLP .80

PLANETOCENTRIC CONIC

C3 25.991 VHL 5.098 DLA 26.75 RAL 31.20 RAD 6568.1 VEL 12.139 PTH 2.18 VHP 9.930 DPA 14.18 RAP 24.43 ECC 1.4277
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 55 3330.22 -24.03 119.72 266.05 74.55 2 35 25 2730.2 -25.92 111.56
90.00 22 51 5 3889.96 -10.41 153.36 260.60 63.52 23 55 35 3270.0 -13.88 146.40
100.00 3 33 22 2964.50 -27.12 93.68 266.92 76.92 4 22 46 2364.5 -28.65 85.21
100.00 23 40 19 3710.91 -7.58 140.17 259.10 61.00 24 42 10 3110.9 -11.39 133.46
110.00 5 34 53 2584.25 -33.27 66.15 268.27 81.64 6 17 57 1984.3 -34.06 57.00
110.00 23 55 17 3663.92 -2.25 133.33 255.81 55.86 24 56 21 3063.9 -6.71 127.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5040 TRA-1.0310 TC3 .2059 BAU .0719 SGT 1431.3 SGR 440.1 SG3 131.7 ST 687.3 SR 437.9 SS 596.3
RDE -.3895 RRA .0323 RC3 -.0200 FAU .02823 RRT .3031 RRF -.3180 RTF -.8533 CRT .8080 CRS .8872 CST .9879
FDE .5564 FRA .7998 FC3 -.9402 B3P 4543 SGB 1497.4 R23 -.0370 R13 -.8548 LSA 983.9 MSA 226.6 SSA 16.4
BDE .6369 BRA 1.0315 BC3 .2068 F3P -349 SGI 1438.1 SG2 417.4 THA 5.82 EL1 782.8 EL2 226.5 ALF 30.01

LAUNCH DATE JAN 8 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 243.727

RL 147.10 LAL -.00 LOL 107.54 VL 25.934 GAL 3.72 AZL 87.50 HCA 102.91 SMA 117.26 ECC .26215 INC 2.5036 V1 30.286
RP 108.07 LAP 2.44 LOP 210.46 VP 36.391 GAP -14.53 AZP 90.56 TAL 169.38 TAP 272.29 RCA 86.52 APO 148.00 V2 35.067
RC 43.658 GL 13.46 GP 6.74 ZAL 70.28 ZAP 6.79 ETS 279.78 ZAE 164.89 ETE 352.54 ZAC 120.75 ETC 161.34 CLP -.88

PLANETOCENTRIC CONIC

C3 23.602 VHL 4.858 DLA 26.80 RAL 30.63 RAD 6568.0 VEL 12.041 PTH 2.15 VHP 9.431 DPA 15.21 RAP 25.69 ECC 1.3884
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 36 28 3310.38 -24.38 118.37 263.76 75.13 2 31 39 2710.4 -26.19 110.17
90.00 22 49 58 3842.36 -11.24 151.76 258.61 63.84 23 54 0 3242.4 -14.67 144.76
100.00 3 30 17 2943.48 -27.44 92.20 264.58 77.64 4 19 20 2343.5 -28.86 83.69
100.00 23 38 50 3664.49 -8.45 138.69 257.14 61.22 24 40 15 3064.5 -12.23 131.94
110.00 5 32 7 2562.25 -33.47 64.47 265.80 82.62 6 14 49 1962.3 -34.13 55.29
110.00 23 53 30 3638.48 -3.22 132.00 253.93 55.95 24 54 8 3038.5 -7.67 125.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5069 TRA-1.0061 TC3 .2716 BAU .0857 SGT 1481.2 SGR 439.3 SG3 145.2 ST 718.6 SR 438.5 SS 624.9
RDE -.3717 RRA .0211 RC3 -.0067 FAU .03013 RRT .3431 RRF -.3606 RTF -.8630 CRT .8211 CRS .8949 CST .9888
FDE .5874 FRA .8262 FC3-1.1053 B3P 4754 SGB 1545.0 R23 -.0424 R13 -.8647 LSA 1024.6 MSA 221.5 SSA 16.6
BDE .6285 BRA 1.0063 BC3 .2717 F3P -389 SGI 1489.5 SG2 410.4 THA 6.29 EL1 812.2 EL2 221.5 ALF 28.97

LAUNCH DATE JAN 8 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 250.459

RL 147.10 LAL -.00 LOL 107.54 VL 26.116 GAL 3.44 AZL 87.60 HCA 106.12 SMA 118.25 ECC .25082 INC 2.3987 V1 30.286
RP 108.11 LAP 2.30 LOP 213.67 VP 36.509 GAP -13.68 AZP 90.67 TAL 169.61 TAP 275.72 RCA 88.59 APO 147.91 V2 35.053
RC 44.405 GL 13.62 GP 7.25 ZAL 70.83 ZAP 7.70 ETS 292.14 ZAE 162.54 ETE 356.64 ZAC 121.95 ETC 160.60 CLP -2.60

PLANETOCENTRIC CONIC

C3 21.476 VHL 4.634 DLA 26.76 RAL 30.00 RAD 6567.9 VEL 11.952 PTH 2.13 VHP 8.953 DPA 16.27 RAP 26.90 ECC 1.3534
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 35 0 3283.96 -24.83 116.57 261.47 75.93 2 29 44 2684.0 -26.52 108.31
90.00 22 46 24 3822.95 -11.82 150.63 256.50 64.08 23 50 7 3222.9 -15.21 143.59
100.00 3 28 29 2918.12 -27.79 90.40 262.22 78.53 4 17 7 2318.1 -29.09 81.84
100.00 23 35 36 3664.01 -9.12 137.54 255.09 61.41 24 36 40 3064.0 -12.87 130.76
110.00 5 30 2 2537.78 -33.67 62.58 263.29 83.72 6 12 20 1937.8 -34.17 53.38
110.00 23 50 32 3617.12 -4.04 130.88 251.98 56.03 24 50 49 3017.1 -8.47 124.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5102 TRA -.9819 TC3 .3462 BAU .0995 SGT 1532.7 SGR 439.8 SG3 160.3 ST 751.2 SR 439.5 SS 654.3
RDE -.3555 RRA .0099 RC3 .0111 FAU .03225 RRT .3885 RRF -.4084 RTF -.8721 CRT .8345 CRS .9027 CST .9897
FDE .6202 FRA .8548 FC3-1.3001 B3P 4929 SGB 1594.6 R23 -.0483 R13 -.8740 LSA 1067.1 MSA 215.7 SSA 16.8
BDE .6218 BRA .9819 BC3 .3464 F3P -434 SGI 1542.9 SG2 402.6 THA 6.83 EL1 843.2 EL2 215.7 ALF 28.02



LAUNCH DATE JAN 8 1969 FLIGHT TIME 102.00 ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC DISTANCE 257.188  
 RL 147.10 LAL -.00 LOL 107.54 VL 26.285 GAL 3.17 AZL 87.71 HCA 109.33 SMA 119.19 ECC .24030 INC 2.2903 V1 30.286  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.617 GAP -12.87 AZP 90.76 TAL 169.87 TAP 279.20 RCA 90.55 APO 147.83 V2 35.040  
 RC 45.309 GL 13.71 GP 7.84 ZAL 71.45 ZAP 8.96 ETS 301.65 ZAE 160.31 ETE 359.97 ZAC 123.06 ETC 159.78 CLP -4.36

PLANETOCENTRIC CONIC  
 C3 19.584 VHL 4.425 DLA 26.63 RAL 29.32 RAD 6567.8 VEL 11.873 PTH 2.11 VHP 8.495 DPA 17.37 RAP 28.04 ECC 1.3223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 35 43 3250.46 -25.36 114.26 259.21 76.97 2 29 54 2650.5 -26.91 105.93  
 90.00 22 40 15 3812.35 -12.14 150.01 254.30 64.22 23 43 48 3212.3 -15.51 142.95  
 100.00 3 28 9 2887.99 -28.18 88.24 259.86 79.60 4 16 17 2288.0 -29.33 79.63  
 100.00 23 30 30 3650.05 -9.57 136.75 252.96 61.55 24 31 20 3050.0 -13.30 129.95  
 110.00 5 28 47 2510.57 -33.85 60.48 260.76 84.95 6 10 37 1910.6 -34.18 51.25  
 110.00 23 46 22 3600.24 -4.68 130.00 249.98 56.10 24 46 22 3000.2 -9.10 123.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5113 TRA -.9563 TC3 .4308 BAU .1132 SGT 1581.7 SGR 442.1 SCS 177.0 ST 781.6 SR 441.1 SS 683.7  
 RDE -.3407 RRA -.0013 RC3 .0346 FAU .03463 RRT .4381 RRF -.4612 RTF -.8805 CRT .8476 CRS .9103 CST .9906  
 FDE .6545 FRA .8854 FC3-1.5311 BSP 5118 SGB 1642.3 R23 -.0555 R13 -.8827 LSA 1108.4 MSA 209.7 SSA 17.1  
 BDE .6144 BRA .9563 BC3 .4322 FSP -485 SGT 1594.3 SGT 394.3 THA 7.44 EL1 872.7 EL2 209.6 ALF 27.27

LAUNCH DATE JAN 8 1969 FLIGHT TIME 104.00 ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC DISTANCE 263.910  
 RL 147.10 LAL -.00 LOL 107.54 VL 26.439 GAL 2.91 AZL 87.82 HCA 112.53 SMA 120.07 ECC .23056 INC 2.1778 V1 30.286  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.715 GAP -12.08 AZP 90.83 TAL 170.19 TAP 282.72 RCA 92.38 APO 147.75 V2 35.027  
 RC 46.364 GL 13.72 GP 8.49 ZAL 72.14 ZAP 10.48 ETS 308.71 ZAE 158.21 ETE 2.84 ZAC 124.07 ETC 158.88 CLP -6.17

PLANETOCENTRIC CONIC  
 C3 17.901 VHL 4.231 DLA 26.39 RAL 28.60 RAD 6567.7 VEL 11.802 PTH 2.09 VHP 8.056 DPA 18.51 RAP 29.10 ECC 1.2946  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 39 3209.97 -25.95 111.44 256.95 78.26 2 32 9 2610.0 -27.31 103.04  
 90.00 22 31 37 3810.60 -12.19 149.90 252.02 64.24 23 35 7 3210.6 -15.56 142.85  
 100.00 3 29 25 2852.85 -28.59 85.71 257.50 80.87 4 16 58 2252.8 -29.55 77.04  
 100.00 23 23 31 3642.95 -9.80 136.35 250.78 61.62 24 24 14 3043.0 -13.52 129.53  
 110.00 5 28 29 2480.33 -34.01 58.13 258.21 86.33 6 9 49 1880.3 -34.14 48.89  
 110.00 23 40 57 3588.23 -5.13 129.37 247.94 56.16 24 40 45 2988.2 -9.54 123.05

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5110 TRA -.9306 TC3 .5245 BAU .1265 SGT 1629.4 SGR 447.2 SCS 195.8 ST 810.7 SR 443.4 SS 713.1  
 RDE -.3274 RRA -.0129 RC3 .0651 FAU .03728 RRT .4922 RRF -.5187 RTF -.8882 CRT .8605 CRS .9178 CST .9914  
 FDE .6902 FRA .9193 FC3-1.8032 BSP 5296 SGB 1689.6 R23 -.0637 R13 -.8909 LSA 1149.2 MSA 203.3 SSA 17.3  
 BDE .6069 BRA .9307 BC3 .5285 FSP -542 SGT 1645.0 SGT 385.6 THA 8.14 EL1 901.4 EL2 203.2 ALF 26.67

LAUNCH DATE JAN 8 1969 FLIGHT TIME 106.00 ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC DISTANCE 270.624  
 RL 147.10 LAL -.00 LOL 107.54 VL 26.581 GAL 2.67 AZL 87.94 HCA 115.73 SMA 120.89 ECC .22158 INC 2.0599 V1 30.286  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.805 GAP -11.32 AZP 90.89 TAL 170.54 TAP 286.27 RCA 94.10 APO 147.67 V2 35.013  
 RC 47.558 GL 13.63 GP 9.24 ZAL 72.87 ZAP 12.23 ETS 313.91 ZAE 156.28 ETE 5.44 ZAC 124.96 ETC 157.89 CLP -8.04

PLANETOCENTRIC CONIC  
 C3 16.404 VHL 4.050 DLA 26.04 RAL 27.87 RAD 6567.7 VEL 11.738 PTH 2.07 VHP 7.638 DPA 19.72 RAP 30.07 ECC 1.2700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 40 3162.98 -26.56 108.14 254.71 79.81 2 36 23 2563.0 -27.70 99.65  
 90.00 22 20 41 3817.29 -11.99 150.30 249.70 64.15 23 24 19 3217.3 -15.37 143.25  
 100.00 3 32 21 2812.60 -28.99 82.78 255.14 82.36 4 19 14 2212.6 -29.74 74.06  
 100.00 23 14 41 3642.90 -9.81 136.35 248.57 61.62 24 15 24 3042.9 -13.52 129.53  
 110.00 5 29 15 2446.83 -34.12 55.52 255.65 87.87 6 10 2 1846.8 -34.04 46.28  
 110.00 23 34 17 3581.44 -5.39 129.01 245.88 56.19 24 33 58 2981.4 -9.79 122.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5088 TRA -.9048 TC3 .6271 BAU .1394 SGT 1673.0 SGR 456.2 SCS 216.6 ST 837.2 SR 446.7 SS 742.0  
 RDE -.3157 RRA -.0249 RC3 .1041 FAU .04024 RRT .5499 RRF -.5800 RTF -.8954 CRT .8729 CRS .9250 CST .9922  
 FDE .7268 FRA .9568 FC3-2.1236 BSP 5473 SGB 1736.0 R23 -.0735 R13 -.8985 LSA 1188.3 MSA 196.8 SSA 17.6  
 BDE .5988 BRA .9052 BC3 .6357 FSP -606 SGT 1694.6 SGT 376.6 THA 8.96 EL1 928.4 EL2 196.5 ALF 26.24

LAUNCH DATE JAN 8 1969 FLIGHT TIME 108.00 ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC DISTANCE 277.328  
 RL 147.10 LAL -.00 LOL 107.54 VL 26.710 GAL 2.44 AZL 88.06 HCA 118.93 SMA 121.65 ECC .21330 INC 1.9356 V1 30.286  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.886 GAP -10.60 AZP 90.94 TAL 170.93 TAP 289.86 RCA 95.71 APO 147.60 V2 35.000  
 RC 48.883 GL 13.43 GP 10.09 ZAL 73.65 ZAP 14.16 ETS 317.75 ZAE 154.53 ETE 7.91 ZAC 125.72 ETC 156.81 CLP -9.98

PLANETOCENTRIC CONIC  
 C3 15.073 VHL 3.882 DLA 25.56 RAL 27.12 RAD 6567.6 VEL 11.682 PTH 2.05 VHP 7.239 DPA 20.98 RAP 30.94 ECC 1.2481  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 39 3110.12 -27.14 104.38 252.48 81.61 2 42 29 2510.1 -28.03 95.82  
 90.00 22 7 47 3831.84 -11.56 151.14 247.38 63.97 23 11 39 3231.8 -14.96 144.13  
 100.00 3 36 59 2767.28 -29.35 79.46 252.79 84.07 4 23 7 2167.3 -29.86 70.70  
 100.00 23 4 7 3649.92 -9.58 136.75 246.34 61.55 24 4 57 3049.9 -13.31 129.94  
 110.00 5 31 15 2409.79 -34.18 52.63 253.11 89.58 6 11 25 1809.8 -33.86 43.40  
 110.00 23 26 21 3580.17 -5.44 128.94 243.82 56.20 24 26 1 2980.2 -9.84 122.62

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5042 TRA -.8792 TC3 .7377 BAU .1519 SGT 1717.7 SGR 470.4 SCS 239.9 ST 860.3 SR 451.2 SS 769.3  
 RDE -.3055 RRA -.0377 RC3 .1537 FAU .04352 RRT .6095 RRF -.6434 RTF -.9018 CRT .8849 CRS .9318 CST .9930  
 FDE .7634 FRA .9990 FC3-2.4997 BSP 5623 SGB 1780.9 R23 -.0849 R13 -.9056 LSA 1224.4 MSA 190.1 SSA 17.9  
 BDE .5895 BRA .8800 BC3 .7536 FSP -676 SGT 1742.6 SGT 367.6 THA 9.92 EL1 952.7 EL2 189.8 ALF 26.00

LAUNCH DATE JAN 8 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 284.018

RL 147.10 LAL -.00 LOL 107.54 VL 26.829 GAL 2.23 AZL 88.20 HCA 122.13 SMA 122.37 ECC .20571 INC 1.8035 V1 30.286  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.959 GAP -9.89 AZP 90.96 TAL 171.34 TAP 293.47 RCA 97.20 APO 147.54 V2 34.987  
 RC 50.327 GL 13.09 GP 11.07 ZAL 74.47 ZAP 16.27 ETS 320.60 ZAE 152.95 ETE 10.37 ZAC 126.33 ETC 155.64 CLP -12.00

PLANETOCENTRIC CONIC

C3 13.889 VHL 3.727 DLA 24.93 RAL 26.39 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 6.859 DPA 22.33 RAP 31.69 ECC 1.2286  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 25 3052.00 -27.65 100.20 250.26 83.65 2 50 17 2432.0 -28.24 91.58  
 90.00 21 53 11 3653.68 -10.90 152.41 245.08 63.70 22 57 25 3253.7 -14.35 145.43  
 100.00 3 43 20 2716.96 -29.65 75.75 250.46 86.00 4 28 37 2117.0 -29.89 66.96  
 100.00 22 51 57 3663.95 -9.12 137.54 244.14 61.41 23 53 1 3064.0 -12.87 130.75  
 110.00 5 34 35 2368.98 -34.16 49.44 250.58 91.47 6 14 2 1769.0 -33.57 40.25  
 110.00 23 17 13 3584.70 -5.27 129.18 241.79 56.18 24 16 57 2984.7 -9.67 122.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4936 TRA -.0508 TC3 .0649 BAU .1656 SGT 1752.7 SGR 491.3 SG3 265.7 ST 873.7 SR 456.5 SS 792.1  
 RDE -.2964 RRA -.0512 RC3 .2170 FAU .04728 RRT .6681 RRF -.7063 RTF -.9088 CRT .8955 CRS .9380 CST .9937  
 FDE .7966 FRA 1.0439 FC3-2.9469 BSP 5849 SGB 1820.2 R23 -.0974 R13 -.9133 LSA 1251.1 MSA 183.5 SSA 18.1  
 BDE .5757 BRA .0523 BC3 .0917 FSP -760 SG1 1784.5 SG2 359.0 THA 11.06 EL1 968.6 EL2 183.3 ALF 26.08

LAUNCH DATE JAN 8 1969

FLIGHT TIME 112.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 290.694

RL 147.10 LAL -.00 LOL 107.54 VL 26.937 GAL 2.03 AZL 88.34 HCA 125.33 SMA 123.03 ECC .19876 INC 1.6619 V1 30.286  
 RP 108.36 LAP 1.36 LOP 232.88 VP 37.025 GAP -9.22 AZP 90.96 TAL 171.78 TAP 297.10 RCA 98.57 APO 147.48 V2 34.974  
 RC 51.881 GL 12.59 GP 12.18 ZAL 75.32 ZAP 18.56 ETS 322.71 ZAE 151.54 ETE 12.89 ZAC 126.76 ETC 154.37 CLP -14.11

PLANETOCENTRIC CONIC

C3 12.836 VHL 3.583 DLA 24.15 RAL 25.70 RAD 6567.5 VEL 11.585 PTH 2.03 VHP 6.500 DPA 23.77 RAP 32.29 ECC 1.2112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 9 53 2989.05 -28.04 95.63 248.05 85.90 2 59 42 2389.1 -28.32 86.98  
 90.00 21 37 10 3882.40 -10.03 154.07 242.84 63.38 22 41 52 3282.4 -13.53 147.14  
 100.00 3 51 24 2661.74 -29.84 71.66 248.16 88.15 4 35 46 2061.7 -29.78 62.86  
 100.00 22 38 20 3684.94 -8.44 138.72 242.00 61.22 23 39 45 3084.9 -12.21 131.97  
 110.00 5 39 19 2324.14 -34.02 45.95 248.09 93.53 6 18 3 1724.1 -33.16 36.81  
 110.00 23 8 55 3595.31 -4.86 129.74 239.81 56.12 24 6 50 2995.3 -9.28 123.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4828 TRA -.0253 TC3 .9884 BAU .1770 SGT 1785.9 SGR 521.6 SG3 294.3 ST 885.9 SR 463.5 SS 813.3  
 RDE -.2890 RRA -.0664 RC3 .2950 FAU .05132 RRT .7249 RRF -.7867 RTF -.9139 CRT .9062 CRS .9439 CST .9944  
 FDE .8293 FRA 1.0965 FC3-3.4614 BSP 5989 SGB 1860.6 R23 -.1125 R13 -.9195 LSA 1276.5 MSA 176.7 SSA 18.5  
 BDE .5627 BRA .0279 BC3 1.0317 FSP -840 SG1 1827.1 SG2 351.2 THA 12.42 EL1 984.1 EL2 176.5 ALF 26.28

LAUNCH DATE JAN 8 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 297.353

RL 147.10 LAL -.00 LOL 107.54 VL 27.036 GAL 1.84 AZL 88.49 HCA 128.52 SMA 123.64 ECC .19242 INC 1.5087 V1 30.286  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.085 GAP -8.56 AZP 90.94 TAL 172.23 TAP 300.75 RCA 99.85 APO 147.43 V2 34.961  
 RC 53.536 GL 11.90 GP 13.47 ZAL 76.18 ZAP 21.04 ETS 324.27 ZAE 150.30 ETE 15.57 ZAC 126.97 ETC 153.00 CLP -16.31

PLANETOCENTRIC CONIC

C3 11.900 VHL 3.450 DLA 23.18 RAL 25.06 RAD 6567.5 VEL 11.545 PTH 2.02 VHP 6.162 DPA 25.33 RAP 32.72 ECC 1.1950  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 22 2 2921.43 -28.27 90.70 245.88 88.36 3 10 43 2321.4 -28.20 82.04  
 90.00 21 19 55 3917.86 -8.94 156.11 240.71 63.02 22 25 13 3317.9 -12.49 149.23  
 100.00 4 1 13 2601.58 -29.89 67.19 245.90 90.50 4 44 35 2001.6 -29.50 58.41  
 100.00 22 23 25 3712.94 -7.92 140.29 239.94 60.98 23 25 18 3112.9 -11.33 133.57  
 110.00 5 45 38 2274.95 -33.75 42.13 245.65 95.78 6 23 33 1674.9 -32.58 33.09  
 110.00 22 55 30 3612.33 -4.22 130.63 237.91 56.05 23 55 42 3012.3 -8.65 124.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4676 TRA -.8003 TC3 1.1167 BAU .1884 SGT 1813.1 SGR 563.3 SG3 325.9 ST 889.8 SR 471.7 SS 828.3  
 RDE -.2827 RRA -.0836 RC3 .3945 FAU .05579 RRT .7761 RRF -.8213 RTF -.9186 CRT .9158 CRS .9489 CST .9952  
 FDE .8559 FRA 1.1563 FC3-4.0586 BSP 6126 SGB 1898.6 R23 -.1293 R13 -.9256 LSA 1292.7 MSA 169.9 SSA 18.9  
 BDE .5464 BRA .8046 BC3 1.1843 FSP -940 SG1 1867.0 SG2 345.0 THA 14.04 EL1 992.7 EL2 169.8 ALF 26.74

LAUNCH DATE JAN 8 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 303.995

RL 147.10 LAL -.00 LOL 107.54 VL 27.125 GAL 1.67 AZL 88.66 HCA 131.71 SMA 124.20 ECC .18667 INC 1.3414 V1 30.286  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.138 GAP -7.93 AZP 90.89 TAL 172.69 TAP 304.39 RCA 101.01 APO 147.38 V2 34.948  
 RC 55.282 GL 11.00 GP 14.96 ZAL 77.04 ZAP 23.75 ETS 325.39 ZAE 149.19 ETE 18.49 ZAC 126.94 ETC 151.55 CLP -18.63

PLANETOCENTRIC CONIC

C3 11.069 VHL 3.327 DLA 22.01 RAL 24.50 RAD 6567.4 VEL 11.509 PTH 2.00 VHP 5.845 DPA 27.03 RAP 32.95 ECC 1.1822  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 54 2849.02 -28.30 85.41 243.76 91.02 3 23 23 2249.0 -27.86 76.77  
 90.00 21 1 37 3960.16 -7.63 158.52 238.71 62.65 22 7 37 3360.2 -11.23 151.70  
 100.00 4 12 53 2536.28 -29.75 62.34 243.70 93.05 4 55 10 1936.3 -29.01 53.61  
 100.00 22 7 19 3748.13 -6.35 142.25 238.01 60.73 23 9 47 3148.1 -10.20 135.58  
 110.00 5 53 40 2221.00 -33.30 37.98 243.29 98.19 6 30 41 1621.0 -31.81 29.07  
 110.00 22 43 2 3636.17 -3.31 131.88 236.13 55.96 23 43 38 3036.2 -7.76 125.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4489 TRA -.7763 TC3 1.2435 BAU .1993 SGT 1833.4 SGR 619.5 SG3 360.5 ST 886.2 SR 481.3 SS 837.1  
 RDE -.2774 RRA -.1035 RC3 .5177 FAU .06063 RRT .8201 RRF -.8683 RTF -.9226 CRT .9249 CRS .9533 CST .9960  
 FDE .8753 FRA 1.2252 FC3-4.7423 BSP 6246 SGB 1935.3 R23 -.1476 R13 -.9314 LSA 1300.3 MSA 162.9 SSA 19.4  
 BDE .5277 BRA .7832 BC3 1.3469 FSP -1056 SG1 1904.9 SG2 341.2 THA 16.01 EL1 995.2 EL2 162.9 ALF 27.47

LAUNCH DATE JAN 8 1969 FLIGHT TIME 118.00 ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC DISTANCE 310.619  
 RL 147.10 LAL -.00 LOL 107.54 VL 27.206 GAL 1.51 AZL 88.84 HCA 134.89 SMA 124.71 ECC .18145 INC 1.1568 V1 30.286  
 RP 108.47 LAP .82 LOP 242.44 VP 37.185 GAP -7.32 AZP 90.82 TAL 173.15 TAP 308.04 ZCA 102.08 APO 147.34 V2 34.936  
 RC 57.159 GL 9.84 GP 16.69 ZAL 77.90 ZAP 26.65 ETS 326.19 ZAE 148.18 ETE 21.72 ZAC 126.63 ETC 150.01 CLP -21.08

PLANETOCENTRIC CONIC  
 C3 10.333 VHL 3.215 DLA 20.59 RAL 24.05 RAD 6567.4 VEL 11.477 PTH 2.00 VHP 5.552 DPA 28.90 RAP 32.93 ECC 1.1701  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 38 2771.41 -28.08 79.74 241.72 93.85 3 37 50 2171.4 -27.25 71.17  
 90.00 20 42 19 4009.76 -6.06 161.33 236.88 62.29 21 49 9 3409.8 -9.73 154.57  
 100.00 4 26 32 2465.43 -29.38 57.11 241.59 95.78 5 7 37 1865.4 -28.27 48.48  
 100.00 21 50 7 3790.97 -4.92 144.62 236.25 60.48 22 53 18 3191.0 -8.81 138.00  
 110.00 6 3 35 2161.76 -32.64 33.49 241.04 100.78 6 39 37 1561.8 -30.81 24.75  
 110.00 22 29 32 3667.40 -2.12 133.51 234.51 55.87 23 30 40 3067.4 -6.58 127.27

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4251 TRA -.7528 TC3 1.3652 BAU .2101 SGT 1843.6 SGR 692.8 SG3 397.7 ST 871.5 SR 490.9 SS 834.9  
 RDE -.2723 RRA -.1268 RC3 .6709 FAU .06583 RRT .8553 RRF -.9063 RTF -.9258 CRT .9331 CRS .9564 CST .9968  
 FDE .8808 FRA 1.3027 FC3-5.5155 BSP 6354 SGB 1969.4 R23 -.1665 R13 -.9371 LSA 1293.4 MSA 155.9 SSA 20.0  
 BDE .5048 BRA .7634 BC3 1.5212 FSP -1173 SG1 1939.7 SG2 341.1 THA 18.41 EL1 988.1 EL2 155.8 ALF 28.50

LAUNCH DATE JAN 8 1969 FLIGHT TIME 120.00 ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC DISTANCE 317.222  
 RL 147.10 LAL -.00 LOL 107.54 VL 27.279 GAL 1.37 AZL 89.05 HCA 138.08 SMA 125.18 ECC .17675 INC .9507 V1 30.286  
 RP 108.51 LAP .64 LOP 245.82 VP 37.227 GAP -6.74 AZP 90.71 TAL 173.60 TAP 311.68 RCA 103.05 APO 147.30 V2 34.923  
 RC 59.010 GL 8.36 GP 18.71 ZAL 78.75 ZAP 29.83 ETS 326.73 ZAE 147.21 ETE 25.36 ZAC 125.99 ETC 148.41 CLP -23.67

PLANETOCENTRIC CONIC  
 C3 9.884 VHL 3.112 DLA 18.89 RAL 23.75 RAD 6567.3 VEL 11.449 PTH 1.99 VHP 5.284 DPA 30.98 RAP 32.62 ECC 1.1594  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 9 29 2687.84 -27.54 73.68 239.78 96.84 3 54 17 2087.8 -26.31 65.23  
 90.00 20 22 1 4067.40 -4.23 164.56 235.28 61.97 21 29 49 3467.5 -7.94 157.87  
 100.00 4 42 22 2388.32 -28.72 51.47 239.60 98.67 5 22 10 1788.3 -27.22 42.99  
 100.00 21 31 50 3842.23 -3.19 147.45 234.71 60.26 22 35 52 3242.2 -7.13 140.87  
 110.00 6 15 39 2096.47 -31.70 28.63 238.93 103.51 6 30 35 1496.5 -29.52 20.10  
 110.00 22 15 2 3706.85 -.61 135.57 233.10 55.82 23 16 49 3106.8 -5.09 129.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3944 TRA -.7278 TC3 1.4853 BAU .2224 SGT 1840.5 SGR 787.2 SG3 437.4 ST 841.7 SR 499.1 SS 817.8  
 RDE -.2665 RRA -.1545 RC3 .8630 FAU .07143 RRT .8825 RRF -.9356 RTF -.9290 CRT .9403 CRS .9582 CST .9977  
 FDE .8654 FRA 1.3879 FC3-6.3854 BSP 6510 SGB 2001.8 R23 -.1820 R13 -.9437 LSA 1266.4 MSA 149.0 SSA 20.8  
 BDE .4760 BRA .7440 BC3 1.7178 FSP -1305 SG1 1971.7 SG2 345.5 THA 21.37 EL1 967.3 EL2 147.9 ALF 29.91

LAUNCH DATE JAN 8 1969 FLIGHT TIME 122.00 ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC DISTANCE 323.804  
 RL 147.10 LAL -.00 LOL 107.54 VL 27.344 GAL 1.24 AZL 89.28 HCA 141.26 SMA 125.60 ECC .17254 INC .7175 V1 30.286  
 RP 108.55 LAP .45 LOP 248.80 VP 37.264 GAP -6.17 AZP 90.56 TAL 174.04 TAP 315.30 RCA 103.93 APO 147.27 V2 34.911  
 RC 60.976 GL 6.51 GP 21.07 ZAL 79.57 ZAP 33.30 ETS 327.08 ZAE 146.21 ETE 29.48 ZAC 124.97 ETC 146.77 CLP -26.41

PLANETOCENTRIC CONIC  
 C3 9.118 VHL 3.020 DLA 16.85 RAL 23.62 RAD 6567.3 VEL 11.424 PTH 1.98 VHP 5.044 DPA 33.31 RAP 31.95 ECC 1.1501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 29 47 2597.18 -26.64 67.20 238.01 99.97 4 13 4 1997.2 -24.99 58.92  
 90.00 20 0 40 4134.62 -2.07 168.33 233.97 81.75 21 9 35 3534.6 -5.83 161.67  
 100.00 5 0 44 2303.90 -27.70 45.40 237.79 101.71 5 39 7 1703.9 -25.80 37.12  
 100.00 21 12 25 3903.13 -1.13 150.79 233.44 60.13 22 17 28 3303.1 -5.10 144.25  
 110.00 6 10 35 2024.10 -30.43 23.37 237.01 106.38 7 3 53 1424.1 -27.89 15.10  
 110.00 21 59 28 3755.69 1.26 138.12 231.95 55.84 23 2 4 3155.7 -3.23 131.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3599 TRA -.7044 TC3 1.5820 BAU .2348 SGT 1824.6 SGR 906.5 SG3 478.1 ST 801.7 SR 504.6 SS 785.4  
 RDE -.2591 RRA -.1886 RC3 1.0989 FAU .07704 RRT .9019 RRF -.9571 RTF -.9308 CRT .9474 CRS .9581 CST .9986  
 FDE .8252 FRA 1.4842 FC3-7.3144 BSP 6615 SGB 2037.4 R23 -.1945 R13 -.9501 LSA 1222.2 MSA 141.8 SSA 21.8  
 BDE .4435 BRA .7292 BC3 1.9262 FSP -1435 SG1 2006.0 SG2 356.2 THA 24.98 EL1 937.2 EL2 138.1 ALF 31.57

LAUNCH DATE JAN 8 1969 FLIGHT TIME 124.00 ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC DISTANCE 330.365  
 RL 147.10 LAL -.00 LOL 107.54 VL 27.403 GAL 1.12 AZL 89.55 HCA 144.44 SMA 125.98 ECC .16877 INC .4499 V1 30.286  
 RP 108.58 LAP .26 LOP 251.98 VP 37.296 GAP -5.62 AZP 90.37 TAL 174.46 TAP 318.89 RCA 104.72 APO 147.24 V2 34.900  
 RC 63.000 GL 4.20 GP 23.83 ZAL 80.35 ZAP 37.10 ETS 327.30 ZAE 145.06 ETE 34.13 ZAC 123.50 ETC 145.12 CLP -29.32

PLANETOCENTRIC CONIC  
 C3 8.635 VHL 2.938 DLA 14.40 RAL 23.70 RAD 6567.3 VEL 11.403 PTH 1.97 VHP 4.837 DPA 35.94 RAP 30.85 ECC 1.1421  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 3 2497.77 -25.28 60.24 236.47 103.20 4 34 41 1897.8 -23.21 52.18  
 90.00 19 38 3 4213.15 .46 172.71 233.01 61.69 20 48 16 3613.2 -3.33 166.08  
 100.00 5 22 5 2210.63 -26.24 38.86 236.21 104.86 5 58 56 1610.6 -23.94 30.81  
 100.00 20 51 42 3975.52 1.33 154.76 232.53 60.13 21 57 58 3375.5 -2.66 148.24  
 110.00 6 47 32 1943.24 -28.74 17.69 235.34 109.36 7 19 56 1343.2 -25.83 9.72  
 110.00 21 42 44 3615.67 3.55 141.25 231.14 55.98 22 46 20 3215.7 -.94 135.05

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3189 TRA -.6804 TC3 1.6621 BAU .2502 SGT 1793.5 SGR 1056.3 SG3 518.8 ST 745.9 SR 502.2 SS 731.1  
 RDE -.2472 RRA -.2306 RC3 1.3908 FAU .08265 RRT .9152 RRF -.9721 RTF -.9323 CRT .9546 CRS .9546 CST .9990  
 FDE .7467 FRA 1.5881 FC3-8.2871 BSP 6810 SGB 2081.5 R23 -.1983 R13 -.9576 LSA 1150.8 MSA 135.4 SSA 23.1  
 BDE .4035 BRA .7184 BC3 2.1672 FSP -1577 SG1 2047.8 SG2 372.8 THA 29.40 EL1 890.5 EL2 125.3 ALF 33.48

LAUNCH DATE JAN 8 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 336.904

RL 147.10 LAL -.00 LOL 107.54 VL 27.455 GAL 1.02 AZL 89.86 HCA 147.62 SMA 126.32 ECC .16543 INC .1358 V1 30.286  
 RP 108.62 LAP .07 LOP 255.16 VP 37.324 GAP -5.09 AZP 90.12 TAL 174.84 TAP 322.46 RCA 105.43 APO 147.22 V2 34.889  
 RC 85.076 GL 1.31 GP 27.08 ZAL 81.10 ZAP 41.26 ETS 327.47 ZAE 143.61 ETE 39.32 ZAC 121.53 ETC 143.52 CLP -32.41

PLANETOCENTRIC CONIC

C3 8.240 VHL 2.870 DLA 11.43 RAL 24.04 RAD 6567.3 VEL 11.386 PTH 1.97 VHP 4.669 DPA 38.91 RAP 29.20 ECC 1.1356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 20 0 2387.32 -23.35 52.73 235.25 106.49 4 59 47 1787.3 -20.87 44.94  
 90.00 19 13 50 4305.96 3.45 177.90 232.50 61.88 20 25 36 3706.0 -.33 171.26  
 100.00 5 47 6 2106.38 -24.22 31.77 234.95 108.07 6 22 13 1506.4 -21.53 24.01  
 100.00 20 29 25 4062.14 4.25 159.53 232.06 60.38 21 37 7 3462.1 .28 153.00  
 110.00 7 8 24 1851.98 -26.52 11.51 234.02 112.40 7 39 16 1252.0 -23.25 3.88  
 110.00 21 24 36 3889.30 6.34 145.12 230.77 56.34 22 29 25 3289.3 1.87 138.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2750 TRA -.6581 TC3 1.6916 BAU .2672 SGT 1743.8 SGR 1240.4 SG3 555.7 ST 681.0 SR 488.5 SS 658.2  
 RDE -.2283 RRA -.2843 RC3 1.7383 FAU .08744 RRT .9224 RRF -.9823 RTF -.9316 CRT .9642 CRS .9457 CST .9966  
 FDE .6252 FRA 1.7008 FC3-9.1874 BSP 6981 SGB 2139.9 R23 -.1949 R13 -.9650 LSA 1057.2 MSA 131.7 SSA 24.6  
 BDE .3574 BRA .7189 BC3 2.4255 FSP -1701 SGI 2102.7 SG2 397.2 THA 34.69 EL1 831.4 EL2 106.1 ALF 35.33

LAUNCH DATE JAN 8 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 343.421

RL 147.10 LAL -.00 LOL 107.54 VL 27.501 GAL .93 AZL 90.23 HCA 150.79 SMA 126.63 ECC .16248 INC .2340 V1 30.286  
 RP 108.85 LAP -.11 LOP 258.33 VP 37.348 GAP -4.58 AZP 89.80 TAL 175.20 TAP 325.99 RCA 106.05 APO 147.20 V2 34.878  
 RC 67.198 GL -2.29 GP 30.89 ZAL 81.81 ZAP 45.81 ETS 327.67 ZAE 141.71 ETE 44.99 ZAC 118.99 ETC 142.01 CLP -35.69

PLANETOCENTRIC CONIC

C3 7.950 VHL 2.820 DLA 7.81 RAL 24.70 RAD 6567.3 VEL 11.373 PTH 1.96 VHP 4.550 DPA 42.28 RAP 26.87 ECC 1.1308  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 51 40 2282.68 -20.71 44.55 234.49 109.76 5 29 23 1662.7 -17.83 37.06  
 90.00 18 47 26 4417.33 7.00 184.16 232.62 62.49 20 1 4 3817.3 3.26 177.40  
 100.00 6 16 47 1988.18 -21.51 24.04 234.17 111.27 6 49 55 1388.2 -18.43 16.60  
 100.00 20 5 1 4187.06 7.75 165.35 232.21 61.04 21 14 28 3567.1 3.83 158.76  
 110.00 7 33 37 1747.72 -23.64 4.79 233.17 115.44 8 2 45 1147.7 -20.02 357.52  
 110.00 21 4 40 3980.29 9.74 149.97 231.00 57.07 22 11 0 3380.3 5.34 143.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2292 TRA -.6368 TC3 1.6682 BAU .2885 SGT 1674.7 SGR 1465.2 SG3 585.3 ST 609.3 SR 457.9 SS 572.5  
 RDE -.1974 RRA -.3537 RC3 2.1423 FAU .09090 RRT .9248 RRF -.9889 RTF -.9289 CRT .9792 CRS .9265 CST .9809  
 FDE .4519 FRA 1.8166 FC3-9.8992 BSP 7197 SGB 2225.2 R23 -.1815 R13 -.9729 LSA 942.8 MSA 138.3 SSA 24.6  
 BDE .3025 BRA .7282 BC3 2.7140 FSP -1799 SGI 2183.7 SG2 427.4 THA 40.88 EL1 758.5 EL2 74.6 ALF 36.76

LAUNCH DATE JAN 8 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 349.914

RL 147.10 LAL -.00 LOL 107.54 VL 27.541 GAL .85 AZL 90.69 HCA 153.96 SMA 126.90 ECC .15990 INC .6886 V1 30.286  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.368 GAP -4.08 AZP 89.38 TAL 175.51 TAP 329.47 RCA 106.61 APO 147.19 V2 34.867  
 RC 69.360 GL -6.81 GP 35.34 ZAL 82.48 ZAP 50.77 ETS 327.99 ZAE 139.13 ETE 50.99 ZAC 115.82 ETC 140.69 CLP -39.17

PLANETOCENTRIC CONIC

C3 7.802 VHL 2.793 DLA 3.38 RAL 25.76 RAD 6567.3 VEL 11.366 PTH 1.96 VHP 4.494 DPA 46.09 RAP 23.62 ECC 1.1284  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 29 39 2119.43 -17.15 35.55 234.41 112.88 6 4 58 1519.4 -13.91 28.37  
 90.00 18 17 54 4553.67 11.19 191.98 233.60 63.82 19 33 47 3953.7 7.59 185.16  
 100.00 6 52 34 1851.96 -17.91 15.53 234.06 114.34 7 23 26 1252.0 -14.47 8.42  
 100.00 19 37 39 4296.36 11.93 172.68 233.22 62.39 20 49 16 3696.4 8.14 165.94  
 110.00 8 4 26 1827.03 -19.92 357.40 233.01 118.37 8 31 33 1027.0 -15.97 350.50  
 110.00 20 42 17 4094.06 13.88 156.19 232.08 58.44 21 50 31 3494.1 9.60 149.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1794 TRA -.6120 TC3 1.5758 BAU .3160 SGT 1578.5 SGR 1733.8 SG3 601.4 ST 527.7 SR 405.6 SS 493.8  
 RDE -.1447 RRA -.4429 RC3 2.5677 FAU .09227 RRT .9230 RRF -.9932 RTF -.9240 CRT .9969 CRS .8908 CST .9102  
 FDE .2121 FRA 1.9184 FC-10.2389 BSP 7569 SGB 2344.8 R23 -.1571 R13 -.9808 LSA 809.9 MSA 174.2 SSA 20.9  
 BDE .2304 BRA .7555 BC3 3.0297 FSP -1864 SGI 2299.6 SG2 457.8 THA 47.91 EL1 665.0 EL2 25.2 ALF 37.52

LAUNCH DATE JAN 8 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 356.383

RL 147.10 LAL -.00 LOL 107.54 VL 27.577 GAL .79 AZL 91.26 HCA 157.13 SMA 127.13 ECC .15767 INC 1.2582 V1 30.286  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.385 GAP -3.60 AZP 88.84 TAL 175.77 TAP 332.90 RCA 107.09 APO 147.18 V2 34.858  
 RC 71.560 GL -12.46 GP 40.52 ZAL 83.13 ZAP 56.11 ETS 328.54 ZAE 135.69 ETE 57.11 ZAC 112.00 ETC 139.64 CLP -42.82

PLANETOCENTRIC CONIC

C3 7.889 VHL 2.805 DLA -2.09 RAL 27.31 RAD 6567.3 VEL 11.369 PTH 1.96 VHP 4.524 DPA 50.35 RAP 19.15 ECC 1.1295  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 16 25 1951.41 -12.44 25.46 235.35 115.65 6 48 56 1351.4 -8.88 18.59  
 90.00 17 43 30 4724.81 16.11 202.14 235.85 66.40 19 2 15 4124.8 12.79 195.04  
 100.00 7 36 47 1692.13 -13.17 6.02 234.97 117.08 8 4 59 1092.2 -9.44 359.23  
 100.00 19 5 49 4459.30 16.86 182.26 235.50 64.95 20 20 9 3859.3 13.35 175.23  
 110.00 8 42 48 1485.50 -15.13 349.22 233.85 121.02 9 7 34 885.5 -10.91 342.66  
 110.00 20 16 18 4238.72 18.86 164.44 234.43 60.95 21 26 56 3638.7 14.84 157.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1323 TRA -.5853 TC3 1.3908 BAU .3494 SGT 1453.6 SGR 2046.7 SG3 596.4 ST 449.8 SR 367.9 SS 486.9  
 RDE -.0594 RRA -.5603 RC3 3.0159 FAU .09022 RRT .9153 RRF -.9958 RTF -.9143 CRT .9503 CRS .8901 CST .7080  
 FDE -.0834 FRA 1.9937 FC3-9.9265 BSP 8051 SGB 2510.4 R23 -.1272 R13 -.9877 LSA 713.8 MSA 254.9 SSA 14.6  
 BDE .1450 BRA .8102 BC3 3.3212 FSP -1859 SGI 2462.8 SG2 486.6 THA 55.43 EL1 574.1 EL2 89.7 ALF 38.99

LAUNCH DATE JAN 8 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 362.826

RL 147.10 LAL -.00 LOL 107.54 VL 27.607 GAL .74 AZL 92.00 HCA 160.29 SMA 127.34 ECC .15575 INC 1.9988 V1 30.286  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.398 GAP -3.14 AZP 88.12 TAL 175.98 TAP 336.27 RCA 107.51 APO 147.17 V2 34.848  
 RC 73.792 GL -19.52 GP 46.48 ZAL 83.79 ZAP 61.78 ETS 329.47 ZAE 131.21 ETE 63.07 ZAC 107.50 ETC 138.97 CLP -46.62

PLANETOCENTRIC CONIC

C3 8.303 VHL 2.882 DLA -8.82 RAL 29.49 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.675 DPA 55.00 RAP 12.97 ECC 1.1366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 16 23 1749.20 -6.23 13.85 237.92 117.68 7 45 32 1149.2 -2.48 7.18  
 90.00 17 0 58 4946.95 21.61 216.11 240.09 71.24 18 23 25 4347.0 18.85 208.52  
 100.00 8 33 26 1500.63 -7.01 355.15 237.50 119.13 8 58 27 900.6 -3.07 348.57  
 100.00 18 26 36 4670.76 22.44 195.48 239.77 69.72 19 44 27 4070.8 19.48 187.94  
 110.00 9 31 54 1317.56 -9.05 340.01 236.25 123.11 9 53 51 717.6 -4.63 333.72  
 110.00 19 44 58 4426.59 24.64 175.95 238.78 65.52 20 58 24 3826.6 21.13 168.56

DIFFERENTIAL CORRECTIONS

TDE -.0933 TRA -.5336 TC3 1.1159 BAU .3893  
 RDE .0755 RRA -.7189 RC3 3.3244 FAU .0839D  
 FDE -.4129 FRA 2.0204 FC3-8.7485 BSP 8735  
 BDE .1200 BRA .9058 BC3 3.5066 FSP -1772

MID-COURSE EXECUTION ACCURACY

SGT 1299.6 SGR 2402.9 SG3 564.1  
 RRT .9002 RRF -.9974 RTF -.8980  
 SGB 2731.8 R23 -.0953 R13 -.9929  
 SG1 2684.4 SG2 506.5 THA 63.00

ORBIT DETERMINATION ACCURACY

ST 382.7 SR 461.6 SS 597.1  
 CRT .6674 CRS .9669 CST 4.566  
 LSA 782.4 MSA 322.1 SSA 9.2  
 EL1 549.8 EL2 239.3 ALF 52.89

LAUNCH DATE JAN 8 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 369.244

RL 147.10 LAL -.00 LOL 107.54 VL 27.633 GAL .70 AZL 93.01 HCA 163.44 SMA 127.51 ECC .15413 INC 3.0088 V1 30.286  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.409 GAP -2.69 AZP 87.12 TAL 176.14 TAP 339.58 RCA 107.86 APO 147.17 V2 34.839  
 RC 76.053 GL -28.16 GP 53.25 ZAL 84.50 ZAP 67.61 ETS 330.91 ZAE 125.58 ETE 66.64 ZAC 102.38 ETC 138.79 CLP -50.46

PLANETOCENTRIC CONIC

C3 9.444 VHL 3.073 DLA -16.95 RAL 32.50 RAD 6567.3 VEL 11.438 PTH 1.98 VHP 5.012 DPA 59.91 RAP 4.22 ECC 1.1554  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 39 4 1493.58 1.98 359.55 243.28 118.25 9 3 58 893.6 5.74 352.89  
 90.00 16 2 15 5251.87 26.77 236.91 247.45 80.39 17 29 47 4651.9 25.16 228.61  
 100.00 9 50 44 1262.37 1.02 342.02 242.75 119.88 10 11 46 662.4 4.99 335.48  
 100.00 17 33 17 4958.32 27.84 215.10 247.22 78.65 18 55 55 4358.3 25.99 206.78  
 110.00 10 37 36 1115.90 -1.40 329.37 241.23 124.16 10 56 12 515.5 3.09 323.16  
 110.00 19 2 53 4677.95 30.62 193.03 246.45 74.00 20 20 51 4078.0 28.12 184.72

DIFFERENTIAL CORRECTIONS

TDE -.0731 TRA -.5140 TC3 .7588 BAU .4320  
 RDE .2836 RRA -.9304 RC3 3.3361 FAU .07255  
 FDE -.7314 FRA 1.9732 FC3-6.8510 BSP 9541  
 BDE .2928 BRA 1.0629 BC3 3.4213 FSP -1575

MID-COURSE EXECUTION ACCURACY

SGT 1113.4 SGR 2787.9 SG3 499.3  
 RRT .8701 RRF -.9984 RTF -.8669  
 SGB 3002.0 R23 -.0665 R13 -.9962  
 SG1 2957.1 SG2 517.3 THA 70.21

ORBIT DETERMINATION ACCURACY

ST 330.3 SR 761.1 SS 775.7  
 CRT .3673 CRS .9952 CST .2756  
 LSA 1091.0 MSA 315.6 SSA 5.6  
 EL1 772.5 EL2 302.6 ALF 79.28

LAUNCH DATE JAN 8 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 375.631

RL 147.10 LAL -.00 LOL 107.54 VL 27.654 GAL .68 AZL 94.48 HCA 166.59 SMA 127.66 ECC .15278 INC 4.4776 V1 30.286  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.417 GAP -2.26 AZP 85.64 TAL 176.22 TAP 342.82 RCA 108.15 APO 147.16 V2 34.831  
 RC 78.340 GL -38.31 GP 60.85 ZAL 85.33 ZAP 73.40 ETS 332.96 ZAE 118.77 ETE 73.63 ZAC 96.76 ETC 139.19 CLP -54.08

PLANETOCENTRIC CONIC

C3 12.128 VHL 3.483 DLA -26.37 RAL 36.56 RAD 6567.5 VEL 11.555 PTH 2.02 VHP 5.653 DPA 64.73 RAP 351.50 ECC 1.1996  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 4 58 1081.08 14.66 335.89 254.48 114.50 11 22 59 481.1 17.85 328.66  
 90.00 14 8 46 5766.20 27.02 274.19 258.42 98.80 15 44 52 5166.2 27.96 265.65  
 100.00 11 56 58 913.14 12.54 322.49 253.41 117.36 12 12 12 313.1 16.10 315.52  
 100.00 15 59 27 5409.38 29.37 248.28 258.76 95.86 17 29 36 4809.4 29.87 239.51  
 110.00 12 14 30 858.12 8.37 315.86 250.94 123.26 12 28 48 258.1 12.69 309.42  
 110.00 17 58 24 5037.16 34.18 220.28 259.04 89.65 19 22 21 4437.2 33.75 211.06

DIFFERENTIAL CORRECTIONS

TDE -.0883 TRA -.4606 TC3 .3856 BAU .4709  
 RDE .5988 RRA -1.2321 RC3 2.8788 FAU .05659  
 FDE -.9741 FRA 1.8412 FC3-4.0393 BSP 10431  
 BDE .6053 BRA 1.3154 BC3 2.9045 FSP -1281

MID-COURSE EXECUTION ACCURACY

SGT 899.2 SGR 3179.7 SG3 404.5  
 RRT .8076 RRF -.9990 RTF -.8035  
 SGB 3304.4 R23 -.0426 R13 -.9981  
 SG1 3263.8 SG2 516.7 THA 76.80

ORBIT DETERMINATION ACCURACY

ST 292.5 SR 1197.9 SS 927.4  
 CRT .0845 CRS .9992 CST .0455  
 LSA 1514.8 MSA 293.2 SSA 3.5  
 EL1 1198.1 EL2 291.4 ALF 88.74

LAUNCH DATE JAN 8 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 381.981

RL 147.10 LAL -.00 LOL 107.54 VL 27.672 GAL .67 AZL 96.82 HCA 169.72 SMA 127.78 ECC .15170 INC 6.8231 V1 30.286  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.423 GAP -1.84 AZP 83.29 TAL 176.24 TAP 345.96 RCA 108.39 APO 147.16 V2 34.824  
 RC 80.851 GL -49.32 GP 69.32 ZAL 86.30 ZAP 78.81 ETS 335.52 ZAE 110.72 ETE 77.83 ZAC 90.77 ETC 140.11 CLP -56.67

PLANETOCENTRIC CONIC

C3 18.791 VHL 4.335 DLA -36.40 RAL 41.90 RAD 6567.8 VEL 11.839 PTH 2.10 VHP 6.863 DPA 68.76 RAP 332.49 ECC 1.3093  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.10 10 6 24 1420.37 25.31 6.67 271.99 117.08 10 30 4 820.4 28.73 358.97  
 113.90 15 49 58 5622.92 25.32 263.00 272.00 117.07 17 23 41 5022.9 28.74 255.29  
 66.10 10 6 24 1420.37 25.31 6.67 271.99 117.08 10 30 4 820.4 28.73 358.97  
 113.90 15 49 58 5622.92 25.32 263.00 272.00 117.07 17 23 41 5022.9 28.74 255.29  
 66.10 10 6 24 1420.37 25.31 6.67 271.99 117.08 10 30 4 820.4 28.73 358.97  
 113.90 15 49 58 5622.92 25.32 263.00 272.00 117.07 17 23 41 5022.9 28.74 255.29

DIFFERENTIAL CORRECTIONS

TDE -.1829 TRA -.3799 TC3 .1145 BAU .4938  
 RDE 1.0736 RRA -1.6883 RC3 1.9621 FAU .03802  
 FDE -1.0750 FRA 1.6216 FC3-1.7518 BSP 11514  
 BDE 1.0859 BRA 1.7306 BC3 1.9654 FSP -942

MID-COURSE EXECUTION ACCURACY

SGT 667.4 SGR 3548.8 SG3 291.9  
 RRT .6727 RRF -.9993 RTF -.6680  
 SGB 3611.0 R23 -.0234 R13 -.9991  
 SG1 3577.7 SG2 489.9 THA 82.65

ORBIT DETERMINATION ACCURACY

ST 285.3 SR 1645.6 SS 967.0  
 CRT -.3187 CRS .9998 CST -.3357  
 LSA 1910.9 MSA 270.1 SSA 2.2  
 EL1 1648.2 EL2 270.0 ALF 93.25

LAUNCH DATE JAN 8 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 388.276

RL 147.10 LAL -.00 LOL 107.54 VL 27.686 GAL .68 AZL 101.18 HCA 172.82 SMA 127.87 ECC .15087 INC11.1782 V1 30.286
RP 108.84 LAP -1.39 LOP 280.50 VP 37.427 GAP -1.44 AZP 78.91 TAL 176.15 TAP 348.98 RCA 108.58 APO 147.16 V2 34.816
RC 82.981 GL -59.67 GP 78.88 ZAL 87.37 ZAP 83.48 ETS 337.52 ZAE 101.13 ETE 80.22 ZAC 84.52 ETC 140.67 CLP -53.94

PLANETOCENTRIC CONIC

C3 38.665 VHL 6.218 DLA -45.57 RAL 48.29 RAD 6568.5 VEL 12.650 PTH 2.30 VHP 9.348 DPA 70.69 RAP 304.82 ECC 1.6363
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.67 9 31 46 1766.57 23.51 34.95 293.04 130.24 10 1 12 1166.6 28.52 28.43
127.33 17 15 35 5633.04 23.53 262.54 293.05 130.23 18 49 28 5033.0 28.53 256.01
52.67 9 31 46 1766.57 23.51 34.95 293.04 130.24 10 1 12 1166.6 28.52 28.43
127.33 17 15 35 5633.04 23.53 262.54 293.05 130.23 18 49 28 5033.0 28.53 256.01
52.67 9 31 46 1766.57 23.51 34.95 293.04 130.24 10 1 12 1166.6 28.52 28.43
127.33 17 15 35 5633.04 23.53 262.54 293.05 130.23 18 49 28 5033.0 28.53 256.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.142 TRA -.2643 TC3 .0066 BAU .4456 SGT 452.7 SGR 3855.2 SG3 182.2 ST 307.8 SR 1945.8 SS 870.0
RDE 1.8170 RRA-2.5093 RC3 .8621 FAU .01892 RRT .3857 RRF -.9996 RTF -.3855 CRT -.6367 CRS 1.0000 CST -.6393
FDE -1.0078 FRA 1.3814 FC3 -.4237 BSP 12268 SGB 3881.7 R23 -.0050 R13 -.9996 LSA 2140.5 MSA 236.2 SSA 1.5
BDE 1.8439 BRA 2.5232 BC3 .8621 FSP -588 SG1 3859.2 SG2 417.3 THA 87.38 EL1 1955.7 EL2 236.1 ALF 95.84

LAUNCH DATE JAN 8 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 394.432

RL 147.10 LAL -.00 LOL 107.54 VL 27.696 GAL .73 AZL 111.89 HCA 175.82 SMA 127.94 ECC .15029 INC21.8903 V1 30.286
RP 108.86 LAP -1.56 LOP 283.66 VP 37.429 GAP -1.08 AZP 88.16 TAL 175.89 TAP 351.71 RCA 108.71 APO 147.17 V2 34.810
RC 85.328 GL -65.99 GP 85.71 ZAL 88.45 ZAP 87.04 ETS 266.31 ZAE 88.22 ETE 8.49 ZAC 77.65 ETC 69.00 CLP 46.33

PLANETOCENTRIC CONIC

C3 127.762 VHL 11.303 DLA -51.18 RAL 52.81 RAD 6570.4 VEL 15.783 PTH 2.80 VHP 15.774 DPA 67.90 RAP 268.88 ECC 3.1026
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.41 9 25 6 2104.19 11.70 55.38 313.20 140.19 10 0 10 1504.2 17.79 50.43
134.59 17 58 17 5849.74 11.72 271.10 313.22 140.19 19 35 46 5249.7 17.81 266.15
45.41 9 25 6 2104.19 11.70 55.38 313.20 140.19 10 0 10 1504.2 17.79 50.43
134.59 17 58 17 5849.74 11.72 271.10 313.22 140.19 19 35 46 5249.7 17.81 266.15
45.41 9 25 6 2104.19 11.70 55.38 313.20 140.19 10 0 10 1504.2 17.79 50.43
134.59 17 58 17 5849.74 11.72 271.10 313.22 140.19 19 35 46 5249.7 17.81 266.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6843 TRA -4.2778 TC3 .0475 BAU .0857 SGT 3718.6 SGR 1573.3 SG3 99.4 ST 1711.2 SR 1223.9 SS 793.3
RDE 2.3354 RRA 1.2807 RC3 .0161 FAU .00062 RRT -.3363 RRF .2733 RTF -.9976 CRT .6152 CRS .6807 CST .9963
FDE -.9696 FRA 1.2856 FC3 -.0042 BSP 13512 SGB 4037.7 R23 .1311 R13 .9911 LSA 2073.8 MSA 868.8 SSA 1.0
BDE 3.5580 BRA 4.4654 BC3 .0502 FSP -344 SG1 3762.9 SG2 1464.2 THA 170.44 EL1 1920.1 EL2 860.0 ALF 30.48

LAUNCH DATE JAN 8 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 399.815

RL 147.10 LAL -.00 LOL 107.54 VL 27.703 GAL .93 AZL 157.44 HCA 178.14 SMA 127.99 ECC .15018 INC67.4358 V1 30.286
RP 108.88 LAP -1.72 LOP 286.83 VP 37.429 GAP -.93 AZP 22.57 TAL 174.73 TAP 352.87 RCA 108.77 APO 147.21 V2 34.804
RC 87.891 GL -52.45 GP 57.78 ZAL 89.28 ZAP 89.03 ETS 178.21 ZAE 59.01 ETE 281.09 ZAC 67.56 ETC 347.67 CLP 88.18

PLANETOCENTRIC CONIC

C31040.881 VHL 32.262 DLA -40.51 RAL 40.61 RAD 6573.0 VEL 34.090 PTH 3.51 VHP 41.671 DPA 47.75 RAP 226.16 ECC18.1299
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.73 9 29 54 2195.90 -3.36 51.60 311.01 130.51 10 6 30 1595.9 4.83 45.93
120.27 16 16 9 929.47 -3.34 315.07 311.03 130.51 16 31 38 329.5 4.85 309.39
59.73 9 29 54 2195.90 -3.36 51.60 311.01 130.51 10 6 30 1595.9 4.83 45.93
120.27 16 16 9 929.47 -3.34 315.07 311.03 130.51 16 31 38 329.5 4.85 309.39
59.73 9 29 54 2195.90 -3.36 51.60 311.01 130.51 10 6 30 1595.9 4.83 45.93
120.27 16 16 9 929.47 -3.34 315.07 311.03 130.51 16 31 38 329.5 4.85 309.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.7319 TRA -2.0051 TC3 -.0967 BAU 3.5710 SGT 1282.4 SGR 3375.2 SG3 63.0 ST 1027.8 SR 1643.4 SS 1313.3
RDE -8.1044 RRA11.3005 RC3 .2377 FAU -.06172 RRT -.8451 RRF .9998 RTF -.8545 CRT -.9338 CRS -.9998 CST .9409
FDE -1.8186 FRA 2.4157 FC3 .0513 BSP 10338 SGB 3610.7 R23 -.0432 R13 .9991 LSA 2318.3 MSA 327.4 SSA .4
BDE 9.9285 BRA11.4770 BC3 .2566 FSP -186 SG1 3551.4 SG2 651.5 THA 108.45 EL1 1912.4 EL2 316.0 ALF 121.23

LAUNCH DATE JAN 8 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 408.108

RL 147.10 LAL -.00 LOL 107.54 VL 27.708 GAL .58 AZL 52.45 HCA 183.08 SMA 128.02 ECC .14939 INC37.5479 V1 30.286
RP 108.90 LAP -1.88 LOP 289.99 VP 37.427 GAP -.03 AZP 127.51 TAL 176.68 TAP 359.77 RCA 108.90 APO 147.15 V2 34.799
RC 90.065 GL 63.78 GP -79.30 ZAL 89.28 ZAP 89.72 ETS 170.88 ZAE 79.26 ETE 71.86 ZAC 99.83 ETC 17.58 CLP 88.50

PLANETOCENTRIC CONIC

C3 354.357 VHL 18.824 DLA 61.72 RAL 331.83 RAD 6571.9 VEL 21.810 PTH 3.23 VHP 21.672 DPA -65.43 RAP 123.96 ECC 6.8318
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.55 15 24 55 4972.72 -4.16 239.59 239.60 28.36 16 47 48 4372.7 -11.18 236.15
147.45 1 12 21 3286.32 -4.15 100.34 239.58 28.36 2 7 8 2686.3 -11.17 96.89
32.55 15 24 55 4972.72 -4.16 239.59 239.60 28.36 16 47 48 4372.7 -11.18 236.15
147.45 1 12 21 3286.32 -4.15 100.34 239.58 28.36 2 7 8 2686.3 -11.17 96.89
32.55 15 24 55 4972.72 -4.16 239.59 239.60 28.36 16 47 48 4372.7 -11.18 236.15
147.45 1 12 21 3286.32 -4.15 100.34 239.58 28.36 2 7 8 2686.3 -11.17 96.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.0508 TRA 2.1064 TC3 -.0970 BAU .9874 SGT 1681.5 SGR 3873.9 SG3 80.6 ST 1013.5 SR 3562.9 SS 1559.4
RD -11.8219 RRA 2.2075 RC3 -.1845 FAU -.01766 RRT .8379 RRF -.9972 RTF -.8758 CRT .9575 CRS .9996 CST .9649
FDE 2.7068 FRA -.6312 FC3 .0432 BSP 13434 SGB 4223.1 R23 -.0056 R13 -.9999 LSA 4009.2 MSA 282.1 SSA .8
BDE 12.0157 BRA 3.0512 BC3 .2084 FSP -268 SG1 4134.6 SG2 859.9 THA 69.07 EL1 3693.5 EL2 281.9 ALF 74.67

LAUNCH DATE JAN 8 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 107.54 VL 27.709 GAL .69 AZL 70.04 HCA 185.96 SMA 128.03 ECC .14943 INC19.9581 V1 30.286  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.424 GAP .27 AZP 109.86 TAL 176.09 TAP 2.05 RCA 108.90 APO 147.16 V2 34.795  
 RC 92.449 GL 65.79 GP -84.96 ZAL 88.41 ZAP 90.52 ETS 33.38 ZAE 94.87 ETE 295.76 ZAC 106.05 ETC 239.88 CLP -95.97

DISTANCE 414.077

PLANETOCENTRIC CONIC

C3 107.524 VHL 10.369 DLA 63.68 RAL 329.43 RAD 6570.1 VEL 15.128 PTH 2.72 VHP 11.071 DPA -64.23 RAP 86.51 ECC 2.7696  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.24 15 9 49 4794.84 -15.61 236.02 231.50 27.41 16 29 43 4194.8 -22.67 232.46  
 149.76 1 8 21 3089.66 -15.60 94.07 231.48 27.41 1 59 51 2489.7 -22.66 90.50  
 30.24 15 9 49 4794.84 -15.61 236.02 231.50 27.41 16 29 43 4194.8 -22.67 232.46  
 149.76 1 8 21 3089.66 -15.60 94.07 231.48 27.41 1 59 51 2489.7 -22.66 90.50  
 30.24 15 9 49 4794.84 -15.61 236.02 231.50 27.41 16 29 43 4194.8 -22.67 232.46  
 149.76 1 8 21 3089.66 -15.60 94.07 231.48 27.41 1 59 51 2489.7 -22.66 90.50

DIFFERENTIAL CORRECTIONS

TDE 3.1794 TRA .3069 TC3 .0179 BAU .1579  
 RDE 6.0232 RRA-1.7566 RC3 -.1083 FAU .00790  
 FDE 2.7144 FRA -.6637 FC3 -.0636 BSP 13812  
 BDE 6.8108 BRA 1.7832 BC3 .1098 FSP -492

MID-COURSE EXECUTION ACCURACY

SGT 1798.3 SGR 3989.8 SG3 148.4  
 RRT .6970 RRF .9968 RTF .7489  
 SGB 4376.3 R23 .0251 R13 .9993  
 SG1 4201.5 SG2 1224.5 THA 70.87

ORBIT DETERMINATION ACCURACY

ST 1760.5 SR 3392.3 SS 1454.2  
 CRT .9664 CR3 -.9995 CST -.9739  
 LSA 4069.1 MSA 405.3 SSA 1.3  
 EL1 3800.5 EL2 404.1 ALF 63.04

LAUNCH DATE JAN 8 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 107.54 VL 27.708 GAL .76 AZL 75.99 HCA 189.03 SMA 128.03 ECC .14959 INC14.0149 V1 30.286  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.420 GAP .61 AZP 103.85 TAL 175.66 TAP 4.70 RCA 108.87 APO 147.18 V2 34.791  
 RC 94.840 GL 62.99 GP -75.12 ZAL 87.54 ZAP 92.57 ETS 358.40 ZAE 104.43 ETE 261.40 ZAC 109.04 ETC 204.80 CLP-100.05

DISTANCE 420.240

PLANETOCENTRIC CONIC

C3 56.716 VHL 7.531 DLA 62.61 RAL 335.35 RAD 6569.0 VEL 13.344 PTH 2.44 VHP 7.549 DPA -59.67 RAP 67.84 ECC 1.9334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.50 15 36 26 4643.22 -24.16 230.40 231.93 30.28 16 53 50 4043.2 -31.00 226.13  
 148.50 1 20 57 2948.08 -24.15 89.92 231.90 30.28 2 18 5 2348.1 -30.99 85.64  
 31.50 15 36 26 4643.22 -24.16 230.40 231.93 30.28 16 53 50 4043.2 -31.00 226.13  
 148.50 1 20 57 2948.08 -24.15 89.92 231.90 30.28 2 18 5 2348.1 -30.99 85.64  
 31.50 15 36 26 4643.22 -24.16 230.40 231.93 30.28 16 53 50 4043.2 -31.00 226.13  
 148.50 1 20 57 2948.08 -24.15 89.92 231.90 30.28 2 18 5 2348.1 -30.99 85.64

DIFFERENTIAL CORRECTIONS

TDE 2.3079 TRA -.6002 TC3 -.2061 BAU .4002  
 RDE 4.5653 RRA -.9478 RC3 -.4860 FAU .02732  
 FDE 3.4615 FRA -.6597 FC3 -.4171 BSP 13771  
 BDE 5.1155 BRA 1.1219 BC3 .5279 FSP -841

MID-COURSE EXECUTION ACCURACY

SGT 2040.8 SGR 3880.3 SG3 252.2  
 RRT .9953 RRF .9992 RTF .9908  
 SGB 4384.2 R23 .0593 R13 .9981  
 SG1 4380.7 SG2 174.4 THA 62.32

ORBIT DETERMINATION ACCURACY

ST 1780.9 SR 3505.0 SS 1731.0  
 CRT .9994 CR3 -.9999 CST -.9990  
 LSA 4295.3 MSA 60.1 SSA .9  
 EL1 3931.2 EL2 53.1 ALF 63.07

LAUNCH DATE JAN 8 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 107.54 VL 27.705 GAL .84 AZL 78.91 HCA 192.15 SMA 128.00 ECC .14992 INC11.0857 V1 30.286  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.415 GAP .96 AZP 100.84 TAL 175.24 TAP 7.39 RCA 108.81 APO 147.19 V2 34.788  
 RC 97.236 GL 59.63 GP -67.10 ZAL 86.65 ZAP 95.64 ETS 351.23 ZAE 111.85 ETE 253.80 ZAC 110.63 ETC 197.24 CLP-104.62

DISTANCE 426.436

PLANETOCENTRIC CONIC

C3 38.116 VHL 6.174 DLA 60.92 RAL 341.62 RAD 6568.5 VEL 12.629 PTH 2.29 VHP 5.907 DPA -54.82 RAP 55.98 ECC 1.6273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.51 16 6 20 4535.26 -29.44 224.78 233.34 33.93 17 21 55 3935.3 -35.96 219.69  
 146.49 1 49 5 2857.13 -29.43 86.67 233.33 33.92 2 36 43 2257.1 -35.96 81.58  
 33.51 16 6 20 4535.26 -29.44 224.78 233.34 33.93 17 21 55 3935.3 -35.96 219.69  
 146.49 1 49 5 2857.13 -29.43 86.67 233.33 33.92 2 36 43 2257.1 -35.96 81.58  
 33.51 16 6 20 4535.26 -29.44 224.78 233.34 33.93 17 21 55 3935.3 -35.96 219.69  
 146.49 1 49 5 2857.13 -29.43 86.67 233.33 33.92 2 36 43 2257.1 -35.96 81.58

DIFFERENTIAL CORRECTIONS

TDE 2.2791 TRA -.5566 TC3 -.4994 BAU .4846  
 RDE 3.5737 RRA -.5189 RC3 -.8092 FAU .04762  
 FDE 4.2772 FRA -.5755 FC3-1.0816 BSP 13588  
 BDE 4.2386 BRA .7609 BC3 .9509 FSP -1254

MID-COURSE EXECUTION ACCURACY

SGT 2446.1 SGR 3602.7 SG3 374.1  
 RRT .9854 RRF .9993 RTF .9807  
 SGB 4354.6 R23 .0769 R13 .9966  
 SG1 4340.9 SG2 345.5 THA 55.97

ORBIT DETERMINATION ACCURACY

ST 2139.1 SR 3330.0 SS 2032.9  
 CRT .9982 CR3-1.0000 CST -.9978  
 LSA 4447.9 MSA 116.8 SSA 1.8  
 EL1 3956.4 EL2 108.4 ALF 57.30

LAUNCH DATE JAN 8 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

RL 147.10 LAL -.00 LOL 107.54 VL 27.699 GAL .92 AZL 80.66 HCA 195.29 SMA 127.97 ECC .15040 INC 9.3418 V1 30.286  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.409 GAP 1.31 AZP 99.02 TAL 174.77 TAP 10.06 RCA 108.72 APO 147.21 V2 34.786  
 RC 99.636 GL 56.42 GP -60.09 ZAL 85.73 ZAP 99.43 ETS 346.64 ZAE 117.89 ETE 247.66 ZAC 111.30 ETC 191.97 CLP-109.18

DISTANCE 432.633

PLANETOCENTRIC CONIC

C3 29.118 VHL 5.396 DLA 59.13 RAL 347.07 RAD 6568.2 VEL 12.268 PTH 2.21 VHP 5.011 DPA -50.06 RAP 47.43 ECC 1.4792  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.65 16 38 29 4457.45 -32.57 219.59 234.64 37.51 17 47 47 3857.4 -38.76 213.77  
 144.35 2 5 25 2799.27 -32.56 84.11 234.62 37.50 2 52 4 2199.3 -38.75 78.30  
 35.65 16 33 29 4457.45 -32.57 219.59 234.64 37.51 17 47 47 3857.4 -38.76 213.77  
 144.35 2 5 25 2799.27 -32.56 84.11 234.62 37.50 2 52 4 2199.3 -38.75 78.30  
 35.65 16 33 29 4457.45 -32.57 219.59 234.64 37.51 17 47 47 3857.4 -38.76 213.77  
 144.35 2 5 25 2799.27 -32.56 84.11 234.62 37.50 2 52 4 2199.3 -38.75 78.30

DIFFERENTIAL CORRECTIONS

TDE 2.3023 TRA -.4727 TC3 -.8482 BAU .5240  
 RDE 2.8756 RRA -.2869 RC3-1.0453 FAU .06751  
 FDE 4.9453 FRA -.4109 FC3-2.0073 BSP 13441  
 BDE 3.6837 BRA .5429 BC3 1.3461 FSP -1678

MID-COURSE EXECUTION ACCURACY

SGT 2787.6 SGR 3301.6 SG3 496.1  
 RRT .9819 RRF .9991 RTF .9775  
 SGB 4321.0 R23 .0974 R13 .9945  
 SG1 4301.9 SG2 405.2 THA 49.91

ORBIT DETERMINATION ACCURACY

ST 2462.2 SR 3058.0 SS 2275.2  
 CRT .9979 CR3-1.0000 CST -.9975  
 LSA 4535.5 MSA 139.5 SSA 2.3  
 EL1 3924.1 EL2 125.1 ALF 51.17

LAUNCH DATE JAN 8 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 438.821

RL 147.10 LAL -.00 LOL 107.54 VL 27.692 GAL 1.02 AZL 81.82 HCA 198.43 SMA 127.91 ECC .15104 INC 8.1809 V1 30.286  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.402 GAP 1.66 AZP 97.77 TAL 174.26 TAP 12.69 RCA 108.59 APO 147.24 V2 34.784  
 RC 102.036 GL 53.51 GP -53.83 ZAL 84.76 ZAP 103.66 ETS 343.28 ZAE 122.74 ETE 241.68 ZAC 111.36 ETC 187.75 CLP-113.59

PLANETOCENTRIC CONIC

C3 24.017 VHL 4.901 DLA 57.42 RAL 351.72 RAD 6568.0 VEL 12.058 PTH 2.16 VHP 4.485 DPA -45.54 RAP 40.89 ECC 1.3953  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.71 16 57 25 4399.33 -34.39 215.00 235.80 40.73 18 10 44 3799.3 -40.27 208.58  
 142.29 2 18 36 2761.95 -34.38 82.13 235.79 40.72 3 4 38 2161.9 -40.26 75.72  
 37.71 16 57 25 4399.33 -34.39 215.00 235.80 40.73 18 10 44 3799.3 -40.27 208.58  
 142.29 2 18 36 2761.95 -34.38 82.13 235.79 40.72 3 4 38 2161.9 -40.26 75.72  
 37.71 16 57 25 4399.33 -34.39 215.00 235.80 40.73 18 10 44 3799.3 -40.27 208.58  
 142.29 2 18 36 2761.95 -34.38 82.13 235.79 40.72 3 4 38 2161.9 -40.26 75.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3335 TRA -.3835 TC3-1.2310 BAU .5486 SGT 3097.1 SGR 2988.1 SG3 603.6 ST 2739.8 SR 2744.6 SS 2439.9  
 RDE 2.3467 RRA -.1063 RC3-1.1847 FAU .08505 RRT .9809 RRF .9988 RTF .9766 CRT .9978 CRS-1.0000 CST -.9974  
 FDE 5.3839 FRA -.1847 FC3-3.0658 BSP 13357 SGB 4303.6 R23 .1171 R13 .9920 LSA 4579.3 HSA 151.4 SSA 3.0  
 BDE 3.3094 BRA .3980 BC3 1.7085 FSP -2059 SGI 4285.0 SG2 419.9 THA 43.95 EL1 3876.0 EL2 128.1 ALF 45.05

LAUNCH DATE JAN 8 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 444.995

RL 147.10 LAL -.00 LOL 107.54 VL 27.682 GAL 1.12 AZL 82.65 HCA 201.58 SMA 127.85 ECC .15184 INC 7.3488 V1 30.286  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.394 GAP 2.00 AZP 96.84 TAL 173.71 TAP 15.28 RCA 108.44 APO 147.26 V2 34.783  
 RC 104.441 GL 50.88 GP -48.23 ZAL 83.73 ZAP 108.10 ETS 340.81 ZAE 126.51 ETE 235.70 ZAC 111.05 ETC 184.32 CLP-117.80

PLANETOCENTRIC CONIC

C3 20.823 VHL 4.563 DLA 55.86 RAL 355.78 RAD 6567.8 VEL 11.925 PTH 2.12 VHP 4.171 DPA -41.31 RAP 35.76 ECC 1.3427  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.60 17 18 44 4354.27 -35.42 211.00 236.96 43.53 18 31 19 3754.3 -41.01 204.12  
 140.40 2 29 36 2737.80 -35.41 80.63 236.94 43.52 3 15 14 2137.8 -41.00 73.75  
 39.60 17 18 44 4354.27 -35.42 211.00 236.96 43.53 18 31 19 3754.3 -41.01 204.12  
 140.40 2 29 36 2737.80 -35.41 80.63 236.94 43.52 3 15 14 2137.8 -41.00 73.75  
 39.60 17 18 44 4354.27 -35.42 211.00 236.96 43.53 18 31 19 3754.3 -41.01 204.12  
 140.40 2 29 36 2737.80 -35.41 80.63 236.94 43.52 3 15 14 2137.8 -41.00 73.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3650 TRA -.2910 TC3-1.8265 BAU .5686 SGT 3383.1 SGR 2676.8 SG3 688.1 ST 2976.3 SR 2428.0 SS 2532.1  
 RDE 1.9335 RRA -.0003 RC3-1.2334 FAU .09877 RRT .9809 RRF .9982 RTF .9765 CRT .9978 CRS-1.0000 CST -.9973  
 FDE 5.5947 FRA .0787 FC3-4.1084 BSP 13365 SGB 4314.0 R23 .1340 R13 .9893 LSA 4597.8 HSA 158.4 SSA 3.6  
 BDE 3.0548 BRA .2910 BC3 2.0425 FSP -2365 SGI 4294.5 SG2 409.7 THA 38.23 EL1 3839.0 EL2 123.4 ALF 39.19

LAUNCH DATE JAN 8 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 451.155

RL 147.10 LAL -.00 LOL 107.54 VL 27.671 GAL 1.24 AZL 83.28 HCA 204.73 SMA 127.77 ECC .15278 INC 6.7199 V1 30.286  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.385 GAP 2.34 AZP 96.11 TAL 173.10 TAP 17.83 RCA 108.25 APO 147.30 V2 34.783  
 RC 106.844 GL 48.49 GP -43.25 ZAL 82.64 ZAP 112.54 ETS 339.01 ZAE 129.29 ETE 229.80 ZAC 110.56 ETC 181.57 CLP-121.76

PLANETOCENTRIC CONIC

C3 18.688 VHL 4.323 DLA 54.45 RAL 359.41 RAD 6567.8 VEL 11.835 PTH 2.10 VHP 3.990 DPA -37.40 RAP 31.71 ECC 1.3076  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.33 17 38 4 4318.41 -35.96 207.55 238.20 45.91 18 50 2 3718.4 -41.29 200.32  
 138.67 2 39 15 2722.30 -35.95 79.52 238.19 45.90 3 24 38 2122.3 -41.28 72.29  
 41.33 17 38 4 4318.41 -35.96 207.55 238.20 45.91 18 50 2 3718.4 -41.29 200.32  
 138.67 2 39 15 2722.30 -35.95 79.52 238.19 45.90 3 24 38 2122.3 -41.28 72.29  
 41.33 17 38 4 4318.41 -35.96 207.55 238.20 45.91 18 50 2 3718.4 -41.29 200.32  
 138.67 2 39 15 2722.30 -35.95 79.52 238.19 45.90 3 24 38 2122.3 -41.28 72.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3948 TRA -.1945 TC3-2.0182 BAU .5885 SGT 3649.1 SGR 2381.1 SG3 746.9 ST 3177.2 SR 2131.6 SS 2565.9  
 RDE 1.8077 RRA .0708 RC3-1.2150 FAU .10804 RRT .9811 RRF .9973 RTF .9764 CRT .9979 CRS -.9999 CST -.9972  
 FDE 5.6122 FRA .3578 FC3-5.0032 BSP 13421 SGB 4357.2 R23 .1466 R13 .9865 LSA 4603.9 HSA 163.3 SSA 4.4  
 BDE 2.8844 BRA .2070 BC3 2.3557 FSP -2565 SGI 4340.0 SG2 387.6 THA 32.92 EL1 3824.3 EL2 114.4 ALF 33.84

LAUNCH DATE JAN 8 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 457.298

RL 147.10 LAL -.00 LOL 107.54 VL 27.659 GAL 1.37 AZL 83.77 HCA 207.88 SMA 127.69 ECC .15388 INC 6.2254 V1 30.286  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.377 GAP 2.67 AZP 95.51 TAL 172.44 TAP 20.33 RCA 108.04 APO 147.34 V2 34.784  
 RC 109.246 GL 46.30 GP -38.84 ZAL 81.46 ZAP 118.87 ETS 337.74 ZAE 131.20 ETE 224.13 ZAC 110.04 ETC 179.40 CLP-125.47

PLANETOCENTRIC CONIC

C3 17.199 VHL 4.147 DLA 53.18 RAL 358.75 RAD 6567.7 VEL 11.772 PTH 2.08 VHP 3.897 DPA -33.82 RAP 28.51 ECC 1.2831  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.90 17 55 59 4289.12 -36.18 204.55 239.57 47.94 19 7 28 3689.1 -41.29 197.06  
 137.10 2 48 2 2712.89 -36.17 78.73 239.56 47.93 3 33 15 2112.9 -41.28 71.25  
 42.90 17 55 59 4289.12 -36.18 204.55 239.57 47.94 19 7 28 3689.1 -41.29 197.06  
 137.10 2 48 2 2712.89 -36.17 78.73 239.56 47.93 3 33 15 2112.9 -41.28 71.25  
 42.90 17 55 59 4289.12 -36.18 204.55 239.57 47.94 19 7 28 3689.1 -41.29 197.06  
 137.10 2 48 2 2712.89 -36.17 78.73 239.56 47.93 3 33 15 2112.9 -41.28 71.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4194 TRA -.0963 TC3-2.3988 BAU .6117 SGT 3896.2 SGR 2108.3 SG3 780.9 ST 3343.7 SR 1863.4 SS 2551.3  
 RDE 1.3474 RRA .1149 RC3-1.1499 FAU .11347 RRT .9813 RRF .9958 RTF .9765 CRT .9980 CRS -.9999 CST -.9971  
 FDE 5.4748 FRA .6201 FC3-5.7115 BSP 13667 SGB 4430.1 R23 .1525 R13 .9841 LSA 4597.2 HSA 165.9 SSA 5.2  
 BDE 2.7893 BRA .1499 BC3 2.6802 FSP -2695 SGI 4415.6 SG2 357.9 THA 28.17 EL1 3826.5 EL2 101.9 ALF 29.11



LAUNCH DATE JAN 8 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 463.424

RL 147.10 LAL -.00 LOL 107.54 VL 27.644 GAL 1.51 AZL 84.18 HCA 211.04 SMA 127.59 ECC .15512 INC 5.8242 V1 30.286  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.367 GAP 3.01 AZP 94.99 TAL 171.74 TAP 22.78 RCA 107.80 APO 147.38 V2 34.785  
 RC 111.645 GL 44.28 GP -34.96 ZAL 80.21 ZAP 121.00 ETS 336.85 ZAE 132.39 ETE 218.84 ZAC 109.58 ETC 177.71 CLP-128.93

PLANETOCENTRIC CONIC

C3 16.134 VHL 4.017 DLA 52.04 RAL 5.90 RAD 6567.6 VEL 11.727 PTH 2.07 VHP 3.866 DPA -30.55 RAP 26.02 ECC 1.2655  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.33 18 12 49 4264.90 -36.20 201.95 241.10 49.67 19 23 54 3664.9 -41.11 194.28  
 135.67 2 56 19 2707.80 -36.19 78.20 241.08 49.66 3 41 27 2107.8 -41.10 70.53  
 44.33 18 12 49 4264.90 -36.20 201.95 241.10 49.67 19 23 54 3664.9 -41.11 194.28  
 135.67 2 56 19 2707.80 -36.19 78.20 241.08 49.66 3 41 27 2107.8 -41.10 70.53  
 44.33 18 12 49 4264.90 -36.20 201.95 241.10 49.67 19 23 54 3664.9 -41.11 194.28  
 135.67 2 56 19 2707.80 -36.19 78.20 241.08 49.66 3 41 27 2107.8 -41.10 70.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4391 TRA .0056 TC3-2.7602 BAU .6376 SGT 4125.7 SGR 1863.7 SCS 794.3 ST 3479.8 SR 1628.9 SS 2501.8  
 RDE 1.1397 RRA .1419 RC3-1.0578 FAU .11562 RRT .9812 RRF .9936 RTF .9767 CRT .9982 CRS -.9998 CST -.9969  
 FDE 5.2325 FRA .8598 FC3-6.2041 BSP 14008 SGB 4527.1 R23 .1514 R13 .9821 LSA 4581.9 HSA 167.6 SSA 6.0  
 BDE 2.6922 BRA .1420 BC3 2.9559 FSP -2751 SGI 4515.2 SGT 328.5 THA 24.04 EL1 3841.2 EL2 87.9 ALF 25.06

LAUNCH DATE JAN 8 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 469.534

RL 147.10 LAL -.00 LOL 107.54 VL 27.629 GAL 1.66 AZL 84.51 HCA 214.19 SMA 127.49 ECC .15652 INC 5.4902 V1 30.286  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.358 GAP 3.34 AZP 94.55 TAL 170.99 TAP 25.19 RCA 107.53 APO 147.44 V2 34.787  
 RC 114.042 GL 42.38 GP -31.56 ZAL 78.88 ZAP 124.88 ETS 336.27 ZAE 133.01 ETE 214.05 ZAC 109.26 ETC 176.40 CLP-132.15

PLANETOCENTRIC CONIC

C3 15.366 VHL 3.920 DLA 50.99 RAL 8.93 RAD 6567.6 VEL 11.694 PTH 2.06 VHP 3.881 DPA -27.58 RAP 24.13 ECC 1.2529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.64 18 28 56 4244.55 -36.07 199.68 242.78 51.14 19 39 41 3644.5 -40.82 191.87  
 134.36 3 4 19 2706.06 -36.06 77.89 242.77 51.13 3 49 25 2106.1 -40.81 70.07  
 45.64 18 28 56 4244.55 -36.07 199.68 242.78 51.14 19 39 41 3644.5 -40.82 191.87  
 134.36 3 4 19 2706.06 -36.06 77.89 242.77 51.13 3 49 25 2106.1 -40.81 70.07  
 45.64 18 28 56 4244.55 -36.07 199.68 242.78 51.14 19 39 41 3644.5 -40.82 191.87  
 134.36 3 4 19 2706.06 -36.06 77.89 242.77 51.13 3 49 25 2106.1 -40.81 70.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4540 TRA .1114 TC3-3.0923 BAU .6644 SGT 4337.0 SGR 1646.5 SCS 790.5 ST 3588.4 SR 1427.7 SS 2427.3  
 RDE .9738 RRA .1586 RC3 -.9482 FAU .11486 RRT .9805 RRF .9904 RTF .9769 CRT .9985 CRS -.9996 CST -.9967  
 FDE 4.9249 FRA 1.0674 FC3-6.4711 BSP 14418 SGB 4639.1 R23 .1420 R13 .9806 LSA 4558.4 HSA 168.2 SSA 6.8  
 BDE 2.6402 BRA .1922 BC3 3.2344 FSP -2749 SGI 4629.2 SGT 303.0 THA 20.51 EL1 3861.3 EL2 73.0 ALF 21.67

LAUNCH DATE JAN 8 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 475.626

RL 147.10 LAL -.00 LOL 107.54 VL 27.612 GAL 1.82 AZL 84.79 HCA 217.35 SMA 127.37 ECC .15807 INC 5.2064 V1 30.286  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.348 GAP 3.67 AZP 94.14 TAL 170.20 TAP 27.56 RCA 107.24 APO 147.51 V2 34.790  
 RC 116.435 GL 40.59 GP -28.59 ZAL 77.48 ZAP 128.50 ETS 335.89 ZAE 133.22 ETE 209.81 ZAC 109.11 ETC 175.41 CLP-135.15

PLANETOCENTRIC CONIC

C3 14.817 VHL 3.849 DLA 50.03 RAL 11.87 RAD 6567.6 VEL 11.671 PTH 2.05 VHP 3.930 DPA -24.87 RAP 22.74 ECC 1.2439  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.86 18 44 32 4227.35 -35.84 197.69 244.62 52.41 19 54 59 3627.3 -40.44 189.78  
 133.14 3 12 11 2706.96 -35.83 77.76 244.61 52.40 3 57 18 2107.0 -40.43 69.84  
 46.86 18 44 32 4227.35 -35.84 197.69 244.62 52.41 19 54 59 3627.3 -40.44 189.78  
 133.14 3 12 11 2706.96 -35.83 77.76 244.61 52.40 3 57 18 2107.0 -40.43 69.84  
 46.86 18 44 32 4227.35 -35.84 197.69 244.62 52.41 19 54 59 3627.3 -40.44 189.78  
 133.14 3 12 11 2706.96 -35.83 77.76 244.61 52.40 3 57 18 2107.0 -40.43 69.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4682 TRA .2249 TC3-3.3877 BAU .6910 SGT 4535.5 SGR 1460.4 SCS 773.5 ST 3678.0 SR 1261.3 SS 2343.0  
 RDE .8437 RRA .1652 RC3 -.8307 FAU .11176 RRT .9785 RRF .9859 RTF .9769 CRT .9988 CRS -.9993 CST -.9964  
 FDE 4.5972 FRA 1.2553 FC3-6.5300 BSP 14798 SGB 4764.8 R23 .1267 R13 .9795 LSA 4536.5 HSA 169.1 SSA 7.7  
 BDE 2.6084 BRA .2790 BC3 3.4880 FSP -2680 SGI 4756.1 SGT 287.2 THA 17.55 EL1 3887.8 EL2 58.5 ALF 18.91

LAUNCH DATE JAN 8 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 481.700

RL 147.10 LAL -.00 LOL 107.54 VL 27.594 GAL 2.00 AZL 85.04 HCA 220.51 SMA 127.25 ECC .15978 INC 4.9608 V1 30.286  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.338 GAP 4.00 AZP 93.78 TAL 169.37 TAP 29.88 RCA 106.92 APO 147.58 V2 34.794  
 RC 118.823 GL 38.87 GP -25.99 ZAL 76.00 ZAP 131.86 ETS 335.65 ZAE 133.12 ETE 206.12 ZAC 109.14 ETC 174.65 CLP-137.94

PLANETOCENTRIC CONIC

C3 14.439 VHL 3.800 DLA 49.14 RAL 14.75 RAD 6567.6 VEL 11.654 PTH 2.05 VHP 4.006 DPA -22.41 RAP 21.78 ECC 1.2376  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.00 18 59 46 4212.69 -35.53 195.92 246.62 53.51 20 9 59 3612.7 -40.01 187.94  
 132.00 3 19 58 2710.12 -35.52 77.78 246.61 53.49 4 5 8 2110.1 -39.99 69.81  
 48.00 18 59 46 4212.69 -35.53 195.92 246.62 53.51 20 9 59 3612.7 -40.01 187.94  
 132.00 3 19 58 2710.12 -35.52 77.78 246.61 53.49 4 5 8 2110.1 -39.99 69.81  
 48.00 18 59 46 4212.69 -35.53 195.92 246.62 53.51 20 9 59 3612.7 -40.01 187.94  
 132.00 3 19 58 2710.12 -35.52 77.78 246.61 53.49 4 5 8 2110.1 -39.99 69.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4752 TRA .3416 TC3-3.6523 BAU .7185 SGT 4717.4 SGR 1299.3 SCS 751.2 ST 3740.7 SR 1120.5 SS 2244.1  
 RDE .7391 RRA .1672 RC3 -.7181 FAU .10754 RRT .9752 RRF .9795 RTF .9770 CRT .9992 CRS -.9989 CST -.9962  
 FDE 4.2504 FRA 1.4062 FC3-6.4480 BSP 15268 SGB 4893.0 R23 .1057 R13 .9788 LSA 4500.6 HSA 169.0 SSA 8.5  
 BDE 2.5832 BRA .3803 BC3 3.7222 FSP -2602 SGI 4885.2 SGT 277.7 THA 15.08 EL1 3904.7 EL2 43.9 ALF 16.66

LAUNCH DATE JAN 8 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 1 1969

Heliocentric Conic

DISTANCE 487.756

RL 147.10 LAL -.00 LOL 107.54 VL 27.575 GAL 2.19 AZL 85.25 HCA 223.67 SMA 127.12 ECC .16165 INC 4.7450 V1 30.286  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.328 GAP 4.33 AZP 93.44 TAL 168.50 TAP 32.17 RCA 106.57 APO 147.67 V2 34.798  
 RC 121.206 GL 37.22 GP -23.72 ZAL 74.45 ZAP 134.98 ETS 335.52 ZAE 132.02 EYE 202.95 ZAC 109.36 ETC 174.08 CLP-140.54

Planetocentric Conic

C3 14.199 VHL 3.768 DLA 48.30 RAL 17.61 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 4.102 DPA -20.14 RAP 21.19 ECC 1.2337  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.09 19 14 47 4200.16 -35.15 194.35 248.75 54.46 20 24 47 3600.2 -39.52 186.32  
 130.91 3 27 43 2715.23 -35.14 77.96 248.74 54.45 4 12 58 2115.2 -39.51 69.94  
 49.09 19 14 47 4200.16 -35.15 194.35 248.75 54.46 20 24 47 3600.2 -39.52 186.32  
 130.91 3 27 43 2715.23 -35.14 77.96 248.74 54.45 4 12 58 2115.2 -39.51 69.94  
 49.09 19 14 47 4200.16 -35.15 194.35 248.75 54.46 20 24 47 3600.2 -39.52 186.32  
 130.91 3 27 43 2715.23 -35.14 77.96 248.74 54.45 4 12 58 2115.2 -39.51 69.94

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4784 TRA .4638 TC3-3.8817 BAU .7460 SGT 4887.0 SGR 1165.2 SG3 721.7 ST 3782.9 SR 1004.6 SS 2140.4  
 RDE .6564 RRA .1858 RC3 -.6126 FAU .10249 RRT .9700 RRF .9710 RTF .9772 CRT .9995 CRS -.9981 CST -.9959  
 FDE 3.9101 FRA 1.5310 FC3-6.2494 BSP 15760 SGB 5023.5 R23 .0828 R13 .9784 LSA 4457.9 MSA 168.7 SSA 9.3  
 BDE 2.5638 BRA .4926 BC3 3.9297 FSP -2505 SGI 5016.0 SG2 275.7 THA 13.04 EL1 3913.9 EL2 29.8 ALF 14.87

LAUNCH DATE JAN 8 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 3 1969

Heliocentric Conic

DISTANCE 493.794

RL 147.10 LAL -.00 LOL 107.54 VL 27.555 GAL 2.40 AZL 85.45 HCA 226.83 SMA 126.99 ECC .16369 INC 4.5527 V1 30.286  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.318 GAP 4.66 AZP 93.12 TAL 167.60 TAP 34.43 RCA 106.20 APO 147.78 V2 34.803  
 RC 123.581 GL 35.62 GP -21.73 ZAL 72.83 ZAP 137.06 ETS 335.44 ZAE 132.40 EYE 200.24 ZAC 109.77 ETC 173.65 CLP-142.96

Planetocentric Conic

C3 14.077 VHL 3.752 DLA 47.49 RAL 20.44 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 4.216 DPA -18.06 RAP 20.92 ECC 1.2317  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.14 19 29 41 4189.37 -34.72 192.92 251.02 55.29 20 39 30 3589.4 -38.99 184.88  
 129.86 3 35 24 2722.24 -34.71 78.27 251.01 55.28 4 20 46 2122.2 -38.98 70.22  
 50.14 19 29 41 4189.37 -34.72 192.92 251.02 55.29 20 39 30 3589.4 -38.99 184.88  
 129.86 3 35 24 2722.24 -34.71 78.27 251.01 55.28 4 20 46 2122.2 -38.98 70.22  
 50.14 19 29 41 4189.37 -34.72 192.92 251.02 55.29 20 39 30 3589.4 -38.99 184.88  
 129.86 3 35 24 2722.24 -34.71 78.27 251.01 55.28 4 20 46 2122.2 -38.98 70.22

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4772 TRA .5929 TC3-4.0714 BAU .7724 SGT 5043.8 SGR 1048.6 SG3 688.9 ST 3805.3 SR 909.4 SS 2033.9  
 RDE .5910 RRA .1827 RC3 -.5157 FAU .09689 RRT .9622 RRF .9600 RTF .9774 CRT .9998 CRS -.9969 CST -.9956  
 FDE 3.5827 FRA 1.6348 FC3-5.9588 BSP 16233 SGB 5151.6 R23 .0610 R13 .9781 LSA 4406.3 MSA 168.5 SSA 10.1  
 BDE 2.5467 BRA .6148 BC3 4.1040 FSP -2394 SGI 5144.0 SG2 279.9 THA 11.35 EL1 3912.4 EL2 17.2 ALF 13.44

LAUNCH DATE JAN 8 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 5 1969

Heliocentric Conic

DISTANCE 499.814

RL 147.10 LAL -.00 LOL 107.54 VL 27.534 GAL 2.61 AZL 85.82 HCA 229.99 SMA 126.85 ECC .16590 INC 4.3793 V1 30.286  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.307 GAP 4.99 AZP 92.82 TAL 166.66 TAP 36.65 RCA 105.81 APO 147.89 V2 34.808  
 RC 123.948 GL 34.08 GP -19.99 ZAL 71.15 ZAP 140.53 ETS 335.39 ZAE 131.91 EYE 197.93 ZAC 110.36 ETC 173.33 CLP-145.23

Planetocentric Conic

C3 14.061 VHL 3.750 DLA 46.71 RAL 23.25 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 4.344 DPA -16.13 RAP 20.93 ECC 1.2314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.16 19 44 31 4180.05 -34.23 191.63 253.40 56.03 20 54 11 3580.1 -38.41 183.57  
 128.84 3 43 1 2731.05 -34.22 78.71 253.39 56.02 4 28 32 2131.0 -38.41 70.65  
 51.16 19 44 31 4180.05 -34.23 191.63 253.40 56.03 20 54 11 3580.1 -38.41 183.57  
 128.84 3 43 1 2731.05 -34.22 78.71 253.39 56.02 4 28 32 2131.0 -38.41 70.65  
 51.16 19 44 31 4180.05 -34.23 191.63 253.40 56.03 20 54 11 3580.1 -38.41 183.57  
 128.84 3 43 1 2731.05 -34.22 78.71 253.39 56.02 4 28 32 2131.0 -38.41 70.65

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4722 TRA .7297 TC3-4.2199 BAU .7974 SGT 5189.3 SGR 953.5 SG3 654.6 ST 3810.0 SR 831.9 SS 1928.0  
 RDE .5400 RRA .1588 RC3 -.4281 FAU .09095 RRT .9516 RRF .9462 RTF .9776 CRT .9999 CRS -.9951 CST -.9952  
 FDE 3.2754 FRA 1.7213 FC3-5.6001 BSP 16678 SGB 5276.2 R23 .0426 R13 .9780 LSA 4347.1 MSA 168.5 SSA 10.9  
 BDE 2.5305 BRA .7467 BC3 4.2416 FSP -2273 SGI 5268.3 SG2 288.7 THA 9.95 EL1 3899.8 EL2 10.9 ALF 12.32

LAUNCH DATE JAN 8 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 7 1969

Heliocentric Conic

DISTANCE 505.814

RL 147.10 LAL -.00 LOL 107.54 VL 27.512 GAL 2.85 AZL 85.78 HCA 233.16 SMA 126.71 ECC .16829 INC 4.2212 V1 30.286  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.297 GAP 5.33 AZP 92.53 TAL 165.68 TAP 38.84 RCA 105.38 APO 148.03 V2 34.815  
 RC 128.306 GL 32.54 GP -18.46 ZAL 69.42 ZAP 143.01 ETS 335.34 ZAE 131.58 EYE 195.97 ZAC 111.10 ETC 173.09 CLP-147.36

Planetocentric Conic

C3 14.142 VHL 3.761 DLA 45.94 RAL 26.05 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.485 DPA -14.33 RAP 21.17 ECC 1.2327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.18 19 59 21 4171.98 -33.69 190.43 255.89 56.69 21 8 53 3572.0 -37.80 182.38  
 127.82 3 50 30 2741.67 -33.68 79.27 255.88 56.68 4 36 12 2141.7 -37.79 71.23  
 52.18 19 59 21 4171.98 -33.69 190.43 255.89 56.69 21 8 53 3572.0 -37.80 182.38  
 127.82 3 50 30 2741.67 -33.68 79.27 255.88 56.68 4 36 12 2141.7 -37.79 71.23  
 52.18 19 59 21 4171.98 -33.69 190.43 255.89 56.69 21 8 53 3572.0 -37.80 182.38  
 127.82 3 50 30 2741.67 -33.68 79.27 255.88 56.68 4 36 12 2141.7 -37.79 71.23

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4652 TRA .8760 TC3-4.3231 BAU .8201 SGT 5325.8 SGR 875.5 SG3 620.1 ST 3801.1 SR 769.6 SS 1825.4  
 RDE .5007 RRA .1550 RC3 -.3501 FAU .08482 RRT .9379 RRF .9297 RTF .9777 CRT .9997 CRS -.9926 CST -.9949  
 FDE 2.9922 FRA 1.7957 FC3-5.1922 BSP 17060 SGB 5397.2 R23 .0282 R13 .9780 LSA 4283.0 MSA 168.9 SSA 11.6  
 BDE 2.5156 BRA .8897 BC3 4.3373 FSP -2145 SGI 5388.9 SG2 300.2 THA 8.79 EL1 3878.2 EL2 18.7 ALF 11.44

LAUNCH DATE JAN 8 1969 FLIGHT TIME 182.00 ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC DISTANCE 511.795

RL 147.10 LAL -.00 LOL 107.54 VL 27.490 GAL 3.09 AZL 85.92 HCA 236.32 SMA 126.56 ECC .17087 INC 4.0757 V1 30.286  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.287 GAP 5.67 AZP 92.26 TAL 164.68 TAP 41.00 RCA 104.93 APO 148.18 V2 34.821  
 RC 130.653 GL 31.04 GP -17.12 ZAL 67.65 ZAP 145.32 ETS 335.27 ZAE 130.84 ETE 194.30 ZAC 112.00 ETC 172.90 CLP-149.36

PLANETOCENTRIC CONIC

C3 14.317 VHL 3.784 DLA 45.19 RAL 28.83 RAD 6567.6 VEL 11.649 PTH 2.05 VHP 4.637 DPA -12.64 RAP 21.62 ECC 1.2356

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
53.19	20 14 13	4164.96	-33.10	189.32	258.48	57.28	21 23 38	3565.0	-37.14	181.29
126.81	3 57 50	2754.11	-33.09	79.97	258.47	57.27	4 43 44	2154.1	-37.13	71.94
53.19	20 14 13	4164.96	-33.10	189.32	258.48	57.28	21 23 38	3565.0	-37.14	181.29
126.81	3 57 50	2754.11	-33.09	79.97	258.47	57.27	4 43 44	2154.1	-37.13	71.94
53.19	20 14 13	4164.96	-33.10	189.32	258.48	57.28	21 23 38	3565.0	-37.14	181.29
126.81	3 57 50	2754.11	-33.09	79.97	258.47	57.27	4 43 44	2154.1	-37.13	71.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4508 TRA 1.0271 TC3-4.3950 BAU .8430 SGT 5450.2 SGR 811.0 SG3 585.6 ST 3771.0 SR 718.4 SS 1721.7  
 RDE .4701 RRA .1506 RC3 -.2845 FAU .07904 RRT .9212 RRF .9103 RTF .9779 CRT .9990 CRS -.9892 CST -.9945  
 FDE 2.7256 FRA 1.8515 FC3-4.7793 BSP 17496 SGB 5510.2 R23 .0166 R13 .9781 LSA 4203.9 MSA 169.4 SSA 12.3  
 BDE 2.4955 BRA 1.0381 BC3 4.4042 FSP -2031 SGI 5501.3 SG2 312.6 THA 7.83 EL1 3838.7 EL2 31.4 ALF 10.78

LAUNCH DATE JAN 8 1969 FLIGHT TIME 184.00 ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC DISTANCE 517.754

RL 147.10 LAL -.00 LOL 107.54 VL 27.467 GAL 3.36 AZL 86.06 HCA 239.49 SMA 126.40 ECC .17366 INC 3.9404 V1 30.286  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.277 GAP 6.02 AZP 92.00 TAL 163.65 TAP 43.14 RCA 104.45 APO 148.33 V2 34.829  
 RC 132.989 GL 29.56 GP -15.93 ZAL 65.83 ZAP 147.47 ETS 335.18 ZAE 130.31 ETE 192.89 ZAC 113.03 ETC 172.76 CLP-151.25

PLANETOCENTRIC CONIC

C3 14.585 VHL 3.819 DLA 44.43 RAL 31.59 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 4.799 DPA -11.04 RAP 22.25 ECC 1.2400

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
54.21	20 29 9	4158.85	-32.46	188.27	261.15	57.82	21 38 27	3558.8	-36.44	180.27
125.79	4 4 56	2768.43	-32.45	80.80	261.14	57.81	4 51 4	2168.4	-36.43	72.80
54.21	20 29 9	4158.85	-32.46	188.27	261.15	57.82	21 38 27	3558.8	-36.44	180.27
125.79	4 4 56	2768.43	-32.45	80.80	261.14	57.81	4 51 4	2168.4	-36.43	72.80
54.21	20 29 9	4158.85	-32.46	188.27	261.15	57.82	21 38 27	3558.8	-36.44	180.27
125.79	4 4 56	2768.43	-32.45	80.80	261.14	57.81	4 51 4	2168.4	-36.43	72.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4323 TRA 1.1874 TC3-4.4288 BAU .8647 SGT 5566.0 SGR 758.7 SG3 552.1 ST 3726.5 SR 677.1 SS 1621.2  
 RDE .4470 RRA .1470 RC3 -.2286 FAU .07343 RRT .9018 RRF .8886 RTF .9781 CRT .9977 CRS -.9848 CST -.9941  
 FDE 2.4800 FRA 1.8987 FC3-4.3589 BSP 17906 SGB 5617.5 R23 .0083 R13 .9781 LSA 4116.3 MSA 170.7 SSA 12.9  
 BDE 2.4750 BRA 1.1965 BC3 4.4344 FSP -1919 SGI 5608.1 SG2 325.4 THA 7.03 EL1 3787.2 EL2 45.2 ALF 10.28

LAUNCH DATE JAN 8 1969 FLIGHT TIME 186.00 ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC DISTANCE 523.692

RL 147.10 LAL -.00 LOL 107.54 VL 27.443 GAL 3.64 AZL 86.19 HCA 242.66 SMA 126.25 ECC .17666 INC 3.8136 V1 30.286  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.267 GAP 6.37 AZP 91.75 TAL 162.60 TAP 45.25 RCA 103.94 APO 148.55 V2 34.837  
 RC 135.313 GL 28.11 GP -14.87 ZAL 63.98 ZAP 149.48 ETS 335.04 ZAE 129.80 ETE 191.67 ZAC 114.18 ETC 172.64 CLP-153.04

PLANETOCENTRIC CONIC

C3 14.946 VHL 3.866 DLA 43.87 RAL 34.32 RAD 6567.6 VEL 11.676 PTH 2.05 VHP 4.971 DPA -9.53 RAP 23.04 ECC 1.2460

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
55.26	20 44 7	4153.51	-31.77	187.28	263.89	58.31	21 53 21	3553.5	-35.70	179.31
124.74	4 11 44	2784.68	-31.76	81.77	263.88	58.29	4 58 9	2184.7	-35.69	73.80
55.26	20 44 7	4153.51	-31.77	187.28	263.89	58.31	21 53 21	3553.5	-35.70	179.31
124.74	4 11 44	2784.68	-31.76	81.77	263.88	58.29	4 58 9	2184.7	-35.69	73.80
55.26	20 44 7	4153.51	-31.77	187.28	263.89	58.31	21 53 21	3553.5	-35.70	179.31
124.74	4 11 44	2784.68	-31.76	81.77	263.88	58.29	4 58 9	2184.7	-35.69	73.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4099 TRA 1.3571 TC3-4.4242 BAU .8848 SGT 5673.5 SGR 716.7 SG3 520.0 ST 3669.0 SR 643.9 SS 1524.7  
 RDE .4303 RRA .1442 RC3 -.1817 FAU .06804 RRT .8803 RRF .8653 RTF .9782 CRT .9956 CRS -.9790 CST -.9936  
 FDE 2.2554 FRA 1.9380 FC3-3.9411 BSP 18281 SGB 5718.6 R23 .0024 R13 .9782 LSA 4021.3 MSA 172.8 SSA 13.4  
 BDE 2.4480 BRA 1.3648 BC3 4.4279 FSP -1811 SGI 5708.6 SG2 337.9 THA 6.37 EL1 3724.6 EL2 59.4 ALF 9.91

LAUNCH DATE JAN 8 1969 FLIGHT TIME 188.00 ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC DISTANCE 529.608

RL 147.10 LAL -.00 LOL 107.54 VL 27.419 GAL 3.95 AZL 86.31 HCA 245.83 SMA 126.09 ECC .17988 INC 3.6939 V1 30.286  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.258 GAP 6.73 AZP 91.51 TAL 161.52 TAP 47.35 RCA 103.41 APO 148.77 V2 34.846  
 RC 137.825 GL 26.68 GP -13.94 ZAL 62.11 ZAP 151.36 ETS 334.85 ZAE 129.32 ETE 190.64 ZAC 115.44 ETC 172.55 CLP-154.73

PLANETOCENTRIC CONIC

C3 15.406 VHL 3.925 DLA 42.90 RAL 37.02 RAD 6567.6 VEL 11.696 PTH 2.06 VHP 5.153 DPA -8.09 RAP 23.97 ECC 1.2535

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
56.32	20 59 11	4148.79	-31.03	186.33	266.69	58.75	22 8 19	3548.8	-34.91	178.40
123.68	4 18 13	2802.98	-31.02	82.87	266.68	58.74	5 4 56	2203.0	-34.90	74.94
56.32	20 59 11	4148.79	-31.03	186.33	266.69	58.75	22 8 19	3548.8	-34.91	178.40
123.68	4 18 13	2802.98	-31.02	82.87	266.68	58.74	5 4 56	2203.0	-34.90	74.94
56.32	20 59 11	4148.79	-31.03	186.33	266.69	58.75	22 8 19	3548.8	-34.91	178.40
123.68	4 18 13	2802.98	-31.02	82.87	266.68	58.74	5 4 56	2203.0	-34.90	74.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.3860 TRA 1.5391 TC3-4.3776 BAU .9021 SGT 5774.6 SGR 683.8 SG3 489.6 ST 3604.0 SR 617.7 SS 1434.9  
 RDE .4191 RRA .1427 RC3 -.1418 FAU .06271 RRT .8574 RRF .8414 RTF .9782 CRT .9926 CRS -.9720 CST -.9932  
 FDE 2.0555 FRA 1.9745 FC3-3.5258 BSP 18570 SGB 5815.0 R23 -.0007 R13 .9782 LSA 3924.0 MSA 176.0 SSA 13.9  
 BDE 2.4226 BRA 1.5457 BC3 4.3799 FSP -1699 SGI 5804.4 SG2 350.1 THA 5.82 EL1 3655.8 EL2 74.1 ALF 9.66

LAUNCH DATE JAN 8 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 535.498

RL 147.10 LAL -.00 LOL 107.54 VL 27.394 GAL 4.25 AZL 86.42 HCA 249.00 SMA 125.93 ECC .18335 INC 3.5799 V1 30.286
RP 108.72 LAP -3.34 LOP 356.50 VP 37.248 GAP 7.09 AZP 91.28 TAL 160.42 TAP 49.42 RCA 102.84 APO 149.01 V2 34.855
RC 139.923 GL 25.27 GP -13.91 ZAL 60.22 ZAP 153.14 ETS 334.59 ZAE 128.06 ETE 189.75 ZAC 116.80 ETC 172.46 CLP-156.34

PLANETOCENTRIC CONIC

C3 15.968 VHL 3.996 DLA 42.12 RAL 39.68 RAD 8567.6 VEL 11.720 PTH 2.06 VHP 5.344 DPA -6.71 RAP 25.02 ECC 1.2628
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.42 21 14 18 4144.62 -30.24 185.41 269.54 59.16 22 23 22 3544.6 -34.08 177.53
122.58 4 24 17 2823.39 -30.23 84.11 269.53 59.15 5 11 21 2223.4 -34.07 76.24
57.42 21 14 18 4144.62 -30.24 185.41 269.54 59.16 22 23 22 3544.6 -34.08 177.53
122.58 4 24 17 2823.39 -30.23 84.11 269.53 59.15 5 11 21 2223.4 -34.07 76.24
57.42 21 14 18 4144.62 -30.24 185.41 269.54 59.16 22 23 22 3544.6 -34.08 177.53
122.58 4 24 17 2823.39 -30.23 84.11 269.53 59.15 5 11 21 2223.4 -34.07 76.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3547 TRA 1.7284 TC3-4.3066 BAU .9197 SGT 5865.7 SCR 656.9 SG3 460.5 ST 3523.4 SR 596.0 SS 1346.5
RDE 1.4117 RRA .1419 RC3 -.1104 FAU .05786 RRT .8339 RRF .8172 RTF .9783 CRT .9885 CR3 -.9635 CST -.9927
FDE 1.6650 FRA 2.0017 FC3-3.1369 BSP 18918 SGB 5902.4 R23 -.0030 R13 .9783 LSA 5814.4 MSA 180.2 SSA 14.2
BDE 2.3905 BRA 1.7342 BC3 4.3080 FSP -1603 SGI 5891.3 SG2 360.9 THA 5.36 EL1 3572.3 EL2 89.0 ALF 9.50

LAUNCH DATE JAN 8 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 541.363

RL 147.10 LAL -.00 LOL 107.54 VL 27.369 GAL 4.58 AZL 86.53 HCA 252.17 SMA 125.76 ECC .18709 INC 3.4705 V1 30.286
RP 108.69 LAP -3.30 LOP 359.88 VP 37.239 GAP 7.47 AZP 91.06 TAL 159.30 TAP 51.48 RCA 102.23 APO 149.29 V2 34.865
RC 142.207 GL 23.88 GP -12.36 ZAL 58.33 ZAP 154.82 ETS 334.26 ZAE 128.44 ETE 188.99 ZAC 118.25 ETC 172.37 CLP-157.88

PLANETOCENTRIC CONIC

C3 16.642 VHL 4.080 DLA 41.33 RAL 42.28 RAD 8567.7 VEL 11.748 PTH 2.07 VHP 5.545 DPA -5.38 RAP 26.18 ECC 1.2739
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.54 21 29 31 4140.81 -29.40 184.51 272.44 59.54 22 38 31 3540.8 -33.21 176.68
121.46 4 29 52 2846.06 -29.39 85.52 272.43 59.53 5 17 18 2246.1 -33.20 77.69
58.54 21 29 31 4140.81 -29.40 184.51 272.44 59.54 22 38 31 3540.8 -33.21 176.68
121.46 4 29 52 2846.06 -29.39 85.52 272.43 59.53 5 17 18 2246.1 -33.20 77.69
58.54 21 29 31 4140.81 -29.40 184.51 272.44 59.54 22 38 31 3540.8 -33.21 176.68
121.46 4 29 52 2846.06 -29.39 85.52 272.43 59.53 5 17 18 2246.1 -33.20 77.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3194 TRA 1.9282 TC3-4.2061 BAU .9360 SGT 5949.2 SCR 635.5 SG3 433.0 ST 3434.0 SR 578.3 SS 1262.8
RDE 1.4078 RRA .1424 RC3 -.0855 FAU .05331 RRT .8108 RRF .7938 RTF .9783 CRT .9831 CR3 -.9529 CST -.9922
FDE 1.8926 FRA 2.0248 FC3-2.7730 BSP 19244 SGB 5985.0 R23 -.0043 R13 .9783 LSA 5699.5 MSA 185.6 SSA 14.4
BDE 2.3549 BRA 1.9334 BC3 4.2070 FSP -1512 SGI 5971.5 SG2 370.6 THA 4.97 EL1 3480.8 EL2 104.4 ALF 9.41

LAUNCH DATE JAN 8 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 547.200

RL 147.10 LAL -.00 LOL 107.54 VL 27.344 GAL 4.94 AZL 86.64 HCA 255.35 SMA 125.59 ECC .19110 INC 3.3650 V1 30.286
RP 108.86 LAP -3.26 LOP 357.22 VP 37.229 GAP 7.86 AZP 90.85 TAL 158.17 TAP 53.52 RCA 101.59 APO 149.60 V2 34.875
RC 144.478 GL 22.51 GP -11.69 ZAL 56.44 ZAP 156.40 ETS 333.83 ZAE 128.05 ETE 188.33 ZAC 119.78 ETC 172.28 CLP-159.36

PLANETOCENTRIC CONIC

C3 17.437 VHL 4.176 DLA 40.52 RAL 44.83 RAD 8567.7 VEL 11.782 PTH 2.08 VHP 5.756 DPA -4.11 RAP 27.44 ECC 1.2870
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.71 21 44 48 4137.29 -28.52 183.82 275.37 59.90 22 53 46 3537.3 -32.29 175.85
120.29 4 34 54 2871.09 -28.51 87.08 275.36 59.89 5 22 45 2271.1 -32.28 79.31
59.71 21 44 48 4137.29 -28.52 183.82 275.37 59.90 22 53 46 3537.3 -32.29 175.85
120.29 4 34 54 2871.09 -28.51 87.08 275.36 59.89 5 22 45 2271.1 -32.28 79.31
59.71 21 44 48 4137.29 -28.52 183.82 275.37 59.90 22 53 46 3537.3 -32.29 175.85
120.29 4 34 54 2871.09 -28.51 87.08 275.36 59.89 5 22 45 2271.1 -32.28 79.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2811 TRA 2.1402 TC3-4.0771 BAU .9506 SGT 6028.2 SCR 618.5 SG3 407.1 ST 3339.1 SR 563.9 SS 1184.7
RDE 1.4070 RRA .1441 RC3 -.0657 FAU .04898 RRT .7887 RRF .7718 RTF .9783 CRT .9764 CR3 -.9408 CST -.9917
FDE 1.5363 FRA 2.0456 FC3-2.4320 BSP 19539 SGB 6057.8 R23 -.0047 R13 .9783 LSA 5582.5 MSA 192.1 SSA 14.6
BDE 2.3171 BRA 2.1450 BC3 4.0776 FSP -1426 SGI 6046.0 SG2 379.0 THA 4.65 EL1 3384.3 EL2 120.0 ALF 9.37

LAUNCH DATE JAN 8 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 553.006

RL 147.10 LAL -.00 LOL 107.54 VL 27.318 GAL 5.31 AZL 86.74 HCA 258.52 SMA 125.43 ECC .19542 INC 3.2624 V1 30.286
RP 108.83 LAP -3.20 LOP 358.05 VP 37.220 GAP 8.26 AZP 90.85 TAL 157.03 TAP 55.55 RCA 100.92 APO 149.94 V2 34.885
RC 146.734 GL 21.17 GP -11.09 ZAL 54.56 ZAP 157.91 ETS 333.30 ZAE 127.68 ETE 187.76 ZAC 121.37 ETC 172.19 CLP-160.78

PLANETOCENTRIC CONIC

C3 18.365 VHL 4.285 DLA 39.71 RAL 47.32 RAD 8567.7 VEL 11.821 PTH 2.09 VHP 5.978 DPA -2.87 RAP 28.79 ECC 1.3022
LNCH AZMTH LNCH TIME L-1 TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.91 22 0 12 4133.92 -27.60 182.73 278.32 60.23 23 9 6 3533.9 -31.33 175.02
119.09 4 39 20 2898.61 -27.59 88.81 278.32 60.22 5 27 39 2298.6 -31.32 81.10
80.91 22 0 12 4133.92 -27.60 182.73 278.32 60.23 23 9 6 3533.9 -31.33 175.02
119.09 4 39 20 2898.61 -27.59 88.81 278.32 60.22 5 27 39 2298.6 -31.32 81.10
80.91 22 0 12 4133.92 -27.60 182.73 278.32 60.23 23 9 6 3533.9 -31.33 175.02
119.09 4 39 20 2898.61 -27.59 88.81 278.32 60.22 5 27 39 2298.6 -31.32 81.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2427 TRA 2.3674 TC3-3.9166 BAU .9617 SGT 6098.3 SCR 605.4 SG3 383.1 ST 3244.2 SR 552.1 SS 1114.2
RDE 1.4089 RRA .1476 RC3 -.0495 FAU .04472 RRT .7685 RRF .7523 RTF .9781 CRT .9683 CR3 -.9271 CST -.9912
FDE 1.5970 FRA 2.0672 FC3-2.1082 BSP 19729 SGB 6128.3 R23 -.0038 R13 .9781 LSA 5468.5 MSA 199.7 SSA 14.6
BDE 2.2797 BRA 2.3720 BC3 3.9169 FSP -1337 SGI 6116.1 SG2 386.2 THA 4.38 EL1 3288.0 EL2 136.0 ALF 9.37

LAUNCH DATE JAN 8 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 558.778

RL 147.10 LAL -.00 LOL 107.54 VL 27.292 GAL 5.71 AZL 86.84 HCA 261.70 SMA 125.26 ECC .20007 INC 3.1620 V1 30.286  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.212 GAP 8.67 AZP 90.46 TAL 155.87 TAP 57.58 RCA 100.20 APO 150.32 V2 34.897  
 RC 148.977 GL 19.86 GP -10.55 ZAL 52.69 ZAP 159.34 ETS 332.65 ZAE 127.35 ETE 187.27 ZAC 123.03 ETC 172.08 CLP-162.14

PLANETOCENTRIC CONIC

C3 19.441 VHL 4.409 DLA 38.89 RAL 49.73 RAD 6567.8 VEL 11.867 PTH 2.11 VHP 6.211 DPA -1.68 RAP 30.22 ECC 1.3199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.15 22 15 41 4130.69 -26.63 181.84 281.30 60.55 23 24 31 3530.7 -30.34 174.19  
 117.85 4 43 8 2928.64 -26.62 90.71 281.30 60.54 5 31 57 2328.6 -30.33 83.06  
 62.15 22 15 41 4130.69 -26.63 181.84 281.30 60.55 23 24 31 3530.7 -30.34 174.19  
 117.85 4 43 8 2928.64 -26.62 90.71 281.30 60.54 5 31 57 2328.6 -30.33 83.06  
 62.15 22 15 41 4130.69 -26.63 181.84 281.30 60.55 23 24 31 3530.7 -30.34 174.19  
 117.85 4 43 8 2928.64 -26.62 90.71 281.30 60.54 5 31 57 2328.6 -30.33 83.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1969 TRA 2.6035 TC3-3.7461 BAU .9737 SGT 6160.8 SGR 594.0 SG3 360.3 ST 3140.1 SR 541.4 SS 1046.0  
 RDE .4125 RRA .1520 RC3 -.0382 FAU .04094 RRT .7500 RRF .7343 RTF .9780 CRT .9586 CRS -.9112 CST -.9907  
 FDE 1.2663 FRA 2.0831 FC3-1.8231 BSP 20006 SGB 6189.4 R23 -.0033 R13 .9780 LSA 3347.2 MSA 208.5 SSA 14.6  
 BDE 2.2355 BRA 2.6079 BC3 3.7462 FSP -1263 SG1 6177.0 SG2 391.9 THA 4.15 EL1 3182.8 EL2 152.1 ALF 9.41

LAUNCH DATE JAN 8 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 564.513

RL 147.10 LAL -.00 LOL 107.54 VL 27.285 GAL 6.14 AZL 86.94 HCA 264.88 SMA 125.09 ECC .20508 INC 3.0632 V1 30.286  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.203 GAP 9.10 AZP 90.27 TAL 154.71 TAP 59.59 RCA 99.43 APO 150.74 V2 34.908  
 RC 151.204 GL 18.57 GP -10.07 ZAL 50.85 ZAP 180.71 ETS 331.86 ZAE 127.03 ETE 186.84 ZAC 124.75 ETC 171.95 CLP-163.46

PLANETOCENTRIC CONIC

C3 20.681 VHL 4.548 DLA 38.06 RAL 52.07 RAD 6567.8 VEL 11.919 PTH 2.12 VHP 6.457 DPA -.52 RAP 31.72 ECC 1.3404  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.43 22 31 16 4127.38 -25.63 180.94 284.30 60.84 23 40 4 3527.4 -29.31 173.35  
 116.57 4 46 13 2961.41 -25.62 92.80 284.29 60.83 5 35 35 2361.4 -29.30 85.21  
 63.43 22 31 16 4127.38 -25.63 180.94 284.30 60.84 23 40 4 3527.4 -29.31 173.35  
 116.57 4 46 13 2961.41 -25.62 92.80 284.29 60.83 5 35 35 2361.4 -29.30 85.21  
 63.43 22 31 16 4127.38 -25.63 180.94 284.30 60.84 23 40 4 3527.4 -29.31 173.35  
 116.57 4 46 13 2961.41 -25.62 92.80 284.29 60.83 5 35 35 2361.4 -29.30 85.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1489 TRA 2.8559 TC3-3.5574 BAU .9836 SGT 6217.3 SGR 584.6 SG3 359.0 ST 3035.9 SR 531.8 SS 983.8  
 RDE .4178 RRA .1580 RC3 -.0298 FAU .03735 RRT .7338 RRF .7189 RTF .9779 CRT .9471 CRS -.8935 CST -.9902  
 FDE 1.1481 FRA 2.0988 FC3-1.5634 BSP 20255 SGB 6244.7 R23 -.0024 R13 .9779 LSA 3227.9 MSA 218.1 SSA 14.4  
 BDE 2.1892 BRA 2.8583 BC3 3.5575 FSP -1193 SG1 6232.1 SG2 396.2 THA 3.96 EL1 3077.5 EL2 168.4 ALF 9.45

LAUNCH DATE JAN 8 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 570.207

RL 147.10 LAL -.00 LOL 107.54 VL 27.239 GAL 8.59 AZL 87.03 HCA 268.07 SMA 124.92 ECC .21049 INC 2.9652 V1 30.286  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.195 GAP 9.56 AZP 90.10 TAL 153.54 TAP 61.61 RCA 98.62 APO 151.21 V2 34.920  
 RC 153.416 GL 17.32 GP -9.63 ZAL 49.04 ZAP 182.02 ETS 330.91 ZAE 126.74 ETE 186.46 ZAC 126.51 ETC 171.80 CLP-164.75

PLANETOCENTRIC CONIC

C3 22.107 VHL 4.702 DLA 37.23 RAL 54.34 RAD 6567.9 VEL 11.979 PTH 2.13 VHP 6.716 DPA .60 RAP 33.29 ECC 1.3638  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.75 22 47 1 4123.83 -24.60 180.02 287.31 61.13 23 55 45 3523.8 -28.25 172.48  
 115.25 4 48 31 2997.08 -24.58 95.08 287.30 61.12 5 38 28 2397.1 -28.24 87.55  
 64.75 22 47 1 4123.83 -24.60 180.02 287.31 61.13 23 55 45 3523.8 -28.25 172.48  
 115.25 4 48 31 2997.08 -24.58 95.08 287.30 61.12 5 38 28 2397.1 -28.24 87.55  
 64.75 22 47 1 4123.83 -24.60 180.02 287.31 61.13 23 55 45 3523.8 -28.25 172.48  
 115.25 4 48 31 2997.08 -24.58 95.08 287.30 61.12 5 38 28 2397.1 -28.24 87.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0984 TRA 3.1191 TC3-3.3547 BAU .9915 SGT 6267.3 SGR 576.4 SG3 319.1 ST 2932.3 SR 522.9 SS 927.0  
 RDE .4246 RRA .1654 RC3 -.0236 FAU .03396 RRT .7201 RRF .7059 RTF .9778 CRT .9337 CRS -.8737 CST -.9898  
 FDE 1.0407 FRA 2.1141 FC3-1.3299 BSP 20479 SGB 6293.7 R23 -.0015 R13 .9778 LSA 3111.1 MSA 228.4 SSA 14.3  
 BDE 2.1409 BRA 3.1235 BC3 3.3548 FSP -1127 SG1 6281.1 SG2 399.1 THA 3.80 EL1 2972.9 EL2 184.6 ALF 9.49

LAUNCH DATE JAN 8 1969

FLIGHT TIME 204.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 575.855

RL 147.10 LAL -.00 LOL 107.54 VL 27.212 GAL 7.07 AZL 87.13 HCA 271.25 SMA 124.75 ECC .21633 INC 2.8676 V1 30.286  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.187 GAP 10.03 AZP 89.10 TAL 152.38 TAP 63.63 RCA 97.76 APO 151.73 V2 34.932  
 RC 155.612 GL 16.10 GP -9.23 ZAL 47.27 ZAP 163.28 ETS 329.77 ZAE 126.46 ETE 186.14 ZAC 128.31 ETC 171.62 CLP-165.99

PLANETOCENTRIC CONIC

C3 23.744 VHL 4.873 DLA 36.39 RAL 56.51 RAD 6568.0 VEL 12.047 PTH 2.15 VHP 6.990 DPA 1.69 RAP 34.91 ECC 1.3908  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.12 23 2 55 4119.95 -23.53 179.06 290.32 61.40 24 11 35 3519.9 -27.16 171.59  
 113.88 4 50 0 3035.73 -23.52 97.56 290.31 61.39 5 40 35 2435.7 -27.14 90.09  
 66.12 23 2 55 4119.95 -23.53 179.06 290.32 61.40 24 11 35 3519.9 -27.16 171.59  
 113.88 4 50 0 3035.73 -23.52 97.56 290.31 61.39 5 40 35 2435.7 -27.14 90.09  
 66.12 23 2 55 4119.95 -23.53 179.06 290.32 61.40 24 11 35 3519.9 -27.16 171.59  
 113.88 4 50 0 3035.73 -23.52 97.56 290.31 61.39 5 40 35 2435.7 -27.14 90.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0459 TRA 3.4005 TC3-3.1421 BAU .9974 SGT 6311.8 SGR 569.0 SG3 300.6 ST 2831.2 SR 514.2 SS 875.7  
 RDE .4325 RRA .1743 RC3 -.0192 FAU .03077 RRT .7087 RRF .6933 RTF .9777 CRT .9185 CRS -.8521 CST -.9895  
 FDE .9432 FRA 2.1298 FC3-1.1217 BSP 20683 SGB 6337.2 R23 -.0005 R13 .9777 LSA 2998.3 MSA 239.1 SSA 14.0  
 BDE 2.0911 BRA 3.4049 BC3 3.1421 FSP -1064 SG1 6324.5 SG2 400.6 THA 3.67 EL1 2870.6 EL2 200.6 ALF 9.52

LAUNCH DATE JAN 8 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 581.451

RL 147.10 LAL -.00 LOL 107.54 VL 27.185 GAL 7.59 AZL 87.23 HCA 274.44 SMA 124.58 ECC .22264 INC 2.7697 V1 30.286  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.179 GAP 10.52 AZP 89.79 TAL 151.21 TAP 65.65 RCA 96.84 APO 152.31 V2 34.945  
 RC 157.792 GL 14.91 GP -8.87 ZAL 45.54 ZAP 164.48 ETS 326.40 ZAE 126.20 ETE 185.85 ZAC 130.15 ETC 171.41 CLP-167.21

PLANETOCENTRIC CONIC

C3 25.621 VHL 5.062 DLA 35.56 RAL 58.61 RAD 6568.0 VEL 12.124 PTH 2.17 VHP 7.261 DPA 2.75 RAP 36.58 ECC 1.4217  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.53 23 19 2 4115.50 -22.44 178.06 293.34 61.66 24 27 38 3515.5 -26.04 170.64  
 112.47 4 50 34 3077.59 -22.42 100.26 293.33 61.65 5 41 52 2477.6 -26.03 92.85  
 67.53 23 19 2 4115.50 -22.44 178.06 293.34 61.66 24 27 38 3515.5 -26.04 170.64  
 112.47 4 50 34 3077.59 -22.42 100.26 293.33 61.65 5 41 52 2477.6 -26.03 92.85  
 67.53 23 19 2 4115.50 -22.44 178.06 293.34 61.66 24 27 38 3515.5 -26.04 170.64  
 112.47 4 50 34 3077.59 -22.42 100.26 293.33 61.65 5 41 52 2477.6 -26.03 92.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9953 TRA 3.7024 TC3-2.9171 BAU .9992 SGT 6353.0 SGR 562.5 SCS 283.5 ST 2738.1 SR 505.8 SS 831.4  
 RDE .4416 RRA .1850 RC3 -.0157 FAU .02764 RRT .7001 RRF .6877 RTF .9776 CRT .9014 CRS -.8293 CST -.9893  
 FDE .8573 FRA 2.1482 FC3 -.9339 BSP 20781 SGB 6377.8 R23 .0007 R13 .9776 LSA 2895.1 MSA 249.9 SSA 13.8  
 BOE 2.0436 BRA 3.7070 BC3 2.9171 FSP -1000 SGI 6365.2 SGT 400.9 THA 3.56 EL1 2776.1 EL2 216.1 ALF 9.51

LAUNCH DATE JAN 8 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 586.987

RL 147.10 LAL -.00 LOL 107.54 VL 27.158 GAL 8.14 AZL 87.33 HCA 277.63 SMA 124.41 ECC .22948 INC 2.6709 V1 30.286  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.171 GAP 11.05 AZP 89.65 TAL 150.05 TAP 67.68 RCA 95.86 APO 152.95 V2 34.957  
 RC 159.953 GL 13.75 GP -8.54 ZAL 43.86 ZAP 165.84 ETS 326.76 ZAE 125.95 ETE 185.60 ZAC 132.02 ETC 171.17 CLP-168.41

PLANETOCENTRIC CONIC

C3 27.773 VHL 5.270 DLA 34.73 RAL 60.61 RAD 6568.1 VEL 12.213 PTH 2.19 VHP 7.590 DPA 3.78 RAP 38.30 ECC 1.4571  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.00 23 35 25 4110.25 -21.31 177.00 296.37 61.91 24 43 56 3510.3 -24.90 169.64  
 111.00 4 50 11 3122.86 -21.30 103.20 296.36 61.91 5 42 14 2522.9 -24.89 95.84  
 69.00 23 35 25 4110.25 -21.31 177.00 296.37 61.91 24 43 56 3510.3 -24.90 169.64  
 111.00 4 50 11 3122.86 -21.30 103.20 296.36 61.91 5 42 14 2522.9 -24.89 95.84  
 69.00 23 35 25 4110.25 -21.31 177.00 296.37 61.91 24 43 56 3510.3 -24.90 169.64  
 111.00 4 50 11 3122.86 -21.30 103.20 296.36 61.91 5 42 14 2522.9 -24.89 95.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9385 TRA 4.0181 TC3-2.6953 BAU 1.0008 SGT 6384.6 SGR 555.5 SCS 267.4 ST 2644.1 SR 496.7 SS 789.9  
 RDE .4512 RRA .1968 RC3 -.0136 FAU .02483 RRT .6951 RRF .6813 RTF .9776 CRT .8820 CRS -.8042 CST -.9893  
 FDE .7786 FRA 2.1646 FC3 -.7741 BSP 20967 SGB 6408.7 R23 .0014 R13 .9776 LSA 2791.8 MSA 260.6 SSA 13.5  
 BOE 1.9903 BRA 4.0229 BC3 2.6954 FSP -946 SGI 6396.2 SGT 399.7 THA 3.46 EL1 2680.4 EL2 230.9 ALF 9.48

LAUNCH DATE JAN 8 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 592.455

RL 147.10 LAL -.00 LOL 107.54 VL 27.131 GAL 8.73 AZL 87.43 HCA 280.82 SMA 124.24 ECC .23690 INC 2.5705 V1 30.286  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.183 GAP 11.61 AZP 89.52 TAL 148.90 TAP 69.73 RCA 94.80 APO 153.67 V2 34.970  
 RC 162.097 GL 12.63 GP -8.24 ZAL 42.24 ZAP 166.75 ETS 324.79 ZAE 125.71 ETE 185.38 ZAC 133.92 ETC 170.88 CLP-169.59

PLANETOCENTRIC CONIC

C3 30.243 VHL 5.499 DLA 33.90 RAL 62.53 RAD 6568.2 VEL 12.313 PTH 2.22 VHP 7.919 DPA 4.77 RAP 40.06 ECC 1.4977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.54 23 52 12 4103.74 -20.18 175.84 299.39 62.17 25 0 36 3503.7 -23.74 168.53  
 109.46 4 48 41 3171.97 -20.16 106.39 299.38 62.16 5 41 33 2572.0 -23.73 99.08  
 70.54 23 52 12 4103.74 -20.18 175.84 299.39 62.17 25 0 36 3503.7 -23.74 168.53  
 109.46 4 48 41 3171.97 -20.16 106.39 299.38 62.16 5 41 33 2572.0 -23.73 99.08  
 110.00 5 25 25 3059.84 -23.47 99.44 301.17 64.40 6 16 25 2459.8 -26.71 91.78  
 110.00 4 18 35 3263.87 -18.94 111.67 297.50 59.86 5 12 59 2663.9 -20.82 104.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8811 TRA 4.3546 TC3-2.4718 BAU .9994 SGT 6411.6 SGR 548.5 SCS 252.4 ST 2556.7 SR 487.2 SS 753.8  
 RDE .4614 RRA .2102 RC3 -.0121 FAU .02215 RRT .6882 RRF .6770 RTF .9777 CRT .8606 CRS -.7780 CST -.9893  
 FDE .7039 FRA 2.1829 FC3 -.6342 BSP 21125 SGB 6435.0 R23 .0021 R13 .9777 LSA 2696.0 MSA 270.9 SSA 13.2  
 BOE 1.9369 BRA 4.3597 BC3 2.4718 FSP -895 SGI 6422.7 SGT 397.3 THA 3.38 EL1 2591.1 EL2 244.8 ALF 9.40

LAUNCH DATE JAN 8 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 597.845

RL 147.10 LAL -.00 LOL 107.54 VL 27.104 GAL 9.36 AZL 87.53 HCA 284.02 SMA 124.07 ECC .24497 INC 2.4878 V1 30.286  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.156 GAP 12.20 AZP 89.40 TAL 147.77 TAP 71.79 RCA 93.67 APO 154.46 V2 34.983  
 RC 164.221 GL 11.55 GP -7.96 ZAL 40.67 ZAP 167.82 ETS 322.42 ZAE 125.48 ETE 185.19 ZAC 135.83 ETC 170.56 CLP-170.75

PLANETOCENTRIC CONIC

C3 33.081 VHL 5.752 DLA 33.08 RAL 64.35 RAD 6568.3 VEL 12.428 PTH 2.25 VHP 8.271 DPA 5.74 RAP 41.86 ECC 1.5444  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.14 0 13 24 4095.61 -19.02 174.57 302.41 62.42 1 21 40 3495.6 -22.56 167.31  
 107.86 4 45 58 3225.22 -19.01 109.87 302.40 62.41 5 39 43 2625.2 -22.55 102.61  
 72.14 0 13 24 4095.61 -19.02 174.57 302.41 62.42 1 21 40 3495.6 -22.56 167.31  
 107.86 4 45 58 3225.22 -19.01 109.87 302.40 62.41 5 39 43 2625.2 -22.55 102.61  
 110.00 6 4 56 2982.89 -25.85 94.51 305.82 66.58 6 54 38 2382.7 -28.58 86.57  
 110.00 5 55 37 3388.14 -12.64 118.55 298.61 57.97 4 50 3 2786.1 -16.78 111.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8230 TRA 4.7129 TC3-2.2487 BAU .9945 SGT 6432.8 SGR 541.2 SCS 238.4 ST 2475.8 SR 477.1 SS 722.4  
 RDE .4721 RRA .2250 RC3 -.0108 FAU .01961 RRT .6851 RRF .6744 RTF .9779 CRT .8373 CRS -.7507 CST -.9896  
 FDE .6382 FRA 2.2031 FC3 -.5132 BSP 21263 SGB 6455.6 R23 .0026 R13 .9779 LSA 2607.7 MSA 280.2 SSA 12.9  
 BOE 1.8832 BRA 4.7182 BC3 2.2487 FSP -846 SGI 6443.6 SGT 393.6 THA 3.31 EL1 2508.1 EL2 257.5 ALF 9.26

LAUNCH DATE JAN 8 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 10 1969

MELIOCENTRIC CONIC

DISTANCE 603.144

RL 147.10 LAL -.00 LOL 107.54 VL 27.078 GAL 10.04 AZL 87.64 HCA 287.21 SMA 123.90 ECC .25376 INC 2.3622 V1 30.286  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.149 GAP 12.83 AZP 89.30 TAL 146.66 TAP 73.87 RCA 92.46 APO 153.34 V2 34.996  
 RC 166.326 GL 10.50 GP -7.71 ZAL 39.16 ZAP 168.83 ETS 319.54 ZAE 125.24 ETE 185.02 ZAC 137.76 ETC 170.18 CLP-171.90

PLANETOCENTRIC CONIC

C3 36.349 VHL 6.029 DLA 32.27 RAL 66.08 RAD 6568.4 VEL 12.559 PTH 2.28 VHP 8.648 DPA 6.67 RAP 43.69 ECC 1.5882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.84 0 31 21 4085.20 -17.85 173.13 305.43 62.67 1 39 26 3485.2 -21.37 165.92  
 106.16 4 41 51 3283.20 -17.84 113.68 305.42 62.66 5 36 34 2683.2 -21.36 106.47  
 73.84 0 31 21 4085.20 -17.85 173.13 305.43 62.67 1 39 26 3485.2 -21.37 165.92  
 106.16 4 41 51 3283.20 -17.84 113.68 305.42 62.66 5 36 34 2683.2 -21.36 106.47  
 110.00 6 32 27 2941.49 -26.73 91.80 309.84 67.86 7 21 28 2341.5 -29.49 83.70  
 110.00 3 39 55 3474.90 -9.39 123.35 300.37 56.98 4 37 50 2874.9 -13.67 116.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7680 TRA 5.0991 TC3-2.0248 BAU .9840 SGT 6451.9 SCR 535.8 SCS 225.5 ST 2405.1 SR 466.6 SS 696.6  
 RDE .4834 RRA .2416 RC3 -.0094 FAU .01709 RRT .6841 RRF .6740 RTF .9782 CRT .8127 CRS -.7237 CST -.9901  
 FDE .5809 FRA 2.2277 FC3 -.4071 BSP 21288 SGB 6474.0 R23 .0033 R13 .9782 LSA 2530.6 MSA 288.2 SSA 12.6  
 BDE 1.8329 BRA 5.1048 BC3 2.0249 FSP -796 SGI 6462.3 SGT 388.7 THA 3.25 EL1 2435.1 EL2 268.5 ALF 9.07

LAUNCH DATE JAN 8 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 12 1969

MELIOCENTRIC CONIC

DISTANCE 608.336

RL 147.10 LAL -.00 LOL 107.54 VL 27.051 GAL 10.77 AZL 87.75 HCA 290.41 SMA 123.73 ECC .26336 INC 2.2527 V1 30.286  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.142 GAP 13.51 AZP 89.21 TAL 145.57 TAP 75.98 RCA 91.14 APO 156.32 V2 35.010  
 RC 168.410 GL 9.49 GP -7.48 ZAL 37.72 ZAP 169.80 ETS 316.04 ZAE 125.00 ETE 184.86 ZAC 139.69 ETC 169.74 CLP-173.05

PLANETOCENTRIC CONIC

C3 40.123 VHL 6.334 DLA 31.47 RAL 67.72 RAD 6568.5 VEL 12.708 PTH 2.31 VHP 9.055 DPA 7.56 RAP 45.54 ECC 1.6803  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.67 0 50 18 4071.34 -16.68 171.44 308.43 62.92 1 58 9 3471.3 -20.17 164.28  
 104.33 4 35 58 3346.97 -16.66 117.89 308.42 62.91 5 31 45 2747.0 -20.16 110.72  
 75.67 0 50 18 4071.34 -16.68 171.44 308.43 62.92 1 58 9 3471.3 -20.17 164.28  
 104.33 4 35 58 3346.97 -16.66 117.89 308.42 62.91 5 31 45 2747.0 -20.16 110.72  
 110.00 6 55 13 2914.34 -27.42 89.99 313.62 68.74 7 43 48 2314.3 -30.05 81.79  
 110.00 3 30 13 3551.97 -6.50 127.45 302.36 56.37 4 29 25 2952.0 -10.88 121.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7083 TRA 5.5072 TC3-1.8114 BAU .9717 SGT 6462.5 SCR 525.3 SCS 213.4 ST 2337.2 SR 455.0 SS 673.6  
 RDE .4948 RRA .2593 RC3 -.0084 FAU .01480 RRT .6840 RRF .6742 RTF .9786 CRT .7862 CRS -.6956 CST -.9907  
 FDE .5271 FRA 2.2529 FC3 -.3194 BSP 21409 SGB 6483.8 R23 .0034 R13 .9786 LSA 2456.8 MSA 295.0 SSA 12.2  
 BDE 1.7785 BRA 5.5133 BC3 1.8114 FSP -754 SGI 6472.5 SGT 382.6 THA 3.19 EL1 2364.8 EL2 277.9 ALF 8.82

LAUNCH DATE JAN 8 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 14 1969

MELIOCENTRIC CONIC

DISTANCE 613.403

RL 147.10 LAL -.00 LOL 107.54 VL 27.025 GAL 11.56 AZL 87.86 HCA 293.61 SMA 123.57 ECC .27388 INC 2.1386 V1 30.286  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.133 GAP 14.24 AZP 89.14 TAL 144.52 TAP 78.13 RCA 89.72 APO 157.41 V2 35.023  
 RC 170.474 GL 8.58 GP -7.28 ZAL 36.35 ZAP 170.70 ETS 311.74 ZAE 124.75 ETE 184.72 ZAC 141.62 ETC 169.24 CLP-174.20

PLANETOCENTRIC CONIC

C3 44.493 VHL 6.670 DLA 30.68 RAL 69.27 RAD 6568.7 VEL 12.879 PTH 2.35 VHP 9.495 DPA 8.43 RAP 47.42 ECC 1.7322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.67 1 10 41 4052.51 -15.50 169.40 311.42 63.19 2 18 14 3452.5 -18.97 162.27  
 102.33 4 27 54 3417.94 -15.48 122.61 311.42 63.18 5 24 52 2817.9 -18.96 115.48  
 77.67 1 10 41 4052.51 -15.50 169.40 311.42 63.19 2 18 14 3452.5 -18.97 162.27  
 102.33 4 27 54 3417.94 -15.48 122.61 311.42 63.18 5 24 52 2817.9 -18.96 115.48  
 110.00 7 15 5 2895.68 -27.87 88.73 317.26 69.36 8 3 20 2295.7 -30.42 80.46  
 110.00 3 22 41 3622.76 -3.82 131.18 304.49 56.01 4 23 4 3022.8 -8.26 124.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8488 TRA 5.9444 TC3-1.6042 BAU .9542 SGT 6467.9 SCR 516.1 SCS 202.1 ST 2276.5 SR 442.6 SS 654.6  
 RDE .5060 RRA .2784 RC3 -.0072 FAU .01260 RRT .6852 RRF .6758 RTF .9792 CRT .7585 CRS -.6677 CST -.9914  
 FDE .4788 FRA 2.2816 FC3 -.2432 BSP 21508 SGB 6488.4 R23 .0035 R13 .9792 LSA 2390.9 MSA 300.1 SSA 11.9  
 BDE 1.7247 BRA 5.9509 BC3 1.6042 FSP -715 SGI 6477.6 SGT 375.3 THA 3.14 EL1 2301.5 EL2 285.3 ALF 8.52

LAUNCH DATE JAN 8 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 16 1969

MELIOCENTRIC CONIC

DISTANCE 618.321

RL 147.10 LAL -.00 LOL 107.54 VL 26.998 GAL 12.42 AZL 87.98 HCA 296.82 SMA 123.40 ECC .28542 INC 2.0186 V1 30.286  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.129 GAP 15.03 AZP 89.09 TAL 143.51 TAP 80.32 RCA 88.18 APO 158.63 V2 35.036  
 RC 172.518 GL 7.58 GP -7.08 ZAL 35.05 ZAP 171.53 ETS 306.45 ZAE 124.49 ETE 184.60 ZAC 143.55 ETC 168.66 CLP-175.35

PLANETOCENTRIC CONIC

C3 49.575 VHL 7.041 DLA 29.91 RAL 70.71 RAD 6568.8 VEL 13.074 PTH 2.39 VHP 9.975 DPA 9.26 RAP 49.31 ECC 1.8159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.96 1 33 29 4025.50 -14.32 168.77 314.39 63.46 2 40 34 3425.5 -17.76 159.68  
 100.04 4 18 40 3499.15 -14.30 128.06 314.39 63.45 5 14 59 2899.1 -17.75 120.96  
 79.96 1 33 29 4025.50 -14.32 168.77 314.39 63.46 2 40 34 3425.5 -17.76 159.68  
 100.04 4 18 40 3499.15 -14.30 128.06 314.39 63.45 5 14 59 2899.1 -17.75 120.96  
 110.00 7 32 49 2883.07 -28.17 87.87 320.80 69.78 8 20 52 2283.1 -30.66 79.55  
 110.00 3 16 30 3689.57 -1.27 134.67 306.71 55.84 4 17 59 3089.6 -5.74 128.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5895 TRA 6.4142 TC3-1.4046 BAU .9309 SGT 6468.5 SCR 506.0 SCS 191.5 ST 2222.5 SR 429.4 SS 639.4  
 RDE .5174 RRA .2988 RC3 -.0059 FAU .01047 RRT .6875 RRF .6784 RTF .9800 CRT .7300 CRS -.6405 CST -.9923  
 FDE .4354 FRA 2.3147 FC3 -.1829 BSP 21591 SGB 6488.3 R23 .0034 R13 .9800 LSA 2332.5 MSA 303.2 SSA 11.5  
 BDE 1.6718 BRA 6.4212 BC3 1.4046 FSP -677 SGI 6477.9 SGT 366.9 THA 3.09 EL1 2244.9 EL2 290.5 ALF 8.17

LAUNCH DATE JAN 9 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 20 1969

HELIOCENTRIC CONIC

DISTANCE 152.019

RL 147.11 LAL .00 LOL 108.56 VL 21.269 GAL 8.44 AZL 86.01 HCA 58.35 SMA 98.17 ECC .51453 INC 3.9881 V1 30.285  
 RP 107.61 LAP 3.39 LOP 166.84 VP 33.386 GAP -30.52 AZP 87.90 TAL 171.87 TAP 230.21 RCA 47.66 APO 148.68 V2 35.215  
 RC 90.116 GL 8.50 GP 3.33 ZAL 71.94 ZAP 21.00 ETS 189.95 ZAE 159.54 ETE 200.84 ZAC 100.95 ETC 166.04 CLP 20.74

PLANETOCENTRIC CONIC

C3 97.986 VHL 9.899 DLA 21.81 RAL 31.49 RAD 6569.9 VEL 14.810 PTH 2.68 VHP 18.308 DPA 3.15 RAP 6.87 ECC 2.6126  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 2 27 3357.69 -23.52 121.37 289.69 73.75 3 58 25 2757.7 -25.52 113.47  
 90.00 21 23 0 4487.47 9.18 188.16 276.89 63.09 22 37 47 3887.5 5.50 181.41  
 100.00 4 39 7 3046.02 -25.74 99.34 290.39 74.25 5 29 53 2446.0 -27.65 91.06  
 100.00 22 29 1 4274.38 11.23 171.42 275.81 62.12 23 40 16 3674.4 7.41 164.71  
 110.00 6 19 10 2732.50 -31.25 77.23 292.09 75.38 7 4 52 2132.5 -32.94 68.42  
 110.00 23 5 18 4160.66 16.22 159.93 272.84 59.49 24 14 39 3560.7 12.05 153.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4567 TRA-1.2274 TC3 -.0848 BAU .1178 SGT 826.8 SCR 436.9 SCS 40.3 ST 350.1 SR 415.4 SS 317.1  
 RDE -.7148 RRA .2049 RC3 -.0300 FAU .01584 RRT .0598 RRF -.0826 RTF -.6589 CRT .6913 CRS .8159 CST .9800  
 FDE .2999 FRA .5345 FC3 -.1400 BSP 2281 SGB 935.1 R23 -.0083 R13 -.6593 LSA 587.9 MSA 223.5 SSA 13.7  
 BDE .8481 BRA 1.2444 BC3 .0899 FSP -87 SGI 827.3 SGT 435.9 THA 2.50 EL1 501.2 EL2 209.7 ALF 51.97

LAUNCH DATE JAN 9 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC

DISTANCE 158.383

RL 147.11 LAL .00 LOL 108.56 VL 21.796 GAL 8.05 AZL 86.15 HCA 61.58 SMA 99.84 ECC .48919 INC 3.8518 V1 30.285  
 RP 107.64 LAP 3.39 LOP 170.09 VP 33.716 GAP -28.97 AZP 88.16 TAL 171.42 TAP 233.00 RCA 51.00 APO 148.69 V2 35.207  
 RC 48.721 GL 8.91 GP 3.47 ZAL 71.33 ZAP 19.47 ETS 191.18 ZAE 161.26 ETE 202.89 ZAC 102.52 ETC 165.91 CLP 19.17

PLANETOCENTRIC CONIC

C3 87.679 VHL 9.364 DLA 22.40 RAL 31.99 RAD 6569.7 VEL 14.458 PTH 2.63 VHP 17.481 DPA 3.96 RAP 8.33 ECC 2.4430  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 56 33 3361.55 -23.44 121.83 288.49 73.64 3 52 35 2761.6 -25.46 113.74  
 90.00 21 32 49 4434.89 7.55 185.16 276.13 62.63 22 46 44 3834.9 3.82 178.46  
 100.00 4 34 14 3046.99 -25.73 99.38 289.21 74.23 5 23 1 2446.6 -27.64 91.10  
 100.00 22 37 49 4225.08 9.65 168.82 275.01 61.57 23 48 15 3625.1 5.78 161.97  
 110.00 8 16 11 2727.67 -31.33 78.88 290.93 75.58 7 1 38 2127.7 -32.99 68.05  
 110.00 23 12 22 4116.77 14.68 157.45 272.06 58.78 24 20 59 3516.8 10.44 150.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4561 TRA-1.2153 TC3 -.0826 BAU .1040 SGT 865.3 SCR 440.5 SCS 44.1 ST 369.0 SR 419.8 SS 333.1  
 RDE -.8834 RRA .1881 RC3 -.0325 FAU .01634 RRT .0682 RRF -.0718 RTF -.6790 CRT .6953 CRS .8193 CST .9800  
 FDE .3123 FRA .5514 FC3 -.1614 BSP 2440 SGB 971.0 R23 -.0094 R13 -.6794 LSA 609.1 MSA 228.3 SSA 13.9  
 BDE .8216 BRA 1.2297 BC3 .0887 FSP -98 SGI 866.0 SGT 439.2 THA 2.68 EL1 515.5 EL2 216.0 ALF 50.28

LAUNCH DATE JAN 9 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC

DISTANCE 164.806

RL 147.11 LAL .00 LOL 108.56 VL 22.285 GAL 7.65 AZL 86.28 HCA 64.82 SMA 101.49 ECC .46496 INC 3.7237 V1 30.285  
 RP 107.66 LAP 3.37 LOP 173.33 VP 34.025 GAP -27.50 AZP 88.41 TAL 171.01 TAP 235.83 RCA 54.30 APO 148.68 V2 35.198  
 RC 47.437 GL 9.32 GP 3.61 ZAL 70.81 ZAP 17.96 ETS 192.63 ZAE 163.13 ETE 205.45 ZAC 104.09 ETC 165.76 CLP 17.60

PLANETOCENTRIC CONIC

C3 78.511 VHL 8.881 DLA 22.98 RAL 32.39 RAD 6569.5 VEL 14.137 PTH 2.58 VHP 16.686 DPA 4.78 RAP 9.79 ECC 2.2921  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 50 17 3364.61 -23.38 122.03 287.14 73.56 3 46 22 2764.6 -25.41 113.95  
 90.00 21 42 20 4381.78 5.87 182.15 275.29 62.25 22 55 22 3781.8 2.11 175.49  
 100.00 4 29 4 3046.13 -25.74 99.35 287.88 74.25 5 19 50 2446.1 -27.65 91.07  
 100.00 22 46 14 4175.49 8.03 165.82 274.12 61.11 23 55 50 3575.5 4.11 159.22  
 110.00 6 12 47 2721.62 -31.43 76.44 289.82 75.82 6 58 9 2121.6 -33.06 67.59  
 110.00 23 19 0 4072.77 13.12 155.01 271.09 58.15 24 26 53 3472.8 8.81 148.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4584 TRA-1.2044 TC3 -.0795 BAU .0911 SGT 907.3 SCR 443.4 SCS 48.3 ST 390.2 SR 423.7 SS 349.9  
 RDE -.8529 RRA .1719 RC3 -.0349 FAU .01689 RRT .0789 RRF -.0822 RTF -.6974 CRT .7013 CRS .8232 CST .9804  
 FDE .3261 FRA .5687 FC3 -.1862 BSP 2553 SGB 1009.9 R23 -.0101 R13 -.6978 LSA 632.5 MSA 232.5 SSA 14.2  
 BDE .7977 BRA 1.2166 BC3 .0868 FSP -109 SGI 908.2 SGT 441.6 THA 2.89 EL1 531.7 EL2 221.7 ALF 48.35

LAUNCH DATE JAN 9 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC

DISTANCE 171.281

RL 147.11 LAL .00 LOL 108.56 VL 22.739 GAL 7.25 AZL 86.40 HCA 68.05 SMA 103.10 ECC .44185 INC 3.6023 V1 30.285  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.315 GAP -26.11 AZP 88.65 TAL 170.65 TAP 238.70 RCA 57.55 APO 148.66 V2 35.189  
 RC 48.274 GL 9.73 GP 3.77 ZAL 70.37 ZAP 16.47 ETS 194.37 ZAE 165.14 ETE 208.77 ZAC 105.66 ETC 165.58 CLP 16.05

PLANETOCENTRIC CONIC

C3 70.349 VHL 8.387 DLA 23.52 RAL 32.71 RAD 6569.4 VEL 13.846 PTH 2.53 VHP 15.922 DPA 5.62 RAP 11.26 ECC 2.1578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 43 40 3366.91 -23.34 122.19 285.64 73.49 3 39 47 2766.9 -25.38 114.11  
 90.00 21 51 30 4328.29 4.17 179.15 274.36 61.97 23 3 38 3728.3 .39 172.51  
 100.00 4 23 37 3044.65 -25.76 99.25 286.41 74.29 5 14 21 2444.7 -27.67 90.97  
 100.00 22 54 14 4125.78 6.38 163.05 273.14 60.74 24 3 0 3523.8 2.44 156.49  
 110.00 6 9 11 2714.37 -31.55 75.91 288.15 76.11 6 54 25 2114.4 -33.14 67.04  
 110.00 23 25 10 4028.82 11.53 152.60 270.04 57.59 24 32 18 3428.8 7.17 146.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4595 TRA-1.1908 TC3 -.0731 BAU .0772 SGT 948.9 SCR 445.7 SCS 52.9 ST 411.5 SR 427.1 SS 367.4  
 RDE -.8231 RRA .1562 RC3 -.0373 FAU .01750 RRT .0899 RRF -.0937 RTF -.7156 CRT .7073 CRS .8274 CST .9807  
 FDE .3403 FRA .5859 FC3 -.2153 BSP 2719 SGB 1048.3 R23 -.0114 R13 -.7161 LSA 656.4 MSA 235.9 SSA 14.4  
 BDE .7742 BRA 1.2008 BC3 .0821 FSP -121 SGI 950.0 SGT 443.4 THA 3.09 EL1 548.0 EL2 226.7 ALF 46.50



LAUNCH DATE JAN 9 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

DISTANCE 177.804

RL 147.11 LAL .00 LOL 108.56 VL 23.161 GAL 6.86 AZL 86.51 HCA 71.29 SMA 104.67 ECC .41985 INC 3.4863 V1 30.285  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.585 GAP -24.77 AZP 88.88 TAL 170.33 TAP 241.62 RCA 60.73 APO 148.62 V2 35.179  
 RC 45.244 GL 10.14 GP 3.94 ZAL 70.03 ZAP 15.04 ETS 196.48 ZAE 167.24 ETE 213.25 ZAC 107.23 ETC 165.37 CLP 14.50

PLANETOCENTRIC CONIC

C3 63.080 VHL 7.942 DLA 24.03 RAL 32.94 RAD 6569.2 VEL 13.581 PTH 2.48 VHP 15.189 DPA 6.48 RAP 12.72 ECC 2.0381  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 41 3368.49 -23.31 122.29 284.00 73.45 3 32 50 2768.5 -25.36 114.22  
 90.00 22 0 18 4274.61 2.45 176.14 273.34 61.78 23 11 33 3674.6 -1.35 169.51  
 100.00 4 17 54 3042.17 -25.81 99.08 284.79 74.37 5 8 36 2442.2 -27.70 90.79  
 100.00 23 1 47 4076.16 4.72 160.30 272.08 60.45 24 9 43 3476.2 .75 153.76  
 110.00 6 5 21 2705.97 -31.69 75.29 286.54 76.46 6 50 27 2106.0 -33.23 66.40  
 110.00 23 30 48 3985.13 9.92 150.23 268.90 57.12 24 37 13 3385.1 5.52 143.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4610 TRA-1.1759 TC3 -.0638 BAU .0633 SGT 991.8 SGR 447.2 S63 57.9 ST 433.9 SR 429.9 SS 385.6  
 RDE -.5941 RRA .1412 RC3 -.0394 FAU .01818 RRT .1021 RRF -.1066 RTF -.7332 CRT .7142 CRS .8321 CST .9811  
 FDE .3555 FRA .6032 FC3 -.2495 BSP 2889 SGB 1088.0 R23 -.0131 R13 -.7337 LSA 681.7 MSA 238.5 SSA 14.6  
 BDE .7520 BRA 1.1844 BC3 .0750 FSP -135 S61 993.1 S62 444.3 THA 3.30 EL1 565.5 EL2 230.9 ALF 44.63

LAUNCH DATE JAN 9 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 184.370

RL 147.11 LAL .00 LOL 108.56 VL 23.551 GAL 6.47 AZL 86.63 HCA 74.52 SMA 106.20 ECC .39897 INC 3.3748 V1 30.285  
 RP 107.75 LAP 3.25 LOP 183.05 VP 34.838 GAP -23.50 AZP 89.10 TAL 170.06 TAP 244.58 RCA 63.83 APO 148.58 V2 35.169  
 RC 44.357 GL 10.55 GP 4.14 ZAL 69.77 ZAP 13.58 ETS 199.09 ZAE 169.39 ETE 219.67 ZAC 108.79 ETC 165.13 CLP 12.95

PLANETOCENTRIC CONIC

C3 56.605 VHL 7.524 DLA 24.51 RAL 33.08 RAD 6569.0 VEL 13.340 PTH 2.44 VHP 14.483 DPA 7.35 RAP 14.18 ECC 1.9316  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 24 3369.34 -23.29 122.35 282.24 73.42 3 25 33 2769.3 -25.34 114.28  
 90.00 22 8 41 4220.99 .72 173.15 272.22 61.69 23 19 2 3621.0 -3.07 166.52  
 100.00 4 11 58 3038.66 -25.87 98.84 283.05 74.48 5 2 37 2438.7 -27.75 90.54  
 100.00 23 8 48 4026.91 3.07 157.59 270.92 60.25 24 15 55 3426.9 -.92 151.06  
 110.00 6 1 22 2896.41 -31.84 74.58 284.79 76.85 6 46 18 2096.4 -33.32 65.67  
 110.00 23 35 54 3941.93 8.32 147.92 267.69 56.72 24 41 36 3341.9 3.88 141.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4634 TRA-1.1601 TC3 -.0514 BAU .0498 SGT 1036.0 SGR 448.2 S63 63.5 ST 457.6 SR 432.2 SS 404.8  
 RDE -.5860 RRA .1267 RC3 -.0411 FAU .01893 RRT .1161 RRF -.1213 RTF -.7498 CRT .7223 CRS .8372 CST .9816  
 FDE .3718 FRA .6209 FC3 -.2895 BSP 3061 SGB 1128.8 R23 -.0147 R13 -.7505 LSA 708.6 MSA 240.3 SSA 14.8  
 BDE .7315 BRA 1.1670 BC3 .0658 FSP -150 S61 1037.6 S62 444.5 THA 3.52 EL1 584.3 EL2 234.1 ALF 42.74

LAUNCH DATE JAN 9 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 190.972

RL 147.11 LAL .00 LOL 108.56 VL 23.914 GAL 6.09 AZL 86.73 HCA 77.74 SMA 107.69 ECC .37919 INC 3.2667 V1 30.285  
 RP 107.79 LAP 3.19 LOP 186.28 VP 35.073 GAP -22.28 AZP 89.31 TAL 169.84 TAP 247.59 RCA 66.85 APO 148.52 V2 35.158  
 RC 43.623 GL 10.96 GP 4.35 ZAL 69.81 ZAP 12.19 ETS 202.36 ZAE 171.48 ETE 229.50 ZAC 110.33 ETC 164.84 CLP 11.40

PLANETOCENTRIC CONIC

C3 50.837 VHL 7.130 DLA 24.96 RAL 33.13 RAD 6568.9 VEL 13.122 PTH 2.40 VHP 13.805 DPA 8.23 RAP 15.63 ECC 1.8366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 52 3369.39 -23.29 122.35 280.35 73.42 3 18 1 2769.4 -25.34 114.28  
 90.00 22 16 35 4167.78 -1.00 170.18 271.02 61.70 23 26 3 3567.8 -4.78 163.54  
 100.00 4 5 53 3034.05 -25.96 98.52 281.19 74.63 4 56 27 2434.1 -27.81 90.21  
 100.00 23 15 18 3978.35 1.42 154.92 269.67 60.14 24 21 34 3378.4 -2.56 148.40  
 110.00 5 57 13 2685.69 -32.00 73.79 282.92 77.29 6 41 59 2085.7 -33.42 64.85  
 110.00 23 40 24 3899.48 6.72 145.66 266.38 56.41 24 45 24 3299.5 2.26 139.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4663 TRA-1.1431 TC3 -.0349 BAU .0373 SGT 1081.4 SGR 448.5 S63 69.6 ST 482.5 SR 434.0 SS 424.9  
 RDE -.5388 RRA .1129 RC3 -.0423 FAU .01977 RRT .1317 RRF -.1378 RTF -.7657 CRT .7312 CRS .8428 CST .9822  
 FDE .3892 FRA .6388 FC3 -.3366 BSP 3244 SGB 1170.7 R23 -.0167 R13 -.7664 LSA 737.1 MSA 241.2 SSA 15.0  
 BDE .7126 BRA 1.1487 BC3 .0548 FSP -168 S61 1083.4 S62 443.8 THA 3.76 EL1 604.4 EL2 236.4 ALF 40.87

LAUNCH DATE JAN 9 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 197.806

RL 147.11 LAL .00 LOL 108.56 VL 24.250 GAL 5.72 AZL 86.84 HCA 80.97 SMA 109.12 ECC .36048 INC 3.1614 V1 30.285  
 RP 107.82 LAP 3.12 LOP 189.52 VP 35.292 GAP -21.12 AZP 89.50 TAL 169.67 TAP 250.64 RCA 69.78 APO 148.45 V2 35.147  
 RC 43.055 GL 11.35 GP 4.58 ZAL 69.54 ZAP 10.85 ETS 206.55 ZAE 173.27 ETE 245.39 ZAC 111.86 ETC 164.52 CLP 9.84

PLANETOCENTRIC CONIC

C3 45.698 VHL 6.760 DLA 25.37 RAL 33.08 RAD 6568.7 VEL 12.925 PTH 2.36 VHP 13.153 DPA 9.13 RAP 17.08 ECC 1.7521  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 10 3368.50 -23.31 122.29 278.36 73.45 3 10 18 2768.5 -25.36 114.22  
 90.00 22 23 55 4115.37 -2.69 167.26 269.71 61.80 23 32 31 3515.4 -6.44 160.59  
 100.00 3 59 42 3028.23 -26.06 98.12 279.22 74.82 4 50 11 2428.2 -27.89 89.80  
 100.00 23 21 4 3930.88 -.19 152.31 268.32 60.11 24 26 35 3330.9 -4.16 145.78  
 110.00 5 53 0 2673.78 -32.18 72.91 280.92 77.79 6 37 34 2073.8 -33.52 63.93  
 110.00 23 44 16 3858.09 5.16 143.48 264.99 56.16 24 48 34 3258.1 .68 137.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4698 TRA-1.1250 TC3 -.0140 BAU .0275 SGT 1128.1 SGR 448.2 S63 76.3 ST 508.7 SR 435.4 SS 446.0  
 RDE -.5127 RRA .0995 RC3 -.0428 FAU .02070 RRT .1495 RRF -.1565 RTF -.7807 CRT .7411 CRS .8488 CST .9829  
 FDE .4079 FRA .6572 FC3 -.3922 BSP 3423 SGB 1213.8 R23 -.0188 R13 -.7815 LSA 767.4 MSA 241.2 SSA 15.2  
 BDE .6954 BRA 1.1294 BC3 .0451 FSP -187 S61 1130.4 S62 442.3 THA 4.02 EL1 626.1 EL2 237.5 ALF 39.05

LAUNCH DATE JAN 9 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 204.267

RL 147.11 LAL .00 LOL 108.56 VL 24.561 GAL 5.36 AZL 86.94 HCA 84.20 SMA 110.50 ECC .34283 INC 3.0579 V1 30.285
RP 107.86 LAP 3.04 LOP 192.75 VP 35.495 GAP -20.00 AZP 89.69 TAL 169.56 TAP 253.75 RCA 72.62 APO 148.38 V2 35.135
RC 42.657 GL 11.74 GP 4.84 ZAL 69.56 ZAP 9.58 ETS 212.01 ZAE 174.33 ETE 270.00 ZAC 113.36 ETC 164.16 CLP 8.28

PLANETOCENTRIC CONIC

C3 41.121 VHL 6.413 DLA 25.73 RAL 32.94 RAD 6568.6 VEL 12.747 PTH 2.32 VHP 12.526 DPA 10.04 RAP 18.50 ECC 1.6767
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 6 25 3366.40 -23.35 122.15 276.27 73.51 3 2 32 2766.4 -25.39 114.08
90.00 22 30 34 4064.32 -4.33 164.40 268.30 61.99 23 38 18 3464.3 -8.04 157.69
100.00 3 53 34 3021.00 -26.19 97.62 277.15 75.05 4 43 55 2421.0 -27.99 89.28
100.00 23 26 7 3884.95 -1.75 149.80 266.87 60.15 24 30 52 3285.0 -5.70 143.25
110.00 5 48 45 2660.62 -32.36 71.92 278.82 78.34 6 33 15 2060.6 -33.63 62.92
110.00 23 47 25 3818.10 3.64 141.38 263.52 55.99 24 51 3 3218.1 -8.85 135.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4757 TRA-1.1080 TC3 .0100 BAU .0240 SGT 1178.3 SGR 447.5 SCS 83.8 ST 537.9 SR 436.5 SS 468.4
RDE -.4877 RRA .0867 RC3 -.0424 FAU .02172 RRT .1707 RRF -.1779 RTF -.7940 CRT .7525 CRS .8552 CST .9838
FDE .4284 FRA .8763 FC3 -.4574 BSP 356C SGB 1260.5 R23 -.0207 R13 -.7949 LSA 800.9 MSA 240.2 SSA 15.5
BDE .6813 BRA 1.1114 BC3 .0436 FSP -208 SGI 1181.2 SGI 439.8 THA 4.31 EL1 650.7 EL2 237.6 ALF 37.19

LAUNCH DATE JAN 9 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 210.950

RL 147.11 LAL .00 LOL 108.56 VL 24.849 GAL 5.00 AZL 87.04 HCA 87.42 SMA 111.82 ECC .32621 INC 2.9557 V1 30.285
RP 107.89 LAP 2.95 LOP 195.97 VP 35.682 GAP -18.94 AZP 89.87 TAL 169.50 TAP 256.91 RCA 75.35 APO 148.30 V2 35.123
RC 42.436 GL 12.11 GP 5.12 ZAL 69.68 ZAP 8.43 ETS 219.21 ZAE 174.11 ETE 299.05 ZAC 114.84 ETC 163.75 CLP 6.71

PLANETOCENTRIC CONIC

C3 37.044 VHL 6.086 DLA 26.05 RAL 32.71 RAD 6568.4 VEL 12.586 PTH 2.28 VHP 11.924 DPA 10.97 RAP 19.91 ECC 1.6097
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 58 49 3362.66 -23.42 121.90 -274.10 73.61 2 54 52 2762.7 -25.44 113.82
90.00 22 36 20 4015.31 -5.89 161.64 266.79 62.25 23 43 15 3415.3 -9.56 154.89
100.00 3 47 34 3012.08 -26.34 97.00 274.99 75.34 4 37 46 2412.1 -28.10 88.64
100.00 23 30 16 3841.12 -3.23 147.39 265.32 60.27 24 34 18 3241.1 -7.16 140.81
110.00 5 44 32 2646.10 -32.36 70.84 276.62 78.96 6 28 38 2046.1 -33.74 61.80
110.00 23 49 48 3779.87 2.18 139.38 261.96 55.88 24 52 48 3179.9 -2.31 133.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4802 TRA-1.0881 TC3 .0415 BAU .0288 SGT 1227.5 SGR 446.3 SCS 92.0 ST 566.8 SR 437.3 SS 491.9
RDE -.4639 RRA .0745 RC3 -.0407 FAU .02287 RRT .1936 RRF -.2021 RTF -.8075 CRT .7640 CRS .8620 CST .9846
FDE .4503 FRA .8980 FC3 -.5346 BSP 3747 SGB 1306.1 R23 -.0235 R13 -.8085 LSA 835.1 MSA 238.4 SSA 15.7
BDE .6676 BRA 1.0906 BC3 .0581 FSP -231 SGI 1230.9 SGI 436.7 THA 4.61 EL1 675.7 EL2 236.7 ALF 35.52

LAUNCH DATE JAN 9 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 217.650

RL 147.11 LAL .00 LOL 108.56 VL 25.116 GAL 4.66 AZL 87.15 HCA 90.64 SMA 113.09 ECC .31060 INC 2.8542 V1 30.285
RP 107.93 LAP 2.85 LOP 199.20 VP 35.858 GAP -17.91 AZP 90.03 TAL 169.49 TAP 260.13 RCA 77.97 APO 148.22 V2 35.111
RC 42.394 GL 12.45 GP 5.44 ZAL 69.88 ZAP 7.46 ETS 228.70 ZAE 172.70 ETE 321.50 ZAC 116.28 ETC 163.28 CLP 5.12

PLANETOCENTRIC CONIC

C3 33.415 VHL 5.781 DLA 26.31 RAL 32.39 RAD 6568.3 VEL 12.441 PTH 2.25 VHP 11.344 DPA 11.92 RAP 21.30 ECC 1.5499
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 51 36 3356.67 -23.54 121.50 271.86 73.78 2 47 33 2756.7 -25.53 113.40
90.00 22 41 1 3969.23 -7.34 159.04 265.16 62.57 23 47 10 3369.2 -10.96 152.23
100.00 3 41 54 3001.10 -26.53 96.24 272.76 75.70 4 31 55 2401.1 -28.24 87.85
100.00 23 33 25 3800.05 -4.61 145.12 263.67 60.43 24 36 45 3200.0 -8.52 138.51
110.00 5 40 28 2630.10 -32.76 69.63 274.33 79.64 6 24 18 2030.1 -33.84 60.56
110.00 23 51 20 3743.80 .80 137.50 260.31 55.83 24 53 43 3143.8 -3.69 131.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4847 TRA-1.0671 TC3 .0796 BAU .0393 SGT 1277.3 SGR 444.9 SCS 101.2 ST 596.8 SR 437.9 SS 516.3
RDE -.4413 RRA .0624 RC3 -.0373 FAU .02416 RRT .2195 RRF -.2293 RTF -.8200 CRT .7761 CRS .8691 CST .9855
FDE .4738 FRA .7163 FC3 -.6260 BSP 3932 SGB 1352.6 R23 -.0267 R13 -.8212 LSA 871.0 MSA 235.8 SSA 15.9
BDE .6555 BRA 1.0689 BC3 .0879 FSP -258 SGI 1281.5 SGI 432.6 THA 4.94 EL1 702.0 EL2 234.7 ALF 33.97

LAUNCH DATE JAN 9 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 224.364

RL 147.11 LAL .00 LOL 108.56 VL 25.363 GAL 4.33 AZL 87.25 HCA 93.86 SMA 114.31 ECC .29596 INC 2.7525 V1 30.285
RP 107.97 LAP 2.75 LOP 202.42 VP 36.019 GAP -16.93 AZP 90.19 TAL 169.54 TAP 263.40 RCA 80.48 APO 148.14 V2 35.099
RC 42.534 GL 12.77 GP 5.79 ZAL 70.18 ZAP 6.77 ETS 240.86 ZAE 170.62 ETE 335.63 ZAC 117.68 ETC 162.77 CLP 3.51

PLANETOCENTRIC CONIC

C3 30.184 VHL 5.494 DLA 26.52 RAL 31.99 RAD 6568.2 VEL 12.311 PTH 2.22 VHP 10.787 DPA 12.89 RAP 22.66 ECC 1.4968
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 5 3347.57 -23.71 120.89 269.57 74.04 2 40 52 2747.6 -25.67 112.77
90.00 22 44 19 3927.17 -8.65 156.64 263.42 62.93 23 49 46 3327.2 -12.22 149.78
100.00 3 36 45 2987.60 -26.75 95.30 270.47 76.15 4 26 32 2387.6 -28.40 86.88
100.00 23 35 21 3762.37 -5.87 143.04 261.92 60.64 24 38 3 3162.4 -9.74 136.39
110.00 5 36 39 2612.42 -32.97 68.29 271.96 80.41 6 20 11 2012.4 -33.94 59.19
110.00 23 51 56 3710.31 -.48 135.75 258.57 55.82 24 53 46 3110.3 -4.96 129.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4871 TRA-1.0428 TC3 .1274 BAU .0530 SGT 1324.7 SGR 443.3 SCS 111.3 ST 625.3 SR 438.3 SS 541.2
RDE -.4199 RRA .0510 RC3 -.0317 FAU .02561 RRT .2478 RRF -.2599 RTF -.8327 CRT .7880 CRS .8763 CST .9863
FDE .4984 FRA .7371 FC3 -.7347 BSP 4170 SGB 1396.9 R23 -.0307 R13 -.8340 LSA 906.5 MSA 232.6 SSA 16.1
BDE .6431 BRA 1.0440 BC3 .1313 FSP -288 SGI 1329.8 SGI 427.9 THA 5.29 EL1 727.5 EL2 231.9 ALF 32.64

LAUNCH DATE JAN 9 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 25.590 GAL 4.02 AZL 87.35 HCA 97.07 SMA 115.46 ECC .28226 INC 2.6502 V1 30.285  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.167 GAP -15.98 AZP 90.33 TAL 169.64 TAP 266.72 RCA 82.87 APO 148.05 V2 35.086  
 RC 42.853 GL 13.05 GP 6.18 ZAL 70.55 ZAP 6.46 ETS 255.31 ZAE 168.28 ETE 344.59 ZAC 119.03 ETC 162.19 CLP 1.88

DISTANCE 231.088

PLANETOCENTRIC CONIC  
 C3 27.311 VHL 5.226 DLA 26.66 RAL 31.51 RAD 6568.1 VEL 12.194 PTH 2.19 VHP 10.253 DPA 13.88 RAP 23.98 ECC 1.4495  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 37 3334.38 -23.95 120.00 267.26 74.42 2 35 12 2734.4 -25.86 111.85  
 90.00 22 45 55 3690.37 -9.79 154.53 261.56 63.30 23 50 45 3290.4 -13.29 147.61  
 100.00 3 32 19 2971.06 -27.02 94.14 268.14 76.70 4 21 50 2371.1 -28.58 85.69  
 100.00 23 35 54 3728.93 -6.99 141.18 260.06 60.86 24 38 3 3128.9 -10.82 134.49  
 110.00 5 33 11 2592.88 -33.18 66.81 269.52 81.26 6 16 24 1992.9 -34.03 57.67  
 110.00 23 51 32 3679.87 -1.64 134.16 256.76 55.85 24 52 52 3079.9 -6.11 127.93

DIFFERENTIAL CORRECTIONS  
 TDE -.4936 TRA -1.0217 TC3 .1778 BAU .0655 SGT 1377.9 SGR 442.0 SG3 122.6 ST 659.0 SR 438.9 SS 568.1  
 RDE -.4001 RRA .0397 RC3 -.0237 FAU .02720 RRT .2821 RRF -.2953 RTF -.8429 CRT .8018 CRS .8839 CST .9874  
 FDE .5256 FRA .7598 FC3 -.8621 BSP 4317 SGB 1447.0 R23 -.0343 R13 -.8443 LSA 947.3 MSA 228.2 SSA 16.3  
 BDE .6354 BRA 1.0223 BC3 .1794 FSP -321 SGT 1384.1 SGT 422.2 THA 5.70 EL1 758.3 EL2 228.0 ALF 31.24

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 9 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 25.801 GAL 3.72 AZL 87.45 HCA 100.29 SMA 116.56 ECC .26948 INC 2.5465 V1 30.285  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.304 GAP -15.08 AZP 90.46 TAL 169.80 TAP 270.09 RCA 85.15 APO 147.97 V2 35.073  
 RC 43.347 GL 13.29 GP 6.62 ZAL 71.02 ZAP 6.62 ETS 270.45 ZAE 165.86 ETE 350.70 ZAC 120.32 ETC 161.54 CLP .21

DISTANCE 237.816

PLANETOCENTRIC CONIC  
 C3 24.754 VHL 4.975 DLA 26.73 RAL 30.95 RAD 6568.0 VEL 12.088 PTH 2.16 VHP 9.740 DPA 14.89 RAP 25.26 ECC 1.4074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 35 38 3315.94 -24.28 118.75 264.93 74.97 2 30 54 2715.9 -26.11 110.56  
 90.00 22 45 27 3860.18 -10.70 152.79 259.57 63.63 23 49 47 3260.2 -14.16 145.82  
 100.00 3 28 52 2950.90 -27.33 92.72 265.77 77.39 4 18 3 2350.9 -28.79 84.22  
 100.00 23 34 54 3700.46 -7.93 139.59 258.10 61.08 24 36 34 3100.5 -11.72 132.86  
 110.00 5 30 12 2571.22 -33.38 65.15 267.03 82.22 6 13 4 1971.2 -34.11 55.99  
 110.00 23 50 3 3652.90 -2.67 132.78 254.86 55.91 24 50 56 3052.9 -7.13 126.50

DIFFERENTIAL CORRECTIONS  
 TDE -.5126 TRA -1.0009 TC3 .2468 BAU .0818 SGT 1440.2 SGR 441.2 SG3 135.1 ST 706.0 SR 439.6 SS 594.8  
 RDE -.3818 RRA .0287 RC3 -.0120 FAU .02901 RRT .3285 RRF -.3347 RTF -.8558 CRT .8220 CRS .8914 CST .9901  
 FDE .5540 FRA .7830 FC3 -1.0146 BSP 4757 SGB 1506.3 R23 -.0299 R13 -.8571 LSA 988.3 MSA 220.5 SSA 16.6  
 BDE .6391 BRA 1.0013 BC3 .2471 FSP -360 SGT 1448.2 SGT 414.4 THA 6.26 EL1 801.9 EL2 220.4 ALF 29.56

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 9 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 25.995 GAL 3.43 AZL 87.56 HCA 103.50 SMA 117.59 ECC .25758 INC 2.4407 V1 30.285  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.429 GAP -14.20 AZP 90.57 TAL 170.01 TAP 273.51 RCA 87.30 APO 147.88 V2 35.060  
 RC 44.011 GL 13.48 GP 7.11 ZAL 71.56 ZAP 7.26 ETS 284.20 ZAE 163.47 ETE 355.21 ZAC 121.55 ETC 160.83 CLP -1.48

DISTANCE 244.547

PLANETOCENTRIC CONIC  
 C3 22.482 VHL 4.742 DLA 26.72 RAL 30.32 RAD 6567.9 VEL 11.994 PTH 2.14 VHP 9.247 DPA 15.94 RAP 26.49 ECC 1.3700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 28 3291.32 -24.71 117.07 262.61 75.71 2 28 19 2691.3 -26.43 108.83  
 90.00 22 42 38 3837.74 -11.38 151.49 257.47 63.90 23 46 35 3237.7 -14.80 144.48  
 100.00 3 26 36 2926.59 -27.68 91.00 263.57 78.23 4 15 23 2326.6 -29.02 82.45  
 100.00 23 32 10 3677.69 -8.67 138.31 256.04 61.28 24 33 28 3077.7 -12.44 131.55  
 110.00 5 27 51 2547.20 -33.60 63.31 264.49 83.30 6 10 18 1947.2 -34.16 54.11  
 110.00 23 47 25 3629.85 -3.55 131.55 252.90 55.98 24 47 55 3029.9 -7.99 125.28

DIFFERENTIAL CORRECTIONS  
 TDE -.4980 TRA -.9715 TC3 .3142 BAU .0944 SGT 1475.8 SGR 441.0 SG3 149.1 ST 719.5 SR 440.4 SS 622.9  
 RDE -.3644 RRA .0178 RC3 .0036 FAU .03100 RRT .3600 RRF -.3792 RTF -.8639 CRT .8273 CRS .8990 CST .9890  
 FDE .5846 FRA .8086 FC3 -1.1938 BSP 4743 SGB 1540.3 R23 -.0453 R13 -.8658 LSA 1025.5 MSA 218.5 SSA 16.8  
 BDE .6171 BRA .9716 BC3 .3142 FSP -401 SGT 1485.1 SGT 408.8 THA 6.65 EL1 814.8 EL2 218.4 ALF 29.15

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 9 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 26.173 GAL 3.15 AZL 87.67 HCA 106.71 SMA 118.57 ECC .24652 INC 2.3321 V1 30.285  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.544 GAP -13.36 AZP 90.67 TAL 170.27 TAP 276.97 RCA 89.34 APO 147.80 V2 35.047  
 RC 44.838 GL 13.60 GP 7.66 ZAL 72.17 ZAP 8.31 ETS 295.34 ZAE 161.17 ETE 358.77 ZAC 122.69 ETC 160.04 CLP -3.22

DISTANCE 251.277

PLANETOCENTRIC CONIC  
 C3 20.462 VHL 4.524 DLA 26.61 RAL 29.64 RAD 6567.8 VEL 11.910 PTH 2.12 VHP 8.775 DPA 17.02 RAP 27.66 ECC 1.3368  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 22 3259.87 -25.22 114.91 260.29 76.67 2 27 42 2659.9 -26.80 106.60  
 90.00 22 37 17 3823.83 -11.80 150.68 255.26 64.07 23 41 1 3223.8 -15.19 143.64  
 100.00 3 25 43 2897.70 -28.06 88.94 260.97 79.25 4 14 0 2297.7 -29.26 80.34  
 100.00 23 27 37 3661.23 -9.21 137.38 253.90 61.44 24 28 38 3061.2 -12.96 130.60  
 110.00 5 26 15 2520.54 -33.79 61.25 261.92 84.50 6 8 16 1920.5 -34.18 52.03  
 110.00 23 43 34 3611.16 -4.26 130.57 250.88 56.05 24 43 45 3011.2 -8.69 124.28

DIFFERENTIAL CORRECTIONS  
 TDE -.4998 TRA -.9461 TC3 .3959 BAU .1085 SGT 1525.0 SGR 442.4 SG3 164.7 ST 750.0 SR 441.7 SS 651.0  
 RDE -.3487 RRA .0070 RC3 .0245 FAU .03325 RRT .4067 RRF -.4287 RTF -.8730 CRT .8404 CRS .9066 CST .9899  
 FDE .8164 FRA .8358 FC3 -1.4070 BSP 4935 SGB 1587.8 R23 -.0517 R13 -.8752 LSA 1065.8 MSA 212.7 SSA 17.0  
 BDE .6094 BRA .9461 BC3 .3966 FSP -448 SGT 1536.3 SGT 401.1 THA 7.22 EL1 844.0 EL2 212.7 ALF 28.29

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 9 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 258.003

RL 147.11 LAL .00 LOL 108.56 VL 26.337 GAL 2.89 AZL 87.78 HCA 109.91 SMA 119.49 ECC .23627 INC 2.2199 V1 30.285
RP 108.17 LAP 2.09 LOP 218.48 VP 36.649 GAP -12.56 AZP 90.76 TAL 170.57 TAP 280.48 RCA 91.26 APO 147.72 V2 35.033
RC 45.818 GL 13.64 GP 8.28 ZAL 72.85 ZAP 9.67 ETS 303.83 ZAE 159.00 ETE 1.76 ZAC 123.75 ETC 159.18 CLP -5.01

PLANETOCENTRIC CONIC

C3 18.667 VHL 4.321 DLA 26.41 RAL 28.91 RAD 6567.8 VEL 11.834 PTH 2.10 VHP 8.324 DPA 18.15 RAP 28.76 ECC 1.3072
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 35 25 3221.52 -25.79 112.25 257.98 77.89 2 29 7 2621.5 -27.20 103.87
90.00 22 29 26 3818.66 -11.95 150.38 252.97 64.14 23 33 4 3218.7 -15.33 143.33
100.00 3 26 21 2863.93 -28.47 86.51 258.56 80.47 4 14 5 2263.9 -29.49 77.86
100.00 23 21 11 3651.48 -9.53 136.83 251.70 61.53 24 22 3 3051.5 -13.26 130.03
110.00 5 25 32 2490.98 -33.96 58.96 259.33 85.85 6 7 3 1891.0 -34.16 49.72
110.00 23 38 29 3597.20 -4.79 129.84 248.82 56.11 24 38 26 2997.2 -9.21 123.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5011 TRA -.9213 TC3 .4844 BAU .1216 SGT 1574.1 SGR 446.0 S63 182.0 ST 780.5 SR 443.8 S5 679.8
RDE -.3346 RRA -.0041 RC3 .0515 FAU .03571 RRT .4584 RRF -.4835 RTF -.8812 CRT .8536 CRS .9141 CST .9908
FDE .6503 FRA .8663 FC3-1.6563 BSP 5098 SGB 1636.0 R23 -.0592 R13 -.8837 LSA 1106.9 MSA 206.6 SSA 17.3
BDE .6025 BRA .9213 BC3 .4871 FSP -500 S61 1588.2 S62 392.9 THA 7.89 EL1 873.8 EL2 206.5 ALF 27.56

LAUNCH DATE JAN 9 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 264.721

RL 147.11 LAL .00 LOL 108.56 VL 26.488 GAL 2.64 AZL 87.90 HCA 113.11 SMA 120.35 ECC .22680 INC 2.1032 V1 30.285
RP 108.21 LAP 1.93 LOP 221.69 VP 36.745 GAP -11.78 AZP 90.83 TAL 170.92 TAP 284.03 RCA 93.06 APO 147.65 V2 35.020
RC 46.944 GL 13.59 GP 8.98 ZAL 73.59 ZAP 11.28 ETS 310.14 ZAE 156.98 ETE 4.42 ZAC 124.70 ETC 158.22 CLP -6.85

PLANETOCENTRIC CONIC

C3 17.075 VHL 4.132 DLA 26.10 RAL 28.16 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 7.892 DPA 19.32 RAP 29.78 ECC 1.2810
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 34 3176.82 -26.40 109.10 255.69 79.36 2 32 31 2576.6 -27.60 100.64
90.00 22 19 14 3822.00 -11.85 150.57 250.62 64.09 23 22 56 3222.0 -15.24 143.53
100.00 3 28 35 2825.16 -28.87 83.70 256.15 81.89 4 15 40 2225.2 -29.69 74.99
100.00 23 12 54 3648.69 -9.62 136.88 249.45 61.56 24 13 43 3048.7 -13.34 129.87
110.00 5 25 51 2458.28 -34.09 56.41 258.72 87.35 6 6 49 1858.3 -34.08 47.17
110.00 23 32 8 3588.34 -5.13 129.37 246.72 56.16 24 31 56 2988.3 -9.54 123.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4994 TRA -.8955 TC3 .5847 BAU .1349 SGT 1620.2 SGR 452.8 S63 201.3 ST 807.4 SR 446.5 S5 707.2
RDE -.3220 RRA -.0155 RC3 .0866 FAU .03851 RRT .5136 RRF -.5422 RTF -.8888 CRT .8659 CRS .9212 CST .9917
FDE .6842 FRA .8989 FC3-1.9528 BSP 5282 SGB 1682.3 R23 -.0662 R13 -.8918 LSA 1145.0 MSA 200.3 SSA 17.6
BDE .5942 BRA .8956 BC3 .5911 FSP -559 S61 1637.8 S62 384.3 THA 8.65 EL1 900.7 EL2 200.2 ALF 27.03

LAUNCH DATE JAN 9 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 271.431

RL 147.11 LAL .00 LOL 108.56 VL 26.626 GAL 2.41 AZL 88.02 HCA 116.32 SMA 121.16 ECC .21807 INC 1.9807 V1 30.285
RP 108.25 LAP 1.78 LOP 224.89 VP 36.832 GAP -11.03 AZP 90.88 TAL 171.30 TAP 287.62 RCA 94.74 APO 147.58 V2 35.007
RC 48.205 GL 13.44 GP 9.78 ZAL 74.39 ZAP 13.10 ETS 314.81 ZAE 155.13 ETE 6.90 ZAC 125.52 ETC 157.18 CLP -8.76

PLANETOCENTRIC CONIC

C3 15.657 VHL 3.957 DLA 25.66 RAL 27.38 RAD 6567.6 VEL 11.706 PTH 2.06 VHP 7.480 DPA 20.55 RAP 30.70 ECC 1.2577
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 40 3125.77 -26.98 105.49 253.40 81.07 2 37 46 2525.8 -27.94 96.96
90.00 22 6 58 3833.30 -11.51 151.23 248.25 63.95 23 10 52 3233.3 -14.92 144.21
100.00 3 32 29 2781.41 -29.25 80.50 253.74 83.53 4 18 50 2181.4 -29.84 71.75
100.00 23 2 51 3652.89 -9.48 136.91 247.19 61.52 24 3 44 3052.9 -13.21 130.11
110.00 5 27 17 2422.21 -34.17 53.60 254.12 89.01 6 7 39 1822.2 -33.93 44.36
110.00 23 24 32 3584.86 -5.26 129.19 244.82 56.18 24 24 16 2984.9 -9.67 122.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4960 TRA -.8700 TC3 .6926 BAU .1476 SGT 1664.2 SGR 463.9 S63 222.9 ST 831.8 SR 450.3 S5 734.1
RDE -.3108 RRA -.0274 RC3 .1311 FAU .04159 RRT .5720 RRF -.6044 RTF -.8959 CRT .8780 CRS .9281 CST .9925
FDE .7189 FRA .9358 FC3-2.2997 BSP 5445 SGB 1727.7 R23 -.0786 R13 -.8994 LSA 1181.4 MSA 193.8 SSA 17.8
BDE .5854 BRA .8704 BC3 .7049 FSP -625 S61 1686.3 S62 375.6 THA 9.54 EL1 925.9 EL2 193.6 ALF 26.68

LAUNCH DATE JAN 9 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 278.128

RL 147.11 LAL .00 LOL 108.56 VL 26.752 GAL 2.19 AZL 88.15 HCA 119.51 SMA 121.91 ECC .21005 INC 1.8515 V1 30.285
RP 108.29 LAP 1.61 LOP 228.09 VP 36.911 GAP -10.31 AZP 90.91 TAL 171.72 TAP 291.23 RCA 96.30 APO 147.52 V2 34.994
RC 49.590 GL 13.16 GP 10.69 ZAL 75.22 ZAP 15.11 ETS 318.29 ZAE 153.46 ETE 9.31 ZAC 126.20 ETC 156.04 CLP -10.74

PLANETOCENTRIC CONIC

C3 14.399 VHL 3.795 DLA 25.09 RAL 26.61 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 7.088 DPA 21.86 RAP 31.52 ECC 1.2370
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 53 33 3089.80 -27.51 101.47 251.11 83.02 2 44 43 2469.6 -28.19 92.87
90.00 21 52 56 3852.00 -10.95 152.32 245.90 63.72 22 57 8 3252.0 -14.40 145.33
100.00 3 38 2 2732.77 -29.57 76.92 251.35 85.39 4 23 35 2132.8 -29.89 68.13
100.00 22 51 9 3684.05 -9.12 137.54 244.93 61.41 23 52 13 3064.1 -12.87 130.76
110.00 5 29 58 2382.54 -34.17 50.50 251.53 90.84 6 9 41 1782.5 -33.68 41.29
110.00 23 15 42 3587.05 -5.18 129.30 242.53 56.16 24 15 29 2987.1 -9.59 122.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4894 TRA -.8437 TC3 .8107 BAU .1602 SGT 1703.9 SGR 481.0 S63 246.9 ST 851.2 SR 455.0 S5 758.3
RDE -.3010 RRA -.0400 RC3 .1876 FAU .04506 RRT .6312 RRF -.6677 RTF -.9024 CRT .8893 CRS .9345 CST .9932
FDE .7525 FRA .9762 FC3-2.7090 BSP 5619 SGB 1770.3 R23 -.0907 R13 -.9067 LSA 1212.9 MSA 187.2 SSA 18.2
BDE .5748 BRA .8446 BC3 .8322 FSP -699 S61 1732.0 S62 367.0 THA 10.58 EL1 946.8 EL2 187.1 ALF 26.54

LAUNCH DATE JAN 9 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 284.813

RL 147.11 LAL .00 LOL 108.56 VL 26.867 GAL 1.98 AZL 88.29 HCA 122.71 SMA 122.61 ECC .20270 INC 1.7139 V1 30.285  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.982 GAP -9.62 AZP 90.93 TAL 172.16 TAP 294.87 RCA 97.75 APO 147.46 V2 34.980  
 RC 51.091 GL 12.73 GP 11.73 ZAL 76.09 ZAP 17.29 ETS 320.88 ZAE 151.97 ETE 11.75 ZAC 126.72 ETC 154.81 CLP -12.80

PLANETOCENTRIC CONIC

C3 13.282 VHL 3.644 DLA 24.36 RAL 25.86 RAD 6567.5 VEL 11.605 PTH 2.03 VHP 6.716 DPA 23.25 RAP 32.20 ECC 1.2186  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 8 3008.60 -27.94 97.06 248.85 85.20 2 53 16 2408.6 -28.31 88.41  
 90.00 21 37 24 3877.61 -10.18 153.80 243.59 63.43 22 42 2 3277.6 -13.66 146.86  
 100.00 3 45 15 2678.35 -29.79 72.97 248.98 87.46 4 29 54 2079.3 -29.83 64.16  
 100.00 22 37 58 3682.09 -8.53 138.56 242.72 61.24 23 39 20 3082.1 -12.30 131.80  
 110.00 5 34 1 2339.04 -34.08 47.11 248.97 92.85 6 13 0 1739.0 -33.31 37.95  
 110.00 23 5 41 3595.16 -4.87 129.73 240.48 56.12 24 5 36 2995.2 -9.29 123.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4781 TRA -.8165 TC3 .9403 BAU .1732 SGT 1737.9 SGR 505.6 SCS 273.5 ST 862.5 SR 460.7 SS 778.2  
 RDE -.2925 RRA -.0537 RC3 .2590 FAU .04893 RRT .6891 RRF -.7296 RTF -.9090 CRT .8996 CRS .9402 CST .9939  
 FDE .7827 FRA 1.0211 FC3-3.1894 BSP 5816 SGB 1809.9 R23 -.1038 R13 -.9142 LSA 1236.5 MSA 180.7 SSA 18.5  
 BDE .5604 BRA .8182 BC3 .9753 FSP -784 SG1 1774.0 SGT 358.9 THA 11.83 EL1 961.0 EL2 180.6 ALF 26.68

LAUNCH DATE JAN 9 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 291.482

RL 147.11 LAL .00 LOL 108.56 VL 26.973 GAL 1.79 AZL 88.43 HCA 125.90 SMA 123.25 ECC .19599 INC 1.5662 V1 30.285  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.046 GAP -8.95 AZP 90.92 TAL 172.62 TAP 298.52 RCA 99.10 APO 147.41 V2 34.967  
 RC 52.697 GL 12.13 GP 12.93 ZAL 76.99 ZAP 19.67 ETS 322.81 ZAE 150.64 ETE 14.30 ZAC 127.04 ETC 153.48 CLP -14.95

PLANETOCENTRIC CONIC

C3 12.291 VHL 3.506 DLA 23.47 RAL 25.16 RAD 6567.5 VEL 11.562 PTH 2.02 VHP 6.365 DPA 24.74 RAP 32.72 ECC 1.2023  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 19 2943.06 -28.22 92.28 246.60 87.57 3 3 22 2343.1 -28.26 83.62  
 90.00 21 20 37 3909.87 -9.19 155.65 241.37 63.10 22 25 47 3309.9 -12.73 148.76  
 100.00 3 54 9 2621.19 -29.89 68.65 246.65 89.73 4 37 50 2021.2 -29.61 59.85  
 100.00 22 23 28 3706.98 -7.71 139.95 240.58 61.03 23 25 15 3107.0 -11.52 133.23  
 110.00 5 39 32 2291.48 -33.86 43.41 246.46 95.03 6 17 43 1691.5 -32.79 34.34  
 110.00 22 54 34 3609.46 -4.33 130.48 238.50 56.06 23 54 44 3009.5 -8.75 124.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4650 TRA -.7915 TC3 1.0690 BAU .1847 SGT 1768.6 SGR 540.3 SCS 303.0 ST 870.0 SR 467.6 SS 794.4  
 RDE -.2852 RRA -.0890 RC3 .3481 FAU .05317 RRT .7436 RRF -.7878 RTF -.9140 CRT .9094 CRS .9454 CST .9947  
 FDE .8098 FRA 1.0729 FC3-3.7451 BSP 5966 SGB 1849.3 R23 -.1196 R13 -.9205 LSA 1255.4 MSA 174.1 SSA 18.9  
 BDE .5455 BRA .7845 BC3 1.1243 FSP -877 SG1 1815.5 SGT 352.0 THA 13.31 EL1 972.3 EL2 174.1 ALF 26.98

LAUNCH DATE JAN 9 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 298.134

RL 147.11 LAL .00 LOL 108.56 VL 27.068 GAL 1.61 AZL 88.59 HCA 129.09 SMA 123.84 ECC .18988 INC 1.4062 V1 30.285  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.103 GAP -8.30 AZP 90.89 TAL 173.09 TAP 302.18 RCA 100.33 APO 147.36 V2 34.954  
 RC 54.398 GL 11.34 GP 14.30 ZAL 77.89 ZAP 22.24 ETS 324.24 ZAE 149.46 ETE 17.03 ZAC 127.14 ETC 152.07 CLP -17.21

PLANETOCENTRIC CONIC

C3 11.412 VHL 3.378 DLA 22.38 RAL 24.53 RAD 6567.4 VEL 11.524 PTH 2.01 VHP 6.035 DPA 26.36 RAP 33.06 ECC 1.1878  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 27 9 2873.02 -28.32 87.16 244.41 90.14 3 15 2 2273.0 -28.00 78.51  
 90.00 21 2 44 3948.76 -7.98 157.87 239.28 62.74 22 8 33 3348.8 -11.57 151.04  
 100.00 4 4 47 2558.20 -29.82 63.97 244.37 92.20 4 47 25 1958.2 -29.20 55.22  
 100.00 22 7 47 3738.81 -6.66 141.73 238.56 60.79 23 10 6 3138.8 -10.50 135.05  
 110.00 5 46 39 2239.51 -33.47 39.40 244.01 97.37 6 23 58 1639.5 -32.09 30.44  
 110.00 22 42 25 3630.26 -3.53 131.57 236.63 55.98 23 42 55 3030.3 -7.98 123.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4482 TRA -.7667 TC3 1.1991 BAU .1959 SGT 1792.2 SGR 587.6 SCS 335.4 ST 869.7 SR 475.7 SS 804.6  
 RDE -.2790 RRA -.0864 RC3 .4591 FAU .05779 RRT .7919 RRF -.8394 RTF -.9185 CRT .9185 CRS .9499 CST .9955  
 FDE .8307 FRA 1.1316 FC3-4.3844 BSP 6085 SGB 1886.1 R23 -.1369 R13 -.9266 LSA 1265.6 MSA 167.4 SSA 19.4  
 BDE .3279 BRA .7716 BC3 1.2840 FSP -978 SG1 1853.9 SGT 346.9 THA 15.10 EL1 977.1 EL2 167.4 ALF 27.55

LAUNCH DATE JAN 9 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 304.768

RL 147.11 LAL .00 LOL 108.56 VL 27.155 GAL 1.45 AZL 88.77 HCA 132.28 SMA 124.39 ECC .18434 INC 1.2311 V1 30.285  
 RP 108.45 LAP .91 LOP 240.85 VP 37.135 GAP -7.68 AZP 90.83 TAL 173.56 TAP 305.85 RCA 101.46 APO 147.32 V2 34.942  
 RC 56.188 GL 10.30 GP 15.90 ZAL 78.80 ZAP 25.03 ETS 325.27 ZAE 148.41 ETE 20.04 ZAC 126.98 ETC 150.57 CLP -19.59

PLANETOCENTRIC CONIC

C3 10.833 VHL 3.261 DLA 21.07 RAL 23.99 RAD 6567.4 VEL 11.490 PTH 2.00 VHP 5.727 DPA 28.13 RAP 33.18 ECC 1.1750  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 41 42 2798.22 -28.18 81.69 242.28 92.88 3 28 20 2198.2 -27.49 73.10  
 90.00 20 43 53 3994.53 -6.55 160.47 237.34 62.39 21 50 28 3394.5 -10.19 153.69  
 100.00 4 17 15 2490.12 -29.53 58.93 242.17 94.83 4 58 45 1890.1 -28.55 50.26  
 100.00 21 51 1 3777.86 -5.36 143.90 236.69 60.55 22 53 59 3177.9 -9.24 137.26  
 110.00 5 55 30 2182.73 -32.89 35.07 241.67 99.87 6 31 53 1582.7 -31.18 26.27  
 110.00 22 29 15 3658.02 -2.48 133.02 234.90 55.90 23 30 13 3058.0 -6.94 126.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4271 TRA -.7432 TC3 1.3249 BAU .2066 SGT 1807.8 SGR 650.1 SCS 370.5 ST 860.2 SR 484.2 SS 806.0  
 RDE -.2733 RRA -.1068 RC3 .5969 FAU .06277 RRT .8323 RRF -.8828 RTF -.9221 CRT .9268 CRS .9333 CST .9963  
 FDE .8410 FRA 1.1994 FC3-5.1108 BSP 6203 SGB 1921.2 R23 -.1356 R13 -.9324 LSA 1264.0 MSA 160.7 SSA 20.0  
 BDE .5070 BRA .7509 BC3 1.4532 FSP -1089 SG1 1890.0 SGT 344.7 THA 17.25 EL1 974.0 EL2 160.6 ALF 28.39

LAUNCH DATE JAN 9 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 311.302

RL 147.11 LAL .00 LOL 108.56 VL 27.233 GAL 1.30 AZL 88.96 HCA 135.47 SMA 124.89 ECC .17934 INC 1.0375 V1 30.285  
 RP 108.49 LAP .73 LOP 244.03 VP 37.200 GAP -7.08 AZP 90.74 TAL 174.04 TAP 309.50 RCA 102.49 APO 147.28 V2 34.929  
 RC 58.051 GL 8.99 GP 17.74 ZAL 79.70 ZAP 28.06 ETS 326.01 ZAE 147.43 ETE 23.41 ZAC 126.51 ETC 149.00 CLP -22.10

PLANETOCENTRIC CONIC

C3 9.946 VHL 3.154 DLA 19.51 RAL 23.58 RAD 6567.4 VEL 11.460 PTH 1.99 VHP 5.444 DPA 30.09 RAP 33.04 ECC 1.1637  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 58 10 2718.13 -27.77 75.87 240.25 95.77 3 43 28 2118.1 -26.68 67.37  
 90.00 20 24 7 4047.77 -4.86 163.47 235.60 62.07 21 31 34 3447.8 -8.56 156.75  
 100.00 4 31 43 2416.44 -28.99 53.52 240.08 97.63 5 12 0 1816.4 -27.63 44.98  
 100.00 21 33 14 3824.69 -3.78 146.48 235.01 60.33 22 36 59 3224.7 -7.71 139.89  
 110.00 6 6 18 2120.52 -32.07 30.41 239.45 102.52 6 41 39 1520.5 -30.02 21.80  
 110.00 22 15 9 3693.37 -1.13 134.87 233.36 55.83 23 16 42 3093.4 -5.60 128.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3990 TRA -.7181 TC3 1.4563 BAU .2191 SGT 1812.4 SGR 731.4 SCS 408.6 ST 835.8 SR 491.4 SS 793.8  
 RDE -.2672 RRA -.1306 RC3 .7702 FAU .06825 RRT .8648 RRF -.9175 RTF -.9261 CRT .9339 CRS .9553 CST .9972  
 FDE .8336 FRA 1.2737 FC3-5.9409 BSP 6364 SGB 1954.4 R23 -.1714 R13 -.9393 LSA 1243.4 MSA 154.1 SSA 20.7  
 BDE .4802 BRA .7299 BC3 1.6474 FSP -1214 SGI 1923.6 S62 346.0 THA 19.91 EL1 957.4 EL2 153.5 ALF 29.61

LAUNCH DATE JAN 9 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 317.977

RL 147.11 LAL .00 LOL 108.56 VL 27.303 GAL 1.16 AZL 89.18 HCA 138.65 SMA 125.34 ECC .17484 INC .8209 V1 30.285  
 RP 108.53 LAP .54 LOP 247.21 VP 37.240 GAP -6.50 AZP 90.62 TAL 174.50 TAP 313.15 RCA 103.42 APO 147.25 V2 34.917  
 RC 59.985 GL 7.35 GP 19.90 ZAL 80.57 ZAP 31.36 ETS 326.53 ZAE 146.47 ETE 27.20 ZAC 125.70 ETC 147.38 CLP -24.75

PLANETOCENTRIC CONIC

C3 9.345 VHL 3.057 DLA 17.64 RAL 23.32 RAD 6567.3 VEL 11.434 PTH 1.98 VHP 5.187 DPA 32.26 RAP 32.58 ECC 1.1538  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 16 48 2631.89 -27.03 69.67 238.36 98.79 4 0 40 2031.9 -25.53 61.32  
 90.00 20 3 24 4109.43 -2.88 166.93 234.12 81.82 21 11 53 3509.4 -6.63 160.25  
 100.00 4 40 27 2336.35 -28.13 47.72 238.15 100.56 5 27 24 1736.4 -26.38 39.35  
 100.00 21 14 26 3880.20 -1.91 149.53 233.58 60.16 22 19 6 3280.2 -5.86 142.98  
 110.00 6 19 18 2052.11 -30.95 25.39 237.40 105.29 6 53 30 1452.1 -26.54 17.02  
 110.00 22 0 4 3737.21 .55 137.16 232.05 55.82 23 2 21 3137.2 -3.94 130.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3680 TRA -.6951 TC3 1.5629 BAU .2306 SGT 1805.0 SGR 834.7 SCS 448.2 ST 803.0 SR 496.9 SS 768.8  
 RDE -.2602 RRA -.1594 RC3 .9824 FAU .07382 RRT .8886 RRF -.9437 RTF -.9282 CRT .9409 CRS .9557 CST .9981  
 FDE .8065 FRA 1.3586 FC3-6.8390 BSP 6478 SGB 1988.6 R23 -.1869 R13 -.9454 LSA 1208.6 MSA 147.3 SSA 21.7  
 BDE .4507 BRA .7132 BC3 1.8460 FSP -1342 SGI 1957.0 S62 353.1 THA 23.14 EL1 933.2 EL2 144.9 ALF 31.04

LAUNCH DATE JAN 9 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 324.550

RL 147.11 LAL .00 LOL 108.56 VL 27.366 GAL 1.04 AZL 89.42 HCA 141.83 SMA 125.75 ECC .17082 INC .5751 V1 30.285  
 RP 108.57 LAP .36 LOP 250.39 VP 37.275 GAP -5.94 AZP 90.45 TAL 174.94 TAP 316.77 RCA 104.27 APO 147.23 V2 34.906  
 RC 61.981 GL 5.31 GP 22.41 ZAL 81.42 ZAP 34.96 ETS 326.88 ZAE 145.43 ETE 31.48 ZAC 124.48 ETC 145.74 CLP -27.57

PLANETOCENTRIC CONIC

C3 8.825 VHL 2.971 DLA 15.41 RAL 23.25 RAD 6567.3 VEL 11.411 PTH 1.98 VHP 4.960 DPA 34.70 RAP 31.73 ECC 1.1452  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 2 2538.22 -25.88 63.06 236.67 101.91 4 20 20 1938.2 -23.98 54.90  
 90.00 19 41 37 4181.02 -.57 170.92 232.96 61.69 20 51 18 3581.0 -4.35 164.28  
 100.00 5 7 48 2248.88 -26.88 41.51 236.42 103.60 5 45 17 1648.7 -24.74 33.36  
 100.00 20 54 31 3945.79 .32 153.13 232.46 60.11 22 0 17 3345.8 -3.66 146.61  
 110.00 6 34 51 1976.36 -29.47 19.99 235.59 108.17 7 7 47 1376.4 -26.70 11.90  
 110.00 21 43 58 3790.88 2.60 139.96 231.04 55.90 22 47 9 3190.9 -1.89 133.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3319 TRA -.6736 TC3 1.6481 BAU .2435 SGT 1784.5 SGR 964.6 SCS 488.5 ST 757.6 SR 497.2 SS 726.2  
 RDE -.2503 RRA -.1953 RC3 1.2423 FAU .07937 RRT .9052 RRF -.9626 RTF -.9295 CRT .9477 CRS .9532 CST .9989  
 FDE .7494 FRA 1.4554 FC3-7.7863 BSP 6591 SGB 2026.5 R23 -.1970 R13 -.9521 LSA 1152.5 MSA 140.8 SSA 23.0  
 BDE .4157 BRA .7013 BC3 2.0639 FSP -1473 SGI 1995.1 S62 366.6 THA 27.06 EL1 896.2 EL2 134.1 ALF 32.70

LAUNCH DATE JAN 9 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 331.102

RL 147.11 LAL .00 LOL 108.56 VL 27.422 GAL .93 AZL 89.71 HCA 145.01 SMA 126.12 ECC .16723 INC .2922 V1 30.285  
 RP 108.60 LAP .17 LOP 253.57 VP 37.306 GAP -5.40 AZP 90.24 TAL 175.36 TAP 320.36 RCA 105.03 APO 147.21 V2 34.894  
 RC 64.032 GL 2.77 GP 25.35 ZAL 82.22 ZAP 38.90 ETS 327.14 ZAE 144.20 ETE 36.30 ZAC 122.80 ETC 144.12 CLP -30.56

PLANETOCENTRIC CONIC

C3 8.390 VHL 2.897 DLA 12.75 RAL 23.41 RAD 6567.3 VEL 11.392 PTH 1.97 VHP 4.768 DPA 37.45 RAP 30.41 ECC 1.1381  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 2 24 2435.31 -24.24 55.97 235.26 105.10 4 42 59 1835.3 -21.93 48.05  
 90.00 19 18 32 4264.75 2.13 175.59 232.19 61.76 20 29 37 3664.8 -1.66 168.97  
 100.00 5 30 19 2151.74 -25.15 34.82 234.98 106.72 6 6 11 1551.7 -22.62 26.94  
 100.00 20 33 18 4023.55 2.95 157.40 231.74 60.24 21 40 21 3423.6 -1.03 150.88  
 110.00 6 53 24 1891.77 -27.53 14.17 234.07 111.12 7 24 56 1291.8 -24.41 6.39  
 110.00 21 26 42 3856.29 5.09 143.38 230.41 56.15 22 30 58 3256.3 .61 137.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2902 TRA -.6501 TC3 1.7069 BAU .2593 SGT 1745.1 SGR 1125.5 SCS 527.4 ST 697.7 SR 487.3 SS 662.3  
 RDE -.2347 RRA -.2393 RC3 1.5590 FAU .08470 RRT .9161 RRF -.9757 RTF -.9301 CRT .9555 CRS .9459 CST .9982  
 FDE .6524 FRA 1.5560 FC3-8.7398 BSP 6775 SGB 2076.6 R23 -.1978 R13 -.9597 LSA 1069.5 MSA 135.8 SSA 24.5  
 BDE .3752 BRA .6927 BC3 2.3117 FSP -1607 SGI 2040.4 S62 385.9 THA 31.85 EL1 842.7 EL2 119.0 ALF 34.50

LAUNCH DATE JAN 9 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 108.56 VL 27.472 GAL .83 AZL 90.04 HCA 148.18 SMA 126.44 ECC .16406 INC .0363 V1 30.285
RP 108.84 LAP -.02 LOP 256.74 VP 37.332 GAP -4.88 AZP 89.97 TAL 175.74 TAP 323.92 RCA 105.70 APO 147.19 V2 34.883
RC 66.131 GL -.38 GP 28.78 ZAL 82.98 ZAP 43.21 ETS 327.39 ZAE 142.81 ETE 41.64 ZAC 120.61 ETC 142.58 CLP -33.74

DISTANCE 337.631

PLANETOCENTRIC CONIC

C3 8.048 VHL 2.837 DLA 9.54 RAL 23.85 RAD 6567.3 VEL 11.377 PTH 1.96 VHP 4.618 DPA 40.54 RAP 28.50 ECC 1.1324
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 30 42 2320.70 -21.99 48.32 234.23 108.30 5 9 23 1720.7 -19.29 40.69
90.00 18 53 45 4363.84 5.30 181.14 231.95 62.14 20 6 29 3763.8 1.53 174.49
100.00 5 56 44 2043.23 -22.83 27.60 233.92 109.84 6 30 47 1443.2 -19.91 20.01
100.00 20 10 25 4116.53 6.08 162.54 231.52 60.60 21 19 1 3516.5 2.12 155.98
110.00 7 15 38 1796.31 -25.03 7.88 232.95 114.08 7 45 35 1196.3 -21.56 .45
110.00 21 7 59 3936.22 8.10 147.61 230.28 56.68 22 13 36 3336.2 3.66 141.34

DIFFERENTIAL CORRECTIONS

TDE -.2461 TRA -.6298 TC3 1.7145 BAU .2779
RDE -.2102 RRA -.2965 RC3 1.9321 FAU .08908
FDE .5099 FRA 1.6678 FC3-9.5823 B8P 6958
BDE .3236 BRA .6961 BC3 2.5831 F8P -1721

MID-COURSE EXECUTION ACCURACY

SGT 1690.2 SGR 1323.1 SG3 561.8
RRT .9214 RRF -.9846 RTF -.9286
SG8 2146.5 R23 -.1903 R13 -.9676
SG1 2106.4 SG2 412.7 THA 37.49

ORBIT DETERMINATION ACCURACY

ST 630.5 SR 463.1 SS 583.3
CRT .9672 CRS .9293 CST .9905
LSA 965.9 MSA 136.5 SSA 25.6
EL1 776.5 EL2 95.6 ALF 36.02

LAUNCH DATE JAN 9 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 108.56 VL 27.516 GAL .75 AZL 90.43 HCA 151.36 SMA 126.74 ECC .16127 INC .4350 V1 30.285
RP 108.67 LAP -.21 LOP 259.92 VP 37.355 GAP -4.37 AZP 89.62 TAL 176.09 TAP 327.44 RCA 106.30 APO 147.18 V2 34.873
RC 66.274 GL -4.28 GP 32.79 ZAL 83.68 ZAP 47.81 ETS 327.70 ZAE 140.51 ETE 47.39 ZAC 117.83 ETC 141.18 CLP -37.12

DISTANCE 344.137

PLANETOCENTRIC CONIC

C3 7.822 VHL 2.797 DLA 5.65 RAL 24.63 RAD 6567.3 VEL 11.367 PTH 1.96 VHP 4.522 DPA 44.03 RAP 25.83 ECC 1.1287
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 4 8 2190.99 -18.99 39.99 233.74 111.41 5 40 39 1591.0 -15.91 32.67
90.00 18 26 35 4483.02 9.04 187.90 232.40 63.05 19 41 18 3883.0 5.36 181.16
100.00 6 20 9 1920.01 -19.76 19.73 233.41 112.89 7 0 9 1320.0 -16.49 12.46
100.00 19 45 16 4229.24 9.78 168.85 232.00 61.61 20 55 45 3629.2 5.92 162.20
110.00 7 42 31 1687.27 -21.82 1.04 232.38 118.99 8 10 38 1087.3 -18.03 333.96
110.00 20 47 23 4034.74 11.74 152.92 230.83 57.66 21 54 38 3434.7 7.39 146.53

DIFFERENTIAL CORRECTIONS

TDE -.1994 TRA -.6078 TC3 1.6572 BAU .3010
RDE -.1701 RRA -.3693 RC3 2.3537 FAU .09179
FDE .3112 FRA 1.7747 FC-10.1599 B8P 7204
BDE .2821 BRA .7111 BC3 2.8788 F8P -1803

MID-COURSE EXECUTION ACCURACY

SGT 1609.6 SGR 1559.8 SG3 586.3
RRT .9216 RRF -.9903 RTF -.9245
SG8 2241.4 R23 -.1726 R13 -.9736
SG1 2197.1 SG2 443.5 THA 44.02

ORBIT DETERMINATION ACCURACY

ST 555.5 SR 418.4 SS 499.9
CRT .9858 CRS .8947 CST .9520
LSA 841.9 MSA 155.1 SSA 24.1
EL1 693.1 EL2 56.4 ALF 36.88

LAUNCH DATE JAN 9 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 108.56 VL 27.554 GAL .68 AZL 90.92 HCA 154.52 SMA 126.99 ECC .15884 INC .9200 V1 30.285
RP 108.70 LAP -.40 LOP 263.09 VP 37.374 GAP -3.88 AZP 89.17 TAL 176.38 TAP 330.91 RCA 106.82 APO 147.16 V2 34.862
RC 70.456 GL -9.14 GP 37.45 ZAL 84.34 ZAP 52.98 ETS 328.19 ZAE 137.68 ETE 53.40 ZAC 114.43 ETC 140.00 CLP -40.69

DISTANCE 350.620

PLANETOCENTRIC CONIC

C3 7.756 VHL 2.785 DLA .91 RAL 25.84 RAD 6567.3 VEL 11.364 PTH 1.96 VHP 4.494 DPA 47.94 RAP 22.16 ECC 1.1276
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 44 27 2041.51 -15.03 30.81 234.04 114.29 6 18 28 1441.5 -11.62 23.79
90.00 17 55 54 4629.42 13.43 196.42 233.83 64.83 19 13 3 4029.4 9.93 189.49
100.00 7 6 13 1777.77 -15.77 11.06 233.69 115.73 7 35 50 1177.8 -12.18 4.11
100.00 19 16 49 4368.39 14.16 176.86 233.46 63.40 20 29 37 3768.4 10.48 170.00
110.00 8 15 25 1561.14 -17.74 353.53 232.60 119.71 8 41 26 961.1 -13.65 346.81
110.00 20 24 6 4157.79 16.12 159.77 232.36 59.44 21 33 24 3557.8 11.94 153.15

DIFFERENTIAL CORRECTIONS

TDE -.1527 TRA -.5846 TC3 1.5234 BAU .3301
RDE -.1058 RRA -.4658 RC3 2.7953 FAU .09195
FDE .0559 FRA 1.8709 FC-10.2643 B8P 7604
BDE .1858 BRA .7469 BC3 3.1834 F8P -1843

MID-COURSE EXECUTION ACCURACY

SGT 1505.1 SGR 1840.3 SG3 595.6
RRT .9171 RRF -.9940 RTF -.9173
SG8 2377.4 R23 -.1460 R13 -.9833
SG1 2329.7 SG2 474.0 THA 51.22

ORBIT DETERMINATION ACCURACY

ST 479.1 SR 363.3 SS 455.5
CRT .9949 CRS .8554 CST .8134
LSA 723.6 MSA 212.2 SSA 18.9
EL1 600.6 EL2 29.3 ALF 37.13

LAUNCH DATE JAN 9 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

RL 147.11 LAL .00 LOL 108.56 VL 27.588 GAL .63 AZL 91.53 HCA 157.69 SMA 127.22 ECC .15675 INC 1.5326 V1 30.285
RP 108.73 LAP -.58 LOP 266.26 VP 37.389 GAP -3.41 AZP 88.58 TAL 176.63 TAP 334.32 RCA 107.28 APO 147.16 V2 34.853
RC 72.872 GL -13.18 GP 42.81 ZAL 84.96 ZAP 58.41 ETS 328.97 ZAE 133.96 ETE 59.43 ZAC 110.39 ETC 139.14 CLP -44.43

DISTANCE 357.078

PLANETOCENTRIC CONIC

C3 7.942 VHL 2.818 DLA -4.90 RAL 27.58 RAD 6567.3 VEL 11.372 PTH 1.96 VHP 4.560 DPA 52.26 RAP 17.14 ECC 1.1307
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 34 34 1865.56 -9.86 20.48 235.54 116.88 7 5 39 1265.6 -6.20 13.71
90.00 17 19 37 4814.08 18.46 207.63 236.72 68.14 18 39 51 4214.1 15.34 200.36
100.00 7 53 36 1610.82 -10.60 1.34 235.15 118.11 8 20 27 1010.6 -6.76 354.65
100.00 18 43 16 4544.28 19.24 187.45 236.38 66.67 19 59 0 3944.3 15.92 180.23
110.00 8 56 34 1413.47 -12.57 345.21 233.98 122.05 9 20 7 813.5 -8.24 338.79
110.00 19 56 48 4314.17 21.29 168.95 233.34 62.60 21 8 42 3714.2 17.45 161.92

DIFFERENTIAL CORRECTIONS

TDE -.1092 TRA -.3552 TC3 1.3078 BAU .3666
RDE -.0030 RRA -.5882 RC3 3.1951 FAU .08875
FDE -.2504 FRA 1.9277 FC3-9.6745 B8P 8182
BDE .1092 BRA .8089 BC3 3.4524 F8P -1819

MID-COURSE EXECUTION ACCURACY

SGT 1369.7 SGR 2164.2 SG3 582.6
RRT .9070 RRF -.9962 RTF -.9055
SG8 2561.3 R23 -.1141 R13 -.9897
SG1 2512.6 SG2 496.9 THA 58.79

ORBIT DETERMINATION ACCURACY

ST 406.6 SR 364.2 SS 510.4
CRT .8437 CRS .9129 CST .5538
LSA 684.9 MSA 298.7 SSA 12.6
EL1 524.3 EL2 151.6 ALF 41.27

LAUNCH DATE JAN 9 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 27.616 GAL .58 AZL 92.34 HCA 160.85 SMA 127.41 ECC .15496 INC 2.3349 V1 30.285  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.402 GAP -2.95 AZP 87.79 TAL 176.83 TAP 337.67 RCA 107.66 APO 147.15 V2 34.844  
 RC 74.919 GL -22.60 GP 46.92 ZAL 85.55 ZAP 64.08 ETS 330.18 ZAE 129.21 ETE 65.24 ZAC 105.72 ETC 136.71 CLP -48.31

DISTANCE 363.511

PLANETOCENTRIC CONIC  
 C3 8.569 VHL 2.927 DLA -11.94 RAL 29.99 RAD 6567.3 VEL 11.400 PTH 1.97 VHP 4.761 DPA 56.89 RAP 10.20 ECC 1.1410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 39 52 1652.18 -3.14 8.40 236.94 118.16 8 7 24 1052.2 .65 1.77  
 90.00 16 33 33 5055.86 23.82 223.33 241.88 74.21 17 37 49 4455.9 21.42 215.48  
 100.00 8 55 8 1409.35 -3.96 350.09 238.48 119.65 9 18 37 809.4 .02 343.56  
 100.00 18 0 58 4773.92 24.71 202.30 241.58 72.62 19 20 32 4173.9 22.10 194.48  
 110.00 9 49 38 1238.64 -6.09 335.82 237.16 123.70 10 10 17 638.6 -1.62 329.59  
 110.00 19 22 57 4517.41 27.07 181.89 240.65 68.28 20 38 14 3917.4 23.88 174.18

DIFFERENTIAL CORRECTIONS  
 TDE -.0793 TRA -.3240 TC3 .9802 BAU .4055 SGT 1205.1 SGR 2520.6 SCS 540.2 ST 351.1 SR 548.8 SS 666.9  
 RDE .1540 RRA -.7577 RC3 3.4011 FAU .08056 RRT .8639 RRF -.9977 RTF -.8812 CRT .5046 CRS .9842 CST .3446  
 FDE -.5703 FRA 1.9447 FC3-8.1386 BSP 8829 SGB 2793.9 R23 -.0839 R13 -.9941 LSA 874.2 MSA 323.9 SSA 8.0  
 BOE .1732 BRA .9212 BC3 3.5395 FSP -1688 SGI 2745.5 SGT 517.5 THA 66.19 EL1 586.5 EL2 283.7 ALF 66.22

LAUNCH DATE JAN 9 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 27.640 GAL .55 AZL 93.44 HCA 164.00 SMA 127.57 ECC .15346 INC 3.4400 V1 30.285  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.412 GAP -2.50 AZP 86.69 TAL 176.96 TAP 340.96 RCA 107.99 APO 147.15 V2 34.835  
 RC 77.184 GL -31.52 GP 55.79 ZAL 86.16 ZAP 69.83 ETS 331.94 ZAE 123.35 ETE 70.62 ZAC 100.51 ETC 138.80 CLP -52.18

DISTANCE 369.916

PLANETOCENTRIC CONIC  
 C3 10.082 VHL 3.172 DLA -20.29 RAL 33.26 RAD 6567.4 VEL 11.465 PTH 1.99 VHP 5.169 DPA 61.64 RAP .42 ECC 1.1656  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 13 35 1373.28 5.83 352.80 245.67 117.76 9 36 28 773.3 9.50 346.05  
 90.00 15 25 58 5397.24 27.99 247.37 250.40 85.49 16 55 36 4797.2 27.07 238.82  
 100.00 10 21 46 1153.23 4.71 336.01 245.05 119.55 10 40 59 553.2 8.61 329.40  
 100.00 17 0 28 5092.52 29.26 224.82 250.26 83.58 18 25 21 4492.5 28.06 216.22  
 110.00 11 1 54 1027.44 1.96 324.77 243.35 124.13 11 19 2 427.4 6.43 318.53  
 110.00 18 36 49 4791.08 32.45 201.34 249.66 78.60 19 56 40 4191.1 30.53 192.64

DIFFERENTIAL CORRECTIONS  
 TDE -.0706 TRA -.4791 TC3 .6145 BAU .4487 SGT 1009.7 SGR 2903.9 SCS 468.2 ST 305.0 SR 914.5 SS 851.8  
 RDE .3948 RRA -.9852 RC3 3.2781 FAU .06810 RRT .8425 RRF -.9985 RTF -.8388 CRT .2414 CRS .9977 CST .1760  
 FDE -.8659 FRA 1.8797 FC3-5.8588 BSP 9717 SGB 3074.5 R23 -.0565 R13 -.9969 LSA 1250.8 MSA 300.6 SSA 5.0  
 BOE .4010 BRA 1.0955 BC3 3.3552 FSP -1476 SGI 3029.9 SGT 521.4 THA 73.16 EL1 917.8 EL2 294.9 ALF 84.87

LAUNCH DATE JAN 9 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 27.660 GAL .54 AZL 95.07 HCA 167.15 SMA 127.70 ECC .15225 INC 5.0686 V1 30.285  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.419 GAP -2.08 AZP 85.06 TAL 177.02 TAP 344.16 RCA 108.26 APO 147.15 V2 34.827  
 RC 79.493 GL -41.71 GP 63.42 ZAL 86.80 ZAP 75.41 ETS 334.34 ZAE 116.37 ETE 75.42 ZAC 94.88 ETC 139.49 CLP -55.73

DISTANCE 376.290

PLANETOCENTRIC CONIC  
 C3 13.489 VHL 3.673 DLA -29.68 RAL 37.64 RAD 6567.5 VEL 11.614 PTH 2.03 VHP 5.924 DPA 66.11 RAP 346.27 ECC 1.2220  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.73 11 21 25 1047.33 22.70 336.86 260.40 109.85 11 38 50 447.3 25.17 328.95  
 99.27 13 53 7 5845.58 22.71 278.78 260.41 109.64 15 30 33 5245.6 25.18 270.87  
 100.00 13 28 28 636.38 20.51 305.82 259.50 112.24 13 39 4 36.4 23.34 298.17  
 100.00 14 28 43 5751.77 24.94 271.14 261.21 107.04 16 4 15 5131.8 27.03 262.96  
 110.00 12 55 21 740.79 12.69 309.51 255.33 122.01 13 7 42 140.8 16.83 302.84  
 110.00 17 18 19 5200.12 33.52 232.95 263.32 97.10 18 44 59 4600.1 34.14 223.76

DIFFERENTIAL CORRECTIONS  
 TDE -.1055 TRA -.4141 TC3 .2709 BAU .4857 SGT 787.2 SGR 3280.8 SCS 369.7 ST 277.3 SR 1367.3 SS 973.0  
 RDE .7500 RRA -1.3085 RC3 2.6795 FAU .05162 RRT .7536 RRF -.9990 RTF -.7486 CRT -.0924 CRS .9996 CST -.1217  
 FDE -1.0611 FRA 1.7303 FC3-3.3128 BSP 10709 SGB 3373.9 R23 -.0346 R13 -.9984 LSA 1678.2 MSA 276.8 SSA 3.2  
 BOE .7374 BRA 1.3725 BC3 2.8932 FSP -1180 SGI 3335.3 SGT 509.0 THA 79.50 EL1 1367.5 EL2 276.1 ALF 91.12

LAUNCH DATE JAN 9 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC  
 RL 147.11 LAL .00 LOL 108.56 VL 27.676 GAL .53 AZL 97.72 HCA 170.27 SMA 127.81 ECC .15125 INC 7.7244 V1 30.285  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.424 GAP -1.66 AZP 82.39 TAL 177.00 TAP 347.27 RCA 108.48 APO 147.15 V2 34.820  
 RC 81.813 GL -52.36 GP 71.90 ZAL 87.50 ZAP 80.49 ETS 337.20 ZAE 108.20 ETE 79.43 ZAC 88.96 ETC 140.66 CLP -57.88

DISTANCE 382.624

PLANETOCENTRIC CONIC  
 C3 22.066 VHL 4.697 DLA -39.27 RAL 43.29 RAD 6567.9 VEL 11.977 PTH 2.13 VHP 7.341 DPA 69.51 RAP 325.55 ECC 1.3631  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.57 9 45 9 1525.15 25.82 15.57 276.99 120.68 10 10 34 925.1 29.68 8.07  
 118.43 16 14 23 5594.84 25.83 261.00 277.00 120.67 17 47 38 4994.8 29.69 253.50  
 61.57 9 45 9 1525.15 25.82 15.57 276.99 120.68 10 10 34 925.1 29.68 8.07  
 118.43 16 14 23 5594.84 25.83 261.00 277.00 120.67 17 47 38 4994.8 29.69 253.50  
 61.57 9 45 9 1525.15 25.82 15.57 276.99 120.68 10 10 34 925.1 29.68 8.07  
 118.43 16 14 23 5594.84 25.83 261.00 277.00 120.67 17 47 38 4994.8 29.69 253.50

DIFFERENTIAL CORRECTIONS  
 TDE -.2140 TRA -.3173 TC3 .0428 BAU .4932 SGT 565.3 SGR 3623.9 SCS 259.6 ST 301.0 SR 1775.9 SS 966.4  
 RDE 1.2723 RRA -1.8241 RC3 1.6713 FAU .03277 RRT .5343 RRF -.9993 RTF -.5290 CRT -.5157 CRS .9999 CST -.5281  
 FDE -1.1003 FRA 1.9240 FC3-1.2859 BSP 11542 SGB 3667.7 R23 -.0169 R13 -.9992 LSA 2027.9 MSA 256.9 SSA 2.1  
 BOE 1.2902 BRA 1.8515 BC3 1.6718 FSP -829 SGI 3636.7 SGT 476.2 THA 85.15 EL1 1782.8 EL2 256.9 ALF 95.10



LAUNCH DATE JAN 9 1969

FLIGHT TIME 142.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 388.892

RL 147.11 LAL .00 LOL 108.56 VL 27.688 GAL .55 AZL 102.84 HCA 173.36 SMA 127.90 ECC .15052 INC12.8355 V1 30.285
RP 108.85 LAP -1.47 LOP 262.08 VP 37.427 GAP -1.27 AZP 77.25 TAL 176.87 TAP 350.23 RCA 108.65 APO 147.15 V2 34.813
RC 84.153 GL -61.81 GP 81.52 ZAL 88.24 ZAP 84.73 ETS 338.92 ZAE 98.38 ETE 81.17 ZAC 82.79 ETC 140.98 CLP -51.44

PLANETOCENTRIC CONIC

C3 48.701 VHL 6.979 DLA -47.51 RAL 49.68 RAD 6568.8 VEL 13.041 PTH 2.38 VHP 10.308 DPA 70.44 RAP 296.66 ECC 1.8015
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.11 9 24 11 1847.88 21.64 40.85 298.35 133.39 9 54 59 1247.9 27.00 34.75
129.89 17 26 21 5667.88 21.65 264.03 298.37 133.38 19 0 49 5067.9 27.02 257.93
50.11 9 24 11 1847.88 21.64 40.85 298.35 133.39 9 54 59 1247.9 27.00 34.75
129.89 17 26 21 5667.88 21.65 264.03 298.37 133.38 19 0 49 5067.9 27.02 257.93
50.11 9 24 11 1847.88 21.64 40.85 298.35 133.39 9 54 59 1247.9 27.00 34.75
129.89 17 26 21 5667.88 21.65 264.03 298.37 133.38 19 0 49 5067.9 27.02 257.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3784 TRA -.1550 TC3 -.0071 BAU .4145 SGT 363.4 SGR 3899.1 SG3 158.2 ST 315.7 SR 2024.1 SS 851.5
RDE 2.1362 RRA-2.7703 RC3 .6366 FAU .01475 RRT .0569 RRF -.9996 RTF -.0586 CRT -.7632 CRS 1.0000 CST -.7628
FDE-1.0086 FRA 1.3098 FC3 -.2621 BSP 12407 SGB 3916.0 R23 .0012 R13 -.9996 LSA 2209.2 MSA 202.8 SSA 1.3
BDE 2.1694 BRA 2.7746 BC3 .6367 FSP -514 SG1 3899.1 SG2 362.8 THA 89.69 EL1 2038.6 EL2 202.6 ALF 96.86

LAUNCH DATE JAN 9 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 394.981

RL 147.11 LAL .00 LOL 108.56 VL 27.697 GAL .61 AZL 116.33 HCA 176.30 SMA 127.96 ECC .15003 INC26.3279 V1 30.285
RP 108.87 LAP -1.64 LOP 285.24 VP 37.428 GAP -.94 AZP 63.72 TAL 176.52 TAP 352.82 RCA 108.76 APO 147.16 V2 34.807
RC 86.508 GL -86.01 GP 82.92 ZAL 88.96 ZAP 87.78 ETS 188.77 ZAE 84.38 ETE 290.34 ZAC 75.69 ETC 350.81 CLP 71.68

PLANETOCENTRIC CONIC

C3 180.770 VHL 13.445 DLA -51.25 RAL 52.69 RAD 6570.9 VEL 17.381 PTH 2.96 VHP 18.428 DPA 65.86 RAP 260.74 ECC 3.9750
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.32 9 20 25 2166.99 8.45 57.93 315.83 140.74 9 56 32 1567.0 14.60 53.13
134.68 17 54 9 623.23 8.46 295.62 315.85 140.74 18 4 33 23.2 14.62 290.81
45.32 9 20 25 2166.99 8.45 57.93 315.83 140.74 9 56 32 1567.0 14.60 53.13
134.68 17 54 9 623.23 8.46 295.62 315.85 140.74 18 4 33 23.2 14.62 290.81
45.32 9 20 25 2166.99 8.45 57.93 315.83 140.74 9 56 32 1567.0 14.60 53.13
134.68 17 54 9 623.23 8.46 295.62 315.85 140.74 18 4 33 23.2 14.62 290.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.6764 TRA -.8221 TC3 -.0279 BAU .1348 SGT 1665.4 SGR 3659.2 SG3 87.0 ST 1575.7 SR 1474.7 SS 830.7
RDE-2.4241 RRA 5.1524 RC3 .0483 FAU-.00425 RRT -.5894 RRF .9849 RTF -.7198 CRT -.7726 CRS -.9690 CST .9055
FDE-1.0468 FRA 1.3243 FC3 .0203 BSP 13817 SGB 4020.4 R23 .0695 R13 .9975 LSA 2193.6 MSA 731.8 SSA .7
BDE 4.4037 BRA 5.2176 BC3 .0558 FSP -309 SG1 3806.7 SG2 1293.3 THA 107.04 EL1 2032.4 EL2 725.9 ALF 137.45

LAUNCH DATE JAN 9 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 399.884

RL 147.11 LAL .00 LOL 108.56 VL 27.703 GAL .91 AZL 175.15 HCA 178.19 SMA 128.00 ECC .15013 INC85.1423 V1 30.285
RP 108.89 LAP -1.80 LOP 288.41 VP 37.427 GAP -.91 AZP 4.85 TAL 174.82 TAP 353.01 RCA 108.78 APO 147.22 V2 34.802
RC 88.877 GL -44.65 GP 48.14 ZAL 89.43 ZAP 89.22 ETS 178.11 ZAE 49.38 ETE 281.69 ZAC 64.91 ETC 350.57 CLP 88.83

PLANETOCENTRIC CONIC

C31542.523 VHL 39.275 DLA -33.43 RAL 36.46 RAD 6573.2 VEL 40.790 PTH 3.56 VHP 50.219 DPA 39.06 RAP 220.16 ECC26.3860
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.44 10 11 40 2026.53 -.85 37.57 307.73 123.42 10 45 26 1426.5 3.55 31.31
108.56 14 53 23 1127.93 -.85 330.71 307.74 123.42 15 12 11 527.9 3.57 324.45
71.44 10 11 40 2026.53 -.85 37.57 307.73 123.42 10 45 26 1426.5 3.55 31.31
108.56 14 53 23 1127.93 -.85 330.71 307.74 123.42 15 12 11 527.9 3.57 324.45
110.00 14 7 54 1267.34 -7.17 337.34 303.54 123.51 14 29 1 667.3 -2.72 331.08
110.00 15 58 19 935.12 5.48 319.94 311.93 123.79 16 11 54 335.1 9.88 313.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 6.2875 TRA-2.2564 TC3 -.1038 BAU 5.0222 SGT 1288.9 SGR 2984.2 SG3 61.0 ST 925.2 SR 1344.0 SS 1402.4
RDE-8.1037 RRA12.1529 RC3 .2203 FAU-.09241 RRT -.8665 RRF 1.0000 RTF -.8701 CRT -.9337 CRS -.9999 CST .9375
FDE-1.9598 FRA-2.8646 FC3 .0519 BSP 8929 SGB 3250.7 R23 -.0658 R13 .9978 LSA 2130.8 MSA 297.7 SSA .6
BDE10.2568 BRA12.3606 BC3 .2435 FSP -175 SG1 3194.6 SG2 601.0 THA 111.31 EL1 1608.0 EL2 276.8 ALF 123.87

LAUNCH DATE JAN 9 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 408.664

RL 147.11 LAL .00 LOL 108.56 VL 27.706 GAL .48 AZL 56.94 HCA 183.59 SMA 128.02 ECC .14934 INC33.0603 V1 30.285
RP 108.90 LAP -1.96 LOP 291.57 VP 37.425 GAP .11 AZP 123.01 TAL 177.29 TAP .88 RCA 108.90 APO 147.14 V2 34.797
RC 91.256 GL 84.94 GP -82.55 ZAL 89.39 ZAP 89.98 ETS 169.02 ZAE 82.51 ETE 70.68 ZAC 100.86 ETC 16.72 CLP 89.88

PLANETOCENTRIC CONIC

C3 278.374 VHL 16.685 DLA 62.71 RAL 330.25 RAD 6571.6 VEL 19.992 PTH 3.14 VHP 19.005 DPA -66.32 RAP 116.22 ECC 5.5813
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.39 15 11 52 4949.60 -5.89 239.59 237.21 27.45 16 34 21 4349.6 -12.97 236.23
148.61 1 4 57 3253.49 -5.88 98.96 237.19 27.45 1 59 11 2653.5 -12.96 95.60
31.39 15 11 52 4949.60 -5.89 239.59 237.21 27.45 16 34 21 4349.6 -12.97 236.23
148.61 1 4 57 3253.49 -5.88 98.96 237.19 27.45 1 59 11 2653.5 -12.96 95.60
31.39 15 11 52 4949.60 -5.89 239.59 237.21 27.45 16 34 21 4349.6 -12.97 236.23
148.61 1 4 57 3253.49 -5.88 98.96 237.19 27.45 1 59 11 2653.5 -12.96 95.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-2.4881 TRA 2.0047 TC3 -.0838 BAU .6417 SGT 1750.1 SGR 3882.6 SG3 87.4 ST 965.9 SR 3566.0 SS 1466.5
RD-10.2988 RRA 2.0310 RC3 -.1507 FAU-.01174 RRT .8016 RRF -.9956 RTF -.8533 CRT .9370 CRS .9994 CST .9485
FDE 2.5663 FRA -.6439 FC3 .0365 BSP 13256 SGB 4258.8 R23 .0016 R13 -.9998 LSA 3961.4 MSA 327.4 SSA .9
BDE10.5949 BRA 2.8537 BC3 .1724 FSP -284 SG1 4144.4 SG2 980.3 THA 68.90 EL1 3680.0 EL2 327.0 ALF 75.64

LAUNCH DATE JAN 9 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 414.682

RL 147.11 LAL .00 LOL 108.56 VL 27.707 GAL .57 AZL 71.11 HCA 186.52 SMA 128.02 ECC .14942 INC18.8935 V1 30.285  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.421 GAP .42 AZP 108.78 TAL 176.72 TAP 3.24 RCA 108.89 APO 147.15 V2 34.793  
 RC 93.844 GL 65.55 GP -83.54 ZAL 88.69 ZAP 91.14 ETS 14.70 ZAE 96.23 ETE 277.70 ZAC 106.26 ETC 222.34 CLP-100.21

PLANETOCENTRIC CONIC

C3 97.118 VHL 9.855 DLA 63.65 RAL 330.03 RAD 6569.9 VEL 14.780 PTH 2.67 VHP 10.454 DPA -63.98 RAP 83.26 ECC 2.5983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.27 15 8 21 4773.12 -16.91 235.38 231.39 27.64 16 27 54 4173.1 -23.95 231.74  
 149.73 1 6 44 3068.20 -16.90 93.46 231.37 27.64 1 57 53 2468.2 -23.94 89.83  
 30.27 15 8 21 4773.12 -16.91 235.38 231.39 27.64 16 27 54 4173.1 -23.95 231.74  
 149.73 1 6 44 3068.20 -16.90 93.46 231.37 27.64 1 57 53 2468.2 -23.94 89.83  
 30.27 15 8 21 4773.12 -16.91 235.38 231.39 27.64 16 27 54 4173.1 -23.95 231.74  
 149.73 1 6 44 3068.20 -16.90 93.46 231.37 27.64 1 57 53 2468.2 -23.94 89.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2580 TRA -.2389 TC3 -.0206 BAU .2106 SGT 1920.3 SGR 3928.9 SG3 158.4 ST 1896.5 SR 3294.2 SS 1460.3  
 RDE 5.5490 RRA -1.6945 RC3 -.1609 FAU .01047 RRT .9038 RRF .9932 RTF .9389 CRT .9882 CRS -.9993 CST -.9933  
 FDE 2.7429 FRA -.6757 FC3 -.0933 BSP 13593 SGB 4373.1 R23 -.0128 R13 .9994 LSA 4064.1 MSA 252.7 SSA 1.5  
 BDE 6.4347 BRA 1.7113 BC3 .1622 FSP -517 SG1 4308.4 SG2 749.5 THA 65.37 EL1 3792.7 EL2 252.7 ALF 60.22

LAUNCH DATE JAN 9 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 420.845

RL 147.11 LAL .00 LOL 108.56 VL 27.704 GAL .65 AZL 76.38 HCA 189.60 SMA 128.01 ECC .14964 INC13.6226 V1 30.285  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.417 GAP .76 AZP 103.44 TAL 176.28 TAP 5.88 RCA 108.85 APO 147.16 V2 34.789  
 RC 96.038 GL 62.67 GP -74.21 ZAL 87.95 ZAP 93.47 ETS 354.93 ZAE 105.21 ETE 258.33 ZAC 108.98 ETC 202.48 CLP-102.85

PLANETOCENTRIC CONIC

C3 53.940 VHL 7.344 DLA 62.44 RAL 335.94 RAD 6569.0 VEL 13.240 PTH 2.42 VHP 7.350 DPA -59.40 RAP 66.02 ECC 1.8877  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.71 15 35 19 4630.03 -24.85 229.79 231.96 30.66 16 52 29 4030.0 -31.65 225.43  
 148.29 1 26 52 2936.54 -24.84 89.54 231.94 30.65 2 15 48 2336.5 -31.64 85.18  
 31.71 15 35 19 4630.03 -24.85 229.79 231.96 30.66 16 52 29 4030.0 -31.65 225.43  
 148.29 1 26 52 2936.54 -24.84 89.54 231.94 30.65 2 15 48 2336.5 -31.64 85.18  
 31.71 15 35 19 4630.03 -24.85 229.79 231.96 30.66 16 52 29 4030.0 -31.65 225.43  
 148.29 1 26 52 2936.54 -24.84 89.54 231.94 30.65 2 15 48 2336.5 -31.64 85.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4464 TRA -.6529 TC3 -.2581 BAU .4194 SGT 2235.6 SGR 3766.5 SG3 260.7 ST 1936.9 SR 3387.7 SS 1733.2  
 RDE 4.3025 RRA -.9061 RC3 -.5212 FAU .02952 RRT .9950 RRF .9992 RTF .9904 CRT .9994 CRS -.9999 CST -.9989  
 FDE 3.4712 FRA -.6730 FC3 -.4739 BSP 13701 SGB 4380.0 R23 .0632 R13 .9979 LSA 4269.4 MSA 67.4 SSA 1.0  
 BDE 4.9494 BRA 1.1160 BC3 .5816 FSP -867 SG1 4375.7 SG2 192.8 THA 59.37 EL1 3901.9 EL2 59.9 ALF 60.25

LAUNCH DATE JAN 9 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 427.035

RL 147.11 LAL .00 LOL 108.56 VL 27.700 GAL .74 AZL 79.09 HCA 192.72 SMA 127.98 ECC .15003 INC10.9073 V1 30.285  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.411 GAP 1.11 AZP 100.65 TAL 174.83 TAP 8.54 RCA 108.78 APO 147.18 V2 34.787  
 RC 98.436 GL 59.38 GP -66.45 ZAL 87.15 ZAP 96.73 ETS 348.78 ZAE 112.28 ETE 251.56 ZAC 110.44 ETC 195.93 CLP-107.05

PLANETOCENTRIC CONIC

C3 37.091 VHL 6.090 DLA 60.74 RAL 341.98 RAD 6568.4 VEL 12.588 PTH 2.28 VHP 5.842 DPA -54.59 RAP 54.77 ECC 1.6104  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.72 16 4 21 4527.44 -29.77 224.28 233.30 34.27 17 19 49 3927.4 -36.27 219.12  
 148.28 1 46 5 2851.17 -29.76 86.43 233.29 34.26 2 33 36 2251.2 -36.26 81.27  
 33.72 16 4 21 4527.44 -29.77 224.28 233.30 34.27 17 19 49 3927.4 -36.27 219.12  
 148.28 1 46 5 2851.17 -29.76 86.43 233.29 34.26 2 33 36 2251.2 -36.26 81.27  
 33.72 16 4 21 4527.44 -29.77 224.28 233.30 34.27 17 19 49 3927.4 -36.27 219.12  
 148.28 1 46 5 2851.17 -29.76 86.43 233.29 34.26 2 33 36 2251.2 -36.26 81.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3775 TRA -.5873 TC3 -.5639 BAU .4967 SGT 2598.6 SGR 3498.2 SG3 377.8 ST 2262.4 SR 3215.4 SS 2017.4  
 RDE 3.4032 RRA -.5117 RC3 -.8277 FAU .04926 RRT .9865 RRF .9993 RTF .9820 CRT .9983 CRS -1.0000 CST -.9979  
 FDE 4.2328 FRA -.5918 FC3 -1.1497 BSP 13590 SGB 4357.7 R23 .0812 R13 .9962 LSA 4417.4 MSA 117.6 SSA 1.8  
 BDE 4.1514 BRA .7790 BC3 1.0016 FSP -1268 SG1 4344.2 SG2 343.3 THA 53.50 EL1 3930.0 EL2 108.1 ALF 54.89

LAUNCH DATE JAN 9 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 433.223

RL 147.11 LAL .00 LOL 108.56 VL 27.693 GAL .83 AZL 80.73 HCA 195.85 SMA 127.93 ECC .15057 INC 9.2506 V1 30.285  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.404 GAP 1.46 AZP 98.90 TAL 175.33 TAP 11.18 RCA 108.67 APO 147.20 V2 34.785  
 RC 100.837 GL 56.25 GP -59.59 ZAL 86.38 ZAP 100.63 ETS 344.63 ZAE 118.06 ETE 245.69 ZAC 111.06 ETC 191.10 CLP-111.38

PLANETOCENTRIC CONIC

C3 28.662 VHL 5.354 DLA 58.99 RAL 347.27 RAD 6568.2 VEL 12.249 PTH 2.20 VHP 5.002 DPA -49.88 RAP 46.57 ECC 1.4717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.82 16 30 47 4452.70 -32.73 219.23 234.56 37.77 17 45 0 3852.7 -38.90 213.36  
 144.18 2 1 52 2796.13 -32.72 83.96 234.54 37.76 2 48 28 2196.1 -38.89 78.09  
 35.82 16 30 47 4452.70 -32.73 219.23 234.56 37.77 17 45 0 3852.7 -38.90 213.36  
 144.18 2 1 52 2796.13 -32.72 83.96 234.54 37.76 2 48 28 2196.1 -38.89 78.09  
 35.82 16 30 47 4452.70 -32.73 219.23 234.56 37.77 17 45 0 3852.7 -38.90 213.36  
 144.18 2 1 52 2796.13 -32.72 83.96 234.54 37.76 2 48 28 2196.1 -38.89 78.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3788 TRA -.4993 TC3 -.9230 BAU .5356 SGT 2919.4 SGR 3202.7 SG3 492.8 ST 2562.8 SR 2949.2 SS 2241.1  
 RDE 2.7506 RRA -.2734 RC3 -1.0498 FAU .06842 RRT .9832 RRF .9991 RTF .9789 CRT .9980 CRS -1.0000 CST -.9976  
 FDE 4.8382 FRA -.4379 FC3 -2.0666 BSP 13530 SGB 4333.7 R23 .1012 R13 .9941 LSA 4502.1 MSA 138.4 SSA 2.4  
 BDE 3.6354 BRA .5703 BC3 1.3979 FSP -1676 SG1 4315.5 SG2 395.8 THA 47.69 EL1 3905.2 EL2 122.8 ALF 49.02

LAUNCH DATE JAN 9 1969 FLIGHT TIME 158.00 ARRIVAL DATE JUN 16 1969

Heliocentric Conic: RL 147.11 LAL .00 LOL 108.56 VL 27.685 GAL .93 AZL 81.87 HCA 198.99 SMA 127.88 ECC .15126 INC 8.1304 V1 30.285  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.397 GAP 1.80 AZP 97.69 TAL 174.80 TAP 13.79 RCA 108.53 APO 147.22 V2 34.784  
 RC 103.240 GL 53.39 GP -53.45 ZAL 85.37 ZAP 104.92 ETS 341.57 ZAE 122.70 ETE 239.90 ZAC 111.13 ETC 187.17 CLP-115.61

Distance 439.403

Planetary Centric Conic: C3 23.785 VML 4.877 DLA 57.32 RAL 351.84 RAD 6568.0 VEL 12.048 PTH 2.15 VHP 4.505 DPA -45.39 RAP 40.28 ECC 1.3914  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.83 16 54 17 4396.32 -34.47 214.74 235.73 40.91 18 7 33 3796.3 -40.33 208.30  
 142.17 2 14 50 2760.20 -34.46 82.03 235.72 40.90 3 0 50 2160.2 -40.32 75.58  
 37.83 16 54 17 4396.32 -34.47 214.74 235.73 40.91 18 7 33 3796.3 -40.33 208.30  
 142.17 2 14 50 2760.20 -34.46 82.03 235.72 40.90 3 0 50 2160.2 -40.32 75.58  
 37.83 16 54 17 4396.32 -34.47 214.74 235.73 40.91 18 7 33 3796.3 -40.33 208.30  
 142.17 2 14 50 2760.20 -34.46 82.03 235.72 40.90 3 0 50 2160.2 -40.32 75.58

Differential Corrections: TDE 2.3942 TRA -.4069 TC3-1.3110 BAU .5600  
 RDE 2.2534 RRA -.1183 RC3-1.1760 FAU .08495  
 FDE 5.2330 FRA -.2177 FC3-3.0922 BSP 13415  
 BDE 3.2878 BRA .4237 BC3 1.7611 FSP -2023

Mid-Course Execution Accuracy: SGT 3214.1 SGR 2896.6 SG3 593.1  
 RRT .9818 RRF .9987 RTF .9776  
 SGB 4326.7 R23 .1205 R13 .9915  
 SGI 4507.3 SG2 410.1 THA 41.97

Orbit Determination Accuracy: ST 2825.5 SR 2648.7 SS 2393.7  
 CRT .9979 CRS -1.0000 CST -.9975  
 LSA 4550.4 MSA 150.3 SBA 3.1  
 EL1 3870.8 EL2 125.6 ALF 43.15

LAUNCH DATE JAN 9 1969 FLIGHT TIME 160.00 ARRIVAL DATE JUN 18 1969

Heliocentric Conic: RL 147.11 LAL .00 LOL 108.56 VL 27.675 GAL 1.04 AZL 82.68 HCA 202.14 SMA 127.80 ECC .15210 INC 7.3186 V1 30.285  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.389 GAP 2.14 AZP 96.78 TAL 174.21 TAP 16.35 RCA 108.36 APO 147.24 V2 34.783  
 RC 105.643 GL 50.80 GP -47.95 ZAL 84.36 ZAP 109.35 ETS 339.33 ZAE 126.31 ETE 234.11 ZAC 110.88 ETC 183.97 CLP-119.65

Distance 445.569

Planetary Centric Conic: C3 20.690 VML 4.549 DLA 55.80 RAL 355.87 RAD 6567.8 VEL 11.919 PTH 2.12 VHP 4.207 DPA -41.18 RAP 35.36 ECC 1.3405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.68 17 15 23 4352.31 -35.47 210.83 236.93 43.64 18 27 55 3752.3 -41.04 203.93  
 140.32 2 25 50 2736.69 -35.45 80.56 236.91 43.63 3 11 27 2136.7 -41.03 73.66  
 39.68 17 15 23 4352.31 -35.47 210.83 236.93 43.64 18 27 55 3752.3 -41.04 203.93  
 140.32 2 25 50 2736.69 -35.45 80.56 236.91 43.63 3 11 27 2136.7 -41.03 73.66  
 39.68 17 15 23 4352.31 -35.47 210.83 236.93 43.64 18 27 55 3752.3 -41.04 203.93  
 140.32 2 25 50 2736.69 -35.45 80.56 236.91 43.63 3 11 27 2136.7 -41.03 73.66

Differential Corrections: TDE 2.4146 TRA -.3124 TC3-1.7096 BAU .5807  
 RDE 1.8621 RRA -.0135 RC3-1.2185 FAU .09775  
 FDE 5.4114 FRA .0378 FC3-4.0900 BSP 13447  
 BDE 3.0492 BRA .3127 BC3 2.0993 FSP -2303

Mid-Course Execution Accuracy: SGT 3487.0 SGR 2594.5 SG3 671.0  
 RRT .9814 RRF .9981 RTF .9770  
 SGB 4346.3 R23 .1368 R13 .9887  
 SGI 4527.8 SG2 401.0 THA 36.50

Orbit Determination Accuracy: ST 3049.0 SR 2345.8 SS 2477.8  
 CRT .9979 CRS -1.0000 CST -.9974  
 LSA 4573.2 MSA 157.5 SBA 3.7  
 EL1 3845.1 EL2 121.0 ALF 37.56

LAUNCH DATE JAN 9 1969 FLIGHT TIME 162.00 ARRIVAL DATE JUN 20 1969

Heliocentric Conic: RL 147.11 LAL .00 LOL 108.56 VL 27.663 GAL 1.16 AZL 83.30 HCA 205.29 SMA 127.72 ECC .15310 INC 6.7003 V1 30.285  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.380 GAP 2.48 AZP 96.06 TAL 173.57 TAP 18.87 RCA 108.17 APO 147.28 V2 34.783  
 RC 108.045 GL 48.43 GP -43.05 ZAL 83.27 ZAP 113.76 ETS 337.70 ZAE 128.96 ETE 228.42 ZAC 110.47 ETC 181.40 CLP-123.46

Distance 451.720

Planetary Centric Conic: C3 18.602 VML 4.313 DLA 54.42 RAL 359.31 RAD 6567.8 VEL 11.831 PTH 2.10 VHP 4.035 DPA -37.28 RAP 31.48 ECC 1.3061  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.37 17 34 38 4317.11 -35.99 207.44 238.22 45.98 18 46 35 3717.1 -41.32 200.20  
 138.63 2 35 37 2721.44 -35.98 79.46 238.20 45.97 3 20 59 2121.4 -41.31 72.23  
 41.37 17 34 38 4317.11 -35.99 207.44 238.22 45.98 18 46 35 3717.1 -41.32 200.20  
 138.63 2 35 37 2721.44 -35.98 79.46 238.20 45.97 3 20 59 2121.4 -41.31 72.23  
 41.37 17 34 38 4317.11 -35.99 207.44 238.22 45.98 18 46 35 3717.1 -41.32 200.20  
 138.63 2 35 37 2721.44 -35.98 79.46 238.20 45.97 3 20 59 2121.4 -41.31 72.23

Differential Corrections: TDE 2.4358 TRA -.2149 TC3-2.1023 BAU .6012  
 RDE 1.5528 RRA .0569 RC3-1.1935 FAU .10622  
 FDE 5.4121 FRA .3054 FC3-4.9435 BSP 13552  
 BDE 2.8887 BRA .2223 BC3 2.4174 FSP -2490

Mid-Course Execution Accuracy: SGT 3741.7 SGR 2309.1 SG3 724.7  
 RRT .9813 RRF .9970 RTF .9767  
 SGB 4396.8 R23 .1483 R13 .9860  
 SGI 4380.4 SG2 379.8 THA 31.46

Orbit Determination Accuracy: ST 3239.6 SR 2063.4 SS 2507.8  
 CRT .9979 CRS -.9999 CST -.9972  
 LSA 4584.3 MSA 162.3 SBA 4.5  
 EL1 3839.3 EL2 112.0 ALF 32.47

LAUNCH DATE JAN 9 1969 FLIGHT TIME 164.00 ARRIVAL DATE JUN 22 1969

Heliocentric Conic: RL 147.11 LAL .00 LOL 108.56 VL 27.649 GAL 1.29 AZL 83.79 HCA 208.45 SMA 127.63 ECC .15424 INC 6.2110 V1 30.285  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.371 GAP 2.81 AZP 95.47 TAL 172.89 TAP 21.34 RCA 107.94 APO 147.32 V2 34.784  
 RC 110.446 GL 46.26 GP -38.71 ZAL 82.09 ZAP 118.03 ETS 336.56 ZAE 130.79 ETE 222.96 ZAC 110.05 ETC 179.36 CLP-127.03

Distance 457.854

Planetary Centric Conic: C3 17.136 VML 4.140 DLA 53.18 RAL 2.88 RAD 6567.7 VEL 11.769 PTH 2.08 VHP 3.948 DPA -33.69 RAP 28.45 ECC 1.2820  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.90 17 52 35 4288.25 -36.22 204.50 239.65 47.98 19 4 3 3688.3 -41.32 197.00  
 137.10 2 44 36 2712.08 -36.21 78.68 239.63 47.97 3 29 48 2112.1 -41.31 71.19  
 42.90 17 52 35 4288.25 -36.22 204.50 239.65 47.98 19 4 3 3688.3 -41.32 197.00  
 137.10 2 44 36 2712.08 -36.21 78.68 239.63 47.97 3 29 48 2112.1 -41.31 71.19  
 42.90 17 52 35 4288.25 -36.22 204.50 239.65 47.98 19 4 3 3688.3 -41.32 197.00  
 137.10 2 44 36 2712.08 -36.21 78.68 239.63 47.97 3 29 48 2112.1 -41.31 71.19

Differential Corrections: TDE 2.4511 TRA -.1163 TC3-2.4858 BAU .6256  
 RDE 1.3034 RRA .1010 RC3-1.1305 FAU .11134  
 FDE 5.2622 FRA .5571 FC3-5.6250 BSP 13821  
 BDE 2.7781 BRA .1540 BC3 2.7308 FSP -2608

Mid-Course Execution Accuracy: SGT 3977.1 SGR 2045.7 SG3 755.2  
 RRT .9813 RRF .9954 RTF .9766  
 SGB 4472.4 R23 .1533 R13 .9836  
 SGI 4458.6 SG2 351.2 THA 26.96

Orbit Determination Accuracy: ST 3394.1 SR 1805.6 SS 2488.6  
 CRT .9980 CRS -.9999 CST -.9971  
 LSA 4576.7 MSA 164.8 SBA 5.3  
 EL1 3843.2 EL2 99.7 ALF 27.99

LAUNCH DATE JAN 9 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC DISTANCE 463.972

RL 147.11 LAL .00 LOL 108.56 VL 27.634 GAL 1.44 AZL 84.19 HCA 211.60 SMA 127.53 ECC .15553 INC 5.8121 V1 30.285  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.361 GAP 3.14 AZP 94.95 TAL 172.16 TAP 23.76 RCA 107.69 APO 147.36 V2 34.786  
 RC 112.844 GL 44.23 GP -34.88 ZAL 80.83 ZAP 122.09 ETS 335.78 ZAE 131.93 ETE 217.89 ZAC 109.70 ETC 177.77 CLP-130.36

PLANETOCENTRIC CONIC

C3 16.083 VHL 4.010 DLA 52.05 RAL 6.08 RAD 6567.6 VEL 11.725 PTH 2.07 VHP 3.922 DPA -30.42 RAP 26.10 ECC 1.2647

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
44.31	18 9 32	4264.32	-36.24	201.94	241.23	49.68	19 20 36	3664.3	-41.15	194.25
135.69	2 53 9	2706.93	-36.23	78.15	241.22	49.67	3 38 16	2106.9	-41.14	70.47
44.31	18 9 32	4264.32	-36.24	201.94	241.23	49.68	19 20 36	3664.3	-41.15	194.25
135.69	2 53 9	2706.93	-36.23	78.15	241.22	49.67	3 38 16	2106.9	-41.14	70.47
44.31	18 9 32	4264.32	-36.24	201.94	241.23	49.68	19 20 36	3664.3	-41.15	194.25
135.69	2 53 9	2706.93	-36.23	78.15	241.22	49.67	3 38 16	2106.9	-41.14	70.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4848 TRA -.0136 TC3-2.8449 BAU .6510 SGT 4196.2 SGR 1809.8 SG3 766.1 ST 3522.1 SR 1582.1 SS 2439.4  
 RDE 1.1054 RRA .1289 RC3-1.0366 FAU .11292 RRT .9809 RRF .9931 RTF .9766 CRT .9985 CRS -.9998 CST -.9969  
 FDE 5.0229 FRA .7887 FC3-6.0785 BSP 14160 SGB 4569.9 R23 .1509 R13 .9816 LSA 4564.2 MSA 166.4 SSA 6.2  
 BDE 2.7014 BRA .1296 BC3 3.0278 FSP -2654 SGI 4558.4 SG2 325.9 THA 23.05 EL1 3860.2 EL2 86.0 ALF 24.16

LAUNCH DATE JAN 9 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC DISTANCE 470.074

RL 147.11 LAL .00 LOL 108.56 VL 27.618 GAL 1.59 AZL 84.52 HCA 214.76 SMA 127.42 ECC .15697 INC 5.4787 V1 30.285  
 RP 108.93 LAP -3.12 LOP 325.20 VP 37.332 GAP 3.47 AZP 94.51 TAL 171.39 TAP 26.15 RCA 107.42 APO 147.42 V2 34.789  
 RC 115.239 GL 42.33 GP -31.53 ZAL 79.48 ZAP 125.90 ETS 335.27 ZAE 132.54 ETE 213.30 ZAC 109.49 ETC 176.55 CLP-133.46

PLANETOCENTRIC CONIC

C3 15.320 VHL 3.914 DLA 51.02 RAL 9.16 RAD 6567.6 VEL 11.692 PTH 2.06 VHP 3.940 DPA -27.44 RAP 24.34 ECC 1.2521

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
45.60	18 25 47	4244.20	-36.12	199.69	242.98	51.14	19 36 31	3644.2	-40.86	191.87
134.40	3 1 27	2705.07	-36.11	77.83	242.97	51.13	3 46 32	2105.1	-40.85	70.01
45.60	18 25 47	4244.20	-36.12	199.69	242.98	51.14	19 36 31	3644.2	-40.86	191.87
134.40	3 1 27	2705.07	-36.11	77.83	242.97	51.13	3 46 32	2105.1	-40.85	70.01
45.60	18 25 47	4244.20	-36.12	199.69	242.98	51.14	19 36 31	3644.2	-40.86	191.87
134.40	3 1 27	2705.07	-36.11	77.83	242.97	51.13	3 46 32	2105.1	-40.85	70.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4744 TRA .0954 TC3-3.1780 BAU .6782 SGT 4399.6 SGR 1802.5 SG3 762.0 ST 3623.5 SR 1390.7 SS 2367.2  
 RDE .9474 RRA .1454 RC3 -.9302 FAU .11207 RRT .9799 RRF .9896 RTF .9766 CRT .9985 CRS -.9996 CST -.9966  
 FDE 4.7257 FRA .9841 FC3-6.3329 BSP 14565 SGB 4682.3 R23 .1411 R13 .9801 LSA 4543.1 MSA 167.4 SSA 7.0  
 BDE 2.6496 BRA .1728 BC3 3.3115 FSP -2645 SGI 4672.6 SG2 301.2 THA 19.73 EL1 3880.6 EL2 71.7 ALF 20.98

LAUNCH DATE JAN 9 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC DISTANCE 476.158

RL 147.11 LAL .00 LOL 108.56 VL 27.600 GAL 1.76 AZL 84.81 HCA 217.92 SMA 127.30 ECC .15856 INC 5.1944 V1 30.285  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.342 GAP 3.80 AZP 94.10 TAL 170.57 TAP 28.49 RCA 107.12 APO 147.48 V2 34.792  
 RC 117.830 GL 40.33 GP -28.60 ZAL 78.05 ZAP 129.44 ETS 334.95 ZAE 132.76 ETE 209.24 ZAC 109.44 ETC 175.61 CLP-136.35

PLANETOCENTRIC CONIC

C3 14.773 VHL 3.844 DLA 50.07 RAL 12.16 RAD 6567.6 VEL 11.669 PTH 2.05 VHP 3.991 DPA -24.73 RAP 23.07 ECC 1.2431

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
46.80	18 41 35	4227.13	-35.89	197.72	244.90	52.39	19 52 2	3627.1	-40.49	189.80
133.20	3 9 36	2705.87	-35.88	77.70	244.89	52.38	3 54 42	2105.9	-40.49	69.78
46.80	18 41 35	4227.13	-35.89	197.72	244.90	52.39	19 52 2	3627.1	-40.49	189.80
133.20	3 9 36	2705.87	-35.88	77.70	244.89	52.38	3 54 42	2105.9	-40.49	69.78
46.80	18 41 35	4227.13	-35.89	197.72	244.90	52.39	19 52 2	3627.1	-40.49	189.80
133.20	3 9 36	2705.87	-35.88	77.70	244.89	52.38	3 54 42	2105.9	-40.49	69.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4840 TRA .2083 TC3-3.4710 BAU .7042 SGT 4589.6 SGR 1423.9 SG3 747.0 ST 3706.5 SR 1231.7 SS 2284.6  
 RDE .8230 RRA .1552 RC3 -.8149 FAU .10889 RRT .9776 RRF .9847 RTF .9765 CRT .9988 CRS -.9993 CST -.9964  
 FDE 4.4089 FRA 1.1785 FC3-6.3812 BSP 14944 SGB 4805.4 R23 .1252 R13 .9790 LSA 4521.7 MSA 168.2 SSA 7.8  
 BDE 2.6167 BRA .2598 BC3 3.5654 FSP -2582 SGI 4796.8 SG2 287.0 THA 16.93 EL1 3905.3 EL2 57.5 ALF 18.37

LAUNCH DATE JAN 9 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC DISTANCE 482.224

RL 147.11 LAL .00 LOL 108.56 VL 27.581 GAL 1.95 AZL 85.05 HCA 221.08 SMA 127.17 ECC .16031 INC 4.9476 V1 30.285  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.331 GAP 4.13 AZP 93.73 TAL 169.72 TAP 30.79 RCA 106.79 APO 147.56 V2 34.796  
 RC 120.015 GL 38.80 GP -26.03 ZAL 76.54 ZAP 132.73 ETS 334.76 ZAE 132.69 ETE 205.70 ZAC 109.57 ETC 174.89 CLP-139.04

PLANETOCENTRIC CONIC

C3 14.398 VHL 3.794 DLA 49.19 RAL 15.11 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 4.068 DPA -22.25 RAP 22.22 ECC 1.2369

LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH	INJ TIME	PO CST TIM	INJ 2 LAT	INJ 2 LONG
47.94	18 57 3	4212.54	-35.59	195.96	246.96	53.48	20 7 16	3612.5	-40.06	187.97
132.06	3 17 40	2708.94	-35.58	77.72	246.95	53.47	4 2 49	2108.9	-40.05	69.74
47.94	18 57 3	4212.54	-35.59	195.96	246.96	53.48	20 7 16	3612.5	-40.06	187.97
132.06	3 17 40	2708.94	-35.58	77.72	246.95	53.47	4 2 49	2108.9	-40.05	69.74
47.94	18 57 3	4212.54	-35.59	195.96	246.96	53.48	20 7 16	3612.5	-40.06	187.97
132.06	3 17 40	2708.94	-35.58	77.72	246.95	53.47	4 2 49	2108.9	-40.05	69.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.4885 TRA .3258 TC3-3.7355 BAU .7316 SGT 4764.5 SGR 1289.9 SG3 723.7 ST 3762.7 SR 1097.5 SS 2188.5  
 RDE .7230 RRA .1584 RC3 -.7054 FAU .10476 RRT .9739 RRF .9780 RTF .9766 CRT .9992 CRS -.9988 CST -.9961  
 FDE 4.0766 FRA 1.3278 FC3-6.3000 BSP 15408 SGB 4930.9 R23 .1042 R13 .9782 LSA 4485.9 MSA 168.1 SSA 8.7  
 BDE 2.5895 BRA .3621 BC3 3.8015 FSP -2505 SGI 4923.0 SG2 279.0 THA 14.60 EL1 3919.2 EL2 43.2 ALF 16.25

LAUNCH DATE JAN 9 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 488.273

RL 147.11 LAL .00 LOL 108.56 VL 27.562 GAL 2.14 AZL 85.27 HCA 224.24 SMA 127.04 ECC .16222 INC 4.7302 V1 30.285
RP 108.89 LAP -3.30 LOP 332.70 VP 37.321 GAP 4.45 AZP 93.39 TAL 168.82 TAP 33.06 RCA 106.43 APO 147.65 V2 34.800
RC 122.394 GL 37.13 GP -23.79 ZAL 74.96 ZAP 135.78 ETS 334.66 ZAE 132.43 ETE 202.65 ZAC 109.89 ETC 174.35 CLP-141.56

PLANETOCENTRIC CONIC

C3 14.156 VHL 3.762 DLA 48.35 RAL 18.03 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.166 DPA -19.98 RAP 21.72 ECC 1.2330
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.02 19 12 20 4200.03 -35.21 194.39 249.16 54.44 20 22 20 3600.0 -39.58 186.36
130.98 3 25 42 2714.02 -35.20 77.89 249.15 54.42 4 10 56 2114.0 -39.57 69.86
49.02 19 12 20 4200.03 -35.21 194.39 249.16 54.44 20 22 20 3600.0 -39.58 186.36
130.98 3 25 42 2714.02 -35.20 77.89 249.15 54.42 4 10 56 2114.0 -39.57 69.86
49.02 19 12 20 4200.03 -35.21 194.39 249.16 54.44 20 22 20 3600.0 -39.58 186.36
130.98 3 25 42 2714.02 -35.20 77.89 249.15 54.42 4 10 56 2114.0 -39.57 69.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4855 TRA .4492 TC3-3.9632 BAU .7586 SGT 4927.4 SGR 1139.6 SG3 695.5 ST 3798.6 SR 986.6 SS 2087.3
RDE .6438 RRA .1584 RC3 -.6026 FAU .09984 RRT .9682 RRF .9691 RTF .9767 CRT .9995 CRS -.9980 CST -.9958
FDE 3.7498 FRA 1.4532 FC3-6.1057 BSP 15886 SGB 5057.5 R23 .0817 R13 .9778 LSA 4442.0 MSA 167.9 SSA 9.5
BDE 2.5675 BRA .4764 BC3 4.0087 FSP -2413 SGI 5049.8 SGI 276.0 THA 12.66 EL1 3924.5 EL2 29.4 ALF 14.55

LAUNCH DATE JAN 9 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 494.303

RL 147.11 LAL .00 LOL 108.56 VL 27.541 GAL 2.35 AZL 85.46 HCA 227.40 SMA 126.90 ECC .16429 INC 4.5361 V1 30.285
RP 108.88 LAP -3.34 LOP 335.87 VP 37.311 GAP 4.78 AZP 93.07 TAL 167.89 TAP 35.29 RCA 106.05 APO 147.75 V2 34.805
RC 124.766 GL 35.52 GP -21.82 ZAL 73.30 ZAP 136.80 ETS 334.60 ZAE 132.04 ETE 200.05 ZAC 110.38 ETC 173.94 CLP-143.90

PLANETOCENTRIC CONIC

C3 14.034 VHL 3.746 DLA 47.54 RAL 20.93 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 4.281 DPA -17.88 RAP 21.53 ECC 1.2310
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.07 19 27 29 4189.26 -34.78 192.96 251.49 55.27 20 37 19 3589.3 -39.05 184.91
129.93 3 33 40 2721.00 -34.77 78.20 251.48 55.26 4 19 1 2121.0 -39.04 70.15
50.07 19 27 29 4189.26 -34.78 192.96 251.49 55.27 20 37 19 3589.3 -39.05 184.91
129.93 3 33 40 2721.00 -34.77 78.20 251.48 55.26 4 19 1 2121.0 -39.04 70.15
50.07 19 27 29 4189.26 -34.78 192.96 251.49 55.27 20 37 19 3589.3 -39.05 184.91
129.93 3 33 40 2721.00 -34.77 78.20 251.48 55.26 4 19 1 2121.0 -39.04 70.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4805 TRA .5805 TC3-4.1492 BAU .7643 SGT 5078.1 SGR 1030.1 SG3 664.3 ST 3815.4 SR 895.5 SS 1983.5
RDE .5813 RRA .1567 RC3 -.5074 FAU .09431 RRT .9600 RRF .9577 RTF .9768 CRT .9998 CRS -.9967 CST -.9955
FDE 3.4362 FRA 1.5598 FC3-5.8176 BSP 16336 SGB 5181.5 R23 .0607 R13 .9775 LSA 4389.2 MSA 167.8 SSA 10.3
BDE 2.5478 BRA .6012 BC3 4.1801 FSP -2305 SGI 5173.8 SGI 283.0 THA 11.05 EL1 3919.0 EL2 17.0 ALF 13.21

LAUNCH DATE JAN 9 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 500.315

RL 147.11 LAL .00 LOL 108.56 VL 27.520 GAL 2.57 AZL 85.64 HCA 230.56 SMA 126.76 ECC .16654 INC 4.3806 V1 30.285
RP 108.86 LAP -3.37 LOP 339.04 VP 37.300 GAP 5.12 AZP 92.77 TAL 166.93 TAP 37.49 RCA 105.65 APO 147.87 V2 34.811
RC 127.128 GL 33.94 GP -20.10 ZAL 71.59 ZAP 141.21 ETS 334.56 ZAE 131.59 ETE 197.82 ZAC 111.04 ETC 173.82 CLP-146.10

PLANETOCENTRIC CONIC

C3 14.019 VHL 3.744 DLA 46.78 RAL 23.81 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 4.410 DPA -15.94 RAP 21.60 ECC 1.2307
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.10 19 42 37 4179.94 -34.29 191.66 253.94 56.01 20 52 17 3579.9 -38.47 183.60
128.90 3 41 33 2729.84 -34.28 78.64 253.93 56.00 4 27 3 2129.8 -38.46 70.58
51.10 19 42 37 4179.94 -34.29 191.66 253.94 56.01 20 52 17 3579.9 -38.47 183.60
128.90 3 41 33 2729.84 -34.28 78.64 253.93 56.00 4 27 3 2129.8 -38.46 70.58
51.10 19 42 37 4179.94 -34.29 191.66 253.94 56.01 20 52 17 3579.9 -38.47 183.60
128.90 3 41 33 2729.84 -34.28 78.64 253.93 56.00 4 27 3 2129.8 -38.46 70.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4748 TRA .7214 TC3-4.2889 BAU .8077 SGT 5220.5 SGR 940.1 SG3 632.1 ST 3819.1 SR 822.3 SS 1883.0
RDE .5331 RRA .1545 RC3 -.4208 FAU .08836 RRT .9490 RRF .9436 RTF .9769 CRT .9999 CRS -.9949 CST -.9951
FDE 3.1484 FRA 1.8532 FC3-5.4580 BSP 16714 SGB 5304.5 R23 .0432 R13 .9774 LSA 4333.5 MSA 168.1 SSA 11.0
BDE 2.5316 BRA .7378 BC3 4.3095 FSP -2182 SGI 5298.4 SGI 292.3 THA 9.73 EL1 3908.6 EL2 11.1 ALF 12.15

LAUNCH DATE JAN 9 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 506.308

RL 147.11 LAL .00 LOL 108.56 VL 27.497 GAL 2.81 AZL 85.80 HCA 233.72 SMA 126.61 ECC .16897 INC 4.2004 V1 30.285
RP 108.84 LAP -3.39 LOP 342.21 VP 37.290 GAP 5.45 AZP 92.49 TAL 165.94 TAP 39.66 RCA 105.22 APO 148.01 V2 34.818
RC 129.481 GL 32.39 GP -18.59 ZAL 69.82 ZAP 143.64 ETS 334.52 ZAE 131.11 ETE 195.92 ZAC 111.85 ETC 173.39 CLP-148.17

PLANETOCENTRIC CONIC

C3 14.102 VHL 3.755 DLA 45.99 RAL 26.68 RAD 6567.6 VEL 11.640 PTH 2.04 VHP 4.551 DPA -14.13 RAP 21.91 ECC 1.2321
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.12 19 57 44 4171.88 -33.74 190.46 256.50 56.68 21 7 16 3571.9 -37.85 182.41
127.88 3 49 18 2740.49 -33.73 79.20 256.49 56.67 4 34 59 2140.5 -37.84 71.15
52.12 19 57 44 4171.88 -33.74 190.46 256.50 56.68 21 7 16 3571.9 -37.85 182.41
127.88 3 49 18 2740.49 -33.73 79.20 256.49 56.67 4 34 59 2140.5 -37.84 71.15
52.12 19 57 44 4171.88 -33.74 190.46 256.50 56.68 21 7 16 3571.9 -37.85 182.41
127.88 3 49 18 2740.49 -33.73 79.20 256.49 56.67 4 34 59 2140.5 -37.84 71.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4614 TRA .8867 TC3-4.3986 BAU .8315 SGT 5350.7 SGR 864.9 SG3 599.0 ST 3800.0 SR 761.7 SS 1779.7
RDE .4949 RRA .1511 RC3 -.3465 FAU .08268 RRT .9349 RRF .9266 RTF .9771 CRT .9997 CRS -.9923 CST -.9947
FDE 2.8703 FRA 1.7251 FC3-5.0758 BSP 17148 SGB 5420.1 R23 .0285 R13 .9774 LSA 4261.4 MSA 168.3 SSA 11.8
BDE 2.5107 BRA .8798 BC3 4.4103 FSP -2070 SGI 5411.6 SGI 303.4 THA 8.62 EL1 3875.6 EL2 19.0 ALF 11.33

LAUNCH DATE JAN 9 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 512.280

RL 147.11 LAL .00 LOL 108.56 VL 27.474 GAL 3.06 AZL 85.95 RCA 236.89 SMA 126.46 ECC .17160 INC 4.0527 V1 30.285
RP 108.82 LAP -3.39 LOP 345.38 VP 37.280 GAP 5.79 AZP 92.22 TAL 164.91 TAP 41.80 RCA 104.76 APO 148.18 V2 34.825
RC 131.823 GL 30.87 GP -17.25 ZAL 68.00 ZAP 145.89 ETS 334.45 ZAE 130.61 ETE 194.31 ZAC 112.81 ETC 173.20 CLP-150.11

PLANETOCENTRIC CONIC

C3 14.279 VHL 3.779 DLA 45.22 RAL 29.53 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 4.704 DPA -12.43 RAP 22.41 ECC 1.2350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.14 20 12 54 4164.83 -33.15 189.34 259.15 57.27 21 22 19 3564.8 -37.19 181.31
126.86 3 56 51 2753.05 -33.13 79.91 259.14 57.26 4 42 44 2153.1 -37.18 71.88
53.14 20 12 54 4164.83 -33.15 189.34 259.15 57.27 21 22 19 3564.8 -37.19 181.31
126.86 3 56 51 2753.05 -33.13 79.91 259.14 57.26 4 42 44 2153.1 -37.18 71.88
53.14 20 12 54 4164.83 -33.15 189.34 259.15 57.27 21 22 19 3564.8 -37.19 181.31
126.86 3 56 51 2753.05 -33.13 79.91 259.14 57.26 4 42 44 2153.1 -37.18 71.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4436 TRA 1.0201 TC3-4.4654 BAU .8541 SGT 5471.7 SGR 803.4 S63 566.3 ST 3764.7 SR 712.6 S8 1678.3
RDE .4657 RRA .1478 RC3 -.2026 FAU .07710 RRT .9181 RRF .9070 RTF .9773 CRT .9990 CR3 -.9888 CST -.9943
FDE 2.6142 FRA 1.7849 FC3-4.6749 BSP 17575 SGB 5530.4 R23 .0172 R13 .9774 LSA 4179.5 MSA 169.0 SSA 12.5
BDE 2.4876 BRA 1.0308 BC3 4.4744 FSP -1962 SGI 5521.3 S62 315.6 THA 7.70 EL1 3831.4 EL2 31.7 ALF 10.71

LAUNCH DATE JAN 9 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 518.232

RL 147.11 LAL .00 LOL 108.56 VL 27.451 GAL 3.33 AZL 86.08 HCA 240.06 SMA 126.30 ECC .17443 INC 3.9151 V1 30.285
RP 108.79 LAP -3.39 LOP 348.56 VP 37.270 GAP 6.13 AZP 91.96 TAL 163.86 TAP 43.92 RCA 104.27 APO 148.33 V2 34.833
RC 134.153 GL 29.38 GP -16.07 ZAL 66.15 ZAP 148.00 ETS 334.35 ZAE 130.12 ETE 192.93 ZAC 113.89 ETC 173.06 CLP-151.95

PLANETOCENTRIC CONIC

C3 14.550 VHL 3.814 DLA 44.45 RAL 32.35 RAD 6567.6 VEL 11.659 PTH 2.05 VHP 4.867 DPA -10.82 RAP 23.09 ECC 1.2395
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.18 20 28 6 4158.69 -32.49 188.28 261.88 57.82 21 37 25 3558.7 -36.48 180.28
125.82 4 4 10 2767.52 -32.48 80.74 261.87 57.80 4 50 18 2167.5 -36.47 72.74
54.18 20 28 6 4158.69 -32.49 188.28 261.88 57.82 21 37 25 3558.7 -36.48 180.28
125.82 4 4 10 2767.52 -32.48 80.74 261.87 57.80 4 50 18 2167.5 -36.47 72.74
54.18 20 28 6 4158.69 -32.49 188.28 261.88 57.82 21 37 25 3558.7 -36.48 180.28
125.82 4 4 10 2767.52 -32.48 80.74 261.87 57.80 4 50 18 2167.5 -36.47 72.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4220 TRA 1.1828 TC3-4.4928 BAU .8750 SGT 5583.7 SGR 753.5 S63 534.4 ST 3715.2 SR 672.9 S8 1580.0
RDE .4438 RRA .1450 RC3 -.2278 FAU .07163 RRT .8986 RRF .8852 RTF .9774 CRT .9976 CR3 -.9842 CST -.9938
FDE 2.3788 FRA 1.8355 FC3-4.2622 BSP 17963 SGB 5634.3 R23 .0090 R13 .9775 LSA 4089.4 MSA 170.5 SSA 13.1
BDE 2.4623 BRA 1.1917 BC3 4.4986 FSP -1855 SGI 5624.7 S62 328.2 THA 6.94 EL1 3775.4 EL2 45.6 ALF 10.24

LAUNCH DATE JAN 9 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 524.162

RL 147.11 LAL .00 LOL 108.56 VL 27.427 GAL 3.62 AZL 86.21 HCA 243.23 SMA 126.14 ECC .17747 INC 3.7860 V1 30.285
RP 108.77 LAP -3.38 LOP 351.73 VP 37.260 GAP 6.49 AZP 91.71 TAL 162.79 TAP 46.01 RCA 103.76 APO 148.53 V2 34.841
RC 136.471 GL 27.90 GP -15.02 ZAL 64.26 ZAP 149.97 ETS 334.20 ZAE 129.65 ETE 191.75 ZAC 115.09 ETC 172.94 CLP-153.69

PLANETOCENTRIC CONIC

C3 14.916 VHL 3.862 DLA 43.68 RAL 35.14 RAD 6567.6 VEL 11.675 PTH 2.05 VHP 5.040 DPA -9.30 RAP 23.93 ECC 1.2455
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.24 20 43 23 4153.26 -31.79 187.28 264.68 58.31 21 52 36 3553.3 -35.72 179.31
124.76 4 11 10 2784.02 -31.78 81.72 264.67 58.30 4 57 34 2184.0 -35.71 73.75
55.24 20 43 23 4153.26 -31.79 187.28 264.68 58.31 21 52 36 3553.3 -35.72 179.31
124.76 4 11 10 2784.02 -31.78 81.72 264.67 58.30 4 57 34 2184.0 -35.71 73.75
55.24 20 43 23 4153.26 -31.79 187.28 264.68 58.31 21 52 36 3553.3 -35.72 179.31
124.76 4 11 10 2784.02 -31.78 81.72 264.67 58.30 4 57 34 2184.0 -35.71 73.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3954 TRA 1.3543 TC3-4.4855 BAU .8952 SGT 5687.7 SGR 713.2 S63 503.7 ST 3651.5 SR 640.7 S8 1484.6
RDE .4278 RRA .1430 RC3 -.1823 FAU .06646 RRT .8771 RRF .8620 RTF .9776 CRT .9955 CR3 -.9782 CST -.9953
FDE 2.1615 FRA 1.8774 FC3-3.8573 BSP 18338 SGB 5732.2 R23 .0030 R13 .9776 LSA 3989.8 MSA 172.8 SSA 13.6
BDE 2.4333 BRA 1.3618 BC3 4.4892 FSP -1752 SGI 5722.1 S62 340.4 THA 6.30 EL1 3706.8 EL2 60.0 ALF 9.91

LAUNCH DATE JAN 9 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 530.070

RL 147.11 LAL .00 LOL 108.56 VL 27.402 GAL 3.92 AZL 86.34 HCA 246.40 SMA 125.98 ECC .18074 INC 3.6639 V1 30.285
RP 108.74 LAP -3.38 LOP 354.91 VP 37.250 GAP 6.84 AZP 91.47 TAL 161.69 TAP 48.09 RCA 103.21 APO 148.75 V2 34.850
RC 138.775 GL 26.45 GP -14.09 ZAL 62.35 ZAP 151.82 ETS 333.99 ZAE 129.20 ETE 190.74 ZAC 116.40 ETC 172.83 CLP-155.34

PLANETOCENTRIC CONIC

C3 15.382 VHL 3.922 DLA 42.89 RAL 37.90 RAD 6567.6 VEL 11.695 PTH 2.06 VHP 5.222 DPA -7.84 RAP 24.90 ECC 1.2531
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.33 20 58 44 4148.44 -31.04 186.30 267.54 58.76 22 7 53 3548.4 -34.92 178.38
123.67 4 17 47 2802.63 -31.03 82.84 267.53 58.75 5 4 30 2202.6 -34.91 74.92
56.33 20 58 44 4148.44 -31.04 186.30 267.54 58.76 22 7 53 3548.4 -34.92 178.38
123.67 4 17 47 2802.63 -31.03 82.84 267.53 58.75 5 4 30 2202.6 -34.91 74.92
56.33 20 58 44 4148.44 -31.04 186.30 267.54 58.76 22 7 53 3548.4 -34.92 178.38
123.67 4 17 47 2802.63 -31.03 82.84 267.53 58.75 5 4 30 2202.6 -34.91 74.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3683 TRA 1.5391 TC3-4.4325 BAU .9120 SGT 5786.1 SGR 681.8 S63 474.8 ST 3581.8 SR 615.6 S8 1396.8
RDE .4173 RRA .1423 RC3 -.1430 FAU .06125 RRT .8544 RRF .8384 RTF .9776 CRT .9924 CR3 -.9709 CST -.9929
FDE 1.9676 FRA 1.9176 FC3-3.4475 BSP 18613 SGB 5826.1 R23 .0001 R13 .9776 LSA 3889.5 MSA 176.2 SSA 14.0
BDE 2.4048 BRA 1.5457 BC3 4.4348 FSP -1645 SGI 5815.4 S62 352.5 THA 5.77 EL1 3633.6 EL2 74.8 ALF 9.68

LAUNCH DATE JAN 9 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 535.952

RL 147.11 LAL .00 LOL 108.56 VL 27.377 GAL 4.24 AZL 86.45 HCA 249.57 SMA 125.82 ECC .18426 INC 3.5474 V1 30.285  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.240 GAP 7.21 AZP 91.24 TAL 160.58 TAP 50.15 RCA 102.63 APO 149.00 V2 34.860  
 RC 141.067 GL 25.02 GP -13.26 ZAL 60.43 ZAP 153.56 ETS 333.71 ZAE 128.77 ETE 189.87 ZAC 117.80 ETC 172.74 CLP-156.92

PLANETOCENTRIC CONIC

C3 15.953 VHL 3.994 DLA 42.10 RAL 40.60 RAD 6567.6 VEL 11.719 PTH 2.06 VHP 5.414 DPA -6.46 RAP 25.99 ECC 1.2625  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.44 21 14 11 4144.07 -30.24 185.36 270.45 59.19 22 23 15 3544.1 -34.07 177.48  
 122.56 4 23 56 2823.49 -30.22 84.12 270.44 59.17 5 11 0 2223.5 -34.06 76.24  
 57.44 21 14 11 4144.07 -30.24 185.36 270.45 59.19 22 23 15 3544.1 -34.07 177.48  
 122.56 4 23 56 2823.49 -30.22 84.12 270.44 59.17 5 11 0 2223.5 -34.06 76.24  
 57.44 21 14 11 4144.07 -30.24 185.36 270.45 59.19 22 23 15 3544.1 -34.07 177.48  
 122.56 4 23 56 2823.49 -30.22 84.12 270.44 59.17 5 11 0 2223.5 -34.06 76.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3334 TRA 1.7310 TC3-4.3561 BAU .9293 SGT 5874.8 SGR 656.0 S63 447.0 ST 3496.2 SR 594.4 SS 1309.8  
 RDE .4104 RRA .1423 RC3 -.1126 FAU .05650 RRT .8314 RRF .8146 RTF .9777 CRT .9881 CRS -.9619 CST -.9923  
 FDE 1.7854 FRA 1.9480 FC3-3.0707 BSP 18948 SGB 5911.3 R23 -.0025 R13 .9777 LSA 3776.2 MSA 180.7 SSA 14.4  
 BDE 2.3692 BRA 1.7369 BC3 4.3575 FSP -1554 S61 5900.1 S62 362.9 THA 5.32 EL1 3545.2 EL2 90.0 ALF 9.54

LAUNCH DATE JAN 9 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 541.809

RL 147.11 LAL .00 LOL 108.56 VL 27.351 GAL 4.58 AZL 86.56 HCA 252.74 SMA 125.85 ECC .18805 INC 3.4356 V1 30.285  
 RP 108.88 LAP -3.28 LOP 1.27 VP 37.231 GAP 7.59 AZP 91.02 TAL 159.44 TAP 52.19 RCA 102.02 APO 149.28 V2 34.870  
 RC 143.344 GL 23.61 GP -12.52 ZAL 58.50 ZAP 155.21 ETS 333.33 ZAE 128.38 ETE 189.12 ZAC 119.28 ETC 172.65 CLP-158.43

PLANETOCENTRIC CONIC

C3 16.637 VHL 4.079 DLA 41.29 RAL 43.26 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 5.616 DPA -5.12 RAP 27.18 ECC 1.2738  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.59 21 29 42 4140.09 -29.39 184.43 273.39 59.58 22 38 42 3540.1 -33.18 176.61  
 121.41 4 29 36 2846.63 -29.37 85.55 273.38 59.56 5 17 2 2246.6 -33.17 77.73  
 58.59 21 29 42 4140.09 -29.39 184.43 273.39 59.58 22 38 42 3540.1 -33.18 176.61  
 121.41 4 29 36 2846.63 -29.37 85.55 273.38 59.56 5 17 2 2246.6 -33.17 77.73  
 58.59 21 29 42 4140.09 -29.39 184.43 273.39 59.58 22 38 42 3540.1 -33.18 176.61  
 121.41 4 29 36 2846.63 -29.37 85.55 273.38 59.56 5 17 2 2246.6 -33.17 77.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2946 TRA 1.9335 TC3-4.2487 BAU .9452 SGT 5955.5 SGR 635.3 S63 420.5 ST 3402.4 SR 577.2 SS 1227.8  
 RDE .4089 RRA .1433 RC3 -.0880 FAU .05213 RRT .8087 RRF .7916 RTF .9777 CRT .9826 CRS -.9511 CST -.9918  
 FDE 1.8192 FRA 1.9741 FC3-2.7127 BSP 19266 SGB 5989.3 R23 -.0037 R13 .9777 LSA 3658.2 MSA 186.3 SSA 14.6  
 BDE 2.3304 BRA 1.9388 BC3 4.2496 FSP -1467 S61 5977.7 S62 372.4 THA 4.95 EL1 3449.4 EL2 105.7 ALF 9.47

LAUNCH DATE JAN 9 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 547.637

RL 147.11 LAL .00 LOL 108.56 VL 27.323 GAL 4.94 AZL 86.67 HCA 255.92 SMA 125.48 ECC .19212 INC 3.3276 V1 30.285  
 RP 108.85 LAP -3.23 LOP 4.45 VP 37.222 GAP 7.98 AZP 90.81 TAL 158.30 TAP 54.21 RCA 101.38 APO 149.59 V2 34.880  
 RC 143.808 GL 22.23 GP -11.85 ZAL 56.57 ZAP 156.77 ETS 332.89 ZAE 128.01 ETE 188.47 ZAC 120.84 ETC 172.55 CLP-159.87

PLANETOCENTRIC CONIC

C3 17.445 VHL 4.177 DLA 40.47 RAL 45.85 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 5.828 DPA -3.84 RAP 28.48 ECC 1.2871  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.78 21 45 18 4136.38 -28.49 183.52 276.37 59.94 22 54 14 3536.4 -32.25 175.74  
 120.22 4 34 41 2872.19 -28.47 87.15 276.36 59.93 5 22 33 2272.2 -32.24 79.38  
 59.78 21 45 18 4136.38 -28.49 183.52 276.37 59.94 22 54 14 3536.4 -32.25 175.74  
 120.22 4 34 41 2872.19 -28.47 87.15 276.36 59.93 5 22 33 2272.2 -32.24 79.38  
 59.78 21 45 18 4136.38 -28.49 183.52 276.37 59.94 22 54 14 3536.4 -32.25 175.74  
 120.22 4 34 41 2872.19 -28.47 87.15 276.36 59.93 5 22 33 2272.2 -32.24 79.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2520 TRA 2.1475 TC3-4.1147 BAU .9598 SGT 6029.5 SGR 618.8 S63 395.7 ST 3302.1 SR 562.9 SS 1150.8  
 RDE .4063 RRA .1457 RC3 -.0687 FAU .04794 RRT .7870 RRF .7701 RTF .9777 CRT .9757 CRS -.9384 CST -.9912  
 FDE 1.4676 FRA 1.9973 FC3-2.3789 BSP 19565 SGB 6061.1 R23 -.0040 R13 .9777 LSA 3536.6 MSA 193.2 SSA 14.7  
 BDE 2.2884 BRA 2.1524 BC3 4.1153 FSP -1386 S61 6049.2 S62 380.5 THA 4.64 EL1 3347.6 EL2 121.7 ALF 9.45

LAUNCH DATE JAN 9 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 553.434

RL 147.11 LAL .00 LOL 108.56 VL 27.299 GAL 5.33 AZL 86.78 HCA 259.10 SMA 125.31 ECC .19650 INC 3.2224 V1 30.285  
 RP 108.81 LAP -3.16 LOP 7.64 VP 37.213 GAP 8.38 AZP 90.61 TAL 157.14 TAP 56.23 RCA 100.69 APO 149.94 V2 34.891  
 RC 147.837 GL 20.87 GP -11.26 ZAL 54.66 ZAP 158.25 ETS 332.32 ZAE 127.67 ETE 187.91 ZAC 122.47 ETC 172.44 CLP-161.26

PLANETOCENTRIC CONIC

C3 18.388 VHL 4.288 DLA 39.64 RAL 48.37 RAD 6567.7 VEL 11.822 PTH 2.09 VHP 6.050 DPA -2.60 RAP 29.85 ECC 1.3026  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.01 22 0 58 4132.86 -27.54 182.60 279.37 60.28 23 9 51 3532.9 -31.27 174.89  
 118.99 4 39 9 2900.25 -27.53 88.91 279.36 60.27 5 27 29 2300.3 -31.26 81.20  
 61.01 22 0 58 4132.86 -27.54 182.60 279.37 60.28 23 9 51 3532.9 -31.27 174.89  
 118.99 4 39 9 2900.25 -27.53 88.91 279.36 60.27 5 27 29 2300.3 -31.26 81.20  
 61.01 22 0 58 4132.86 -27.54 182.60 279.37 60.28 23 9 51 3532.9 -31.27 174.89  
 118.99 4 39 9 2900.25 -27.53 88.91 279.36 60.27 5 27 29 2300.3 -31.26 81.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2100 TRA 2.3782 TC3-3.9481 BAU .9706 SGT 6100.2 SGR 606.1 S63 372.7 ST 3203.5 SR 551.2 SS 1081.8  
 RDE .4084 RRA .1498 RC3 -.0528 FAU .04381 RRT .7674 RRF .7511 RTF .9776 CRT .9673 CRS -.9240 CST -.9906  
 FDE 1.3329 FRA 2.0222 FC3-2.0626 BSP 19748 SGB 6130.2 R23 -.0033 R13 .9776 LSA 3419.9 MSA 201.3 SSA 14.7  
 BDE 2.2474 BRA 2.3829 BC3 3.9484 FSP -1301 S61 6118.0 S62 387.5 THA 4.38 EL1 3247.6 EL2 138.0 ALF 9.47

LAUNCH DATE JAN 9 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 559.196

RL 147.11 LAL .00 LOL 108.56 VL 27.272 GAL 5.73 AZL 86.88 HCA 262.28 SMA 125.14 ECC .20121 INC 3.1194 V1 30.285  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.204 GAP 8.79 AZP 90.42 TAL 155.97 TAP 58.24 RCA 99.96 APO 150.32 V2 34.902  
 RC 190.092 GL 19.55 GP -10.72 ZAL 52.77 ZAP 159.66 ETS 331.62 ZAE 127.35 ETE 107.42 ZAC 124.15 ETC 172.31 CLP-162.61

PLANETOCENTRIC CONIC

C3 19.482 VHL 4.414 DLA 38.80 RAL 50.82 RAD 6567.8 VEL 11.869 PTH 2.11 VHP 6.285 DPA -1.40 RAP 31.31 ECC 1.3206  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.28 22 16 46 4129.29 -26.56 181.68 282.39 60.61 23 25 35 3529.3 -30.26 174.03  
 117.72 4 42 54 2931.06 -26.55 90.87 282.36 60.60 5 31 45 2331.1 -30.25 83.22  
 62.28 22 16 46 4129.29 -26.56 181.68 282.39 60.61 23 25 35 3529.3 -30.26 174.03  
 117.72 4 42 54 2931.06 -26.55 90.87 282.36 60.60 5 31 45 2331.1 -30.25 83.22  
 62.28 22 16 46 4129.29 -26.56 181.68 282.39 60.61 23 25 35 3529.3 -30.26 174.03  
 117.72 4 42 54 2931.06 -26.55 90.87 282.36 60.60 5 31 45 2331.1 -30.25 83.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1609 TRA 2.6178 TC3-3.7699 BAU .9820 SGT 6160.8 SCR 599.0 SCS 350.8 ST 3096.6 SR 340.5 SS 1015.5  
 RDE .4121 RRA .1549 RC3 -.0415 FAU .04009 RRT .7494 RRF .7338 RTF .9775 CRT .9570 CRS -.9073 CST -.9901  
 FDE 1.2068 FRA 2.0413 FC3-1.7613 BSP 20007 SGB 6189.5 R23 -.0027 R13 .9775 LSA 3296.6 HSA 210.5 SSA 14.7  
 BOE 2.1998 BRA 2.6224 BC3 3.7701 FSP -1229 SGI 6177.0 SGT 392.9 THA 4.16 EL1 3139.6 EL2 154.6 ALF 9.51

LAUNCH DATE JAN 9 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 564.921

RL 147.11 LAL .00 LOL 108.56 VL 27.246 GAL 6.17 AZL 86.98 HCA 265.46 SMA 124.97 ECC .20629 INC 3.0179 V1 30.285  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.195 GAP 9.23 AZP 90.24 TAL 154.79 TAP 60.25 RCA 99.19 APO 150.75 V2 34.914  
 RC 192.312 GL 18.25 GP -10.23 ZAL 50.90 ZAP 161.00 ETS 330.78 ZAE 127.05 ETE 107.00 ZAC 125.89 ETC 172.17 CLP-163.91

PLANETOCENTRIC CONIC

C3 20.745 VHL 4.555 DLA 37.96 RAL 53.19 RAD 6567.8 VEL 11.922 PTH 2.12 VHP 6.532 DPA -.24 RAP 32.83 ECC 1.3414  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.59 22 32 39 4125.69 -25.54 180.75 285.43 60.92 23 41 24 3525.7 -29.21 173.15  
 116.41 4 45 55 2964.59 -25.53 93.00 285.42 60.91 5 35 20 2364.6 -29.20 85.41  
 63.59 22 32 39 4125.69 -25.54 180.75 285.43 60.92 23 41 24 3525.7 -29.21 173.15  
 116.41 4 45 55 2964.59 -25.53 93.00 285.42 60.91 5 35 20 2364.6 -29.20 85.41  
 63.59 22 32 39 4125.69 -25.54 180.75 285.43 60.92 23 41 24 3525.7 -29.21 173.15  
 116.41 4 45 55 2964.59 -25.53 93.00 285.42 60.91 5 35 20 2364.6 -29.20 85.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1085 TRA 2.8709 TC3-3.5759 BAU .9918 SGT 6214.8 SCR 585.6 SCS 330.3 ST 2988.7 SR 530.6 SS 954.4  
 RDE .4174 RRA .1614 RC3 -.0331 FAU .03660 RRT .7337 RRF .7187 RTF .9774 CRT .9450 CRS -.8884 CST -.9896  
 FDE 1.0918 FRA 2.0594 FC3-1.5272 BSP 20261 SGB 6242.4 R23 -.0020 R13 .9774 LSA 3174.3 HSA 220.6 SSA 14.5  
 BOE 2.1494 BRA 2.8735 BC3 3.5760 FSP -1162 SGI 6229.7 SGT 397.0 THA 3.97 EL1 3030.6 EL2 171.3 ALF 9.56

LAUNCH DATE JAN 9 1969

FLIGHT TIME 202.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 570.604

RL 147.11 LAL .00 LOL 108.56 VL 27.219 GAL 6.63 AZL 87.08 HCA 268.64 SMA 124.80 ECC .21178 INC 2.9172 V1 30.285  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.187 GAP 9.68 AZP 90.07 TAL 153.62 TAP 62.26 RCA 98.37 APO 151.23 V2 34.926  
 RC 154.516 GL 16.98 GP -9.79 ZAL 49.07 ZAP 162.29 ETS 329.77 ZAE 126.77 ETE 186.62 ZAC 127.67 ETC 172.00 CLP-165.17

PLANETOCENTRIC CONIC

C3 22.199 VHL 4.712 DLA 37.10 RAL 55.48 RAD 6567.9 VEL 11.982 PTH 2.14 VHP 6.793 DPA .89 RAP 34.41 ECC 1.3653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.95 22 48 42 4121.77 -24.49 179.78 288.47 61.21 23 57 23 3521.8 -28.13 172.25  
 15.05 4 48 6 3001.14 -24.48 95.34 288.46 61.20 5 38 7 2401.1 -28.12 87.81  
 64.95 22 48 42 4121.77 -24.49 179.78 288.47 61.21 23 57 23 3521.8 -28.13 172.25  
 115.05 4 48 6 3001.14 -24.48 95.34 288.46 61.20 5 38 7 2401.1 -28.12 87.81  
 64.95 22 48 42 4121.77 -24.49 179.78 288.47 61.21 23 57 23 3521.8 -28.13 172.25  
 115.05 4 48 6 3001.14 -24.48 95.34 288.46 61.20 5 38 7 2401.1 -28.12 87.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0547 TRA 3.1401 TC3-3.3670 BAU .9993 SGT 6263.7 SCR 577.5 SCS 311.2 ST 2883.7 SR 521.7 SS 899.4  
 RDE .4242 RRA .1894 RC3 -.0268 FAU .03327 RRT .7204 RRF .7062 RTF .9773 CRT .9309 CRS -.8675 CST -.9891  
 FDE .9881 FRA 2.0776 FC3-1.2976 BSP 20470 SGB 6290.2 R23 -.0010 R13 .9773 LSA 3056.6 HSA 231.4 SSA 14.3  
 BOE 2.0981 BRA 3.1446 BC3 3.3671 FSP -1098 SGI 6277.5 SGT 399.6 THA 3.82 EL1 2924.5 EL2 187.9 ALF 9.60

LAUNCH DATE JAN 9 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 576.240

RL 147.11 LAL .00 LOL 108.56 VL 27.192 GAL 7.12 AZL 87.18 HCA 271.83 SMA 124.63 ECC .21770 INC 2.8167 V1 30.285  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.178 GAP 10.16 AZP 89.91 TAL 152.44 TAP 64.26 RCA 97.49 APO 151.76 V2 34.938  
 RC 156.704 GL 15.75 GP -9.39 ZAL 47.27 ZAP 163.52 ETS 328.56 ZAE 126.51 ETE 186.30 ZAC 129.50 ETC 171.81 CLP-166.40

PLANETOCENTRIC CONIC

C3 23.868 VHL 4.885 DLA 36.25 RAL 57.68 RAD 6568.0 VEL 12.052 PTH 2.15 VHP 7.069 DPA 1.98 RAP 36.06 ECC 1.3928  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.35 23 4 54 4117.48 -23.40 178.79 291.52 61.49 24 13 31 3517.5 -27.02 171.32  
 113.65 4 49 27 3040.74 -23.39 97.89 291.51 61.48 5 40 8 2440.7 -27.01 90.42  
 66.35 23 4 54 4117.48 -23.40 178.79 291.52 61.49 24 13 31 3517.5 -27.02 171.32  
 113.65 4 49 27 3040.74 -23.39 97.89 291.51 61.48 5 40 8 2440.7 -27.01 90.42  
 66.35 23 4 54 4117.48 -23.40 178.79 291.52 61.49 24 13 31 3517.5 -27.02 171.32  
 113.65 4 49 27 3040.74 -23.39 97.89 291.51 61.48 5 40 8 2440.7 -27.01 90.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9983 TRA 3.4250 TC3-3.1490 BAU 1.0048 SGT 6306.3 SCR 570.0 SCS 293.4 ST 2781.0 SR 512.7 SS 849.7  
 RDE .4321 RRA .1788 RC3 -.0223 FAU .03015 RRT .7094 RRF .6959 RTF .9772 CRT .9147 CRS -.8446 CST -.9888  
 FDE .8936 FRA 2.0957 FC3-1.0938 BSP 20666 SGB 6332.0 R23 -.0002 R13 .9772 LSA 2942.7 HSA 242.6 SSA 14.1  
 BOE 2.0445 BRA 3.4297 BC3 3.1491 FSP -1037 SGI 6319.3 SGT 400.9 THA 3.66 EL1 2820.4 EL2 204.3 ALF 9.62



LAUNCH DATE JAN 9 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 3 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 108.56 VL 27.165 GAL 7.64 AZL 87.28 HCA 275.02 SMA 124.45 ECC .22411 INC 2.7158 V1 30.285  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.170 GAP 10.66 AZP 89.76 TAL 131.26 TAP 66.28 RCA 96.56 APO 152.34 V2 34.951  
 RC 158.875 GL 14.55 GP -9.03 ZAL 45.53 ZAP 164.71 ETS 327.10 ZAE 126.27 ETE 186.02 ZAC 131.35 ETC 171.59 CLP-167.60

Planetocentric Conic  
 C3 25.783 VHL 5.078 DLA 35.40 RAL 59.79 RAD 6568.0 VEL 12.131 PTH 2.17 VHP 7.362 DPA 3.04 RAP 37.75 ECC 1.4243  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.81 23 21 21 4112.45 -22.29 177.74 294.57 61.76 24 29 54 3512.5 -25.89 170.32  
 112.19 4 49 49 3083.75 -22.28 100.67 294.56 61.75 5 41 13 2483.8 -25.87 93.26  
 67.81 23 21 21 4112.45 -22.29 177.74 294.57 61.76 24 29 54 3512.5 -25.89 170.32  
 112.19 4 49 49 3083.75 -22.28 100.67 294.56 61.75 5 41 13 2483.8 -25.87 93.26  
 67.81 23 21 21 4112.45 -22.29 177.74 294.57 61.76 24 29 54 3512.5 -25.89 170.32  
 112.19 4 49 49 3083.75 -22.28 100.67 294.56 61.75 5 41 13 2483.8 -25.87 93.26

Differential Corrections  
 TDE 1.9432 TRA 3.7303 TC3-2.9196 BAU 1.0064 SGT 6345.4 SGR 563.2 SG3 276.9  
 RDE .4411 RRA .1899 RC3 -.0186 FAU .02710 RRT .7009 RRF .6884 RTF .9771  
 FDE .8099 FRA 2.1161 FC3 -.9099 BSP 20774 SGB 6370.4 R23 .0010 R13 .9771  
 BDE 1.9927 BRA 3.7351 BC3 2.9197 FSP -976 SGI 6357.7 SGI 400.9 THA 3.57

LAUNCH DATE JAN 9 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 5 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 108.56 VL 27.137 GAL 8.20 AZL 87.39 HCA 278.21 SMA 124.28 ECC .23105 INC 2.6138 V1 30.285  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.163 GAP 11.19 AZP 89.63 TAL 150.09 TAP 68.30 RCA 95.57 APO 153.00 V2 34.964  
 RC 161.027 GL 13.39 GP -8.70 ZAL 43.83 ZAP 165.84 ETS 325.37 ZAE 126.03 ETE 185.77 ZAC 133.24 ETC 171.32 CLP-168.79

Planetocentric Conic  
 C3 27.981 VHL 5.290 DLA 34.55 RAL 61.81 RAD 6568.1 VEL 12.221 PTH 2.20 VHP 7.673 DPA 4.06 RAP 39.49 ECC 1.4605  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.32 23 38 7 4106.48 -21.16 176.61 297.63 62.02 24 46 33 3506.5 -24.73 169.25  
 110.68 4 49 10 3130.35 -21.14 103.69 297.62 62.01 5 41 20 2530.4 -24.72 96.34  
 69.32 23 38 7 4106.48 -21.16 176.61 297.63 62.02 24 46 33 3506.5 -24.73 169.25  
 110.68 4 49 10 3130.35 -21.14 103.69 297.62 62.01 5 41 20 2530.4 -24.72 96.34  
 69.32 23 38 7 4106.48 -21.16 176.61 297.63 62.02 24 46 33 3506.5 -24.73 169.25  
 110.68 4 49 10 3130.35 -21.14 103.69 297.62 62.01 5 41 20 2530.4 -24.72 96.34

Differential Corrections  
 TDE 1.8831 TRA 4.0505 TC3-2.6928 BAU 1.0074 SGT 6378.0 SGR 556.1 SG3 261.3  
 RDE .4506 RRA .2022 RC3 -.0163 FAU .02433 RRT .6942 RRF .6822 RTF .9772  
 FDE .7519 FRA 2.1350 FC3 -.7529 BSP 20946 SGB 6400.2 R23 .0017 R13 .9772  
 BDE 1.9363 BRA 4.0556 BC3 2.6929 FSP -924 SGI 6387.7 SGI 399.5 THA 3.48

LAUNCH DATE JAN 9 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 7 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 108.56 VL 27.110 GAL 8.80 AZL 87.49 HCA 281.40 SMA 124.11 ECC .23858 INC 2.5100 V1 30.285  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.155 GAP 11.75 AZP 89.50 TAL 148.94 TAP 70.34 RCA 94.50 APO 153.72 V2 34.977  
 RC 163.161 GL 12.27 GP -8.40 ZAL 42.19 ZAP 166.93 ETS 323.28 ZAE 125.80 ETE 185.55 ZAC 133.14 ETC 171.02 CLP-169.95

Planetocentric Conic  
 C3 30.503 VHL 5.523 DLA 33.71 RAL 63.73 RAD 6568.2 VEL 12.324 PTH 2.22 VHP 8.006 DPA 5.03 RAP 41.26 ECC 1.5020  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.89 23 55 15 4099.24 -20.01 175.40 300.68 62.28 25 3 35 3499.2 -23.55 168.09  
 109.11 4 47 22 3180.81 -19.99 106.98 300.67 62.27 5 40 23 2580.8 -23.54 99.68  
 70.89 23 55 15 4099.24 -20.01 175.40 300.68 62.28 25 3 35 3499.2 -23.55 168.09  
 109.11 4 47 22 3180.81 -19.99 106.98 300.67 62.27 5 40 23 2580.8 -23.54 99.68  
 110.00 5 35 49 3032.71 -24.25 97.73 302.94 65.14 6 26 22 2432.7 -27.40 89.97  
 110.00 4 9 55 3295.34 -15.86 113.47 298.24 59.31 5 4 50 2693.3 -19.81 106.57

Differential Corrections  
 TDE 1.8221 TRA 4.3917 TC3-2.4649 BAU 1.0053 SGT 6401.7 SGR 548.9 SG3 246.8  
 RDE .4607 RRA .2160 RC3 -.0145 FAU .02170 RRT .6894 RRF .6780 RTF .9773  
 FDE .6614 FRA 2.1557 FC3 -.6159 BSP 21093 SGB 6425.2 R23 .0022 R13 .9773  
 BDE 1.8795 BRA 4.3970 BC3 2.4649 FSP -874 SGI 6412.9 SGI 396.9 THA 3.40

LAUNCH DATE JAN 9 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 9 1969

Heliocentric Conic  
 RL 147.11 LAL .00 LOL 108.56 VL 27.083 GAL 9.44 AZL 87.60 HCA 284.60 SMA 123.94 ECC .24678 INC 2.4039 V1 30.285  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.148 GAP 12.35 AZP 89.39 TAL 147.79 TAP 72.39 RCA 93.35 APO 154.53 V2 34.990  
 RC 165.276 GL 11.18 GP -8.12 ZAL 40.61 ZAP 167.97 ETS 320.78 ZAE 125.57 ETE 185.35 ZAC 137.07 ETC 170.66 CLP-171.10

Planetocentric Conic  
 C3 33.408 VHL 5.780 DLA 32.88 RAL 65.56 RAD 6568.3 VEL 12.441 PTH 2.25 VHP 8.361 DPA 6.01 RAP 43.08 ECC 1.5498  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.55 0 16 54 4090.09 -18.84 174.04 303.72 62.54 1 25 4 3490.1 -22.36 166.79  
 107.45 4 44 16 3235.71 -18.82 110.58 303.71 62.53 5 38 12 2635.7 -22.35 103.32  
 72.55 0 16 54 4090.09 -18.84 174.04 303.72 62.54 1 25 4 3490.1 -22.36 166.79  
 107.45 4 44 16 3235.71 -18.82 110.58 303.71 62.53 5 38 12 2635.7 -22.35 103.32  
 110.00 6 11 27 2987.55 -26.05 93.52 307.39 67.04 7 0 55 2367.5 -28.93 85.52  
 110.00 3 48 53 3406.25 -11.91 119.63 299.60 57.72 4 45 40 2806.3 -18.09 113.02

Differential Corrections  
 TDE 1.7597 TRA 4.7548 TC3-2.2388 BAU 1.0000 SGT 6421.6 SGR 541.2 SG3 233.3  
 RDE .4712 RRA .2313 RC3 -.0129 FAU .01920 RRT .6864 RRF .6754 RTF .9775  
 FDE .5976 FRA 2.1781 FC3 -.4976 BSP 21231 SGB 6444.3 R23 .0027 R13 .9775  
 BDE 1.8217 BRA 4.7602 BC3 2.2389 FSP -827 SGI 6432.3 SGI 392.9 THA 3.32

LAUNCH DATE JAN 9 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 603.447

RL 147.11 LAL .00 LOL 108.56 VL 27.056 GAL 10.13 AZL 87.71 HCA 287.79 SMA 123.77 ECC .25571 INC 2.2945 V1 30.285
RP 108.26 LAP -2.18 LOP 36.37 VP 37.140 GAP 12.98 AZP 89.30 TAL 146.68 TAP 74.47 RCA 92.12 APO 155.42 V2 35.003
RC 167.370 GL 10.13 GP -7.87 ZAL 39.10 ZAP 168.97 ETS 317.74 ZAE 125.34 ETE 185.18 ZAC 139.00 ETC 170.26 CLP-172.25

PLANETOCENTRIC CONIC

C3 36.755 VHL 6.063 DLA 32.06 RAL 67.30 RAD 6568.4 VEL 12.575 PTH 2.28 VHP 8.743 DPA 6.94 RAP 44.92 ECC 1.6049
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.31 0 35 23 4078.27 -17.66 172.50 306.76 62.80 1 43 21 3478.3 -21.16 165.29
103.69 4 39 38 3295.74 -17.64 114.53 306.75 62.79 5 34 34 2695.7 -21.15 107.32
74.31 0 35 23 4078.27 -17.66 172.50 306.76 62.80 1 43 21 3478.3 -21.16 165.29
103.69 4 39 38 3295.74 -17.64 114.53 306.75 62.79 5 34 34 2695.7 -21.15 107.32
110.00 6 37 55 2929.74 -27.03 91.02 311.37 68.23 7 26 45 2329.7 -29.74 82.88
110.00 3 36 16 3492.26 -8.74 124.28 301.44 56.82 4 34 28 2892.3 -13.05 117.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7009 TRA 5.1459 TC3-2.0121 BAU .9887 SGT 6439.2 SGR 533.4 SG3 220.9 ST 2356.4 SR 463.3 SS 678.5
RDE .4823 RRA .2482 RC3 -.0112 FAU .01673 RRT .6853 RRF .6750 RTF .9779 CRT .8021 CRS -.7083 CST -.9895
FDE .5420 FRA 2.2047 FC3 -.3940 BSP 21257 SGB 6461.3 R23 .0032 R13 .9779 LSA 2478.3 MSA 292.8 SSA 12.5
BOE 1.7679 BRA 5.1519 BC3 2.0122 FSP -779 SGI 6449.6 SGI 387.8 THA 3.26 EL1 2385.9 EL2 273.3 ALF 9.08

LAUNCH DATE JAN 9 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 608.615

RL 147.11 LAL .00 LOL 108.56 VL 27.029 GAL 10.87 AZL 87.82 HCA 290.99 SMA 123.60 ECC .26547 INC 2.1810 V1 30.285
RP 108.22 LAP -2.04 LOP 39.57 VP 37.133 GAP 13.67 AZP 89.22 TAL 145.58 TAP 76.58 RCA 90.79 APO 156.42 V2 35.016
RC 169.445 GL 9.12 GP -7.84 ZAL 37.85 ZAP 169.90 ETS 314.05 ZAE 125.10 ETE 185.02 ZAC 140.94 ETC 169.79 CLP-173.39

PLANETOCENTRIC CONIC

C3 40.621 VHL 6.373 DLA 31.25 RAL 68.94 RAD 6568.6 VEL 12.727 PTH 2.31 VHP 9.155 DPA 7.83 RAP 46.79 ECC 1.6685
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.20 0 54 57 4062.68 -16.47 170.68 309.79 63.07 2 2 40 3462.7 -19.93 163.51
103.80 4 33 9 3361.87 -16.46 118.91 309.78 63.06 5 29 10 2761.9 -19.94 111.74
76.20 0 54 57 4062.68 -16.47 170.68 309.79 63.07 2 2 40 3462.7 -19.93 163.51
103.80 4 33 9 3361.87 -16.46 118.91 309.78 63.06 5 29 10 2761.9 -19.94 111.74
110.00 7 0 9 2904.41 -27.86 89.32 315.13 69.06 7 48 34 2304.4 -30.25 81.08
110.00 3 27 7 3568.14 -5.89 128.31 303.49 56.27 4 26 35 2968.1 -10.28 121.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6370 TRA 5.5595 TC3-1.7985 BAU .9757 SGT 6448.5 SGR 524.6 SG3 209.1 ST 2290.4 SR 451.4 SS 656.9
RDE .4933 RRA .2862 RC3 -.0099 FAU .01448 RRT .6852 RRF .6752 RTF .9784 CRT .7738 CRS -.6786 CST -.9902
FDE .4897 FRA 2.2321 FC3 -.3085 BSP 21371 SGB 6469.8 R23 .0033 R13 .9784 LSA 2406.5 MSA 299.6 SSA 12.2
BOE 1.7097 BRA 5.5659 BC3 1.7966 FSP -739 SGI 6458.6 SGI 381.5 THA 3.20 EL1 2317.3 EL2 282.6 ALF 8.80

LAUNCH DATE JAN 9 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 613.655

RL 147.11 LAL .00 LOL 108.56 VL 27.003 GAL 11.68 AZL 87.94 HCA 294.20 SMA 123.44 ECC .27616 INC 2.0624 V1 30.285
RP 108.18 LAP -1.88 LOP 42.77 VP 37.127 GAP 14.41 AZP 89.15 TAL 144.53 TAP 78.73 RCA 89.35 APO 157.53 V2 35.030
RC 171.498 GL 8.15 GP -7.43 ZAL 36.28 ZAP 170.78 ETS 309.55 ZAE 124.86 ETE 184.88 ZAC 142.88 ETC 169.25 CLP-174.53

PLANETOCENTRIC CONIC

C3 45.103 VHL 6.716 DLA 30.45 RAL 70.48 RAD 6568.7 VEL 12.902 PTH 2.35 VHP 9.601 DPA 8.68 RAP 48.68 ECC 1.7423
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.31 1 16 15 4041.18 -15.28 168.44 312.80 63.34 2 23 36 3441.2 -18.74 161.31
101.69 4 24 9 3436.13 -15.27 123.86 312.79 63.33 5 21 25 2836.1 -18.73 116.73
78.31 1 16 15 4041.18 -15.28 168.44 312.80 63.34 2 23 36 3441.2 -18.74 161.31
101.69 4 24 9 3436.13 -15.27 123.86 312.79 63.33 5 21 25 2836.1 -18.73 116.73
110.00 7 19 40 2886.99 -28.08 88.13 318.77 69.65 8 7 47 2287.0 -30.58 79.83
110.00 3 19 55 3638.32 -3.23 131.99 305.67 55.95 4 20 33 3038.3 -7.68 125.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5727 TRA 6.0027 TC3-1.5879 BAU .9575 SGT 6452.7 SGR 514.9 SG3 198.1 ST 2231.7 SR 438.6 SS 639.4
RDE .5044 RRA .2855 RC3 -.0085 FAU .01231 RRT .6862 RRF .6765 RTF .9790 CRT .7442 CRS -.6492 CST -.9910
FDE .4427 FRA 2.2830 FC3 -.2362 BSP 21469 SGB 6473.2 R23 .0034 R13 .9790 LSA 2342.8 MSA 304.4 SSA 11.8
BOE 1.6517 BRA 6.0095 BC3 1.5879 FSP -700 SGI 6462.4 SGI 374.0 THA 3.15 EL1 2255.8 EL2 289.8 ALF 8.46

LAUNCH DATE JAN 9 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 618.540

RL 147.11 LAL .00 LOL 108.56 VL 26.976 GAL 12.56 AZL 88.06 HCA 297.40 SMA 123.27 ECC .28791 INC 1.9377 V1 30.285
RP 108.14 LAP -1.72 LOP 45.88 VP 37.120 GAP 15.21 AZP 89.11 TAL 143.52 TAP 80.92 RCA 87.78 APO 158.77 V2 35.043
RC 173.532 GL 7.21 GP -7.24 ZAL 34.99 ZAP 171.57 ETS 304.04 ZAE 124.60 ETE 184.76 ZAC 144.82 ETC 168.62 CLP-175.68

PLANETOCENTRIC CONIC

C3 50.324 VHL 7.094 DLA 29.67 RAL 71.92 RAD 6568.9 VEL 13.103 PTH 2.39 VHP 10.086 DPA 9.50 RAP 50.58 ECC 1.8282
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.75 1 40 29 4009.71 -14.10 165.49 315.79 63.62 2 47 19 3409.7 -17.53 158.39
99.25 4 11 27 3522.40 -14.08 129.67 315.78 63.61 5 10 9 2922.4 -17.51 122.58
100.00 4 48 0 3405.57 -17.09 122.50 317.28 65.10 5 44 45 2805.6 -20.31 115.18
100.00 3 46 37 3601.78 -11.13 134.01 314.22 62.08 4 46 39 3001.8 -14.78 127.12
110.00 7 37 9 2875.32 -28.35 87.34 322.30 70.05 8 25 4 2275.3 -30.80 78.99
110.00 3 15 58 3704.79 -.69 135.46 307.92 55.82 4 15 43 3104.8 -5.17 129.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5096 TRA 6.4794 TC3-1.3867 BAU .9329 SGT 6452.3 SGR 504.5 SG3 187.9 ST 2180.6 SR 425.1 SS 625.8
RDE .5157 RRA .3061 RC3 -.0069 FAU .01019 RRT .6883 RRF .6790 RTF .9799 CRT .7142 CRS -.6208 CST -.9919
FDE .4008 FRA 2.2984 FC3 -.1754 BSP 21538 SGB 6472.0 R23 .0033 R13 .9799 LSA 2287.5 MSA 307.2 SSA 11.4
BOE 1.5953 BRA 6.4867 BC3 1.3867 FSP -664 SGI 6461.7 SGI 365.4 THA 3.09 EL1 2202.0 EL2 294.7 ALF 8.07

LAUNCH DATE JAN 10 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 21 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 21.415 GAL 7.98 AZL 86.04 HCA 58.95 SMA 98.63 ECC .50629 INC 3.9601 V1 30.284  
 RP 107.62 LAP 3.39 LOP 160.47 VP 33.476 GAP -30.01 AZP 87.95 TAL 172.07 TAP 231.02 RCA 48.69 APO 148.56 V2 35.211  
 RC 49.405 GL 8.69 GP 3.48 ZAL 72.52 ZAP 20.57 ETS 190.62 ZAE 160.72 ETE 201.92 ZAC 102.04 ETC 165.94 CLP 20.29

DISTANCE 152.731

PLANETOCENTRIC CONIC

C3 93.912 VHL 9.691 DLA 22.13 RAL 31.86 RAD 6569.8 VEL 14.672 PTH 2.66 VHP 18.035 DPA 3.77 RAP 7.86 ECC 2.5456  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 55 43 3363.66 -23.40 121.98 289.43 73.58 3 51 47 2763.9 -25.43 113.90  
 90.00 21 24 48 4462.89 0.42 186.75 276.82 62.86 22 39 11 3862.9 4.71 180.03  
 100.00 4 32 55 3050.42 -25.66 99.64 290.15 74.11 5 23 46 2450.4 -27.59 91.38  
 100.00 22 30 17 4251.54 10.50 170.12 275.72 61.85 23 41 9 3651.5 6.66 163.44  
 110.00 6 14 4 2733.99 -31.22 77.34 291.88 75.32 6 59 38 2134.0 -32.92 68.53  
 110.00 23 5 38 4140.76 15.53 158.80 272.80 59.16 24 14 39 3540.8 11.32 152.22

DIFFERENTIAL CORRECTIONS

TDE -.4499 TRA-1.2026 TC3 -.0816 BAU .1093  
 RDE -.7001 RRA .1963 RC3 -.0304 FAU .01803  
 FDE .2977 FRA .5285 FC3 -.1477 BSP 2243  
 BDE .8322 BRA 1.2185 BC3 .0871 FSP -89

MID-COURSE EXECUTION ACCURACY

S6T 827.6 S6R 436.5 S6S 41.1  
 RRT .0643 RRF -.0668 RTF -.6596  
 S6B 935.7 R23 -.0082 R13 -.6600  
 S6I 828.3 S62 435.2 THA 2.68

ORBIT DETERMINATION ACCURACY

ST 351.9 SR 415.6 SS 316.4  
 CRT .6937 CRS .8183 CST .9798  
 LSA 588.9 MSA 222.9 SSA 13.8  
 EL1 502.6 EL2 209.6 ALF 51.78

LAUNCH DATE JAN 10 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 23 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 21.933 GAL 7.60 AZL 86.18 HCA 62.18 SMA 100.30 ECC .48116 INC 3.8217 V1 30.284  
 RP 107.65 LAP 3.38 LOP 171.71 VP 33.801 GAP -28.48 AZP 88.21 TAL 171.65 TAP 233.83 RCA 52.04 APO 148.56 V2 35.202  
 RC 48.084 GL 9.10 GP 3.62 ZAL 71.95 ZAP 19.05 ETS 191.95 ZAE 162.51 ETE 204.23 ZAC 103.60 ETC 165.80 CLP 18.71

DISTANCE 159.112

PLANETOCENTRIC CONIC

C3 83.983 VHL 9.163 DLA 22.72 RAL 32.32 RAD 6569.6 VEL 14.329 PTH 2.61 VHP 17.214 DPA 4.58 RAP 9.32 ECC 2.3818  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 49 39 3367.12 -23.33 122.20 288.14 73.49 3 45 46 2767.1 -25.38 114.13  
 90.00 21 34 29 4409.89 6.76 183.74 276.01 62.44 22 47 59 3809.9 3.02 177.06  
 100.00 4 27 55 3050.28 -25.66 99.83 288.88 74.11 5 18 45 2450.3 -27.59 91.37  
 100.00 22 38 54 4201.96 8.90 167.31 274.86 61.34 23 48 56 3602.0 5.00 160.69  
 110.00 6 10 49 2728.34 -31.32 76.93 290.63 75.55 6 56 17 2128.3 -32.99 68.10  
 110.00 23 12 29 4096.66 13.97 156.33 271.86 58.48 24 20 46 3496.7 9.70 149.84

DIFFERENTIAL CORRECTIONS

TDE -.4495 TRA-1.1898 TC3 -.0785 BAU .0956  
 RDE -.6692 RRA .1799 RC3 -.0329 FAU .01655  
 FDE .3103 FRA .5429 FC3 -.1706 BSP 2400  
 BDE .8082 BRA 1.2033 BC3 .0851 FSP -99

MID-COURSE EXECUTION ACCURACY

S6T 866.1 S6R 440.0 S6S 45.0  
 RRT .0732 RRF -.0782 RTF -.6795  
 S6B 971.5 R23 -.0094 R13 -.6800  
 S6I 867.0 S62 436.4 THA 2.86

ORBIT DETERMINATION ACCURACY

ST 370.9 SR 420.1 SS 332.3  
 CRT .6981 CRS .8218 CST .9799  
 LSA 610.3 MSA 227.6 SSA 14.0  
 EL1 517.2 EL2 215.7 ALF 50.07

LAUNCH DATE JAN 10 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 22.415 GAL 7.22 AZL 86.31 HCA 65.42 SMA 101.95 ECC .45715 INC 3.6914 V1 30.284  
 RP 107.68 LAP 3.36 LOP 174.95 VP 34.106 GAP -27.03 AZP 88.46 TAL 171.27 TAP 236.68 RCA 55.34 APO 148.55 V2 35.194  
 RC 46.839 GL 9.51 GP 3.78 ZAL 71.47 ZAP 17.54 ETS 193.53 ZAE 164.44 ETE 207.19 ZAC 105.16 ETC 165.63 CLP 17.14

DISTANCE 165.551

PLANETOCENTRIC CONIC

C3 75.122 VHL 8.667 DLA 23.27 RAL 32.88 RAD 6569.5 VEL 14.017 PTH 2.56 VHP 16.426 DPA 5.41 RAP 10.77 ECC 2.2363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 43 13 3369.54 -23.29 122.36 286.70 73.42 3 39 25 2769.5 -25.34 114.29  
 90.00 21 43 49 4356.43 5.07 180.73 275.12 62.10 22 56 25 3756.4 1.30 174.08  
 100.00 4 22 37 3049.05 -25.68 99.55 287.46 74.15 5 13 26 2449.1 -27.61 91.28  
 100.00 22 47 6 4152.15 7.26 164.52 273.92 60.92 23 56 18 3552.2 3.33 157.94  
 110.00 6 7 20 2721.43 -31.44 76.42 289.22 75.83 6 52 41 2121.4 -33.06 67.58  
 110.00 23 18 32 4052.54 12.39 153.89 270.84 57.88 24 26 25 3452.5 8.06 147.48

DIFFERENTIAL CORRECTIONS

TDE -.4497 TRA-1.1760 TC3 -.0733 BAU .0817  
 RDE -.8391 RRA .1641 RC3 -.0332 FAU .01713  
 FDE .3237 FRA .5594 FC3 -.1974 BSP 2564  
 BDE .7815 BRA 1.1874 BC3 .0813 FSP -111

MID-COURSE EXECUTION ACCURACY

S6T 905.9 S6R 442.9 S6S 49.2  
 RRT .0833 RRF -.0869 RTF -.6987  
 S6B 1008.4 R23 -.0107 R13 -.6992  
 S6I 906.9 S62 440.9 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 391.0 SR 424.0 SS 349.0  
 CRT .7035 CRS .8258 CST .9801  
 LSA 632.9 MSA 231.6 SSA 14.2  
 EL1 532.6 EL2 221.2 ALF 48.29

LAUNCH DATE JAN 10 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 22.861 GAL 6.84 AZL 86.43 HCA 68.65 SMA 103.56 ECC .43429 INC 3.5677 V1 30.284  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.392 GAP -25.64 AZP 88.70 TAL 170.93 TAP 239.58 RCA 58.58 APO 148.53 V2 35.184  
 RC 45.742 GL 9.92 GP 3.95 ZAL 71.08 ZAP 16.06 ETS 195.42 ZAE 166.49 ETE 211.11 ZAC 106.72 ETC 165.42 CLP 15.58

DISTANCE 172.041

PLANETOCENTRIC CONIC

C3 87.259 VHL 8.201 DLA 23.80 RAL 32.95 RAD 6569.3 VEL 13.734 PTH 2.51 VHP 15.669 DPA 6.26 RAP 12.23 ECC 2.1069  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 26 3371.17 -23.26 122.47 285.11 73.37 3 32 37 2771.2 -25.31 114.41  
 90.00 21 52 47 4302.71 3.35 177.71 274.13 61.87 23 4 29 3702.7 -.44 171.08  
 100.00 4 17 3 3048.76 -25.72 99.39 285.90 74.23 5 7 50 2446.8 -27.64 91.12  
 100.00 22 54 51 4102.35 5.60 161.75 272.88 60.59 24 3 13 3502.4 1.64 155.20  
 110.00 6 3 38 2713.31 -31.57 75.83 287.66 76.16 6 48 51 2113.3 -33.15 66.96  
 110.00 23 24 45 4088.57 10.79 151.50 269.74 57.36 24 31 34 3408.6 6.41 145.14

DIFFERENTIAL CORRECTIONS

TDE -.4510 TRA-1.1616 TC3 -.0655 BAU .0679  
 RDE -.8097 RRA .1489 RC3 -.0374 FAU .01777  
 FDE .3360 FRA .5760 FC3 -.2287 BSP 2727  
 BDE .7584 BRA 1.1711 BC3 .0755 FSP -124

MID-COURSE EXECUTION ACCURACY

S6T 947.4 S6R 445.1 S6S 53.9  
 RRT .0947 RRF -.0990 RTF -.7170  
 S6B 1046.8 R23 -.0122 R13 -.7176  
 S6I 948.6 S62 442.6 THA 3.26

ORBIT DETERMINATION ACCURACY

ST 412.4 SR 427.3 SS 366.5  
 CRT .7101 CRS .8303 CST .9805  
 LSA 657.0 MSA 234.8 SSA 14.4  
 EL1 549.2 EL2 225.9 ALF 46.43

LAUNCH DATE JAN 10 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 170.577

RL 147.12 LAL .00 LOL 109.58 VL 23.276 GAL 6.46 AZL 86.55 HCA 71.88 SMA 105.12 ECC .41255 INC 3.4494 V1 30.284  
RP 107.74 LAP 3.28 LOP 181.43 VP 34.658 GAP -24.33 AZP 88.93 TAL 170.64 TAP 242.52 RCA 61.75 APO 148.49 V2 35.174  
RC 44.782 GL 10.33 GP 4.13 ZAL 70.79 ZAP 14.60 ETS 197.74 ZAE 188.61 ETE 216.60 ZAC 108.27 ETC 165.19 CLP 14.02

PLANETOCENTRIC CONIC

C3 60.265 VHL 7.763 DLA 24.29 RAL 33.13 RAD 6569.1 VEL 13.477 PTH 2.46 VMP 14.942 DPA 7.12 RAP 13.69 ECC 1.9916  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 29 20 3372.00 -23.24 122.53 283.39 73.35 3 25 32 2772.0 -25.30 114.46  
90.00 22 1 19 4248.97 1.62 174.71 273.04 61.73 23 12 8 3649.0 -2.17 168.08  
100.00 4 11 15 3043.39 -25.79 99.16 284.20 74.33 5 1 59 2443.4 -27.69 90.88  
100.00 23 2 5 4052.81 3.94 159.01 271.75 60.34 24 9 38 3452.8 -.04 152.48  
110.00 5 59 44 2703.98 -31.72 75.14 283.96 76.54 6 44 48 2104.0 -33.25 66.25  
110.00 23 30 5 3964.99 9.18 149.15 268.54 56.93 24 36 10 3365.0 4.76 142.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4528 TRA-1.1459 TC3 -.0546 BAU .0542 SGT 989.8 SGR 446.7 SCS 59.1 ST 434.8 SR 430.1 SS 384.7  
RDE -.5811 RRA .1343 RC3 -.0393 FAU .01848 RRT .1074 RRF -.1126 RTF -.7345 CRT .7174 CRS .8352 CST .9809  
FDE .3531 FRA .5927 FC3 -.2655 BSP 2904 SGB 1085.9 RZ3 -.0139 R13 -.7352 LSA 682.3 MSA 237.2 SSA 14.6  
BDE .7386 BRA 1.1358 BC3 .0673 FSP -138 SGT 991.3 SGT 443.4 THA 3.47 EL1 566.8 EL2 229.9 ALF 44.57

LAUNCH DATE JAN 10 1969

FLIGHT TIME 80.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 185.154

RL 147.12 LAL .00 LOL 109.58 VL 23.680 GAL 6.08 AZL 86.66 HCA 75.11 SMA 106.65 ECC .39193 INC 3.3355 V1 30.284  
RP 107.77 LAP 3.22 LOP 184.67 VP 34.907 GAP -23.07 AZP 89.14 TAL 170.40 TAP 245.51 RCA 64.85 APO 148.44 V2 35.164  
RC 43.971 GL 10.73 GP 4.33 ZAL 70.58 ZAP 13.18 ETS 200.61 ZAE 170.73 ETE 224.78 ZAC 109.81 ETC 164.92 CLP 12.46

PLANETOCENTRIC CONIC

C3 54.042 VHL 7.351 DLA 24.75 RAL 33.22 RAD 6569.0 VEL 13.244 PTH 2.42 VMP 14.243 DPA 7.99 RAP 15.14 ECC 1.8894  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 21 58 3371.99 -23.24 122.53 281.54 73.35 3 18 10 2772.0 -25.30 114.46  
90.00 22 9 23 4193.51 -.11 171.73 271.86 61.88 23 19 19 3595.5 -3.89 165.09  
100.00 4 5 17 3038.90 -25.87 98.85 282.38 74.47 4 55 55 2438.9 -27.75 90.56  
100.00 23 8 46 4003.84 2.29 156.32 270.53 60.19 24 15 29 3403.8 -1.70 149.80  
110.00 5 55 42 2693.44 -31.88 74.36 284.13 76.97 6 40 35 2093.4 -33.35 65.44  
110.00 23 34 50 3922.06 7.57 146.86 267.26 56.57 24 40 12 3322.1 3.12 140.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4552 TRA-1.1294 TC3 -.0401 BAU .0413 SGT 1033.9 SGR 447.6 SCS 64.8 ST 458.7 SR 432.5 SS 403.9  
RDE -.5335 RRA .1203 RC3 -.0408 FAU .01927 RRT .1220 RRF -.1279 RTF -.7512 CRT .7260 CRS .8405 CST .9815  
FDE .3894 FRA .6097 FC3 -.3087 BSP 3080 SGB 1128.6 RZ3 -.0157 R13 -.7519 LSA 709.5 MSA 238.8 SSA 14.8  
BDE .7166 BRA 1.1358 BC3 .0572 FSP -154 SGT 1035.7 SGT 443.5 THA 3.70 EL1 565.9 EL2 232.9 ALF 42.68

LAUNCH DATE JAN 10 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 191.766

RL 147.12 LAL .00 LOL 109.58 VL 24.016 GAL 5.71 AZL 86.77 HCA 78.34 SMA 108.12 ECC .37242 INC 3.2250 V1 30.284  
RP 107.80 LAP 3.16 LOP 187.90 VP 35.138 GAP -21.86 AZP 89.35 TAL 170.21 TAP 248.55 RCA 67.85 APO 148.39 V2 35.153  
RC 43.319 GL 11.13 GP 4.56 ZAL 70.47 ZAP 11.81 ETS 204.23 ZAE 172.67 ETE 237.81 ZAC 111.34 ETC 164.61 CLP 10.90

PLANETOCENTRIC CONIC

C3 48.305 VHL 6.985 DLA 25.17 RAL 33.21 RAD 6568.8 VEL 13.033 PTH 2.38 VMP 13.572 DPA 8.88 RAP 16.58 ECC 1.7983  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 14 24 3371.03 -23.26 122.46 279.58 73.38 3 10 35 2771.0 -25.32 114.40  
90.00 22 16 54 4142.72 -1.81 168.79 270.58 61.74 23 25 57 3542.7 -5.57 162.13  
100.00 3 59 11 3033.19 -25.97 98.46 280.43 74.66 4 49 44 2433.2 -27.83 90.15  
100.00 23 14 48 3955.80 .86 153.68 269.20 60.11 24 20 43 3355.8 -3.32 147.16  
110.00 5 51 32 2681.89 -32.06 73.49 282.16 77.46 6 36 14 2081.7 -33.46 64.54  
110.00 23 38 56 3880.06 5.99 144.64 265.89 56.28 24 43 36 3280.1 1.52 138.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4608 TRA-1.1141 TC3 -.0233 BAU .0310 SGT 1081.8 SGR 447.9 SCS 71.1 ST 485.7 SR 434.4 SS 424.5  
RDE -.5268 RRA .1069 RC3 -.0416 FAU .02013 RRT .1398 RRF -.1456 RTF -.7662 CRT .7364 CRS .8464 CST .9823  
FDE .3874 FRA .6274 FC3 -.3592 BSP 3202 SGB 1170.9 RZ3 -.0172 R13 -.7670 LSA 739.8 MSA 239.4 SSA 15.1  
BDE .6998 BRA 1.1193 BC3 .0477 FSP -171 SGT 1084.0 SGT 442.7 THA 3.98 EL1 607.8 EL2 234.8 ALF 40.68

LAUNCH DATE JAN 10 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 198.408

RL 147.12 LAL .00 LOL 109.58 VL 24.346 GAL 5.35 AZL 86.88 HCA 81.57 SMA 109.54 ECC .35399 INC 3.1171 V1 30.284  
RP 107.84 LAP 3.08 LOP 191.13 VP 35.353 GAP -20.71 AZP 89.54 TAL 170.08 TAP 251.64 RCA 70.77 APO 148.32 V2 35.141  
RC 42.834 GL 11.52 GP 4.81 ZAL 70.46 ZAP 10.49 ETS 208.89 ZAE 174.10 ETE 258.92 ZAC 112.84 ETC 164.26 CLP 9.34

PLANETOCENTRIC CONIC

C3 43.578 VHL 6.601 DLA 25.55 RAL 33.11 RAD 6568.7 VEL 12.843 PTH 2.34 VMP 12.926 DPA 9.78 RAP 18.01 ECC 1.7172  
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
90.00 2 6 45 3368.88 -23.30 122.32 277.51 73.44 3 2 54 2768.9 -25.35 114.25  
90.00 22 23 44 4091.11 -3.47 165.90 269.19 61.88 23 31 55 3491.1 -7.21 159.21  
100.00 3 53 5 3026.08 -26.10 97.97 278.38 74.88 4 43 31 2426.1 -27.92 89.64  
100.00 23 20 8 3909.14 -.93 151.12 267.78 60.12 24 25 15 3309.1 -4.89 144.58  
110.00 5 47 19 2688.66 -32.25 72.52 280.08 78.00 6 31 48 2068.7 -33.57 63.54  
110.00 23 42 21 3839.32 4.45 142.49 264.43 56.07 24 46 20 3239.3 -.04 136.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4841 TRA-1.0955 TC3 .0001 BAU .0243 SGT 1128.2 SGR 447.7 SCS 78.0 ST 512.0 SR 435.9 SS 445.6  
RDE -.5012 RRA .0940 RC3 -.0416 FAU .02111 RRT .1583 RRF -.1852 RTF -.7811 CRT .7467 CRS .8526 CST .9831  
FDE .4061 FRA .6451 FC3 -.4193 BSP 3388 SGB 1215.8 RZ3 -.0193 R13 -.7820 LSA 770.2 MSA 239.2 SSA 15.3  
BDE .6831 BRA 1.0995 BC3 .0416 FSP -191 SGT 1130.9 SGT 441.1 THA 4.24 EL1 629.8 EL2 235.8 ALF 38.89

LAUNCH DATE JAN 10 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 24.651 GAL 5.00 AZL 86.99 HCA 84.79 SMA 110.91 ECC .33663 INC 3.0111 V1 30.284
RP 107.87 LAP 3.00 LOP 194.36 VP 35.553 GAP -19.61 AZP 89.73 TAL 170.00 TAP 254.79 RCA 73.58 APO 148.25 V2 35.129
RC 42.524 GL 11.89 GP 5.08 ZAL 70.54 ZAP 9.27 ETS 214.97 ZAE 174.43 ETE 287.70 ZAC 114.33 ETC 163.87 CLP 7.77

DISTANCE 205.076

PLANETOCENTRIC CONIC

C3 39.195 VHL 6.261 DLA 25.89 RAL 32.92 RAD 6568.5 VEL 12.671 PTH 2.30 VHP 12.305 DPA 10.71 RAP 19.42 ECC 1.6450
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 59 11 3365.18 -23.37 122.07 275.55 73.54 2 55 16 2765.2 -25.41 113.99
90.00 22 29 45 4041.31 -5.06 163.11 267.69 62.10 23 37 6 3441.3 -8.76 156.38
100.00 3 47 4 3017.34 -26.25 97.37 276.24 75.17 4 37 22 2417.3 -28.03 89.02
100.00 23 24 32 3864.38 -2.44 148.67 266.25 60.20 24 28 57 3264.4 -6.39 142.10
110.00 5 43 7 2654.28 -32.45 71.45 277.89 78.61 6 27 21 2054.3 -33.68 62.43
110.00 23 44 59 3800.21 2.96 140.44 262.80 55.93 24 48 20 3200.2 -1.53 134.24

DIFFERENTIAL CORRECTIONS

TDE -.4682 TRA-1.0757 TC3 .0287 BAU .0260
RDE -.4768 RRA .0818 RC3 -.0405 FAU .02219
FDE .4264 FRA .6632 FC3 -.4902 BSP 3565
BDE .6683 BRA 1.0788 BC3 .0496 FSP -213

MID-COURSE EXECUTION ACCURACY

S6T 1175.8 S6R 447.1 S6S 85.7
RRT .1795 RRF -.1075 RTF -.7952
S6B 1257.9 R23 -.0220 R13 -.7962
S6I 1178.9 S62 438.6 THA 4.53

ORBIT DETERMINATION ACCURACY

ST 539.8 SR 437.1 SS 467.8
CRT .7579 CRS .8591 CST .9839
LSA 802.7 MSA 238.0 SSA 15.5
EL1 653.4 EL2 235.6 ALF 37.16

LAUNCH DATE JAN 10 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 24.934 GAL 4.66 AZL 87.09 HCA 88.01 SMA 112.23 ECC .32029 INC 2.9063 V1 30.284
RP 107.91 LAP 2.90 LOP 197.59 VP 35.737 GAP -18.55 AZP 89.90 TAL 169.97 TAP 257.98 RCA 76.28 APO 148.17 V2 35.117
RC 42.392 GL 12.24 GP 5.38 ZAL 70.71 ZAP 8.19 ETS 222.96 ZAE 175.43 ETE 313.78 ZAC 115.78 ETC 163.42 CLP 6.18

DISTANCE 211.764

PLANETOCENTRIC CONIC

C3 35.296 VHL 5.941 DLA 26.17 RAL 32.63 RAD 6568.4 VEL 12.517 PTH 2.27 VHP 11.709 DPA 11.64 RAP 20.81 ECC 1.5809
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 51 54 3359.40 -23.48 121.89 273.11 73.71 2 47 54 2759.4 -25.49 113.59
90.00 22 34 44 3994.13 -6.56 160.45 266.09 62.39 23 41 18 3394.1 -10.21 153.67
100.00 3 41 20 3006.65 -26.44 96.63 274.01 75.52 4 31 26 2406.6 -28.17 88.25
100.00 23 28 0 3822.12 -3.87 146.34 264.61 60.34 24 31 42 3222.1 -7.79 139.75
110.00 5 39 1 2638.43 -32.66 70.26 275.61 79.28 6 22 59 2038.4 -33.79 61.21
110.00 23 46 48 3763.11 1.54 138.51 261.25 55.85 24 49 31 3163.1 -2.95 132.30

DIFFERENTIAL CORRECTIONS

TDE -.4727 TRA-1.0552 TC3 .0636 BAU .0349
RDE -.4538 RRA .0897 RC3 -.0380 FAU .02340
FDE .4483 FRA .6820 FC3 -.5738 BSP 3751
BDE .6551 BRA 1.0575 BC3 .0740 FSP -237

MID-COURSE EXECUTION ACCURACY

S6T 1224.4 S6R 446.1 S6S 94.2
RRT .2035 RRF -.2128 RTF -.8086
S6B 1303.1 R23 -.0250 R13 -.8097
S6I 1228.2 S62 435.4 THA 4.85

ORBIT DETERMINATION ACCURACY

ST 568.8 SR 438.0 SS 491.1
CRT .7697 CRS .8660 CST .9848
LSA 837.0 MSA 236.0 SSA 15.8
EL1 678.5 EL2 234.4 ALF 35.53

LAUNCH DATE JAN 10 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 25.195 GAL 4.53 AZL 87.20 HCA 91.23 SMA 113.49 ECC .30497 INC 2.8019 V1 30.284
RP 107.95 LAP 2.80 LOP 200.81 VP 35.908 GAP -17.54 AZP 90.06 TAL 170.00 TAP 261.23 RCA 78.88 APO 148.10 V2 35.105
RC 42.442 GL 12.57 GP 5.72 ZAL 70.97 ZAP 7.32 ETS 233.36 ZAE 171.55 ETE 330.95 ZAC 117.19 ETC 162.92 CLP 4.58

DISTANCE 218.468

PLANETOCENTRIC CONIC

C3 31.829 VHL 5.642 DLA 26.39 RAL 32.25 RAD 6568.3 VEL 12.377 PTH 2.23 VHP 11.136 DPA 12.60 RAP 22.18 ECC 1.5238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 12 3350.80 -23.65 121.11 270.82 73.95 2 41 3 2750.8 -25.62 112.99
90.00 22 38 25 3950.60 -7.92 157.98 264.36 62.73 23 44 16 3350.6 -11.52 151.14
100.00 3 36 1 2993.57 -26.66 95.72 271.72 75.95 4 25 55 2393.6 -28.33 87.31
100.00 23 30 18 3783.06 -5.18 144.18 262.87 60.52 24 33 21 3183.1 -9.07 137.55
110.00 5 35 6 2620.95 -32.87 68.94 273.24 80.04 6 18 47 2020.9 -33.89 59.85
110.00 23 47 42 3728.45 .22 136.70 259.52 55.82 24 49 50 3128.4 -4.27 130.49

DIFFERENTIAL CORRECTIONS

TDE -.4772 TRA-1.0337 TC3 .1052 BAU .0470
RDE -.4316 RRA .0581 RC3 -.0335 FAU .02474
FDE .4717 FRA .7015 FC3 -.6730 BSP 3931
BDE .6434 BRA 1.0353 BC3 .1104 FSP -265

MID-COURSE EXECUTION ACCURACY

S6T 1273.8 S6R 444.8 S6S 103.6
RRT .2306 RRF -.2415 RTF -.8211
S6B 1349.2 R23 -.0283 R13 -.8223
S6I 1278.4 S62 431.3 THA 5.20

ORBIT DETERMINATION ACCURACY

ST 598.7 SR 438.7 SS 515.4
CRT .7821 CRS .8732 CST .9857
LSA 872.9 MSA 233.2 SSA 16.0
EL1 705.0 EL2 232.2 ALF 34.00

LAUNCH DATE JAN 10 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 109.58 VL 25.437 GAL 4.01 AZL 87.30 HCA 94.45 SMA 114.69 ECC .29062 INC 2.6973 V1 30.284
RP 107.99 LAP 2.69 LOP 204.03 VP 36.066 GAP -16.57 AZP 90.21 TAL 170.09 TAP 264.53 RCA 81.36 APO 148.02 V2 35.092
RC 42.671 GL 12.87 GP 6.09 ZAL 71.33 ZAP 6.77 ETS 246.30 ZAE 169.28 ETE 341.60 ZAC 118.56 ETC 162.37 CLP 2.95

DISTANCE 225.185

PLANETOCENTRIC CONIC

C3 28.747 VHL 5.362 DLA 26.56 RAL 31.79 RAD 6568.2 VEL 12.252 PTH 2.20 VHP 10.586 DPA 13.58 RAP 23.51 ECC 1.4731
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 26 3338.44 -23.88 120.27 268.49 74.31 2 35 4 2738.4 -25.80 112.13
90.00 22 40 30 3911.88 -9.13 155.77 262.51 63.08 23 45 42 3311.9 -12.67 148.88
100.00 3 31 21 2977.61 -26.92 94.80 269.57 76.48 4 20 59 2377.6 -28.51 86.16
100.00 23 31 18 3747.94 -6.35 142.24 261.02 60.73 24 33 44 3147.9 -10.21 135.57
110.00 5 31 30 2601.65 -33.09 67.48 270.79 80.88 6 14 52 2001.7 -33.99 58.35
110.00 23 47 36 3696.66 -1.00 135.04 257.70 55.83 24 49 12 3096.7 -5.48 128.82

DIFFERENTIAL CORRECTIONS

TDE -.4814 TRA-1.0113 TC3 .1548 BAU .0604
RDE -.4109 RRA .0470 RC3 -.0266 FAU .02625
FDE .4968 FRA .7219 FC3 -.7904 BSP 4118
BDE .6330 BRA 1.0124 BC3 .1571 FSP -295

MID-COURSE EXECUTION ACCURACY

S6T 1323.6 S6R 443.6 S6S 114.1
RRT .2812 RRF -.2740 RTF -.8329
S6B 1396.0 R23 -.0323 R13 -.8343
S6I 1329.3 S62 426.4 THA 5.58

ORBIT DETERMINATION ACCURACY

ST 629.3 SR 439.4 SS 540.7
CRT .7948 CRS .8806 CST .9866
LSA 910.2 MSA 229.7 SSA 16.2
EL1 732.6 EL2 229.1 ALF 32.61

LAUNCH DATE JAN 10 1969      FLIGHT TIME 94.00      ARRIVAL DATE APR 14 1969

Heliocentric Conic      Distance 231.909  
 RL 147.12 LAL .00 LOL 109.58 VL 25.660 GAL 3.70 AZL 87.41 HCA 97.66 SMA 115.83 ECC .27721 INC 2.5919 V1 30.284  
 RP 108.03 LAP 2.37 LOP 207.25 VP 36.211 GAP -15.64 AZP 90.35 TAL 170.23 TAP 267.89 RCA 83.72 APO 147.93 V2 35.080  
 RC 43.078 GL 13.12 GP 6.51 ZAL 71.77 ZAP 6.63 ETS 260.97 ZAE 166.86 ETE 348.63 ZAC 119.87 ETC 161.75 CLP 1.30

Planetocentric Conic  
 C3 26.010 VHL 5.100 DLA 26.65 RAL 31.25 RAD 6568.1 VEL 12.140 PTH 2.18 VHP 10.057 DPA 14.59 RAP 24.81 ECC 1.4281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 57 3321.26 -24.19 119.11 266.13 74.81 2 30 18 2721.3 -26.04 110.93  
 90.00 22 40 39 3679.27 -10.13 153.89 260.54 63.41 23 45 18 3279.3 -13.62 146.95  
 100.00 3 27 34 2958.24 -27.22 93.24 266.97 77.14 4 16 52 2358.2 -28.72 84.76  
 100.00 23 30 43 3717.53 -7.36 140.54 259.06 60.93 24 32 41 3117.5 -11.18 133.84  
 110.00 5 28 21 2580.32 -33.31 65.85 268.28 81.82 6 11 21 1980.3 -34.08 56.69  
 110.00 23 48 26 3668.21 -2.09 133.56 255.81 55.87 24 47 34 3068.2 -6.55 127.31

Differential Corrections      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.4857 TRA -.9878 TC3 .2126 BAU .0741      SGT 1373.5 SGR 442.7 SCS 125.7      ST 660.7 SR 440.2 SS 566.8  
 RDE -.3916 RRA .0361 RC3 -.0168 FAU .02792      RRT .2961 RRF -.3108 RTF -.8439      CRT .8080 CRS .8881 CST .9876  
 FDE .5236 FRA .7434 FC3 -.9295 BSP 4300      SGB 1443.0 R23 -.0366 R13 -.8455      LSA 949.0 MSA 225.3 SSA 16.5  
 BDE .6239 BRA .9884 BC3 .2132 FSP -330      SGI 1380.4 SGT 420.7 THA 6.01      EL1 761.4 EL2 225.1 ALF 31.34

LAUNCH DATE JAN 10 1969      FLIGHT TIME 96.00      ARRIVAL DATE APR 16 1969

Heliocentric Conic      Distance 238.638  
 RL 147.12 LAL .00 LOL 109.58 VL 25.865 GAL 3.41 AZL 87.52 HCA 100.87 SMA 116.91 ECC .26471 INC 2.4850 V1 30.284  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.344 GAP -14.74 AZP 90.47 TAL 170.42 TAP 271.30 RCA 85.96 APO 147.85 V2 35.067  
 RC 43.858 GL 13.33 GP 6.97 ZAL 72.50 ZAP 6.98 ETS 275.91 ZAE 164.44 ETE 353.64 ZAC 121.13 ETC 161.06 CLP -.38

Planetocentric Conic  
 C3 23.578 VHL 4.856 DLA 26.66 RAL 30.83 RAD 6568.0 VEL 12.040 PTH 2.15 VHP 9.551 DPA 15.62 RAP 26.06 ECC 1.3880  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 9 3298.28 -24.99 117.55 263.77 75.50 2 27 7 2698.3 -26.34 109.32  
 90.00 22 38 32 3653.96 -10.89 152.43 258.44 63.70 23 42 46 3254.0 -14.34 145.45  
 100.00 3 24 32 2934.91 -27.96 91.59 264.55 77.94 4 13 47 2334.9 -28.94 83.06  
 100.00 23 28 30 3682.56 -8.19 139.15 257.00 61.15 24 30 3 3092.6 -11.97 132.40  
 110.00 5 25 44 2556.70 -33.92 64.04 265.72 82.87 6 8 21 1956.7 -34.14 54.85  
 110.00 23 44 7 3643.54 -3.03 132.27 253.84 55.94 24 44 51 3043.5 -7.48 126.01

Differential Corrections      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.4886 TRA -.9825 TC3 .2805 BAU .0884      SGT 1421.8 SGR 442.3 SCS 138.7      ST 691.3 SR 441.1 SS 593.4  
 RDE -.3758 RRA .0255 RC3 -.0031 FAU .02980      RRT .3591 RRF -.3521 RTF -.8546      CRT .8213 CRS .8956 CST .9885  
 FDE .5319 FRA .7661 FC3 -1.0843 BSP 4503      SGB 1489.0 R23 -.0415 R13 -.8564      LSA 987.8 MSA 220.4 SSA 16.7  
 BDE .6152 BRA .9828 BC3 .2805 FSP -369      SGI 1430.3 SGT 414.3 THA 6.50      EL1 789.9 EL2 220.3 ALF 30.26

LAUNCH DATE JAN 10 1969      FLIGHT TIME 98.00      ARRIVAL DATE APR 18 1969

Heliocentric Conic      Distance 245.368  
 RL 147.12 LAL .00 LOL 109.58 VL 26.055 GAL 3.13 AZL 87.62 HCA 104.08 SMA 117.93 ECC .25308 INC 2.3758 V1 30.284  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.467 GAP -13.88 AZP 90.58 TAL 170.67 TAP 274.75 RCA 88.08 APO 147.78 V2 35.053  
 RC 44.405 GL 13.48 GP 7.50 ZAL 72.90 ZAP 7.78 ETS 288.15 ZAE 162.08 ETE 357.49 ZAC 122.31 ETC 160.30 CLP -2.11

Planetocentric Conic  
 C3 21.418 VHL 4.628 DLA 26.59 RAL 29.95 RAD 6567.9 VEL 11.950 PTH 2.13 VHP 9.065 DPA 16.68 RAP 27.26 ECC 1.3525  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 31 17 3268.77 -25.08 115.52 261.41 76.40 2 25 46 2668.8 -26.70 107.23  
 90.00 22 33 58 3636.85 -11.41 151.44 256.23 63.91 23 37 55 3236.9 -14.82 144.43  
 100.00 3 23 27 2907.18 -27.94 89.62 262.11 78.91 4 11 54 2307.2 -29.18 81.03  
 100.00 23 24 29 3673.67 -8.81 138.08 254.86 61.32 24 25 43 3073.7 -12.57 131.32  
 110.00 5 23 49 2530.55 -33.72 62.02 263.12 84.05 6 6 0 1930.5 -34.18 52.81  
 110.00 23 40 37 3623.07 -3.81 131.20 251.80 56.00 24 41 0 3023.1 -8.25 124.92

Differential Corrections      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.4910 TRA -.9387 TC3 .3567 BAU .1022      SGT 1472.2 SGR 443.1 SCS 153.1      ST 722.2 SR 442.4 SS 620.7  
 RDE -.3573 RRA .0149 RC3 .0152 FAU .03189      RRT .3784 RRF -.3985 RTF -.8640      CRT .8341 CRS .9031 CST .9894  
 FDE .5819 FRA .7907 FC3 -1.2892 BSP 4886      SGB 1537.4 R23 -.0480 R13 -.8662      LSA 1027.6 MSA 215.2 SSA 17.0  
 BDE .6072 BRA .9388 BC3 .3570 FSP -412      SGI 1482.5 SGT 407.3 THA 7.03      EL1 819.1 EL2 215.2 ALF 29.28

LAUNCH DATE JAN 10 1969      FLIGHT TIME 100.00      ARRIVAL DATE APR 20 1969

Heliocentric Conic      Distance 252.095  
 RL 147.12 LAL .00 LOL 109.58 VL 26.229 GAL 2.86 AZL 87.74 HCA 107.29 SMA 118.89 ECC .24230 INC 2.2636 V1 30.284  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.579 GAP -13.05 AZP 90.67 TAL 170.96 TAP 278.25 RCA 90.08 APO 147.70 V2 35.040  
 RC 45.309 GL 13.55 GP 8.08 ZAL 73.58 ZAP 8.96 ETS 298.17 ZAE 159.84 ETE .65 ZAC 123.40 ETC 159.46 CLP -3.87

Planetocentric Conic  
 C3 19.502 VHL 4.416 DLA 26.42 RAL 29.22 RAD 6567.8 VEL 11.869 PTH 2.11 VHP 8.599 DPA 17.78 RAP 28.40 ECC 1.3210  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 31 3232.48 -25.63 113.01 259.05 77.54 2 26 23 2632.5 -27.10 104.65  
 90.00 22 26 54 3628.35 -11.66 150.94 253.92 64.01 23 30 42 3228.5 -15.06 143.92  
 100.00 3 23 29 2874.72 -28.34 87.29 259.65 80.08 4 11 24 2274.7 -29.42 78.65  
 100.00 23 18 36 3661.34 -9.21 137.39 252.64 61.44 24 19 38 3061.3 -12.95 130.60  
 110.00 5 22 44 2501.80 -33.90 59.78 260.48 85.36 6 4 26 1901.6 -34.18 50.55  
 110.00 23 35 51 3607.22 -4.41 130.36 249.71 56.07 24 35 58 3007.2 -8.84 124.07

Differential Corrections      MID-COURSE EXECUTION ACCURACY      ORBIT DETERMINATION ACCURACY  
 TDE -.4901 TRA -.9115 TC3 .4487 BAU .1169      SGT 1517.8 SGR 445.4 SCS 169.2      ST 749.3 SR 444.0 SS 647.2  
 RDE -.3422 RRA .0043 RC3 .0393 FAU .03426      RRT .4258 RRF -.4496 RTF -.8738      CRT .8465 CRS .9104 CST .9902  
 FDE .6124 FRA .8166 FC3 -1.5208 BSP 4920      SGB 1581.8 R23 -.0551 R13 -.8763      LSA 1064.6 MSA 209.6 SSA 17.2  
 BDE .5978 BRA .9115 BC3 .4484 FSP -462      SGI 1530.4 SGT 399.7 THA 7.65      EL1 845.4 EL2 209.6 ALF 28.55

LAUNCH DATE JAN 10 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 258.818

RL 147.12 LAL .00 LOL 109.58 VL 26.389 GAL 2.61 AZL 87.85 HCA 110.50 SMA 119.80 ECC .23233 INC 2.1474 V1 30.284  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.681 GAP -12.25 AZP 90.75 TAL 171.30 TAP 281.80 RCA 91.96 APO 147.63 V2 35.027  
 RC 46.364 GL 13.54 GP 8.75 ZAL 74.32 ZAP 10.42 ETS 305.75 ZAE 157.73 ETE 3.39 ZAC 124.40 ETC 158.54 CLP -5.69

PLANETOCENTRIC CONIC

C3 17.801 VHL 4.219 DLA 26.14 RAL 28.44 RAD 6567.7 VEL 11.798 PTH 2.09 VHP 8.154 DPA 18.93 RAP 29.46 ECC 1.2930  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 35 48 3189.63 -26.23 110.02 256.70 78.93 2 28 58 2589.6 -27.49 101.58  
 90.00 22 17 27 3828.34 -11.66 150.94 251.55 64.01 23 21 15 3228.3 -15.06 143.92  
 100.00 3 25 4 2837.37 -28.75 84.59 257.19 81.44 4 12 22 2237.4 -29.63 75.89  
 100.00 23 10 52 3655.84 -9.39 137.08 250.36 61.49 24 11 47 3055.8 -13.12 130.28  
 110.00 5 22 36 2469.64 -34.05 57.30 257.83 86.82 6 3 45 1869.6 -34.12 48.05  
 110.00 23 29 49 3596.33 -4.83 129.79 247.58 56.12 24 29 46 2996.3 -9.24 123.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4900 TRA -.8865 TC3 .5423 BAW .1301  
 RDE -.3287 RRA -.0065 RC3 .0707 FAU .03686  
 FDE .6446 FRA .8459 FC3-1.7928 BSP 5091  
 BDE .5901 BRA .8865 BC3 .5469 FSP -516

SGT 1565.4 SGR 450.5 SG3 187.2  
 RRT .4787 RRF -.5059 RTF -.8820  
 SGB 1828.9 R23 -.0631 R13 -.8849  
 SG1 1581.2 SG2 391.6 THA 8.36

ST 777.7 SR 446.4 SS 674.2  
 CRT .8591 CRS .9176 CST .9911  
 LSA 1103.2 MSA 203.5 SSA 17.5  
 EL1 873.3 EL2 203.5 ALF 27.90

LAUNCH DATE JAN 10 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 265.532

RL 147.12 LAL .00 LOL 109.58 VL 26.536 GAL 2.37 AZL 87.97 HCA 113.70 SMA 120.64 ECC .22312 INC 2.0265 V1 30.284  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.774 GAP -11.48 AZP 90.81 TAL 171.68 TAP 285.38 RCA 93.72 APO 147.56 V2 35.013  
 RC 47.958 GL 13.43 GP 9.50 ZAL 75.12 ZAP 12.12 ETS 311.41 ZAE 155.80 ETE 5.89 ZAC 125.29 ETC 157.53 CLP -7.56

PLANETOCENTRIC CONIC

C3 16.293 VHL 4.036 DLA 25.75 RAL 27.65 RAD 6567.7 VEL 11.734 PTH 2.07 VHP 7.730 DPA 20.13 RAP 30.43 ECC 1.2681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 41 2 3140.76 -26.82 106.56 254.35 80.56 2 33 23 2540.8 -27.85 98.04  
 90.00 22 5 51 3836.40 -11.42 151.41 249.15 63.91 23 9 47 3236.4 -14.84 144.40  
 100.00 3 28 15 2795.11 -29.14 81.51 254.73 83.02 4 14 50 2195.1 -29.80 72.76  
 100.00 23 1 19 3857.28 -9.34 137.16 248.06 61.47 24 2 16 3057.3 -13.08 130.37  
 110.00 5 23 31 2434.45 -34.15 54.56 258.17 88.44 6 4 6 1834.4 -33.99 45.31  
 110.00 23 22 32 3590.71 -5.04 129.50 245.43 56.15 24 22 23 2990.7 -9.45 123.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4874 TRA -.8608 TC3 .6479 BAW .1432  
 RDE -.3187 RRA -.0177 RC3 .1107 FAU .03978  
 FDE .6772 FRA .8776 FC3-2.1138 BSP 5260  
 BDE .5813 BRA .8610 BC3 .6573 FSP -577

SGT 1810.1 SGR 459.1 SG3 207.2  
 RRT .5350 RRF -.5680 RTF -.8895  
 SGB 1874.3 R23 -.0728 R13 -.8929  
 SG1 1829.9 SG2 383.2 THA 9.19

ST 802.9 SR 449.6 SS 700.0  
 CRT .8712 CRS .9245 CST .9919  
 LSA 1139.1 MSA 197.3 SSA 17.8  
 EL1 898.8 EL2 197.2 ALF 27.44

LAUNCH DATE JAN 10 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 272.236

RL 147.12 LAL .00 LOL 109.58 VL 26.670 GAL 2.15 AZL 88.10 HCA 116.90 SMA 121.43 ECC .21465 INC 1.8995 V1 30.284  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.859 GAP -10.74 AZP 90.86 TAL 172.09 TAP 288.99 RCA 95.37 APO 147.50 V2 35.000  
 RC 48.883 GL 13.21 GP 10.35 ZAL 75.97 ZAP 14.01 ETS 315.63 ZAE 154.03 ETE 8.28 ZAC 126.04 ETC 156.43 CLP -9.50

PLANETOCENTRIC CONIC

C3 14.955 VHL 3.867 DLA 25.22 RAL 26.84 RAD 6567.5 VEL 11.676 PTH 2.05 VHP 7.325 DPA 21.40 RAP 31.31 ECC 1.2461  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 48 5 3086.48 -27.37 102.68 252.01 82.43 2 39 31 2486.5 -28.13 94.10  
 90.00 21 52 23 3851.97 -10.95 152.32 246.75 63.72 22 56 35 3252.0 -14.40 145.33  
 100.00 3 33 3 2748.04 -29.48 78.05 252.28 84.81 4 18 51 2148.0 -29.89 69.27  
 100.00 22 50 6 3665.64 -9.07 137.63 245.75 61.39 23 51 12 3065.6 -12.82 130.85  
 110.00 5 25 38 2395.81 -34.18 51.54 252.52 90.23 6 5 34 1795.8 -33.77 42.32  
 110.00 23 14 1 3590.64 -5.04 129.49 245.29 56.15 24 13 51 2990.6 -9.45 123.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4829 TRA -.8356 TC3 .7618 BAW .1557  
 RDE -.3061 RRA -.0295 RC3 .1611 FAU .04302  
 FDE .7096 FRA .9135 FC3-2.4903 BSP 5417  
 BDE .5717 BRA .8361 BC3 .7787 FSP -644

SGT 1852.8 SGR 472.8 SG3 229.5  
 RRT .5938 RRF -.6287 RTF -.8963  
 SGB 1719.1 R23 -.0839 R13 -.9004  
 SG1 1877.8 SG2 374.7 THA 10.15

ST 825.1 SR 453.7 SS 724.4  
 CRT .8827 CRS .9310 CST .9927  
 LSA 1172.4 MSA 190.9 SSA 18.1  
 EL1 922.1 EL2 190.7 ALF 27.15

LAUNCH DATE JAN 10 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 278.928

RL 147.12 LAL .00 LOL 109.58 VL 26.793 GAL 1.94 AZL 88.23 HCA 120.09 SMA 122.17 ECC .20689 INC 1.7652 V1 30.284  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.935 GAP -10.03 AZP 90.89 TAL 172.54 TAP 292.63 RCA 96.89 APO 147.44 V2 34.987  
 RC 50.327 GL 12.84 GP 11.32 ZAL 76.87 ZAP 16.09 ETS 318.78 ZAE 152.44 ETE 10.66 ZAC 126.63 ETC 155.24 CLP -11.52

PLANETOCENTRIC CONIC

C3 13.789 VHL 3.711 DLA 24.55 RAL 26.05 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 6.940 DPA 22.74 RAP 32.06 ECC 1.2266  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 47 3027.35 -27.83 98.42 249.68 84.52 2 47 14 2427.3 -28.29 89.78  
 90.00 21 37 22 3874.53 -10.27 153.82 244.38 63.47 22 41 56 3274.5 -13.75 146.67  
 100.00 3 39 28 2696.29 -29.74 74.22 249.85 86.80 4 24 24 2096.3 -29.86 65.42  
 100.00 22 37 22 3680.82 -8.57 138.49 243.48 61.25 23 38 43 3080.8 -12.34 131.73  
 110.00 5 29 1 2353.53 -34.12 48.24 249.89 92.18 6 8 15 1753.5 -33.44 39.06  
 110.00 23 4 18 3598.34 -4.82 129.79 241.18 56.12 24 4 14 2996.3 -9.24 123.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4748 TRA -.8093 TC3 .8840 BAW .1679  
 RDE -.2987 RRA -.0420 RC3 .2253 FAU .04862  
 FDE .7400 FRA .9526 FC3-2.9316 BSP 5583  
 BDE .5599 BRA .8104 BC3 .9123 FSP -721

SGT 1889.8 SGR 492.9 SG3 254.2  
 RRT .6526 RRF -.6914 RTF -.9026  
 SGB 1780.2 R23 -.0967 R13 -.9075  
 SG1 1721.6 SG2 366.6 THA 11.30

ST 841.2 SR 458.7 SS 745.4  
 CRT .8935 CRS .9369 CST .9935  
 LSA 1199.7 MSA 184.3 SSA 18.5  
 EL1 940.3 EL2 184.2 ALF 27.10

LAUNCH DATE JAN 10 1969

FLIGHT TIME 110.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 285.606

RL 147.12 LAL .00 LOL 109.58 VL 26.905 GAL 1.74 AZL 88.38 HCA 123.29 SMA 122.85 ECC .19978 INC 1.6221 V1 30.284
RP 108.36 LAP 1.36 LOP 232.88 VP 37.004 GAP -9.34 AZP 90.89 TAL 173.00 TAP 296.29 RCA 98.30 APO 147.39 V2 34.974
RC 51.881 GL 12.33 GP 12.43 ZAL 77.79 ZAP 18.36 ETS 321.14 ZAE 151.03 ETE 13.10 ZAC 127.05 ETC 153.95 CLP -13.62

PLANETOCENTRIC CONIC

C3 12.717 VHL 3.566 DLA 23.72 RAL 25.29 RAD 6567.5 VEL 11.580 PTH 2.03 VHP 6.576 DPA 24.18 RAP 32.67 ECC 1.2093
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 7 5 2963.75 -28.15 93.79 247.37 86.82 2 56 28 2363.7 -28.30 85.13
90.00 21 21 1 3903.72 -9.38 155.30 242.08 63.16 22 26 5 3303.7 -12.91 148.40
100.00 3 47 30 2639.96 -29.88 70.04 247.44 89.00 4 31 30 2040.0 -29.70 61.24
100.00 22 23 16 3702.74 -7.85 139.72 241.26 61.06 23 24 59 3102.7 -11.65 132.99
110.00 5 33 48 2307.41 -33.94 44.65 247.31 94.30 6 12 15 1707.4 -32.98 35.54
110.00 22 53 28 3608.06 -4.38 130.41 239.13 56.06 23 53 36 3008.1 -8.81 124.12

DIFFERENTIAL CORRECTIONS

TDE -.4636 TRA -.7841 TC3 1.0123 BAU .1798
RDE -.2886 RRA -.0558 RC3 .3055 FAU .05062
FDE .7671 FRA .9973 FC3-3.4463 BSP 5731
BDE .5460 BRA .7861 BC3 1.0574 FSP -807

MID-COURSE EXECUTION ACCURACY

SGT 1723.3 SGR 521.6 SCS 281.6
RRR .7092 RRF -.7520 RTF -.9082
SGB 1800.5 R23 -.1115 R13 -.9142
SGI 1764.3 SGT 359.2 THA 12.65

ORBIT DETERMINATION ACCURACY

ST 851.8 SR 464.6 SS 762.3
CRT .9035 CRS .9422 CST .9942
LSA 1220.9 MSA 177.9 SSA 18.9
EL1 953.9 EL2 177.8 ALF 27.26

LAUNCH DATE JAN 10 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 292.268

RL 147.12 LAL .00 LOL 109.58 VL 27.007 GAL 1.56 AZL 88.53 HCA 126.48 SMA 123.47 ECC .19331 INC 1.4681 V1 30.284
RP 108.40 LAP 1.18 LOP 236.07 VP 37.066 GAP -8.68 AZP 90.87 TAL 173.48 TAP 299.96 RCA 99.61 APO 147.34 V2 34.961
RC 53.536 GL 11.82 GP 13.70 ZAL 78.73 ZAP 20.82 ETS 322.91 ZAE 149.78 ETE 15.69 ZAC 127.27 ETC 152.58 CLP -15.83

PLANETOCENTRIC CONIC

C3 11.785 VHL 3.433 DLA 22.71 RAL 24.59 RAD 6567.4 VEL 11.540 PTH 2.01 VHP 6.233 DPA 25.73 RAP 33.11 ECC 1.1940
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 18 56 2895.82 -28.31 88.83 245.10 89.30 3 7 12 2295.8 -28.11 80.17
90.00 21 3 32 3939.40 -8.27 157.34 239.89 62.82 22 9 12 3339.4 -11.85 150.49
100.00 3 57 11 2579.03 -29.86 65.51 245.09 91.38 4 40 10 1979.0 -29.35 56.75
100.00 22 7 59 3731.42 -8.90 141.32 239.15 60.84 23 10 10 3131.4 -10.74 134.63
110.00 5 40 4 2257.17 -33.62 40.76 244.78 96.58 6 17 41 1657.2 -32.34 31.76
110.00 22 41 35 3626.05 -3.70 131.35 237.17 55.99 23 42 1 3026.0 -8.13 125.08

DIFFERENTIAL CORRECTIONS

TDE -.4465 TRA -.7575 TC3 1.1519 BAU .1924
RDE -.2813 RRA -.0711 RC3 .4063 FAU .05911
FDE .7872 FRA 1.0469 FC3-4.0480 BSP 5929
BDE .5277 BRA .7608 BC3 1.2214 FSP -906

MID-COURSE EXECUTION ACCURACY

SGT 1748.9 SGR 561.0 SCS 312.0
RRR .7611 RRF -.8078 RTF -.9141
SGB 1836.7 R23 -.1266 R13 -.9216
SGI 1802.5 SGT 353.1 THA 14.28

ORBIT DETERMINATION ACCURACY

ST 851.4 SR 471.1 SS 772.1
CRT .9122 CRS .9466 CST .9949
LSA 1230.1 MSA 171.6 SSA 19.4
EL1 957.8 EL2 171.6 ALF 27.75

LAUNCH DATE JAN 10 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 298.912

RL 147.12 LAL .00 LOL 109.58 VL 27.100 GAL 1.39 AZL 88.70 HCA 129.67 SMA 124.05 ECC .18743 INC 1.3011 V1 30.284
RP 108.43 LAP 1.00 LOP 239.26 VP 37.121 GAP -8.05 AZP 90.83 TAL 173.97 TAP 303.64 RCA 100.80 APO 147.30 V2 34.948
RC 55.282 GL 10.71 GP 15.17 ZAL 79.68 ZAP 23.48 ETS 324.22 ZAE 148.67 ETE 18.51 ZAC 127.24 ETC 151.11 CLP -18.14

PLANETOCENTRIC CONIC

C3 10.961 VHL 3.311 DLA 21.50 RAL 23.97 RAD 6567.4 VEL 11.504 PTH 2.00 VHP 5.911 DPA 27.41 RAP 33.35 ECC 1.1804
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 32 25 2823.49 -28.26 83.54 242.89 91.95 3 19 28 2223.5 -27.69 74.92
90.00 20 45 6 3981.66 -6.95 159.74 237.85 62.48 21 51 28 3381.7 -10.58 152.95
100.00 4 8 35 2513.38 -29.66 60.64 242.80 93.94 4 50 29 1913.4 -28.79 51.95
100.00 21 51 37 3767.01 -5.72 143.29 237.17 60.61 22 54 24 3187.0 -9.59 136.65
110.00 5 47 37 2202.51 -33.11 36.57 242.34 99.01 6 24 40 1602.5 -31.52 27.71
110.00 22 28 44 3650.64 -2.76 132.84 235.34 55.91 23 29 35 3050.6 -7.21 126.38

DIFFERENTIAL CORRECTIONS

TDE -.4272 TRA -.7330 TC3 1.2831 BAU .2035
RDE -.2748 RRA -.0888 RC3 .5308 FAU .05989
FDE .8002 FRA 1.1043 FC3-4.7305 BSP 6054
BDE .5080 BRA .7384 BC3 1.3886 FSP -1010

MID-COURSE EXECUTION ACCURACY

SGT 1768.4 SGR 613.9 SCS 345.0
RRR .8063 RRF -.8560 RTF -.9183
SGB 1872.0 R23 -.1443 R13 -.9277
SGI 1839.1 SGT 349.2 THA 16.24

ORBIT DETERMINATION ACCURACY

ST 845.3 SR 478.2 SS 775.6
CRT .9205 CRS .9502 CST .9958
LSA 1231.7 MSA 165.1 SSA 20.0
EL1 957.1 EL2 165.0 ALF 28.43

LAUNCH DATE JAN 10 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 305.538

RL 147.12 LAL .00 LOL 109.58 VL 27.183 GAL 1.23 AZL 88.88 HCA 132.86 SMA 124.58 ECC .18211 INC 1.1181 V1 30.284
RP 108.47 LAP .82 LOP 242.44 VP 37.171 GAP -7.43 AZP 90.78 TAL 174.46 TAP 307.32 RCA 101.89 APO 147.27 V2 34.936
RC 57.109 GL 9.54 GP 16.87 ZAL 80.63 ZAP 26.38 ETS 325.18 ZAE 147.66 ETE 21.63 ZAC 126.94 ETC 149.57 CLP -20.58

PLANETOCENTRIC CONIC

C3 10.234 VHL 3.199 DLA 20.05 RAL 23.45 RAD 6567.4 VEL 11.473 PTH 1.99 VHP 5.613 DPA 29.26 RAP 33.35 ECC 1.1684
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 47 38 2746.41 -27.95 77.92 240.76 94.75 3 33 25 2146.4 -27.00 69.39
90.00 20 25 47 4030.88 -5.39 162.32 235.99 62.16 21 32 58 3430.9 -9.08 155.78
100.00 4 21 50 2442.65 -29.21 55.45 240.62 96.85 5 2 33 1842.7 -27.98 46.85
100.00 21 34 16 3809.87 -4.28 145.66 235.38 60.39 22 37 46 3209.9 -8.19 139.06
110.00 5 57 38 2142.95 -32.39 32.08 240.03 101.58 6 33 21 1543.0 -30.46 23.40
110.00 22 14 58 3682.33 -1.55 134.29 233.67 55.85 23 16 20 3082.3 -6.02 128.06

DIFFERENTIAL CORRECTIONS

TDE -.4047 TRA -.7110 TC3 1.4077 BAU .2142
RDE -.2687 RRA -.1098 RC3 .6848 FAU .06502
FDE .8022 FRA 1.1721 FC3-5.3007 BSP 6156
BDE .4858 BRA .7195 BC3 1.5654 FSP -1122

MID-COURSE EXECUTION ACCURACY

SGT 1781.7 SGR 683.6 SCS 381.0
RRR .8433 RRF -.8960 RTF -.9216
SGB 1908.3 R23 -.1831 R13 -.9336
SGI 1876.2 SGT 348.9 THA 18.60

ORBIT DETERMINATION ACCURACY

ST 831.6 SR 485.5 SS 770.6
CRT .9281 CRS .9526 CST .9966
LSA 1222.9 MSA 158.6 SSA 20.7
EL1 949.9 EL2 158.2 ALF 29.35



LAUNCH DATE JAN 10 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.259 GAL 1.09 AZL 89.08 HCA 136.04 SMA 125.06 ECC .17732 INC .9151 V1 30.284  
 RP 108.51 LAP .64 LOP 245.62 VP 37.215 GAP -6.84 AZP 90.66 TAL 174.95 TAP 310.99 RCA 102.89 APO 147.24 V2 34.923  
 RC 59.010 GL 8.08 GP 18.85 ZAL 81.56 ZAP 29.52 ETS 325.88 ZAE 146.71 ETE 25.13 ZAC 126.31 ETC 147.98 CLP -23.15

PLANETOCENTRIC CONIC  
 C3 9.595 VHL 3.098 DLA 18.33 RAL 23.08 RAD 6567.3 VEL 11.445 PTH 1.99 VHP 5.340 DPA 31.30 RAP 33.08 ECC 1.1579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 4 49 2663.92 -27.34 71.96 238.77 97.68 3 49 13 2063.9 -25.99 63.56  
 90.00 20 5 35 4087.78 -3.58 165.72 234.36 61.89 21 13 43 3487.8 -7.31 159.02  
 100.00 4 37 8 2366.24 -28.48 49.87 238.57 99.48 5 16 34 1766.2 -26.88 41.44  
 100.00 21 15 58 3860.68 -2.57 148.46 235.80 60.21 22 20 19 3260.7 -6.51 141.90  
 110.00 6 9 18 2077.88 -31.40 27.26 237.86 104.26 6 43 56 1477.9 -29.12 18.80  
 110.00 22 0 17 3721.81 -.04 136.35 232.22 55.82 23 2 19 3121.8 -4.52 130.14

DIFFERENTIAL CORRECTIONS  
 TDE -.3759 TRA -.6877 TC3 1.5262 BAU .2257 SGT 1781.2 SGR 772.7 SG3 419.1  
 RDE -.2616 RRA -.1344 RC3 .8757 FAU .07050 RRT .8721 RRF -.9273 RTF -.9245 CRT .9348 CRS .9533 CST .9976  
 FDE .7840 FRA 1.2464 FC3-6.3608 BSP 6270 SGB 1941.6 R23 -.1796 R13 -.9400 LSA 1194.2 MSA 152.2 SSA 21.6  
 BDE .4579 BRA .7007 BC3 1.7596 FSP -1245 SGI 1909.3 SG2 352.7 THA 21.49 EL1 929.3 EL2 150.6 ALF 30.60

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 10 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.327 GAL .96 AZL 89.31 HCA 139.22 SMA 125.50 ECC .17302 INC .6876 V1 30.284  
 RP 108.55 LAP .45 LOP 248.80 VP 37.233 GAP -6.26 AZP 90.52 TAL 175.41 TAP 314.64 RCA 103.79 APO 147.21 V2 34.911  
 RC 60.976 GL 6.26 GP 21.14 ZAL 82.46 ZAP 32.95 ETS 326.37 ZAE 145.73 ETE 29.08 ZAC 125.32 ETC 146.36 CLP -25.88

PLANETOCENTRIC CONIC  
 C3 9.041 VHL 3.007 DLA 16.30 RAL 22.87 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 5.095 DPA 33.58 RAP 32.46 ECC 1.1488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 24 16 2375.02 -26.37 65.84 236.95 100.71 4 7 11 1975.0 -24.63 57.40  
 90.00 19 44 29 4153.47 -1.46 169.39 233.01 61.72 20 53 43 3553.5 -5.23 162.73  
 100.00 4 54 45 2285.24 -27.41 43.94 236.71 102.43 5 32 48 1683.2 -25.42 35.70  
 100.00 20 56 41 3920.49 -.94 151.75 232.50 60.11 22 2 2 3320.5 -4.51 145.21  
 110.00 6 23 14 2006.40 -30.08 22.11 235.91 107.05 6 56 40 1406.4 -27.46 13.91  
 110.00 21 44 42 3770.09 1.81 138.87 231.03 55.86 22 47 32 3170.1 -2.68 132.67

DIFFERENTIAL CORRECTIONS  
 TDE -.3423 TRA -.6645 TC3 1.6294 BAU .2383 SGT 1768.1 SGR 885.4 SG3 458.7  
 RDE -.2527 RRA -.1643 RC3 1.1102 FAU .07611 RRT .8934 RRF -.9506 RTF -.9269 CRT .9412 CRS .9518 CST .9985  
 FDE .7424 FRA 1.3295 FC3-7.2889 BSP 6442 SGB 1977.4 R23 -.1915 R13 -.9471 LSA 1147.1 MSA 145.8 SSA 22.8  
 BDE .4255 BRA .6645 BC3 1.9717 FSP -1379 SGI 1944.0 SG2 381.8 THA 25.03 EL1 897.2 EL2 141.4 ALF 32.12

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 10 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.387 GAL .84 AZL 89.57 HCA 142.40 SMA 125.89 ECC .16918 INC .4288 V1 30.284  
 RP 108.58 LAP .26 LOP 251.98 VP 37.287 GAP -5.71 AZP 90.34 TAL 175.86 TAP 318.26 RCA 104.60 APO 147.19 V2 34.900  
 RC 63.000 GL 4.02 GP 23.81 ZAL 83.32 ZAP 36.69 ETS 326.75 ZAE 144.64 ETE 33.54 ZAC 123.90 ETC 144.74 CLP -28.78

PLANETOCENTRIC CONIC  
 C3 8.568 VHL 2.927 DLA 13.88 RAL 22.87 RAD 6567.3 VEL 11.400 PTH 1.97 VHP 4.881 DPA 36.12 RAP 31.42 ECC 1.1410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 46 27 2478.33 -24.97 58.91 235.37 103.80 4 27 45 1878.3 -22.83 50.89  
 90.00 19 22 19 4229.65 1.00 173.63 232.02 61.70 20 32 48 3629.7 -2.79 167.00  
 100.00 5 15 7 2192.35 -25.91 37.60 235.09 105.45 5 51 40 1592.4 -23.54 29.60  
 100.00 20 36 19 3990.87 1.85 155.61 231.55 60.16 21 42 50 3390.9 -2.14 149.09  
 110.00 6 39 49 1927.34 -28.38 16.59 234.21 109.91 7 11 56 1327.3 -25.40 8.68  
 110.00 21 28 7 3828.64 4.04 141.93 230.18 56.03 22 31 55 3228.6 -.45 135.72

DIFFERENTIAL CORRECTIONS  
 TDE -.3044 TRA -.6435 TC3 1.7020 BAU .2521 SGT 1741.2 SGR 1025.9 SG3 498.2  
 RDE -.2598 RRA -.2016 RC3 1.3950 FAU .08160 RRT .9074 RRF -.9673 RTF -.9276 CRT .9479 CRS .9459 CST .9987  
 FDE .6673 FRA 1.4239 FC3-8.2452 BSP 6566 SGB 2020.9 R23 -.1986 R13 -.9541 LSA 1078.0 MSA 140.4 SSA 24.3  
 BDE .3875 BRA .6744 BC3 2.2006 FSP -1508 SGI 1985.2 SG2 378.1 THA 29.30 EL1 852.4 EL2 129.2 ALF 33.74

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 10 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.441 GAL .74 AZL 89.87 HCA 145.58 SMA 126.25 ECC .16577 INC .1301 V1 30.284  
 RP 108.62 LAP .07 LOP 255.16 VP 37.316 GAP -5.18 AZP 90.11 TAL 176.27 TAP 321.85 RCA 105.32 APO 147.18 V2 34.889  
 RC 65.076 GL 1.25 GP 26.92 ZAL 84.14 ZAP 40.77 ETS 327.06 ZAE 143.31 ETE 38.52 ZAC 122.01 ETC 143.17 CLP -31.85

PLANETOCENTRIC CONIC  
 C3 8.182 VHL 2.860 DLA 11.01 RAL 23.12 RAD 6567.3 VEL 11.383 PTH 1.97 VHP 4.705 DPA 38.98 RAP 29.86 ECC 1.1347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 11 57 2371.91 -23.05 51.70 234.11 106.92 4 51 29 1771.9 -20.51 43.95  
 90.00 18 58 47 4318.77 3.86 178.81 231.47 61.93 20 10 46 3718.8 .08 171.98  
 100.00 5 38 49 2091.77 -23.91 30.80 233.81 108.49 6 13 41 1491.8 -21.16 23.08  
 100.00 20 14 36 4074.14 4.66 160.19 231.04 60.44 21 22 31 3474.1 .69 153.65  
 110.00 6 59 34 1839.09 -28.19 10.66 232.87 112.80 7 30 13 1239.1 -22.87 3.08  
 110.00 21 10 21 3899.58 6.73 145.67 229.76 56.41 22 15 20 3299.6 2.27 139.42

DIFFERENTIAL CORRECTIONS  
 TDE -.2639 TRA -.6234 TC3 1.7314 BAU .2680 SGT 1696.7 SGR 1198.3 SG3 535.0  
 RDE -.2203 RRA -.2487 RC3 1.7337 FAU .08648 RRT .9154 RRF -.9788 RTF -.9266 CRT .9573 CRS .9327 CST .9953  
 FDE .5540 FRA 1.5265 FC3-9.1508 BSP 6700 SGB 2077.2 R23 -.1976 R13 -.9616 LSA 988.4 MSA 137.8 SSA 25.9  
 BDE .3438 BRA .6712 BC3 2.4502 FSP -1627 SGI 2038.0 SG2 401.6 THA 34.41 EL1 795.2 EL2 111.0 ALF 35.25

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 10 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.489 GAL .65 AZL 90.22 HCA 148.75 SMA 126.56 ECC .16277 INC .2201 V1 30.284  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.341 GAP -4.66 AZP 89.81 TAL 176.65 TAP 325.40 RCA 105.96 APO 147.16 V2 34.878  
 RC 67.198 GL -2.16 GP 30.54 ZAL 84.90 ZAP 45.22 ETS 327.40 ZAE 141.57 ETE 43.98 ZAC 119.58 ETC 141.71 CLP -35.13

PLANETOCENTRIC CONIC  
 C3 7.896 VHL 2.810 DLA 7.55 RAL 23.66 RAD 6567.3 VEL 11.370 PTH 1.96 VHP 4.575 DPA 42.19 RAP 27.66 ECC 1.1299  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 41 42 2253.07 -20.48 43.93 233.31 109.99 5 19 15 1653.1 -17.58 36.47  
 90.00 18 33 25 4424.41 7.22 184.56 231.51 62.54 19 47 9 3824.4 3.48 177.88  
 100.00 6 6 41 1979.01 -21.28 23.45 232.98 111.50 6 39 40 1379.0 -18.17 16.04  
 100.00 19 51 7 4173.70 7.97 165.72 231.10 61.09 21 0 41 3573.7 4.05 159.13  
 110.00 7 23 13 1739.50 -23.40 4.27 231.98 115.66 7 52 12 1139.5 -19.75 357.03  
 110.00 20 51 5 3985.98 9.95 150.28 229.90 57.13 21 57 31 3386.0 5.55 143.95

DIFFERENTIAL CORRECTIONS  
 TDE -.2164 TRA -.6003 TC3 1.7226 BAU .2893 SGT 1629.9 SGR 1408.1 S63 566.0 ORBIT DETERMINATION ACCURACY  
 RDE -.1879 RRA -.3076 RC3 2.1319 FAU .09050 RRT .9195 RRF -.9865 RTF -.9251 CRT .9713 CRS .9012 CST .9750  
 FDE .3841 FRA 1.6277 FC3-9.9226 BSP 6976 SGB 2153.9 R23 -.1831 R13 -.9704 LSA 867.6 MSA 146.2 SSA 26.1  
 BDE .2866 BRA .6745 BC3 2.7409 FSP -1741 S61 2111.1 S62 427.3 THA 40.46 EL1 714.3 EL2 82.4 ALF 36.41

LAUNCH DATE JAN 10 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.530 GAL .57 AZL 90.64 HCA 151.92 SMA 126.84 ECC .16014 INC .6419 V1 30.284  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.362 GAP -4.16 AZP 89.43 TAL 176.98 TAP 328.91 RCA 106.53 APO 147.15 V2 34.867  
 RC 69.360 GL -6.37 GP 34.74 ZAL 85.59 ZAP 50.04 ETS 327.85 ZAE 139.26 ETE 49.80 ZAC 116.58 ETC 140.43 CLP -38.60

PLANETOCENTRIC CONIC  
 C3 7.737 VHL 2.782 DLA 3.39 RAL 24.58 RAD 6567.3 VEL 11.363 PTH 1.96 VHP 4.502 DPA 45.79 RAP 24.63 ECC 1.1273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 17 0 2118.25 -17.12 35.47 233.13 112.90 5 52 18 1518.2 -13.87 28.30  
 90.00 18 5 25 4551.80 11.14 191.87 232.32 63.80 19 21 17 3951.8 7.53 185.05  
 100.00 6 39 56 1850.77 -17.87 15.46 232.79 114.37 7 10 46 1250.8 -14.43 8.35  
 100.00 19 25 10 4294.51 11.87 172.57 231.95 62.36 20 36 45 3694.5 8.08 165.84  
 110.00 7 31 48 1625.79 -19.88 357.33 231.74 118.40 8 18 54 1025.8 -15.93 350.43  
 110.00 20 29 47 4092.25 13.81 156.09 230.81 58.42 21 37 59 3492.2 9.54 149.60

DIFFERENTIAL CORRECTIONS  
 TDE -.1715 TRA -.5803 TC3 1.6304 BAU .3142 SGT 1543.2 SGR 1837.9 S63 585.6 ORBIT DETERMINATION ACCURACY  
 RDE -.1385 RRA -.3858 RC3 2.5634 FAU .09234 RRT .9175 RRF -.9914 RTF -.9194 CRT .9935 CRS .8475 CST .8897  
 FDE .1672 FRA 1.7329 FC-10.3319 BSP 7268 SGB 2265.0 R23 -.1622 R13 -.9784 LSA 747.0 MSA 181.3 SSA 22.9  
 BDE .2205 BRA .6968 BC3 3.0380 FSP -1808 S61 2218.1 S62 458.7 THA 47.24 EL1 627.5 EL2 34.2 ALF 36.53

LAUNCH DATE JAN 10 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.567 GAL .51 AZL 91.16 HCA 155.09 SMA 127.09 ECC .15786 INC 1.1609 V1 30.284  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.379 GAP -3.68 AZP 88.95 TAL 177.27 TAP 332.36 RCA 107.02 APO 147.15 V2 34.858  
 RC 71.560 GL -11.56 GP 39.58 ZAL 86.22 ZAP 55.22 ETS 328.52 ZAE 136.18 ETE 55.79 ZAC 112.96 ETC 139.41 CLP -42.27

PLANETOCENTRIC CONIC  
 C3 7.762 VHL 2.786 DLA -1.65 RAL 25.94 RAD 6567.3 VEL 11.365 PTH 1.96 VHP 4.504 DPA 49.77 RAP 20.50 ECC 1.1277  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 59 53 1962.40 -12.76 26.11 233.87 115.49 6 32 35 1362.4 -9.22 19.22  
 90.00 17 33 25 4708.84 15.68 201.17 234.26 66.11 18 51 54 4108.8 12.32 194.10  
 100.00 7 20 27 1702.49 -13.49 6.63 233.49 116.93 7 48 50 1102.5 -9.78 359.81  
 100.00 18 55 32 4443.98 16.42 181.34 233.91 64.67 20 9 36 3844.0 12.87 174.34  
 110.00 8 26 56 1494.38 -15.44 349.72 232.38 120.88 8 51 50 894.4 -11.24 343.14  
 110.00 20 5 32 4224.85 18.40 163.63 232.83 60.67 21 15 57 3624.9 14.35 156.85

DIFFERENTIAL CORRECTIONS  
 TDE -.1263 TRA -.5537 TC3 1.4621 BAU .3460 SGT 1427.7 SGR 1950.0 S63 588.0 ORBIT DETERMINATION ACCURACY  
 RDE -.0594 RRA -.4862 RC3 2.9962 FAU .09147 RRT .9107 RRF -.9946 RTF -.9103 CRT .9618 CRS .8398 CST .6657  
 FDE -.1071 FRA 1.8136 FC-10.2011 BSP 7749 SGB 2416.8 R23 -.1328 R13 -.9858 LSA 654.1 MSA 258.7 SSA 16.7  
 BDE .1396 BRA .7384 BC3 3.3339 FSP -1832 S61 2367.5 S62 485.8 THA 54.59 EL1 536.7 EL2 72.1 ALF 36.96

LAUNCH DATE JAN 10 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.598 GAL .46 AZL 91.82 HCA 158.25 SMA 127.30 ECC .15590 INC 1.8192 V1 30.284  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.394 GAP -3.21 AZP 88.31 TAL 177.50 TAP 335.75 RCA 107.45 APO 147.14 V2 34.848  
 RC 73.792 GL -17.95 GP 45.10 ZAL 86.77 ZAP 60.70 ETS 329.55 ZAE 132.19 ETE 61.71 ZAC 108.73 ETC 138.77 CLP -46.10

PLANETOCENTRIC CONIC  
 C3 8.084 VHL 2.843 DLA -7.76 RAL 27.87 RAD 6567.3 VEL 11.379 PTH 1.97 VHP 4.609 DPA 54.11 RAP 14.87 ECC 1.1330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 53 46 1778.16 -7.15 15.49 235.98 117.47 7 23 24 1178.2 -3.41 8.80  
 90.00 16 54 55 4908.02 20.74 213.59 237.86 70.27 18 16 43 4308.0 17.86 206.10  
 100.00 8 11.22 1527.80 -7.91 356.67 235.57 118.92 8 36 50 927.8 -3.99 350.07  
 100.00 18 20 0 4633.61 21.54 193.08 237.54 68.76 19 37 14 4033.6 18.47 185.64  
 110.00 9 11 5 1340.83 -9.91 341.26 234.35 122.88 9 33 26 740.8 -5.51 354.94  
 110.00 19 36 46 4393.35 23.69 173.84 236.54 64.60 20 50 0 3793.4 20.07 166.57

DIFFERENTIAL CORRECTIONS  
 TDE -.0903 TRA -.5276 TC3 1.1933 BAU .3829 SGT 1283.2 SGR 2279.9 S63 566.0 ORBIT DETERMINATION ACCURACY  
 RDE .0607 RRA -.6193 RC3 3.3351 FAU .08661 RRT .8930 RRF -.9966 RTF -.8930 CRT .6766 CRS .9505 CST .4164  
 FDE -.4120 FRA 1.8880 FC3-9.2755 BSP 8262 SGB 2616.2 R23 -.1018 R13 -.9914 LSA 716.7 MSA 321.2 SSA 10.9  
 BDE .1088 BRA .8136 BC3 3.5428 FSP -1758 S61 2566.3 S62 508.5 THA 62.07 EL1 500.3 EL2 218.7 ALF 48.37

LAUNCH DATE JAN 10 1969 FLIGHT TIME 134.00 ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC DISTANCE 364.191  
 RL 147.12 LAL .00 LOL 109.58 VL 27.625 GAL .42 AZL 92.69 HCA 161.41 SMA 127.48 ECC .15424 INC 2.6888 V1 30.284  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.405 GAP -2.76 AZP 87.43 TAL 177.67 TAP 339.08 RCA 107.81 APO 147.14 V2 34.839  
 RC 76.053 GL -25.69 GP 51.33 ZAL 87.27 ZAP 66.34 ETS 331.05 ZAE 127.19 ETE 67.36 ZAC 103.93 ETC 138.58 CLP -50.05

PLANETOCENTRIC CONIC  
 C3 8.935 VHL 2.989 DLA -15.07 RAL 30.52 RAD 6567.3 VEL 11.416 PTH 1.98 VHP 4.864 DPA 58.67 RAP 7.13 ECC 1.1470  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 5 26 1551.87 .09 2.80 240.31 118.32 8 31 18 951.9 3.88 356.16  
 90.00 16 4 20 5172.11 25.74 231.30 244.00 77.76 17 30 32 4572.1 23.79 223.17  
 100.00 9 18 36 1315.80 -.79 344.95 239.82 119.88 9 40 32 715.8 3.19 338.43  
 100.00 17 33 51 4883.41 26.73 209.81 243.74 76.08 18 55 15 4283.4 24.55 201.69  
 110.00 10 8 36 1159.16 -3.07 331.65 238.40 124.06 10 27 55 559.2 1.42 325.44  
 110.00 19 0 20 4612.81 29.30 188.41 242.89 71.56 20 17 13 4012.8 26.50 180.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0686 TRA -.4900 TC3 .8522 BAU .4242 SGT 1105.9 SGR 2638.6 SG3 515.3 ST 320.4 SR 668.2 SS 746.5  
 RDE .2436 RRA -.7959 RC3 3.4477 FAU .07731 RRT .8655 RRF -.9978 RTF -.8623 CRT .3637 CRS .9929 CST .2513  
 FDE -.7216 FRA 1.8578 FC3 -7.4907 BSP 9094 SGB 2861.0 R23 -.0721 R13 -.9952 LSA 1005.2 MSA 309.6 SSA 7.0  
 BDE .2531 BRA .9346 BC3 3.5515 FSP -1624 SG1 2813.4 SG2 519.6 THA 69.32 EL1 680.6 EL2 293.0 ALF 77.81

LAUNCH DATE JAN 10 1969 FLIGHT TIME 136.00 ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC DISTANCE 370.584  
 RL 147.12 LAL .00 LOL 109.58 VL 27.647 GAL .40 AZL 93.90 HCA 164.56 SMA 127.63 ECC .15286 INC 3.8986 V1 30.284  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.414 GAP -2.32 AZP 86.24 TAL 177.78 TAP 342.34 RCA 108.12 APO 147.14 V2 34.831  
 RC 78.340 GL -34.80 GP 58.27 ZAL 87.72 ZAP 71.97 ETS 333.16 ZAE 121.14 ETE 72.56 ZAC 98.66 ETC 138.95 CLP -53.94

PLANETOCENTRIC CONIC  
 C3 10.846 VHL 3.293 DLA -23.54 RAL 34.07 RAD 6567.4 VEL 11.499 PTH 2.00 VHP 5.350 DPA 63.21 RAP 356.26 ECC 1.1785  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 55 16 1236.04 10.10 344.99 248.72 116.59 10 15 52 636.0 13.59 338.05  
 90.00 14 42 54 5564.80 28.27 259.61 253.53 91.61 16 15 39 4964.8 28.20 250.94  
 100.00 10 57 57 1033.68 8.67 329.36 247.96 118.72 11 15 11 433.7 12.44 322.60  
 100.00 16 22 53 5242.40 29.89 235.90 253.54 89.37 17 50 16 4642.4 29.48 227.12  
 110.00 11 28 48 936.94 5.41 320.03 245.96 123.80 11 44 25 336.9 9.81 313.71  
 110.00 18 8 32 4911.89 33.70 210.54 253.28 83.90 19 30 24 4311.9 32.49 201.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0754 TRA -.4398 TC3 .4781 BAU .4655 SGT 901.5 SGR 3012.0 SG3 436.5 ST 282.8 SR 1078.1 SS 920.2  
 RDE .5167 RRA -1.0397 RC3 3.1742 FAU .06360 RRT .8054 RRF -.9986 RTF -.8010 CRT .1015 CRS .9989 CST .0541  
 FDE -.9832 FRA 1.7804 FC3 -5.0767 BSP 9996 SGB 3144.1 R23 -.0470 R13 -.9975 LSA 1417.2 MSA 283.7 SSA 4.5  
 BDE .5222 BRA 1.1289 BC3 3.2100 FSP -1388 SG1 3100.9 SG2 519.0 THA 76.05 EL1 1078.5 EL2 281.2 ALF 88.36

LAUNCH DATE JAN 10 1969 FLIGHT TIME 138.00 ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC DISTANCE 376.944  
 RL 147.12 LAL .00 LOL 109.58 VL 27.665 GAL .39 AZL 95.71 HCA 167.70 SMA 127.75 ECC .15174 INC 5.7082 V1 30.284  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.420 GAP -1.90 AZP 84.42 TAL 177.81 TAP 345.51 RCA 108.37 APO 147.13 V2 34.824  
 RC 80.651 GL -44.92 GP 65.92 ZAL 88.14 ZAP 77.30 ETS 335.90 ZAE 114.02 ETE 77.21 ZAC 93.05 ETC 139.93 CLP -57.39

PLANETOCENTRIC CONIC  
 C3 15.183 VHL 3.897 DLA -32.78 RAL 38.77 RAD 6567.6 VEL 11.686 PTH 2.06 VHP 6.231 DPA 67.26 RAP 340.67 ECC 1.2499  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.76 10 25 19 1252.10 24.28 352.95 264.28 112.73 10 46 12 652.1 27.14 345.07  
 107.24 14 50 19 5693.13 24.29 267.97 264.29 112.71 16 25 12 5093.1 27.15 260.09  
 72.76 10 25 19 1252.10 24.28 352.95 264.28 112.73 10 46 12 652.1 27.14 345.07  
 107.24 14 50 19 5693.13 24.29 267.97 264.29 112.71 16 25 12 5093.1 27.15 260.09  
 110.00 13 53 26 5868.43 18.28 278.34 261.13 119.40 15 31 15 5268.4 22.05 271.24  
 110.00 16 21 22 5412.84 30.60 248.81 266.78 106.05 17 51 35 4812.8 32.49 240.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1347 TRA -.3651 TC3 .1606 BAU .4960 SGT 680.2 SGR 3371.0 SG3 336.3 ST 275.5 SR 1530.5 SS 1005.6  
 RDE .9133 RRA -1.3947 RC3 2.4381 FAU .04648 RRT .6671 RRF -.9990 RTF -.6613 CRT -.2976 CRS .9997 CST -.3196  
 FDE -1.1286 FRA 1.6302 FC3 -2.6501 BSP 10853 SGB 3438.9 R23 -.0272 R13 -.9987 LSA 1833.1 MSA 262.9 SSA 2.9  
 BDE .9232 BRA 1.4417 BC3 2.4433 FSP -1071 SG1 3402.0 SG2 502.1 THA 82.16 EL1 1532.7 EL2 262.6 ALF 93.16

LAUNCH DATE JAN 10 1969 FLIGHT TIME 140.00 ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC DISTANCE 383.261  
 RL 147.12 LAL .00 LOL 109.58 VL 27.680 GAL .40 AZL 98.73 HCA 170.82 SMA 127.85 ECC .15086 INC 8.7268 V1 30.284  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.424 GAP -1.49 AZP 81.38 TAL 177.76 TAP 348.58 RCA 108.56 APO 147.14 V2 34.816  
 RC 82.981 GL -55.12 GP 74.40 ZAL 88.54 ZAP 82.02 ETS 339.04 ZAE 105.72 ETE 81.06 ZAC 87.22 ETC 141.36 CLP -58.92

PLANETOCENTRIC CONIC  
 C3 26.209 VHL 5.119 DLA -41.83 RAL 44.68 RAD 6568.1 VEL 12.148 PTH 2.18 VHP 7.887 DPA 69.97 RAP 318.42 ECC 1.4313  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.82 9 29 59 1614.37 25.73 23.13 282.10 124.20 9 56 53 1014.4 30.02 15.90  
 122.18 16 32 50 5589.95 25.74 260.52 282.11 124.19 18 6 0 4989.9 30.03 253.30  
 57.82 9 29 59 1614.37 25.73 23.13 282.10 124.20 9 56 53 1014.4 30.02 15.90  
 122.18 16 32 50 5589.95 25.74 260.52 282.11 124.19 18 6 0 4989.9 30.03 253.30  
 57.82 9 29 59 1614.37 25.73 23.13 282.10 124.20 9 56 53 1014.4 30.02 15.90  
 122.18 16 32 50 5589.95 25.74 260.52 282.11 124.19 18 6 0 4989.9 30.03 253.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2796 TRA -.2417 TC3 -.0090 BAU .4913 SGT 479.4 SGR 3687.2 SG3 230.1 ST 331.3 SR 1893.3 SS 959.4  
 RDE 1.4941 RRA -1.9681 RC3 1.4022 FAU .02813 RRT .3036 RRF -.9993 RTF -.2977 CRT -.6802 CRS .9999 CST -.6888  
 FDE -1.1180 FRA 1.4311 FC3 -.9291 BSP 11692 SGB 3718.3 R23 -.0109 R13 -.9993 LSA 2134.6 MSA 241.2 SSA 1.9  
 BDE 1.5200 BRA 1.9829 BC3 1.4022 FSP -736 SG1 3690.2 SG2 456.4 THA 87.70 EL1 1906.8 EL2 241.1 ALF 96.90

LAUNCH DATE JAN 10 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 389.500

RL 147.12 LAL .00 LOL 109.58 VL 27.691 GAL .43 AZL 104.77 HCA 173.88 SMA 127.92 ECC .15022 INC14.7695 V1 30.284
RP 108.86 LAP -1.56 LOP 283.66 VP 37.426 GAP -1.11 AZP 75.31 TAL 177.58 TAP 351.47 RCA 108.71 APO 147.14 V2 34.810
RC 85.328 GL -63.55 GP 84.07 ZAL 88.95 ZAP 85.81 ETS 340.16 ZAE 95.62 ETE 81.89 ZAC 81.09 ETC 141.16 CLP -45.04

PLANETOCENTRIC CONIC

C3 62.161 VHL 7.884 DLA -49.03 RAL 50.93 RAD 6569.2 VEL 13.547 PTH 2.48 VHP 11.442 DPA 69.86 RAP 288.80 ECC 2.0230
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.12 9 18 27 1924.60 19.27 45.87 303.25 136.02 9 50 31 1324.6 24.92 40.17
131.88 17 34 9 5711.40 19.29 265.80 303.26 136.02 19 9 21 5111.4 24.94 260.10
48.12 9 18 27 1924.60 19.27 45.87 303.25 136.02 9 50 31 1324.6 24.92 40.17
131.88 17 34 9 5711.40 19.29 265.80 303.26 136.02 19 9 21 5111.4 24.94 260.10
48.12 9 18 27 1924.60 19.27 45.87 303.25 136.02 9 50 31 1324.6 24.92 40.17
131.88 17 34 9 5711.40 19.29 265.80 303.26 136.02 19 9 21 5111.4 24.94 260.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -0.4278 TRA .0009 TC3 -.0121 BAU .3690 SGT 311.5 SGR 3928.2 SG3 137.6 ST 310.9 SR 2093.6 SS 836.7
RDE 2.5142 RRA-3.0722 RC3 .4438 FAU .01091 RRT -.4780 RRF -.9996 RTF .4736 CRT -.8732 CRS 1.0000 CST -.8704
FDE-1.0131 FRA 1.2550 FC3 -.1520 BSP 12577 SGB 3940.5 R23 .0075 R13 -.9996 LSA 2270.9 MSA 150.7 SSA 1.3
BDE 2.5503 BRA 3.0722 BC3 .4440 FSP -451 SGI 3931.0 SG2 273.4 THA 92.18 EL1 2111.2 EL2 150.2 ALF 97.43

LAUNCH DATE JAN 10 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 395.497

RL 147.12 LAL .00 LOL 109.58 VL 27.698 GAL .51 AZL 122.02 HCA 176.75 SMA 127.97 ECC .14983 INC32.0217 V1 30.284
RP 108.88 LAP -1.72 LOP 286.83 VP 37.427 GAP -.80 AZP 58.02 TAL 177.11 TAP 353.86 RCA 108.80 APO 147.15 V2 34.804
RC 87.691 GL -65.14 GP 79.01 ZAL 89.35 ZAP 88.37 ETS 179.21 ZAE 80.04 ETE 280.18 ZAC 73.59 ETC 340.85 CLP 81.44

PLANETOCENTRIC CONIC

C3 261.961 VHL 16.185 DLA -50.55 RAL 51.90 RAD 6571.5 VEL 19.577 PTH 3.11 VHP 21.816 DPA 63.15 RAP 253.02 ECC 5.3112
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.20 9 16 6 2215.15 5.51 59.33 317.33 140.33 9 53 1 1615.1 11.64 54.54
133.80 17 44 16 684.29 5.52 298.35 317.35 140.33 17 55 40 84.3 11.65 293.57
46.20 9 16 6 2215.15 5.51 59.33 317.33 140.33 9 53 1 1615.1 11.64 54.54
133.80 17 44 16 684.29 5.52 298.35 317.35 140.33 17 55 40 84.3 11.65 293.57
46.20 9 16 6 2215.15 5.51 59.33 317.33 140.33 9 53 1 1615.1 11.64 54.54
133.80 17 44 16 684.29 5.52 298.35 317.35 140.33 17 55 40 84.3 11.65 293.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.4758 TRA -.7300 TC3 -.0490 BAU .4760 SGT 1305.6 SGR 3766.9 SG3 77.7 ST 1236.5 SR 1823.8 SS 898.0
RDE-4.2545 RRA 6.1932 RC3 .1268 FAU-.01036 RRT -.6735 RRF .9976 RTF -.7221 CRT -.8774 CRS -.9970 CST .9122
FDE-1.1671 FRA 1.4190 FC3 .0342 BSP 13916 SGB 3986.7 R23 .0075 R13 .9999 LSA 2324.6 MSA 507.8 SSA .5
BDE 5.4938 BRA 6.1964 BC3 .1359 FSP -280 SGI 3874.8 SG2 938.1 THA 103.98 EL1 2144.9 EL2 504.3 ALF 122.79

LAUNCH DATE JAN 10 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 404.033

RL 147.12 LAL .00 LOL 109.58 VL 27.703 GAL .12 AZL 12.27 HCA 181.92 SMA 128.01 ECC .14931 INC77.7290 V1 30.284
RP 108.90 LAP -1.88 LOP 289.99 VP 37.425 GAP .16 AZP 167.72 TAL 179.34 TAP 1.26 RCA 108.89 APO 147.12 V2 34.799
RC 90.065 GL 47.97 GP -55.27 ZAL 90.01 ZAP 90.03 ETS 176.95 ZAE 55.53 ETE 76.03 ZAC 88.36 ETC 25.14 CLP 90.05

PLANETOCENTRIC CONIC

C31327.926 VHL 36.441 DLA 50.42 RAL 351.89 RAD 6573.1 VEL 38.068 PTH 3.54 VHP 43.964 DPA -53.16 RAP 165.90 ECC22.8543
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.37 17 15 25 4980.22 .91 232.95 262.66 39.59 18 38 25 4380.2 -5.25 228.26
133.63 1 46 13 3452.41 .93 112.25 262.64 39.59 2 43 45 2852.4 -5.23 107.56
46.37 17 15 25 4980.22 .91 232.95 262.66 39.59 18 38 25 4380.2 -5.25 228.26
133.63 1 46 13 3452.41 .93 112.25 262.64 39.59 2 43 45 2852.4 -5.23 107.56
46.37 17 15 25 4980.22 .91 232.95 262.66 39.59 18 38 25 4380.2 -5.25 228.26
133.63 1 46 13 3452.41 .93 112.25 262.64 39.59 2 43 45 2852.4 -5.23 107.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.9917 TRA 2.7089 TC3 -.1182 BAU 4.6512 SGT 1441.0 SGR 3255.8 SG3 62.1 ST 963.5 SR 2768.1 SS 2313.5
RD-17.5985 RRA .8090 RC3 -.2338 FAU-.07939 RRT .8970 RRF -.9999 RTF -.9036 CRT .9823 CRS 1.0000 CST .9833
FDE 3.8715 FRA -.2228 FC3 .0518 BSP 10016 SGB 3560.4 R23 -.0537 R13 -.9985 LSA 3730.1 MSA 172.6 SSA .5
BDE18.5905 BRA 2.8271 BC3 .2620 FSP -183 SGI 3511.1 SG2 590.7 THA 67.68 EL1 2926.1 EL2 170.6 ALF 71.06

LAUNCH DATE JAN 10 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 409.236

RL 147.12 LAL .00 LOL 109.58 VL 27.704 GAL .37 AZL 60.32 HCA 184.11 SMA 128.02 ECC .14932 INC29.6762 V1 30.284
RP 108.91 LAP -2.03 LOP 293.15 VP 37.422 GAP .26 AZP 119.61 TAL 177.91 TAP 2.01 RCA 108.90 APO 147.13 V2 34.795
RC 92.449 GL 65.63 GP -85.19 ZAL 89.56 ZAP 90.33 ETS 167.17 ZAE 85.17 ETE 69.62 ZAC 101.66 ETC 15.92 CLP 93.93

PLANETOCENTRIC CONIC

C3 226.750 VHL 15.058 DLA 63.32 RAL 329.34 RAD 6571.3 VEL 18.657 PTH 3.05 VHP 16.987 DPA -66.76 RAP 109.51 ECC 4.7317
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.66 15 2 36 4924.88 -7.60 239.33 235.52 26.93 16 24 41 4324.9 -14.71 236.01
149.34 0 59 9 3222.99 -7.58 97.86 235.49 26.93 1 52 52 2623.0 -14.70 94.54
30.66 15 2 36 4924.88 -7.60 239.33 235.52 26.93 16 24 41 4324.9 -14.71 236.01
149.34 0 59 9 3222.99 -7.58 97.86 235.49 26.93 1 52-52 2623.0 -14.70 94.54
30.66 15 2 36 4924.88 -7.60 239.33 235.52 26.93 16 24 41 4324.9 -14.71 236.01
149.34 0 59 9 3222.99 -7.58 97.86 235.49 26.93 1 52 52 2623.0 -14.70 94.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.8879 TRA 1.9539 TC3 -.0655 BAU .3919 SGT 1815.8 SGR 3878.3 SG3 94.9 ST 873.4 SR 3562.0 SS 1403.7
RDE-9.2794 RRA 1.8514 RC3 -.1115 FAU-.00699 RRT .7385 RRF -.9931 RTF -.8115 CRT .8904 CRS .9990 CST .9095
FDE 2.4746 FRA -.6598 FC3 .0267 BSP 13474 SGB 4282.4 R23 .0107 R13 -.9997 LSA 3907.7 MSA 389.2 SSA 1.1
BDE 9.4695 BRA 2.6917 BC3 .1293 FSP -311 SGI 4124.8 SG2 1151.1 THA 69.23 EL1 3646.9 EL2 388.3 ALF 77.54

LAUNCH DATE JAN 10 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 415.286

RL 147.12 LAL .00 LOL 109.58 VL 27.704 GAL .46 AZL 72.02 HCA 187.07 SMA 128.01 ECC .14945 INC17.9849 V1 30.284
RP 108.92 LAP -2.18 LOP 296.31 VP 37.418 GAP .58 AZP 107.86 TAL 177.36 TAP 4.43 RCA 108.88 APO 147.14 V2 34.791
RC 94.84D GL 65.28 GP -82.22 ZAL 89.01 ZAP 91.82 ETS 4.23 ZAE 97.47 ETE 267.80 ZAC 106.42 ETC 213.03 CLP-103.56

PLANETOCENTRIC CONIC

C3 88.871 VHL 9.417 DLA 63.58 RAL 330.66 RAD 6569.7 VEL 14.492 PTH 2.63 VHP 9.935 DPA -63.71 RAP 80.28 ECC 2.4593
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.36 15 7 7 4752.86 -18.10 234.72 231.32 27.91 16 26 20 4152.9 -25.12 231.02
149.64 1 5 6 3048.60 -18.09 92.91 231.31 27.91 1 55 55 2448.6 -25.11 89.20
30.36 15 7 7 4752.86 -18.10 234.72 231.32 27.91 16 26 20 4152.9 -25.12 231.02
149.64 1 5 6 3048.60 -18.09 92.91 231.31 27.91 1 55 55 2448.6 -25.11 89.20
30.36 15 7 7 4752.86 -18.10 234.72 231.32 27.91 16 26 20 4152.9 -25.12 231.02
149.64 1 5 6 3048.60 -18.09 92.91 231.31 27.91 1 55 55 2448.6 -25.11 89.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2828 TRA -.5409 TC3 -.0627 BAU .2591 SGT 2133.1 SGR 3813.5 SG3 168.0 ST 2009.6 SR 3195.1 SS 1465.2
RDE 5.1437 RRA -1.5671 RC3 -.2094 FAU .01309 RRT .9690 RRF .9958 RTF .9856 CRT .9958 CRS -.9994 CST -.9984
FDE 2.7665 FRA -.6899 FC3 -.1278 BSP 13647 SGB 4369.5 R23 -.0251 R13 .9990 LSA 4045.9 MSA 156.9 SSA 1.8
BDE 6.1019 BRA 1.6578 BC3 .2185 FSP -351 SGI 4345.0 SGI 462.5 THA 61.18 EL1 3771.3 EL2 156.4 ALF 57.88

LAUNCH DATE JAN 10 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 421.448

RL 147.12 LAL .00 LOL 109.58 VL 27.700 GAL .55 AZL 76.73 HCA 190.16 SMA 127.99 ECC .14974 INC13.2651 V1 30.284
RP 108.93 LAP -2.32 LOP 299.47 VP 37.413 GAP .92 AZP 103.06 TAL 176.89 TAP 7.05 RCA 108.82 APO 147.15 V2 34.788
RC 97.236 GL 62.35 GP -73.32 ZAL 88.38 ZAP 94.40 ETS 351.73 ZAE 105.94 ETE 255.51 ZAC 108.91 ETC 200.43 CLP-105.51

PLANETOCENTRIC CONIC

C3 51.483 VHL 7.175 DLA 62.25 RAL 336.50 RAD 6568.9 VEL 13.147 PTH 2.40 VHP 7.174 DPA -59.11 RAP 64.27 ECC 1.8473
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.93 15 34 11 4617.56 -25.48 229.18 232.00 31.05 16 51 8 4017.6 -32.25 224.73
148.07 1 24 40 2925.89 -25.47 89.19 231.98 31.04 2 13 25 2325.9 -32.24 84.74
31.93 15 34 11 4617.56 -25.48 229.18 232.00 31.05 16 51 8 4017.6 -32.25 224.73
148.07 1 24 40 2925.89 -25.47 89.19 231.98 31.04 2 13 25 2325.9 -32.24 84.74
31.93 15 34 11 4617.56 -25.48 229.18 232.00 31.05 16 51 8 4017.6 -32.25 224.73
148.07 1 24 40 2925.89 -25.47 89.19 231.98 31.04 2 13 25 2325.9 -32.24 84.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5596 TRA -.7003 TC3 -.3128 BAU .4386 SGT 2412.8 SGR 3652.7 SG3 268.6 ST 2075.4 SR 3270.8 SS 1733.3
RDE 4.0577 RRA -.8666 RC3 -.5552 FAU .03175 RRT .9946 RRF .9992 RTF .9900 CRT .9993 CRS -.9999 CST -.9988
FDE 3.4741 FRA -.6854 FC3 -.5338 BSP 13672 SGB 4377.7 R23 .0675 R13 .9975 LSA 4243.1 MSA 74.2 SSA 1.1
BDE 4.7975 BRA 1.1142 BC3 .6373 FSP -893 SGI 4372.6 SGI 210.1 THA 56.61 EL1 3873.1 EL2 66.2 ALF 57.61

LAUNCH DATE JAN 10 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 427.630

RL 147.12 LAL .00 LOL 109.58 VL 27.695 GAL .63 AZL 79.26 HCA 193.28 SMA 127.95 ECC .15018 INC10.7371 V1 30.284
RP 108.94 LAP -2.45 LOP 302.63 VP 37.407 GAP 1.26 AZP 100.46 TAL 176.41 TAP 9.69 RCA 108.74 APO 147.17 V2 34.786
RC 99.636 GL 59.12 GP -65.78 ZAL 87.67 ZAP 97.83 ETS 346.43 ZAE 112.70 ETE 249.38 ZAC 110.26 ETC 194.72 CLP-109.40

PLANETOCENTRIC CONIC

C3 36.135 VHL 6.011 DLA 60.56 RAL 342.35 RAD 6568.4 VEL 12.550 PTH 2.27 VHP 5.784 DPA -54.34 RAP 53.57 ECC 1.5947
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.94 16 2 27 4519.84 -30.08 223.78 233.27 34.61 17 17 46 3919.8 -36.55 218.55
146.06 1 43 2 2845.58 -30.07 86.20 233.26 34.61 2 30 28 2245.6 -36.54 80.97
33.94 16 2 27 4519.84 -30.08 223.78 233.27 34.61 17 17 46 3919.8 -36.55 218.55
146.06 1 43 2 2845.58 -30.07 86.20 233.26 34.61 2 30 28 2245.6 -36.54 80.97
33.94 16 2 27 4519.84 -30.08 223.78 233.27 34.61 17 17 46 3919.8 -36.55 218.55
146.06 1 43 2 2845.58 -30.07 86.20 233.26 34.61 2 30 28 2245.6 -36.54 80.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4806 TRA -.6194 TC3 -.6320 BAU .5102 SGT 2742.3 SGR 3393.5 SG3 380.8 ST 2372.9 SR 3099.7 SS 1999.6
RDE 3.2372 RRA -.5053 RC3 -.8462 FAU .05096 RRT .9871 RRF .9992 RTF .9828 CRT .9983 CRS -1.0000 CST -.9980
FDE 4.1811 FRA -.6090 FC3 -1.2208 BSP 13612 SGB 4363.0 R23 .0856 R13 .9958 LSA 4384.4 MSA 118.8 SSA 1.9
BDE 4.0662 BRA .7993 BC3 1.0562 FSP -1280 SGI 4349.6 SGI 341.9 THA 51.13 EL1 3902.2 EL2 108.2 ALF 52.58

LAUNCH DATE JAN 10 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 433.811

RL 147.12 LAL .00 LOL 109.58 VL 27.687 GAL .73 AZL 80.84 HCA 196.42 SMA 127.90 ECC .15077 INC 9.1597 V1 30.284
RP 108.94 LAP -2.58 LOP 305.80 VP 37.400 GAP 1.60 AZP 98.79 TAL 175.89 TAP 12.30 RCA 108.62 APO 147.18 V2 34.784
RC 102.036 GL 56.06 GP -59.07 ZAL 86.87 ZAP 101.84 ETS 342.69 ZAE 118.23 ETE 243.78 ZAC 110.84 ETC 190.29 CLP-113.52

PLANETOCENTRIC CONIC

C3 28.218 VHL 5.312 DLA 58.84 RAL 347.50 RAD 6568.1 VEL 12.231 PTH 2.20 VHP 4.996 DPA -49.67 RAP 45.71 ECC 1.4644
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.00 16 28 13 4447.91 -32.88 218.85 234.50 38.04 17 42 21 3847.9 -39.02 212.93
144.00 1 58 21 2793.13 -32.87 83.80 234.48 38.03 2 44 54 2193.1 -39.01 77.89
36.00 16 28 13 4447.91 -32.88 218.85 234.50 38.04 17 42 21 3847.9 -39.02 212.93
144.00 1 58 21 2793.13 -32.87 83.80 234.48 38.03 2 44 54 2193.1 -39.01 77.89
36.00 16 28 13 4447.91 -32.88 218.85 234.50 38.04 17 42 21 3847.9 -39.02 212.93
144.00 1 58 21 2793.13 -32.87 83.80 234.48 38.03 2 44 54 2193.1 -39.01 77.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4422 TRA -.5258 TC3 -.9994 BAU .5475 SGT 3044.2 SGR 3103.5 SG3 489.2 ST 2654.8 SR 2841.9 SS 2207.4
RDE 2.8297 RRA -.2786 RC3 -1.0522 FAU .06926 RRT .9838 RRF .9990 RTF .9797 CRT .9980 CRS -1.0000 CST -.9977
FDE 4.7329 FRA -.4566 FC3 -2.1250 BSP 13546 SGB 4347.3 R23 .1056 R13 .9936 LSA 4469.6 MSA 138.9 SSA 2.5
BDE 3.5888 BRA .5950 BC3 1.4312 FSP -1661 SGI 4329.7 SGI 391.0 THA 45.56 EL1 3887.1 EL2 121.8 ALF 46.95

LAUNCH DATE JAN 10 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 439.982

RL 147.12 LAL .00 LOL 109.58 VL 27.678 GAL .85 AZL 81.92 HCA 199.56 SMA 127.83 ECC .15151 INC 8.0775 V1 30.284
RP 108.95 LAP -2.70 LOP 308.96 VP 37.392 GAP 1.94 AZP 97.62 TAL 175.32 TAP 14.88 RCA 108.47 APO 147.20 V2 34.783
RC 104.441 GL 53.25 GP -53.05 ZAL 85.97 ZAP 106.16 ETS 339.92 ZAE 122.67 ETE 238.18 ZAC 110.94 ETC 186.64 CLP-117.57

PLANETOCENTRIC CONIC

C3 23.551 VHL 4.853 DLA 57.21 RAL 351.99 RAD 6568.0 VEL 12.039 PTH 2.15 VHP 4.526 DPA -45.20 RAP 39.68 ECC 1.3876
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.96 16 51 18 4393.18 -34.55 214.47 235.68 41.11 18 4 31 3793.2 -40.38 207.98
142.04 2 11 8 2758.51 -34.53 81.93 235.67 41.10 2 57 6 2158.5 -40.37 75.45
37.96 16 51 18 4393.18 -34.55 214.47 235.68 41.11 18 4 31 3793.2 -40.38 207.98
142.04 2 11 8 2758.51 -34.53 81.93 235.67 41.10 2 57 6 2158.5 -40.37 75.45
37.96 16 51 18 4393.18 -34.55 214.47 235.68 41.11 18 4 31 3793.2 -40.38 207.98
142.04 2 11 8 2758.51 -34.53 81.93 235.67 41.10 2 57 6 2158.5 -40.37 75.45

DIFFERENTIAL CORRECTIONS

TDE 2.4466 TRA -4.307 TC3-1.3914 BAU .5712
RDE 2.1611 RRA -.1279 RC3-1.1642 FAU .08473
FDE 5.0827 FRA -.2458 FC3-3.1145 BSP 13492
BDE 3.2644 BRA .4493 BC3 1.8142 FSP -1989

MID-COURSE EXECUTION ACCURACY

SGT 3324.1 SGR 2804.4 S63 582.4
RRR .9824 RRF .9986 RTF .9783
SGB 4349.0 R23 .1240 R13 .9909
S61 4330.4 S62 402.1 THA 40.07

ORBIT DETERMINATION ACCURACY

ST 2902.6 SR 2553.1 SS 2347.6
CRT .9979 CRS-1.0000 CST -.9975
LSA 4520.1 MSA 149.9 SSA 3.2
EL1 3863.7 EL2 123.5 ALF 41.33

LAUNCH DATE JAN 10 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 446.139

RL 147.12 LAL .00 LOL 109.58 VL 27.666 GAL .95 AZL 82.71 HCA 202.71 SMA 127.76 ECC .15241 INC 7.2853 V1 30.284
RP 108.95 LAP -2.81 LOP 312.12 VP 37.384 GAP 2.28 AZP 96.73 TAL 174.70 TAP 17.41 RCA 108.29 APO 147.23 V2 34.783
RC 106.844 GL 50.69 GP -47.64 ZAL 84.98 ZAP 110.58 ETS 337.89 ZAE 126.12 ETE 232.58 ZAC 110.74 ETC 183.66 CLP-121.45

PLANETOCENTRIC CONIC

C3 20.552 VHL 4.533 DLA 55.72 RAL 355.99 RAD 6567.8 VEL 11.914 PTH 2.12 VHP 4.243 DPA -41.00 RAP 34.97 ECC 1.3382
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.77 17 12 11 4350.21 -35.51 210.64 236.91 43.78 18 24 42 3750.2 -41.07 203.72
140.23 2 22 10 2735.59 -35.50 80.49 236.90 43.77 3 7 45 2135.6 -41.06 73.57
39.77 17 12 11 4350.21 -35.51 210.64 236.91 43.78 18 24 42 3750.2 -41.07 203.72
140.23 2 22 10 2735.59 -35.50 80.49 236.90 43.77 3 7 45 2135.6 -41.06 73.57
39.77 17 12 11 4350.21 -35.51 210.64 236.91 43.78 18 24 42 3750.2 -41.07 203.72
140.23 2 22 10 2735.59 -35.50 80.49 236.90 43.77 3 7 45 2135.6 -41.06 73.57

DIFFERENTIAL CORRECTIONS

TDE 2.4578 TRA -.3338 TC3-1.7911 BAU .5919
RDE 1.7917 RRA -.0243 RC3-1.1966 FAU .09646
FDE 5.2331 FRA .0034 FC3-4.0632 BSP 13508
BDE 3.0415 BRA .3347 BC3 2.1540 FSP -2237

MID-COURSE EXECUTION ACCURACY

SGT 3584.3 SGR 2511.5 S63 654.1
RRR .9816 RRF .9979 RTF .9774
SGB 4376.6 R23 .1397 R13 .9881
S61 4358.8 S62 394.1 THA 34.85

ORBIT DETERMINATION ACCURACY

ST 3114.8 SR 2264.7 SS 2424.8
CRT .9979 CRS-1.0000 CST -.9974
LSA 4548.1 MSA 157.2 SSA 3.9
EL1 3849.2 EL2 119.1 ALF 36.00

LAUNCH DATE JAN 10 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 452.282

RL 147.12 LAL .00 LOL 109.58 VL 27.653 GAL 1.08 AZL 83.32 HCA 205.86 SMA 127.67 ECC .15344 INC 6.6772 V1 30.284
RP 108.94 LAP -2.91 LOP 315.28 VP 37.375 GAP 2.61 AZP 96.01 TAL 174.04 TAP 19.90 RCA 108.08 APO 147.26 V2 34.784
RC 109.246 GL 48.35 GP -42.82 ZAL 83.89 ZAP 114.95 ETS 336.43 ZAE 128.65 ETE 227.09 ZAC 110.42 ETC 181.25 CLP-125.11

PLANETOCENTRIC CONIC

C3 18.511 VHL 4.302 DLA 54.38 RAL 359.64 RAD 6567.7 VEL 11.828 PTH 2.09 VHP 4.080 DPA -37.10 RAP 31.28 ECC 1.3046
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.42 17 31 24 4315.61 -36.02 207.31 238.25 46.07 18 43 19 3715.6 -41.34 200.06
138.58 2 32 3 2720.63 -36.01 79.41 238.24 46.06 3 17 24 2120.6 -41.33 72.16
41.42 17 31 24 4315.61 -36.02 207.31 238.25 46.07 18 43 19 3715.6 -41.34 200.06
138.58 2 32 3 2720.63 -36.01 79.41 238.24 46.06 3 17 24 2120.6 -41.33 72.16
41.42 17 31 24 4315.61 -36.02 207.31 238.25 46.07 18 43 19 3715.6 -41.34 200.06
138.58 2 32 3 2720.63 -36.01 79.41 238.24 46.06 3 17 24 2120.6 -41.33 72.16

DIFFERENTIAL CORRECTIONS

TDE 2.4695 TRA -.2364 TC3-2.1877 BAU .6143
RDE 1.4967 RRA .0438 RC3-1.1723 FAU .10452
FDE 5.2118 FRA .2566 FC3-4.8880 BSP 13670
BDE 2.8876 BRA .2404 BC3 2.4820 FSP -2414

MID-COURSE EXECUTION ACCURACY

SGT 3827.6 SGR 2236.2 S63 703.0
RRR .9814 RRF .9967 RTF .9769
SGB 4433.0 R23 .1500 R13 .9854
S61 4417.3 S62 372.3 THA 30.06

ORBIT DETERMINATION ACCURACY

ST 3293.1 SR 1993.6 SS 2448.1
CRT .9979 CRS -.9999 CST -.9972
LSA 4559.2 MSA 161.4 SSA 4.7
EL1 3848.0 EL2 109.7 ALF 31.17

LAUNCH DATE JAN 10 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 458.408

RL 147.12 LAL .00 LOL 109.58 VL 27.639 GAL 1.22 AZL 83.81 HCA 209.01 SMA 127.57 ECC .15463 INC 6.1932 V1 30.284
RP 108.94 LAP -3.00 LOP 318.45 VP 37.365 GAP 2.94 AZP 95.42 TAL 173.33 TAP 22.34 RCA 107.85 APO 147.30 V2 34.785
RC 111.645 GL 46.18 GP -38.54 ZAL 82.71 ZAP 119.16 ETS 335.42 ZAE 130.40 ETE 221.84 ZAC 110.10 ETC 179.35 CLP-128.54

PLANETOCENTRIC CONIC

C3 17.069 VHL 4.131 DLA 53.16 RAL 3.05 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 4.000 DPA -33.52 RAP 28.41 ECC 1.2809
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.93 17 49 22 4287.18 -36.25 204.41 239.74 48.03 19 0 49 3687.2 -41.34 196.91
137.07 2 41 15 2711.32 -36.24 78.63 239.72 48.02 3 26 26 2111.3 -41.33 71.13
42.93 17 49 22 4287.18 -36.25 204.41 239.74 48.03 19 0 49 3687.2 -41.34 196.91
137.07 2 41 15 2711.32 -36.24 78.63 239.72 48.02 3 26 26 2111.3 -41.33 71.13
42.93 17 49 22 4287.18 -36.25 204.41 239.74 48.03 19 0 49 3687.2 -41.34 196.91
137.07 2 41 15 2711.32 -36.24 78.63 239.72 48.02 3 26 26 2111.3 -41.33 71.13

DIFFERENTIAL CORRECTIONS

TDE 2.4776 TRA -.1371 TC3-2.5725 BAU .6393
RDE 1.2592 RRA .0879 RC3-1.1095 FAU .10918
FDE 5.0550 FRA .4982 FC3-5.5379 BSP 13984
BDE 2.7792 BRA .1628 BC3 2.8015 FSP -2529

MID-COURSE EXECUTION ACCURACY

SGT 4052.7 SGR 1982.7 S63 730.1
RRR .9812 RRF .9950 RTF .9767
SGB 4511.7 R23 .1538 R13 .9830
S61 4498.5 S62 344.8 THA 25.81

ORBIT DETERMINATION ACCURACY

ST 3437.8 SR 1747.5 SS 2426.3
CRT .9980 CRS -.9999 CST -.9970
LSA 4553.3 MSA 163.7 SSA 5.5
EL1 3855.3 EL2 97.5 ALF 26.92

LAUNCH DATE JAN 10 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 464.518

RL 147.12 LAL .00 LOL 109.58 VL 27.623 GAL 1.37 AZL 84.20 HCA 212.17 SMA 127.46 ECC .15596 INC 5.7966 V1 30.284  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.355 GAP 3.27 AZP 94.91 TAL 172.57 TAP 24.74 RCA 107.58 APO 147.34 V2 34.787  
 RC 114.042 GL 44.16 GP -34.78 ZAL 81.43 ZAP 123.15 ETS 334.74 ZAE 131.51 ETE 216.98 ZAC 109.86 ETC 177.86 CLP-131.74

PLANETOCENTRIC CONIC

C3 16.027 VHL 4.003 DLA 52.05 RAL 6.29 RAD 6567.6 VEL 11.722 PTH 2.07 VHP 3.978 DPA -30.25 RAP 26.21 ECC 1.2638  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.31 18 6 25 4263.53 -36.27 201.89 241.39 49.71 19 17 29 3663.5 -41.18 194.20  
 135.69 2 50 3 2706.15 -36.26 78.10 241.38 49.70 3 35 9 2106.1 -41.17 70.41  
 44.31 18 6 25 4263.53 -36.27 201.89 241.39 49.71 19 17 29 3663.5 -41.18 194.20  
 135.69 2 50 3 2706.15 -36.26 78.10 241.38 49.70 3 35 9 2106.1 -41.17 70.41  
 44.31 18 6 25 4263.53 -36.27 201.89 241.39 49.71 19 17 29 3663.5 -41.18 194.20  
 135.69 2 50 3 2706.15 -36.26 78.10 241.38 49.70 3 35 9 2106.1 -41.17 70.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4859 TRA -.0330 TC3-2.9318 BAU .6649  
 RDE 1.0713 RRA .1170 RC3-1.0165 FAU .11043  
 FDE 4.8207 FRA .7249 FC3-5.9652 BSP 14315  
 BDE 2.7069 BRA .1216 BC3 3.1030 FSP -2563

SGT 4263.0 SGR 1757.0 SG3 739.5  
 RRT .9805 RRF .9924 RTF .9764  
 SGB 4610.9 R23 .1505 R13 .9811  
 SG1 4599.8 SG2 320.1 THA 22.12

ST 3558.5 SR 1535.5 SS 2378.3  
 CRT .9982 CRS -.9998 CST -.9968  
 LSA 4544.2 MSA 165.5 SSA 6.3  
 EL1 3874.7 EL2 84.3 ALF 23.32

LAUNCH DATE JAN 10 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 470.611

RL 147.12 LAL .00 LOL 109.58 VL 27.606 GAL 1.53 AZL 84.54 HCA 215.32 SMA 127.35 ECC .15744 INC 5.4639 V1 30.284  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.345 GAP 3.60 AZP 94.46 TAL 171.77 TAP 27.10 RCA 107.30 APO 147.40 V2 34.790  
 RC 116.435 GL 42.26 GP -31.48 ZAL 80.07 ZAP 126.89 ETS 334.30 ZAE 132.11 ETE 212.58 ZAC 109.75 ETC 176.70 CLP-134.73

PLANETOCENTRIC CONIC

C3 15.270 VHL 3.908 DLA 51.04 RAL 9.42 RAD 6567.6 VEL 11.690 PTH 2.06 VHP 3.999 DPA -27.27 RAP 24.58 ECC 1.2513  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.59 18 22 51 4243.55 -36.16 199.67 243.21 51.15 19 33 35 3643.5 -40.90 191.84  
 134.41 2 58 35 2704.25 -36.15 77.78 243.19 51.14 3 43 40 2104.3 -40.89 69.96  
 45.59 18 22 51 4243.55 -36.16 199.67 243.21 51.15 19 33 35 3643.5 -40.90 191.84  
 134.41 2 58 35 2704.25 -36.15 77.78 243.19 51.14 3 43 40 2104.3 -40.89 69.96  
 45.59 18 22 51 4243.55 -36.16 199.67 243.21 51.15 19 33 35 3643.5 -40.90 191.84  
 134.41 2 58 35 2704.25 -36.15 77.78 243.19 51.14 3 43 40 2104.3 -40.89 69.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4911 TRA .0755 TC3-3.2820 BAU .6914  
 RDE .9209 RRA .1348 RC3 -.9105 FAU .10926  
 FDE 4.5334 FRA .9265 FC3-6.1943 BSP 14710  
 BDE 2.6559 BRA .1545 BC3 3.3867 FSP -2550

SGT 4457.7 SGR 1558.3 SG3 734.6  
 RRT .9791 RRF .9887 RTF .9763  
 SGB 4722.3 R23 .1400 R13 .9796  
 SG1 4712.7 SG2 299.7 THA 18.97

ST 3653.7 SR 1353.7 SS 2308.2  
 CRT .9985 CRS -.9996 CST -.9966  
 LSA 4525.7 MSA 166.4 SSA 7.2  
 EL1 3895.8 EL2 70.4 ALF 20.31

LAUNCH DATE JAN 10 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 476.687

RL 147.12 LAL .00 LOL 109.58 VL 27.588 GAL 1.70 AZL 84.82 HCA 218.48 SMA 127.23 ECC .15907 INC 5.1792 V1 30.284  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.335 GAP 3.93 AZP 94.06 TAL 170.93 TAP 29.41 RCA 106.99 APO 147.46 V2 34.794  
 RC 118.823 GL 40.44 GP -28.58 ZAL 78.61 ZAP 130.36 ETS 334.04 ZAE 132.33 ETE 208.69 ZAC 109.80 ETC 175.81 CLP-137.52

PLANETOCENTRIC CONIC

C3 14.727 VHL 3.838 DLA 50.10 RAL 12.48 RAD 6567.6 VEL 11.667 PTH 2.05 VHP 4.053 DPA -24.55 RAP 23.42 ECC 1.2424  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.77 18 38 50 4226.61 -35.94 197.71 245.18 52.40 19 49 17 3626.6 -40.54 189.78  
 133.23 3 7 2 2704.96 -35.93 77.64 245.17 52.39 3 52 7 2105.0 -40.53 69.72  
 46.77 18 38 50 4226.61 -35.94 197.71 245.18 52.40 19 49 17 3626.6 -40.54 189.78  
 133.23 3 7 2 2704.96 -35.93 77.64 245.17 52.39 3 52 7 2105.0 -40.53 69.72  
 46.77 18 38 50 4226.61 -35.94 197.71 245.18 52.40 19 49 17 3626.6 -40.54 189.78  
 133.23 3 7 2 2704.96 -35.93 77.64 245.17 52.39 3 52 7 2105.0 -40.53 69.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4956 TRA .1912 TC3-3.5552 BAU .7174  
 RDE .8020 RRA .1457 RC3 -.7987 FAU .10613  
 FDE 4.2267 FRA 1.1070 FC3-6.2389 BSP 15088  
 BDE 2.6214 BRA .2403 BC3 3.6438 FSP -2489

SGT 4639.7 SGR 1387.3 SG3 719.7  
 RRT .9765 RRF .9835 RTF .9761  
 SGB 4842.7 R23 .1237 R13 .9784  
 SG1 4834.2 SG2 287.0 THA 16.34

ST 3729.4 SR 1201.9 SS 2226.8  
 CRT .9988 CRS -.9993 CST -.9963  
 LSA 4503.7 MSA 167.3 SSA 8.0  
 EL1 3917.9 EL2 56.5 ALF 17.85

LAUNCH DATE JAN 10 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 482.746

RL 147.12 LAL .00 LOL 109.58 VL 27.568 GAL 1.89 AZL 85.07 HCA 221.64 SMA 127.10 ECC .16086 INC 4.9315 V1 30.284  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.325 GAP 4.25 AZP 93.69 TAL 170.05 TAP 31.69 RCA 106.65 APO 147.54 V2 34.798  
 RC 121.206 GL 38.70 GP -26.05 ZAL 77.07 ZAP 133.58 ETS 333.89 ZAE 132.28 ETE 205.30 ZAC 110.03 ETC 175.13 CLP-140.12

PLANETOCENTRIC CONIC

C3 14.350 VHL 3.788 DLA 49.22 RAL 15.50 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 4.131 DPA -22.07 RAP 22.67 ECC 1.2362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.90 18 54 32 4212.13 -35.64 195.96 247.31 53.48 20 4 44 3612.1 -40.11 187.97  
 132.10 3 15 24 2707.94 -35.62 77.66 247.30 53.47 4 0 32 2107.9 -40.10 69.67  
 47.90 18 54 32 4212.13 -35.64 195.96 247.31 53.48 20 4 44 3612.1 -40.11 187.97  
 132.10 3 15 24 2707.94 -35.62 77.66 247.30 53.47 4 0 32 2107.9 -40.10 69.67  
 47.90 18 54 32 4212.13 -35.64 195.96 247.31 53.48 20 4 44 3612.1 -40.11 187.97  
 132.10 3 15 24 2707.94 -35.62 77.66 247.30 53.47 4 0 32 2107.9 -40.10 69.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4942 TRA .3100 TC3-3.8194 BAU .7447  
 RDE .7066 RRA .1501 RC3 -.6928 FAU .10212  
 FDE 3.9075 FRA 1.2555 FC3-6.1812 BSP 15550  
 BDE 2.5924 BRA .3444 BC3 3.8817 FSP -2416

SGT 4808.4 SGR 1240.4 SG3 697.5  
 RRT .9725 RRF .9764 RTF .9761  
 SGB 4965.8 R23 .1026 R13 .9777  
 SG1 4957.9 SG2 280.2 THA 14.13

ST 3779.7 SR 1073.9 SS 2133.1  
 CRT .9992 CRS -.9988 CST -.9960  
 LSA 4467.8 MSA 167.2 SSA 8.9  
 EL1 3929.1 EL2 42.5 ALF 15.85

LAUNCH DATE JAN 10 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 488.787

RL 147.12 LAL .00 LOL 109.58 VL 27.548 GAL 2.09 AZL 85.29 HCA 224.80 SMA 126.96 ECC .16281 INC 4.7126 V1 30.284  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.314 GAP 4.58 AZP 93.35 TAL 169.13 TAP 33.94 RCA 106.29 APO 147.63 V2 34.803  
 RC 123.581 GL 37.02 GP -23.84 ZAL 75.45 ZAP 136.56 ETS 333.81 ZAE 132.05 ETE 202.37 ZAC 110.43 ETC 174.62 CLP-142.54

PLANETOCENTRIC CONIC

C3 14.111 VHL 3.756 DLA 48.38 RAL 18.48 RAD 6567.6 VEL 11.640 PTH 2.04 VHP 4.230 DPA -19.79 RAP 22.26 ECC 1.2322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.98 19 10 3 4199.70 -35.26 194.40 249.58 54.43 20 20 3 3599.7 -39.63 186.36  
 131.02 3 23 43 2712.96 -35.25 77.83 249.57 54.42 4 8 56 2113.0 -39.62 69.80  
 48.98 19 10 3 4199.70 -35.26 194.40 249.58 54.43 20 20 3 3599.7 -39.63 186.36  
 131.02 3 23 43 2712.96 -35.25 77.83 249.57 54.42 4 8 56 2113.0 -39.62 69.80  
 48.98 19 10 3 4199.70 -35.26 194.40 249.58 54.43 20 20 3 3599.7 -39.63 186.36  
 131.02 3 23 43 2712.96 -35.25 77.83 249.57 54.42 4 8 56 2113.0 -39.62 69.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4898 TRA .4358 TC3-4.0440 BAU .7710 SGT 4965.3 SGR 1116.2 SG3 670.6 ST 3810.6 SR 968.5 SS 2035.2  
 RDE .6312 RRA .1516 RC3 -.5918 FAU .09722 RRT .9663 RRF .9671 RTF .9761 CRT .9995 CRS -.9979 CST -.9957  
 FDE 3.5955 FRA 1.3634 FC3-5.9647 BSP 16011 SGB 5089.2 R23 .0808 R13 .9772 LSA 4424.0 MSA 167.3 SSA 9.7  
 BDE 2.5686 BRA .4614 BC3 4.0871 FSP -2326 SG1 5081.5 SG2 280.6 THA 12.29 EL1 3931.6 EL2 29.0 ALF 14.25

LAUNCH DATE JAN 10 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 494.809

RL 147.12 LAL .00 LOL 109.58 VL 27.527 GAL 2.31 AZL 85.48 HCA 227.96 SMA 126.82 ECC .16492 INC 4.5168 V1 30.284  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.304 GAP 4.91 AZP 93.03 TAL 168.18 TAP 36.14 RCA 105.90 APO 147.73 V2 34.808  
 RC 125.948 GL 35.39 GP -21.90 ZAL 73.77 ZAP 139.32 ETS 335.77 ZAE 131.71 ETE 199.86 ZAC 111.00 ETC 174.22 CLP-144.82

PLANETOCENTRIC CONIC

C3 13.990 VHL 3.740 DLA 47.58 RAL 21.45 RAD 6567.6 VEL 11.635 PTH 2.04 VHP 4.346 DPA -17.68 RAP 22.15 ECC 1.2302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.02 19 25 28 4188.95 -34.83 192.97 251.98 55.27 20 35 17 3589.0 -39.10 184.92  
 129.98 3 31 58 2719.92 -34.82 78.13 251.97 55.26 4 17 18 2119.9 -39.09 70.08  
 50.02 19 25 28 4188.95 -34.83 192.97 251.98 55.27 20 35 17 3589.0 -39.10 184.92  
 129.98 3 31 58 2719.92 -34.82 78.13 251.97 55.26 4 17 18 2119.9 -39.09 70.08  
 50.02 19 25 28 4188.95 -34.83 192.97 251.98 55.27 20 35 17 3589.0 -39.10 184.92  
 129.98 3 31 58 2719.92 -34.82 78.13 251.97 55.26 4 17 18 2119.9 -39.09 70.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4818 TRA .5684 TC3-4.2285 BAU .7964 SGT 5111.2 SGR 1011.9 SG3 641.0 ST 3822.6 SR 881.7 SS 1934.5  
 RDE .5716 RRA .1510 RC3 -.4996 FAU .09189 RRT .9578 RRF .9552 RTF .9762 CRT .9998 CRS -.9966 CST -.9953  
 FDE 3.2960 FRA 1.4908 FC3-5.6866 BSP 16447 SGB 5210.4 R23 .0601 R13 .9769 LSA 4370.8 MSA 167.2 SSA 10.5  
 BDE 2.5468 BRA .5881 BC3 4.2579 FSP -2222 SG1 5202.6 SG2 285.9 THA 10.77 EL1 3922.9 EL2 16.8 ALF 12.99

LAUNCH DATE JAN 10 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 500.813

RL 147.12 LAL .00 LOL 109.58 VL 27.505 GAL 2.53 AZL 85.66 HCA 231.13 SMA 126.67 ECC .16721 INC 4.3394 V1 30.284  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.293 GAP 5.24 AZP 92.73 TAL 167.20 TAP 38.32 RCA 105.49 APO 147.85 V2 34.815  
 RC 128.308 GL 33.79 GP -20.19 ZAL 72.02 ZAP 141.87 ETS 333.75 ZAE 131.30 ETE 197.71 ZAC 111.73 ETC 173.92 CLP-146.95

PLANETOCENTRIC CONIC

C3 13.975 VHL 3.738 DLA 46.79 RAL 24.40 RAD 6567.6 VEL 11.634 PTH 2.04 VHP 4.476 DPA -15.73 RAP 22.30 ECC 1.2300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.05 19 40 53 4179.62 -34.33 191.67 254.50 56.01 20 50 33 3579.6 -38.52 183.61  
 128.95 3 40 6 2728.80 -34.32 78.57 254.49 56.00 4 25 35 2128.8 -38.51 70.51  
 51.05 19 40 53 4179.62 -34.33 191.67 254.50 56.01 20 50 33 3579.6 -38.52 183.61  
 128.95 3 40 6 2728.80 -34.32 78.57 254.49 56.00 4 25 35 2128.8 -38.51 70.51  
 51.05 19 40 53 4179.62 -34.33 191.67 254.50 56.01 20 50 33 3579.6 -38.52 183.61  
 128.95 3 40 6 2728.80 -34.32 78.57 254.49 56.00 4 25 35 2128.8 -38.51 70.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4693 TRA .7079 TC3-4.3742 BAU .8210 SGT 5246.9 SGR 925.0 SG3 610.0 ST 3815.5 SR 810.6 SS 1832.8  
 RDE .5248 RRA .1490 RC3 -.4173 FAU .08641 RRT .9464 RRF .9406 RTF .9764 CRT .9999 CRS -.9947 CST -.9949  
 FDE 3.0127 FRA 1.5795 FC3-5.3531 BSP 16881 SGB 5327.8 R23 .0422 R13 .9768 LSA 4306.5 MSA 167.2 SSA 11.2  
 BDE 2.5244 BRA .7234 BC3 4.3941 FSP -2116 SG1 5319.6 SG2 294.7 THA 9.50 EL1 3900.7 EL2 11.3 ALF 11.99

LAUNCH DATE JAN 10 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 506.799

RL 147.12 LAL .00 LOL 109.58 VL 27.482 GAL 2.78 AZL 85.82 HCA 234.29 SMA 126.52 ECC .16968 INC 4.1771 V1 30.284  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.283 GAP 5.57 AZP 92.44 TAL 166.18 TAP 40.47 RCA 105.05 APO 147.99 V2 34.821  
 RC 130.653 GL 32.22 GP -18.69 ZAL 70.21 ZAP 144.25 ETS 335.71 ZAE 130.85 ETE 195.87 ZAC 112.61 ETC 173.69 CLP-148.95

PLANETOCENTRIC CONIC

C3 14.060 VHL 3.750 DLA 46.01 RAL 27.33 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 4.618 DPA -13.90 RAP 22.66 ECC 1.2314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.08 19 56 17 4171.55 -33.78 190.46 257.12 56.68 21 5 48 3571.6 -37.89 182.41  
 127.92 3 48 6 2739.51 -33.77 79.15 257.11 56.67 4 33 46 2139.5 -37.88 71.09  
 52.08 19 56 17 4171.55 -33.78 190.46 257.12 56.68 21 5 48 3571.6 -37.89 182.41  
 127.92 3 48 6 2739.51 -33.77 79.15 257.11 56.67 4 33 46 2139.5 -37.88 71.09  
 52.08 19 56 17 4171.55 -33.78 190.46 257.12 56.68 21 5 48 3571.6 -37.89 182.41  
 127.92 3 48 6 2739.51 -33.77 79.15 257.11 56.67 4 33 46 2139.5 -37.88 71.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4556 TRA .8580 TC3-4.4705 BAU .8420 SGT 5374.2 SGR 854.0 SG3 578.8 ST 3796.0 SR 753.6 SS 1734.7  
 RDE .4890 RRA .1472 RC3 -.3429 FAU .08063 RRT .9319 RRF .9233 RTF .9765 CRT .9997 CRS -.9920 CST -.9945  
 FDE 2.7525 FRA 1.6589 FC3-4.9647 BSP 17253 SGB 5441.6 R23 .0286 R13 .9767 LSA 4237.7 MSA 167.7 SSA 12.0  
 BDE 2.5038 BRA .8705 BC3 4.4836 FSP -1999 SG1 5433.0 SG2 306.4 THA 8.45 EL1 3870.0 EL2 19.3 ALF 11.22



LAUNCH DATE JAN 10 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 512.763

RL 147.12 LAL .00 LOL 109.58 VL 27.458 GAL 3.04 AZL 85.97 HCA 237.46 SMA 126.36 ECC .17235 INC 4.0272 V1 30.284  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.273 GAP 5.91 AZP 92.17 TAL 165.14 TAP 42.59 RCA 104.58 APO 148.14 V2 34.829  
 RC 132.989 GL 30.69 GP -17.37 ZAL 68.35 ZAP 146.46 ETS 333.64 ZAE 130.39 ETE 194.31 ZAC 113.63 ETC 173.50 CLP-150.84

PLANETOCENTRIC CONIC

C3 14.240 VHL 3.774 DLA 45.24 RAL 30.25 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 4.771 DPA -12.19 RAP 23.22 ECC 1.2343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.12 20 11 44 4164.46 -33.18 189.33 259.84 57.28 21 21 9 3564.5 -37.22 181.29  
 126.88 3 55 53 2752.21 -33.17 79.86 259.83 57.27 4 41 45 2152.2 -37.21 71.82  
 53.12 20 11 44 4164.46 -33.18 189.33 259.84 57.28 21 21 9 3564.5 -37.22 181.29  
 126.88 3 55 53 2752.21 -33.17 79.86 259.83 57.27 4 41 45 2152.2 -37.21 71.82  
 53.12 20 11 44 4164.46 -33.18 189.33 259.84 57.28 21 21 9 3564.5 -37.22 181.29  
 126.88 3 55 53 2752.21 -33.17 79.86 259.83 57.27 4 41 45 2152.2 -37.21 71.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4347 TRA 1.0139 TC3-4.5346 BAU .8649 SGT 5491.6 SGR 795.5 SG3 547.7 ST 3755.8 SR 706.5 SS 1635.6  
 RDE .4612 RRA .1449 RC3 -.2804 FAU .07521 RRT .9148 RRF .9035 RTF .9766 CRT .9989 CRS -.9884 CST -.9941  
 FDE 2.5070 FRA 1.7223 FC3-4.5726 BSP 17646 SGB 5548.9 R23 .0176 R13 .9768 LSA 4153.5 MSA 168.6 SSA 12.7  
 BDE 2.4780 BRA 1.0242 BC3 4.5433 FSP -1896 SG1 5539.7 SG2 318.6 THA 7.57 EL1 3821.6 EL2 32.1 ALF 10.64

LAUNCH DATE JAN 10 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 518.708

RL 147.12 LAL .00 LOL 109.58 VL 27.434 GAL 3.31 AZL 86.11 HCA 240.62 SMA 126.20 ECC .17522 INC 3.8875 V1 30.284  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.262 GAP 6.25 AZP 91.81 TAL 164.07 TAP 44.69 RCA 104.09 APO 148.32 V2 34.837  
 RC 135.313 GL 29.17 GP -16.20 ZAL 66.46 ZAP 148.52 ETS 333.53 ZAE 129.94 ETE 192.97 ZAC 114.76 ETC 173.36 CLP-152.63

PLANETOCENTRIC CONIC

C3 14.514 VHL 3.810 DLA 44.46 RAL 33.13 RAD 6567.6 VEL 11.658 PTH 2.05 VHP 4.935 DPA -10.58 RAP 23.95 ECC 1.2389  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.17 20 27 15 4158.25 -32.52 188.26 262.63 57.83 21 36 33 3558.3 -36.50 180.25  
 125.83 4 3 23 2766.87 -32.51 80.71 262.62 57.82 4 49 30 2166.9 -36.49 72.70  
 54.17 20 27 15 4158.25 -32.52 188.26 262.63 57.83 21 36 33 3558.3 -36.50 180.25  
 125.83 4 3 23 2766.87 -32.51 80.71 262.62 57.82 4 49 30 2166.9 -36.49 72.70  
 54.17 20 27 15 4158.25 -32.52 188.26 262.63 57.83 21 36 33 3558.3 -36.50 180.25  
 125.83 4 3 23 2766.87 -32.51 80.71 262.62 57.82 4 49 30 2166.9 -36.49 72.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4091 TRA 1.1783 TC3-4.5595 BAU .8859 SGT 5600.1 SGR 747.8 SG3 517.3 ST 3700.4 SR 668.3 SS 1538.7  
 RDE .4403 RRA .1430 RC3 -.2274 FAU .06996 RRT .8952 RRF .8817 RTF .9768 CRT .9975 CRS -.9836 CST -.9936  
 FDE 2.2798 FRA 1.7749 FC3-4.1731 BSP 18027 SGB 5649.8 R23 .0093 R13 .9769 LSA 4059.3 MSA 170.2 SSA 13.3  
 BDE 2.4490 BRA 1.1870 BC3 4.5652 FSP -1794 SG1 5640.1 SG2 330.9 THA 6.84 EL1 3760.0 EL2 46.1 ALF 10.21

LAUNCH DATE JAN 10 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 524.630

RL 147.12 LAL .00 LOL 109.58 VL 27.409 GAL 3.60 AZL 86.24 HCA 243.79 SMA 126.04 ECC .17830 INC 3.7561 V1 30.284  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.252 GAP 6.60 AZP 91.66 TAL 162.98 TAP 46.77 RCA 103.57 APO 148.51 V2 34.846  
 RC 137.625 GL 27.68 GP -15.16 ZAL 64.53 ZAP 150.45 ETS 333.37 ZAE 129.50 ETE 191.82 ZAC 116.01 ETC 173.23 CLP-154.33

PLANETOCENTRIC CONIC

C3 14.886 VHL 3.858 DLA 43.67 RAL 35.98 RAD 6567.6 VEL 11.674 PTH 2.05 VHP 5.108 DPA -9.05 RAP 24.83 ECC 1.2450  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.25 20 42 50 4152.74 -31.81 187.24 265.49 58.33 21 52 2 3552.7 -35.73 179.27  
 124.75 4 10 33 2783.64 -31.79 81.70 265.48 58.32 4 56 57 2183.6 -35.72 73.73  
 55.25 20 42 50 4152.74 -31.81 187.24 265.49 58.33 21 52 2 3552.7 -35.73 179.27  
 124.75 4 10 33 2783.64 -31.79 81.70 265.48 58.32 4 56 57 2183.6 -35.72 73.73  
 55.25 20 42 50 4152.74 -31.81 187.24 265.49 58.33 21 52 2 3552.7 -35.73 179.27  
 124.75 4 10 33 2783.64 -31.79 81.70 265.48 58.32 4 56 57 2183.6 -35.72 73.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3791 TRA 1.3523 TC3-4.5459 BAU .9054 SGT 5700.6 SGR 709.4 SG3 483.1 ST 3631.5 SR 637.4 SS 1445.3  
 RDE .4252 RRA .1418 RC3 -.1827 FAU .06491 RRT .8738 RRF .8585 RTF .9770 CRT .9953 CRS -.9774 CST -.9930  
 FDE 2.0711 FRA 1.8204 FC3-3.7748 BSP 18396 SGB 5744.5 R23 .0037 R13 .9770 LSA 3956.4 MSA 172.7 SSA 13.8  
 BDE 2.4168 BRA 1.3597 BC3 4.5496 FSP -1697 SG1 5734.3 SG2 343.0 THA 6.23 EL1 3686.5 EL2 60.6 ALF 9.91

LAUNCH DATE JAN 10 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 530.530

RL 147.12 LAL .00 LOL 109.58 VL 27.384 GAL 3.91 AZL 86.37 HCA 246.96 SMA 125.88 ECC .18162 INC 3.6317 V1 30.284  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.242 GAP 6.96 AZP 91.42 TAL 161.86 TAP 48.83 RCA 103.01 APO 148.74 V2 34.835  
 RC 139.923 GL 26.20 GP -14.23 ZAL 62.58 ZAP 152.27 ETS 333.14 ZAE 129.08 ETE 190.83 ZAC 117.36 ETC 173.12 CLP-155.95

PLANETOCENTRIC CONIC

C3 15.359 VHL 3.919 DLA 42.87 RAL 38.79 RAD 6567.6 VEL 11.694 PTH 2.06 VHP 5.291 DPA -7.59 RAP 25.84 ECC 1.2528  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.35 20 58 29 4147.80 -31.04 186.25 268.40 58.79 22 7 37 3547.8 -34.92 178.32  
 123.65 4 17 19 2802.59 -31.03 82.84 268.39 58.78 5 4 1 2202.6 -34.91 74.91  
 56.35 20 58 29 4147.80 -31.04 186.25 268.40 58.79 22 7 37 3547.8 -34.92 178.32  
 123.65 4 17 19 2802.59 -31.03 82.84 268.39 58.78 5 4 1 2202.6 -34.91 74.91  
 56.35 20 58 29 4147.80 -31.04 186.25 268.40 58.79 22 7 37 3547.8 -34.92 178.32  
 123.65 4 17 19 2802.59 -31.03 82.84 268.39 58.78 5 4 1 2202.6 -34.91 74.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3485 TRA 1.5395 TC3-4.4877 BAU .9219 SGT 5796.1 SGR 679.4 SG3 460.4 ST 3556.6 SR 613.1 SS 1358.9  
 RDE .4153 RRA .1419 RC3 -.1444 FAU .05986 RRT .8513 RRF .8352 RTF .9770 CRT .9921 CRS -.9697 CST -.9925  
 FDE 1.8839 FRA 1.8633 FC3-3.3744 BSP 18657 SGB 5835.7 R23 .0007 R13 .9770 LSA 3852.3 MSA 176.4 SSA 14.2  
 BDE 2.3849 BRA 1.5461 BC3 4.4900 FSP -1594 SG1 5824.9 SG2 354.7 THA 5.72 EL1 3608.2 EL2 75.7 ALF 9.71

LAUNCH DATE JAN 10 1969 FLIGHT TIME 190.00 ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC DISTANCE 536.404

RL 147.12 LAL .00 LOL 109.58 VL 27.359 GAL 4.24 AZL 86.49 HCA 250.14 SMA 125.71 ECC .18519 INC 3.5129 V1 30.284  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.233 GAP 7.33 AZP 91.19 TAL 160.73 TAP 50.87 RCA 102.43 APO 148.99 V2 34.865  
 RC 142.207 GL 24.76 GP -13.41 ZAL 60.62 ZAP 133.98 ETS 332.84 ZAE 128.69 ETE 189.98 ZAC 118.80 ETC 173.02 CLP-157.49

PLANETOCENTRIC CONIC

C3 15.938 VHL 3.992 DLA 42.06 RAL 41.55 RAD 6567.6 VEL 11.718 PTH 2.06 VHP 5.484 DPA -6.19 RAP 26.96 ECC 1.2623  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.49 21 14 13 4143.32 -30.22 185.28 271.36 59.22 22 23 17 3543.3 -34.05 177.40  
 122.51 4 23 35 2823.82 -30.21 84.14 271.35 59.21 5 10 39 2223.8 -34.04 76.26  
 57.49 21 14 13 4143.32 -30.22 185.28 271.36 59.22 22 23 17 3543.3 -34.05 177.40  
 122.51 4 23 35 2823.82 -30.21 84.14 271.35 59.21 5 10 39 2223.8 -34.04 76.26  
 57.49 21 14 13 4143.32 -30.22 185.28 271.36 59.22 22 23 17 3543.3 -34.05 177.40  
 122.51 4 23 35 2823.82 -30.21 84.14 271.35 59.21 5 10 39 2223.8 -34.04 76.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.3100 TRA 1.7336 TC3-4.4061 BAU .9392 SGT 5882.1 SGR 654.7 SG3 433.8 ST 3465.9 SR 592.6 SS 1273.5  
 RDE .4089 RRA .1425 RC3 -.1147 FAU .05534 RRT .8286 RRF .8117 RTF .9771 CRT .9878 CRS -.9603 CST -.9919  
 FDE 1.7082 FRA 1.8965 FC3-3.0059 BSP 18992 SGB 5918.4 R23 -.0018 R13 .9771 LSA 3735.3 MSA 181.1 SSA 14.5  
 BDE 2.3459 BRA 1.7395 BC3 4.4076 FSP -1508 SG1 5907.1 SG2 365.0 THA 5.29 EL1 3515.0 EL2 91.2 ALF 9.59

LAUNCH DATE JAN 10 1969 FLIGHT TIME 192.00 ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC DISTANCE 542.252

RL 147.12 LAL .00 LOL 109.58 VL 27.333 GAL 4.58 AZL 86.60 HCA 253.31 SMA 125.54 ECC .18903 INC 3.3987 V1 30.284  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.223 GAP 7.71 AZP 90.98 TAL 159.58 TAP 52.89 RCA 101.81 APO 149.27 V2 34.875  
 RC 144.478 GL 23.33 GP -12.67 ZAL 58.66 ZAP 155.59 ETS 332.44 ZAE 128.32 ETE 189.24 ZAC 120.32 ETC 172.92 CLP-158.96

PLANETOCENTRIC CONIC

C3 16.633 VHL 4.078 DLA 41.24 RAL 44.25 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 5.686 DPA -4.85 RAP 28.19 ECC 1.2737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.67 21 30 3 4139.14 -29.35 184.33 274.36 59.62 22 39 2 3539.1 -33.15 176.50  
 121.33 4 29 18 2847.47 -29.34 85.60 274.35 59.61 5 16 45 2247.5 -33.13 77.78  
 58.67 21 30 3 4139.14 -29.35 184.33 274.36 59.62 22 39 2 3539.1 -33.15 176.50  
 121.33 4 29 18 2847.47 -29.34 85.60 274.35 59.61 5 16 45 2247.5 -33.13 77.78  
 58.67 21 30 3 4139.14 -29.35 184.33 274.36 59.62 22 39 2 3539.1 -33.15 176.50  
 121.33 4 29 18 2847.47 -29.34 85.60 274.35 59.61 5 16 45 2247.5 -33.13 77.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.2677 TRA 1.9391 TC3-4.2916 BAU .9545 SGT 5960.5 SGR 634.9 SG3 408.6 ST 3367.8 SR 575.7 SS 1193.0  
 RDE .4057 RRA .1443 RC3 -.0905 FAU .05099 RRT .8063 RRF .7892 RTF .9771 CRT .9821 CRS -.9490 CST -.9913  
 FDE 1.5477 FRA 1.9280 FC3-2.6538 BSP 19295 SGB 5994.2 R23 -.0029 R13 .9771 LSA 3614.0 MSA 187.2 SSA 14.7  
 BDE 2.3037 BRA 1.9445 BC3 4.2925 FSP -1424 SG1 5982.5 SG2 374.2 THA 4.93 EL1 3414.9 EL2 107.1 ALF 9.54

LAUNCH DATE JAN 10 1969 FLIGHT TIME 194.00 ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC DISTANCE 548.071

RL 147.12 LAL .00 LOL 109.58 VL 27.306 GAL 4.95 AZL 86.71 HCA 256.49 SMA 125.37 ECC .19315 INC 3.2881 V1 30.284  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.214 GAP 8.10 AZP 90.77 TAL 158.42 TAP 54.91 RCA 101.15 APO 149.58 V2 34.885  
 RC 146.734 GL 21.93 GP -12.01 ZAL 56.70 ZAP 157.12 ETS 331.95 ZAE 127.97 ETE 188.60 ZAC 121.91 ETC 172.81 CLP-160.38

PLANETOCENTRIC CONIC

C3 17.454 VHL 4.178 DLA 40.40 RAL 46.88 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 5.899 DPA -3.56 RAP 29.51 ECC 1.2873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.89 21 45 57 4135.23 -28.44 183.39 277.38 60.00 22 54 52 3535.2 -32.19 175.61  
 120.11 4 34 25 2873.60 -28.43 87.24 277.37 59.99 5 22 18 2273.6 -32.18 79.47  
 59.89 21 45 57 4135.23 -28.44 183.39 277.38 60.00 22 54 52 3535.2 -32.19 175.61  
 120.11 4 34 25 2873.60 -28.43 87.24 277.37 59.99 5 22 18 2273.6 -32.18 79.47  
 59.89 21 45 57 4135.23 -28.44 183.39 277.38 60.00 22 54 52 3535.2 -32.19 175.61  
 120.11 4 34 25 2873.60 -28.43 87.24 277.37 59.99 5 22 18 2273.6 -32.18 79.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.2218 TRA 2.1567 TC3-4.1502 BAU .9686 SGT 6032.9 SGR 619.0 SG3 384.8 ST 3263.9 SR 561.7 SS 1117.9  
 RDE .4054 RRA .1474 RC3 -.0713 FAU .04690 RRT .7852 RRF .7683 RTF .9771 CRT .9748 CRS -.9357 CST -.9907  
 FDE 1.4014 FRA 1.9525 FC3-2.3262 BSP 19578 SGB 6064.5 R23 -.0033 R13 .9771 LSA 3490.0 MSA 194.5 SSA 14.8  
 BDE 2.2585 BRA 2.1617 BC3 4.1508 FSP -1346 SG1 6052.5 SG2 382.1 THA 4.62 EL1 3309.6 EL2 123.5 ALF 9.54

LAUNCH DATE JAN 10 1969 FLIGHT TIME 196.00 ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC DISTANCE 553.859

RL 147.12 LAL .00 LOL 109.58 VL 27.280 GAL 5.34 AZL 86.82 HCA 259.67 SMA 125.20 ECC .19759 INC 3.1805 V1 30.284  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.205 GAP 8.50 AZP 90.57 TAL 157.24 TAP 56.91 RCA 100.46 APO 149.94 V2 34.897  
 RC 148.977 GL 20.56 GP -11.41 ZAL 54.75 ZAP 158.58 ETS 331.34 ZAE 127.65 ETE 188.05 ZAC 123.56 ETC 172.69 CLP-161.74

PLANETOCENTRIC CONIC

C3 18.414 VHL 4.291 DLA 39.55 RAL 49.44 RAD 6567.7 VEL 11.824 PTH 2.09 VHP 6.123 DPA -2.31 RAP 30.92 ECC 1.3030  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.14 22 1 56 4131.42 -27.48 182.44 280.43 60.35 23 10 47 3531.4 -31.20 174.73  
 118.86 4 38 52 2902.35 -27.47 89.05 280.42 60.34 5 27 14 2302.3 -31.19 81.34  
 61.14 22 1 56 4131.42 -27.48 182.44 280.43 60.35 23 10 47 3531.4 -31.20 174.73  
 118.86 4 38 52 2902.35 -27.47 89.05 280.42 60.34 5 27 14 2302.3 -31.19 81.34  
 61.14 22 1 56 4131.42 -27.48 182.44 280.43 60.35 23 10 47 3531.4 -31.20 174.73  
 118.86 4 38 52 2902.35 -27.47 89.05 280.42 60.34 5 27 14 2302.3 -31.19 81.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

TDE 2.1758 TRA 2.3900 TC3-3.9774 BAU .9792 SGT 6101.0 SGR 606.6 SG3 362.7 ST 3161.0 SR 550.1 SS 1050.2  
 RDE .4077 RRA .1521 RC3 -.0559 FAU .04288 RRT .7660 RRF .7498 RTF .9770 CRT .9660 CRS -.9205 CST -.9901  
 FDE 1.2710 FRA 1.9797 FC3-2.0158 BSP 19757 SGB 6131.1 R23 -.0026 R13 .9770 LSA 3369.9 MSA 203.0 SSA 14.8  
 BDE 2.2137 BRA 2.3949 BC3 3.9778 FSP -1265 SG1 6118.8 SG2 388.8 THA 4.37 EL1 3205.5 EL2 140.2 ALF 9.56

LAUNCH DATE JAN 10 1969 FLIGHT TIME 198.00 ARRIVAL DATE JUL 27 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.253 GAL 5.75 AZL 86.93 HCA 262.85 SMA 125.02 ECC .20238 INC 3.0749 V1 30.284  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.196 GAP 8.92 AZP 90.38 TAL 156.06 TAP 58.91 RCA 99.72 APO 150.33 V2 34.908  
 RC 151.204 GL 19.22 GP -10.87 ZAL 52.83 ZAP 159.96 ETS 330.60 ZAE 127.35 ETE 187.57 ZAC 125.28 ETC 172.55 CLP-163.06

Distance 559.612

Planetary Data: C3 19.528 VHL 4.419 DLA 38.70 RAL 51.93 RAD 6567.8 VEL 11.871 PTH 2.11 VHP 6.359 DPA -1.11 RAP 32.39 ECC 1.3214

Planetary Corrections: LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.44 22 18 0 4127.60 -26.48 181.49 283.49 60.69 23 26 48 3527.6 -30.17 173.84  
 117.56 4 42 35 2933.85 -26.47 91.05 283.48 60.67 5 31 28 2333.9 -30.16 83.40  
 62.44 22 18 0 4127.60 -26.48 181.49 283.49 60.69 23 26 48 3527.6 -30.17 173.84  
 117.56 4 42 35 2933.85 -26.47 91.05 283.48 60.67 5 31 28 2333.9 -30.16 83.40  
 62.44 22 18 0 4127.60 -26.48 181.49 283.49 60.69 23 26 48 3527.6 -30.17 173.84  
 117.56 4 42 35 2933.85 -26.47 91.05 283.48 60.67 5 31 28 2333.9 -30.16 83.40

Differential Corrections: TDE 2.1226 TRA 2.6325 TC3-3.7936 BAU .9905 SGT 6159.6 SGR 595.7 SG3 341.6  
 RDE .4115 RRA .1577 RC3 -.0448 FAU .03926 RRT .7486 RRF .7328 RTF .9769 CRT .9553 CRS -.9028 CST -.9894  
 FDE 1.1484 FRA 2.0012 FC3-1.7407 BSP 20017 SGB 6188.4 R23 -.0022 R13 .9769 LSA 3243.6 MSA 212.7 SSA 14.7  
 BDE 2.1621 BRA 2.6372 BC3 3.7939 FSP -1196 SGI 6175.8 SG2 393.9 THA 4.16 EL1 3093.8 EL2 157.2 ALF 9.61

Mid-Course Execution Accuracy: SGT 6159.6 SGR 595.7 SG3 341.6  
 RRT .7486 RRF .7328 RTF .9769  
 SGB 6188.4 R23 -.0022 R13 .9769  
 SGI 6175.8 SG2 393.9 THA 4.16

Orbit Determination Accuracy: ST 3050.5 SR 539.3 SS 984.9  
 CRT .9553 CRS -.9028 CST -.9894  
 LSA 3243.6 MSA 212.7 SSA 14.7  
 EL1 3093.8 EL2 157.2 ALF 9.61

LAUNCH DATE JAN 10 1969 FLIGHT TIME 200.00 ARRIVAL DATE JUL 29 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.226 GAL 6.19 AZL 87.03 HCA 266.03 SMA 124.85 ECC .20753 INC 2.9707 V1 30.284  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.187 GAP 9.35 AZP 90.21 TAL 154.87 TAP 60.90 RCA 98.94 APO 150.76 V2 34.920  
 RC 153.416 GL 17.91 GP -10.39 ZAL 50.94 ZAP 161.28 ETS 329.70 ZAE 127.08 ETE 187.15 ZAC 127.04 ETC 172.39 CLP-164.34

Distance 565.326

Planetary Data: C3 20.814 VHL 4.562 DLA 37.83 RAL 54.32 RAD 6567.8 VEL 11.925 PTH 2.12 VHP 6.608 DPA .05 RAP 33.94 ECC 1.3425

Planetary Corrections: LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.79 22 34 12 4123.62 -25.44 180.51 286.56 61.00 23 42 56 3523.6 -29.10 172.92  
 116.21 4 45 30 2968.25 -25.43 93.24 286.55 60.99 5 34 58 2368.2 -29.09 85.65  
 63.79 22 34 12 4123.62 -25.44 180.51 286.56 61.00 23 42 56 3523.6 -29.10 172.92  
 116.21 4 45 30 2968.25 -25.43 93.24 286.55 60.99 5 34 58 2368.2 -29.09 85.65  
 63.79 22 34 12 4123.62 -25.44 180.51 286.56 61.00 23 42 56 3523.6 -29.10 172.92  
 116.21 4 45 30 2968.25 -25.43 93.24 286.55 60.99 5 34 58 2368.2 -29.09 85.65

Differential Corrections: TDE 2.0672 TRA 2.8897 TC3-3.5923 BAU .9997 SGT 6212.6 SGR 586.4 SG3 322.0  
 RDE .4169 RRA .1648 RC3 -.0363 FAU .03584 RRT .7334 RRF .7183 RTF .9768 CRT .9426 CRS -.8829 CST -.9889  
 FDE 1.0375 FRA 2.0223 FC3-1.4907 BSP 20246 SGB 6240.2 R23 -.0015 R13 .9769 LSA 3120.4 MSA 223.3 SSA 14.6  
 BDE 2.1088 BRA 2.8944 BC3 3.5925 FSP -1131 SGI 6227.5 SG2 397.7 THA 3.98 EL1 2983.2 EL2 174.3 ALF 9.66

Mid-Course Execution Accuracy: SGT 6212.6 SGR 586.4 SG3 322.0  
 RRT .7334 RRF .7183 RTF .9768  
 SGB 6240.2 R23 -.0015 R13 .9769  
 SGI 6227.5 SG2 397.7 THA 3.98

Orbit Determination Accuracy: ST 2941.0 SR 529.5 SS 925.9  
 CRT .9426 CRS -.8829 CST -.9889  
 LSA 3120.4 MSA 223.3 SSA 14.6  
 EL1 2983.2 EL2 174.3 ALF 9.66

LAUNCH DATE JAN 10 1969 FLIGHT TIME 202.00 ARRIVAL DATE JUL 31 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.199 GAL 6.66 AZL 87.13 HCA 269.22 SMA 124.68 ECC .21309 INC 2.8672 V1 30.284  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.179 GAP 9.81 AZP 90.04 TAL 153.68 TAP 62.90 RCA 98.11 APO 151.24 V2 34.932  
 RC 155.612 GL 16.63 GP -9.95 ZAL 49.08 ZAP 162.55 ETS 328.62 ZAE 126.81 ETE 186.78 ZAC 128.84 ETC 172.21 CLP-165.59

Distance 570.998

Planetary Data: C3 22.296 VHL 4.722 DLA 36.96 RAL 56.63 RAD 6567.9 VEL 11.986 PTH 2.14 VHP 6.870 DPA 1.18 RAP 35.55 ECC 1.3669

Planetary Corrections: LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.18 22 50 33 4119.32 -24.37 179.51 289.64 61.30 23 59 13 3519.3 -28.00 171.98  
 114.82 4 47 35 3005.70 -24.36 95.64 289.63 61.29 5 37 41 2405.7 -27.99 88.11  
 65.18 22 50 33 4119.32 -24.37 179.51 289.64 61.30 23 59 13 3519.3 -28.00 171.98  
 114.82 4 47 35 3005.70 -24.36 95.64 289.63 61.29 5 37 41 2405.7 -27.99 88.11  
 65.18 22 50 33 4119.32 -24.37 179.51 289.64 61.30 23 59 13 3519.3 -28.00 171.98  
 114.82 4 47 35 3005.70 -24.36 95.64 289.63 61.29 5 37 41 2405.7 -27.99 88.11

Differential Corrections: TDE 2.0089 TRA 3.1616 TC3-3.3788 BAU 1.0072 SGT 6259.1 SGR 578.2 SG3 303.5  
 RDE .4236 RRA .1732 RC3 -.0301 FAU .03262 RRT .7204 RRF .7061 RTF .9768 CRT .9277 CRS -.8607 CST -.9884  
 FDE .9364 FRA 2.0423 FC3-1.2666 BSP 20469 SGB 6285.8 R23 -.0007 R13 .9768 LSA 3000.3 MSA 234.5 SSA 14.3  
 BDE 2.0530 BRA 3.1664 BC3 3.3790 FSP -1070 SGI 6273.0 SG2 400.1 THA 3.82 EL1 2874.0 EL2 191.4 ALF 9.71

Mid-Course Execution Accuracy: SGT 6259.1 SGR 578.2 SG3 303.5  
 RRT .7204 RRF .7061 RTF .9768  
 SGB 6285.8 R23 -.0007 R13 .9768  
 SGI 6273.0 SG2 400.1 THA 3.82

Orbit Determination Accuracy: ST 2833.0 SR 520.1 SS 872.0  
 CRT .9277 CRS -.8607 CST -.9884  
 LSA 3000.3 MSA 234.5 SSA 14.3  
 EL1 2874.0 EL2 191.4 ALF 9.71

LAUNCH DATE JAN 10 1969 FLIGHT TIME 204.00 ARRIVAL DATE AUG 2 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.171 GAL 7.16 AZL 87.24 HCA 272.40 SMA 124.50 ECC .21910 INC 2.7638 V1 30.284  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.170 GAP 10.29 AZP 89.88 TAL 152.49 TAP 64.90 RCA 97.22 APO 151.78 V2 34.945  
 RC 157.792 GL 15.39 GP -9.55 ZAL 47.27 ZAP 163.76 ETS 327.33 ZAE 126.57 ETE 186.46 ZAC 130.68 ETC 172.00 CLP-166.80

Distance 576.622

Planetary Data: C3 23.998 VHL 4.899 DLA 36.09 RAL 58.85 RAD 6568.0 VEL 12.057 PTH 2.16 VHP 7.149 DPA 2.27 RAP 37.21 ECC 1.3949

Planetary Corrections: LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.62 23 7 5 4114.54 -23.27 178.47 292.72 61.59 24 15 39 3514.5 -26.87 171.00  
 113.38 4 48 45 3046.35 -23.26 98.26 292.72 61.58 5 39 32 2446.3 -26.86 90.79  
 66.62 23 7 5 4114.54 -23.27 178.47 292.72 61.59 24 15 39 3514.5 -26.87 171.00  
 113.38 4 48 45 3046.35 -23.26 98.26 292.72 61.58 5 39 32 2446.3 -26.86 90.79  
 66.62 23 7 5 4114.54 -23.27 178.47 292.72 61.59 24 15 39 3514.5 -26.87 171.00  
 113.38 4 48 45 3046.35 -23.26 98.26 292.72 61.58 5 39 32 2446.3 -26.86 90.79

Differential Corrections: TDE 1.9490 TRA 3.4504 TC3-3.1548 BAU 1.0122 SGT 6300.2 SGR 570.6 SG3 286.3  
 RDE .4315 RRA .1832 RC3 -.0254 FAU .02956 RRT .7097 RRF .6961 RTF .9767 CRT .9105 CRS -.8362 CST -.9880  
 FDE .8449 FRA 2.0620 FC3-1.0662 BSP 20658 SGB 6326.0 R23 .0001 R13 .9767 LSA 2885.9 MSA 246.2 SSA 14.1  
 BDE 1.9962 BRA 3.4553 BC3 3.1550 FSP -1012 SGI 6313.3 SG2 401.1 THA 3.69 EL1 2769.0 EL2 208.2 ALF 9.73

Mid-Course Execution Accuracy: SGT 6300.2 SGR 570.6 SG3 286.3  
 RRT .7097 RRF .6961 RTF .9767  
 SGB 6326.0 R23 .0001 R13 .9767  
 SGI 6313.3 SG2 401.1 THA 3.69

Orbit Determination Accuracy: ST 2729.4 SR 510.9 SS 824.0  
 CRT .9105 CRS -.8362 CST -.9880  
 LSA 2885.9 MSA 246.2 SSA 14.1  
 EL1 2769.0 EL2 208.2 ALF 9.73

LAUNCH DATE JAN 10 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.144 GAL 7.69 AZL 87.34 HCA 275.59 SMA 124.33 ECC .22560 INC 2.6599 V1 30.284  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.162 GAP 10.79 AZP 89.74 TAL 151.31 TAP 66.90 RCA 96.28 APO 152.38 V2 34.957  
 RC 159.953 GL 14.18 GP -9.18 ZAL 45.51 ZAP 164.92 ETS 325.80 ZAE 126.33 ETE 186.18 ZAC 132.56 ETC 171.76 CLP-167.99

DISTANCE 582.192

PLANETOCENTRIC CONIC  
 C3 25.953 VHL 5.094 DLA 35.23 RAL 60.98 RAD 6568.0 VEL 12.138 PTH 2.18 VHP 7.444 DPA 3.32 RAP 38.92 ECC 1.4271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.11 23 23 53 4108.89 -22.14 177.37 295.81 61.87 24 32 22 3508.9 -25.72 169.95  
 111.89 4 48 54 3090.57 -22.13 101.12 295.80 61.86 5 40 25 2490.6 -25.71 93.71  
 68.11 23 23 53 4108.89 -22.14 177.37 295.81 61.87 24 32 22 3508.9 -25.72 169.95  
 111.89 4 48 54 3090.57 -22.13 101.12 295.80 61.86 5 40 25 2490.6 -25.71 93.71  
 68.11 23 23 53 4108.89 -22.14 177.37 295.81 61.87 24 32 22 3508.9 -25.72 169.95  
 111.89 4 48 54 3090.57 -22.13 101.12 295.80 61.86 5 40 25 2490.6 -25.71 93.71

DIFFERENTIAL CORRECTIONS  
 TDE 1.8902 TRA 3.7598 TC3-2.9203 BAU 1.0133 SGT 6337.9 SGR 563.7 SCS 270.5 ST 2634.2 SR 501.8 SS 782.7  
 RDE .4404 RRA 1.948 RC3 -.0214 FAU .02656 RRT .7016 RRF .6888 RTF .9767 CRT .8912 CRS -.8104 CST -.9878  
 FDE .7639 FRA 2.0857 FC3 -.8859 BSP 20756 SGB 6363.0 R23 .0012 R13 .9767 LSA 2781.5 MSA 257.8 SSA 13.8  
 BDE 1.9409 BRA 3.7648 BC3 2.9204 FSP -.953 SGI 6350.3 SGI 400.9 THA 3.58 EL1 2672.2 EL2 224.4 ALF 9.70

LAUNCH DATE JAN 10 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.116 GAL 8.26 AZL 87.45 HCA 278.79 SMA 124.16 ECC .23265 INC 2.5547 V1 30.284  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.154 GAP 11.33 AZP 89.61 TAL 150.13 TAP 68.91 RCA 95.27 APO 153.04 V2 34.970  
 RC 162.097 GL 13.02 GP -8.85 ZAL 43.79 ZAP 166.04 ETS 323.96 ZAE 126.10 ETE 185.93 ZAC 134.45 ETC 171.47 CLP-169.16

DISTANCE 587.699

PLANETOCENTRIC CONIC  
 C3 28.199 VHL 5.310 DLA 34.37 RAL 63.01 RAD 6568.1 VEL 12.230 PTH 2.20 VHP 7.758 DPA 4.35 RAP 40.68 ECC 1.4641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.66 23 41 0 4102.27 -20.99 176.19 298.89 62.15 24 49 22 3502.3 -24.55 168.83  
 110.34 4 47 59 3138.42 -20.98 104.23 298.88 62.14 5 40 18 2538.4 -24.54 96.88  
 69.66 23 41 0 4102.27 -20.99 176.19 298.89 62.15 24 49 22 3502.3 -24.55 168.83  
 110.34 4 47 59 3138.42 -20.98 104.23 298.88 62.14 5 40 18 2538.4 -24.54 96.88  
 69.66 23 41 0 4102.27 -20.99 176.19 298.89 62.15 24 49 22 3502.3 -24.55 168.83  
 110.34 4 47 59 3138.42 -20.98 104.23 298.88 62.14 5 40 18 2538.4 -24.54 96.88

DIFFERENTIAL CORRECTIONS  
 TDE 1.8260 TRA 4.0842 TC3-2.6892 BAU 1.0138 SGT 6367.0 SGR 556.4 SCS 255.4 ST 2540.5 SR 492.1 SS 744.6  
 RDE .4498 RRA 2.076 RC3 -.0189 FAU .02385 RRT .6950 RRF .6828 RTF .9768 CRT .8692 CRS -.7821 CST -.9877  
 FDE .6880 FRA 2.1067 FC3 -.7322 BSP 20931 SGB 6391.3 R23 .0018 R13 .9768 LSA 2679.2 MSA 269.2 SSA 13.5  
 BDE 1.8806 BRA 4.0895 BC3 2.6893 FSP -.903 SGI 6378.8 SGI 399.3 THA 3.49 EL1 2576.6 EL2 239.9 ALF 9.64

LAUNCH DATE JAN 10 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.089 GAL 8.87 AZL 87.55 HCA 281.98 SMA 123.98 ECC .24030 INC 2.4476 V1 30.284  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.147 GAP 11.89 AZP 89.49 TAL 148.96 TAP 70.94 RCA 94.19 APO 153.78 V2 34.983  
 RC 164.221 GL 11.89 GP -8.55 ZAL 42.14 ZAP 167.10 ETS 321.76 ZAE 125.88 ETE 185.71 ZAC 136.37 ETC 171.14 CLP-170.31

DISTANCE 593.134

PLANETOCENTRIC CONIC  
 C3 30.779 VHL 5.548 DLA 33.51 RAL 64.94 RAD 6568.2 VEL 12.335 PTH 2.22 VHP 8.094 DPA 5.33 RAP 42.47 ECC 1.5065  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.28 0 2 29 4094.09 -19.83 174.90 301.97 62.41 1 10 43 3494.1 -23.36 167.59  
 108.72 4 45 51 3190.44 -19.81 107.63 301.96 62.40 5 39 2 2590.4 -23.35 100.33  
 71.28 0 2 29 4094.09 -19.83 174.90 301.97 62.41 1 10 43 3494.1 -23.36 167.59  
 108.72 4 45 51 3190.44 -19.81 107.63 301.96 62.40 5 39 2 2590.4 -23.35 100.33  
 110.00 5 45 1 3009.28 -24.92 96.23 304.64 65.80 6 35 11 2409.3 -27.96 88.39  
 110.00 4 2 29 3323.26 -14.88 115.04 299.05 58.87 4 57 53 2723.3 -18.90 108.22

DIFFERENTIAL CORRECTIONS  
 TDE 1.7610 TRA 4.4297 TC3-2.4576 BAU 1.0113 SGT 6391.2 SGR 548.9 SCS 241.4 ST 2454.3 SR 481.9 SS 711.8  
 RDE .4597 RRA .2218 RC3 -.0168 FAU .02127 RRT .6903 RRF .6787 RTF .9769 CRT .8448 CRS -.7524 CST -.9879  
 FDE .8196 FRA 2.1295 FC3 -.5982 BSP 21073 SGB 6414.7 R23 .0023 R13 .9769 LSA 2585.3 MSA 279.9 SSA 13.2  
 BDE 1.8200 BRA 4.4352 BC3 2.4577 FSP -.855 SGI 6402.5 SGI 396.4 THA 3.41 EL1 2488.2 EL2 254.3 ALF 9.52

LAUNCH DATE JAN 10 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 109.58 VL 27.062 GAL 9.52 AZL 87.66 HCA 285.18 SMA 123.81 ECC .24862 INC 2.3379 V1 30.284  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.139 GAP 12.50 AZP 89.39 TAL 147.82 TAP 72.99 RCA 93.03 APO 154.60 V2 34.996  
 RC 166.326 GL 10.80 GP -8.28 ZAL 40.55 ZAP 168.12 ETS 319.12 ZAE 125.66 ETE 185.51 ZAC 138.31 ETC 170.76 CLP-171.45

DISTANCE 598.487

PLANETOCENTRIC CONIC  
 C3 33.750 VHL 5.809 DLA 32.67 RAL 66.77 RAD 6568.3 VEL 12.455 PTH 2.25 VHP 8.453 DPA 6.28 RAP 44.30 ECC 1.5554  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.99 0 20 40 4083.77 -18.65 173.45 305.04 62.68 1 28 44 3483.8 -22.16 166.20  
 107.01 4 42 19 3247.16 -18.63 111.35 305.03 62.67 5 36 26 2647.2 -22.14 104.10  
 72.99 0 20 40 4083.77 -18.65 173.45 305.04 62.68 1 28 44 3483.8 -22.16 166.20  
 107.01 4 42 19 3247.16 -18.63 111.35 305.03 62.67 5 36 26 2647.2 -22.14 104.10  
 110.00 6 17 55 2952.61 -26.45 92.54 308.95 67.51 7 7 8 2352.6 -29.25 84.48  
 110.00 3 44 14 3426.31 -11.18 120.73 300.60 57.48 4 41 21 2826.3 -15.39 114.15

DIFFERENTIAL CORRECTIONS  
 TDE 1.6951 TRA 4.7978 TC3-2.2279 BAU 1.0053 SGT 6410.1 SGR 541.0 SCS 228.4 ST 2375.8 SR 471.1 SS 683.7  
 RDE .4701 RRA .2374 RC3 -.0150 FAU .01881 RRT .6874 RRF .6762 RTF .9772 CRT .8183 CRS -.7218 CST -.9883  
 FDE .5579 FRA 2.1542 FC3 -.4824 BSP 21199 SGB 6432.9 R23 .0027 R13 .9772 LSA 2499.9 MSA 289.6 SSA 12.8  
 BDE 1.7591 BRA 4.8036 BC3 2.2279 FSP -.809 SGI 6420.9 SGI 392.2 THA 3.33 EL1 2407.2 EL2 267.2 ALF 9.33

LAUNCH DATE JAN 10 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 12 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.034 GAL 10.22 AZL 87.78 HCA 288.38 SMA 123.64 ECC .25770 INC 2.2247 V1 30.284  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.132 GAP 13.14 AZP 89.30 TAL 146.69 TAP 75.07 RCA 91.78 APO 155.51 V2 35.010  
 RC 168.410 GL 9.75 GP -8.03 ZAL 39.03 ZAP 169.09 ETS 315.93 ZAE 125.44 ETE 185.34 ZAC 140.25 ETC 170.33 CLP-172.59

Distance 603.745

Planetocentric Conic: C3 37.177 VHL 6.097 DLA 31.83 RAL 68.51 RAD 6568.4 VEL 12.591 PTH 2.28 VHP 8.840 DPA 7.20 RAP 46.16 ECC 1.6118  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.81 0 39 43 4070.48 -17.46 171.80 308.10 62.95 1 47 34 3470.5 -20.94 164.59  
 105.19 4 37 8 3309.30 -17.44 115.45 308.09 62.94 5 32 18 2709.3 -20.93 108.24  
 74.81 0 39 43 4070.48 -17.46 171.80 308.10 62.95 1 47 34 3470.5 -20.94 164.59  
 105.19 4 37 8 3309.30 -17.44 115.45 308.09 62.94 5 32 18 2709.3 -20.93 108.24  
 110.00 6 43 27 2917.86 -27.33 90.22 312.89 68.62 7 32 5 2317.9 -29.98 82.04  
 110.00 3 32 35 3509.92 -8.08 125.22 302.52 56.67 4 31 5 2909.9 -12.41 118.80

Differential Corrections: TDE 1.6318 TRA 5.1939 TC3-1.9987 BAU .9934 SGT 6426.0 SGR 532.8 SG3 216.3 ST 2308.0 SR 459.8 SS 660.9  
 RDE .4810 RRA .2547 RC3 -.0130 FAU .01637 RRT .6863 RRF .6757 RTF .9776 CRT .7903 CRS -.6916 CST -.9889  
 FDE .5038 FRA 2.1828 FC3 -.3813 BSP 21219 SGB 6448.1 R23 .0032 R13 .9776 LSA 2426.2 MSA 297.6 SSA 12.5  
 BDE 1.7012 BRA 5.2001 BC3 1.9988 FSP -763 SG1 6436.5 SG2 386.9 THA 3.27 EL1 2336.9 EL2 278.3 ALF 9.08

MID-COURSE EXECUTION ACCURACY: SGT 6426.0 SGR 532.8 SG3 216.3  
 RRT .6863 RRF .6757 RTF .9776  
 SGB 6448.1 R23 .0032 R13 .9776  
 SG1 6436.5 SG2 386.9 THA 3.27

ORBIT DETERMINATION ACCURACY: ST 2308.0 SR 459.8 SS 660.9  
 CRT .7903 CRS -.6916 CST -.9889  
 LSA 2426.2 MSA 297.6 SSA 12.5  
 EL1 2336.9 EL2 278.3 ALF 9.08

LAUNCH DATE JAN 10 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 14 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 27.007 GAL 10.98 AZL 87.89 HCA 291.58 SMA 123.48 ECC .26762 INC 2.1072 V1 30.284  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.125 GAP 13.84 AZP 89.22 TAL 145.60 TAP 77.17 RCA 90.43 APO 156.52 V2 35.023  
 RC 170.474 GL 8.74 GP -7.80 ZAL 37.58 ZAP 170.00 ETS 312.06 ZAE 125.21 ETE 185.18 ZAC 142.20 ETC 169.82 CLP-173.72

Distance 608.889

Planetocentric Conic: C3 41.141 VHL 6.414 DLA 31.01 RAL 70.15 RAD 6568.6 VEL 12.748 PTH 2.32 VHP 9.257 DPA 8.09 RAP 48.04 ECC 1.6771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.79 1 0 3 4052.75 -16.26 169.82 311.15 63.22 2 7 35 3452.7 -19.72 162.66  
 103.21 4 29 54 3378.21 -16.25 120.02 311.14 63.21 5 26 12 2778.2 -19.71 112.86  
 76.79 1 0 3 4052.75 -16.26 169.82 311.15 63.22 2 7 35 3452.7 -19.72 162.66  
 103.21 4 29 54 3378.21 -16.25 120.02 311.14 63.21 5 26 12 2778.2 -19.71 112.86  
 110.00 7 5 10 2894.27 -27.90 88.63 316.65 69.40 7 53 24 2294.3 -30.44 80.36  
 110.00 3 23 57 3584.69 -5.27 129.18 304.62 56.18 4 23 42 2984.7 -9.67 122.86

Differential Corrections: TDE 1.5637 TRA 5.6131 TC3-1.7809 BAU .9796 SGT 6434.1 SGR 523.6 SG3 204.9 ST 2244.2 SR 447.5 SS 641.0  
 RDE .4918 RRA .2729 RC3 -.0114 FAU .01415 RRT .6861 RRF .6758 RTF .9781 CRT .7602 CRS -.6602 CST -.9897  
 FDE .4530 FRA 2.2123 FC3 -.2978 BSP 21335 SGB 6455.4 R23 .0032 R13 .9781 LSA 2356.9 MSA 304.2 SSA 12.1  
 BDE 1.6392 BRA 5.6198 BC3 1.7810 FSP -723 SG1 6444.2 SG2 380.3 THA 3.21 EL1 2270.2 EL2 287.4 ALF 8.76

MID-COURSE EXECUTION ACCURACY: SGT 6434.1 SGR 523.6 SG3 204.9  
 RRT .6861 RRF .6758 RTF .9781  
 SGB 6455.4 R23 .0032 R13 .9781  
 SG1 6444.2 SG2 380.3 THA 3.21

ORBIT DETERMINATION ACCURACY: ST 2244.2 SR 447.5 SS 641.0  
 CRT .7602 CRS -.6602 CST -.9897  
 LSA 2356.9 MSA 304.2 SSA 12.1  
 EL1 2270.2 EL2 287.4 ALF 8.76

LAUNCH DATE JAN 10 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 16 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 26.981 GAL 11.80 AZL 88.02 HCA 294.78 SMA 123.31 ECC .27849 INC 1.9842 V1 30.284  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.118 GAP 14.59 AZP 89.17 TAL 144.54 TAP 79.32 RCA 88.97 APO 157.65 V2 35.036  
 RC 172.318 GL 7.77 GP -7.59 ZAL 36.21 ZAP 170.84 ETS 307.36 ZAE 124.97 ETE 185.04 ZAC 144.15 ETC 169.24 CLP-174.86

Distance 613.899

Planetocentric Conic: C3 45.741 VHL 6.763 DLA 30.21 RAL 71.69 RAD 6568.7 VEL 12.927 PTH 2.36 VHP 9.709 DPA 8.93 RAP 49.94 ECC 1.7528  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.01 1 22 24 4028.05 -15.07 167.35 314.18 63.50 2 29 32 3428.1 -18.50 160.22  
 100.99 4 19 50 3456.30 -15.05 125.25 314.17 63.49 5 17 26 2856.3 -18.49 118.12  
 79.01 1 22 24 4028.05 -15.07 167.35 314.18 63.50 2 29 32 3428.1 -18.50 160.22  
 100.99 4 19 50 3456.30 -15.05 125.25 314.17 63.49 5 17 26 2856.3 -18.49 118.12  
 110.00 7 24 19 2878.08 -28.29 87.53 320.28 69.96 8 12 17 2278.1 -30.75 79.19  
 110.00 3 17 5 3654.27 -2.62 132.83 306.84 55.91 4 17 59 3054.3 -7.08 126.58

Differential Corrections: TDE 1.4954 TRA 6.0625 TC3-1.5704 BAU .9604 SGT 6437.2 SGR 513.6 SG3 194.3 ST 2188.1 SR 434.5 SS 625.0  
 RDE .5027 RRA .2925 RC3 -.0096 FAU .01201 RRT .6870 RRF .6770 RTF .9788 CRT .7288 CRS -.6294 CST -.9906  
 FDE .4073 FRA 2.2433 FC3 -.2273 BSP 21432 SGB 6457.6 R23 .0032 R13 .9789 LSA 2296.0 MSA 308.7 SSA 11.8  
 BDE 1.5776 BRA 6.0695 BC3 1.5705 FSP -686 SG1 6446.8 SG2 372.6 THA 3.15 EL1 2211.3 EL2 294.4 ALF 8.38

MID-COURSE EXECUTION ACCURACY: SGT 6437.2 SGR 513.6 SG3 194.3  
 RRT .6870 RRF .6770 RTF .9788  
 SGB 6457.6 R23 .0032 R13 .9789  
 SG1 6446.8 SG2 372.6 THA 3.15

ORBIT DETERMINATION ACCURACY: ST 2188.1 SR 434.5 SS 625.0  
 CRT .7288 CRS -.6294 CST -.9906  
 LSA 2296.0 MSA 308.7 SSA 11.8  
 EL1 2211.3 EL2 294.4 ALF 8.38

LAUNCH DATE JAN 10 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 18 1969

Heliocentric Conic: RL 147.12 LAL .00 LOL 109.58 VL 26.954 GAL 12.70 AZL 88.15 HCA 297.99 SMA 123.15 ECC .29045 INC 1.8546 V1 30.284  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.111 GAP 15.40 AZP 89.13 TAL 143.52 TAP 81.51 RCA 87.38 APO 158.91 V2 35.050  
 RC 174.540 GL 6.84 GP -7.39 ZAL 34.92 ZAP 171.60 ETS 301.63 ZAE 124.71 ETE 184.91 ZAC 146.08 ETC 168.57 CLP-176.00

Distance 618.751

Planetocentric Conic: C3 51.102 VHL 7.149 DLA 29.42 RAL 73.13 RAD 6568.9 VEL 13.133 PTH 2.40 VHP 10.201 DPA 9.74 RAP 51.86 ECC 1.8410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.66 1 48 27 3990.86 -13.87 163.98 317.18 63.79 2 54 58 3390.9 -17.28 156.88  
 98.34 4 5 16 3548.90 -13.86 131.52 317.17 63.79 5 4 25 2948.9 -17.27 124.42  
 100.00 5 2 46 3364.77 -18.24 120.02 319.32 65.90 5 58 51 2764.8 -21.35 112.59  
 100.00 3 33 38 3650.22 -9.57 136.76 314.91 61.55 4 34 28 3050.2 -13.30 129.96  
 110.00 7 41 32 2867.36 -28.53 86.79 323.81 70.33 8 29 19 2267.4 -30.94 78.42  
 110.00 3 11 22 3720.39 -.09 136.28 309.13 55.82 4 13 22 3120.4 -4.58 130.06

Differential Corrections: TDE 1.4280 TRA 6.5462 TC3-1.3683 BAU .9348 SGT 6435.9 SGR 502.7 SG3 184.4 ST 2139.9 SR 420.8 SS 612.9  
 RDE .5138 RRA .3132 RC3 -.0078 FAU .00992 RRT .6889 RRF .6794 RTF .9797 CRT .6970 CRS -.5998 CST -.9916  
 FDE .3667 FRA 2.2830 FC3 -.1681 BSP 21495 SGB 6455.5 R23 .0031 R13 .9797 LSA 2245.8 MSA 311.1 SSA 11.4  
 BDE 1.5176 BRA 6.5337 BC3 1.3683 FSP -651 SG1 6445.3 SG2 363.9 THA 3.09 EL1 2160.3 EL2 298.9 ALF 7.96

MID-COURSE EXECUTION ACCURACY: SGT 6435.9 SGR 502.7 SG3 184.4  
 RRT .6889 RRF .6794 RTF .9797  
 SGB 6455.5 R23 .0031 R13 .9797  
 SG1 6445.3 SG2 363.9 THA 3.09

ORBIT DETERMINATION ACCURACY: ST 2139.9 SR 420.8 SS 612.9  
 CRT .6970 CRS -.5998 CST -.9916  
 LSA 2245.8 MSA 311.1 SSA 11.4  
 EL1 2160.3 EL2 298.9 ALF 7.96

LAUNCH DATE JAN 11 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 22 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 21.560 GAL 7.32 AZL 86.07 HCA 59.55 SMA 99.09 ECC .49805 INC 3.9298 V1 30.282  
 RP 107.64 LAP 3.39 LOP 170.09 VP 33.566 GAP -29.50 AZP 88.01 TAL 172.29 TAP 231.84 RCA 49.74 APO 148.44 V2 35.207  
 RC 48.721 GL 8.88 GP 3.64 ZAL 73.14 ZAP 20.15 ETS 191.34 ZAE 161.94 EYE 203.13 ZAC 103.11 ETC 165.83 CLP 19.83

PLANETOCENTRIC CONIC  
 C3 89.959 VHL 9.485 DLA 22.45 RAL 32.20 RAD 6569.8 VEL 14.536 PTH 2.64 VHP 17.763 DPA 4.39 RAP 8.85 ECC 2.4805  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 48 54 3369.52 -23.29 122.36 289.11 73.42 3 45 3 2769.5 -25.34 114.29  
 90.00 21 26 26 4438.33 7.65 185.36 276.71 62.65 22 40 24 3838.3 3.93 178.65  
 100.00 4 26 40 3054.29 -25.58 99.91 289.84 73.99 5 17 34 2454.3 -27.53 91.65  
 100.00 22 31 21 4228.79 9.77 168.82 275.58 61.61 23 41 50 3628.8 5.90 162.17  
 110.00 6 8 45 2734.92 -31.21 77.41 291.60 75.29 6 54 20 2134.9 -32.91 68.60  
 110.00 23 5 45 4120.92 14.83 157.69 272.62 58.84 24 14 26 3520.9 10.60 151.15

DIFFERENTIAL CORRECTIONS  
 TDE -.4413 TRA-1.1757 TC3 -.0772 BAU .0999 SGT 826.5 SGR 436.0 SG3 41.8 ST 352.5 SR 415.8 SS 315.3  
 RDE -.6856 RRA .1881 RC3 -.0308 FAU .01623 RRT .0680 RRF -.0708 RTF -.6609 CRT .6953 CRS .8207 CST .9794  
 FDE .2953 FRA .5180 FC3 -.1562 BSP 2253 SGB 934.4 R23 -.0087 R13 -.6614 LSA 589.1 MSA 222.2 SSA 13.8  
 BDE .8154 BRA 1.1907 BC3 .0831 FSP -91 SG1 827.2 SG2 434.6 THA 2.84 EL1 503.3 EL2 209.3 ALF 51.72

LAUNCH DATE JAN 11 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 22.070 GAL 7.16 AZL 86.21 HCA 62.79 SMA 100.77 ECC .47314 INC 3.7894 V1 30.282  
 RP 107.66 LAP 3.37 LOP 173.33 VP 33.887 GAP -27.99 AZP 88.27 TAL 171.89 TAP 234.67 RCA 53.09 APO 148.44 V2 35.198  
 RC 47.437 GL 9.29 GP 3.79 ZAL 72.61 ZAP 18.62 ETS 192.77 ZAE 163.79 EYE 205.79 ZAC 104.66 ETC 165.67 CLP 18.24

PLANETOCENTRIC CONIC  
 C3 80.361 VHL 8.964 DLA 23.02 RAL 32.61 RAD 6569.6 VEL 14.202 PTH 2.59 VHP 16.948 DPA 5.21 RAP 10.30 ECC 2.3225  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 42 40 3372.13 -23.24 122.54 287.73 73.35 3 38 52 2772.1 -25.30 114.47  
 90.00 21 35 56 4384.95 5.97 182.33 275.85 62.27 22 49 1 3784.9 2.21 175.67  
 100.00 4 21 32 3053.37 -25.60 99.85 288.49 74.02 5 12 25 2453.4 -27.55 91.58  
 100.00 22 39 45 4178.94 8.14 166.02 274.67 61.14 23 49 24 3578.9 4.23 159.42  
 110.00 6 5 24 2728.41 -31.32 76.93 290.26 75.55 6 50 52 2128.4 -32.99 68.11  
 110.00 23 12 23 4076.66 13.26 155.22 271.63 58.20 24 20 19 3476.7 8.96 148.76

DIFFERENTIAL CORRECTIONS  
 TDE -.4410 TRA-1.1622 TC3 -.0730 BAU .0862 SGT 864.8 SGR 439.5 SG3 45.8 ST 371.6 SR 420.3 SS 331.3  
 RDE -.6552 RRA .1721 RC3 -.0332 FAU .01678 RRT .0773 RRF -.0807 RTF -.6809 CRT .7002 CRS .8245 CST .9796  
 FDE .3079 FRA .5338 FC3 -.1807 BSP 2412 SGB 970.1 R23 -.0100 R13 -.6814 LSA 610.6 MSA 226.7 SSA 14.0  
 BDE .7898 BRA 1.1748 BC3 .0802 FSP -101 SG1 865.7 SG2 437.8 THA 3.02 EL1 518.1 EL2 215.2 ALF 50.00

LAUNCH DATE JAN 11 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 22.544 GAL 6.79 AZL 86.34 HCA 66.02 SMA 102.41 ECC .44937 INC 3.6569 V1 30.282  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.188 GAP -26.55 AZP 88.51 TAL 171.54 TAP 237.56 RCA 56.39 APO 148.43 V2 35.189  
 RC 46.274 GL 9.70 GP 3.95 ZAL 72.18 ZAP 17.12 ETS 194.48 ZAE 165.77 EYE 209.24 ZAC 106.21 ETC 165.48 CLP 16.67

PLANETOCENTRIC CONIC  
 C3 71.841 VHL 8.476 DLA 23.56 RAL 32.93 RAD 6569.4 VEL 13.899 PTH 2.54 VHP 16.167 DPA 6.04 RAP 11.75 ECC 2.1823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 5 3373.86 -23.20 122.65 286.20 73.30 3 32 18 2773.9 -25.27 114.59  
 90.00 21 45 3 4331.23 4.26 179.31 274.89 61.98 22 57 15 3731.2 .48 172.67  
 100.00 4 16 7 3051.32 -25.64 99.71 286.98 74.08 5 6 58 2451.3 -27.58 91.44  
 100.00 22 47 42 4129.00 6.49 163.23 273.67 60.76 23 56 31 3529.0 2.54 156.67  
 110.00 6 1 49 2720.62 -31.45 76.36 288.76 75.86 6 47 10 2120.6 -33.07 67.51  
 110.00 23 18 29 4032.47 11.66 152.80 270.55 57.64 24 25 42 3432.5 7.31 146.41

DIFFERENTIAL CORRECTIONS  
 TDE -.4415 TRA-1.1479 TC3 -.0665 BAU .0724 SGT 904.6 SGR 442.4 SG3 50.2 ST 391.9 SR 424.2 SS 348.0  
 RDE -.6254 RRA .1567 RC3 -.0355 FAU .01738 RRT .0877 RRF -.0918 RTF -.7001 CRT .7061 CRS .8287 CST .9798  
 FDE .3213 FRA .5498 FC3 -.2094 BSP 2575 SGB 1007.0 R23 -.0114 R13 -.7007 LSA 633.4 MSA 230.6 SSA 14.2  
 BDE .7655 BRA 1.1585 BC3 .0754 FSP -113 SG1 905.7 SG2 440.1 THA 3.22 EL1 533.7 EL2 220.5 ALF 48.20

LAUNCH DATE JAN 11 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 22.983 GAL 6.42 AZL 86.47 HCA 69.25 SMA 104.01 ECC .42675 INC 3.5310 V1 30.282  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.469 GAP -25.18 AZP 88.75 TAL 171.23 TAP 240.48 RCA 59.63 APO 148.40 V2 35.179  
 RC 45.244 GL 10.11 GP 4.13 ZAL 71.84 ZAP 15.64 ETS 196.55 ZAE 167.85 EYE 213.98 ZAC 107.76 ETC 165.25 CLP 15.10

PLANETOCENTRIC CONIC  
 C3 64.273 VHL 8.017 DLA 24.06 RAL 33.15 RAD 6569.2 VEL 13.625 PTH 2.49 VHP 15.417 DPA 6.89 RAP 13.20 ECC 2.0578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 10 3374.73 -23.19 122.71 284.53 73.27 3 25 24 2774.7 -25.26 114.65  
 90.00 21 53 46 4277.40 2.54 176.30 273.84 61.79 23 5 3 3677.4 -1.26 169.67  
 100.00 4 10 27 3048.15 -25.70 99.49 285.33 74.18 5 1 15 2448.1 -27.62 91.21  
 100.00 22 55 10 4079.21 4.83 160.47 272.57 60.46 24 3 9 3479.2 .86 153.93  
 110.00 5 58 2 2711.58 -31.60 75.70 287.11 76.23 6 43 14 2111.6 -33.17 66.82  
 110.00 23 24 4 3988.56 10.05 150.42 289.39 57.15 24 30 32 3388.6 5.65 144.09

DIFFERENTIAL CORRECTIONS  
 TDE -.4427 TRA-1.1325 TC3 -.0572 BAU .0587 SGT 945.6 SGR 444.6 SG3 55.0 ST 413.3 SR 427.5 SS 365.5  
 RDE -.5964 RRA .1420 RC3 -.0375 FAU .01805 RRT .0996 RRF -.1044 RTF -.7184 CRT .7130 CRS .8333 CST .9802  
 FDE .3355 FRA .5858 FC3 -.2431 BSP 2744 SGB 1044.9 R23 -.0130 R13 -.7191 LSA 657.6 MSA 233.6 SSA 14.4  
 BDE .7427 BRA 1.1413 BC3 .0683 FSP -127 SG1 946.9 SG2 441.7 THA 3.43 EL1 550.4 EL2 225.1 ALF 46.36

LAUNCH DATE JAN 11 1969

FLIGHT TIME 78.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 179.354

RL 147.12 LAL .00 LOL 110.60 VL 23.390 GAL 6.05 AZL 86.59 HCA 72.48 SMA 105.58 ECC .40528 INC 3.4105 V1 30.282  
 RP 107.75 LAP 3.25 LOP 183.05 VP 34.731 GAP -23.88 AZP 88.97 TAL 170.97 TAP 243.45 RCA 62.79 APO 148.36 V2 35.169  
 RC 44.357 GL 10.51 GP 4.32 ZAL 71.59 ZAP 14.20 ETS 199.09 ZAE 169.96 ETE 220.86 ZAC 109.29 ETC 164.99 CLP 13.54

PLANETOCENTRIC CONIC

C3 57.549 VHL 7.586 DLA 24.54 RAL 33.28 RAD 6569.0 VEL 13.376 PTH 2.44 VHP 14.696 DPA 7.76 RAP 14.64 ECC 1.9471  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 58 3374.71 -23.19 122.71 282.72 73.27 3 10 12 2774.7 -25.26 114.65  
 90.00 22 2 0 4223.74 .81 173.30 272.68 61.69 23 12 24 3623.7 -2.98 166.67  
 100.00 4 4 36 3043.81 -25.78 99.19 283.55 74.32 4 55 19 2443.8 -27.68 90.91  
 100.00 23 2 3 4029.87 3.17 157.75 271.37 60.26 24 9 13 3429.9 -.82 151.23  
 110.00 5 54 5 2701.26 -31.76 74.94 285.32 76.65 6 39 6 2101.3 -33.27 66.04  
 110.00 23 29 3 3945.19 8.44 148.09 268.13 56.75 24 34 49 3345.2 4.00 141.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4468 TRA-1.1183 TC3 -.0460 BAU .0464 SGT 990.3 SGR 446.1 SG3 60.3 ST 437.6 SR 430.4 SS 384.1  
 RDE -.5683 RRA .1278 RC3 -.0391 FAU .01078 RRT .1142 RRF -.1190 RTF -.7350 CRT .7220 CRS .8386 CST .9810  
 FDE .3511 FRA .5822 FC3 -.2825 BSP 2865 SGB 1086.2 R23 -.0142 R13 -.7358 LSA 684.4 MSA 235.8 SSA 14.7  
 BDE .7229 BRA 1.1256 BC3 .0604 FSP -141 SG1 992.0 SG2 442.5 THA 3.68 EL1 569.5 EL2 228.8 ALF 44.35

LAUNCH DATE JAN 11 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 185.942

RL 147.12 LAL .00 LOL 110.60 VL 23.767 GAL 5.69 AZL 86.71 HCA 75.71 SMA 107.09 ECC .38494 INC 3.2942 V1 30.282  
 RP 107.79 LAP 3.19 LOP 186.28 VP 34.976 GAP -22.64 AZP 89.19 TAL 170.76 TAP 246.47 RCA 65.87 APO 148.32 V2 35.158  
 RC 43.625 GL 10.91 GP 4.54 ZAL 71.44 ZAP 12.79 ETS 202.26 ZAE 172.00 ETE 231.56 ZAC 110.82 ETC 164.70 CLP 11.97

PLANETOCENTRIC CONIC

C3 51.573 VHL 7.181 DLA 24.97 RAL 33.31 RAD 6568.9 VEL 13.150 PTH 2.40 VHP 14.004 DPA 8.64 RAP 16.08 ECC 1.8488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 32 3373.70 -23.21 122.64 280.79 73.30 3 10 46 2773.7 -25.27 114.58  
 90.00 22 9 42 4170.62 -.91 170.34 271.43 61.70 23 19 12 3570.6 -4.69 163.70  
 100.00 3 58 36 3038.23 -25.88 98.81 281.64 74.50 4 49 14 2438.2 -27.76 90.51  
 100.00 23 8 20 3981.32 1.52 155.08 270.08 60.14 24 14 41 3381.3 -2.46 148.56  
 110.00 5 50 0 2689.69 -31.94 74.09 283.39 77.12 6 34 50 2089.7 -33.38 65.15  
 110.00 23 33 25 3902.63 6.84 145.83 266.78 56.43 24 38 27 3302.6 2.38 139.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4496 TRA-1.1013 TC3 -.0296 BAU .0345 SGT 1034.4 SGR 447.1 SG3 66.2 ST 461.8 SR 432.8 SS 403.4  
 RDE -.5411 RRA .1142 RC3 -.0403 FAU .01960 RRT .1295 RRF -.1351 RTF -.7517 CRT .7311 CRS .8441 CST .9816  
 FDE .3675 FRA .5987 FC3 -.3291 BSP 3034 SGB 1126.9 R23 -.0161 R13 -.7525 LSA 711.9 MSA 237.1 SSA 14.9  
 BDE .7036 BRA 1.1072 BC3 .0500 FSP -157 SG1 1036.4 SG2 442.4 THA 3.92 EL1 589.0 EL2 231.5 ALF 42.46

LAUNCH DATE JAN 11 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 192.563

RL 147.12 LAL .00 LOL 110.60 VL 24.117 GAL 5.33 AZL 86.82 HCA 78.94 SMA 108.56 ECC .36570 INC 3.1813 V1 30.282  
 RP 107.82 LAP 3.12 LOP 189.52 VP 35.203 GAP -21.45 AZP 89.39 TAL 170.61 TAP 249.54 RCA 68.86 APO 148.26 V2 35.147  
 RC 43.055 GL 11.30 GP 4.78 ZAL 71.39 ZAP 11.43 ETS 206.27 ZAE 173.68 ETE 249.07 ZAC 112.33 ETC 164.36 CLP 10.40

PLANETOCENTRIC CONIC

C3 46.261 VHL 6.802 DLA 25.37 RAL 33.25 RAD 6568.7 VEL 12.947 PTH 2.36 VHP 13.339 DPA 9.53 RAP 17.51 ECC 1.7613  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 0 3371.53 -23.25 122.50 278.75 73.36 3 3 12 2771.5 -25.31 114.43  
 90.00 22 16 44 4118.50 -2.59 167.43 270.07 61.79 23 25 22 3518.5 -6.34 160.76  
 100.00 3 52 33 3031.26 -26.01 98.33 279.62 74.72 4 43 4 2431.3 -27.85 90.01  
 100.00 23 13 53 3933.99 -.08 152.49 268.67 60.11 24 19 27 3334.0 -4.06 145.96  
 110.00 5 45 50 2676.83 -32.13 73.13 281.34 77.66 6 30 27 2076.8 -33.50 64.17  
 110.00 23 37 5 3861.20 5.28 143.64 265.34 56.18 24 41 26 3261.2 .80 137.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4530 TRA-1.0831 TC3 -.0089 BAU .0258 SGT 1079.5 SGR 447.4 SG3 72.7 ST 487.2 SR 434.8 SS 423.6  
 RDE -.5150 RRA .1013 RC3 -.0407 FAU .02052 RRT .1468 RRF -.1534 RTF -.7674 CRT .7411 CRS .8501 CST .9823  
 FDE .3851 FRA .6153 FC3 -.3840 BSP 3211 SGB 1168.6 R23 -.0182 R13 -.7683 LSA 741.1 MSA 237.5 SSA 15.1  
 BDE .6859 BRA 1.0878 BC3 .0416 FSP -175 SG1 1081.9 SG2 441.6 THA 4.18 EL1 609.9 EL2 233.2 ALF 40.62

LAUNCH DATE JAN 11 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 199.213

RL 147.12 LAL .00 LOL 110.60 VL 24.441 GAL 4.99 AZL 86.93 HCA 82.16 SMA 109.97 ECC .34756 INC 3.0710 V1 30.282  
 RP 107.86 LAP 3.04 LOP 192.75 VP 35.414 GAP -20.31 AZP 89.58 TAL 170.51 TAP 252.67 RCA 71.75 APO 148.20 V2 35.135  
 RC 42.857 GL 11.88 GP 5.04 ZAL 71.43 ZAP 10.15 ETS 211.45 ZAE 174.52 ETE 275.65 ZAC 113.81 ETC 163.98 CLP 8.83

PLANETOCENTRIC CONIC

C3 41.541 VHL 6.445 DLA 25.72 RAL 33.09 RAD 6568.6 VEL 12.764 PTH 2.32 VHP 12.700 DPA 10.44 RAP 18.92 ECC 1.6837  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 29 3367.87 -23.32 122.25 276.80 73.47 2 55 37 2767.9 -25.37 114.18  
 90.00 22 22 59 4067.98 -4.21 164.61 268.59 61.97 23 30 47 3468.0 -7.93 157.90  
 100.00 3 46 33 3022.71 -26.16 97.74 277.49 74.99 4 36 56 2422.7 -27.96 89.40  
 100.00 23 18 36 3888.37 -1.63 149.98 267.16 60.15 24 23 25 3288.4 -5.59 143.43  
 110.00 5 41 39 2662.60 -32.34 72.07 279.17 78.26 6 26 1 2062.6 -33.61 63.07  
 110.00 23 40 0 3821.25 3.76 141.54 263.81 56.00 24 43 41 3221.2 -.73 135.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4569 TRA-1.0640 TC3 .0170 BAU .0242 SGT 1125.9 SGR 447.3 SG3 79.8 ST 514.0 SR 436.4 SS 444.8  
 RDE -.4900 RRA .0888 RC3 -.0401 FAU .02154 RRT .1664 RRF -.1740 RTF -.7823 CRT .7519 CRS .8563 CST .9831  
 FDE .4041 FRA .6322 FC3 -.4489 BSP 3387 SGB 1211.5 R23 -.0207 R13 -.7833 LSA 772.0 MSA 237.1 SSA 15.4  
 BDE .6700 BRA 1.0677 BC3 .0436 FSP -196 SG1 1128.8 SG2 439.9 THA 4.46 EL1 632.4 EL2 233.8 ALF 38.83

LAUNCH DATE JAN 11 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC DISTANCE 205.886  
 RL 147.12 LAL .00 LOL 110.60 VL 24.740 GAL 4.64 AZL 87.04 HCA 85.38 SMA 111.33 ECC .33048 INC 2.9624 V1 30.282  
 RP 107.89 LAP 2.95 LOP 195.97 VP 35.610 GAP -19.22 AZP 89.76 TAL 170.46 TAP 255.84 RCA 74.54 APO 148.13 V2 35.123  
 RC 42.436 GL 12.04 GP 5.33 ZAL 71.57 ZAP 8.98 ETS 218.20 ZAE 174.03 ETE 304.44 ZAC 115.27 ETC 163.55 CLP 7.24

PLANETOCENTRIC CONIC  
 C3 37.347 VHL 6.111 DLA 26.02 RAL 32.84 RAD 6568.5 VEL 12.598 PTH 2.29 VHP 12.086 DPA 11.37 RAP 20.32 ECC 1.6146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 11 3362.28 -23.43 121.88 274.37 73.62 2 48 13 2762.3 -25.45 113.79  
 90.00 22 28 15 4019.81 -5.75 161.90 267.00 62.22 23 39 15 3419.8 -9.42 155.15  
 100.00 3 40 45 3012.28 -26.34 97.02 275.27 75.33 4 30 57 2412.3 -28.10 88.66  
 100.00 23 22 22 3845.04 -3.10 147.60 265.55 60.25 24 26 27 3245.0 -7.03 141.03  
 110.00 5 37 31 2646.91 -32.55 70.90 276.89 78.92 6 21 38 2046.9 -33.73 61.86  
 110.00 23 42 5 3783.17 2.31 139.55 262.18 55.89 24 45 8 3183.2 -2.18 133.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4608 TRA-1.0437 TC3 .0492 BAU .0311 SGT 1172.9 SGR 446.7 SG3 87.7 ST 541.6 SR 437.6 SS 466.9  
 RDE -.4661 RRA .0768 RC3 -.0382 FAU .02268 RRT .1883 RRF -.1973 RTF -.7965 CRT .7633 CRS .8632 CST .9840  
 FDE .4243 FRA .6495 FC3 -.5258 BSP 3573 SGB 1255.1 R23 -.0235 R13 -.7976 LSA 804.4 MSA 235.7 SSA 15.6  
 BDE .6554 BRA 1.0465 BC3 .0623 FSP -219 SGI 1176.4 SG2 437.4 THA 4.76 EL1 656.0 EL2 233.4 ALF 37.14

LAUNCH DATE JAN 11 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC DISTANCE 212.580  
 RL 147.12 LAL .00 LOL 110.60 VL 25.018 GAL 4.31 AZL 87.15 HCA 88.60 SMA 112.64 ECC .31444 INC 2.8540 V1 30.282  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.791 GAP -18.18 AZP 89.93 TAL 170.47 TAP 259.08 RCA 77.22 APO 148.05 V2 35.111  
 RC 42.394 GL 12.37 GP 5.65 ZAL 71.80 ZAP 7.98 ETS 227.02 ZAE 172.42 ETE 325.22 ZAC 116.70 ETC 168.08 CLP 5.64

PLANETOCENTRIC CONIC  
 C3 33.621 VHL 5.798 DLA 26.26 RAL 32.49 RAD 6568.3 VEL 12.450 PTH 2.25 VHP 11.496 DPA 12.32 RAP 21.70 ECC 1.5533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 21 3354.08 -23.58 121.33 272.08 73.86 2 41 15 2754.1 -25.57 113.22  
 90.00 22 32 18 3974.92 -7.16 159.36 265.30 62.53 23 38 33 3374.9 -10.79 152.56  
 100.00 3 35 19 2999.58 -26.56 96.13 272.97 75.75 4 25 18 2399.6 -28.25 87.74  
 100.00 23 25 1 3804.66 -4.46 145.38 263.82 60.41 24 28 26 3204.7 -8.36 138.77  
 110.00 5 33 33 2629.62 -32.77 69.60 274.53 79.66 6 17 23 2029.6 -33.84 60.52  
 110.00 23 43 16 3747.38 .94 137.69 260.46 55.83 24 45 44 3147.4 -3.55 131.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4654 TRA-1.0228 TC3 .0873 BAU .0422 SGT 1221.4 SGR 445.9 SG3 96.5 ST 570.8 SR 438.7 SS 490.3  
 RDE -.4435 RRA .0653 RC3 -.0347 FAU .02394 RRT .2136 RRF -.2240 RTF -.8097 CRT .7756 CRS .8702 CST .9849  
 FDE .4463 FRA .6676 FC3 -.6165 BSP 3751 SGB 1300.3 R23 -.0266 R13 -.8109 LSA 839.0 MSA 235.5 SSA 15.8  
 BDE .6429 BRA 1.0249 BC3 .0939 FSP -244 SGI 1225.7 SG2 434.1 THA 5.10 EL1 681.6 EL2 232.0 ALF 35.53

LAUNCH DATE JAN 11 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC DISTANCE 219.287  
 RL 147.12 LAL .00 LOL 110.60 VL 25.274 GAL 3.99 AZL 87.25 HCA 91.82 SMA 113.88 ECC .29941 INC 2.7477 V1 30.282  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.958 GAP -17.17 AZP 90.09 TAL 170.54 TAP 262.36 RCA 79.78 APO 147.98 V2 35.099  
 RC 42.534 GL 12.68 GP 6.01 ZAL 72.13 ZAP 7.22 ETS 238.30 ZAE 170.26 ETE 338.06 ZAC 118.08 ETC 162.54 CLP 4.02

PLANETOCENTRIC CONIC  
 C3 30.313 VHL 5.506 DLA 26.44 RAL 32.05 RAD 6568.2 VEL 12.316 PTH 2.22 VHP 10.929 DPA 13.29 RAP 23.04 ECC 1.4989  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 19 3342.44 -23.80 120.54 269.73 74.19 2 35 1 2742.4 -25.74 112.41  
 90.00 22 34 51 3934.44 -8.43 157.06 263.46 62.87 23 40 25 3334.4 -12.00 150.20  
 100.00 3 30 27 2984.16 -26.81 95.06 270.61 76.26 4 20 11 2384.2 -28.43 86.63  
 100.00 23 28 24 3767.95 -5.69 143.35 261.98 60.60 24 29 12 3168.0 -9.56 136.70  
 110.00 5 29 51 2610.56 -32.99 68.15 272.07 80.49 6 13 21 2010.6 -33.95 59.05  
 110.00 23 43 29 3714.32 -.32 135.96 258.65 55.82 24 45 23 3114.3 -4.61 129.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4697 TRA-1.0005 TC3 .1334 BAU .0553 SGT 1269.9 SGR 444.9 SG3 106.2 ST 600.5 SR 439.7 SS 514.3  
 RDE -.4221 RRA .0542 RC3 -.0290 FAU .02535 RRT .2420 RRF -.2541 RTF -.8223 CRT .7882 CRS .8775 CST .9858  
 FDE .4696 FRA .6882 FC3 -.7241 BSP 3938 SGB 1345.6 R23 -.0302 R13 -.8237 LSA 874.7 MSA 230.5 SSA 16.1  
 BDE .6315 BRA 1.0020 BC3 .1366 FSP -272 SGI 1275.1 SG2 429.9 THA 5.47 EL1 708.0 EL2 229.5 ALF 34.05

LAUNCH DATE JAN 11 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC DISTANCE 226.006  
 RL 147.12 LAL .00 LOL 110.60 VL 25.510 GAL 3.69 AZL 87.36 HCA 95.04 SMA 115.07 ECC .28535 INC 2.6402 V1 30.282  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.113 GAP -16.21 AZP 90.23 TAL 170.66 TAP 265.70 RCA 82.23 APO 147.90 V2 35.086  
 RC 42.853 GL 12.95 GP 6.40 ZAL 72.55 ZAP 6.83 ETS 251.83 ZAE 167.87 ETE 346.25 ZAC 119.42 ETC 161.94 CLP 2.38

PLANETOCENTRIC CONIC  
 C3 27.377 VHL 5.232 DLA 26.56 RAL 31.53 RAD 6568.1 VEL 12.196 PTH 2.19 VHP 10.385 DPA 14.28 RAP 24.36 ECC 1.4506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 25 3326.37 -24.10 119.46 267.35 74.66 2 29 51 2726.4 -25.97 111.29  
 90.00 22 35 33 3899.59 -9.50 155.06 261.50 63.20 23 40 33 3299.6 -13.03 148.16  
 100.00 3 26 21 2965.51 -27.11 93.75 268.20 76.89 4 15 47 2365.5 -28.64 85.28  
 100.00 23 26 18 3735.68 -6.76 141.55 260.03 60.81 24 28 34 3135.7 -10.60 134.87  
 110.00 5 26 31 2589.52 -33.21 66.55 269.55 81.41 6 9 40 1989.5 -34.04 57.41  
 110.00 23 42 38 3684.43 -1.47 134.40 258.75 55.84 24 44 2 3084.4 -5.94 128.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4734 TRA -.9776 TC3 .1875 BAU .0690 SGT 1318.9 SGR 444.0 SG3 117.0 ST 630.6 SR 440.6 SS 539.0  
 RDE -.4021 RRA .0435 RC3 -.0206 FAU .02693 RRT .2738 RRF -.2880 RTF -.8340 CRT .8009 CRS .8848 CST .9867  
 FDE .4943 FRA .7037 FC3 -.8515 BSP 4122 SGB 1391.6 R23 -.0345 R13 -.8356 LSA 911.4 MSA 226.8 SSA 16.3  
 BDE .6211 BRA .9785 BC3 .1887 FSP -304 SGI 1325.1 SG2 425.0 THA 5.87 EL1 735.2 EL2 226.3 ALF 32.71



LAUNCH DATE JAN 11 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC DISTANCE 232.731
RL 147.12 LAL .00 LOL 110.60 VL 25.728 GAL 3.39 AZL 87.47 HCA 98.25 SMA 116.19 ECC .27223 INC 2.5317 V1 30.282
PLANETOCENTRIC CONIC
C3 24.771 VHL 4.977 DLA 26.60 RAL 30.92 RAD 6568.0 VEL 12.089 PTH 2.16 VHP 9.863 DPA 15.30 RAP 25.63 ECC 1.4077
DIFFERENTIAL CORRECTIONS
TDE -.4774 TRA -.9543 TC3 .2484 BAU .0823
ORBIT DETERMINATION ACCURACY
ST 661.7 SR 441.6 SS 564.8

LAUNCH DATE JAN 11 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC DISTANCE 239.460
RL 147.12 LAL .00 LOL 110.60 VL 25.930 GAL 3.11 AZL 87.58 HCA 101.46 SMA 117.26 ECC .26001 INC 2.4216 V1 30.282
PLANETOCENTRIC CONIC
C3 22.460 VHL 4.739 DLA 26.55 RAL 30.25 RAD 6567.9 VEL 11.993 PTH 2.14 VHP 9.363 DPA 16.35 RAP 26.85 ECC 1.3696
DIFFERENTIAL CORRECTIONS
TDE -.4799 TRA -.9292 TC3 .3227 BAU .0969
ORBIT DETERMINATION ACCURACY
ST 691.8 SR 442.8 SS 590.9

LAUNCH DATE JAN 11 1969 FLIGHT TIME 98.00 ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC DISTANCE 246.188
RL 147.12 LAL .00 LOL 110.60 VL 26.115 GAL 2.84 AZL 87.69 HCA 104.67 SMA 118.27 ECC .24868 INC 2.3090 V1 30.282
PLANETOCENTRIC CONIC
C3 20.411 VHL 4.318 DLA 26.41 RAL 29.51 RAD 6567.8 VEL 11.908 PTH 2.12 VHP 8.884 DPA 17.43 RAP 28.02 ECC 1.3359
DIFFERENTIAL CORRECTIONS
TDE -.4819 TRA -.9045 TC3 .4049 BAU .1108
ORBIT DETERMINATION ACCURACY
ST 722.0 SR 444.4 SS 617.0

LAUNCH DATE JAN 11 1969 FLIGHT TIME 100.00 ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC DISTANCE 252.913
RL 147.12 LAL .00 LOL 110.60 VL 26.285 GAL 2.58 AZL 87.81 HCA 107.87 SMA 119.21 ECC .23817 INC 2.1931 V1 30.282
PLANETOCENTRIC CONIC
C3 18.595 VHL 4.312 DLA 26.17 RAL 28.73 RAD 6567.8 VEL 11.831 PTH 2.10 VHP 8.425 DPA 18.55 RAP 29.12 ECC 1.3060
DIFFERENTIAL CORRECTIONS
TDE -.4798 TRA -.8771 TC3 .5014 BAU .1254
ORBIT DETERMINATION ACCURACY
ST 747.2 SR 446.3 SS 641.9

LAUNCH DATE JAN 11 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 259.632

RL 147.12 LAL .00 LOL 110.60 VL 26.441 GAL 2.34 AZL 87.93 HCA 111.08 SMA 120.10 ECC .22847 INC 2.0730 V1 30.282  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.713 GAP -11.94 AZP 90.75 TAL 172.06 TAP 283.14 RCA 92.66 APO 147.54 V2 35.020  
 RC 46.944 GL 13.41 GP 9.23 ZAL 75.86 ZAP 11.20 ETS 307.46 ZAE 156.51 ETE 4.89 ZAC 125.02 ETC 157.88 CLP -6.38

PLANETOCENTRIC CONIC

C3 16.986 VHL 4.121 DLA 25.82 RAL 27.92 RAD 6567.7 VEL 11.763 PTH 2.08 VHP 7.987 DPA 19.73 RAP 30.14 ECC 1.2795  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 36 45 3155.12 -26.66 107.58 255.34 80.08 2 29 21 2555.1 -27.76 99.09  
 90.00 22 4 24 3041.14 -11.28 151.69 250.07 63.85 23 8 25 3241.1 -14.70 144.68  
 100.00 3 24 18 2808.40 -29.03 82.48 255.75 82.52 4 11 7 2208.4 -29.76 73.75  
 100.00 22 59 33 3663.09 -9.15 137.49 248.95 61.42 24 0 36 3063.1 -12.90 130.70  
 110.00 5 19 57 2446.56 -34.13 55.50 256.26 87.89 6 0 44 1846.6 -34.04 46.26  
 110.00 23 20 23 3597.70 -4.77 129.86 246.28 56.11 24 20 21 2997.7 -9.19 123.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4785 TRA -.8518 TC3 .6029 BAU .1385  
 RDE -.3250 RRA -.0085 RC3 .0923 FAU .03806  
 FDE .6379 FRA .8241 FC3-1.9401 BSP 5080  
 BDE .5773 BRA .6518 BC3 .6099 FSP -532

SGT 1555.6 SGR 455.6 SG3 192.5  
 RRT .4991 RRF -.5286 RTF -.8826  
 SGB 1620.9 R23 -.0674 R13 -.8859  
 SG1 1573.2 SG2 390.4 THA 8.87

ST 773.6 SR 449.1 SS 667.1  
 CRT .8644 CRS .9210 CST .9913  
 LSA 1097.6 MSA 200.4 SSA 17.7  
 EL1 871.8 EL2 200.4 ALF 28.27

LAUNCH DATE JAN 11 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 266.342

RL 147.12 LAL .00 LOL 110.60 VL 26.584 GAL 2.11 AZL 88.05 HCA 114.28 SMA 120.93 ECC .21954 INC 1.9478 V1 30.282  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.803 GAP -11.18 AZP 90.80 TAL 172.47 TAP 286.75 RCA 94.38 APO 147.48 V2 35.007  
 RC 48.205 GL 13.23 GP 10.03 ZAL 76.72 ZAP 12.98 ETS 312.55 ZAE 154.65 ETE 7.28 ZAC 125.83 ETC 156.81 CLP -8.29

PLANETOCENTRIC CONIC

C3 15.561 VHL 3.945 DLA 25.34 RAL 27.08 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 7.569 DPA 20.96 RAP 31.06 ECC 1.2561  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 42 58 3102.70 -27.22 103.84 252.95 81.87 2 34 41 2502.7 -28.06 95.28  
 90.00 21 51 33 3853.59 -10.90 152.41 247.62 63.70 22 55 46 3253.6 -14.35 145.43  
 100.00 3 28 23 2762.83 -29.38 79.14 253.25 84.24 4 14 26 2162.8 -29.87 70.37  
 100.00 22 48 49 3668.69 -8.97 137.80 246.60 61.37 23 49 57 3068.7 -12.72 131.03  
 110.00 5 21 31 2408.86 -34.18 52.56 253.55 89.63 6 1 40 1808.9 -33.86 43.33  
 110.00 23 12 10 3595.42 -4.86 129.74 244.09 56.12 24 12 5 2995.4 -9.28 123.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4749 TRA -.8263 TC3 .7151 BAU .1515  
 RDE -.3115 RRA -.0195 RC3 .1379 FAU .04113  
 FDE .6685 FRA .8551 FC3-2.2883 BSP 5252  
 BDE .5679 BRA .8265 BC3 .7283 FSP -596

SGT 1599.2 SGR 466.4 SG3 213.2  
 RRT .5564 RRF -.5897 RTF -.8902  
 SGB 1665.8 R23 -.0774 R13 -.8940  
 SG1 1621.4 SG2 382.2 THA 9.76

ST 796.7 SR 452.5 SS 690.7  
 CRT .8761 CRS .9275 CST .9921  
 LSA 1130.8 MSA 194.2 SSA 18.1  
 EL1 895.5 EL2 194.1 ALF 27.88

LAUNCH DATE JAN 11 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 273.041

RL 147.12 LAL .00 LOL 110.60 VL 26.715 GAL 1.89 AZL 88.18 HCA 117.48 SMA 121.70 ECC .21133 INC 1.8161 V1 30.282  
 RP 108.29 LAP 1.81 LOP 228.09 VP 36.885 GAP -10.45 AZP 90.84 TAL 172.91 TAP 290.39 RCA 95.98 APO 147.42 V2 34.994  
 RC 49.590 GL 12.93 GP 10.94 ZAL 77.64 ZAP 14.96 ETS 316.36 ZAE 152.97 ETE 9.61 ZAC 126.51 ETC 155.66 CLP -10.27

PLANETOCENTRIC CONIC

C3 14.298 VHL 3.781 DLA 24.72 RAL 26.25 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 7.171 DPA 22.26 RAP 31.88 ECC 1.2353  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 50 3045.36 -27.70 99.72 250.55 83.88 2 41 36 2445.4 -28.26 91.10  
 90.00 21 37 2 3873.12 -10.31 153.54 245.19 63.48 22 41 35 3273.1 -13.79 146.59  
 100.00 3 34 2 2712.64 -29.67 75.43 250.75 86.17 4 19 15 2112.6 -29.88 66.64  
 100.00 22 36 31 3681.08 -8.56 138.50 244.27 61.25 23 37 52 3081.1 -12.34 131.74  
 110.00 5 24 18 2367.67 -34.15 49.34 250.86 91.53 6 3 45 1767.7 -33.56 40.15  
 110.00 23 2 45 3598.81 -4.73 129.92 241.92 56.11 24 2 44 2998.8 -9.15 123.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4684 TRA -.8009 TC3 .8351 BAU .1639  
 RDE -.3013 RRA -.0311 RC3 .1954 FAU .04453  
 FDE .6977 FRA .8893 FC3-2.6962 BSP 5409  
 BDE .5569 BRA .8015 BC3 .8577 FSP -666

SGT 1639.3 SGR 482.6 SG3 236.2  
 RRT .6150 RRF -.6524 RTF -.8969  
 SGB 1708.9 R23 -.0893 R13 -.9015  
 SG1 1667.4 SG2 374.1 THA 10.81

ST 815.3 SR 456.8 SS 711.7  
 CRT .8869 CRS .9335 CST .9929  
 LSA 1159.4 MSA 187.9 SSA 18.5  
 EL1 915.4 EL2 187.9 ALF 27.69

LAUNCH DATE JAN 11 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 279.727

RL 147.12 LAL .00 LOL 110.60 VL 26.834 GAL 1.69 AZL 88.32 HCA 120.67 SMA 122.42 ECC .20382 INC 1.6768 V1 30.282  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.980 GAP -9.75 AZP 90.86 TAL 173.39 TAP 294.06 RCA 97.47 APO 147.37 V2 34.980  
 RC 51.091 GL 12.48 GP 11.97 ZAL 78.58 ZAP 17.12 ETS 319.23 ZAE 151.47 ETE 11.97 ZAC 127.01 ETC 154.41 CLP -12.33

PLANETOCENTRIC CONIC

C3 13.181 VHL 3.631 DLA 23.95 RAL 25.44 RAD 6567.5 VEL 11.600 PTH 2.03 VHP 6.794 DPA 23.64 RAP 32.56 ECC 1.2169  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 16 2983.58 -28.07 95.24 248.18 86.10 2 50 0 2383.6 -28.31 86.58  
 90.00 21 21 8 3899.32 -9.51 155.05 242.83 63.20 22 26 7 3299.3 -13.03 148.14  
 100.00 3 41 15 2697.99 -29.85 71.38 248.28 88.30 4 25 33 2058.0 -29.77 62.58  
 100.00 22 22 50 3700.14 -7.94 139.57 241.98 61.09 23 24 30 3100.1 -11.73 132.84  
 110.00 5 28 23 2322.83 -34.02 45.85 248.20 93.59 6 7 6 1722.8 -33.14 36.71  
 110.00 22 52 12 3608.07 -4.38 130.41 239.80 56.06 23 52 20 3008.1 -8.81 124.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4594 TRA -.7754 TC3 .9603 BAU .1757  
 RDE -.2923 RRA -.0436 RC3 .2674 FAU .04828  
 FDE .7250 FRA .9278 FC3-3.1707 BSP 5557  
 BDE .5445 BRA .7766 BC3 .9968 FSP -745

SGT 1674.6 SGR 506.2 SG3 261.7  
 RRT .6731 RRF -.7144 RTF -.9028  
 SGB 1749.5 R23 -.1029 R13 -.9084  
 SG1 1710.6 SG2 366.4 THA 12.06

ST 829.0 SR 461.9 SS 729.6  
 CRT .8973 CRS .9390 CST .9937  
 LSA 1183.1 MSA 181.5 SSA 18.9  
 EL1 931.5 EL2 181.5 ALF 27.71

LAUNCH DATE JAN 11 1969 FLIGHT TIME 110.00 ARRIVAL DATE MAY 1 1969

DISTANCE 286.390

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 26.943 GAL 1.50 AZL 88.47 HCA 123.07 SMA 123.09 ECC .19696 INC 1.5279 V1 30.282  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.026 GAP -9.07 AZP 90.85 TAL 173.07 TAP 297.74 RCA 98.84 APO 147.33 V2 34.967  
 RC 52.697 GL 11.87 GP 13.16 ZAL 79.56 ZAP 19.47 ETS 321.38 ZAE 130.14 ETE 14.44 ZAC 127.33 ETC 153.07 CLP -14.48

PLANETOCENTRIC CONIC  
 C3 12.193 VHL 3.492 DLA 23.00 RAL 24.67 RAD 6567.5 VEL 11.558 PTH 2.02 VHP 6.438 DPA 25.13 RAP 33.09 ECC 1.2007  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 11 13 2917.60 -28.20 90.42 245.83 88.50 2 59 51 2317.6 -28.19 81.76  
 90.00 21 4 4 3931.94 -8.51 156.92 240.55 62.89 22 9 36 3331.9 -12.07 150.06  
 100.00 3 50 3 2598.93 -29.89 66.99 245.85 90.61 4 33 22 1998.9 -29.48 58.21  
 100.00 22 7 55 3725.83 -7.09 141.01 239.79 60.88 23 10 1 3125.8 -10.92 134.31  
 110.00 5 33 52 2274.13 -33.74 42.07 245.59 95.81 6 11 46 1674.1 -32.57 33.03  
 110.00 22 40 35 3623.40 -3.80 131.21 237.76 56.00 23 40 58 3023.4 -8.23 124.94

MID-COURSE EXECUTION ACCURACY  
 SGT 1705.6 SGR 539.1 SG3 290.0  
 RRT .7279 RRF -.7732 RTF -.9084  
 SGB 1788.7 R23 -.1182 R13 -.9154  
 SGI 1752.2 SG2 359.8 THA 13.54

ORBIT DETERMINATION ACCURACY  
 ST 835.0 SR 467.7 SS 742.0  
 CRT .9065 CRS .9436 CST .9944  
 LSA 1198.1 MSA 175.3 SSA 19.4  
 EL1 940.9 EL2 175.3 ALF 27.97

DIFFERENTIAL CORRECTIONS  
 TDE -.4460 TRA -.7503 TC3 1.0936 BAU .1875  
 RDE -.2844 RRA -.0574 RC3 .3576 FAU .05245  
 FDE .7473 FRA .9715 FC3-3.7242 BSP 5704  
 BDE .5290 BRA .7527 BC3 1.1506 FSP -833

LAUNCH DATE JAN 11 1969 FLIGHT TIME 112.00 ARRIVAL DATE MAY 3 1969

DISTANCE 293.033

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.042 GAL 1.32 AZL 88.63 HCA 127.06 SMA 123.70 ECC .19072 INC 1.3676 V1 30.282  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.086 GAP -8.42 AZP 90.82 TAL 174.38 TAP 301.43 RCA 100.11 APO 147.29 V2 34.954  
 RC 54.398 GL 11.06 GP 14.52 ZAL 80.55 ZAP 22.01 ETS 323.01 ZAE 148.96 ETE 17.09 ZAC 127.43 ETC 151.65 CLP -16.73

PLANETOCENTRIC CONIC  
 C3 11.319 VHL 3.364 DLA 21.87 RAL 23.97 RAD 6567.4 VEL 11.520 PTH 2.01 VHP 6.103 DPA 26.74 RAP 33.45 ECC 1.1863  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 23 42 2847.47 -28.30 85.29 243.54 91.08 3 11 10 2247.5 -27.85 76.66  
 90.00 20 46 0 3970.93 -7.29 159.13 238.41 62.56 21 52 11 3370.9 -10.91 152.33  
 100.00 4 0 29 2535.43 -29.75 62.27 243.48 93.08 4 42 45 1935.4 -29.00 53.55  
 100.00 21 51 55 3758.20 -6.01 142.81 237.71 60.66 22 54 33 3158.2 -9.88 136.15  
 110.00 5 40 53 2221.32 -33.31 38.01 243.07 98.18 6 17 54 1621.3 -31.82 29.10  
 110.00 22 28 0 3645.07 -2.97 132.35 235.83 55.93 23 28 45 3045.1 -7.42 126.09

MID-COURSE EXECUTION ACCURACY  
 SGT 1731.4 SGR 583.9 SG3 321.2  
 RRT .7772 RRF -.8261 RTF -.9131  
 SGB 1827.2 R23 -.1354 R13 -.9218  
 SGI 1792.4 SG2 354.9 THA 15.30

ORBIT DETERMINATION ACCURACY  
 ST 834.5 SR 474.1 SS 748.5  
 CRT .9149 CRS .9474 CST .9953  
 LSA 1205.2 MSA 169.0 SSA 20.0  
 EL1 944.8 EL2 169.0 ALF 28.46

DIFFERENTIAL CORRECTIONS  
 TDE -.4297 TRA -.7273 TC3 1.2264 BAU .1987  
 RDE -.2773 RRA -.0733 RC3 .4695 FAU .05700  
 FDE .7634 FRA 1.0226 FC3-4.3598 BSP 5835  
 BDE .5114 BRA .7310 BC3 1.3132 FSP -931

LAUNCH DATE JAN 11 1969 FLIGHT TIME 114.00 ARRIVAL DATE MAY 5 1969

DISTANCE 299.689

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.131 GAL 1.16 AZL 88.81 HCA 130.24 SMA 124.26 ECC .18507 INC 1.1934 V1 30.282  
 RP 108.43 LAP .91 LOP 240.85 VP 37.140 GAP -7.79 AZP 90.77 TAL 174.88 TAP 305.13 RCA 101.26 APO 147.26 V2 34.942  
 RC 56.186 GL 10.02 GP 16.09 ZAL 81.54 ZAP 24.78 ETS 324.22 ZAE 147.91 ETE 20.00 ZAC 127.27 ETC 150.14 CLP -19.10

PLANETOCENTRIC CONIC  
 C3 10.548 VHL 3.248 DLA 20.53 RAL 23.37 RAD 6567.4 VEL 11.486 PTH 2.00 VHP 5.790 DPA 28.49 RAP 33.58 ECC 1.1736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 37 49 2772.97 -28.08 79.85 241.33 93.79 3 24 2 2173.0 -27.26 71.28  
 90.00 20 27 4 4016.53 -5.85 161.71 236.43 62.24 21 34 1 3416.5 -9.52 154.96  
 100.00 4 12 37 2467.25 -29.39 57.24 241.20 95.71 4 53 44 1867.3 -28.29 48.61  
 100.00 21 34 57 3797.48 -4.70 144.98 235.80 60.45 22 38 14 3197.5 -8.60 138.37  
 110.00 5 49 32 2164.04 -32.67 33.66 240.65 100.68 6 25 36 1564.0 -30.85 24.91  
 110.00 22 14 31 3673.46 -1.89 133.83 234.05 55.86 23 15 44 3073.5 -6.35 127.59

MID-COURSE EXECUTION ACCURACY  
 SGT 1745.4 SGR 643.0 SG3 355.1  
 RRT .8193 RRF -.8712 RTF -.9180  
 SGB 1860.1 R23 -.1518 R13 -.9289  
 SGI 1826.4 SG2 352.3 THA 17.46

ORBIT DETERMINATION ACCURACY  
 ST 819.3 SR 479.6 SS 743.2  
 CRT .9220 CRS .9498 CST .9961  
 LSA 1194.4 MSA 163.0 SSA 20.7  
 EL1 935.3 EL2 162.7 ALF 29.33

DIFFERENTIAL CORRECTIONS  
 TDE -.4062 TRA -.7013 TC3 1.3663 BAU .2110  
 RDE -.2702 RRA -.0909 RC3 .6097 FAU .06208  
 FDE .7661 FRA 1.0770 FC3-5.0947 BSP 6019  
 BDE .4879 BRA .7072 BC3 1.4962 FSP -1043

LAUNCH DATE JAN 11 1969 FLIGHT TIME 116.00 ARRIVAL DATE MAY 7 1969

DISTANCE 306.307

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.212 GAL 1.01 AZL 89.00 HCA 133.43 SMA 124.77 ECC .17997 INC 1.0021 V1 30.282  
 RP 108.49 LAP .73 LOP 244.03 VP 37.187 GAP -7.18 AZP 90.69 TAL 175.39 TAP 308.82 RCA 102.32 APO 147.23 V2 34.929  
 RC 58.051 GL 8.71 GP 17.90 ZAL 82.52 ZAP 27.78 ETS 325.12 ZAE 146.94 ETE 23.24 ZAC 126.82 ETC 148.58 CLP -21.60

PLANETOCENTRIC CONIC  
 C3 9.871 VHL 3.142 DLA 18.94 RAL 22.88 RAD 6567.4 VEL 11.457 PTH 1.99 VHP 5.502 DPA 30.41 RAP 33.47 ECC 1.1625  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 53 41 2693.68 -27.59 74.11 239.23 96.63 3 38 35 2093.7 -26.39 65.65  
 90.00 20 7 20 4069.21 -4.17 164.87 234.66 61.97 21 15 9 3469.2 -7.89 157.97  
 100.00 4 26 38 2393.99 -28.78 51.88 239.05 98.47 5 6 32 1794.0 -27.31 43.39  
 100.00 21 17 5 3844.13 -3.13 147.55 234.08 60.26 22 21 9 3244.1 -7.06 140.98  
 110.00 6 0 1 2101.81 -31.79 29.02 238.38 103.29 6 35 3 1501.8 -29.63 20.47  
 110.00 22 0 11 3709.08 -.53 135.69 232.46 55.82 23 2 0 3109.1 -5.01 129.47

MID-COURSE EXECUTION ACCURACY  
 SGT 1753.4 SGR 719.7 SG3 391.4  
 RRT .8529 RRF -.9078 RTF -.9210  
 SGB 1895.4 R23 -.1699 R13 -.9350  
 SGI 1862.1 SG2 353.8 THA 20.05

ORBIT DETERMINATION ACCURACY  
 ST 800.0 SR 484.9 SS 730.7  
 CRT .9289 CRS .9511 CST .9970  
 LSA 1176.4 MSA 156.7 SSA 21.6  
 EL1 922.4 EL2 153.7 ALF 30.34

DIFFERENTIAL CORRECTIONS  
 TDE -.3817 TRA -.6797 TC3 1.4884 BAU .2215  
 RDE -.2634 RRA -.1125 RC3 .7801 FAU .06728  
 FDE .7583 FRA 1.1439 FC3-5.9008 BSP 6125  
 BDE .4837 BRA .6890 BC3 1.6787 FSP -1158

LAUNCH DATE JAN 11 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 312.904

RL 147.12 LAL .00 LOL 110.60 VL 27.285 GAL .88 AZL 89.21 HCA 136.61 SMA 125.24 ECC .17538 INC .7897 V1 30.282
RP 108.53 LAP .54 LOP 247.21 VP 37.229 GAP -6.60 AZP 90.57 TAL 175.88 TAP 312.49 RCA 103.27 APO 147.20 V2 34.917
RC 59.985 GL 7.09 GP 19.99 ZAL 83.48 ZAP 31.04 ETS 325.78 ZAE 146.00 ETE 26.89 ZAC 126.02 ETC 146.97 CLP -24.25

PLANETOCENTRIC CONIC

C3 9.280 VHL 3.046 DLA 17.07 RAL 22.55 RAD 6567.3 VEL 11.431 PTH 1.98 VHP 5.240 DPA 32.54 RAP 33.04 ECC 1.1527
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 11 36 2608.83 -26.78 68.03 237.29 99.57 3 55 5 2008.8 -25.18 59.73
90.00 19 46 47 4129.81 -2.23 168.07 233.15 61.76 20 55 37 3529.8 -5.98 161.40
100.00 4 42 44 2314.95 -27.85 46.19 237.06 101.32 5 21 19 1714.9 -26.00 37.87
100.00 20 58 20 3898.92 -1.27 150.56 232.62 60.13 22 3 19 3298.9 -5.24 144.02
110.00 6 12 32 2033.94 -30.62 24.08 236.29 106.00 6 46 26 1433.9 -28.12 15.77
110.00 21 45 1 3752.70 1.14 137.96 231.11 55.83 22 47 33 3152.7 -3.35 131.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3515 TRA -.8569 TC3 1.5997 BAU .2335 SGT 1748.5 SGR 817.5 SCS 429.9 ST 766.9 SR 486.6 SS 702.2
RDE -.2549 RRA -.1377 RC3 .9916 FAU .07287 RRT .8786 RRF -.9360 RTF -.9235 CRT .9351 CRS .9501 CST .9980
FDE .7281 FRA 1.2158 FC3-6.7982 BSP 6228 SGB 1930.2 R23 -.1851 R13 -.9416 LSA 1137.9 MSA 150.5 SSA 22.7
BDE .4342 BRA .6712 BC3 1.8821 FSP -1280 SGI 1896.3 SGT 359.9 THA 23.22 EL1 896.2 EL2 147.6 ALF 31.64

LAUNCH DATE JAN 11 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 319.480

RL 147.12 LAL .00 LOL 110.60 VL 27.350 GAL .75 AZL 89.45 HCA 139.79 SMA 125.66 ECC .17128 INC .5506 V1 30.282
RP 108.57 LAP .36 LOP 250.39 VP 37.266 GAP -6.03 AZP 90.42 TAL 176.35 TAP 316.14 RCA 104.14 APO 147.18 V2 34.906
RC 61.981 GL 5.09 GP 22.43 ZAL 84.40 ZAP 34.59 ETS 326.28 ZAE 145.00 ETE 31.01 ZAC 124.85 ETC 145.35 CLP -27.06

PLANETOCENTRIC CONIC

C3 8.772 VHL 2.962 DLA 14.86 RAL 22.41 RAD 6567.3 VEL 11.409 PTH 1.97 VHP 5.007 DPA 34.91 RAP 32.25 ECC 1.1444
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 31 53 2517.32 -25.58 61.60 235.56 102.58 4 13 50 1917.3 -23.59 53.49
90.00 19 25 20 4199.62 .03 171.96 231.96 61.68 20 35 19 3599.6 -3.76 165.32
100.00 5 1 15 2229.10 -26.55 40.14 235.30 104.26 5 38 24 1629.1 -24.33 32.05
100.00 20 38 38 3963.07 .90 154.08 231.47 60.12 21 44 42 3363.1 -3.08 147.56
110.00 6 27 25 1959.49 -29.10 18.81 234.44 108.78 7 0 4 1359.5 -26.26 10.78
110.00 21 28 58 3805.44 3.16 140.72 230.07 55.95 22 32 23 3205.4 -1.33 134.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3162 TRA -.6352 TC3 1.8913 BAU .2465 SGT 1730.4 SGR 939.9 SCS 469.2 ST 721.4 SR 482.7 SS 657.8
RDE -.2437 RRA -.1689 RC3 1.2485 FAU .07846 RRT .8971 RRF -.9568 RTF -.9254 CRT .9410 CRS .9456 CST .9987
FDE .6709 FRA 1.2992 FC3-7.7437 BSP 6386 SGB 1969.2 R23 -.1947 R13 -.9490 LSA 1079.2 MSA 145.0 SSA 24.1
BDE .3992 BRA .6573 BC3 2.1022 FSP -1412 SGI 1933.8 SGT 371.6 THA 27.06 EL1 857.1 EL2 137.6 ALF 33.16

LAUNCH DATE JAN 11 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 326.035

RL 147.12 LAL .00 LOL 110.60 VL 27.408 GAL .65 AZL 89.72 HCA 142.97 SMA 126.04 ECC .16763 INC .2784 V1 30.282
RP 108.60 LAP .17 LOP 253.57 VP 37.298 GAP -5.48 AZP 90.22 TAL 176.79 TAP 319.76 RCA 104.91 APO 147.17 V2 34.894
RC 84.032 GL 2.64 GP 23.26 ZAL 85.28 ZAP 38.47 ETS 326.68 ZAE 143.85 ETE 35.64 ZAC 123.23 ETC 143.77 CLP -30.04

PLANETOCENTRIC CONIC

C3 8.347 VHL 2.889 DLA 12.26 RAL 22.48 RAD 6567.3 VEL 11.390 PTH 1.97 VHP 4.808 DPA 37.56 RAP 31.00 ECC 1.1374
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 55 2 2417.62 -23.92 54.77 234.11 105.62 4 35 19 1817.6 -21.55 46.90
90.00 19 2 47 4280.51 2.64 176.47 231.16 61.80 20 14 7 3680.5 -1.16 169.84
100.00 5 22 39 2135.05 -24.82 33.69 233.82 107.22 5 58 14 1535.1 -22.22 25.86
100.00 20 17 51 4038.31 3.45 158.21 230.71 60.29 21 25 9 3438.3 -.53 151.69
110.00 6 45 3 1877.20 -27.17 13.19 232.90 111.59 7 16 20 1277.2 -23.99 5.47
110.00 21 11 56 3868.94 5.57 144.05 229.39 56.22 22 16 25 3268.9 1.09 137.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2766 TRA -.6154 TC3 1.7421 BAU .2606 SGT 1695.3 SGR 1090.4 SCS 507.2 ST 665.0 SR 468.3 SS 594.9
RDE -.2269 RRA -.2080 RC3 1.5557 FAU .08370 RRT .9084 RRF -.9714 RTF -.9251 CRT .9478 CRS .9340 CST .9975
FDE .5769 FRA 1.3924 FC3-8.6812 BSP 6534 SGB 2015.7 R23 -.1990 R13 -.9563 LSA 997.4 MSA 141.4 SSA 25.8
BDE .3578 BRA .6496 BC3 2.3356 FSP -1540 SGI 1977.4 SGT 390.9 THA 31.68 EL1 803.9 EL2 123.6 ALF 34.66

LAUNCH DATE JAN 11 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 332.567

RL 147.12 LAL .00 LOL 110.60 VL 27.459 GAL .55 AZL 90.04 HCA 146.15 SMA 126.38 ECC .16440 INC .0328 V1 30.282
RP 108.64 LAP -.02 LOP 256.74 VP 37.325 GAP -4.96 AZP 89.97 TAL 177.20 TAP 323.35 RCA 105.60 APO 147.16 V2 34.883
RC 86.131 GL -.36 GP 28.54 ZAL 86.10 ZAP 42.69 ETS 327.06 ZAE 142.39 ETE 40.77 ZAC 121.12 ETC 142.26 CLP -33.21

PLANETOCENTRIC CONIC

C3 8.012 VHL 2.831 DLA 9.17 RAL 22.82 RAD 6567.3 VEL 11.376 PTH 1.96 VHP 4.649 DPA 40.53 RAP 29.19 ECC 1.1319
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 21 45 2307.65 -21.71 47.46 233.05 108.64 5 0 12 1707.7 -18.97 39.87
90.00 18 38 48 4375.22 5.66 181.78 230.86 62.21 19 51 43 3775.2 1.90 175.13
100.00 5 47 34 2030.85 -22.54 26.79 232.73 110.17 6 21 25 1430.8 -19.59 19.24
100.00 19 53 39 4127.25 6.43 163.13 230.44 60.75 21 4 27 3527.3 2.49 156.57
110.00 7 6 1 1785.36 -24.72 7.18 231.76 114.40 7 35 46 1185.4 -21.22 359.78
110.00 20 53 42 3945.51 8.45 148.11 229.20 56.75 21 59 27 3345.5 4.02 141.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2338 TRA -.5934 TC3 1.7631 BAU .2794 SGT 1643.3 SGR 1275.7 SCS 542.2 ST 598.5 SR 439.0 SS 517.8
RDE -.2017 RRA -.2565 RC3 1.9222 FAU .08845 RRT .9155 RRF -.9814 RTF -.9246 CRT .9586 CRS .9091 CST .9875
FDE .4412 FRA 1.4877 FC3-9.5373 BSP 6726 SGB 2080.4 R23 -.1909 R13 -.9649 LSA 893.1 MSA 143.3 SSA 27.0
BDE .3088 BRA .6465 BC3 2.6083 FSP -1656 SGI 2038.8 SGT 413.7 THA 37.19 EL1 735.2 EL2 101.7 ALF 35.91

LAUNCH DATE JAN 11 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.505 GAL .47 AZL 90.41 HCA 149.32 SMA 126.68 ECC .16156 INC .4084 V1 30.282  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.349 GAP -4.45 AZP 89.65 TAL 177.57 TAP 326.89 RCA 106.21 APO 147.15 V2 34.873  
 RC 88.274 GL -4.03 GP 32.35 ZAL 86.84 ZAP 47.27 ETS 327.51 ZAE 140.49 ETE 46.33 ZAC 118.47 ETC 140.91 CLP -36.57

DISTANCE 339.076

PLANETOCENTRIC CONIC

C3 7.784 VHL 2.790 DLA 5.48 RAL 23.49 RAD 6567.3 VEL 11.366 PTH 1.96 VHP 4.539 DPA 43.85 RAP 26.68 ECC 1.1281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 53 1 2184.58 -18.83 39.59 232.50 111.55 5 29 26 1584.6 -15.74 32.28  
 90.00 18 12 49 4487.67 9.19 188.17 231.20 63.10 19 27 36 3887.7 5.50 181.43  
 100.00 6 16 57 1913.88 -19.60 19.35 232.17 113.03 6 48 51 1313.9 -16.31 12.10  
 100.00 19 31 34 4233.61 9.92 169.10 230.81 61.66 20 42 8 3633.6 6.06 162.44  
 110.00 7 31 7 1681.75 -21.65 .70 231.14 117.12 7 59 9 1081.8 -17.84 353.64  
 110.00 20 33 53 4038.50 11.88 153.13 229.64 57.71 21 41 12 3438.5 7.53 146.73

DIFFERENTIAL CORRECTIONS

TDE -.1890 TRA -.5729 TC3 1.7109 BAU .3010  
 RDE -.1622 RRA -.3193 RC3 2.3327 FAU .09161  
 FDE .2544 FRA 1.5878 FC-10.1884 B9P 6976  
 BDE .2490 BRA .6559 BC3 2.8929 F9P -1750

MID-COURSE EXECUTION ACCURACY

SGT 1568.1 SGR 1496.4 SG3 568.7  
 RRT .9164 RRF -.9881 RTF -.9206  
 SGB 2167.5 R23 -.1750 R13 -.9732  
 SG1 2121.8 SG2 442.5 THA 43.54

ORBIT DETERMINATION ACCURACY

ST 526.5 SR 389.2 SS 441.6  
 CRT .9782 CRS .8553 CST .9381  
 LSA 772.3 MSA 162.8 SSA 25.9  
 EL1 651.5 EL2 65.4 ALF 36.30

LAUNCH DATE JAN 11 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.545 GAL .40 AZL 90.86 HCA 152.49 SMA 126.95 ECC .15909 INC .8563 V1 30.282  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.369 GAP -3.95 AZP 89.24 TAL 177.89 TAP 330.38 RCA 106.75 APO 147.14 V2 34.862  
 RC 70.456 GL -8.54 GP 36.73 ZAL 87.51 ZAP 52.21 ETS 328.11 ZAE 137.95 ETE 52.19 ZAC 115.24 ETC 139.77 CLP -40.14

DISTANCE 345.562

PLANETOCENTRIC CONIC

C3 7.699 VHL 2.775 DLA 1.05 RAL 24.54 RAD 6567.3 VEL 11.362 PTH 1.96 VHP 4.491 DPA 47.54 RAP 23.25 ECC 1.1267  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 30 20 2044.58 -15.11 31.00 232.67 114.23 6 4 25 1444.6 -11.72 23.97  
 90.00 17 43 54 4623.65 13.26 196.08 232.43 64.75 19 0 58 4023.6 9.75 189.16  
 100.00 6 52 10 1780.63 -15.85 11.23 232.32 115.68 7 21 50 1180.6 -12.27 4.27  
 100.00 19 4 45 4362.83 13.99 176.53 232.08 63.31 20 17 28 3762.8 10.30 169.69  
 110.00 8 1 32 1563.52 -17.82 353.67 231.24 119.67 8 27 35 963.5 -13.74 346.94  
 110.00 20 11 53 4152.70 15.94 159.48 230.98 59.35 21 21 6 3552.7 11.76 152.87

DIFFERENTIAL CORRECTIONS

TDE -.1473 TRA -.5534 TC3 1.5813 BAU .3279  
 RDE -.1030 RRA -.4021 RC3 2.7654 FAU .09249  
 FDE .0236 FRA 1.6874 FC-10.4006 B9P 7309  
 BDE .1797 BRA .6841 BC3 3.1856 F9P -1798

MID-COURSE EXECUTION ACCURACY

SGT 1472.8 SGR 1757.8 SG3 562.5  
 RRT .9118 RRF -.9924 RTF -.9127  
 SGB 2293.3 R23 -.1514 R13 -.9810  
 SG1 2243.8 SG2 473.7 THA 50.52

ORBIT DETERMINATION ACCURACY

ST 459.1 SR 330.7 SS 411.7  
 CRT .9964 CRS .7946 CST .7758  
 LSA 664.6 MSA 218.1 SSA 21.0  
 EL1 565.4 EL2 22.7 ALF 35.74

LAUNCH DATE JAN 11 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.579 GAL .34 AZL 91.41 HCA 155.65 SMA 127.18 ECC .15695 INC 1.4110 V1 30.282  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.385 GAP -3.47 AZP 88.71 TAL 178.16 TAP 333.81 RCA 107.22 APO 147.14 V2 34.853  
 RC 72.672 GL -14.05 GP 41.73 ZAL 88.08 ZAP 57.48 ETS 329.00 ZAE 134.62 ETE 58.13 ZAC 111.42 ETC 138.94 CLP -43.91

DISTANCE 352.023

PLANETOCENTRIC CONIC

C3 7.825 VHL 2.797 DLA -4.28 RAL 26.07 RAD 6567.3 VEL 11.367 PTH 1.96 VHP 4.525 DPA 51.57 RAP 18.62 ECC 1.1288  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 16 2 1882.23 -10.37 21.44 233.89 116.50 6 47 24 1282.2 -6.72 14.65  
 90.00 17 10 25 4791.95 17.90 206.26 234.92 67.68 18 30 17 4191.9 14.72 199.03  
 100.00 7 35 22 1626.30 -11.10 2.23 233.51 117.93 8 2 28 1026.3 -7.28 355.53  
 100.00 18 33 46 4523.11 18.66 186.15 234.57 66.21 19 49 9 3923.1 15.29 178.98  
 110.00 8 39 1 1427.05 -13.06 345.96 232.36 121.88 9 2 48 827.1 -8.75 339.51  
 110.00 19 46 37 4295.13 20.69 167.79 233.53 62.16 20 58 12 3695.1 16.80 160.83

DIFFERENTIAL CORRECTIONS

TDE -.1048 TRA -.5285 TC3 1.3751 BAU .3619  
 RDE -.0078 RRA -.5084 RC3 3.1743 FAU .09047  
 FDE -.2651 FRA 1.7602 FC-10.0092 B9P 7829  
 BDE .1051 BRA .7334 BC3 3.4593 F9P -1797

MID-COURSE EXECUTION ACCURACY

SGT 1347.7 SGR 2060.2 SG3 577.8  
 RRT .9015 RRF -.9952 RTF -.9005  
 SGB 2461.9 R23 -.1202 R13 -.9879  
 SG1 2411.0 SG2 498.3 THA 57.94

ORBIT DETERMINATION ACCURACY

ST 390.8 SR 318.2 SS 478.8  
 CRT .8579 CRS .8729 CST .5027  
 LSA 626.1 MSA 301.6 SSA 14.6  
 EL1 486.5 EL2 131.3 ALF 38.22

LAUNCH DATE JAN 11 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.608 GAL .30 AZL 92.12 HCA 158.81 SMA 127.37 ECC .15512 INC 2.1192 V1 30.282  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.398 GAP -3.01 AZP 88.02 TAL 178.37 TAP 337.19 RCA 107.62 APO 147.13 V2 34.844  
 RC 74.919 GL -20.75 GP 47.39 ZAL 88.55 ZAP 62.97 ETS 330.28 ZAE 130.38 ETE 63.95 ZAC 107.03 ETC 138.52 CLP -47.83

DISTANCE 358.459

PLANETOCENTRIC CONIC

C3 8.300 VHL 2.881 DLA -10.85 RAL 28.20 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.672 DPA 55.89 RAP 12.35 ECC 1.1366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 14 13 1689.07 -4.32 10.46 236.70 118.01 7 42 22 1089.1 -.54 3.82  
 90.00 16 29 14 5006.94 22.87 220.06 239.29 72.83 17 52 41 4406.9 20.30 212.32  
 100.00 8 30 14 1443.78 -5.12 351.99 236.26 119.49 8 54 18 843.8 -1.15 345.45  
 100.00 17 55 53 4727.46 23.73 199.20 238.98 71.27 19 14 41 4127.5 20.95 191.50  
 110.00 9 26 26 1267.82 -7.19 337.36 234.98 123.51 9 47 34 667.8 -2.73 331.11  
 110.00 19 16 11 4476.20 26.00 179.16 238.03 66.99 20 30 47 3876.2 22.66 171.60

DIFFERENTIAL CORRECTIONS

TDE -.0743 TRA -.4967 TC3 1.0733 BAU .4002  
 RDE .1337 RRA -.6476 RC3 3.4435 FAU .08421  
 FDE -.5714 FRA 1.7923 FC3-8.7842 B9P 8449  
 BDE .1530 BRA .8161 BC3 3.6069 F9P -1708

MID-COURSE EXECUTION ACCURACY

SGT 1189.3 SGR 2392.7 SG3 546.9  
 RRT .8803 RRF -.9969 RTF -.8778  
 SGB 2672.0 R23 -.0890 R13 -.9929  
 SG1 2621.9 SG2 515.0 THA 65.35

ORBIT DETERMINATION ACCURACY

ST 336.3 SR 478.4 SS 638.1  
 CRT .4996 CRS .9774 CST .3067  
 LSA 805.3 MSA 317.2 SSA 9.6  
 EL1 519.6 EL2 268.2 ALF 62.88

LAUNCH DATE JAN 11 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 364.869

RL 147.12 LAL .00 LOL 110.60 VL 27.633 GAL .27 AZL 93.06 HCA 161.97 SMA 127.54 ECC .15359 INC 3.0621 V1 30.202
RP 108.78 LAP -.95 LOP 272.59 VP 37.409 GAP -2.57 AZP 87.09 TAL 178.52 TAP 340.49 RCA 107.95 APO 147.13 V2 34.835
RC 77.194 GL -28.76 GP 53.71 ZAL 88.91 ZAP 68.55 ETS 332.10 ZAE 125.16 ETE 69.44 ZAC 102.14 ETC 138.59 CLP -31.84

PLANETOCENTRIC CONIC

C3 9.411 VHL 3.068 DLA -18.16 RAL 31.09 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 4.984 DPA 60.33 RAP 3.75 ECC 1.1549
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 33 49 1446.66 3.48 356.92 242.10 118.12 8 57 56 846.7 7.22 350.24
90.00 15 32 40 5297.44 27.24 240.16 246.43 81.96 17 0 57 4697.4 25.85 231.77
100.00 9 44 22 1219.02 2.49 339.64 241.55 119.80 10 4 41 619.0 6.43 333.08
100.00 17 4 48 5000.31 28.37 218.11 246.23 80.15 18 28 9 4400.3 26.71 209.69
110.00 10 29 1 1079.11 -.01 327.47 239.99 124.18 10 47 0 479.1 4.47 321.25
110.00 18 36 38 4712.98 31.25 195.57 245.31 75.38 19 55 11 4113.0 28.92 187.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0845 TRA -.4571 TC3 .7064 BAU .4415 SGT 1004.8 SGR 2750.6 SG3 488.7 ST 295.5 SR 811.3 SS 828.1
RDE .3431 RRA -.8371 RC3 3.4373 FAU .07358 RRT .8377 RRF -.9980 RTF -.8339 CRT .2365 CRS .9968 CST .1584
FDE -.8612 FRA 1.7745 FC3-6.7683 BSP 9198 SGB 2928.4 R23 -.0613 R13 -.9961 LSA 1159.9 MSA 293.0 SSA 6.2
BOE .3491 BRA 1.9538 BC3 3.5092 FSP -1530 SGI 2881.1 SG2 523.9 THA 72.38 EL1 814.8 EL2 285.9 ALF 84.38

LAUNCH DATE JAN 11 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 371.249

RL 147.12 LAL .00 LOL 110.60 VL 27.654 GAL .25 AZL 94.39 HCA 165.12 SMA 127.68 ECC .15232 INC 4.3878 V1 30.282
RP 108.81 LAP -1.13 LOP 275.75 VP 37.416 GAP -2.13 AZP 85.76 TAL 178.60 TAP 343.72 RCA 108.23 APO 147.13 V2 34.827
RC 79.493 GL -37.98 GP 60.69 ZAL 89.16 ZAP 74.01 ETS 334.55 ZAE 118.94 ETE 74.49 ZAC 96.84 ETC 139.25 CLP -55.75

PLANETOCENTRIC CONIC

C3 11.822 VHL 3.458 DLA -26.67 RAL 34.94 RAD 6567.5 VEL 11.542 PTH 2.01 VHP 5.555 DPA 64.60 RAP 351.75 ECC 1.1946
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 53 52 1051.67 15.48 334.12 252.76 114.01 11 11 24 451.7 18.60 326.83
90.00 13 43 19 5784.84 26.82 275.52 256.40 99.44 15 19 43 5184.8 27.85 267.00
100.00 11 43 48 890.39 13.24 321.18 251.65 117.04 11 58 39 290.4 16.77 314.16
100.00 15 36 4 5421.35 29.28 249.16 256.79 96.31 17 6 25 4821.4 29.84 240.40
110.00 11 59 23 841.47 8.99 314.97 249.15 123.12 12 13 25 241.5 13.29 308.50
110.00 17 36 58 5043.04 34.18 220.74 257.10 89.92 19 1 1 4443.0 33.79 211.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0906 TRA -.4003 TC3 .3399 BAU .4794 SGT 796.6 SGR 3111.3 SG3 404.7 ST 270.1 SR 1243.3 SS 976.4
RDE .6488 RRA-1.1020 RC3 3.0139 FAU .05879 RRT .7487 RRF -.9986 RTF -.7435 CRT -.0720 CRS .9994 CST -.1073
FDE-1.0793 FRA 1.6913 FC3-4.3050 BSP 10109 SGB 3211.6 R23 -.0385 R13 -.9979 LSA 1580.8 MSA 270.5 SSA 4.0
BOE .6531 BRA 1.1724 BC3 3.0330 FSP -1279 SGI 3169.5 SG2 518.3 THA 78.85 EL1 1243.4 EL2 269.4 ALF 90.94

LAUNCH DATE JAN 11 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 377.595

RL 147.12 LAL .00 LOL 110.60 VL 27.670 GAL .25 AZL 96.40 HCA 168.25 SMA 127.79 ECC .15131 INC 6.4029 V1 30.282
RP 108.83 LAP -1.30 LOP 278.92 VP 37.422 GAP -1.72 AZP 83.73 TAL 178.60 TAP 346.85 RCA 108.46 APO 147.13 V2 34.820
RC 81.813 GL -47.93 GP 68.34 ZAL 89.32 ZAP 79.06 ETS 337.64 ZAE 111.70 ETE 79.02 ZAC 91.29 ETC 140.52 CLP -59.06

PLANETOCENTRIC CONIC

C3 17.279 VHL 4.157 DLA -35.65 RAL 39.95 RAD 6567.7 VEL 11.775 PTH 2.08 VHP 6.577 DPA 68.17 RAP 334.77 ECC 1.2844
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.37 9 53 42 1380.20 25.42 3.52 268.45 115.89 10 16 43 780.2 28.68 355.73
112.63 15 23 26 5623.96 25.43 263.14 268.45 115.88 16 57 10 5024.0 28.69 255.35
67.37 9 53 42 1380.20 25.42 3.52 268.45 115.89 10 16 43 780.2 28.68 355.73
112.63 15 23 26 5623.96 25.43 263.14 268.45 115.88 16 57 10 5024.0 28.69 255.35
67.37 9 53 42 1380.20 25.42 3.52 268.45 115.89 10 16 43 780.2 28.68 355.73
112.63 15 23 26 5623.96 25.43 263.14 268.45 115.88 16 57 10 5024.0 28.69 255.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1784 TRA -.3097 TC3 .0644 BAU .5030 SGT 582.6 SGR 3446.7 SG3 304.2 ST 292.1 SR 1678.5 SS 1022.8
RDE 1.0862 RRA-1.4872 RC3 2.1764 FAU .04144 RRT .5249 RRF -.9990 RTF -.5181 CRT -.5076 CRS .9998 CST -.5236
FDE-1.1757 FRA 1.5357 FC3-2.0765 BSP 11044 SGB 3495.6 R23 -.0204 R13 -.9989 LSA 1971.3 MSA 250.8 SSA 2.7
BOE 1.1007 BRA 1.5191 BC3 2.1774 FSP -972 SGI 3460.5 SG2 493.9 THA 84.82 EL1 1685.1 EL2 250.7 ALF 95.16

LAUNCH DATE JAN 11 1969

FLIGHT TIME 140.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 383.892

RL 147.12 LAL .00 LOL 110.60 VL 27.683 GAL .26 AZL 99.85 HCA 171.36 SMA 127.88 ECC .15053 INC 9.8475 V1 30.282
RP 108.85 LAP -1.47 LOP 282.08 VP 37.425 GAP -1.32 AZP 80.26 TAL 178.51 TAP 349.87 RCA 108.63 APO 147.13 V2 34.813
RC 84.153 GL -57.57 GP 76.84 ZAL 89.43 ZAP 83.40 ETS 341.07 ZAE 103.29 ETE 82.77 ZAC 85.54 ETC 142.22 CLP -59.70

PLANETOCENTRIC CONIC

C3 31.483 VHL 5.609 DLA -44.08 RAL 46.08 RAD 6568.3 VEL 12.363 PTH 2.23 VHP 8.511 DPA 70.16 RAP 311.25 ECC 1.5178
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.69 9 18 50 1694.45 25.05 29.70 287.20 127.53 9 47 4 1094.5 29.75 22.82
125.31 16 47 15 5601.13 25.07 260.98 287.21 127.52 18 20 36 5001.1 29.76 254.09
54.69 9 18 50 1694.45 25.05 29.70 287.20 127.53 9 47 4 1094.5 29.75 22.82
125.31 16 47 15 5601.13 25.07 260.98 287.21 127.52 18 20 36 5001.1 29.76 254.09
54.69 9 18 50 1694.45 25.05 29.70 287.20 127.53 9 47 4 1094.5 29.75 22.82
125.31 16 47 15 5601.13 25.07 260.98 287.21 127.52 18 20 36 5001.1 29.76 254.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3620 TRA -.1474 TC3 -.0425 BAU .4850 SGT 427.7 SGR 3739.8 SG3 203.5 ST 375.0 SR 1991.5 SS 945.5
RDE 1.7344 RRA-2.1305 RC3 1.1522 FAU .02388 RRT -.0511 RRF -.9994 RTF .0572 CRT -.8005 CRS 1.0000 CST -.8062
FDE-1.1252 FRA 1.3502 FC3 -.6371 BSP 11841 SGB 3764.2 R23 -.0055 R13 -.9994 LSA 2225.2 MSA 222.3 SSA 1.8
BOE 1.7718 BRA 2.1356 BC3 1.1530 FSP -653 SGI 3739.9 SG2 427.1 THA 90.34 EL1 2014.3 EL2 222.2 ALF 98.68

LAUNCH DATE JAN 11 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.692 GAL .30 AZL 107.05 HCA 174.40 SMA 127.95 ECC .14997 INC17.0519 V1 30.282
RP 108.87 LAP -1.64 LOP 285.24 VP 37.426 GAP -.95 AZP 73.02 TAL 178.28 TAP 352.68 RCA 108.76 APO 147.13 V2 34.807
RC 86.508 GL -64.87 GP 86.35 ZAL 89.52 ZAP 86.75 ETS 340.88 ZAE 92.79 ETE 82.03 ZAC 79.40 ETC 140.84 CLP -26.94

DISTANCE 390.096

PLANETOCENTRIC CONIC

C3 80.442 VML 8.969 DLA -50.18 RAL 51.98 RAD 6569.6 VEL 14.205 PTH 2.59 VHP 12.793 DPA 68.97 RAP 281.29 ECC 2.3239
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.67 9 13 59 1996.69 16.56 50.07 307.61 138.08 9 47 15 1396.7 22.42 44.72
133.33 17 39 11 5760.85 16.57 267.72 307.63 138.08 19 15 12 5160.8 22.44 262.36
46.67 9 13 59 1996.69 16.56 50.07 307.61 138.08 9 47 15 1396.7 22.42 44.72
133.33 17 39 11 5760.85 16.57 267.72 307.63 138.08 19 15 12 5160.8 22.44 262.36
46.67 9 13 59 1996.69 16.56 50.07 307.61 138.08 9 47 15 1396.7 22.42 44.72
133.33 17 39 11 5760.85 16.57 267.72 307.63 138.08 19 15 12 5160.8 22.44 262.36

DIFFERENTIAL CORRECTIONS

TDE -3.906 TRA 2.855 TC3 -.0085 BAU .2992
RDE 2.9693 RRA -3.4260 RC3 .2781 FAU .00719
FDE -1.0235 FRA 1.2220 FC3 -.0775 BSP 12634
BDE 2.9949 BRA 3.4378 BC3 .2782 FSP -394

MID-COURSE EXECUTION ACCURACY

SGT 379.0 SGR 3940.6 SG3 120.1
RRR -.9739 RRF -.9995 RTF .9727
SGB 3958.8 R23 .0054 R13 -.9995
SG1 3957.9 SG2 85.7 THA 95.35

ORBIT DETERMINATION ACCURACY

ST 263.7 SR 2156.3 SS 827.9
CRT -.9863 CRS .9999 CST -.9838
LSA 2324.4 MSA 45.1 SSA 1.4
EL1 2172.0 EL2 43.2 ALF 96.88

LAUNCH DATE JAN 11 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.699 GAL .41 AZL 129.43 HCA 177.16 SMA 127.99 ECC .14967 INC39.4307 V1 30.282
RP 108.89 LAP -1.80 LOP 288.41 VP 37.426 GAP -.67 AZP 50.60 TAL 177.65 TAP 354.81 RCA 108.83 APO 147.14 V2 34.802
RC 88.877 GL -63.19 GP 74.18 ZAL 89.62 ZAP 88.83 ETS 177.02 ZAE 74.99 ETE 277.44 ZAC 71.25 ETC 338.65 CLP 85.72

DISTANCE 395.965

PLANETOCENTRIC CONIC

C3 388.518 VML 19.711 DLA -48.88 RAL 50.33 RAD 6572.1 VEL 22.579 PTH 3.26 VHP 26.165 DPA 59.58 RAP 245.69 ECC 7.3940
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.34 9 12 52 2243.86 3.06 59.35 317.64 138.81 9 50 16 1643.9 9.06 54.44
131.66 17 27 9 746.06 3.08 301.71 317.66 138.81 17 39 35 146.1 9.07 296.80
48.34 9 12 52 2243.86 3.06 59.35 317.64 138.81 9 50 16 1643.9 9.06 54.44
131.66 17 27 9 746.06 3.08 301.71 317.66 138.81 17 39 35 146.1 9.07 296.80
48.34 9 12 52 2243.86 3.06 59.35 317.64 138.81 9 50 16 1643.9 9.06 54.44
131.66 17 27 9 746.06 3.08 301.71 317.66 138.81 17 39 35 146.1 9.07 296.80

DIFFERENTIAL CORRECTIONS

TDE 3.8274 TRA -.8963 TC3 -.0652 BAU 1.0337
RDE -5.6412 RRA 7.4391 RC3 .1680 FAU -.01936
FDE -1.3308 FRA 1.5936 FC3 .0431 BSP 12509
BDE 6.8170 BRA 7.4930 BC3 .1990 FSP -234

MID-COURSE EXECUTION ACCURACY

SGT 1208.8 SGR 3748.2 SG3 71.0
RRR -.7323 RRF .9992 RTF -.7586
SGB 3938.3 R23 -.0117 R13 .9999
SG1 3856.2 SG2 800.0 THA 103.90

ORBIT DETERMINATION ACCURACY

ST 1118.9 SR 1913.7 SS 996.6
CRT -.9068 CRS -.9991 CST .9236
LSA 2394.2 MSA 418.5 SSA .4
EL1 2177.7 EL2 414.5 ALF 119.09

LAUNCH DATE JAN 11 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.702 GAL .06 AZL 26.38 HCA 182.18 SMA 128.01 ECC .14931 INC63.6200 V1 30.282
RP 108.90 LAP -1.96 LOP 291.57 VP 37.424 GAP .24 AZP 153.60 TAL 179.67 TAP 1.85 RCA 108.90 APO 147.12 V2 34.797
RC 91.256 GL 54.09 GP -63.13 ZAL 90.08 ZAP 90.12 ETS 176.26 ZAE 63.29 ETE 77.06 ZAC 91.36 ETC 25.81 CLP 90.27

DISTANCE 404.324

PLANETOCENTRIC CONIC

C3 938.944 VML 30.642 DLA 55.55 RAL 346.29 RAD 6572.9 VEL 32.561 PTH 3.49 VHP 36.632 DPA -59.22 RAP 156.72 ECC16.4526
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.98 16 30 8 5008.05 .17 236.96 256.42 34.45 17 53 36 4408.1 -6.42 232.83
140.02 1 38 55 3395.88 .18 107.09 256.40 34.45 2 35 31 2795.9 -6.41 102.96
39.98 16 30 8 5008.05 .17 236.96 256.42 34.45 17 53 36 4408.1 -6.42 232.83
140.02 1 38 55 3395.88 .18 107.09 256.40 34.45 2 35 31 2795.9 -6.41 102.96
39.98 16 30 8 5008.05 .17 236.96 256.42 34.45 17 53 36 4408.1 -6.42 232.83
140.02 1 38 55 3395.88 .18 107.09 256.40 34.45 2 35 31 2795.9 -6.41 102.96

DIFFERENTIAL CORRECTIONS

TDE -5.0438 TRA 2.5749 TC3 -.1148 BAU 3.3352
RD -16.8123 RRA 1.9072 RC3 -.2396 FAU -.05487
FDE 3.5177 FRA -.4552 FC3 .0506 BSP 10976
BDE17.5526 BRA 3.2043 BC3 .2657 FSP -192

MID-COURSE EXECUTION ACCURACY

SGT 1452.1 SGR 3526.5 SG3 64.2
RRR .8854 RRF -.9997 RTF -.8963
SGB 3813.8 R23 -.0393 R13 -.9992
SG1 3760.9 SG2 632.8 THA 69.36

ORBIT DETERMINATION ACCURACY

ST 977.3 SR 3149.6 SS 2086.9
CRT .9792 CRS 1.0000 CST .9809
LSA 3897.9 MSA 190.5 SSA .5
EL1 3292.3 EL2 189.8 ALF 73.04

LAUNCH DATE JAN 11 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.702 GAL .26 AZL 62.96 HCA 184.64 SMA 128.01 ECC .14934 INC27.0426 V1 30.282
RP 108.92 LAP -2.11 LOP 294.73 VP 37.420 GAP .41 AZP 116.97 TAL 178.53 TAP 3.17 RCA 108.90 APO 147.13 V2 34.793
RC 93.644 GL 65.99 GP -87.33 ZAL 89.78 ZAP 90.75 ETS 165.40 ZAE 87.42 ETE 68.59 ZAC 102.30 ETC 15.24 CLP 106.32

DISTANCE 409.817

PLANETOCENTRIC CONIC

C3 190.093 VML 13.787 DLA 63.70 RAL 328.91 RAD 6571.0 VEL 17.647 PTH 2.98 VHP 15.418 DPA -66.93 RAP 103.67 ECC 4.1285
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.22 14 55 53 4899.92 -9.24 238.93 234.31 26.67 16 17 33 4299.9 -16.37 235.61
149.78 0 54 32 3194.58 -9.23 96.95 234.29 26.67 1 47 46 2594.6 -16.36 93.63
30.22 14 55 53 4899.92 -9.24 238.93 234.31 26.67 16 17 33 4299.9 -16.37 235.61
149.78 0 54 32 3194.58 -9.23 96.95 234.29 26.67 1 47 46 2594.6 -16.36 93.63
30.22 14 55 53 4899.92 -9.24 238.93 234.31 26.67 16 17 33 4299.9 -16.37 235.61
149.78 0 54 32 3194.58 -9.23 96.95 234.29 26.67 1 47 46 2594.6 -16.36 93.63

DIFFERENTIAL CORRECTIONS

TDE -1.0888 TRA 1.9252 TC3 -.0454 BAU .2196
RDE -8.5259 RRA 1.6378 RC3 -.0735 FAU -.00328
FDE 2.4222 FRA -.6683 FC3 .0149 BSP 13209
BDE 8.5951 BRA 2.5277 BC3 .0864 FSP -329

MID-COURSE EXECUTION ACCURACY

SGT 1865.7 SGR 3867.0 SG3 102.5
RRR .6101 RRF -.9890 RTF -.7193
SGB 4293.6 R23 .0294 R13 -.9993
SG1 4055.7 SG2 1409.4 THA 71.25

ORBIT DETERMINATION ACCURACY

ST 705.8 SR 3572.9 SS 1364.1
CRT .7346 CRS .9985 CST .7710
LSA 3859.8 MSA 476.0 SSA 1.1
EL1 3611.0 EL2 473.8 ALF 81.60

LAUNCH DATE JAN 11 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 415.888

RL 147.12 LAL .00 LOL 110.60 VL 27.700 GAL .53 AZL 72.80 HCA 187.63 SMA 128.00 ECC .14953 INC17.1978 V1 30.282
RP 108.93 LAP -2.25 LOP 297.89 VP 37.416 GAP .75 AZP 107.05 TAL 177.99 TAP 5.62 RCA 108.86 APO 147.14 V2 34.789
RC 96.038 GL 64.98 GP -80.97 ZAL 89.37 ZAP 92.55 ETS 357.32 ZAE 98.61 ETE 261.43 ZAC 106.55 ETC 207.26 CLP-106.46

PLANETOCENTRIC CONIC

C3 81.685 VML 9.038 DLA 63.47 RAL 331.30 RAD 6569.6 VEL 14.249 PTH 2.59 VHP 9.493 DPA -63.42 RAP 77.51 ECC 2.3443
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.49 15 6 3 4733.87 -19.19 234.06 231.30 28.23 16 24 57 4133.9 -26.19 230.27
149.51 1 3 24 3030.66 -19.18 92.40 231.28 28.23 1 53 54 2430.7 -26.18 88.61
30.49 15 6 3 4733.87 -19.19 234.06 231.30 28.23 16 24 57 4133.9 -26.19 230.27
149.51 1 3 24 3030.66 -19.18 92.40 231.28 28.23 1 53 54 2430.7 -26.18 88.61
30.49 15 6 3 4733.87 -19.19 234.06 231.30 28.23 16 24 57 4133.9 -26.19 230.27
149.51 1 3 24 3030.66 -19.18 92.40 231.28 28.23 1 53 54 2430.7 -26.18 88.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2909 TRA -.7218 TC3 -.1075 BAW .3028 SGT 2332.2 SGR 3694.4 SCS 177.4 ST 2108.7 SR 3094.0 SS 1468.8
RDE 4.7821 RRA -1.4518 RC3 -.2556 FAU .01573 RRT .9894 RRF .9987 RTF .9961 CRT .9985 CRS -.9995 CST -.9997
FDE 2.7847 FRA -.7081 FC3 -.1667 BSP 13753 SGB 4369.0 R23 -.0278 R13 .9987 LSA 4020.9 MSA 97.7 SSA 2.2
BDE 5.8051 BRA 1.6214 BC3 .2773 FSP -587 SGI 4359.5 SGT 287.3 THA 57.86 EL1 3743.1 EL2 95.7 ALF 55.74

LAUNCH DATE JAN 11 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 422.047

RL 147.12 LAL .00 LOL 110.60 VL 27.696 GAL .44 AZL 77.06 HCA 190.72 SMA 127.97 ECC .14987 INC12.9368 V1 30.282
RP 108.94 LAP -2.39 LOP 301.05 VP 37.410 GAP 1.07 AZP 102.72 TAL 177.50 TAP 8.22 RCA 108.79 APO 147.15 V2 34.787
RC 98.436 GL 62.03 GP -72.44 ZAL 88.84 ZAP 95.37 ETS 348.78 ZAE 106.63 ETE 252.89 ZAC 108.84 ETC 198.62 CLP-108.06

PLANETOCENTRIC CONIC

C3 49.289 VML 7.021 DLA 62.05 RAL 337.05 RAD 6568.8 VEL 13.063 PTH 2.38 VHP 7.017 DPA -58.80 RAP 62.57 ECC 1.8112
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.16 15 33 1 4605.75 -26.06 228.57 232.03 31.44 16 49 47 4005.7 -32.80 224.03
147.84 1 22 22 2916.01 -26.05 88.86 232.01 31.44 2 10 58 2316.0 -32.79 84.32
32.16 15 33 1 4605.75 -26.06 228.57 232.03 31.44 16 49 47 4005.7 -32.80 224.03
147.84 1 22 22 2916.01 -26.05 88.86 232.01 31.44 2 10 58 2316.0 -32.79 84.32
32.16 15 33 1 4605.75 -26.06 228.57 232.03 31.44 16 49 47 4005.7 -32.80 224.03
147.84 1 22 22 2916.01 -26.05 88.86 232.01 31.44 2 10 58 2316.0 -32.79 84.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6482 TRA -.7431 TC3 -.3708 BAW .4565 SGT 2574.0 SGR 3538.0 SCS 275.7 ST 2196.0 SR 3151.2 SS 1729.3
RDE 3.8242 RRA -.8325 RC3 -.5852 FAU .03385 RRT .9942 RRF .9992 RTF .9897 CRT .9992 CRS -1.0000 CST -.9988
FDE 3.4658 FRA -.6998 FC3 -.5945 BSP 13677 SGB 4375.2 R23 .0715 R13 .9972 LSA 4211.5 MSA 80.2 SSA 1.2
BDE 4.6516 BRA 1.1172 BC3 .8928 FSP -918 SGI 4369.5 SGT 224.2 THA 54.01 EL1 3840.3 EL2 71.6 ALF 55.14

LAUNCH DATE JAN 11 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 426.223

RL 147.12 LAL .00 LOL 110.60 VL 27.689 GAL .53 AZL 79.43 HCA 193.84 SMA 127.92 ECC .15037 INC10.5738 V1 30.282
RP 108.94 LAP -2.52 LOP 304.21 VP 37.403 GAP 1.41 AZP 100.27 TAL 176.99 TAP 10.83 RCA 108.69 APO 147.16 V2 34.785
RC 100.837 GL 58.86 GP -65.09 ZAL 88.20 ZAP 98.95 ETS 344.18 ZAE 113.10 ETE 247.29 ZAC 110.09 ETC 193.59 CLP-111.68

PLANETOCENTRIC CONIC

C3 35.239 VML 5.936 DLA 60.37 RAL 342.72 RAD 6568.4 VEL 12.514 PTH 2.27 VHP 5.733 DPA -54.06 RAP 52.40 ECC 1.5800
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.17 16 0 34 4512.44 -30.37 223.28 233.25 34.97 17 15 46 3912.4 -36.81 217.98
145.83 1 40 0 2840.30 -30.36 85.97 233.25 34.97 2 27 20 2240.3 -36.80 80.67
34.17 16 0 34 4512.44 -30.37 223.28 233.25 34.97 17 15 46 3912.4 -36.81 217.98
145.83 1 40 0 2840.30 -30.36 85.97 233.25 34.97 2 27 20 2240.3 -36.80 80.67
34.17 16 0 34 4512.44 -30.37 223.28 233.25 34.97 17 15 46 3912.4 -36.81 217.98
145.83 1 40 0 2840.30 -30.36 85.97 233.25 34.97 2 27 20 2240.3 -36.80 80.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.9295 TRA -.6510 TC3 -.7014 BAW .5234 SGT 2875.5 SGR 3285.1 SCS 382.9 ST 2471.1 SR 2980.9 SS 1977.6
RDE 3.0735 RRA -.4983 RC3 -.8614 FAU .05254 RRT .9877 RRF .9992 RTF .9834 CRT .9984 CRS -1.0000 CST -.9980
FDE 4.1187 FRA -.6255 FC3 -1.2909 BSP 13675 SGB 4365.9 R23 .0899 R13 .9954 LSA 4346.1 MSA 119.8 SSA 1.9
BDE 3.9805 BRA .8198 BC3 1.1109 FSP -1294 SGI 4352.6 SGT 339.7 THA 48.85 EL1 3870.5 EL2 108.1 ALF 50.35

LAUNCH DATE JAN 11 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 434.395

RL 147.12 LAL .00 LOL 110.60 VL 27.680 GAL .63 AZL 80.93 HCA 196.98 SMA 127.86 ECC .15101 INC 9.0688 V1 30.282
RP 108.95 LAP -2.64 LOP 307.38 VP 37.396 GAP 1.75 AZP 98.68 TAL 176.44 TAP 13.41 RCA 108.56 APO 147.17 V2 34.784
RC 103.240 GL 55.86 GP -58.53 ZAL 87.44 ZAP 103.04 ETS 340.83 ZAE 118.40 ETE 241.93 ZAC 110.65 ETC 189.54 CLP-115.60

PLANETOCENTRIC CONIC

C3 27.787 VML 5.271 DLA 58.67 RAL 347.74 RAD 6568.1 VEL 12.213 PTH 2.19 VHP 4.993 DPA -49.41 RAP 44.87 ECC 1.4573
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.20 16 25 46 4443.10 -33.02 218.45 234.46 38.32 17 39 49 3843.1 -39.14 212.48
143.80 1 54 52 2790.27 -33.01 83.65 234.44 38.31 2 41 23 2190.3 -39.13 77.69
36.20 16 25 46 4443.10 -33.02 218.45 234.46 38.32 17 39 49 3843.1 -39.14 212.48
143.80 1 54 52 2790.27 -33.01 83.65 234.44 38.31 2 41 23 2190.3 -39.13 77.69
36.20 16 25 46 4443.10 -33.02 218.45 234.46 38.32 17 39 49 3843.1 -39.14 212.48
143.80 1 54 52 2790.27 -33.01 83.65 234.44 38.31 2 41 23 2190.3 -39.13 77.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4988 TRA -.5519 TC3 -1.0753 BAW .5583 SGT 3161.2 SGR 3003.1 SCS 485.1 ST 2738.2 SR 2735.2 SS 2172.8
RDE 2.5111 RRA -.2806 RC3 -1.0498 FAU .06988 RRT .9843 RRF .9989 RTF .9803 CRT .9981 CRS -1.0000 CST -.9977
FDE 4.6249 FRA -.4737 FC3 -2.1771 BSP 13602 SGB 4360.2 R23 .1097 R13 .9930 LSA 4436.3 MSA 139.1 SSA 2.6
BDE 3.5425 BRA .6191 BC3 1.9028 FSP -1651 SGI 4343.2 SGT 385.5 THA 43.51 EL1 3868.4 EL2 120.7 ALF 44.97



LAUNCH DATE JAN 11 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.670 GAL .74 AZL 81.98 HCA 200.12 SMA 127.79 ECC .15180 INC 8.0222 V1 30.282
RP 108.95 LAP -2.75 LOP 310.54 VP 37.387 GAP 2.09 AZP 97.54 TAL 175.84 TAP 15.96 RCA 108.39 APO 147.19 V2 34.783
RC 105.843 GL 53.10 GP -52.61 ZAL 86.58 ZAP 107.38 ETS 338.33 ZAE 122.65 ETE 236.52 ZAC 110.77 ETC 186.16 CLP-119.47

DISTANCE 440.558

PLANETOCENTRIC CONIC

C3 23.317 VHL 4.829 DLA 57.09 RAL 352.17 RAD 6567.9 VEL 12.029 PTH 2.15 VHP 4.548 DPA -44.96 RAP 39.10 ECC 1.3837
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
38.12 16 48 30 4389.90 -34.62 214.17 235.65 41.32 18 1 40 3789.9 -40.43 207.65
141.88 2 7 29 2756.90 -34.60 81.83 235.63 41.31 2 53 26 2156.9 -40.42 75.31
38.12 16 48 30 4389.90 -34.62 214.17 235.65 41.32 18 1 40 3789.9 -40.43 207.65
141.88 2 7 29 2756.90 -34.60 81.83 235.63 41.31 2 53 26 2156.9 -40.42 75.31
38.12 16 48 30 4389.90 -34.62 214.17 235.65 41.32 18 1 40 3789.9 -40.43 207.65
141.88 2 7 29 2756.90 -34.60 81.83 235.63 41.31 2 53 26 2156.9 -40.42 75.31

DIFFERENTIAL CORRECTIONS

TDE 2.4912 TRA -.4554 TC3-1.4736 BAU .5835
RDE 2.0699 RRA -.1368 RC3-1.1544 FAU .08466
FDE 4.9322 FRA -.2732 FC3-3.1435 BSP 13597
BDE 3.2389 BRA .4755 BC3 1.8719 FSP -1960

MID-COURSE EXECUTION ACCURACY

SGT 3428.1 SGR 2713.7 SG3 572.0
RRT .9829 RRF .9984 RTF .9788
SGB 4572.2 R23 .1273 R13 .9904
SG1 4354.4 SG2 393.5 THA 38.25

ORBIT DETERMINATION ACCURACY

ST 2971.3 SR 2457.9 SS 2301.0
CRT .9979 CRS-1.0000 CST -.9976
LSA 4488.0 MSA 149.2 SSA 3.3
EL1 3854.2 EL2 121.4 ALF 39.59

LAUNCH DATE JAN 11 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.658 GAL .86 AZL 82.75 HCA 203.27 SMA 127.71 ECC .15274 INC 7.2487 V1 30.282
RP 108.95 LAP -2.88 LOP 313.70 VP 37.379 GAP 2.42 AZP 96.66 TAL 175.19 TAP 18.46 RCA 108.20 APO 147.22 V2 34.783
RC 108.045 GL 50.57 GP -47.30 ZAL 85.60 ZAP 111.79 ETS 336.51 ZAE 125.94 ETE 231.10 ZAC 110.64 ETC 183.38 CLP-123.19

DISTANCE 446.707

PLANETOCENTRIC CONIC

C3 20.410 VHL 4.518 DLA 55.63 RAL 356.15 RAD 6567.8 VEL 11.908 PTH 2.12 VHP 4.280 DPA -40.77 RAP 34.60 ECC 1.3359
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.88 17 9 12 4347.87 -35.55 210.41 236.91 43.93 18 21 40 3747.9 -41.09 203.47
140.12 2 18 31 2734.61 -35.53 80.42 236.90 43.92 3 4 6 2134.6 -41.08 75.48
39.88 17 9 12 4347.87 -35.55 210.41 236.91 43.93 18 21 40 3747.9 -41.09 203.47
140.12 2 18 31 2734.61 -35.53 80.42 236.90 43.92 3 4 6 2134.6 -41.08 75.48
39.88 17 9 12 4347.87 -35.55 210.41 236.91 43.93 18 21 40 3747.9 -41.09 203.47
140.12 2 18 31 2734.61 -35.53 80.42 236.90 43.92 3 4 6 2134.6 -41.08 75.48

DIFFERENTIAL CORRECTIONS

TDE 2.4942 TRA -.3566 TC3-1.8749 BAU .6042
RDE 1.7212 RRA -.0355 RC3-1.1784 FAU .09548
FDE 5.0558 FRA -.0324 FC3-4.0499 BSP 13612
BDE 3.0304 BRA .3583 BC3 2.2145 FSP -2184

MID-COURSE EXECUTION ACCURACY

SGT 3678.6 SGR 2430.1 SG3 637.9
RRT .9819 RRF .9976 RTF .9777
SGB 4407.1 R23 .1420 R13 .9875
SG1 4390.2 SG2 385.5 THA 33.27

ORBIT DETERMINATION ACCURACY

ST 3172.7 SR 2183.3 SS 2371.3
CRT .9979 CRS-1.0000 CST -.9974
LSA 4520.1 MSA 156.4 SSA 4.0
EL1 3849.6 EL2 116.7 ALF 34.51

LAUNCH DATE JAN 11 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.844 GAL 1.00 AZL 83.35 HCA 206.42 SMA 127.62 ECC .15382 INC 6.6507 V1 30.282
RP 108.94 LAP -2.95 LOP 316.87 VP 37.369 GAP 2.75 AZP 95.96 TAL 174.50 TAP 20.92 RCA 107.99 APO 147.25 V2 34.784
RC 110.446 GL 48.24 GP -42.55 ZAL 84.52 ZAP 116.12 ETS 335.21 ZAE 128.37 ETE 225.80 ZAC 110.41 ETC 181.14 CLP-126.70

DISTANCE 452.841

PLANETOCENTRIC CONIC

C3 18.415 VHL 4.291 DLA 54.31 RAL 359.81 RAD 6567.7 VEL 11.824 PTH 2.09 VHP 4.127 DPA -36.88 RAP 31.10 ECC 1.3031
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.50 17 28 21 4313.89 -36.05 207.15 238.30 46.18 18 40 15 3713.9 -41.35 199.88
138.50 2 28 33 2719.90 -36.04 79.36 238.29 46.17 3 13 53 2119.9 -41.34 72.09
41.50 17 28 21 4313.89 -36.05 207.15 238.30 46.18 18 40 15 3713.9 -41.35 199.88
138.50 2 28 33 2719.90 -36.04 79.36 238.29 46.17 3 13 53 2119.9 -41.34 72.09
41.50 17 28 21 4313.89 -36.05 207.15 238.30 46.18 18 40 15 3713.9 -41.35 199.88
138.50 2 28 33 2719.90 -36.04 79.36 238.29 46.17 3 13 53 2119.9 -41.34 72.09

DIFFERENTIAL CORRECTIONS

TDE 2.4968 TRA -.2586 TC3-2.2745 BAU .6277
RDE 1.4405 RRA .0313 RC3-1.1520 FAU .10295
FDE 5.0147 FRA .2102 FC3-4.8399 BSP 13827
BDE 2.8826 BRA .2605 BC3 2.5496 FSP -2351

MID-COURSE EXECUTION ACCURACY

SGT 3908.3 SGR 2163.8 SG3 682.0
RRT .9814 RRF .9964 RTF .9771
SGB 4467.3 R23 .1513 R13 .9848
SG1 4452.4 SG2 364.5 THA 28.73

ORBIT DETERMINATION ACCURACY

ST 3339.0 SR 1923.7 SS 2388.3
CRT .9979 CRS -.9999 CST -.9972
LSA 4530.7 MSA 160.4 SSA 4.8
EL1 3852.0 EL2 107.4 ALF 29.92

LAUNCH DATE JAN 11 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

RL 147.12 LAL .00 LOL 110.60 VL 27.629 GAL 1.14 AZL 83.83 HCA 209.58 SMA 127.51 ECC .15505 INC 6.1719 V1 30.282
RP 108.94 LAP -3.04 LOP 320.03 VP 37.360 GAP 3.08 AZP 95.37 TAL 173.76 TAP 23.34 RCA 107.74 APO 147.28 V2 34.786
RC 112.844 GL 46.08 GP -38.35 ZAL 83.33 ZAP 120.27 ETS 334.31 ZAE 130.05 ETE 220.76 ZAC 110.18 ETC 179.35 CLP-130.00

DISTANCE 458.959

PLANETOCENTRIC CONIC

C3 16.996 VHL 4.123 DLA 53.12 RAL 3.24 RAD 6567.7 VEL 11.763 PTH 2.08 VHP 4.053 DPA -33.31 RAP 28.39 ECC 1.2797
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.98 17 46 21 4285.87 -36.27 204.30 239.85 48.11 18 57 47 3685.9 -41.36 196.78
137.02 2 37 56 2710.68 -36.26 78.59 239.83 48.10 3 23 7 2110.7 -41.35 71.07
42.98 17 46 21 4285.87 -36.27 204.30 239.85 48.11 18 57 47 3685.9 -41.36 196.78
137.02 2 37 56 2710.68 -36.26 78.59 239.83 48.10 3 23 7 2110.7 -41.35 71.07
42.98 17 46 21 4285.87 -36.27 204.30 239.85 48.11 18 57 47 3685.9 -41.36 196.78
137.02 2 37 56 2710.68 -36.26 78.59 239.83 48.10 3 23 7 2110.7 -41.35 71.07

DIFFERENTIAL CORRECTIONS

TDE 2.5005 TRA -.1573 TC3-2.6576 BAU .6523
RDE 1.2163 RRA .0785 RC3-1.0859 FAU .10692
FDE 4.8587 FRA .4474 FC3-5.4462 BSP 14109
BDE 2.7806 BRA .1749 BC3 2.8709 FSP -2443

MID-COURSE EXECUTION ACCURACY

SGT 4124.4 SGR 1921.1 SG3 706.3
RRT .9809 RRF .9945 RTF .9766
SGB 4549.8 R23 .1542 R13 .9825
SG1 4537.1 SG2 339.8 THA 24.70

ORBIT DETERMINATION ACCURACY

ST 3477.4 SR 1691.5 SS 2367.4
CRT .9980 CRS -.9999 CST -.9970
LSA 4531.1 MSA 162.9 SSA 5.6
EL1 3865.8 EL2 95.7 ALF 25.91

LAUNCH DATE JAN 11 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 465.061

RL 147.12 LAL .00 LOL 110.60 VL 27.612 GAL 1.30 AZL 84.22 HCA 212.73 SMA 127.40 ECC .15642 INC 5.7778 V1 30.282  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.349 GAP 3.40 AZP 94.87 TAL 172.98 TAP 25.71 RCA 107.47 APO 147.33 V2 34.789  
 RC 115.259 GL 44.06 GP -34.65 ZAL 82.03 ZAP 124.19 ETS 333.73 ZAE 131.11 ETE 216.10 ZAC 110.05 ETC 177.96 CLP-133.08

PLANETOCENTRIC CONIC

C3 15.968 VHL 3.996 DLA 52.03 RAL 6.52 RAD 6567.6 VEL 11.720 PTH 2.06 VHP 4.035 DPA -30.04 RAP 26.34 ECC 1.2628  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.34 18 3 31 4262.50 -36.30 201.80 241.56 49.76 19 14 33 3662.5 -41.20 194.10  
 135.66 2 46 59 2705.48 -36.29 78.06 241.55 49.75 3 32 4 2105.5 -41.19 70.36  
 44.34 18 3 31 4262.50 -36.30 201.80 241.56 49.76 19 14 33 3662.5 -41.20 194.10  
 135.66 2 46 59 2705.48 -36.29 78.06 241.55 49.75 3 32 4 2105.5 -41.19 70.36  
 44.34 18 3 31 4262.50 -36.30 201.80 241.56 49.76 19 14 33 3662.5 -41.20 194.10  
 135.66 2 46 59 2705.48 -36.29 78.06 241.55 49.75 3 32 4 2105.5 -41.19 70.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5036 TRA -.0516 TC3-3.0157 BAU .6778 SGT 4325.4 SGR 1704.7 SG3 714.0 ST 3590.6 SR 1489.7 SS 2319.2  
 RDE 1.0376 RRA .1065 RC3 -.9940 FAU .10785 RRT .9799 RRF .9917 RTF .9762 CRT .9982 CRS -.9998 CST -.9968  
 FDE 4.6271 FRA .6691 FC3-5.8473 BSP 14435 SGB 4649.2 R23 .1502 R13 .9805 LSA 4523.7 MSA 164.8 SSA 6.5  
 BDE 2.7100 BRA .1183 BC3 3.1753 FSP -2470 SG1 4638.4 SG2 317.1 THA 21.22 EL1 3886.5 EL2 82.8 ALF 22.51

LAUNCH DATE JAN 11 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 471.146

RL 147.12 LAL .00 LOL 110.60 VL 27.594 GAL 1.46 AZL 84.55 HCA 215.89 SMA 127.28 ECC .15794 INC 5.4459 V1 30.282  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.339 GAP 3.73 AZP 94.42 TAL 172.15 TAP 28.04 RCA 107.18 APO 147.38 V2 34.792  
 RC 117.630 GL 42.15 GP -31.40 ZAL 80.65 ZAP 127.85 ETS 333.36 ZAE 131.70 ETE 211.89 ZAC 110.04 ETC 176.87 CLP-135.96

PLANETOCENTRIC CONIC

C3 15.217 VHL 3.901 DLA 51.03 RAL 9.71 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 4.059 DPA -27.06 RAP 24.84 ECC 1.2504  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.59 18 20 6 4242.74 -36.19 199.61 243.44 51.19 19 30 48 3642.7 -40.93 191.78  
 134.41 2 55 48 2703.50 -36.18 77.74 243.43 51.18 3 40 52 2103.5 -40.92 69.90  
 45.59 18 20 6 4242.74 -36.19 199.61 243.44 51.19 19 30 48 3642.7 -40.93 191.78  
 134.41 2 55 48 2703.50 -36.18 77.74 243.43 51.18 3 40 52 2103.5 -40.92 69.90  
 45.59 18 20 6 4242.74 -36.19 199.61 243.44 51.19 19 30 48 3642.7 -40.93 191.78  
 134.41 2 55 48 2703.50 -36.18 77.74 243.43 51.18 3 40 52 2103.5 -40.92 69.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5040 TRA .0577 TC3-3.3477 BAU .7048 SGT 4512.9 SGR 1515.0 SG3 708.7 ST 3678.9 SR 1316.8 SS 2250.1  
 RDE .8944 RRA .1249 RC3 -.8922 FAU .10668 RRT .9783 RRF .9877 RTF .9759 CRT .9984 CRS -.9996 CST -.9965  
 FDE 4.3478 FRA .8648 FC3-6.0695 BSP 14844 SGB 4760.5 R23 .1387 R13 .9790 LSA 4506.0 MSA 165.6 SSA 7.3  
 BDE 2.6590 BRA .1375 BC3 3.4646 FSP -2458 SG1 4751.1 SG2 298.2 THA 18.26 EL1 3906.9 EL2 69.1 ALF 19.67

LAUNCH DATE JAN 11 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 477.214

RL 147.12 LAL .00 LOL 110.60 VL 27.575 GAL 1.64 AZL 84.84 HCA 219.05 SMA 127.15 ECC .15961 INC 5.1611 V1 30.282  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.329 GAP 4.05 AZP 94.01 TAL 171.29 TAP 30.33 RCA 106.86 APO 147.44 V2 34.796  
 RC 120.015 GL 40.33 GP -28.55 ZAL 79.16 ZAP 131.25 ETS 333.15 ZAE 131.93 ETE 208.16 ZAC 110.19 ETC 176.03 CLP-138.65

PLANETOCENTRIC CONIC

C3 14.677 VHL 3.831 DLA 50.10 RAL 12.83 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 4.115 DPA -24.34 RAP 23.79 ECC 1.2415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.77 18 36 16 4225.95 -35.97 197.67 245.48 52.42 19 46 42 3625.9 -40.57 189.74  
 133.23 3 4 32 2704.12 -35.96 77.59 245.47 52.41 3 49 36 2104.1 -40.56 69.66  
 46.77 18 36 16 4225.95 -35.97 197.67 245.48 52.42 19 46 42 3625.9 -40.57 189.74  
 133.23 3 4 32 2704.12 -35.96 77.59 245.47 52.41 3 49 36 2104.1 -40.56 69.66  
 46.77 18 36 16 4225.95 -35.97 197.67 245.48 52.42 19 46 42 3625.9 -40.57 189.74  
 133.23 3 4 32 2704.12 -35.96 77.59 245.47 52.41 3 49 36 2104.1 -40.56 69.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5045 TRA .1746 TC3-3.6396 BAU .7305 SGT 4887.5 SGR 1351.5 SG3 694.0 ST 3748.5 SR 1172.5 SS 2170.7  
 RDE .7813 RRA .1368 RC3 -.7826 FAU .10348 RRT .9753 RRF .9821 RTF .9756 CRT .9988 CRS -.9992 CST -.9962  
 FDE 4.0525 FRA 1.0426 FC3-6.1038 BSP 15221 SGB 4878.4 R23 .1222 R13 .9778 LSA 4484.5 MSA 166.5 SSA 8.2  
 BDE 2.6235 BRA .2219 BC3 3.7228 FSP -2398 SG1 4869.9 SG2 287.4 THA 15.76 EL1 3927.2 EL2 55.5 ALF 17.35

LAUNCH DATE JAN 11 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 483.265

RL 147.12 LAL .00 LOL 110.60 VL 27.555 GAL 1.84 AZL 85.09 HCA 222.20 SMA 127.02 ECC .16143 INC 4.9124 V1 30.282  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.318 GAP 4.38 AZP 93.64 TAL 170.38 TAP 32.59 RCA 106.51 APO 147.52 V2 34.800  
 RC 122.394 GL 38.58 GP -26.06 ZAL 77.59 ZAP 134.40 ETS 333.04 ZAE 131.91 ETE 204.91 ZAC 110.51 ETC 175.39 CLP-141.16

PLANETOCENTRIC CONIC

C3 14.302 VHL 3.782 DLA 49.23 RAL 15.91 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 4.195 DPA -21.85 RAP 23.14 ECC 1.2354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.88 18 52 11 4211.53 -35.67 195.94 247.68 53.50 20 2 23 3611.5 -40.15 187.94  
 132.12 3 13 11 2707.05 -35.66 77.61 247.67 53.49 3 58 18 2107.1 -40.14 69.61  
 47.88 18 52 11 4211.53 -35.67 195.94 247.68 53.50 20 2 23 3611.5 -40.15 187.94  
 132.12 3 13 11 2707.05 -35.66 77.61 247.67 53.49 3 58 18 2107.1 -40.14 69.61  
 47.88 18 52 11 4211.53 -35.67 195.94 247.68 53.50 20 2 23 3611.5 -40.15 187.94  
 132.12 3 13 11 2707.05 -35.66 77.61 247.67 53.49 3 58 18 2107.1 -40.14 69.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4995 TRA .2949 TC3-3.9024 BAU .7574 SGT 4849.8 SGR 1211.3 SG3 672.5 ST 3793.5 SR 1050.8 SS 2079.6  
 RDE .6904 RRA .1424 RC3 -.6792 FAU .09950 RRT .9709 RRF .9746 RTF .9756 CRT .9991 CRS -.9987 CST -.9959  
 FDE 3.7464 FRA 1.1898 FC3-6.0230 BSP 15673 SGB 4998.8 R23 .1012 R13 .9771 LSA 4448.8 MSA 166.5 SSA 9.1  
 BDE 2.5931 BRA .3275 BC3 3.9611 FSP -2328 SG1 4990.8 SG2 282.0 THA 13.68 EL1 3936.1 EL2 41.8 ALF 15.47

LAUNCH DATE JAN 11 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.534 GAL 2.04 AZL 85.31 HCA 225.37 SMA 126.88 ECC .16342 INC 4.6923 V1 30.282  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.308 GAP 4.70 AZP 93.30 TAL 169.44 TAP 34.81 RCA 106.14 APO 147.61 V2 34.805  
 RC 124.766 GL 36.89 GP -23.87 ZAL 75.95 ZAP 137.32 ETS 332.99 ZAE 131.71 ETE 202.09 ZAC 111.00 ETC 174.89 CLP-143.51

DISTANCE 489.298

PLANETOCENTRIC CONIC  
 C3 14.064 VHL 3.750 DLA 48.40 RAL 18.96 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 4.295 DPA -19.57 RAP 22.82 ECC 1.2315  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.95 19 7 56 4199.16 -35.30 194.38 250.02 54.44 20 17 56 3599.2 -39.67 186.34  
 131.05 3 21 47 2712.02 -35.29 77.77 250.01 54.43 4 6 59 2112.0 -39.66 69.73  
 48.95 19 7 56 4199.16 -35.30 194.38 250.02 54.44 20 17 56 3599.2 -39.67 186.34  
 131.05 3 21 47 2712.02 -35.29 77.77 250.01 54.43 4 6 59 2112.0 -39.66 69.73  
 48.95 19 7 56 4199.16 -35.30 194.38 250.02 54.44 20 17 56 3599.2 -39.67 186.34  
 131.05 3 21 47 2712.02 -35.29 77.77 250.01 54.43 4 6 59 2112.0 -39.66 69.73

DIFFERENTIAL CORRECTIONS  
 TDE 2.4914 TRA .4222 TC3-4.1253 BAU .7833 SGT 5000.6 SGR 1092.7 SG3 646.8 ST 3818.7 SR 950.2 SS 1983.7  
 RDE .6184 RRA .1450 RC3 -.5812 FAU .09472 RRT .9643 RRF .9649 RTF .9756 CRT .9995 CRS -.9978 CST -.9955  
 FDE 3.4466 FRA 1.3172 FC3-5.8309 BSP 16117 SGB 5118.8 R23 .0797 R13 .9766 LSA 4403.7 MSA 166.5 SSA 9.9  
 BDE 2.5670 BRA .4464 BC3 4.1661 FSP -2240 SGI 5110.8 SG2 283.0 THA 11.94 EL1 3935.0 EL2 28.5 ALF 13.97

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 11 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.512 GAL 2.26 AZL 85.51 HCA 228.53 SMA 126.73 ECC .16557 INC 4.4948 V1 30.282  
 RP 108.88 LAP -3.37 LOP 339.04 VP 37.297 GAP 5.03 AZP 92.98 TAL 168.47 TAP 36.99 RCA 105.75 APO 147.71 V2 34.811  
 RC 127.128 GL 35.24 GP -21.95 ZAL 74.22 ZAP 140.02 ETS 332.96 ZAE 131.40 ETE 199.67 ZAC 111.65 ETC 174.51 CLP-145.71

DISTANCE 495.313

PLANETOCENTRIC CONIC  
 C3 13.844 VHL 3.754 DLA 47.59 RAL 21.99 RAD 6567.5 VEL 11.633 PTH 2.04 VHP 4.412 DPA -17.46 RAP 22.79 ECC 1.2295  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 19 23 39 4188.41 -34.87 192.95 252.49 55.28 20 33 27 3588.4 -39.13 184.89  
 130.00 3 30 17 2719.01 -34.85 78.08 252.48 55.27 4 15 36 2119.0 -39.12 70.02  
 50.00 19 23 39 4188.41 -34.87 192.95 252.49 55.28 20 33 27 3588.4 -39.13 184.89  
 130.00 3 30 17 2719.01 -34.85 78.08 252.48 55.27 4 15 36 2119.0 -39.12 70.02  
 50.00 19 23 39 4188.41 -34.87 192.95 252.49 55.28 20 33 27 3588.4 -39.13 184.89  
 130.00 3 30 17 2719.01 -34.85 78.08 252.48 55.27 4 15 36 2119.0 -39.12 70.02

DIFFERENTIAL CORRECTIONS  
 TDE 2.4801 TRA .5564 TC3-4.3084 BAU .8084 SGT 5141.7 SGR 993.3 SG3 618.6 ST 3825.6 SR 867.5 SS 1885.4  
 RDE .5616 RRA .1453 RC3 -.4918 FAU .08958 RRT .9554 RRF .9525 RTF .9757 CRT .9998 CRS -.9964 CST -.9952  
 FDE 3.1997 FRA 1.4248 FC3-5.5620 BSP 16949 SGB 5236.8 R23 .0592 R13 .9763 LSA 4349.1 MSA 166.4 SSA 10.7  
 BDE 2.5429 BRA .5750 BC3 4.3364 FSP -2144 SGI 5228.8 SG2 288.6 THA 10.49 EL1 3922.7 EL2 16.6 ALF 12.77

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 11 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.489 GAL 2.50 AZL 85.68 HCA 231.69 SMA 126.58 ECC .16790 INC 4.3157 V1 30.282  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.286 GAP 5.36 AZP 92.68 TAL 167.46 TAP 39.15 RCA 105.33 APO 147.83 V2 34.818  
 RC 129.481 GL 33.62 GP -20.27 ZAL 72.43 ZAP 142.52 ETS 332.94 ZAE 131.03 ETE 197.60 ZAC 112.45 ETC 174.22 CLP-147.77

DISTANCE 501.310

PLANETOCENTRIC CONIC  
 C3 13.931 VHL 3.732 DLA 46.80 RAL 25.01 RAD 6567.5 VEL 11.633 PTH 2.04 VHP 4.542 DPA -15.49 RAP 23.00 ECC 1.2293  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.04 19 39 19 4179.12 -34.37 191.65 255.07 56.02 20 48 58 3579.1 -38.55 183.58  
 128.96 3 38 41 2727.89 -34.36 78.52 255.06 56.01 4 24 9 2127.9 -38.54 70.45  
 51.04 19 39 19 4179.12 -34.37 191.65 255.07 56.02 20 48 58 3579.1 -38.55 183.58  
 128.96 3 38 41 2727.89 -34.36 78.52 255.06 56.01 4 24 9 2127.9 -38.54 70.45  
 51.04 19 39 19 4179.12 -34.37 191.65 255.07 56.02 20 48 58 3579.1 -38.55 183.58  
 128.96 3 38 41 2727.89 -34.36 78.52 255.06 56.01 4 24 9 2127.9 -38.54 70.45

DIFFERENTIAL CORRECTIONS  
 TDE 2.4673 TRA .7008 TC3-4.4429 BAU .8310 SGT 5274.0 SGR 911.4 SG3 589.4 ST 3818.0 SR 800.7 SS 1789.2  
 RDE .5177 RRA .1451 RC3 -.4092 FAU .08397 RRT .9433 RRF .9376 RTF .9757 CRT .9999 CRS -.9945 CST -.9947  
 FDE 2.8929 FRA 1.5212 FC3-5.2181 BSP 16904 SGB 5352.1 R23 .0430 R13 .9761 LSA 4288.5 MSA 166.8 SSA 11.5  
 BDE 2.5210 BRA .7157 BC3 4.4617 FSP -2031 SGI 5343.8 SG2 298.5 THA 9.29 EL1 3901.1 EL2 11.5 ALF 11.84

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 11 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC  
 RL 147.12 LAL .00 LOL 110.60 VL 27.466 GAL 2.75 AZL 85.85 HCA 234.66 SMA 126.42 ECC .17041 INC 4.1514 V1 30.282  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.276 GAP 5.69 AZP 92.39 TAL 166.42 TAP 41.28 RCA 104.88 APO 147.97 V2 34.825  
 RC 131.823 GL 32.04 GP -18.79 ZAL 70.59 ZAP 144.84 ETS 332.90 ZAE 130.62 ETE 195.82 ZAC 113.39 ETC 173.99 CLP-149.72

DISTANCE 507.287

PLANETOCENTRIC CONIC  
 C3 14.017 VHL 3.744 DLA 46.02 RAL 28.01 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 4.685 DPA -13.66 RAP 23.43 ECC 1.2307  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.07 19 55 1 4170.97 -33.82 190.43 257.76 56.70 21 4 32 3571.0 -37.92 182.37  
 127.93 3 46 54 2738.76 -33.80 79.10 257.75 56.68 4 32 33 2138.8 -37.91 71.04  
 52.07 19 55 1 4170.97 -33.82 190.43 257.76 56.70 21 4 32 3571.0 -37.92 182.37  
 127.93 3 46 54 2738.76 -33.80 79.10 257.75 56.68 4 32 33 2138.8 -37.91 71.04  
 52.07 19 55 1 4170.97 -33.82 190.43 257.76 56.70 21 4 32 3571.0 -37.92 182.37  
 127.93 3 46 54 2738.76 -33.80 79.10 257.75 56.68 4 32 33 2138.8 -37.91 71.04

DIFFERENTIAL CORRECTIONS  
 TDE 2.4477 TRA .8501 TC3-4.5443 BAU .8540 SGT 5396.3 SGR 843.3 SG3 559.6 ST 3789.1 SR 745.3 SS 1690.5  
 RDE .4830 RRA .1436 RC3 -.3391 FAU .07865 RRT .9287 RRF .9199 RTF .9758 CRT .9996 CRS -.9917 CST -.9943  
 FDE 2.6393 FRA 1.5978 FC3-4.8373 BSP 17311 SGB 5461.8 R23 .0288 R13 .9761 LSA 4212.2 MSA 167.2 SSA 12.2  
 BDE 2.4949 BRA .8622 BC3 4.5569 FSP -1931 SGI 5453.0 SG2 309.5 THA 8.28 EL1 3861.7 EL2 19.7 ALF 11.12

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 11 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 513.244

RL 147.12 LAL .00 LOL 110.60 VL 27.442 GAL 3.01 AZL 86.00 HCA 238.02 SMA 126.26 ECC .17312 INC 3.9995 V1 30.282  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.265 GAP 6.03 AZP 92.12 TAL 165.36 TAP 43.38 RCA 104.41 APO 148.12 V2 34.833  
 RC 134.153 GL 30.48 GP -17.48 ZAL 68.69 ZAP 147.01 ETS 332.83 ZAE 130.20 ETE 194.30 ZAC 114.46 ETC 175.81 CLP-151.56

PLANETOCENTRIC CONIC

C3 14.200 VHL 3.768 DLA 45.24 RAL 30.99 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 4.839 DPA -11.94 RAP 24.04 ECC 1.2337  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.12 20 10 46 4163.84 -33.20 189.29 260.54 57.30 21 20 10 3563.8 -37.24 181.25  
 126.88 3 54 54 2751.59 -33.19 79.82 260.53 57.29 4 40 46 2151.6 -37.23 71.78  
 53.12 20 10 46 4163.84 -33.20 189.29 260.54 57.30 21 20 10 3563.8 -37.24 181.25  
 126.88 3 54 54 2751.59 -33.19 79.82 260.53 57.29 4 40 46 2151.6 -37.23 71.78  
 53.12 20 10 46 4163.84 -33.20 189.29 260.54 57.30 21 20 10 3563.8 -37.24 181.25  
 126.88 3 54 54 2751.59 -33.19 79.82 260.53 57.29 4 40 46 2151.6 -37.23 71.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4232 TRA 1.0079 TC3-4.6056 BAU .8759 SGT 5509.9 SGR 787.4 SCS 530.0 ST 3743.2 SR 700.2 SS 1593.0  
 RDE .4565 RRA .1422 RC3 -.2786 FAU .07343 RRT .9113 RRF .8999 RTF .9760 CRT .9989 CRS -.9879 CST -.9938  
 FDE 2.4028 FRA 1.6630 FC3-4.4767 BSP 17714 SGB 5565.9 R23 .0178 R13 .9762 LSA 4124.4 MSA 168.2 SSA 12.9  
 BDE 2.4658 BRA 1.0179 BC3 4.6140 FSP -1833 SGI 5556.6 S62 321.4 THA 7.45 EL1 3808.0 EL2 32.6 ALF 10.58

LAUNCH DATE JAN 11 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 519.181

RL 147.12 LAL .00 LOL 110.60 VL 27.417 GAL 3.29 AZL 86.14 HCA 241.19 SMA 126.10 ECC .17603 INC 3.8576 V1 30.282  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.255 GAP 6.37 AZP 91.86 TAL 164.27 TAP 45.46 RCA 103.90 APO 148.30 V2 34.841  
 RC 138.471 GL 28.94 GP -16.32 ZAL 66.76 ZAP 149.03 ETS 332.71 ZAE 129.78 ETE 195.00 ZAC 115.65 ETC 173.66 CLP-153.30

PLANETOCENTRIC CONIC

C3 14.479 VHL 3.805 DLA 44.45 RAL 33.93 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 5.003 DPA -10.32 RAP 24.81 ECC 1.2383  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.18 20 26 33 4157.58 -32.53 188.21 263.39 57.86 21 35 51 3557.6 -36.51 180.20  
 125.82 4 2 37 2766.46 -32.52 80.68 263.38 57.85 4 48 43 2166.5 -36.50 72.66  
 54.18 20 26 33 4157.58 -32.53 188.21 263.39 57.86 21 35 51 3557.6 -36.51 180.20  
 125.82 4 2 37 2766.46 -32.52 80.68 263.38 57.85 4 48 43 2166.5 -36.50 72.66  
 54.18 20 26 33 4157.58 -32.53 188.21 263.39 57.86 21 35 51 3557.6 -36.51 180.20  
 125.82 4 2 37 2766.46 -32.52 80.68 263.38 57.85 4 48 43 2166.5 -36.50 72.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3944 TRA 1.1749 TC3-4.6251 BAU .8964 SGT 5615.2 SGR 742.0 SCS 501.0 ST 3682.8 SR 663.6 SS 1498.1  
 RDE .4367 RRA .1411 RC3 -.2265 FAU .06830 RRT .8916 RRF .8779 RTF .9762 CRT .9974 CRS -.9829 CST -.9933  
 FDE 2.1846 FRA 1.7191 FC3-4.0840 BSP 18089 SGB 5684.0 R23 .0100 R13 .9762 LSA 4027.2 MSA 170.0 SSA 13.5  
 BDE 2.4339 BRA 1.1834 BC3 4.6307 FSP -1737 SGI 5654.2 S62 333.7 THA 6.74 EL1 3741.8 EL2 46.6 ALF 10.19

LAUNCH DATE JAN 11 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 525.095

RL 147.12 LAL .00 LOL 110.60 VL 27.392 GAL 3.58 AZL 86.28 HCA 244.36 SMA 125.94 ECC .17916 INC 3.7240 V1 30.282  
 RP 108.74 LAP -3.38 LOP 354.91 VP 37.245 GAP 6.72 AZP 91.61 TAL 163.16 TAP 47.52 RCA 103.37 APO 148.50 V2 34.850  
 RC 138.775 GL 27.43 GP -15.28 ZAL 64.79 ZAP 150.92 ETS 332.54 ZAE 129.37 ETE 191.88 ZAC 116.95 ETC 173.53 CLP-154.96

PLANETOCENTRIC CONIC

C3 14.856 VHL 3.854 DLA 43.65 RAL 36.84 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 5.177 DPA -8.78 RAP 25.73 ECC 1.2445  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.28 20 42 27 4151.94 -31.81 187.17 266.31 58.37 21 51 39 3551.9 -35.73 179.19  
 124.72 4 9 55 2783.54 -31.80 81.69 266.30 58.35 4 56 19 2183.5 -35.72 73.72  
 55.28 20 42 27 4151.94 -31.81 187.17 266.31 58.37 21 51 39 3551.9 -35.73 179.19  
 124.72 4 9 55 2783.54 -31.80 81.69 266.30 58.35 4 56 19 2183.5 -35.72 73.72  
 55.28 20 42 27 4151.94 -31.81 187.17 266.31 58.37 21 51 39 3551.9 -35.73 179.19  
 124.72 4 9 55 2783.54 -31.80 81.69 266.30 58.35 4 56 19 2183.5 -35.72 73.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3616 TRA 1.3517 TC3-4.6055 BAU .9154 SGT 5713.1 SGR 705.5 SCS 473.2 ST 3609.6 SR 633.9 SS 1406.8  
 RDE .4224 RRA .1407 RC3 -.1828 FAU .06338 RRT .8702 RRF .8549 RTF .9763 CRT .9952 CRS -.9764 CST -.9927  
 FDE 1.9840 FRA 1.7675 FC3-3.6932 BSP 18436 SGB 5756.5 R23 .0045 R13 .9763 LSA 3921.7 MSA 172.8 SSA 14.0  
 BDE 2.3991 BRA 1.3590 BC3 4.6091 FSP -1642 SGI 5746.1 S62 345.6 THA 6.16 EL1 3664.3 EL2 61.4 ALF 9.92

LAUNCH DATE JAN 11 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 530.987

RL 147.12 LAL .00 LOL 110.60 VL 27.366 GAL 3.90 AZL 86.40 HCA 247.53 SMA 125.77 ECC .18252 INC 3.5973 V1 30.282  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.235 GAP 7.08 AZP 91.38 TAL 162.03 TAP 49.56 RCA 102.81 APO 148.73 V2 34.860  
 RC 141.067 GL 25.94 GP -14.37 ZAL 62.80 ZAP 152.70 ETS 332.29 ZAE 128.98 ETE 190.91 ZAC 118.34 ETC 173.41 CLP-156.53

PLANETOCENTRIC CONIC

C3 15.336 VHL 3.916 DLA 42.84 RAL 39.70 RAD 6567.6 VEL 11.693 PTH 2.06 VHP 5.360 DPA -7.31 RAP 26.78 ECC 1.2524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.40 20 58 25 4146.88 -31.03 186.16 269.28 58.84 22 7 32 3546.9 -34.90 178.23  
 123.60 4 16 48 2802.85 -31.02 82.85 269.27 58.83 5 3 31 2202.8 -34.89 74.92  
 56.40 20 58 25 4146.88 -31.03 186.16 269.28 58.84 22 7 32 3546.9 -34.90 178.23  
 123.60 4 16 48 2802.85 -31.02 82.85 269.27 58.83 5 3 31 2202.8 -34.89 74.92  
 56.40 20 58 25 4146.88 -31.03 186.16 269.28 58.84 22 7 32 3546.9 -34.90 178.23  
 123.60 4 16 48 2802.85 -31.02 82.85 269.27 58.83 5 3 31 2202.8 -34.89 74.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3270 TRA 1.5409 TC3-4.5422 BAU .9317 SGT 5805.3 SGR 676.8 SCS 446.7 ST 3529.0 SR 610.3 SS 1321.5  
 RDE .4131 RRA .1415 RC3 -.1457 FAU .05852 RRT .8480 RRF .8318 RTF .9764 CRT .9919 CRS -.9685 CST -.9921  
 FDE 1.8030 FRA 1.8122 FC3-3.3034 BSP 18695 SGB 5844.6 R23 .0013 R13 .9764 LSA 3813.3 MSA 176.7 SSA 14.4  
 BDE 2.3634 BRA 1.5474 BC3 4.5445 FSP -1545 SGI 5833.7 S62 357.0 THA 5.67 EL1 3580.6 EL2 76.6 ALF 9.74

LAUNCH DATE JAN 11 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 20 1969

MELIOCENTRIC CONIC

DISTANCE 536.853

RL 147.12 LAL .00 LOL 110.60 VL 27.340 GAL 4.23 AZL 86.52 HCA 250.71 SMA 125.60 ECC .18614 INC 3.4762 V1 30.282  
 RP 108.88 LAP -3.28 LOP 1.27 VP 37.225 GAP 7.45 AZP 91.15 TAL 160.88 TAP 51.58 RCA 102.22 APO 148.98 V2 34.870  
 RC 143.344 GL 24.47 GP -13.55 ZAL 60.81 ZAP 154.38 ETS 331.96 ZAE 128.61 ETE 190.08 ZAC 119.81 ETC 173.30 CLP-158.04

PLANETOCENTRIC CONIC

C3 15.925 VHL 3.991 DLA 42.01 RAL 42.51 RAD 6567.6 VEL 11.718 PTH 2.06 VHP 5.554 DPA -5.91 RAP 27.94 ECC 1.2621  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.57 21 14 27 4142.25 -30.20 185.17 272.29 59.28 22 23 29 3542.2 -34.02 177.29  
 122.43 4 23 10 2824.51 -30.18 84.18 272.28 59.26 5 10 14 2224.5 -34.01 76.30  
 57.57 21 14 27 4142.25 -30.20 185.17 272.29 59.28 22 23 29 3542.2 -34.02 177.29  
 122.43 4 23 10 2824.51 -30.18 84.18 272.28 59.26 5 10 14 2224.5 -34.01 76.30  
 57.57 21 14 27 4142.25 -30.20 185.17 272.29 59.28 22 23 29 3542.2 -34.02 177.29  
 122.43 4 23 10 2824.51 -30.18 84.18 272.28 59.26 5 10 14 2224.5 -34.01 76.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2852 TRA 1.7379 TC3-4.4539 BAU .9486 SGT 5888.9 SGR 653.2 SG3 421.2 ST 3433.9 SR 590.5 SS 1237.8  
 RDE .4072 RRA .1428 RC3 -.1165 FAU .05410 RRT .8256 RRF .8087 RTF .9765 CRT .9873 CRS -.9586 CST -.9915  
 FDE 1.6335 FRA 1.8484 FC3-2.9411 BSP 19019 SGB 5925.1 R23 -.0011 R13 .9765 LSA 3693.1 MSA 181.7 SSA 14.7  
 BDE 2.3212 BRA 1.7438 BC3 4.4555 FSP -1462 SGI 5913.7 SG2 367.0 THA 5.25 EL1 3483.0 EL2 92.4 ALF 9.64

LAUNCH DATE JAN 11 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 22 1969

MELIOCENTRIC CONIC

DISTANCE 542.692

RL 147.12 LAL .00 LOL 110.60 VL 27.314 GAL 4.58 AZL 86.64 HCA 253.88 SMA 125.43 ECC .19003 INC 3.3596 V1 30.282  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.215 GAP 7.83 AZP 90.93 TAL 159.71 TAP 53.60 RCA 101.59 APO 149.26 V2 34.880  
 RC 145.808 GL 23.03 GP -12.81 ZAL 58.81 ZAP 155.96 ETS 331.54 ZAE 128.27 ETE 189.36 ZAC 121.37 ETC 173.39 CLP-159.49

PLANETOCENTRIC CONIC

C3 16.831 VHL 4.078 DLA 41.17 RAL 45.26 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 5.757 DPA -4.57 RAP 29.20 ECC 1.2737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.77 21 30 34 4137.92 -29.31 184.19 275.33 59.69 22 39 32 3537.9 -33.10 176.37  
 121.23 4 28 57 2848.64 -29.30 85.68 275.33 59.67 5 16 26 2248.6 -33.08 77.85  
 58.77 21 30 34 4137.92 -29.31 184.19 275.33 59.69 22 39 32 3537.9 -33.10 176.37  
 121.23 4 28 57 2848.64 -29.30 85.68 275.33 59.67 5 16 26 2248.6 -33.08 77.85  
 58.77 21 30 34 4137.92 -29.31 184.19 275.33 59.69 22 39 32 3537.9 -33.10 176.37  
 121.23 4 28 57 2848.64 -29.30 85.68 275.33 59.67 5 16 26 2248.6 -33.08 77.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2595 TRA 1.9484 TC3-4.3332 BAU .9637 SGT 5965.6 SGR 634.2 SG3 397.1 ST 3331.5 SR 574.1 SS 1159.0  
 RDE .4045 RRA .1453 RC3 -.0929 FAU .04987 RRT .8038 RRF .7887 RTF .9765 CRT .9814 CRS -.9468 CST -.9908  
 FDE 1.4787 FRA 1.8009 FC3-2.5961 BSP 19312 SGB 5999.2 R23 -.0022 R13 .9765 LSA 3568.8 MSA 188.2 SSA 14.9  
 BDE 2.2757 BRA 1.9519 BC3 4.3342 FSP -1382 SGI 5987.4 SG2 375.9 THA 4.90 EL1 3378.8 EL2 108.7 ALF 9.61

LAUNCH DATE JAN 11 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 24 1969

MELIOCENTRIC CONIC

DISTANCE 548.503

RL 147.12 LAL .00 LOL 110.60 VL 27.287 GAL 4.96 AZL 86.75 HCA 257.06 SMA 125.26 ECC .19421 INC 3.2467 V1 30.282  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.206 GAP 8.22 AZP 90.75 TAL 158.53 TAP 55.59 RCA 100.93 APO 149.58 V2 34.891  
 RC 147.857 GL 21.62 GP -12.15 ZAL 56.82 ZAP 157.47 ETS 331.01 ZAE 127.95 ETE 188.73 ZAC 122.99 ETC 173.07 CLP-160.88

PLANETOCENTRIC CONIC

C3 17.466 VHL 4.179 DLA 40.32 RAL 47.93 RAD 6567.7 VEL 11.783 PTH 2.08 VHP 5.971 DPA -3.27 RAP 30.55 ECC 1.2874  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.01 21 46 45 4133.81 -28.38 183.22 278.40 60.07 22 55 39 3533.8 -32.12 175.45  
 119.99 4 34 6 2875.32 -28.37 87.35 278.40 60.06 5 22 1 2275.3 -32.11 79.58  
 60.01 21 46 45 4133.81 -28.38 183.22 278.40 60.07 22 55 39 3533.8 -32.12 175.45  
 119.99 4 34 6 2875.32 -28.37 87.35 278.40 60.06 5 22 1 2275.3 -32.11 79.58  
 60.01 21 46 45 4133.81 -28.38 183.22 278.40 60.07 22 55 39 3533.8 -32.12 175.45  
 119.99 4 34 6 2875.32 -28.37 87.35 278.40 60.06 5 22 1 2275.3 -32.11 79.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1897 TRA 2.1664 TC3-4.1852 BAU .9774 SGT 6035.1 SGR 618.8 SG3 374.2 ST 3223.1 SR 560.2 SS 1085.0  
 RDE .4044 RRA .1490 RC3 -.0743 FAU .04589 RRT .7831 RRF .7662 RTF .9765 CRT .9739 CRS -.9328 CST -.9901  
 FDE 1.3368 FRA 1.9094 FC3-2.2747 BSP 19591 SGB 6066.7 R23 -.0027 R13 .9765 LSA 3441.0 MSA 195.9 SSA 14.9  
 BDE 2.2267 BRA 2.1715 BC3 4.1858 FSP -1307 SGI 6054.6 SG2 383.6 THA 4.61 EL1 3269.0 EL2 125.4 ALF 9.62

LAUNCH DATE JAN 11 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 26 1969

MELIOCENTRIC CONIC

DISTANCE 554.281

RL 147.12 LAL .00 LOL 110.60 VL 27.260 GAL 5.35 AZL 86.86 HCA 260.24 SMA 125.08 ECC .19872 INC 3.1365 V1 30.282  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.197 GAP 8.62 AZP 90.53 TAL 157.35 TAP 57.59 RCA 100.23 APO 149.94 V2 34.902  
 RC 150.092 GL 20.23 GP -11.56 ZAL 54.84 ZAP 158.89 ETS 330.36 ZAE 127.65 ETE 188.19 ZAC 124.67 ETC 172.94 CLP-162.22

PLANETOCENTRIC CONIC

C3 18.442 VHL 4.294 DLA 39.45 RAL 50.53 RAD 6567.7 VEL 11.825 PTH 2.09 VHP 6.196 DPA -2.02 RAP 31.98 ECC 1.3035  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.30 22 3 3 4129.70 -27.40 182.25 281.49 60.43 23 11 53 3529.7 -31.11 174.54  
 118.70 4 38 31 2904.79 -27.39 89.20 281.49 60.42 5 26 56 2304.8 -31.10 81.50  
 61.30 22 3 3 4129.70 -27.40 182.25 281.49 60.43 23 11 53 3529.7 -31.11 174.54  
 118.70 4 38 31 2904.79 -27.39 89.20 281.49 60.42 5 26 56 2304.8 -31.10 81.50  
 61.30 22 3 3 4129.70 -27.40 182.25 281.49 60.43 23 11 53 3529.7 -31.11 174.54  
 118.70 4 38 31 2904.79 -27.39 89.20 281.49 60.42 5 26 56 2304.8 -31.10 81.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1599 TRA 2.4027 TC3-4.0066 BAU .9880 SGT 6101.4 SGR 606.8 SG3 353.0 ST 3116.6 SR 548.6 SS 1018.6  
 RDE .4068 RRA .1543 RC3 -.0590 FAU .04199 RRT .7645 RRF .7482 RTF .9764 CRT .9646 CRS -.9167 CST -.9894  
 FDE 1.2103 FRA 1.9390 FC3-1.9711 BSP 19770 SGB 6131.5 R23 -.0021 R13 .9764 LSA 3318.0 MSA 204.9 SSA 14.9  
 BDE 2.1783 BRA 2.4078 BC3 4.0070 FSP -1230 SGI 6119.1 SG2 390.0 THA 4.37 EL1 3161.3 EL2 142.6 ALF 9.66

LAUNCH DATE JAN 11 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 560.024

RL 147.12 LAL .00 LOL 110.60 VL 27.233 GAL 5.78 AZL 86.97 HCA 263.42 SMA 124.91 ECC .20356 INC 3.0284 V1 30.282  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.188 GAP 9.04 AZP 90.35 TAL 156.15 TAP 59.57 RCA 99.48 APO 150.33 V2 34.914  
 RC 152.312 GL 18.88 GP -11.02 ZAL 52.89 ZAP 160.26 ETS 329.57 ZAE 127.37 ETE 187.71 ZAC 126.41 ETC 172.79 CLP-163.51

PLANETOCENTRIC CONIC

C3 19.577 VHL 4.425 DLA 38.57 RAL 53.04 RAD 6567.8 VEL 11.873 PTH 2.11 VHP 6.433 DPA -.82 RAP 33.49 ECC 1.3222  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.63 22 19 26 4125.57 -26.38 181.26 284.60 60.78 23 28 12 3525.6 -30.06 173.61  
 117.37 4 42 10 2937.07 -26.37 91.25 284.59 60.76 5 31 8 2337.1 -30.05 83.61  
 62.63 22 19 26 4125.57 -26.38 181.26 284.60 60.78 23 28 12 3525.6 -30.06 173.61  
 117.37 4 42 10 2937.07 -26.37 91.25 284.59 60.76 5 31 8 2337.1 -30.05 83.61  
 62.63 22 19 26 4125.57 -26.38 181.26 284.60 60.78 23 28 12 3525.6 -30.06 173.61  
 117.37 4 42 10 2937.07 -26.37 91.25 284.59 60.76 5 31 8 2337.1 -30.05 83.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0834 TRA 2.6487 TC3-3.8155 BAU .9987  
 RDE .4107 RRA .1605 RC3 -.0479 FAU .03845  
 FDE 1.0921 FRA 1.9632 FC3-1.7005 BSP 20019  
 BDE 2.1235 BRA 2.6535 BC3 3.8158 FSP -1164

SGT 6158.3 SGR 596.1 SCS 332.8  
 RRT .7476 RRF .7318 RTF .9764  
 SGB 6187.1 R23 -.0017 R13 .9764  
 SGI 6174.5 SGT 394.9 THA 4.16

ST 3003.5 SR 537.8 SS 955.3  
 CRT .9534 CRS -.8980 CST -.9888  
 LSA 3190.0 MSA 215.1 SSA 14.8  
 EL1 3047.1 EL2 160.0 ALF 9.71

LAUNCH DATE JAN 11 1969

FLIGHT TIME 200.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 565.729

RL 147.12 LAL .00 LOL 110.60 VL 27.206 GAL 6.22 AZL 87.08 HCA 266.61 SMA 124.73 ECC .20879 INC 2.9215 V1 30.282  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.179 GAP 9.48 AZP 90.17 TAL 154.95 TAP 61.55 RCA 98.69 APO 150.77 V2 34.926  
 RC 154.516 GL 17.55 GP -10.53 ZAL 50.97 ZAP 161.56 ETS 328.61 ZAE 127.10 ETE 187.30 ZAC 128.19 ETC 172.62 CLP-164.77

PLANETOCENTRIC CONIC

C3 20.888 VHL 4.570 DLA 37.69 RAL 55.46 RAD 6567.8 VEL 11.928 PTH 2.12 VHP 6.684 DPA .35 RAP 35.06 ECC 1.3438  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.01 22 35 56 4121.21 -25.33 180.25 287.71 61.10 23 44 38 3521.2 -28.98 172.66  
 115.99 4 45 0 2972.34 -25.31 93.51 287.70 61.09 5 34 33 2372.3 -28.96 85.92  
 64.01 22 35 56 4121.21 -25.33 180.25 287.71 61.10 23 44 38 3521.2 -28.98 172.66  
 115.99 4 45 0 2972.34 -25.31 93.51 287.70 61.09 5 34 33 2372.3 -28.96 85.92  
 64.01 22 35 56 4121.21 -25.33 180.25 287.71 61.10 23 44 38 3521.2 -28.98 172.66  
 115.99 4 45 0 2972.34 -25.31 93.51 287.70 61.09 5 34 33 2372.3 -28.96 85.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0236 TRA 2.9088 TC3-3.6088 BAU 1.0078  
 RDE .4182 RRA .1681 RC3 -.0396 FAU .03513  
 FDE .9842 FRA 1.9882 FC3-1.4560 BSP 20258  
 BDE 2.0660 BRA 2.9138 BC3 3.6090 FSP -1103

SGT 6209.2 SGR 586.9 SCS 313.9  
 RRT .7327 RRF .7176 RTF .9763  
 SGB 6236.8 R23 -.0011 R13 .9763  
 SGI 6224.1 SGT 398.4 THA 3.98

ST 2890.9 SR 527.8 SS 897.4  
 CRT .9399 CRS -.8768 CST -.9881  
 LSA 3064.3 MSA 226.1 SSA 14.6  
 EL1 2933.3 EL2 177.6 ALF 9.77

LAUNCH DATE JAN 11 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 571.389

RL 147.12 LAL .00 LOL 110.60 VL 27.178 GAL 6.70 AZL 87.18 HCA 269.79 SMA 124.56 ECC .21443 INC 2.8153 V1 30.282  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.170 GAP 9.94 AZP 90.01 TAL 153.75 TAP 63.54 RCA 97.85 APO 151.27 V2 34.938  
 RC 156.704 GL 16.27 GP -10.09 ZAL 49.09 ZAP 162.80 ETS 327.47 ZAE 126.86 ETE 186.94 ZAC 130.01 ETC 172.42 CLP-166.00

PLANETOCENTRIC CONIC

C3 22.398 VHL 4.733 DLA 36.81 RAL 57.79 RAD 6567.9 VEL 11.991 PTH 2.14 VHP 6.948 DPA 1.47 RAP 36.68 ECC 1.3686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.44 22 52 36 4116.47 -24.24 179.20 290.82 61.41 24 1 13 3516.5 -27.86 171.68  
 114.56 4 46 56 3010.77 -24.23 95.97 290.81 61.40 5 37 7 2410.8 -27.85 88.45  
 65.44 22 52 36 4116.47 -24.24 179.20 290.82 61.41 24 1 13 3516.5 -27.86 171.68  
 114.56 4 46 56 3010.77 -24.23 95.97 290.81 61.40 5 37 7 2410.8 -27.85 88.45  
 65.44 22 52 36 4116.47 -24.24 179.20 290.82 61.41 24 1 13 3516.5 -27.86 171.68  
 114.56 4 46 56 3010.77 -24.23 95.97 290.81 61.40 5 37 7 2410.8 -27.85 88.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9621 TRA 3.1646 TC3-3.3888 BAU 1.0148  
 RDE .4229 RRA .1771 RC3 -.0332 FAU .03197  
 FDE .8865 FRA 2.0089 FC3-1.2356 BSP 20461  
 BDE 2.0071 BRA 3.1695 BC3 3.3889 FSP -1043

SGT 6234.4 SGR 578.7 SCS 296.1  
 RRT .7202 RRF .7058 RTF .9763  
 SGB 6281.1 R23 -.0004 R13 .9763  
 SGI 6268.4 SGT 400.6 THA 3.83

ST 2781.8 SR 518.3 SS 845.5  
 CRT .9241 CRS -.8532 CST -.9876  
 LSA 2943.6 MSA 237.9 SSA 14.4  
 EL1 2822.9 EL2 195.1 ALF 9.82

LAUNCH DATE JAN 11 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 577.001

RL 147.12 LAL .00 LOL 110.60 VL 27.150 GAL 7.20 AZL 87.29 HCA 272.98 SMA 124.38 ECC .22052 INC 2.7090 V1 30.282  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.162 GAP 10.42 AZP 89.86 TAL 152.54 TAP 65.52 RCA 96.95 APO 151.81 V2 34.951  
 RC 158.875 GL 15.02 GP -9.70 ZAL 47.26 ZAP 163.99 ETS 326.11 ZAE 126.62 ETE 186.62 ZAC 131.87 ETC 172.19 CLP-167.20

PLANETOCENTRIC CONIC

C3 24.135 VHL 4.913 DLA 35.92 RAL 60.03 RAD 6568.0 VEL 12.063 PTH 2.16 VHP 7.228 DPA 2.56 RAP 38.37 ECC 1.3972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.91 23 9 28 4111.12 -23.12 178.11 293.94 61.71 24 17 59 3511.1 -26.71 170.65  
 113.09 4 47 55 3052.56 -23.11 98.67 293.93 61.70 5 38 47 2452.6 -26.70 91.20  
 66.91 23 9 28 4111.12 -23.12 178.11 293.94 61.71 24 17 59 3511.1 -26.71 170.65  
 113.09 4 47 55 3052.56 -23.11 98.67 293.93 61.70 5 38 47 2452.6 -26.70 91.20  
 66.91 23 9 28 4111.12 -23.12 178.11 293.94 61.71 24 17 59 3511.1 -26.71 170.65  
 113.09 4 47 55 3052.56 -23.11 98.67 293.93 61.70 5 38 47 2452.6 -26.70 91.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9022 TRA 3.4810 TC3-3.1528 BAU 1.0173  
 RDE .4310 RRA .1879 RC3 -.0278 FAU .02803  
 FDE .8003 FRA 2.0340 FC3-1.0342 BSP 20548  
 BDE 1.9504 BRA 3.4660 BC3 3.1529 FSP -982

SGT 6298.7 SGR 571.5 SCS 279.8  
 RRT .7102 RRF .6968 RTF .9762  
 SGB 6322.6 R23 .0009 R13 .9762  
 SGI 6309.9 SGT 401.5 THA 3.70

ST 2681.8 SR 509.2 SS 800.8  
 CRT .9061 CRS -.8278 CST -.9872  
 LSA 2833.7 MSA 249.9 SSA 14.1  
 EL1 2721.4 EL2 212.3 ALF 9.82

LAUNCH DATE JAN 11 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 582.557

RL 147.12 LAL .00 LOL 110.60 VL 27.123 GAL 7.75 AZL 87.40 HCA 276.17 SMA 124.21 ECC .22712 INC 2.6021 V1 30.282
RP 108.39 LAP -2.59 LOP 26.78 VP 37.154 GAP 10.93 AZP 89.72 TAL 151.35 TAP 67.52 RCA 96.00 APO 152.42 V2 34.964
RC 161.027 GL 13.81 GP -9.33 ZAL 45.48 ZAP 165.13 ETS 324.48 ZAE 126.40 ETE 186.33 ZAC 133.76 ETC 171.93 CLP-168.37

PLANETOCENTRIC CONIC

C3 26.132 VHL 5.112 DLA 35.04 RAL 62.17 RAD 6568.1 VEL 12.145 PTH 2.18 VHP 7.526 DPA 3.61 RAP 40.10 ECC 1.4301
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.44 23 26 37 4104.89 -21.98 176.96 297.05 62.00 24 35 1 3504.9 -25.55 169.55
111.56 4 47 50 3097.95 -21.97 101.61 297.04 61.99 5 39 28 2498.0 -25.53 94.21
68.44 23 26 37 4104.89 -21.98 176.96 297.05 62.00 24 35 1 3504.9 -25.55 169.55
111.56 4 47 50 3097.95 -21.97 101.61 297.04 61.99 5 39 28 2498.0 -25.53 94.21
68.44 23 26 37 4104.89 -21.98 176.96 297.05 62.00 24 35 1 3504.9 -25.55 169.55
111.56 4 47 50 3097.95 -21.97 101.61 297.04 61.99 5 39 28 2498.0 -25.53 94.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8357 TRA 3.7904 TC3-2.9197 BAU 1.0200 SGT 6329.9 SGR 564.0 SG3 264.2 ST 2581.6 SR 499.5 SS 759.3
RDE .4396 RRA .1997 RC3 -.0242 FAU .02603 RRT .7019 RRF .6890 RTF .9762 CRT .8652 CRS -.7996 CST -.9870
FDE .7190 FRA 2.0564 FC3 -.8623 BSP 20733 SGB 6355.0 R23 .0014 R13 .9762 LSA 2724.3 MSA 262.0 SSA 13.8
BDE 1.8876 BRA 3.7957 BC3 2.9198 FSP -930 SG1 6342.4 SG2 400.9 THA 3.59 EL1 2619.5 EL2 229.0 ALF 9.79

LAUNCH DATE JAN 11 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 588.049

RL 147.12 LAL .00 LOL 110.60 VL 27.095 GAL 8.32 AZL 87.51 HCA 279.36 SMA 124.03 ECC .23427 INC 2.4937 V1 30.282
RP 108.35 LAP -2.46 LOP 29.97 VP 37.146 GAP 11.47 AZP 89.59 TAL 150.16 TAP 69.53 RCA 94.97 APO 153.09 V2 34.977
RC 163.161 GL 12.64 GP -9.00 ZAL 43.78 ZAP 166.22 ETS 322.54 ZAE 126.18 ETE 186.09 ZAC 135.67 ETC 171.62 CLP-169.53

PLANETOCENTRIC CONIC

C3 28.426 VHL 5.332 DLA 34.16 RAL 64.21 RAD 6568.1 VEL 12.239 PTH 2.20 VHP 7.843 DPA 4.63 RAP 41.87 ECC 1.4678
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.04 23 44 7 4097.44 -20.82 175.71 300.16 62.28 24 52 24 3497.4 -24.36 168.36
109.96 4 46 37 3147.26 -20.80 104.82 300.15 62.27 5 39 4 2547.3 -24.34 97.47
70.04 23 44 7 4097.44 -20.82 175.71 300.16 62.28 24 52 24 3497.4 -24.36 168.36
109.96 4 46 37 3147.26 -20.80 104.82 300.15 62.27 5 39 4 2547.3 -24.34 97.47
110.00 4 55 49 3119.25 -21.67 103.12 300.63 62.89 5 47 48 2519.2 -25.13 95.67
110.00 4 38 1 3173.45 -19.95 106.39 299.67 61.65 5 30 55 2573.4 -23.58 99.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7680 TRA 4.1194 TC3-2.6840 BAU 1.0200 SGT 6357.9 SGR 556.4 SG3 249.7 ST 2488.6 SR 489.4 SS 723.1
RDE .4488 RRA .2129 RC3 -.0214 FAU .02336 RRT .6956 RRF .6832 RTF .9763 CRT .8618 CRS -.7695 CST -.9869
FDE .6455 FRA 2.0798 FC3 -.7115 BSP 20894 SGB 6382.2 R23 .0019 R13 .9763 LSA 2623.1 MSA 273.8 SSA 13.5
BDE 1.8241 BRA 4.1248 BC3 2.6841 FSP -881 SG1 6369.8 SG2 399.0 THA 3.50 EL1 2524.4 EL2 244.8 ALF 9.71

LAUNCH DATE JAN 11 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 593.468

RL 147.12 LAL .00 LOL 110.60 VL 27.067 GAL 8.94 AZL 87.62 HCA 282.56 SMA 123.86 ECC .24204 INC 2.3833 V1 30.282
RP 108.31 LAP -2.33 LOP 33.17 VP 37.138 GAP 12.04 AZP 89.48 TAL 148.99 TAP 71.55 RCA 93.88 APO 153.84 V2 34.990
RC 165.276 GL 11.51 GP -8.70 ZAL 42.09 ZAP 167.27 ETS 320.22 ZAE 125.97 ETE 185.87 ZAC 137.61 ETC 171.27 CLP-170.67

PLANETOCENTRIC CONIC

C3 31.065 VHL 5.574 DLA 33.30 RAL 66.15 RAD 6568.2 VEL 12.347 PTH 2.23 VHP 8.182 DPA 5.61 RAP 43.68 ECC 1.5113
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.71 0 6 2 4088.27 -19.64 174.34 303.26 62.56 1 14 10 3488.3 -23.15 167.04
108.29 4 44 6 3200.91 -19.62 108.33 303.25 62.55 5 37 27 2600.9 -23.14 101.03
71.71 0 6 2 4088.27 -19.64 174.34 303.26 62.56 1 14 10 3488.3 -23.15 167.04
108.29 4 44 6 3200.91 -19.62 108.33 303.25 62.55 5 37 27 2600.9 -23.14 101.03
110.00 5 53 32 2988.00 -25.50 94.86 306.29 66.43 6 43 20 2388.0 -28.46 86.93
110.00 3 55 47 3349.18 -13.96 116.49 299.92 58.48 4 51 36 2749.2 -18.03 109.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6987 TRA 4.4688 TC3-2.4488 BAU 1.0171 SGT 6380.2 SGR 548.6 SG3 236.2 ST 2403.0 SR 478.9 SS 691.8
RDE .4586 RRA .2275 RC3 -.0190 FAU .02083 RRT .6910 RRF .6791 RTF .9765 CRT .8357 CRS -.7380 CST -.9871
FDE .5790 FRA 2.1044 FC3 -.5805 BSP 21047 SGB 6403.8 R23 .0024 R13 .9765 LSA 2530.1 MSA 284.7 SSA 13.2
BDE 1.7595 BRA 4.4746 BC3 2.4489 FSP -836 SG1 6391.5 SG2 395.9 THA 3.41 EL1 2436.5 EL2 259.4 ALF 9.56

LAUNCH DATE JAN 11 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 598.802

RL 147.12 LAL .00 LOL 110.60 VL 27.040 GAL 9.61 AZL 87.73 HCA 285.76 SMA 123.69 ECC .25050 INC 2.2700 V1 30.282
RP 108.26 LAP -2.18 LOP 36.37 VP 37.131 GAP 12.65 AZP 89.38 TAL 147.83 TAP 73.59 RCA 92.70 APO 154.67 V2 35.003
RC 167.370 GL 10.42 GP -8.43 ZAL 40.49 ZAP 168.26 ETS 317.44 ZAE 125.75 ETE 185.67 ZAC 139.55 ETC 170.86 CLP-171.80

PLANETOCENTRIC CONIC

C3 34.106 VHL 5.840 DLA 32.44 RAL 67.99 RAD 6568.3 VEL 12.469 PTH 2.26 VHP 8.546 DPA 6.56 RAP 45.52 ECC 1.5613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.47 0 24 43 4076.70 -18.44 172.80 306.36 62.83 1 32 40 3476.7 -21.94 165.55
106.53 4 40 6 3259.52 -18.43 112.19 306.35 62.82 5 34 26 2659.5 -21.92 104.94
73.47 0 24 43 4076.70 -18.44 172.80 306.36 62.83 1 32 40 3476.7 -21.94 165.55
106.53 4 40 6 3259.52 -18.43 112.19 306.35 62.82 5 34 26 2659.5 -21.92 104.94
110.00 6 24 20 2937.87 -26.83 91.56 310.51 67.97 7 13 18 2337.9 -29.57 83.45
110.00 3 39 40 3446.35 -10.44 121.81 301.60 57.26 4 37 6 2846.3 -14.68 115.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6288 TRA 4.8417 TC3-2.2159 BAU 1.0104 SGT 6397.7 SGR 540.4 SG3 223.6 ST 2326.1 SR 467.7 SS 665.3
RDE .4888 RRA .2435 RC3 -.0189 FAU .01841 RRT .6881 RRF .6766 RTF .9768 CRT .8074 CRS -.7055 CST -.9876
FDE .5191 FRA 2.1311 FC3 -.4674 BSP 21166 SGB 6420.5 R23 .0027 R13 .9769 LSA 2446.5 MSA 294.4 SSA 12.8
BDE 1.6949 BRA 4.8478 BC3 2.2160 FSP -792 SG1 6408.6 SG2 391.5 THA 3.34 EL1 2357.0 EL2 272.4 ALF 9.35

LAUNCH DATE JAN 11 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 604.037

RL 147.12 LAL .00 LOL 110.60 VL 27.012 GAL 10.32 AZL 87.85 HCA 288.96 SMA 123.52 ECC .25972 INC 2.1530 V1 30.282  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.123 GAP 13.30 AZP 89.30 TAL 146.70 TAP 75.66 RCA 91.44 APO 155.60 V2 35.016  
 RC 169.445 GL 9.37 GP -8.17 ZAL 38.97 ZAP 169.20 ETS 314.09 ZAE 125.54 ETE 185.49 ZAC 141.51 ETC 170.39 CLP-172.93

PLANETOCENTRIC CONIC

C3 37.616 VHL 6.133 DLA 31.60 RAL 69.73 RAD 6568.5 VEL 12.609 PTH 2.29 VHP 8.937 DPA 7.47 RAP 47.40 ECC 1.6191  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.36 0 44 23 4061.72 -17.24 171.02 309.44 63.11 1 52 5 3461.7 -20.71 163.81  
 104.64 4 34 19 3323.99 -17.23 116.45 309.44 63.10 5 29 43 2724.0 -20.70 109.25  
 75.36 0 44 23 4061.72 -17.24 171.02 309.44 63.11 1 52 5 3461.7 -20.71 163.81  
 104.64 4 34 19 3323.99 -17.23 116.45 309.44 63.10 5 29 43 2724.0 -20.70 109.25  
 110.00 6 49 1 2905.88 -27.62 89.42 314.42 69.01 7 37 27 2305.9 -30.22 81.19  
 110.00 3 28 52 3527.83 -7.41 126.18 303.60 56.53 4 27 40 2927.8 -11.76 119.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5614 TRA 5.2432 TC3-1.9845 BAU .9980 SGT 6412.7 SGR 531.9 SG3 211.9 ST 2260.3 SR 456.1 SS 644.2  
 RDE .4796 RRA .2610 RC3 -.0146 FAU .01602 RRT .6870 RRF .6761 RTF .9773 CRT .7775 CRS -.6735 CST -.9883  
 FDE .4665 FRA 2.1618 FC3 -.3688 BSP 21189 SGB 6434.7 R23 .0031 R13 .9773 LSA 2375.0 MSA 302.4 SSA 12.5  
 BDE 1.6334 BRA 5.2497 BC3 1.9846 FSP -747 SG1 6423.1 SG2 385.9 THA 3.27 EL1 2288.4 EL2 283.3 ALF 9.06

LAUNCH DATE JAN 11 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 609.156

RL 147.12 LAL .00 LOL 110.60 VL 26.985 GAL 11.09 AZL 87.97 HCA 292.16 SMA 123.35 ECC .26981 INC 2.0313 V1 30.282  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.116 GAP 14.00 AZP 89.23 TAL 145.60 TAP 77.77 RCA 90.07 APO 156.63 V2 35.030  
 RC 171.498 GL 8.36 GP -7.94 ZAL 37.51 ZAP 170.09 ETS 310.05 ZAE 125.31 ETE 185.33 ZAC 143.46 ETC 169.84 CLP-174.05

PLANETOCENTRIC CONIC

C3 41.681 VHL 6.456 DLA 30.77 RAL 71.37 RAD 6568.6 VEL 12.769 PTH 2.32 VHP 9.359 DPA 8.34 RAP 49.29 ECC 1.6860  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.43 1 5 35 4041.45 -16.04 168.86 312.51 63.39 2 12 56 3441.4 -19.49 161.69  
 102.57 4 26 12 3396.10 -16.03 121.25 312.50 63.38 5 22 48 2796.1 -19.47 114.09  
 77.43 1 5 35 4041.45 -16.04 168.86 312.51 63.39 2 12 56 3441.4 -19.49 161.69  
 102.57 4 26 12 3396.10 -16.03 121.25 312.50 63.38 5 22 48 2796.1 -19.47 114.09  
 110.00 7 10 14 2883.98 -28.15 87.93 318.16 69.75 7 58 18 2284.0 -30.64 79.62  
 110.00 3 20 43 3601.56 -4.63 130.07 305.76 56.09 4 20 45 3001.6 -9.05 123.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4892 TRA 5.6681 TC3-1.7646 BAU .9833 SGT 6419.5 SGR 522.4 SG3 200.9 ST 2199.1 SR 443.6 SS 625.9  
 RDE .4902 RRA .2795 RC3 -.0127 FAU .01383 RRT .6867 RRF .6761 RTF .9779 CRT .7454 CRS -.6406 CST -.9892  
 FDE .4172 FRA 2.1934 FC3 -.2873 BSP 21294 SGB 6440.7 R23 .0032 R13 .9779 LSA 2308.5 MSA 308.8 SSA 12.1  
 BDE 1.5678 BRA 5.6750 BC3 1.7646 FSP -709 SG1 6429.6 SG2 379.2 THA 3.21 EL1 2224.2 EL2 292.3 ALF 8.70

LAUNCH DATE JAN 11 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 614.137

RL 147.12 LAL .00 LOL 110.60 VL 26.958 GAL 11.93 AZL 88.10 HCA 295.37 SMA 123.18 ECC .28087 INC 1.9038 V1 30.282  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.109 GAP 14.76 AZP 89.18 TAL 144.54 TAP 79.91 RCA 88.58 APO 157.78 V2 35.043  
 RC 173.532 GL 7.39 GP -7.73 ZAL 36.14 ZAP 170.90 ETS 305.15 ZAE 125.08 ETE 185.19 ZAC 145.41 ETC 169.22 CLP-175.18

PLANETOCENTRIC CONIC

C3 46.403 VHL 6.812 DLA 29.96 RAL 72.91 RAD 6568.7 VEL 12.952 PTH 2.36 VHP 9.818 DPA 9.18 RAP 51.21 ECC 1.7637  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.80 1 29 12 4012.91 -14.84 166.10 315.56 63.68 2 36 5 3412.9 -18.26 158.97  
 100.20 4 14 51 3478.65 -14.83 126.80 315.55 63.67 5 12 50 2878.6 -18.24 119.67  
 79.80 1 29 12 4012.91 -14.84 166.10 315.56 63.68 2 36 5 3412.9 -18.26 158.97  
 100.20 4 14 51 3478.65 -14.83 126.80 315.55 63.67 5 12 50 2878.6 -18.24 119.67  
 110.00 7 29 2 2868.99 -28.50 86.90 321.78 70.27 8 16 51 2269.0 -30.92 78.54  
 110.00 3 14 11 3670.56 -2.00 133.68 308.02 55.87 4 15 22 3070.6 -6.46 127.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4170 TRA 6.1239 TC3-1.5524 BAU .9630 SGT 6421.6 SGR 512.0 SG3 190.6 ST 2146.0 SR 430.2 SS 611.6  
 RDE .5009 RRA .2993 RC3 -.0107 FAU .01171 RRT .6874 RRF .6773 RTF .9786 CRT .7122 CRS -.6085 CST -.9902  
 FDE .3730 FRA 2.2287 FC3 -.2184 BSP 21382 SGB 6442.0 R23 .0031 R13 .9787 LSA 2250.9 MSA 313.0 SSA 11.7  
 BDE 1.5029 BRA 6.1312 BC3 1.5524 FSP -672 SG1 6431.3 SG2 371.3 THA 3.15 EL1 2168.2 EL2 298.9 ALF 8.29

LAUNCH DATE JAN 11 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 618.954

RL 147.12 LAL .00 LOL 110.60 VL 26.932 GAL 12.84 AZL 88.23 HCA 298.57 SMA 123.02 ECC .29304 INC 1.7693 V1 30.282  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.102 GAP 15.59 AZP 89.15 TAL 143.53 TAP 82.10 RCA 86.97 APO 159.06 V2 35.056  
 RC 175.544 GL 6.46 GP -7.54 ZAL 34.85 ZAP 171.61 ETS 299.24 ZAE 124.83 ETE 185.06 ZAC 147.35 ETC 168.50 CLP-176.32

PLANETOCENTRIC CONIC

C3 51.911 VHL 7.205 DLA 29.16 RAL 74.34 RAD 6568.9 VEL 13.163 PTH 2.40 VHP 10.317 DPA 9.98 RAP 53.13 ECC 1.8543  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.72 1 57 43 3967.85 -13.64 162.16 318.58 63.97 3 3 51 3367.9 -17.03 155.06  
 97.28 3 57 46 3579.71 -13.63 133.68 318.57 63.97 4 57 26 2979.7 -17.02 126.58  
 100.00 5 14 34 3533.45 -19.10 118.09 321.20 66.56 6 10 7 2733.4 -22.11 110.58  
 100.00 3 23 37 3689.35 -8.29 138.97 315.75 61.18 4 25 6 3089.3 -12.08 132.22  
 110.00 7 45 58 2859.23 -28.72 86.23 325.32 70.61 8 33 38 2259.2 -31.09 77.83  
 110.00 3 8 42 3736.33 .52 137.11 310.35 55.82 4 10 58 3136.3 -3.97 130.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3449 TRA 6.6143 TC3-1.3492 BAU .9363 SGT 6419.1 SGR 500.7 SG3 181.1 ST 2100.6 SR 416.2 SS 600.8  
 RDE .5117 RRA .3201 RC3 -.0086 FAU .00965 RRT .6892 RRF .6794 RTF .9796 CRT .6786 CRS -.5776 CST -.9914  
 FDE .3332 FRA 2.2685 FC3 -.1609 BSP 21446 SGB 6438.6 R23 .0030 R13 .9796 LSA 2201.7 MSA 315.0 SSA 11.3  
 BDE 1.4390 BRA 6.6221 BC3 1.3492 FSP -638 SG1 6428.4 SG2 362.3 THA 3.09 EL1 2119.9 EL2 302.9 ALF 7.82



LAUNCH DATE JAN 12 1969 FLIGHT TIME 70.00 ARRIVAL DATE MAR 23 1969

Heliocentric Conic  
 RL 147.13 LAL .00 LOL 111.62 VL 21.705 GAL 7.07 AZL 86.10 HCA 60.15 SMA 99.56 ECC .48981 INC 3.8972 V1 30.281  
 RP 107.65 LAP 3.38 LOP 171.71 VP 33.656 GAP -28.99 AZP 88.06 TAL 172.52 TAP 232.67 RCA 50.80 APO 148.33 V2 35.202  
 RC 48.064 GL 9.08 GP 3.80 ZAL 73.79 ZAP 19.72 ETS 192.09 ZAE 163.18 ETE 204.53 ZAC 104.17 ETC 165.71 CLP 19.36

Planetocentric Conic  
 C3 86.127 VHL 9.280 DLA 22.75 RAL 32.50 RAD 6569.7 VEL 14.404 PTH 2.62 VHP 17.491 DPA 5.01 RAP 9.84 ECC 2.4174  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 42 0 3374.63 -23.19 122.70 288.73 73.28 3 38 15 2774.6 -25.26 114.65  
 90.00 21 27 51 4413.82 6.88 183.96 276.56 62.47 22 41 25 3813.8 3.14 177.28  
 100.00 4 20 20 3057.57 -25.52 100.13 289.48 73.89 5 11 18 2457.6 -27.49 91.88  
 100.00 22 32 12 4206.12 9.03 167.54 275.41 61.38 23 42 18 3606.1 5.14 160.92  
 110.00 6 3 22 2735.27 -31.20 77.43 291.26 75.27 6 48 57 2135.3 -32.91 68.63  
 110.00 23 5 40 4101.18 14.13 156.58 272.40 58.55 24 14 1 3501.2 9.87 150.08

Differential Corrections  
 TDE -.4326 TRA-1.1486 TC3 -.0722 BAU .0905 SGT 825.0 SGR 435.5 S63 42.6 ST 352.9 SR 416.0 SS 314.2  
 RDE -.6713 RRA .1802 RC3 -.0312 FAU .01644 RRT .0715 RRF -.0747 RTF -.6623 CRT .6970 CRS .8233 CST .9790  
 FDE .2928 FRA .5092 FC3 -.1653 B8P 2268 SGB 932.9 R23 -.0093 R13 -.6628 LSA 589.2 MSA 221.5 SSA 13.8  
 BDE .7986 BRA 1.1627 BC3 .0786 F8P -93 S61 825.0 S62 434.0 THA 2.99 EL1 504.0 EL2 208.9 ALF 51.67

LAUNCH DATE JAN 12 1969 FLIGHT TIME 72.00 ARRIVAL DATE MAR 25 1969

Heliocentric Conic  
 RL 147.13 LAL .00 LOL 111.62 VL 22.207 GAL 6.72 AZL 86.25 HCA 63.39 SMA 101.24 ECC .46513 INC 3.7548 V1 30.281  
 RP 107.68 LAP 3.38 LOP 174.95 VP 33.973 GAP -27.50 AZP 88.32 TAL 172.15 TAP 235.54 RCA 54.15 APO 148.33 V2 35.194  
 RC 46.839 GL 9.48 GP 3.95 ZAL 73.31 ZAP 18.19 ETS 193.64 ZAE 165.09 ETE 207.60 ZAC 105.71 ETC 165.52 CLP 17.77

Planetocentric Conic  
 C3 78.875 VHL 8.768 DLA 23.31 RAL 32.86 RAD 6569.5 VEL 14.079 PTH 2.57 VHP 16.683 DPA 5.83 RAP 11.27 ECC 2.2652  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 37 3376.54 -23.15 122.83 287.26 73.22 3 31 53 2776.5 -25.23 114.78  
 90.00 21 37 9 4360.14 5.19 180.94 275.64 62.12 22 49 49 3760.1 1.41 174.28  
 100.00 4 15 5 3055.82 -25.56 100.01 288.04 73.94 5 6 1 2455.8 -27.51 91.76  
 100.00 22 40 22 4158.08 7.39 164.74 274.44 60.95 23 49 38 3556.1 3.46 158.16  
 110.00 5 39 55 2727.86 -31.33 76.89 289.83 75.57 6 45 22 2127.9 -32.99 68.06  
 110.00 23 12 1 4056.81 12.54 154.13 271.35 57.94 24 19 38 3456.8 8.22 147.70

Differential Corrections  
 TDE -.4326 TRA-1.1343 TC3 -.0669 BAU .0768 SGT 863.2 SGR 439.0 S63 46.7 ST 372.2 SR 420.5 SS 330.2  
 RDE -.6412 RRA .1646 RC3 -.0355 FAU .01701 RRT .0812 RRF -.0851 RTF -.6823 CRT .7025 CRS .8272 CST .9792  
 FDE .3054 FRA .5245 FC3 -.1916 B8P 2427 SGB 968.4 R23 -.0106 R13 -.6829 LSA 610.9 MSA 225.8 SSA 14.0  
 BDE .7735 BRA 1.1482 BC3 .0748 F8P -104 S61 864.2 S62 437.1 THA 3.18 EL1 518.9 EL2 214.7 ALF 49.93

LAUNCH DATE JAN 12 1969 FLIGHT TIME 74.00 ARRIVAL DATE MAR 27 1969

Heliocentric Conic  
 RL 147.13 LAL .00 LOL 111.62 VL 22.673 GAL 6.36 AZL 86.38 HCA 66.62 SMA 102.88 ECC .44161 INC 3.6203 V1 30.281  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.269 GAP -26.08 AZP 88.56 TAL 171.83 TAP 238.45 RCA 57.45 APO 148.31 V2 35.184  
 RC 45.742 GL 9.89 GP 4.13 ZAL 72.92 ZAP 16.69 ETS 195.51 ZAE 167.11 ETE 211.73 ZAC 107.25 ETC 165.31 CLP 16.19

Planetocentric Conic  
 C3 88.670 VHL 8.287 DLA 23.83 RAL 33.13 RAD 6569.3 VEL 13.785 PTH 2.52 VHP 15.909 DPA 6.67 RAP 12.71 ECC 2.1301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 28 53 3377.50 -23.13 122.90 285.64 73.20 3 25 11 2777.5 -25.22 114.84  
 90.00 21 46 1 4306.26 3.46 177.91 274.62 61.88 22 57 48 3706.3 -3.32 171.28  
 100.00 4 9 34 3052.89 -25.61 99.81 286.44 74.03 5 0 27 2452.9 -27.55 91.55  
 100.00 22 48 2 4106.10 5.73 161.96 273.37 60.61 23 56 28 3506.1 1.77 155.41  
 110.00 5 56 15 2719.13 -31.47 76.26 288.23 75.92 6 41 34 2119.1 -33.09 67.40  
 110.00 23 17 50 4012.62 10.93 151.72 270.21 57.41 24 24 43 3412.6 6.56 145.36

Differential Corrections  
 TDE -.4333 TRA-1.1194 TC3 -.0590 BAU .0632 SGT 902.8 SGR 441.8 S63 51.2 ST 392.7 SR 424.4 SS 346.9  
 RDE -.6118 RRA .1497 RC3 -.0356 FAU .01765 RRT .0922 RRF -.0968 RTF -.7015 CRT .7089 CRS .8317 CST .9796  
 FDE .3188 FRA .5398 FC3 -.2225 B8P 2588 SGB 1005.2 R23 -.0121 R13 -.7021 LSA 633.9 MSA 229.5 SSA 14.2  
 BDE .7497 BRA 1.1293 BC3 .0689 F8P -116 S61 904.0 S62 439.4 THA 3.38 EL1 534.8 EL2 219.8 ALF 48.13

LAUNCH DATE JAN 12 1969 FLIGHT TIME 76.00 ARRIVAL DATE MAR 29 1969

Heliocentric Conic  
 RL 147.13 LAL .00 LOL 111.62 VL 23.104 GAL 6.01 AZL 86.51 HCA 69.85 SMA 104.48 ECC .41925 INC 3.4922 V1 30.281  
 RP 107.74 LAP 3.28 LOP 181.43 VP 34.546 GAP -24.73 AZP 88.80 TAL 171.55 TAP 241.40 RCA 60.68 APO 148.28 V2 35.174  
 RC 44.782 GL 10.29 GP 4.31 ZAL 72.63 ZAP 15.23 ETS 197.77 ZAE 169.20 ETE 217.57 ZAC 108.78 ETC 165.06 CLP 14.61

Planetocentric Conic  
 C3 61.391 VHL 7.835 DLA 24.31 RAL 33.31 RAD 6569.1 VEL 13.518 PTH 2.47 VHP 15.165 DPA 7.53 RAP 14.15 ECC 2.0103  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 52 3377.52 -23.13 122.90 283.88 73.20 3 18 9 2777.5 -25.22 114.85  
 90.00 21 54 26 4252.43 1.73 174.91 273.49 61.73 23 5 19 3652.4 -2.06 168.28  
 100.00 4 3 50 3048.75 -25.69 99.53 284.70 74.16 4 54 39 2448.7 -27.61 91.26  
 100.00 22 55 9 4056.45 4.08 159.21 272.20 60.36 24 2 46 3456.4 .09 152.68  
 110.00 5 52 24 2709.10 -31.64 75.52 286.49 76.33 6 37 33 2109.1 -33.19 66.64  
 110.00 23 23 5 3988.86 9.32 149.36 288.98 56.96 24 29 14 3368.9 4.90 143.05

Differential Corrections  
 TDE -.4372 TRA-1.1057 TC3 -.0495 BAU .0509 SGT 946.3 SGR 444.0 S63 56.1 ST 416.0 SR 427.8 SS 364.8  
 RDE -.5833 RRA .1354 RC3 -.0374 FAU .01833 RRT .1060 RRF -.1105 RTF -.7189 CRT .7176 CRS .8367 CST .9803  
 FDE .3336 FRA .5555 FC3 -.2585 B8P 2699 SGB 1045.3 R23 -.0132 R13 -.7196 LSA 659.6 MSA 232.2 SSA 14.5  
 BDE .7290 BRA 1.1139 BC3 .0621 F8P -129 S61 947.7 S62 440.8 THA 3.64 EL1 553.0 EL2 224.1 ALF 46.11

LAUNCH DATE JAN 12 1969 FLIGHT TIME 78.00 ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC DISTANCE 180.134  
 RL 147.13 LAL .00 LOL 111.62 VL 23.504 GAL 5.65 AZL 86.63 HCA 73.08 SMA 106.04 ECC .39805 INC 3.3695 V1 30.281  
 RP 107.77 LAP 3.22 LOP 184.67 VP 34.804 GAP -23.44 AZP 89.02 TAL 171.32 TAP 244.40 RCA 63.83 APO 148.24 V2 35.164  
 RC 43.971 GL 10.69 GP 4.52 ZAL 72.44 ZAP 13.79 ETS 200.56 ZAE 171.27 ETE 226.43 ZAC 110.31 ETC 164.78 CLP 13.04

PLANETOCENTRIC CONIC  
 C3 54.930 VHL 7.411 DLA 24.76 RAL 33.38 RAD 6569.0 VEL 13.277 PTH 2.43 VHP 14.451 DPA 8.40 RAP 15.59 ECC 1.9040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 36 3376.51 -23.15 122.83 281.99 73.22 3 10 52 2776.5 -25.23 114.78  
 90.00 22 2 19 4199.04 .01 171.93 272.27 61.68 23 12 18 3599.0 -3.78 165.29  
 100.00 3 57 56 3043.33 -25.79 99.16 282.83 74.33 4 48 40 2443.3 -27.69 90.87  
 100.00 23 1 39 4007.45 2.41 156.52 270.93 60.20 24 8 27 3407.4 -1.58 150.00  
 110.00 5 48 24 2697.76 -31.82 74.68 284.60 76.79 6 33 21 2097.8 -33.31 65.77  
 110.00 23 27 41 3925.78 7.71 147.06 267.66 56.59 24 33 7 3325.8 3.27 140.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4394 TRA-1.0887 TC3 -.0351 BAU .0384 SGT 988.5 SGR 445.6 S63 61.6 ST 439.0 SR 430.7 SS 383.2  
 RDE -.5596 RRA .1217 RC3 -.0388 FAU .01911 RRT .1200 RRF -.1254 RTF -.7364 CRT .7261 CRS .8420 CST .9808  
 FDE .3489 FRA .5710 FC3 -.3012 BSP 2871 SGB 1084.3 R23 -.0151 R13 -.7371 LSA 685.5 MSA 234.2 SSA 14.7  
 BDE .7084 BRA 1.0955 BC3 .0523 FSP -144 S61 990.3 S62 441.6 THA 3.87 EL1 571.3 EL2 227.5 ALF 44.25

LAUNCH DATE JAN 12 1969 FLIGHT TIME 80.00 ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC DISTANCE 186.732  
 RL 147.13 LAL .00 LOL 111.62 VL 23.875 GAL 5.30 AZL 86.75 HCA 76.31 SMA 107.54 ECC .37798 INC 3.2509 V1 30.281  
 RP 107.80 LAP 3.16 LOP 187.90 VP 35.045 GAP -22.21 AZP 89.23 TAL 171.15 TAP 247.45 RCA 66.89 APO 148.19 V2 35.153  
 RC 43.319 GL 11.08 GP 4.75 ZAL 72.34 ZAP 12.40 ETS 204.05 ZAE 173.14 ETE 240.76 ZAC 111.81 ETC 164.46 CLP 11.47

PLANETOCENTRIC CONIC  
 C3 49.195 VHL 7.014 DLA 25.17 RAL 33.36 RAD 6568.8 VEL 13.060 PTH 2.38 VHP 13.766 DPA 9.28 RAP 17.01 ECC 1.8096  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 11 3374.33 -23.19 122.68 279.98 73.28 3 3 25 2774.3 -25.27 114.63  
 90.00 22 9 33 4146.48 -1.69 169.00 270.93 61.73 23 18 40 3546.5 -5.46 162.34  
 100.00 3 51 57 3036.54 -25.91 98.69 280.84 74.55 4 42 34 2436.5 -27.78 90.39  
 100.00 23 7 28 3959.51 .78 153.89 269.56 60.12 24 13 27 3359.5 -3.20 147.36  
 110.00 5 44 17 2685.09 -32.01 73.75 282.58 77.32 6 29 2 2085.1 -33.42 64.80  
 110.00 23 31 37 3883.71 6.13 144.83 266.24 56.30 24 36 21 3283.7 1.66 138.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4424 TRA-1.0712 TC3 -.0166 BAU .0282 SGT 1032.4 SGR 446.5 S63 67.6 ST 463.4 SR 433.1 SS 402.5  
 RDE -.5290 RRA .1086 RC3 -.0395 FAU .01997 RRT .1361 RRF -.1423 RTF -.7529 CRT .7356 CRS .8478 CST .9815  
 FDE .3654 FRA .3868 FC3 -.3514 BSP 3041 SGB 1124.9 R23 -.0171 R13 -.7538 LSA 713.3 MSA 235.3 SSA 15.0  
 BDE .6896 BRA 1.0767 BC3 .0429 FSP -161 S61 1034.6 S62 441.5 THA 4.12 EL1 591.1 EL2 230.0 ALF 42.37

LAUNCH DATE JAN 12 1969 FLIGHT TIME 82.00 ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC DISTANCE 193.363  
 RL 147.13 LAL .00 LOL 111.62 VL 24.218 GAL 4.96 AZL 86.86 HCA 79.53 SMA 109.00 ECC .35904 INC 3.1356 V1 30.281  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.268 GAP -21.03 AZP 89.43 TAL 171.03 TAP 250.56 RCA 69.87 APO 148.14 V2 35.141  
 RC 42.834 GL 11.46 GP 5.00 ZAL 72.35 ZAP 11.07 ETS 208.50 ZAE 174.39 ETE 263.87 ZAC 113.30 ETC 164.09 CLP 9.89

PLANETOCENTRIC CONIC  
 C3 44.105 VHL 6.641 DLA 25.54 RAL 33.24 RAD 6568.7 VEL 12.864 PTH 2.34 VHP 13.107 DPA 10.19 RAP 18.43 ECC 1.7259  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 44 3370.72 -23.26 122.44 277.85 73.39 2 55 55 2770.7 -25.32 114.30  
 90.00 22 16 2 4095.31 -3.34 166.14 269.48 61.86 23 24 17 3495.3 -7.07 159.45  
 100.00 3 45 59 3028.17 -26.06 98.12 278.73 74.82 4 36 27 2428.2 -27.89 89.79  
 100.00 23 12 28 3913.09 -.79 151.34 268.07 60.12 24 17 41 3313.1 -4.76 144.80  
 110.00 5 40 8 2671.04 -32.22 72.70 280.44 77.90 6 24 39 2071.0 -33.55 63.72  
 110.00 23 34 48 3842.99 4.59 142.60 264.72 56.09 24 38 51 3243.0 .10 136.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4456 TRA-1.0522 TC3 .0069 BAU .0236 SGT 1077.0 SGR 447.0 S63 74.3 ST 488.8 SR 435.2 SS 422.6  
 RDE -.5034 RRA .0960 RC3 -.0394 FAU .02093 RRT .1540 RRF -.1614 RTF -.7687 CRT .7459 CRS .8540 CST .9823  
 FDE .3829 FRA .6026 FC3 -.4109 BSP 3219 SGB 1166.1 R23 -.0195 R13 -.7696 LSA 742.4 MSA 235.6 SSA 15.2  
 BDE .6723 BRA 1.0565 BC3 .0400 FSP -180 S61 1079.6 S62 440.5 THA 4.39 EL1 612.1 EL2 231.4 ALF 40.56

LAUNCH DATE JAN 12 1969 FLIGHT TIME 84.00 ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC DISTANCE 200.020  
 RL 147.13 LAL .00 LOL 111.62 VL 24.536 GAL 4.62 AZL 86.98 HCA 82.75 SMA 110.41 ECC .34119 INC 3.0228 V1 30.281  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.475 GAP -19.91 AZP 89.62 TAL 170.96 TAP 253.72 RCA 72.74 APO 148.08 V2 35.129  
 RC 42.524 GL 11.83 GP 5.28 ZAL 72.45 ZAP 9.83 ETS 214.24 ZAE 174.45 ETE 293.51 ZAC 114.77 ETC 163.68 CLP 8.30

PLANETOCENTRIC CONIC  
 C3 39.587 VHL 6.292 DLA 25.85 RAL 33.02 RAD 6568.5 VEL 12.687 PTH 2.30 VHP 12.475 DPA 11.11 RAP 19.83 ECC 1.6515  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 26 3365.28 -23.37 122.08 275.64 73.54 2 48 31 2765.3 -25.40 114.00  
 90.00 22 21 34 4048.24 -4.91 163.39 267.92 62.08 23 29 1 3446.2 -8.60 156.66  
 100.00 3 40 9 3017.99 -26.24 97.41 276.52 75.15 4 30 27 2418.0 -26.03 89.06  
 100.00 23 16 32 3868.76 -2.29 148.91 266.47 60.19 24 21 1 3268.8 -6.24 142.35  
 110.00 5 36 0 2655.53 -32.43 71.54 278.18 78.56 6 20 16 2055.5 -33.67 62.53  
 110.00 23 37 11 3803.99 3.10 140.64 263.11 55.94 24 40 35 3204.0 -1.39 134.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4497 TRA-1.0323 TC3 .0359 BAU .0277 SGT 1123.1 SGR 446.9 S63 81.6 ST 515.7 SR 436.8 SS 443.8  
 RDE -.4789 RRA .0840 RC3 -.0382 FAU .02200 RRT .1745 RRF -.1830 RTF -.7836 CRT .7572 CRS .8605 CST .9832  
 FDE .4019 FRA .6187 FC3 -.4811 BSP 3392 SGB 1208.8 R23 -.0220 R13 -.7847 LSA 773.5 MSA 234.8 SSA 15.4  
 BDE .6569 BRA 1.0359 BC3 .0524 FSP -201 S61 1126.3 S62 438.8 THA 4.68 EL1 634.9 EL2 231.8 ALF 38.79

LAUNCH DATE JAN 12 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 8 1969

Heliocentric Conic

DISTANCE 206.700

RL 147.13 LAL .00 LOL 111.62 VL 24.829 GAL 4.29 AZL 87.09 HCA 85.98 SMA 111.76 ECC .32440 INC 2.9117 V1 30.281  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.667 GAP -18.83 AZP 89.80 TAL 170.95 TAP 256.93 RCA 75.50 APO 148.01 V2 35.117  
 RC 42.392 GL 12.17 GP 5.59 ZAL 72.65 ZAP 8.72 ETS 221.72 ZAE 173.22 ETE 318.17 ZAC 116.20 ETC 163.22 CLP 6.70

Planetocentric Conic

C3 35.578 VHL 5.965 DLA 26.12 RAL 32.70 RAD 6568.4 VEL 12.528 PTH 2.27 VHP 11.867 DPA 12.04 RAP 21.21 ECC 1.5855  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 31 3357.43 -23.52 121.55 273.34 73.76 2 41 28 2757.4 -25.52 113.46  
 90.00 22 25 58 4000.13 -6.37 160.79 266.23 62.35 23 32 38 3400.1 -10.02 154.01  
 100.00 3 34 38 3005.65 -26.45 96.56 274.23 75.55 4 24 43 2405.7 -28.18 88.18  
 100.00 23 19 32 3827.14 -3.70 146.62 264.76 60.32 24 23 19 3227.1 -7.62 140.03  
 110.00 5 32 0 2638.43 -32.66 70.26 275.82 79.28 6 15 58 2038.4 -33.79 61.21  
 110.00 23 38 40 3767.13 1.69 138.72 261.40 55.85 24 41 27 3167.1 -2.80 132.51

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4539 TRA -1.0119 TC3 .0712 BAU .0378 SGT 1170.1 SGR 446.5 SCS 89.8 ST 543.7 SR 438.3 SS 465.9  
 RDE -.4556 RRA .0725 RC3 -.0355 FAU .02319 RRT .1977 RRF -.2076 RTF -.7977 CRT .7691 CRS .8673 CST .9841  
 FDE .4222 FRA .6354 FC3 -.5642 BSP 3574 SGB 1252.4 R23 -.0249 R13 -.7989 LSA 806.3 MSA 233.3 SSA 15.7  
 BDE .6431 BRA 1.0145 BC3 .0796 FSP -224 SGI 1174.0 SGI 436.2 THA 5.01 EL1 659.0 EL2 231.1 ALF 37.11

LAUNCH DATE JAN 12 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 10 1969

Heliocentric Conic

DISTANCE 213.397

RL 147.13 LAL .00 LOL 111.62 VL 25.101 GAL 3.97 AZL 87.20 HCA 89.19 SMA 113.05 ECC .30866 INC 2.8015 V1 30.281  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.845 GAP -17.80 AZP 89.96 TAL 171.00 TAP 260.20 RCA 78.15 APO 147.94 V2 35.105  
 RC 42.442 GL 12.49 GP 5.93 ZAL 72.95 ZAP 7.80 ETS 231.39 ZAE 171.21 ETE 333.79 ZAC 117.60 ETC 162.71 CLP 5.09

Planetocentric Conic

C3 32.021 VHL 5.659 DLA 26.32 RAL 32.29 RAD 6568.3 VEL 12.385 PTH 2.24 VHP 11.283 DPA 13.00 RAP 22.57 ECC 1.5270  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 15 3346.41 -23.73 120.81 270.99 74.08 2 35 1 2746.4 -25.69 112.69  
 90.00 22 28 57 3958.02 -7.69 158.40 264.41 62.66 23 34 55 3358.0 -11.30 151.58  
 100.00 3 29 35 2990.73 -26.70 95.52 271.86 76.04 4 19 26 2390.7 -28.36 87.11  
 100.00 23 21 18 3788.94 -4.98 144.51 262.94 60.49 24 24 27 3188.9 -8.88 137.89  
 110.00 5 28 12 2819.60 -32.89 68.84 273.37 80.10 6 11 51 2019.6 -33.90 59.75  
 110.00 23 39 11 3732.83 .38 136.93 259.60 55.82 24 41 24 3132.8 -4.10 130.72

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4581 TRA -.9901 TC3 .1134 BAU .0503 SGT 1217.6 SGR 445.8 SCS 98.8 ST 572.5 SR 439.5 SS 488.8  
 RDE -.4356 RRA .0614 RC3 -.0308 FAU .02451 RRT .2240 RRF -.2355 RTF -.8109 CRT .7815 CRS .8744 CST .9850  
 FDE .4439 FRA .6524 FC3 -.6626 BSP 3755 SGB 1296.6 R23 -.0283 R13 -.8123 LSA 840.4 MSA 230.8 SSA 15.9  
 BDE .6307 BRA .9920 BC3 .1176 FSP -250 SGI 1222.3 SGI 432.8 THA 5.36 EL1 684.3 EL2 229.4 ALF 35.55

LAUNCH DATE JAN 12 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 12 1969

Heliocentric Conic

DISTANCE 220.108

RL 147.13 LAL .00 LOL 111.62 VL 25.352 GAL 3.66 AZL 87.31 HCA 92.41 SMA 114.28 ECC .29392 INC 2.6916 V1 30.281  
 RP 107.99 LAP 2.69 LOP 204.03 VP 36.008 GAP -16.81 AZP 90.11 TAL 171.11 TAP 263.52 RCA 80.69 APO 147.87 V2 35.092  
 RC 42.871 GL 12.78 GP 6.31 ZAL 73.34 ZAP 7.18 ETS 243.46 ZAE 168.88 ETE 343.49 ZAC 118.95 ETC 162.13 CLP 3.45

Planetocentric Conic

C3 28.868 VHL 5.373 DLA 26.46 RAL 31.79 RAD 6568.2 VEL 12.257 PTH 2.21 VHP 10.723 DPA 13.98 RAP 23.89 ECC 1.4751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 0 3331.31 -24.01 119.79 268.59 74.51 2 29 31 2731.3 -25.90 111.64  
 90.00 22 30 12 3921.10 -8.84 156.30 262.46 62.99 23 35 33 3321.1 -12.40 149.42  
 100.00 3 25 14 2972.73 -26.99 94.26 269.44 76.64 4 14 46 2372.7 -28.56 85.81  
 100.00 23 21 39 3754.91 -6.12 142.62 261.00 60.68 24 24 14 3154.9 -9.98 135.96  
 110.00 5 24 43 2598.85 -33.12 67.26 270.84 81.00 6 8 2 1998.8 -34.01 58.14  
 110.00 23 38 39 3701.56 -.81 135.30 257.71 55.83 24 40 20 3101.6 -5.29 129.07

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4620 TRA -.9675 TC3 .1641 BAU .0640 SGT 1265.7 SGR 445.1 SCS 108.8 ST 601.9 SR 440.6 SS 512.5  
 RDE -.4128 RRA .0507 RC3 -.0237 FAU .02600 RRT .2535 RRF -.2670 RTF -.8234 CRT .7942 CRS .8617 CST .9860  
 FDE .4670 FRA .6700 FC3 -.7798 BSP 3944 SGB 1341.7 R23 -.0322 R13 -.8249 LSA 875.8 MSA 227.7 SSA 16.2  
 BDE .6196 BRA .9688 BC3 .1658 FSP -280 SGI 1271.4 SGI 428.6 THA 5.75 EL1 710.6 EL2 226.8 ALF 34.12

LAUNCH DATE JAN 12 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 14 1969

Heliocentric Conic

DISTANCE 226.829

RL 147.13 LAL .00 LOL 111.62 VL 25.583 GAL 3.37 AZL 87.42 HCA 95.63 SMA 115.45 ECC .28015 INC 2.5812 V1 30.281  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.159 GAP -15.86 AZP 90.25 TAL 171.27 TAP 266.89 RCA 83.11 APO 147.79 V2 35.080  
 RC 43.078 GL 13.02 GP 6.73 ZAL 73.83 ZAP 6.96 ETS 257.38 ZAE 166.43 ETE 349.95 ZAC 120.25 ETC 161.49 CLP 1.79

Planetocentric Conic

C3 26.072 VHL 5.106 DLA 26.52 RAL 31.20 RAD 6568.1 VEL 12.143 PTH 2.18 VHP 10.186 DPA 14.98 RAP 25.18 ECC 1.4291  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 30 6 3311.17 -24.37 118.43 266.16 75.11 2 25 18 2711.2 -26.18 110.22  
 90.00 22 29 24 3890.56 -9.78 154.34 260.39 63.29 23 34 15 3290.6 -13.29 147.62  
 100.00 3 21 47 2951.17 -27.32 92.74 266.97 77.38 4 10 58 2351.2 -28.79 84.24  
 100.00 23 20 25 3725.79 -7.09 141.00 258.95 60.88 24 22 31 3125.8 -10.92 134.31  
 110.00 5 21 41 2575.96 -33.35 65.52 268.23 82.01 6 4 37 1978.0 -34.09 56.35  
 110.00 23 37 0 3673.76 -1.88 133.85 255.73 55.86 24 38 14 3073.8 -6.34 127.61

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4662 TRA -.9442 TC3 .2227 BAU .0778 SGT 1314.3 SGR 444.6 SCS 120.0 ST 632.4 SR 441.7 SS 537.0  
 RDE -.3934 RRA .0403 RC3 -.0136 FAU .02765 RRT .2874 RRF -.3027 RTF -.8351 CRT .8075 CRS .8891 CST .9870  
 FDE .4917 FRA .6886 FC3 -.9180 BSP 4123 SGB 1387.4 R23 -.0364 R13 -.8368 LSA 912.8 MSA 223.7 SSA 16.5  
 BDE .6101 BRA .9450 BC3 .2231 FSP -313 SGI 1321.2 SGI 423.6 THA 6.19 EL1 736.4 EL2 223.2 ALF 32.79

LAUNCH DATE JAN 12 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 233.555

RL 147.13 LAL .00 LOL 111.62 VL 25.797 GAL 3.06 AZL 87.53 HCA 98.84 SMA 116.56 ECC .26733 INC 2.4697 V1 30.281  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.298 GAP -14.95 AZP 90.38 TAL 171.49 TAP 270.32 RCA 85.40 APO 147.72 V2 35.067  
 RC 43.858 GL 13.21 GP 7.20 ZAL 74.40 ZAP 7.20 ETS 271.58 ZAE 164.00 ETE 354.63 ZAC 121.49 ETC 160.79 CLP .10

PLANETOCENTRIC CONIC

C3 23.596 VHL 4.858 DLA 26.50 RAL 30.54 RAD 6568.0 VEL 12.040 PTH 2.15 VHP 9.671 DPA 16.01 RAP 26.43 ECC 1.3883  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 27 54 3285.15 -24.81 116.65 263.72 75.89 2 22 39 2685.2 -26.51 108.39  
 90.00 22 26 19 3867.46 -10.48 153.21 258.18 63.54 23 30 47 3267.5 -13.96 146.25  
 100.00 3 19 26 2925.55 -27.89 90.93 264.46 78.27 4 8 12 2325.6 -29.03 82.38  
 100.00 23 17 28 3702.29 -7.87 139.69 256.79 61.07 24 19 10 3102.3 -11.67 132.96  
 110.00 5 19 14 2550.72 -33.57 63.58 265.58 83.14 6 1 45 1950.7 -34.15 54.39  
 110.00 23 34 9 3649.89 -2.79 132.60 253.67 55.92 24 34 59 3049.9 -7.24 126.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4667 TRA -.9145 TC3 .2904 BAU .0916  
 RDE -.3754 RRA .0302 RC3 .0004 FAU .02950  
 FDE .5177 FRA .7080 FC3-1.0823 B8P 4351  
 BOE .5990 BRA .9150 BC3 .2904 F8P -350

SGT 1354.8 SGR 444.6 SCS 132.4  
 RRT .3252 RRF -.3428 RTF -.8464  
 SGB 1425.9 R23 -.0409 R13 -.8485  
 SGI 1363.3 SGI 417.8 THA 6.73

ST 658.7 SR 443.0 SS 561.9  
 CRT .8207 CRS .8964 CST .9880  
 LSA 947.5 MSA 218.8 SSA 16.7  
 EL1 763.1 EL2 218.5 ALF 31.80

LAUNCH DATE JAN 12 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 240.283

RL 147.13 LAL .00 LOL 111.62 VL 25.993 GAL 2.81 AZL 87.64 HCA 102.05 SMA 117.61 ECC .25541 INC 2.3563 V1 30.281  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.425 GAP -14.07 AZP 90.49 TAL 171.76 TAP 273.80 RCA 87.57 APO 147.65 V2 35.053  
 RC 44.405 GL 13.34 GP 7.72 ZAL 75.06 ZAP 7.89 ETS 284.58 ZAE 161.63 ETE 358.26 ZAC 122.66 ETC 160.01 CLP -1.63

PLANETOCENTRIC CONIC

C3 21.402 VHL 4.626 DLA 26.40 RAL 29.81 RAD 6567.9 VEL 11.949 PTH 2.13 VHP 9.177 DPA 17.08 RAP 27.62 ECC 1.3522  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 27 34 3252.75 -25.33 114.42 261.27 76.90 2 21 47 2652.8 -26.88 106.09  
 90.00 22 20 48 3852.49 -10.94 152.35 255.87 63.72 23 25 1 3252.5 -14.38 145.36  
 100.00 3 18 23 2895.91 -28.09 88.78 261.92 79.33 4 6 39 2295.5 -29.27 80.18  
 100.00 23 12 40 3684.97 -8.44 138.72 254.55 61.22 24 14 5 3085.0 -12.21 131.97  
 110.00 5 17 29 2522.89 -33.78 61.43 262.87 84.39 5 59 31 1922.9 -34.18 52.21  
 110.00 23 30 4 3630.36 -3.53 131.58 251.54 55.98 24 30 35 3030.4 -7.97 125.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4714 TRA -.8956 TC3 .3683 BAU .1055  
 RDE -.3589 RRA .0202 RC3 .0191 FAU .05155  
 FDE .5451 FRA .7290 FC3-1.2762 B8P 4490  
 BOE .5925 BRA .8959 BC3 .3688 F8P -391

SGT 1410.8 SGR 445.7 SCS 146.3  
 RRT .3674 RRF -.5881 RTF -.8561  
 SGB 1479.6 R23 -.0477 R13 -.8584  
 SGI 1421.2 SGI 411.5 THA 7.23

ST 692.1 SR 444.5 SS 587.2  
 CRT .8334 CRS .9038 CST .9889  
 LSA 987.5 MSA 214.2 SSA 17.1  
 EL1 794.2 EL2 214.1 ALF 30.62

LAUNCH DATE JAN 12 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 247.009

RL 147.13 LAL .00 LOL 111.62 VL 26.174 GAL 2.55 AZL 87.76 HCA 105.25 SMA 118.60 ECC .24435 INC 2.2402 V1 30.281  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.542 GAP -13.23 AZP 90.59 TAL 172.07 TAP 277.33 RCA 89.62 APO 147.58 V2 35.040  
 RC 45.309 GL 13.40 GP 8.32 ZAL 75.79 ZAP 8.98 ETS 294.83 ZAE 159.38 ETE 358.26 ZAC 123.74 ETC 159.15 CLP -3.40

PLANETOCENTRIC CONIC

C3 19.460 VHL 4.411 DLA 26.19 RAL 29.02 RAD 6567.8 VEL 11.868 PTH 2.11 VHP 8.704 DPA 18.18 RAP 28.75 ECC 1.3203  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 29 14 3213.89 -25.90 111.72 258.82 78.13 2 22 48 2613.9 -27.28 103.32  
 90.00 22 12 52 3845.90 -11.14 151.96 253.47 63.80 23 16 37 3245.9 -14.57 144.97  
 100.00 3 18 45 2880.80 -28.50 86.28 259.37 80.58 4 6 26 2260.8 -29.51 77.62  
 100.00 23 6 1 3674.23 -8.79 138.12 252.23 61.31 24 7 15 3074.2 -12.55 131.35  
 110.00 5 16 33 2492.24 -33.95 59.08 260.14 85.79 5 58 5 1892.2 -34.16 49.82  
 110.00 23 24 43 3615.55 -4.09 130.80 249.36 56.03 24 24 58 3015.6 -8.53 124.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4723 TRA -.8705 TC3 .4565 BAU .1193  
 RDE -.3437 RRA .0102 RC3 .0438 FAU .03386  
 FDE .5732 FRA .7512 FC3-1.5062 B8P 4673  
 BOE .5841 BRA .8706 BC3 .4586 F8P -438

SGT 1458.1 SGR 448.3 SCS 161.7  
 RRT .4141 RRF -.4381 RTF -.8655  
 SGB 1525.5 R23 -.0546 R13 -.8682  
 SGI 1470.9 SGI 404.5 THA 7.85

ST 720.6 SR 446.4 SS 612.0  
 CRT .8460 CRS .9109 CST .9898  
 LSA 1024.3 MSA 208.8 SSA 17.4  
 EL1 821.6 EL2 208.8 ALF 29.77

LAUNCH DATE JAN 12 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 253.731

RL 147.13 LAL .00 LOL 111.62 VL 26.340 GAL 2.30 AZL 87.88 HCA 108.46 SMA 119.53 ECC .23413 INC 2.1207 V1 30.281  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.848 GAP -12.42 AZP 90.67 TAL 172.44 TAP 280.90 RCA 91.55 APO 147.52 V2 35.027  
 RC 46.384 GL 13.37 GP 8.98 ZAL 76.60 ZAP 10.38 ETS 302.90 ZAE 157.27 ETE 358.26 ZAC 124.73 ETC 158.21 CLP -5.22

PLANETOCENTRIC CONIC

C3 17.741 VHL 4.212 DLA 25.87 RAL 28.19 RAD 6567.7 VEL 11.795 PTH 2.09 VHP 8.252 DPA 19.33 RAP 29.81 ECC 1.2920  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 49 3188.89 -26.49 108.55 256.37 79.61 2 25 37 2568.9 -27.66 100.08  
 90.00 22 2 39 3847.50 -11.09 152.06 251.01 63.78 23 6 46 3247.5 -14.52 145.06  
 100.00 3 20 37 2821.34 -28.91 83.42 256.81 82.03 4 7 38 2221.3 -29.71 74.71  
 100.00 22 57 31 3670.28 -8.92 137.89 249.86 61.35 23 58 42 3070.3 -12.67 131.12  
 110.00 5 16 33 2458.58 -34.09 56.44 257.58 87.33 5 57 32 1858.6 -34.09 47.19  
 110.00 23 18 4 3605.81 -4.47 130.29 247.14 56.07 24 18 10 3005.8 -8.89 124.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4715 TRA -.8454 TC3 .5543 BAU .1327  
 RDE -.3299 RRA .0001 RC3 .0758 FAU .03642  
 FDE .6021 FRA .7759 FC3-1.7772 B8P 4844  
 BOE .5755 BRA .8454 BC3 .5594 F8P -489

SGT 1504.2 SGR 453.3 SCS 178.9  
 RRT .4654 RRF -.4929 RTF -.8743  
 SGB 1571.0 R23 -.0627 R13 -.8775  
 SGI 1520.0 SGI 397.0 THA 8.57

ST 747.4 SR 448.8 SS 636.4  
 CRT .8582 CRS .9178 CST .9907  
 LSA 1059.9 MSA 203.1 SSA 17.7  
 EL1 847.8 EL2 203.1 ALF 29.09

LAUNCH DATE JAN 12 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 24 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 26.492 GAL 2.06 AZL 88.00 HCA 111.66 SMA 120.41 ECC .22471 INC 1.9966 V1 30.281  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.745 GAP -11.64 AZP 90.74 TAL 172.85 TAP 284.51 RCA 93.35 APO 147.48 V2 35.013  
 RC 47.558 GL 13.24 GP 9.73 ZAL 77.47 ZAP 12.02 ETS 308.99 ZAE 155.33 ETE 6.29 ZAC 125.60 ETC 197.18 CLP -7.10

Distance 260.446

Planetocentric Conic: C3 16.221 VHL 4.027 DLA 25.43 RAL 27.33 RAD 6567.7 VEL 11.730 PTH 2.07 VHP 7.821 DPA 20.53 RAP 30.79 ECC 1.2669  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 12 3118.30 -27.06 104.96 253.92 81.33 2 30 10 2518.3 -27.98 96.42  
 90.00 21 50 24 3856.83 -10.81 152.60 248.52 63.67 22 34 41 3256.8 -14.26 145.62  
 100.00 3 24 0 2777.19 -29.28 80.19 254.25 83.69 4 10 18 2177.2 -29.84 71.43  
 100.00 22 47 17 3673.17 -8.82 138.06 247.47 61.32 23 48 30 3073.2 -12.58 131.29  
 110.00 5 17 37 2421.74 -34.17 53.56 254.61 89.03 5 57 59 1821.7 -33.93 44.33  
 110.00 23 10 10 3601.39 -4.63 130.06 244.91 56.09 24 10 11 3001.4 -9.05 123.76

Differential Corrections: TDE -.4608 TRA -.8194 TC3 .6622 BAU .1458 SGT 1547.7 SGR 461.6 SG3 198.1 ST 771.3 SR 451.8 S3 659.4  
 RDE -.3176 RRA -.0101 RC3 .1163 FAU .03929 RRT .5205 RRF -.5518 RTF -.8824 CRT .8700 CRS .9244 CST .9915  
 FDE .6310 FRA .8022 FC3-2.0968 BSP 5020 SGB 1615.0 R23 -.0720 R13 -.8861 LSA 1093.0 MSA 197.1 SSA 18.1  
 BDE .5662 BRA .8194 BC3 .6724 FSP -548 SG1 1567.4 S2 389.2 THA 9.41 EL1 871.9 EL2 197.1 ALF 28.60

Mid-course Execution Accuracy: SGT 1547.7 SGR 461.6 SG3 198.1 ST 771.3 SR 451.8 S3 659.4  
 RRT .5205 RRF -.5518 RTF -.8824 CRT .8700 CRS .9244 CST .9915  
 SGB 1615.0 R23 -.0720 R13 -.8861 LSA 1093.0 MSA 197.1 SSA 18.1  
 SG1 1567.4 S2 389.2 THA 9.41 EL1 871.9 EL2 197.1 ALF 28.60

Orbit Determination Accuracy: ST 771.3 SR 451.8 S3 659.4  
 CRT .8700 CRS .9244 CST .9915  
 LSA 1093.0 MSA 197.1 SSA 18.1  
 EL1 871.9 EL2 197.1 ALF 28.60

LAUNCH DATE JAN 12 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 26 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 26.631 GAL 1.84 AZL 88.13 HCA 114.86 SMA 121.22 ECC .21604 INC 1.8671 V1 30.281  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.833 GAP -10.89 AZP 90.79 TAL 173.29 TAP 288.15 RCA 95.03 APO 147.41 V2 35.000  
 RC 48.883 GL 12.99 GP 10.58 ZAL 78.40 ZAP 13.88 ETS 313.57 ZAE 153.56 ETE 8.60 ZAC 126.34 ETC 156.07 CLP -9.04

Distance 267.152

Planetocentric Conic: C3 14.876 VHL 3.857 DLA 24.86 RAL 26.46 RAD 6567.6 VEL 11.673 PTH 2.05 VHP 7.410 DPA 21.79 RAP 31.66 ECC 1.2448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 16 3062.71 -27.57 100.97 251.47 83.27 2 36 19 2462.7 -28.22 92.36  
 90.00 21 38 25 3673.37 -10.30 153.55 246.04 63.48 22 40 59 3273.4 -13.79 146.60  
 100.00 3 28 56 2728.48 -29.59 76.60 251.69 85.56 4 14 24 2128.5 -29.89 67.81  
 100.00 22 35 26 3682.83 -8.51 138.60 245.09 61.24 23 36 49 3082.8 -12.28 131.84  
 110.00 5 19 49 2381.54 -34.17 50.42 251.86 90.89 5 59 31 1781.5 -33.67 41.22  
 110.00 23 1 2 3602.53 -4.59 130.12 242.69 56.09 24 1 5 3002.5 -9.01 123.82

Differential Corrections: TDE -.4613 TRA -.7916 TC3 .7857 BAU .1598 SGT 1586.4 SGR 474.5 SG3 219.5 ST 788.2 SR 455.2 S3 678.9  
 RDE -.3083 RRA -.0207 RC3 .1684 FAU .04255 RRT .5774 RRF -.6132 RTF -.8907 CRT .8805 CRS .9303 CST .9923  
 FDE .8577 FRA .8304 FC3-2.4784 BSP 5240 SGB 1655.8 R23 -.0824 R13 -.8951 LSA 1119.1 MSA 191.1 SSA 18.4  
 BDE .5538 BRA .7919 BC3 .8035 FSP -616 SG1 1611.3 S2 381.4 THA 10.39 EL1 889.9 EL2 191.1 ALF 28.38

Mid-course Execution Accuracy: SGT 1586.4 SGR 474.5 SG3 219.5 ST 788.2 SR 455.2 S3 678.9  
 RRT .5774 RRF -.6132 RTF -.8907 CRT .8805 CRS .9303 CST .9923  
 SGB 1655.8 R23 -.0824 R13 -.8951 LSA 1119.1 MSA 191.1 SSA 18.4  
 SG1 1611.3 S2 381.4 THA 10.39 EL1 889.9 EL2 191.1 ALF 28.38

Orbit Determination Accuracy: ST 788.2 SR 455.2 S3 678.9  
 CRT .8805 CRS .9303 CST .9923  
 LSA 1119.1 MSA 191.1 SSA 18.4  
 EL1 889.9 EL2 191.1 ALF 28.38

LAUNCH DATE JAN 12 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 28 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 26.758 GAL 1.63 AZL 88.27 HCA 118.06 SMA 121.98 ECC .20810 INC 1.7307 V1 30.281  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.912 GAP -10.17 AZP 90.81 TAL 173.77 TAP 291.82 RCA 96.59 APO 147.36 V2 34.987  
 RC 50.327 GL 12.61 GP 11.55 ZAL 79.37 ZAP 15.94 ETS 317.03 ZAE 151.97 ETE 10.90 ZAC 126.93 ETC 154.86 CLP -11.06

Distance 273.845

Planetocentric Conic: C3 13.687 VHL 3.700 DLA 24.14 RAL 25.60 RAD 6567.5 VEL 11.622 PTH 2.04 VHP 7.020 DPA 23.13 RAP 32.41 ECC 1.2253  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 53 3002.65 -27.97 98.62 249.03 85.41 2 43 55 2402.6 -28.32 87.97  
 90.00 21 20 58 3896.63 -9.59 154.89 243.61 63.23 22 25 55 3296.6 -13.11 147.98  
 100.00 3 35 23 2675.39 -29.81 72.67 249.16 87.62 4 19 58 2075.4 -29.82 63.87  
 100.00 22 22 9 3699.12 -7.97 139.51 242.74 61.09 23 23 49 3099.1 -11.77 132.76  
 110.00 5 23 16 2337.85 -34.07 47.01 249.13 92.90 6 2 14 1737.9 -33.30 37.86  
 110.00 22 50 46 3609.42 -4.33 130.48 240.50 56.06 23 50 55 3009.4 -8.76 124.19

Differential Corrections: TDE -.4541 TRA -.7676 TC3 .9082 BAU .1716 SGT 1625.8 SGR 493.7 SG3 243.3 ST 804.8 SR 459.6 S3 697.2  
 RDE -.2968 RRA -.0324 RC3 .2331 FAU .04608 RRT .6360 RRF -.6758 RTF -.8970 CRT .8909 CRS .9357 CST .9931  
 FDE .6844 FRA .8647 FC3-2.9145 BSP 5379 SGB 1699.1 R23 -.0951 R13 -.9024 LSA 1144.8 MSA 185.0 SSA 18.9  
 BDE .5424 BRA .7683 BC3 .9377 FSP -688 SG1 1657.5 S2 373.7 THA 11.52 EL1 908.2 EL2 185.0 ALF 28.24

Mid-course Execution Accuracy: SGT 1625.8 SGR 493.7 SG3 243.3 ST 804.8 SR 459.6 S3 697.2  
 RRT .6360 RRF -.6758 RTF -.8970 CRT .8909 CRS .9357 CST .9931  
 SGB 1699.1 R23 -.0951 R13 -.9024 LSA 1144.8 MSA 185.0 SSA 18.9  
 SG1 1657.5 S2 373.7 THA 11.52 EL1 908.2 EL2 185.0 ALF 28.24

Orbit Determination Accuracy: ST 804.8 SR 459.6 S3 697.2  
 CRT .8909 CRS .9357 CST .9931  
 LSA 1144.8 MSA 185.0 SSA 18.9  
 EL1 908.2 EL2 185.0 ALF 28.24

LAUNCH DATE JAN 12 1969

FLIGHT TIME 108.00

ARRIVAL DATE APR 30 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 26.874 GAL 1.44 AZL 88.41 HCA 121.25 SMA 122.68 ECC .20084 INC 1.5861 V1 30.281  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.984 GAP -9.47 AZP 90.82 TAL 174.26 TAP 295.51 RCA 98.04 APO 147.32 V2 34.974  
 RC 51.881 GL 12.08 GP 12.65 ZAL 80.37 ZAP 18.18 ETS 319.64 ZAE 150.55 ETE 13.27 ZAC 127.34 ETC 153.56 CLP -13.16

Distance 280.525

Planetocentric Conic: C3 12.637 VHL 3.555 DLA 23.26 RAL 24.78 RAD 6567.5 VEL 11.577 PTH 2.02 VHP 6.650 DPA 24.56 RAP 33.03 ECC 1.2080  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 58 2938.46 -28.23 91.95 246.61 87.74 2 52 57 2338.5 -28.25 83.28  
 90.00 21 4 18 3926.29 -8.88 156.59 241.25 62.94 22 9 44 3326.3 -12.24 149.72  
 100.00 3 43 21 2818.03 -29.89 68.41 246.65 89.86 4 26 59 2018.0 -29.59 59.62  
 100.00 22 7 37 3721.95 -7.22 140.79 240.46 60.91 23 9 38 3122.0 -11.04 134.09  
 110.00 5 28 2 2290.51 -33.85 43.34 246.45 95.07 6 6 13 1690.5 -32.78 34.26  
 110.00 22 39 25 3622.24 -3.84 131.15 238.38 56.01 23 39 47 3022.2 -8.28 124.87

Differential Corrections: TDE -.4427 TRA -.7424 TC3 1.0396 BAU .1835 SGT 1658.9 SGR 520.8 SG3 269.6 ST 813.8 SR 464.5 S3 710.3  
 RDE -.2878 RRA -.0448 RC3 .3142 FAU .05002 RRT .6927 RRF -.7366 RTF -.9030 CRT .9003 CRS .9405 CST .9939  
 FDE .7067 FRA .9018 FC3-3.4285 BSP 5540 SGB 1738.7 R23 -.1093 R13 -.9095 LSA 1162.0 MSA 178.9 SSA 19.4  
 BDE .5280 BRA .7437 BC3 1.0861 FSP -772 SG1 1699.6 S2 366.6 THA 12.88 EL1 919.8 EL2 178.9 ALF 28.37

Mid-course Execution Accuracy: SGT 1658.9 SGR 520.8 SG3 269.6 ST 813.8 SR 464.5 S3 710.3  
 RRT .6927 RRF -.7366 RTF -.9030 CRT .9003 CRS .9405 CST .9939  
 SGB 1738.7 R23 -.1093 R13 -.9095 LSA 1162.0 MSA 178.9 SSA 19.4  
 SG1 1699.6 S2 366.6 THA 12.88 EL1 919.8 EL2 178.9 ALF 28.37

Orbit Determination Accuracy: ST 813.8 SR 464.5 S3 710.3  
 CRT .9003 CRS .9405 CST .9939  
 LSA 1162.0 MSA 178.9 SSA 19.4  
 EL1 919.8 EL2 178.9 ALF 28.37

LAUNCH DATE JAN 12 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 287.189

RL 147.13 LAL .00 LOL 111.62 VL 26.980 GAL 1.26 AZL 88.57 HCA 124.44 SMA 123.32 ECC .19423 INC 1.4315 V1 30.281
RP 108.40 LAP 1.18 LOP 236.07 VP 37.048 GAP -8.80 AZP 90.81 TAL 174.77 TAP 299.22 RCA 99.37 APO 147.28 V2 34.961
RC 53.536 GL 11.36 GP 13.92 ZAL 81.40 ZAP 20.62 ETS 321.62 ZAE 149.30 ETE 15.78 ZAC 127.55 ETC 152.17 CLP -15.36

PLANETOCENTRIC CONIC

C3 11.710 VHL 3.422 DLA 22.21 RAL 24.01 RAD 6567.4 VEL 11.537 PTH 2.01 VHP 6.302 DPA 26.10 RAP 33.48 ECC 1.1927
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 15 32 2870.30 -28.32 86.96 244.24 90.24 3 3 22 2270.3 -27.98 78.31
90.00 20 46 36 3962.21 -7.56 158.64 239.01 62.63 21 52 39 3362.2 -11.17 151.82
100.00 3 52 52 2556.45 -29.81 63.84 244.21 92.27 4 35 29 1956.4 -29.18 55.09
100.00 21 51 57 3751.30 -6.24 142.42 238.30 60.71 22 54 29 3151.3 -10.10 135.76
110.00 5 34 14 2239.33 -33.47 39.39 243.84 97.38 6 11 33 1639.3 -32.09 30.43
110.00 22 27 5 3641.19 -3.12 132.14 236.36 55.94 23 27 46 3041.2 -7.57 125.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4280 TRA -.7176 TC3 1.1744 BAU .1950 SGT 1686.4 SGR 558.3 SG3 298.6 ST 816.0 SR 469.9 SS 717.9
RDE -.2800 RRA -.0586 RC3 .4151 FAU .05435 RRT .7454 RRF -.7931 RTF -.9083 CRT .9090 CRS .9445 CST .9947
FDE .7240 FRA .9458 FC3-4.0184 BSP 5687 SGB 1776.5 R23 -.1252 R13 -.9163 LSA 1171.2 MSA 172.7 SSA 20.0
BDE .5114 BRA .7200 BC3 1.2456 FSP -863 SGI 1759.4 SG2 360.8 THA 14.50 EL1 925.6 EL2 172.7 ALF 28.72

LAUNCH DATE JAN 12 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 293.836

RL 147.13 LAL .00 LOL 111.62 VL 27.075 GAL 1.09 AZL 88.74 HCA 127.63 SMA 123.92 ECC .18823 INC 1.2647 V1 30.281
RP 108.43 LAP 1.00 LOP 239.26 VP 37.106 GAP -8.16 AZP 90.77 TAL 175.30 TAP 302.93 RCA 100.59 APO 147.24 V2 34.948
RC 55.282 GL 10.43 GP 15.37 ZAL 82.43 ZAP 23.26 ETS 323.11 ZAE 148.18 ETE 18.51 ZAC 127.52 ETC 150.70 CLP -17.67

PLANETOCENTRIC CONIC

C3 10.892 VHL 3.300 DLA 20.98 RAL 23.32 RAD 6567.4 VEL 11.501 PTH 2.00 VHP 5.976 DPA 27.77 RAP 33.73 ECC 1.1793
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 28 37 2798.10 -28.18 81.69 241.94 92.88 3 15 15 2198.1 -27.49 73.09
90.00 20 28 2 4004.47 -6.23 161.03 236.93 62.32 21 34 47 3404.5 -9.89 154.26
100.00 4 4 0 2490.52 -29.54 58.95 241.84 94.82 4 45 30 1890.5 -28.56 50.29
100.00 21 35 20 3787.28 -5.04 144.42 236.27 60.50 22 38 27 3187.3 -8.93 137.79
110.00 5 41 58 2184.02 -32.91 35.17 241.33 99.82 6 18 22 1584.0 -31.20 26.36
110.00 22 13 51 3666.54 -2.15 133.47 234.48 53.88 23 14 58 3066.5 -6.61 127.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4075 TRA -.8929 TC3 1.3154 BAU .2071 SGT 1706.9 SGR 608.5 SG3 330.6 ST 806.6 SR 474.9 SS 716.6
RDE -.2724 RRA -.0743 RC3 .5409 FAU .05916 RRT .7919 RRF -.8431 RTF -.9137 CRT .9161 CRS .9472 CST .9955
FDE .7312 FRA .9919 FC3-4.7020 BSP 5841 SGB 1812.1 R23 -.1414 R13 -.9237 LSA 1166.7 MSA 166.9 SSA 20.6
BDE .4902 BRA .6968 BC3 1.4223 FSP -964 SGI 1776.6 SG2 357.0 THA 16.45 EL1 921.0 EL2 168.7 ALF 29.40

LAUNCH DATE JAN 12 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 300.465

RL 147.13 LAL .00 LOL 111.62 VL 27.162 GAL .93 AZL 88.92 HCA 130.82 SMA 124.47 ECC .18280 INC 1.0830 V1 30.281
RP 108.47 LAP .82 LOP 242.44 VP 37.157 GAP -7.53 AZP 90.71 TAL 175.82 TAP 306.64 RCA 101.71 APO 147.22 V2 34.936
RC 57.109 GL 9.26 GP 17.04 ZAL 83.46 ZAP 26.12 ETS 324.24 ZAE 147.18 ETE 21.52 ZAC 127.22 ETC 149.16 CLP -20.10

PLANETOCENTRIC CONIC

C3 10.174 VHL 3.190 DLA 19.48 RAL 22.74 RAD 6567.4 VEL 11.470 PTH 1.99 VHP 5.673 DPA 29.59 RAP 33.76 ECC 1.1674
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 43 19 2721.57 -27.79 76.12 239.75 95.64 3 28 41 2121.6 -26.72 67.62
90.00 20 8 41 4053.36 -4.68 163.79 235.03 62.04 21 16 15 3453.4 -8.38 157.07
100.00 4 16 51 2419.97 -29.02 53.77 239.59 97.50 4 57 11 1820.0 -27.68 45.23
100.00 21 17 51 3830.19 -3.60 146.78 234.44 60.30 22 21 41 3230.2 -7.52 140.20
110.00 5 51 23 2124.23 -32.13 30.68 238.95 102.36 6 26 47 1524.2 -30.09 22.06
110.00 21 59 48 3698.69 -.92 133.15 232.77 55.83 23 1 27 3098.7 -5.40 128.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3851 TRA -.6707 TC3 1.4412 BAU .2176 SGT 1719.5 SGR 674.1 SG3 365.0 ST 791.3 SR 479.4 SS 707.2
RDE -.2852 RRA -.0928 RC3 .6944 FAU .06420 RRT .8305 RRF -.8849 RTF -.9171 CRT .9230 CRS .9487 CST .9964
FDE .7283 FRA 1.0489 FC3-5.4631 BSP 5958 SGB 1846.9 R23 -.1596 R13 -.9298 LSA 1153.2 MSA 160.9 SSA 21.5
BDE .4675 BRA .6771 BC3 1.5998 FSP -1074 SGI 1812.3 SG2 356.2 THA 18.79 EL1 911.2 EL2 160.2 ALF 30.25

LAUNCH DATE JAN 12 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 307.074

RL 147.13 LAL .00 LOL 111.62 VL 27.240 GAL .79 AZL 89.12 HCA 134.00 SMA 124.96 ECC .17792 INC .8833 V1 30.281
RP 108.51 LAP .64 LOP 245.62 VP 37.203 GAP -6.93 AZP 90.61 TAL 176.33 TAP 310.33 RCA 102.73 APO 147.20 V2 34.923
RC 59.010 GL 7.81 GP 18.96 ZAL 84.48 ZAP 29.25 ETS 325.08 ZAE 146.24 ETE 24.90 ZAC 126.61 ETC 147.58 CLP -22.67

PLANETOCENTRIC CONIC

C3 9.545 VHL 3.090 DLA 17.75 RAL 22.29 RAD 6567.3 VEL 11.443 PTH 1.98 VHP 5.395 DPA 31.59 RAP 33.51 ECC 1.1571
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 59 51 2640.15 -27.11 70.26 237.69 98.50 3 43 51 2040.1 -25.66 61.90
90.00 19 48 36 4109.49 -2.88 166.93 233.38 61.82 20 57 5 3509.5 -6.63 160.25
100.00 4 31 36 2344.29 -28.22 48.29 237.48 100.28 5 10 40 1744.3 -26.52 39.91
100.00 20 59 32 3880.58 -1.89 149.56 232.83 60.16 22 4 13 3280.6 -5.85 143.00
110.00 6 2 39 2059.42 -31.08 25.92 236.75 105.00 6 36 58 1459.4 -28.71 17.52
110.00 21 44 59 3738.22 .59 137.21 231.28 55.82 22 47 17 3138.2 -3.90 131.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3592 TRA -.8499 TC3 1.5595 BAU .2287 SGT 1724.4 SGR 758.8 SG3 402.0 ST 767.3 SR 482.2 SS 686.8
RDE -.2573 RRA -.1148 RC3 .8836 FAU .06959 RRT .8612 RRF -.9184 RTF -.9199 CRT .9294 CRS .9485 CST .9974
FDE .7101 FRA 1.1143 FC3-6.3116 BSP 6054 SGB 1884.0 R23 -.1769 R13 -.9362 LSA 1126.3 MSA 154.9 SSA 22.6
BDE .4419 BRA .6599 BC3 1.7924 FSP -1190 SGI 1849.3 SG2 359.7 THA 21.61 EL1 893.3 EL2 152.9 ALF 31.31

LAUNCH DATE JAN 12 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 313.662

RL 147.13 LAL .00 LOL 111.62 VL 27.310 GAL .67 AZL 89.34 HCA 137.18 SMA 125.41 ECC .17354 INC .6608 V1 30.281
RP 108.55 LAP .45 LOP 248.80 VP 37.243 GAP -6.36 AZP 90.48 TAL 176.83 TAP 314.01 RCA 103.65 APO 147.18 V2 34.911
RC 80.976 GL 6.03 GP 21.19 ZAL 85.46 ZAP 32.62 ETS 325.73 ZAE 145.30 ETE 28.70 ZAC 125.65 ETC 145.97 CLP -25.39

PLANETOCENTRIC CONIC

C3 9.002 VHL 3.000 DLA 15.72 RAL 22.01 RAD 6567.3 VEL 11.419 PTH 1.98 VHP 5.144 DPA 33.81 RAP 32.93 ECC 1.1401
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 18 29 2552.99 -26.08 64.09 235.83 101.43 4 1 2 1953.0 -24.24 55.90
90.00 19 27 44 4173.85 -.81 170.52 232.00 61.69 20 37 17 3573.8 -4.58 163.88
100.00 4 48 30 2262.70 -27.10 42.49 235.58 103.13 5 26 13 1662.7 -25.02 34.31
100.00 20 40 24 3939.37 .10 152.78 231.50 60.11 21 46 3 3339.4 -3.88 146.25
110.00 6 16 2 1988.85 -29.73 20.87 234.75 107.71 6 49 10 1388.9 -27.02 12.73
110.00 21 29 22 3785.98 2.41 139.70 230.05 55.89 22 32 28 3186.0 -2.08 133.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3257 TRA -.8278 TC3 1.6627 BAU .2409 SGT 1712.8 SGR 864.7 SG3 440.3 ST 726.2 SR 478.9 SS 647.5
RDE -.2487 RRA -.1409 RC3 1.1151 FAU .07519 RRT .8836 RRF -.9436 RTF -.9220 CRT .9343 CRS .9446 CST .9983
FDE .6639 FRA 1.1858 FC3-7.2316 BSP 6183 SGB 1918.7 R23 -.1901 R13 -.9433 LSA 1073.8 MSA 149.6 SSA 24.0
BDE .4088 BRA .6435 BC3 2.0020 FSP -1315 SGI 1883.0 SG2 368.3 THA 25.07 EL1 857.8 EL2 144.5 ALF 32.68

LAUNCH DATE JAN 12 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 320.229

RL 147.13 LAL .00 LOL 111.62 VL 27.373 GAL .55 AZL 89.59 HCA 140.36 SMA 125.82 ECC .16963 INC .4102 V1 30.281
RP 108.98 LAP .26 LOP 251.98 VP 37.278 GAP -5.80 AZP 90.32 TAL 177.30 TAP 317.66 RCA 104.48 APO 147.16 V2 34.900
RC 83.000 GL 3.83 GP 23.77 ZAL 86.40 ZAP 36.30 ETS 326.23 ZAE 144.27 ETE 32.99 ZAC 124.28 ETC 144.38 CLP -28.28

PLANETOCENTRIC CONIC

C3 8.540 VHL 2.922 DLA 13.34 RAL 21.93 RAD 6567.3 VEL 11.399 PTH 1.97 VHP 4.925 DPA 36.28 RAP 31.95 ECC 1.1405
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 39 37 2458.90 -24.85 57.57 234.21 104.40 4 20 36 1858.9 -22.43 49.60
90.00 19 5 58 4247.84 1.58 174.65 230.98 61.72 20 16 46 3647.8 -2.21 168.02
100.00 5 7 56 2174.10 -25.58 36.35 233.94 106.02 5 44 10 1574.1 -23.13 28.40
100.00 20 20 20 4007.88 2.42 156.54 230.52 60.20 21 27 8 3407.9 -1.56 150.02
110.00 6 31 50 1911.53 -28.00 15.51 233.04 110.45 7 3 42 1311.5 -24.96 7.66
110.00 21 12 55 3843.21 4.59 142.70 229.17 56.09 22 16 58 3243.2 .11 136.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2917 TRA -.8095 TC3 1.7285 BAU .2531 SGT 1889.2 SGR 996.4 SG3 478.5 ST 680.9 SR 469.9 SS 597.1
RDE -.2332 RRA -.1740 RC3 1.3908 FAU .08051 RRT .8985 RRF -.9820 RTF -.9220 CRT .9407 CRS .9381 CST .9983
FDE .5944 FRA 1.2713 FC3-8.1621 BSP 6292 SGB 1961.2 R23 -.2001 R13 -.9500 LSA 1009.6 MSA 144.9 SSA 23.7
BDE .3735 BRA .6338 BC3 2.2170 FSP -1439 SGI 1923.2 SG2 384.2 THA 29.20 EL1 816.6 EL2 132.9 ALF 34.01

LAUNCH DATE JAN 12 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 326.774

RL 147.13 LAL .00 LOL 111.62 VL 27.428 GAL .45 AZL 89.88 HCA 143.54 SMA 126.19 ECC .16616 INC .1231 V1 30.281
RP 108.82 LAP .07 LOP 255.16 VP 37.309 GAP -5.26 AZP 90.10 TAL 177.74 TAP 321.28 RCA 105.22 APO 147.15 V2 34.889
RC 85.076 GL 1.19 GP 26.76 ZAL 87.28 ZAP 40.31 ETS 326.68 ZAE 143.03 ETE 37.78 ZAC 122.46 ETC 142.85 CLP -31.35

PLANETOCENTRIC CONIC

C3 8.183 VHL 2.857 DLA 10.54 RAL 22.09 RAD 6567.3 VEL 11.382 PTH 1.97 VHP 4.741 DPA 39.03 RAP 30.48 ECC 1.1343
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 3 47 2356.21 -22.73 50.66 232.93 107.35 4 43 3 1756.2 -20.15 42.94
90.00 18 43 3 4333.59 4.34 179.44 230.39 61.99 19 55 17 3733.6 .56 172.80
100.00 5 30 23 2076.93 -23.59 29.81 232.62 108.91 6 5 0 1476.9 -20.79 22.14
100.00 19 39 9 4088.10 5.13 160.96 229.96 60.51 21 7 17 3488.1 1.16 154.42
110.00 6 50 32 1826.10 -25.84 9.81 231.67 113.20 7 20 58 1226.1 -22.48 2.27
110.00 20 55 28 3911.70 7.18 146.31 228.69 56.49 22 0 40 3311.7 2.73 140.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2496 TRA -.5866 TC3 1.7804 BAU .2707 SGT 1648.4 SGR 1159.8 SG3 516.0 ST 616.7 SR 445.9 SS 525.1
RDE -.2121 RRA -.2136 RC3 1.7276 FAU .08588 RRT .9093 RRF -.9749 RTF -.9231 CRT .9480 CRS .9155 CST .9935
FDE .4810 FRA 1.3561 FC3-9.1084 BSP 6517 SGB 2015.5 R23 -.1958 R13 -.9591 LSA 912.9 MSA 143.9 SSA 27.3
BDE .3275 BRA .6242 BC3 2.4808 FSP -1570 SGI 1974.9 SG2 402.8 THA 34.23 EL1 752.1 EL2 116.3 ALF 35.40

LAUNCH DATE JAN 12 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 333.296

RL 147.13 LAL .00 LOL 111.62 VL 27.477 GAL .36 AZL 90.21 HCA 146.71 SMA 126.51 ECC .16311 INC .2078 V1 30.281
RP 108.65 LAP -.11 LOP 258.33 VP 37.335 GAP -4.74 AZP 89.83 TAL 178.14 TAP 324.86 RCA 105.88 APO 147.14 V2 34.878
RC 87.198 GL -2.04 GP 30.22 ZAL 88.09 ZAP 44.67 ETS 327.15 ZAE 141.45 ETE 43.05 ZAC 120.13 ETC 141.43 CLP -34.61

PLANETOCENTRIC CONIC

C3 7.880 VHL 2.807 DLA 7.24 RAL 22.54 RAD 6567.3 VEL 11.370 PTH 1.96 VHP 4.600 DPA 42.10 RAP 28.39 ECC 1.1297
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 31 48 2242.71 -20.24 43.27 232.08 110.24 5 9 9 1642.7 -17.30 35.83
90.00 18 18 37 4434.05 7.92 185.11 230.36 62.62 19 32 31 3834.1 3.79 178.42
100.00 5 36 35 1969.17 -21.04 22.83 231.76 111.74 6 29 24 1369.2 -17.90 15.44
100.00 19 36 29 4182.83 8.27 166.24 229.95 61.17 20 46 12 3582.8 4.36 159.63
110.00 7 12 45 1730.79 -23.14 3.73 230.75 115.89 7 41 36 1130.8 -19.47 356.51
110.00 20 36 48 3993.97 10.25 150.71 228.76 57.21 21 43 22 3394.0 5.85 144.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2078 TRA -.5879 TC3 1.7552 BAU .2889 SGT 1586.2 SGR 1354.0 SG3 547.0 ST 551.0 SR 405.4 SS 448.9
RDE -.1808 RRA -.2654 RC3 2.1068 FAU .08984 RRT .9126 RRF -.9836 RTF -.9197 CRT .9625 CRS .8708 CST .9670
FDE .3265 FRA 1.4530 FC3-9.8697 BSP 6726 SGB 2085.6 R23 -.1870 R13 -.9672 LSA 803.3 MSA 153.1 SSA 27.8
BDE .2754 BRA .6268 BC3 2.7422 FSP -1680 SGI 2040.7 SG2 430.4 THA 40.06 EL1 678.2 EL2 89.3 ALF 36.03

LAUNCH DATE JAN 12 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 339.795

RL 147.13 LAL .00 LOL 111.62 VL 27.521 GAL .29 AZL 90.60 HCA 149.88 SMA 126.80 ECC .16043 INC .6021 V1 30.281
RP 108.68 LAP -.30 LOP 281.30 VP 37.357 GAP -4.23 AZP 89.48 TAL 178.50 TAP 328.39 RCA 106.46 APO 147.14 V2 34.867
RC 89.360 GL -5.98 GP 34.19 ZAL 88.81 ZAP 49.38 ETS 327.72 ZAF 139.35 ETE 48.70 ZAC 117.26 ETC 140.19 CLP -38.08

PLANETOCENTRIC CONIC

C3 7.714 VHL 2.777 DLA 3.32 RAL 23.32 RAD 6567.3 VEL 11.362 PTH 1.96 VHP 4.511 DPA 45.51 RAP 25.54 ECC 1.1270
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 4 40 2115.39 -17.04 35.30 231.82 112.96 5 39 56 1515.4 -13.79 28.13
90.00 17 51 58 4553.59 11.19 191.97 231.04 63.82 19 7 52 3953.6 7.58 185.15
100.00 6 27 34 1848.02 -17.80 15.29 231.48 114.42 6 58 22 1248.0 -14.35 8.19
100.00 19 11 46 4296.19 11.92 172.67 230.66 62.38 20 23 22 3696.2 8.13 165.93
110.00 7 39 22 1623.30 -19.80 357.18 230.43 118.45 8 6 25 1023.3 -15.84 350.29
110.00 20 16 27 4093.67 13.87 156.17 229.53 58.44 21 24 41 3493.7 9.59 149.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1620 TRA -.5466 TC3 1.6791 BAU .3133 SGT 1502.5 SGR 1587.1 SCS 569.6 ST 476.8 SR 342.9 SS 391.0
RDE -.1316 RRA -.3309 RC3 2.5316 FAU .09243 RRT .9120 RRF -.9894 RTF -.9150 CRT .9875 CRS .7827 CST .8572
FDE .1166 FRA 1.5461 FC-10.3722 BSP 7002 SGB 2185.5 R23 -.1655 R13 -.9760 LSA 679.2 MSA 189.3 SSA 24.9
BOE .2087 BRA .6390 BC3 3.0378 FSP -1755 SGT 2137.0 SGT 457.7 THA 46.72 EL1 585.6 EL2 44.0 ALF 35.61

LAUNCH DATE JAN 12 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 346.270

RL 147.13 LAL .00 LOL 111.62 VL 27.558 GAL .22 AZL 91.08 HCA 153.05 SMA 127.05 ECC .15811 INC 1.0787 V1 30.281
RP 108.72 LAP -.49 LOP 264.87 VP 37.375 GAP -3.74 AZP 89.04 TAL 178.81 TAP 331.86 RCA 106.96 APO 147.14 V2 34.858
RC 71.560 GL -10.77 GP 38.74 ZAL 89.43 ZAP 54.42 ETS 328.51 ZAE 136.59 ETE 54.57 ZAC 113.83 ETC 139.21 CLP -41.75

PLANETOCENTRIC CONIC

C3 7.709 VHL 2.776 DLA -1.36 RAL 24.52 RAD 6567.3 VEL 11.362 PTH 1.96 VHP 4.490 DPA 49.26 RAP 21.69 ECC 1.1269
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 44 11 1970.15 -12.99 26.57 232.39 115.39 6 17 1 1370.2 -9.46 19.66
90.00 17 22 2 4698.56 15.39 200.55 232.71 65.93 18 40 21 4098.6 12.01 193.50
100.00 7 4 53 1709.81 -13.72 7.05 232.02 116.82 7 33 23 1109.8 -10.01 .22
100.00 18 44 0 4434.14 18.13 180.75 232.36 64.49 19 57 55 3834.1 12.57 173.77
110.00 8 11 41 1500.73 -15.87 350.08 230.91 120.78 8 36 41 900.7 -11.47 343.49
110.00 19 53 42 4215.98 18.10 163.11 231.28 60.50 21 3 58 3616.0 14.04 156.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1241 TRA -.5256 TC3 1.5050 BAU .3415 SGT 1393.2 SGR 1855.8 SCS 576.2 ST 414.9 SR 291.4 SS 410.9
RDE -.0609 RRA -.4170 RC3 2.9516 FAU .09216 RRT .9035 RRF -.9932 RTF -.9036 CRT .9716 CRS .7678 CST .6069
FDE -.1287 FRA 1.6339 FC-10.3495 BSP 7358 SGB 2320.4 R23 -.1397 R13 -.9834 LSA 596.2 MSA 264.7 SSA 18.9
BOE .1382 BRA .6710 BC3 3.3132 FSP -1781 SGT 2288.5 SGT 488.3 THA 53.91 EL1 503.8 EL2 56.8 ALF 34.81

LAUNCH DATE JAN 12 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 352.720

RL 147.13 LAL .00 LOL 111.62 VL 27.591 GAL .17 AZL 91.67 HCA 156.21 SMA 127.27 ECC .15611 INC 1.6712 V1 30.281
RP 108.74 LAP -.67 LOP 267.84 VP 37.390 GAP -3.27 AZP 88.47 TAL 179.06 TAP 335.27 RCA 107.40 APO 147.13 V2 34.848
RC 73.792 GL -16.58 GP 43.89 ZAL 89.92 ZAP 59.73 ETS 329.82 ZAE 133.02 ETE 60.45 ZAC 109.83 ETC 138.59 CLP -45.62

PLANETOCENTRIC CONIC

C3 7.947 VHL 2.819 DLA -6.94 RAL 26.23 RAD 6567.3 VEL 11.373 PTH 1.96 VHP 4.558 DPA 53.32 RAP 16.53 ECC 1.1308
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 33 0 1801.05 -7.86 16.79 234.14 117.29 7 3 1 1201.1 -4.15 10.08
90.00 16 46 49 4878.84 20.05 211.72 235.81 69.58 18 8 8 4278.8 17.10 204.30
100.00 7 51 2 1549.34 -8.62 357.87 233.74 118.73 8 16 51 949.3 -4.71 351.26
100.00 18 11 29 4605.78 20.85 191.31 235.48 68.08 19 28 15 4005.8 17.69 183.94
110.00 8 51 41 1359.42 -10.60 342.27 232.55 122.69 9 14 21 759.4 -6.21 335.92
110.00 19 27 19 4368.47 22.95 172.28 234.47 63.95 20 40 7 3768.5 19.26 165.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0879 TRA -.5032 TC3 1.2439 BAU .3749 SGT 1259.0 SGR 2160.5 SCS 562.7 ST 357.6 SR 347.0 SS 535.2
RDE .0495 RRA -.5330 RC3 3.3024 FAU .08839 RRT .8868 RRF -.9956 RTF -.8852 CRT .8600 CRS .9287 CST .3627
FDE -.4173 FRA 1.7081 FC3-9.6286 BSP 7869 SGB 2500.6 R23 -.1087 R13 -.9897 LSA 656.2 MSA 322.3 SSA 12.8
BOE .1009 BRA .7330 BC3 3.3289 FSP -1745 SGT 2447.2 SGT 513.7 THA 61.29 EL1 456.7 EL2 199.2 ALF 43.74

LAUNCH DATE JAN 12 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 359.145

RL 147.13 LAL .00 LOL 111.62 VL 27.618 GAL .14 AZL 92.43 HCA 159.37 SMA 127.45 ECC .15442 INC 2.4331 V1 30.281
RP 108.77 LAP -.86 LOP 271.01 VP 37.403 GAP -2.82 AZP 87.72 TAL 179.25 TAP 338.62 RCA 107.77 APO 147.13 V2 34.839
RC 76.053 GL -23.57 GP 49.67 ZAL 90.27 ZAP 65.21 ETS 331.18 ZAE 128.55 ETE 66.15 ZAC 105.31 ETC 138.40 CLP -49.63

PLANETOCENTRIC CONIC

C3 8.597 VHL 2.932 DLA -13.55 RAL 28.57 RAD 6567.3 VEL 11.401 PTH 1.97 VHP 4.750 DPA 57.57 RAP 9.57 ECC 1.1415
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 36 12 1597.89 -1.39 5.37 237.72 118.29 8 2 50 997.9 2.40 358.74
90.00 16 2 17 5111.38 24.79 227.10 241.00 75.86 17 27 29 4511.4 22.60 219.12
100.00 8 50 26 1358.38 -2.24 347.29 237.25 119.82 9 13 5 758.4 1.75 340.77
100.00 17 30 44 4826.13 25.73 205.85 240.73 74.23 18 51 11 4226.1 23.31 197.88
110.00 9 42 43 1194.84 -4.42 333.50 235.89 123.93 10 2 58 594.6 .06 327.29
110.00 18 54 57 4562.63 28.17 184.95 239.84 69.79 20 11 0 3962.6 25.16 177.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0630 TRA -.4688 TC3 .9344 BAU .4172 SGT 1097.0 SGR 2506.2 SCS 526.6 ST 308.8 SR 591.3 SS 723.1
RDE .2154 RRA -.6810 RC3 3.5073 FAU .08136 RRT .8602 RRF -.9971 RTF -.8573 CRT .3576 CRS .9904 CST .2260
FDE -.7233 FRA 1.7283 FC3-8.1933 BSP 8529 SGB 2735.8 R23 -.0770 R13 -.9942 LSA 936.3 MSA 301.8 SSA 8.4
BOE .2244 BRA .8268 BC3 3.6296 FSP -1631 SGT 2685.5 SGT 522.0 THA 68.51 EL1 604.5 EL2 282.1 ALF 76.41



LAUNCH DATE JAN 12 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 365.543

RL 147.13 LAL .00 LOL 111.62 VL 27.641 GAL .11 AZL 93.46 HCA 162.53 SMA 127.61 ECC .15300 INC 3.4559 V1 30.281
RP 108.80 LAP -1.04 LOP 274.17 VP 37.412 GAP -2.38 AZP 86.70 TAL 179.37 TAP 341.90 RCA 108.08 APO 147.13 V2 34.831
RC 78.340 GL -31.78 GP 56.05 ZAL 90.45 ZAP 70.69 ETS 333.32 ZAE 123.13 ETE 71.50 ZAC 100.35 ETC 138.75 CLP -53.70

PLANETOCENTRIC CONIC

C3 10.012 VHL 3.164 DLA -21.19 RAL 31.71 RAD 6567.4 VEL 11.463 PTH 1.99 VHP 5.124 DPA 61.85 RAP .07 ECC 1.1648
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 6 19 1333.03 7.10 350.53 244.36 117.48 9 28 32 733.0 10.72 343.73
90.00 14 57 15 5435.49 28.16 250.16 249.10 86.08 16 27 50 4835.5 27.43 241.57
100.00 10 13 16 1116.92 5.92 334.00 243.72 119.35 10 31 53 516.9 9.79 327.35
100.00 16 32 58 5126.83 29.49 227.34 248.99 84.88 17 58 25 4526.8 28.47 218.68
110.00 10 51 12 998.05 3.08 323.24 241.96 124.06 11 7 50 398.0 7.53 316.98
110.00 18 11 32 4818.47 32.80 203.40 248.47 79.77 19 31 50 4218.5 31.04 194.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0720 TRA -.4261 TC3 .5404 BAU .4541 SGT 904.8 SGR 2846.8 SCS 459.6 ST 280.6 SR 958.8 SS 896.4
RDE .4448 RRA -.8864 RC3 3.3493 FAU .06897 RRT .7937 RRF -.9981 RTF -.7894 CRT .0889 CRS .9983 CST .0318
FDE -.9726 FRA 1.7036 FC3-5.9636 B8P 9241 SGB 2987.2 R23 -.0518 R13 -.9967 LSA 1312.2 MSA 282.5 SSA 5.5
BDE .4506 BRA .9835 BC3 3.3927 F8P -1425 SGI 2939.2 SGT 535.2 THA 75.35 EL1 959.2 EL2 279.4 ALF 88.37

LAUNCH DATE JAN 12 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 371.910

RL 147.13 LAL .00 LOL 111.62 VL 27.660 GAL .10 AZL 94.91 HCA 165.67 SMA 127.73 ECC .15185 INC 4.9110 V1 30.281
RP 108.82 LAP -1.21 LOP 277.34 VP 37.419 GAP -1.95 AZP 85.24 TAL 179.43 TAP 345.10 RCA 108.34 APO 147.13 V2 34.824
RC 80.651 GL -41.02 GP 63.04 ZAL 90.48 ZAP 75.94 ETS 336.12 ZAE 116.77 ETE 76.42 ZAC 95.06 ETC 139.69 CLP -57.61

PLANETOCENTRIC CONIC

C3 13.019 VHL 3.608 DLA -29.64 RAL 35.85 RAD 6567.5 VEL 11.593 PTH 2.03 VHP 5.788 DPA 65.79 RAP 346.91 ECC 1.2143
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.84 11 3 20 1036.74 22.85 336.13 258.06 109.42 11 20 37 436.7 25.29 328.20
99.16 13 33 15 5840.80 22.86 278.48 258.07 109.41 15 10 36 5240.8 25.30 270.55
100.00 13 7 17 635.84 20.32 305.78 257.11 112.23 13 17 53 35.8 25.36 298.13
100.00 14 12 0 5716.94 25.23 270.13 258.91 106.59 15 47 17 5116.9 27.26 261.92
110.00 12 35 58 734.89 12.91 309.17 253.05 121.93 12 48 11 134.7 17.03 302.49
110.00 16 59 50 5190.86 33.80 232.23 260.89 96.69 18 26 21 4590.9 34.16 223.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1148 TRA -.3541 TC3 .2185 BAU .4934 SGT 690.0 SGR 3198.3 SCS 373.2 ST 266.3 SR 1407.5 SS 1022.1
RDE .7898 RRA -1.8004 RC3 2.8268 FAU .05416 RRT .6823 RRF -.9987 RTF -.6560 CRT -.2797 CRS .9996 CST -.3056
FDE -1.1623 FRA 1.5950 FC3-3.6016 B8P 10149 SGB 3271.9 R23 -.0305 R13 -.9982 LSA 1741.0 MSA 255.7 SSA 3.7
BDE .7981 BRA 1.2132 BC3 2.8351 F8P -1166 SGI 3231.6 SGT 511.7 THA 81.66 EL1 1409.6 EL2 255.3 ALF 93.13

LAUNCH DATE JAN 12 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 378.241

RL 147.13 LAL .00 LOL 111.62 VL 27.675 GAL .11 AZL 97.16 HCA 168.80 SMA 127.84 ECC .15093 INC 7.1599 V1 30.281
RP 108.84 LAP -1.39 LOP 280.50 VP 37.423 GAP -1.54 AZP 82.98 TAL 179.40 TAP 348.19 RCA 108.54 APO 147.13 V2 34.816
RC 82.981 GL -50.72 GP 70.68 ZAL 90.36 ZAP 80.69 ETS 339.57 ZAE 109.44 ETE 80.87 ZAC 89.57 ETC 141.27 CLP -60.72

PLANETOCENTRIC CONIC

C3 19.861 VHL 4.457 DLA -38.29 RAL 41.18 RAD 6567.8 VEL 11.885 PTH 2.11 VHP 6.968 DPA 68.85 RAP 328.64 ECC 1.3269
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.07 9 32 6 1479.14 26.08 11.92 272.83 119.09 9 56 45 879.1 29.74 4.28
116.93 15 46 52 5590.33 26.09 260.80 272.83 119.08 17 20 3 4990.3 29.76 253.16
63.07 9 32 6 1479.14 26.08 11.92 272.83 119.09 9 56 45 879.1 29.74 4.28
116.93 15 46 52 5590.33 26.09 260.80 272.83 119.08 17 20 3 4990.3 29.76 253.16
63.07 9 32 6 1479.14 26.08 11.92 272.83 119.09 9 56 45 879.1 29.74 4.28
116.93 15 46 52 5590.33 26.09 260.80 272.83 119.08 17 20 3 4990.3 29.76 253.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2368 TRA -2.462 TC3 -.0117 BAU .5073 SGT 905.4 SGR 3516.5 SCS 274.5 ST 327.6 SR 1810.8 SS 1028.3
RDE 1.2696 RRA -1.5922 RC3 1.9106 FAU .03667 RRT .3021 RRF -.9990 RTF -.2940 CRT -.6782 CRS .9999 CST -.6898
FDE -1.2066 FRA 1.4524 FC3-1.5983 B8P 11049 SGB 3552.6 R23 -.0142 R13 -.9990 LSA 2094.5 MSA 238.9 SSA 2.5
BDE 1.2915 BRA 1.6111 BC3 1.9106 F8P -866 SGI 3519.9 SGT 481.3 THA 87.47 EL1 1824.7 EL2 238.9 ALF 97.12

LAUNCH DATE JAN 12 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 384.517

RL 147.13 LAL .00 LOL 111.62 VL 27.686 GAL .13 AZL 101.11 HCA 171.90 SMA 127.91 ECC .15025 INC 11.1092 V1 30.281
RP 108.86 LAP -1.56 LOP 283.66 VP 37.425 GAP -1.15 AZP 79.00 TAL 179.26 TAP 351.16 RCA 108.69 APO 147.13 V2 34.810
RC 85.328 GL -59.73 GP 79.23 ZAL 90.16 ZAP 84.64 ETS 343.33 ZAE 100.88 ETE 84.62 ZAC 83.91 ETC 143.31 CLP -60.02

PLANETOCENTRIC CONIC

C3 38.152 VHL 6.177 DLA -46.01 RAL 47.45 RAD 6568.5 VEL 12.630 PTH 2.29 VHP 9.227 DPA 70.08 RAP 304.20 ECC 1.6279
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.08 9 10 31 1768.75 23.85 35.47 292.18 130.60 9 40 0 1168.7 28.90 28.96
127.92 16 58 39 5824.11 23.86 262.02 292.19 130.59 18 32 23 5024.1 28.91 255.50
52.08 9 10 31 1768.75 23.85 35.47 292.18 130.60 9 40 0 1168.7 28.90 28.96
127.92 16 58 39 5824.11 23.86 262.02 292.19 130.59 18 32 23 5024.1 28.91 255.50
52.08 9 10 31 1768.75 23.85 35.47 292.18 130.60 9 40 0 1168.7 28.90 28.96
127.92 16 58 39 5824.11 23.86 262.02 292.19 130.59 18 32 23 5024.1 28.91 255.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4868 TRA -.0288 TC3 -.0889 BAU .4654 SGT 442.7 SGR 3770.5 SCS 179.5 ST 433.1 SR 2068.6 SS 926.5
RDE 1.8936 RRA -2.3117 RC3 .9098 FAU .01962 RRT -.4707 RRF -.9994 RTF .4752 CRT -.8827 CRS 1.0000 CST -.8860
FDE -1.1241 FRA 1.2805 FC3 -.4453 B8P 11834 SGB 3796.4 R23 .0003 R13 -.9994 LSA 2298.9 MSA 200.3 SSA 1.7
BDE 2.0475 BRA 2.3119 BC3 .9124 F8P -571 SGI 3776.4 SGT 390.0 THA 93.20 EL1 2103.9 EL2 200.1 ALF 100.57

LAUNCH DATE JAN 12 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 390.679

RL 147.13 LAL .00 LOL 111.62 VL 27.694 GAL .18 AZL 109.78 HCA 174.91 SMA 127.97 ECC .14978 INC19.7806 V1 30.281
RP 108.88 LAP -1.72 LOP 286.83 VP 37.426 GAP -.80 AZP 70.29 TAL 178.96 TAP 353.88 RCA 108.80 APO 147.13 V2 34.804
RC 87.691 GL -65.76 GP 87.33 ZAL 89.95 ZAP 87.54 ETS 338.58 ZAE 89.84 ETE 79.10 ZAC 77.68 ETC 137.57 CLP 23.17

PLANETOCENTRIC CONIC

C3 105.853 VHL 10.279 DLA -50.90 RAL 52.78 RAD 6570.0 VEL 15.066 PTH 2.71 VHP 14.418 DPA 67.75 RAP 274.18 ECC 2.7388
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.76 9 10 22 2063.25 13.65 53.48 311.38 139.53 9 44 45 1463.3 19.67 48.40
134.24 17 41 20 5813.91 13.67 269.74 311.40 139.53 19 18 14 5213.9 19.69 264.65
45.76 9 10 22 2063.25 13.65 53.48 311.38 139.53 9 44 45 1463.3 19.67 48.40
134.24 17 41 20 5813.91 13.67 269.74 311.40 139.53 19 18 14 5213.9 19.69 264.65
45.76 9 10 22 2063.25 13.65 53.48 311.38 139.53 9 44 45 1463.3 19.67 48.40
134.24 17 41 20 5813.91 13.67 269.74 311.40 139.53 19 18 14 5213.9 19.69 264.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1452 TRA 1.2910 TC3 .0047 BAU .1961 SGT 1144.0 SGR 3803.5 SCS 105.6 ST 351.8 SR 2190.3 SS 828.7
RDE 3.5197 RRA-3.6725 RC3 .1388 FAU .00344 RRT -.8141 RRF -.9985 RTF .8416 CRT -.2265 CRS .9990 CST -.2694
FDE-1.0445 FRA 1.2138 FC3 -.0282 BSP 12550 SGB 3971.8 R23 -.0079 R13 -.9997 LSA 2345.1 MSA 343.7 SSA 1.0
BDE 3.5227 BRA 3.8928 BC3 .1388 FSP -343 SGT 3919.1 SGT 644.7 THA 104.15 EL1 2191.8 EL2 342.4 ALF 92.14

LAUNCH DATE JAN 12 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 396.362

RL 147.13 LAL .00 LOL 111.62 VL 27.699 GAL .35 AZL 139.10 HCA 177.51 SMA 128.00 ECC .14956 INC49.0963 V1 30.281
RP 108.90 LAP -1.88 LOP 289.99 VP 37.425 GAP -.57 AZP 40.95 TAL 178.11 TAP 355.62 RCA 108.86 APO 147.14 V2 34.799
RC 90.065 GL -59.88 GP 68.31 ZAL 89.81 ZAP 89.17 ETS 176.61 ZAE 68.97 ETE 276.58 ZAC 68.60 ETC 338.80 CLP 87.77

PLANETOCENTRIC CONIC

C3 585.750 VHL 24.202 DLA -45.96 RAL 47.99 RAD 6572.5 VEL 26.590 PTH 3.38 VHP 31.693 DPA 54.88 RAP 238.81 ECC10.6400
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.16 9 12 57 2245.54 1.21 57.50 316.81 135.94 9 50 22 1645.5 6.94 52.32
127.84 17 0 32 814.29 1.22 306.28 316.82 135.94 17 14 6 214.3 6.96 301.10
52.16 9 12 57 2245.54 1.21 57.50 316.81 135.94 9 50 22 1645.5 6.94 52.32
127.84 17 0 32 814.29 1.22 306.28 316.82 135.94 17 14 6 214.3 6.96 301.10
52.16 9 12 57 2245.54 1.21 57.50 316.81 135.94 9 50 22 1645.5 6.94 52.32
127.84 17 0 32 814.29 1.22 306.28 316.82 135.94 17 14 6 214.3 6.96 301.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.5072 TRA-1.1590 TC3 -.0767 BAU 1.8158 SGT 1196.7 SGR 3627.0 SCS 65.9 ST 1073.6 SR 1914.8 SS 1137.6
RDE-7.1161 RRA 8.9047 RC3 .2188 FAU-.03156 RRT -.7805 RRF .9997 RTF -.7963 CRT -.9269 CRS -.9997 CST .9361
FDE-1.5645 FRA 1.8407 FC3 .0466 BSP 12621 SGB 3819.3 R23 -.0259 R13 .9997 LSA 2445.9 MSA 361.7 SSA .3
BDE 8.4234 BRA 8.9798 BC3 .2319 FSP -226 SGT 3750.1 SGT 725.6 THA 105.01 EL1 2166.2 EL2 356.1 ALF 118.30

LAUNCH DATE JAN 12 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 404.724

RL 147.13 LAL .00 LOL 111.62 VL 27.701 GAL -.02 AZL 37.01 HCA 182.55 SMA 128.01 ECC .14934 INC52.9931 V1 30.281
RP 108.91 LAP -2.03 LOP 293.15 VP 37.422 GAP .35 AZP 142.97 TAL 180.12 TAP 2.67 RCA 108.90 APO 147.13 V2 34.795
RC -92.449 GL 58.40 GP -69.31 ZAL 90.20 ZAP 90.29 ETS 175.55 ZAE 69.43 ETE 77.59 ZAC 93.78 ETC 26.27 CLP 90.81

PLANETOCENTRIC CONIC

C3 674.495 VHL 25.971 DLA 58.98 RAL 341.36 RAD 6572.7 VEL 28.210 PTH 3.42 VHP 30.753 DPA -63.33 RAP 146.93 ECC12.1005
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.84 15 55 27 5011.72 -.90 239.07 250.84 31.03 17 18 59 4411.7 -7.75 235.33
144.16 1 26 26 3355.33 -.88 103.82 250.81 31.03 2 22 21 2755.3 -7.73 100.08
35.84 15 55 27 5011.72 -.90 239.07 250.84 31.03 17 18 59 4411.7 -7.75 235.33
144.16 1 26 26 3355.33 -.88 103.82 250.81 31.03 2 22 21 2755.3 -7.73 100.08
35.84 15 55 27 5011.72 -.90 239.07 250.84 31.03 17 18 59 4411.7 -7.75 235.33
144.16 1 26 26 3355.33 -.88 103.82 250.81 31.03 2 22 21 2755.3 -7.73 100.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-4.0547 TRA 2.3822 TC3 -.1096 BAU 2.3084 SGT 1471.0 SGR 3689.4 SCS 67.2 ST 945.5 SR 3547.1 SS 1856.7
RD-15.1059 RRA 2.4073 RC3 -.2314 FAU-.03784 RRT .8689 RRF -.9994 RTF -.8851 CRT .9720 CRS .9999 CST .9748
FDE 3.1499 FRA -.5684 FC3 .0486 BSP 12994 SGB 3971.9 R23 -.0292 R13 -.9995 LSA 3936.8 MSA 214.3 SSA .7
BDE15.6406 BRA 3.3868 BC3 .2560 FSP -232 SGT 3912.1 SGT 686.7 THA 70.26 EL1 3471.5 EL2 214.1 ALF 74.59

LAUNCH DATE JAN 12 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 410.404

RL 147.13 LAL .00 LOL 111.62 VL 27.700 GAL .15 AZL 85.06 HCA 185.17 SMA 128.01 ECC .14941 INC24.9380 V1 30.281
RP 108.92 LAP -2.18 LOP 296.31 VP 37.410 GAP .56 AZP 114.85 TAL 179.16 TAP 4.34 RCA 108.88 APO 147.13 V2 34.791
RC 94.840 GL 66.15 GP -88.60 ZAL 90.04 ZAP 91.24 ETS 163.87 ZAE 89.38 ETE 67.75 ZAC 102.83 ETC 14.82 CLP 152.54

PLANETOCENTRIC CONIC

C3 163.065 VHL 12.770 DLA 63.91 RAL 328.80 RAD 6570.8 VEL 16.864 PTH 2.91 VHP 14.169 DPA -66.93 RAP 98.51 ECC 3.6836
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
29.97 14 50 56 4875.41 -10.81 238.42 233.45 26.60 16 12 11 4275.4 -17.94 235.09
150.03 0 50 46 3168.14 -10.80 96.16 233.43 26.60 1 43 34 2568.1 -17.93 92.82
29.97 14 50 56 4875.41 -10.81 238.42 233.45 26.60 16 12 11 4275.4 -17.94 235.09
150.03 0 50 46 3168.14 -10.80 96.16 233.43 26.60 1 43 34 2568.1 -17.93 92.82
29.97 14 50 56 4875.41 -10.81 238.42 233.45 26.60 16 12 11 4275.4 -17.94 235.09
150.03 0 50 46 3168.14 -10.80 96.16 233.43 26.60 1 43 34 2568.1 -17.93 92.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2893 TRA 1.9807 TC3 -.0193 BAU .0825 SGT 2005.3 SGR 3806.1 SCS 110.4 ST 614.0 SR 3558.1 SS 1337.3
RDE-7.8738 RRA 1.3857 RC3 -.0326 FAU .00011 RRT .3110 RRF -.9809 RTF -.4881 CRT -.0934 CRS .9974 CST -.0210
FDE 2.3900 FRA -.6810 FC3 -.0006 BSP 13338 SGB 4302.0 R23 .0895 R13 -.9956 LSA 3800.4 MSA 618.5 SSA 1.3
BDE 7.8789 BRA 2.4009 BC3 .0379 FSP -356 SGT 3872.9 SGT 1872.9 THA 77.80 EL1 3558.6 EL2 611.3 ALF 90.95

LAUNCH DATE JAN 12 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 416.489

RL 147.13 LAL .00 LOL 111.62 VL 27.696 GAL .24 AZL 73.49 HCA 188.19 SMA 127.98 ECC .14965 INC16.5072 V1 30.281
RP 108.93 LAP -2.32 LOP 299.47 VP 37.413 GAP .88 AZP 106.35 TAL 178.61 TAP 6.80 RCA 108.83 APO 147.14 V2 34.788
RC 97.236 GL 64.66 GP -79.77 ZAL 89.75 ZAP 93.33 ETS 352.19 ZAE 99.67 ETE 256.79 ZAC 106.65 ETC 203.28 CLP-109.08

PLANETOCENTRIC CONIC

C3 75.813 VHL 8.707 DLA 63.32 RAL 331.94 RAD 6569.5 VEL 14.041 PTH 2.56 VHP 9.111 DPA -63.10 RAP 74.91 ECC 2.2477
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.66 15 5 5 4716.06 -20.19 233.40 231.30 28.58 16 23 41 4116.1 -27.16 229.52
149.34 1 1 38 3014.17 -20.18 91.93 231.29 28.58 1 51 52 2414.2 -27.15 88.06
30.66 15 5 5 4716.06 -20.19 233.40 231.30 28.58 16 23 41 4116.1 -27.16 229.52
149.34 1 1 38 3014.17 -20.18 91.93 231.29 28.58 1 51 52 2414.2 -27.15 88.06
30.66 15 5 5 4716.06 -20.19 233.40 231.30 28.58 16 23 41 4116.1 -27.16 229.52
149.34 1 1 38 3014.17 -20.18 91.93 231.29 28.58 1 51 52 2414.2 -27.15 88.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2977 TRA -.8423 TC3 -.1543 BAU .3374 SGT 2511.0 SGR 3570.0 SG3 186.2 ST 2201.4 SR 2995.0 SS 1473.1
RDE 4.4824 RRA-1.3401 RC3 -.2950 FAU .01810 RRT .9967 RRF .9974 RTF .9982 CRT .9996 CRS -.9996 CST-1.0000
FDE 2.8025 FRA -.7202 FC3 -.2067 BSP 13641 SGB 4364.6 R23 -.0236 R13 .9983 LSA 3997.9 MSA 56.9 SSA 2.6
BDE 5.5487 BRA 1.5829 BC3 .3329 FSP -612 SGI 4361.5 SG2 165.9 THA 54.91 EL1 3716.7 EL2 51.5 ALF 53.69

LAUNCH DATE JAN 12 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 422.645

RL 147.13 LAL .00 LOL 111.62 VL 27.691 GAL .34 AZL 77.37 HCA 191.28 SMA 127.95 ECC .15005 INC12.6330 V1 30.281
RP 108.94 LAP -2.45 LOP 302.63 VP 37.406 GAP 1.22 AZP 102.40 TAL 178.10 TAP 9.38 RCA 108.75 APO 147.14 V2 34.786
RC 99.636 GL 61.69 GP -71.56 ZAL 89.31 ZAP 96.36 ETS 346.03 ZAE 107.30 ETE 250.44 ZAC 108.77 ETC 197.00 CLP-110.49

PLANETOCENTRIC CONIC

C3 47.313 VHL 6.878 DLA 61.85 RAL 337.60 RAD 6568.8 VEL 12.988 PTH 2.37 VHP 6.879 DPA -58.47 RAP 60.92 ECC 1.7787
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.41 15 31 51 4594.48 -26.60 227.96 232.07 31.85 16 48 26 3994.5 -33.30 223.34
147.59 1 20 1 2906.82 -26.59 88.54 232.05 31.85 2 8 28 2306.8 -33.29 83.91
32.41 15 31 51 4594.48 -26.60 227.96 232.07 31.85 16 48 26 3994.5 -33.30 223.34
147.59 1 20 1 2906.82 -26.59 88.54 232.05 31.85 2 8 28 2306.8 -33.29 83.91
32.41 15 31 51 4594.48 -26.60 227.96 232.07 31.85 16 48 26 3994.5 -33.30 223.34
147.59 1 20 1 2906.82 -26.59 88.54 232.05 31.85 2 8 28 2306.8 -33.29 83.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7188 TRA -.7871 TC3 -.4311 BAU .4725 SGT 2722.3 SGR 3422.8 SG3 282.1 ST 2302.8 SR 3033.3 SS 1723.4
RDE 3.6058 RRA -.7990 RC3 -.8101 FAU .03578 RRT .9958 RRF .9992 RTF .9893 CRT .9991 CRS-1.0000 CST -.9987
FDE 3.4515 FRA -.7126 FC3 -.6547 BSP 13654 SGB 4373.4 R23 .0756 R13 .9968 LSA 4179.3 MSA 86.4 SSA 1.3
BDE 4.5160 BRA 1.1215 BC3 .7471 FSP -938 SGI 4366.9 SG2 238.1 THA 51.54 EL1 3807.6 EL2 77.1 ALF 52.80

LAUNCH DATE JAN 12 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 428.813

RL 147.13 LAL .00 LOL 111.62 VL 27.683 GAL .43 AZL 79.58 HCA 194.41 SMA 127.89 ECC .15059 INC10.4164 V1 30.281
RP 108.94 LAP -2.58 LOP 305.80 VP 37.399 GAP 1.56 AZP 100.10 TAL 177.56 TAP 11.96 RCA 108.63 APO 147.15 V2 34.784
RC 102.038 GL 58.58 GP -64.40 ZAL 88.74 ZAP 100.08 ETS 342.04 ZAE 113.49 ETE 245.28 ZAC 109.94 ETC 192.56 CLP-113.88

PLANETOCENTRIC CONIC

C3 34.396 VHL 5.863 DLA 60.16 RAL 343.10 RAD 6568.4 VEL 12.481 PTH 2.26 VHP 5.688 DPA -53.75 RAP 51.24 ECC 1.5661
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.41 15 58 44 4505.22 -30.65 222.76 233.24 35.33 17 13 50 3905.2 -37.05 217.39
143.59 1 36 59 2835.28 -30.64 85.75 233.22 35.33 2 24 14 2235.3 -37.04 80.39
34.41 15 58 44 4505.22 -30.65 222.76 233.24 35.33 17 13 50 3905.2 -37.05 217.39
143.59 1 36 59 2835.28 -30.64 85.75 233.22 35.33 2 24 14 2235.3 -37.04 80.39
34.41 15 58 44 4505.22 -30.65 222.76 233.24 35.33 17 13 50 3905.2 -37.05 217.39
143.59 1 36 59 2835.28 -30.64 85.75 233.22 35.33 2 24 14 2235.3 -37.04 80.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5886 TRA -.6823 TC3 -.7720 BAU .5353 SGT 3001.7 SGR 3178.5 SG3 384.6 ST 2560.8 SR 2867.0 SS 1956.6
RDE 2.9196 RRA -.4894 RC3 -.8712 FAU .05390 RRT .9879 RRF .9991 RTF .9838 CRT .9984 CRS-1.0000 CST -.9980
FDE 4.0566 FRA -.6395 FC3-1.3566 BSP 13697 SGB 4371.9 R23 .0941 R13 .9949 LSA 4311.7 MSA 121.5 SSA 2.0
BDE 3.9019 BRA .8397 BC3 1.1641 FSP -1301 SGI 4358.7 SG2 339.1 THA 46.66 EL1 3842.6 EL2 108.6 ALF 48.23

LAUNCH DATE JAN 12 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 434.977

RL 147.13 LAL .00 LOL 111.62 VL 27.673 GAL .54 AZL 81.02 HCA 197.54 SMA 127.83 ECC .15129 INC 8.9779 V1 30.281
RP 108.95 LAP -2.70 LOP 308.96 VP 37.391 GAP 1.89 AZP 98.57 TAL 176.98 TAP 14.52 RCA 108.49 APO 147.17 V2 34.783
RC 104.441 GL 55.64 GP -57.96 ZAL 88.02 ZAP 104.25 ETS 339.05 ZAE 118.57 ETE 240.14 ZAC 110.49 ETC 188.85 CLP-117.61

PLANETOCENTRIC CONIC

C3 27.367 VHL 5.251 DLA 58.50 RAL 348.01 RAD 6568.1 VEL 12.196 PTH 2.19 VHP 4.993 DPA -49.11 RAP 44.06 ECC 1.4504
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.41 16 23 26 4438.27 -33.15 218.04 234.43 38.61 17 37 24 3838.3 -39.24 212.02
143.59 1 51 28 2787.51 -33.14 83.51 234.41 38.61 2 37 55 2187.5 -39.23 77.49
36.41 16 23 26 4438.27 -33.15 218.04 234.43 38.61 17 37 24 3838.3 -39.24 212.02
143.59 1 51 28 2787.51 -33.14 83.51 234.41 38.61 2 37 55 2187.5 -39.23 77.49
36.41 16 23 26 4438.27 -33.15 218.04 234.43 38.61 17 37 24 3838.3 -39.24 212.02
143.59 1 51 28 2787.51 -33.14 83.51 234.41 38.61 2 37 55 2187.5 -39.23 77.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5453 TRA -.5796 TC3-1.1530 BAU .5695 SGT 3271.5 SGR 2903.3 SG3 480.6 ST 2811.7 SR 2629.3 SS 2137.0
RDE 2.3950 RRA -.2831 RC3-1.0455 FAU .07042 RRT .9847 RRF .9988 RTF .9808 CRT .9981 CRS-1.0000 CST -.9977
FDE 4.5138 FRA -.4924 FC3-2.2278 BSP 13661 SGB 4374.0 R23 .1135 R13 .9925 LSA 4400.7 MSA 139.4 SSA 2.7
BDE 3.4949 BRA .6450 BC3 1.5564 FSP -1639 SGI 4357.5 SG2 379.8 THA 41.54 EL1 3847.6 EL2 119.5 ALF 43.08

LAUNCH DATE JAN 12 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 441.131

RL 147.13 LAL .00 LOL 111.62 VL 27.662 GAL .65 AZL 82.04 HCA 200.69 SMA 127.75 ECC .15213 INC 7.9647 V1 30.281  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.383 GAP 2.23 AZP 97.46 TAL 176.35 TAP 17.04 RCA 108.32 APO 147.18 V2 34.783  
 RC 108.844 GL 52.92 GP -52.15 ZAL 87.18 ZAP 108.60 ETS 336.80 ZAE 122.64 ETE 234.91 ZAC 110.64 ETC 185.72 CLP-121.31

PLANETOCENTRIC CONIC

C3 23.081 VHL 4.804 DLA 56.95 RAL 352.38 RAD 6567.9 VEL 12.019 PTH 2.15 VHP 4.571 DPA -44.68 RAP 38.54 ECC 1.3799  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.28 16 45 50 4386.52 -34.68 213.85 235.63 41.55 17 58 57 3786.5 -40.47 207.29  
 141.72 2 3 55 2755.33 -34.67 81.73 235.62 41.54 2 49 51 2155.3 -40.46 75.18  
 38.28 16 45 50 4386.52 -34.68 213.85 235.63 41.55 17 58 57 3786.5 -40.47 207.29  
 141.72 2 3 55 2755.33 -34.67 81.73 235.62 41.54 2 49 51 2155.3 -40.46 75.18  
 38.28 16 45 50 4386.52 -34.68 213.85 235.63 41.55 17 58 57 3786.5 -40.47 207.29  
 141.72 2 3 55 2755.33 -34.67 81.73 235.62 41.54 2 49 51 2155.3 -40.46 75.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5278 TRA -.4801 TC3-1.5540 BAU .5943 SGT 3524.2 SGR 2820.5 SG3 560.8 ST 3031.4 SR 2362.9 SS 2253.4  
 RDE 1.9795 RRA -.1438 RC3-1.1377 FAU .08422 RRT .9831 RRF .9983 RTF .9792 CRT .9979 CRS-1.0000 CST -.9976  
 FDE 4.7805 FRA -.2966 FC3-3.1569 BSP 13629 SGB 4391.7 R23 .1304 R13 .9898 LSA 4452.9 MSA 148.9 SSA 3.4  
 BDE 3.2106 BRA .5012 BC3 1.9260 FSP -1917 SGI 4374.7 SGT 386.2 THA 36.50 EL1 3841.6 EL2 119.5 ALF 37.92

LAUNCH DATE JAN 12 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 447.272

RL 147.13 LAL .00 LOL 111.62 VL 27.649 GAL .78 AZL 82.79 HCA 203.83 SMA 127.66 ECC .15311 INC 7.2091 V1 30.281  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.374 GAP 2.56 AZP 96.60 TAL 175.68 TAP 19.51 RCA 108.11 APO 147.21 V2 34.784  
 RC 109.246 GL 50.42 GP -46.93 ZAL 86.22 ZAP 112.98 ETS 335.17 ZAE 125.79 ETE 229.68 ZAC 110.58 ETC 183.14 CLP-124.87

PLANETOCENTRIC CONIC

C3 20.263 VHL 4.501 DLA 55.53 RAL 356.34 RAD 6567.8 VEL 11.901 PTH 2.11 VHP 4.318 DPA -40.50 RAP 34.26 ECC 1.3335  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.01 17 6 22 4345.42 -35.58 210.17 236.93 44.10 18 18 48 3745.4 -41.10 203.20  
 139.99 2 14 59 2733.61 -35.57 80.34 236.92 44.10 3 0 33 2133.6 -41.09 73.38  
 40.01 17 6 22 4345.42 -35.58 210.17 236.93 44.10 18 18 48 3745.4 -41.10 203.20  
 139.99 2 14 59 2733.61 -35.57 80.34 236.92 44.10 3 0 33 2133.6 -41.09 73.38  
 40.01 17 6 22 4345.42 -35.58 210.17 236.93 44.10 18 18 48 3745.4 -41.10 203.20  
 139.99 2 14 59 2733.61 -35.57 80.34 236.92 44.10 3 0 33 2133.6 -41.09 73.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5224 TRA -.3799 TC3-1.9598 BAU .6167 SGT 3761.6 SGR 2347.6 SG3 621.6 ST 3221.2 SR 2101.1 SS 2316.1  
 RDE 1.8504 RRA -.0451 RC3-1.1587 FAU .09445 RRT .9819 RRF .9974 RTF .9779 CRT .9979 CRS-1.0000 CST -.9974  
 FDE 4.8771 FRA -.0638 FC3-4.0353 BSP 13736 SGB 4434.1 R23 .1445 R13 .9869 LSA 4486.7 MSA 135.9 SSA 4.2  
 BDE 3.0144 BRA .3826 BC3 2.2765 FSP -2134 SGI 4417.9 SGT 378.3 THA 31.76 EL1 3844.2 EL2 114.7 ALF 33.09

LAUNCH DATE JAN 12 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 453.398

RL 147.13 LAL .00 LOL 111.62 VL 27.634 GAL .92 AZL 83.38 HCA 206.99 SMA 127.56 ECC .15423 INC 6.6208 V1 30.281  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.364 GAP 2.89 AZP 95.91 TAL 174.96 TAP 21.94 RCA 107.89 APO 147.23 V2 34.785  
 RC 111.645 GL 48.11 GP -42.27 ZAL 85.13 ZAP 117.28 ETS 334.02 ZAE 128.11 ETE 224.57 ZAC 110.43 ETC 181.05 CLP-128.25

PLANETOCENTRIC CONIC

C3 18.314 VHL 4.279 DLA 54.23 RAL 358.00 RAD 6567.7 VEL 11.819 PTH 2.09 VHP 4.174 DPA -36.63 RAP 30.94 ECC 1.3014  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 138.40 2 25 8 2719.22 -36.06 79.30 238.36 46.30 3 10 27 2119.2 -41.35 72.02  
 41.60 17 25 29 4312.00 -36.07 206.96 238.37 46.31 18 37 21 3712.0 -41.36 199.67  
 138.40 2 25 8 2719.22 -36.06 79.30 238.36 46.30 3 10 27 2119.2 -41.35 72.02  
 41.60 17 25 29 4312.00 -36.07 206.96 238.37 46.31 18 37 21 3712.0 -41.36 199.67  
 138.40 2 25 8 2719.22 -36.06 79.30 238.36 46.30 3 10 27 2119.2 -41.35 72.02  
 41.60 17 25 29 4312.00 -36.07 206.96 238.37 46.31 18 37 21 3712.0 -41.36 199.67  
 138.40 2 25 8 2719.22 -36.06 79.30 238.36 46.30 3 10 27 2119.2 -41.35 72.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5197 TRA -.2805 TC3-2.3605 BAU .6407 SGT 3984.4 SGR 2092.8 SG3 661.9 ST 3379.6 SR 1855.7 SS 2330.6  
 RDE 1.3858 RRA .0208 RC3-1.1297 FAU .10130 RRT .9813 RRF .9960 RTF .9771 CRT .9979 CRS -.9999 CST -.9972  
 FDE 4.8257 FRA .1708 FC3-4.7886 BSP 13950 SGB 4500.6 R23 .1527 R13 .9842 LSA 4502.4 MSA 159.8 SSA 5.0  
 BDE 2.8757 BRA .2813 BC3 2.6169 FSP -2282 SGI 4486.3 SGT 358.2 THA 27.46 EL1 3854.1 EL2 105.4 ALF 28.74

LAUNCH DATE JAN 12 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 459.507

RL 147.13 LAL .00 LOL 111.62 VL 27.618 GAL 1.07 AZL 83.85 HCA 210.14 SMA 127.45 ECC .15550 INC 6.1473 V1 30.281  
 RP 108.95 LAP -3.08 LOP 321.81 VP 37.354 GAP 3.21 AZP 95.32 TAL 174.19 TAP 24.33 RCA 107.63 APO 147.27 V2 34.787  
 RC 114.042 GL 45.98 GP -38.14 ZAL 83.94 ZAP 121.35 ETS 335.24 ZAE 129.72 ETE 219.73 ZAC 110.30 ETC 179.38 CLP-131.41

PLANETOCENTRIC CONIC

C3 16.920 VHL 4.113 DLA 53.08 RAL 354.7 RAD 6567.7 VEL 11.760 PTH 2.08 VHP 4.106 DPA -33.06 RAP 28.40 ECC 1.2785  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 136.95 2 34 43 2710.05 -36.28 78.54 239.96 48.20 3 19 53 2110.1 -41.36 71.01  
 43.05 17 43 31 4284.41 -36.29 204.15 239.97 48.20 18 54 55 3684.4 -41.36 196.62  
 136.95 2 34 43 2710.05 -36.28 78.54 239.96 48.20 3 19 53 2110.1 -41.36 71.01  
 43.05 17 43 31 4284.41 -36.29 204.15 239.97 48.20 18 54 55 3684.4 -41.36 196.62  
 136.95 2 34 43 2710.05 -36.28 78.54 239.96 48.20 3 19 53 2110.1 -41.36 71.01  
 43.05 17 43 31 4284.41 -36.29 204.15 239.97 48.20 18 54 55 3684.4 -41.36 196.62  
 136.95 2 34 43 2710.05 -36.28 78.54 239.96 48.20 3 19 53 2110.1 -41.36 71.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5178 TRA -.1779 TC3-2.7433 BAU .6655 SGT 4190.7 SGR 1859.6 SG3 683.3 ST 3509.7 SR 1634.9 SS 2307.5  
 RDE 1.1731 RRA .0637 RC3-1.0629 FAU .10479 RRT .9805 RRF .9939 RTF .9764 CRT .9980 CRS -.9999 CST -.9970  
 FDE 4.8650 FRA .4002 FC3-5.3818 BSP 14229 SGB 4584.7 R23 .1545 R13 .9819 LSA 4504.4 MSA 162.1 SSA 5.8  
 BDE 2.7775 BRA .1897 BC3 2.9420 FSP -2362 SGI 4572.5 SGT 334.7 THA 23.65 EL1 3870.7 EL2 93.8 ALF 24.95

LAUNCH DATE JAN 12 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.600 GAL 1.23 AZL 84.24 HCA 213.29 SMA 127.33 ECC .15691 INC 5.7550 V1 30.281
RP 108.93 LAP -3.16 LOP 324.78 VP 37.344 GAP 3.54 AZP 94.82 TAL 173.38 TAP 26.67 RCA 107.35 APO 147.31 V2 34.790
RC 116.435 GL 43.94 GP -34.50 ZAL 82.63 ZAP 125.20 ETS 332.75 ZAE 130.74 ETE 215.26 ZAC 110.27 ETC 178.07 CLP-134.38

DISTANCE 465.601

PLANETOCENTRIC CONIC

C3 15.904 VHL 3.988 DLA 51.99 RAL 6.79 RAD 6567.6 VEL 11.717 PTH 2.06 VHP 4.092 DPA -29.80 RAP 26.49 ECC 1.2617
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.38 18 0 48 4261.25 -36.32 201.69 241.75 49.84 19 11 49 3661.3 -41.21 193.98
135.62 2 43 58 2704.91 -36.31 78.02 241.74 49.82 3 29 3 2104.9 -41.20 70.31
44.38 18 0 48 4261.25 -36.32 201.69 241.75 49.84 19 11 49 3661.3 -41.21 193.98
135.62 2 43 58 2704.91 -36.31 78.02 241.74 49.82 3 29 3 2104.9 -41.20 70.31
44.38 18 0 48 4261.25 -36.32 201.69 241.75 49.84 19 11 49 3661.3 -41.21 193.98
135.62 2 43 58 2704.91 -36.31 78.02 241.74 49.82 3 29 3 2104.9 -41.20 70.31

DIFFERENTIAL CORRECTIONS

TDE 2.9167 TRA -.0709 TC3-3.1020 BAU .6912
RDE 1.0040 RRA .0964 RC3 -.9727 FAU .10545
FDE 4.4391 FRA .6166 FC3-5.7403 BSP 14568
BDE 2.7095 BRA .1197 BC3 3.2509 FSP -2385

MID-COURSE EXECUTION ACCURACY

SGT 4384.3 SGR 1653.2 SCS 689.6
RRT .9792 RRF .9909 RTF .9759
SGB 4685.7 R23 .1496 R13 .9799
SGI 4675.1 SGT 314.3 THA 20.36

ORBIT DETERMINATION ACCURACY

ST 3616.9 SR 1444.2 SS 2260.6
CRT .9982 CRS -.9998 CST -.9967
LSA 4500.1 MSA 164.0 SSA 6.7
EL1 3893.7 EL2 81.3 ALF 21.74

LAUNCH DATE JAN 12 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.582 GAL 1.40 AZL 84.58 HCA 216.45 SMA 127.21 ECC .15847 INC 5.4249 V1 30.281
RP 108.91 LAP -3.22 LOP 327.95 VP 37.333 GAP 3.86 AZP 94.37 TAL 172.53 TAP 28.98 RCA 107.05 APO 147.37 V2 34.794
RC 118.823 GL 42.03 GP -31.30 ZAL 81.22 ZAP 128.79 ETS 332.45 ZAE 131.32 ETE 211.22 ZAC 110.36 ETC 177.05 CLP-137.15

DISTANCE 471.678

PLANETOCENTRIC CONIC

C3 15.161 VHL 3.894 DLA 51.01 RAL 10.03 RAD 6567.6 VEL 11.685 PTH 2.06 VHP 4.119 DPA -26.82 RAP 25.11 ECC 1.2495
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.62 18 17 32 4241.68 -36.21 199.52 243.69 51.24 19 28 14 3641.7 -40.94 191.68
134.38 2 53 3 2702.88 -36.20 77.69 243.68 51.23 3 38 6 2102.9 -40.93 69.85
45.62 18 17 32 4241.68 -36.21 199.52 243.69 51.24 19 28 14 3641.7 -40.94 191.68
134.38 2 53 3 2702.88 -36.20 77.69 243.68 51.23 3 38 6 2102.9 -40.93 69.85
45.62 18 17 32 4241.68 -36.21 199.52 243.69 51.24 19 28 14 3641.7 -40.94 191.68
134.38 2 53 3 2702.88 -36.20 77.69 243.68 51.23 3 38 6 2102.9 -40.93 69.85

DIFFERENTIAL CORRECTIONS

TDE 2.5127 TRA .0402 TC3-3.4326 BAU .7179
RDE .8679 RRA .1159 RC3 -.8723 FAU .10408
FDE 4.1674 FRA .8086 FC3-5.9433 BSP 14977
BDE 2.6584 BRA .1226 BC3 3.5417 FSP -2371

MID-COURSE EXECUTION ACCURACY

SGT 4563.5 SGR 1471.7 SCS 683.7
RRT .9773 RRF .9886 RTF .9755
SGB 4794.9 R23 .1378 R13 .9784
SGI 4785.7 SGT 297.5 THA 17.56

ORBIT DETERMINATION ACCURACY

ST 3698.5 SR 1279.8 SS 2192.3
CRT .9984 CRS -.9996 CST -.9964
LSA 4482.8 MSA 165.0 SSA 7.5
EL1 3913.1 EL2 68.0 ALF 19.07

LAUNCH DATE JAN 12 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.562 GAL 1.59 AZL 84.86 HCA 219.61 SMA 127.07 ECC .16017 INC 5.1399 V1 30.281
RP 108.90 LAP -3.27 LOP 331.11 VP 37.322 GAP 4.18 AZP 93.96 TAL 171.64 TAP 31.25 RCA 106.72 APO 147.43 V2 34.798
RC 121.206 GL 40.20 GP -28.50 ZAL 79.71 ZAP 132.12 ETS 332.28 ZAE 131.56 ETE 207.65 ZAC 110.61 ETC 176.26 CLP-139.74

DISTANCE 477.739

PLANETOCENTRIC CONIC

C3 14.824 VHL 3.824 DLA 50.09 RAL 13.21 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 4.177 DPA -24.10 RAP 24.18 ECC 1.2407
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.78 18 33 54 4224.99 -36.00 197.60 245.80 52.47 19 44 19 3625.0 -40.59 189.66
133.22 3 2 2 2703.47 -35.99 77.55 245.79 52.45 3 47 6 2103.5 -40.58 69.61
46.78 18 33 54 4224.99 -36.00 197.60 245.80 52.47 19 44 19 3625.0 -40.59 189.66
133.22 3 2 2 2703.47 -35.99 77.55 245.79 52.45 3 47 6 2103.5 -40.58 69.61
46.78 18 33 54 4224.99 -36.00 197.60 245.80 52.47 19 44 19 3625.0 -40.59 189.66
133.22 3 2 2 2703.47 -35.99 77.55 245.79 52.45 3 47 6 2103.5 -40.58 69.61

DIFFERENTIAL CORRECTIONS

TDE 2.5092 TRA .1583 TC3-3.7253 BAU .7436
RDE .7602 RRA .1286 RC3 -.7669 FAU .10097
FDE 3.8823 FRA .9835 FC3-5.9777 BSP 15357
BDE 2.6218 BRA .2039 BC3 3.8035 FSP -2314

MID-COURSE EXECUTION ACCURACY

SGT 4731.6 SGR 1315.9 SCS 669.3
RRT .9740 RRF .9807 RTF .9751
SGB 4911.2 R23 .1208 R13 .9772
SGI 4902.7 SGT 287.8 THA 15.21

ORBIT DETERMINATION ACCURACY

ST 3762.1 SR 1142.7 SS 2114.4
CRT .9988 CRS -.9992 CST -.9961
LSA 4461.2 MSA 165.8 SSA 8.4
EL1 3931.4 EL2 54.6 ALF 16.88

LAUNCH DATE JAN 12 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.541 GAL 1.78 AZL 85.11 HCA 222.77 SMA 126.94 ECC .16204 INC 4.8905 V1 30.281
RP 106.89 LAP -3.32 LOP 334.28 VP 37.312 GAP 4.50 AZP 93.59 TAL 170.71 TAP 33.48 RCA 106.37 APO 147.50 V2 34.803
RC 123.581 GL 38.44 GP -26.04 ZAL 78.11 ZAP 135.21 ETS 332.21 ZAE 131.55 ETE 204.53 ZAC 111.02 ETC 175.65 CLP-142.17

DISTANCE 483.781

PLANETOCENTRIC CONIC

C3 14.251 VHL 3.775 DLA 49.23 RAL 16.35 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 4.259 DPA -21.61 RAP 23.63 ECC 1.2345
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.89 18 50 2 4210.71 -35.70 195.88 248.07 53.53 20 0 12 3610.7 -40.17 187.88
132.11 3 10 59 2706.31 -35.69 77.56 248.06 53.52 3 56 5 2106.3 -40.16 69.56
47.89 18 50 2 4210.71 -35.70 195.88 248.07 53.53 20 0 12 3610.7 -40.17 187.88
132.11 3 10 59 2706.31 -35.69 77.56 248.06 53.52 3 56 5 2106.3 -40.16 69.56
47.89 18 50 2 4210.71 -35.70 195.88 248.07 53.53 20 0 12 3610.7 -40.17 187.88
132.11 3 10 59 2706.31 -35.69 77.56 248.06 53.52 3 56 5 2106.3 -40.16 69.56

DIFFERENTIAL CORRECTIONS

TDE 2.5019 TRA .2806 TC3-3.9847 BAU .7697
RDE .6742 RRA .1353 RC3 -.6652 FAU .09693
FDE 3.5912 FRA 1.1305 FC3-5.8882 BSP 15782
BDE 2.5911 BRA .3116 BC3 4.0399 FSP -2245

MID-COURSE EXECUTION ACCURACY

SGT 4888.3 SGR 1182.5 SCS 648.7
RRT .9691 RRF .9727 RTF .9750
SGB 5029.3 R23 .1000 R13 .9764
SGI 5021.3 SGT 284.0 THA 13.24

ORBIT DETERMINATION ACCURACY

ST 3803.3 SR 1027.7 SS 2027.0
CRT .9991 CRS -.9986 CST -.9958
LSA 4427.5 MSA 165.9 SSA 9.2
EL1 3939.5 EL2 41.1 ALF 15.11

LAUNCH DATE JAN 12 1969 FLIGHT TIME 174.00 ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC DISTANCE 489.807  
 RL 147.13 LAL .00 LOL 111.62 VL 27.520 GAL 2.00 AZL 85.33 HCA 225.93 SMA 126.79 ECC .16406 INC 4.6692 V1 30.281  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.301 GAP 4.83 AZP 93.25 TAL 169.74 TAP 35.67 RCA 105.99 APO 147.59 V2 34.808  
 RC 125.948 GL 36.73 GP -23.89 ZAL 76.43 ZAP 138.06 ETS 332.18 ZAE 131.39 ETE 201.82 ZAC 111.59 ETC 175.17 CLP-144.44

PLANETOCENTRIC CONIC  
 C3 14.015 VHL 3.744 DLA 48.40 RAL 19.46 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 4.360 DPA -19.32 RAP 23.39 ECC 1.2306  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.96 19 6 1 4198.39 -35.33 194.33 250.47 54.47 20 16 0 3598.4 -39.69 186.28  
 131.04 3 19 51 2711.26 -35.32 77.72 250.46 54.46 4 5 3 2111.3 -39.68 69.68  
 48.96 19 6 1 4198.39 -35.33 194.33 250.47 54.47 20 16 0 3598.4 -39.69 186.28  
 131.04 3 19 51 2711.26 -35.32 77.72 250.46 54.46 4 5 3 2111.3 -39.68 69.68  
 48.96 19 6 1 4198.39 -35.33 194.33 250.47 54.47 20 16 0 3598.4 -39.69 186.28  
 131.04 3 19 51 2711.26 -35.32 77.72 250.46 54.46 4 5 3 2111.3 -39.68 69.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4903 TRA .4091 TC3-4.2070 BAU .7954 5GT 5033.7 5GR 1069.4 5G3 624.0 ST 3823.0 SR 931.9 SS 1932.9  
 RDE .6056 RRA .1386 RC3 -.5704 FAU .09231 RRT .9622 RRF .9625 RTF .9750 CRT .9995 CRS -.9977 CST -.9954  
 FDE 3.3030 FRA 1.2559 FC3-5.7027 BSP 16221 5GB 5146.0 R23 .0785 R13 .9759 LSA 4381.0 MSA 165.7 SSA 10.1  
 BDE 2.5629 BRA .4320 BC3 4.2455 FSP -2161 5G1 5138.1 5G2 285.5 THA 11.59 EL1 3934.9 EL2 28.0 ALF 13.69

LAUNCH DATE JAN 12 1969 FLIGHT TIME 176.00 ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC DISTANCE 495.814  
 RL 147.13 LAL .00 LOL 111.62 VL 27.497 GAL 2.22 AZL 85.53 HCA 229.09 SMA 126.64 ECC .16625 INC 4.4702 V1 30.281  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.290 GAP 5.15 AZP 92.93 TAL 168.74 TAP 37.84 RCA 105.59 APO 147.69 V2 34.815  
 RC 128.306 GL 35.06 GP -22.00 ZAL 74.67 ZAP 140.70 ETS 332.17 ZAE 131.11 ETE 199.49 ZAC 112.31 ETC 174.81 CLP-146.57

PLANETOCENTRIC CONIC  
 C3 13.896 VHL 3.728 DLA 47.59 RAL 22.56 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 4.478 DPA -17.21 RAP 23.43 ECC 1.2287  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.00 19 21 59 4187.68 -34.90 192.91 253.01 55.31 20 31 46 3587.7 -39.16 184.84  
 130.00 3 28 38 2718.24 -34.88 78.03 253.00 55.30 4 13 56 2118.2 -39.15 69.96  
 50.00 19 21 59 4187.68 -34.90 192.91 253.01 55.31 20 31 46 3587.7 -39.16 184.84  
 130.00 3 28 38 2718.24 -34.88 78.03 253.00 55.30 4 13 56 2118.2 -39.15 69.96  
 50.00 19 21 59 4187.68 -34.90 192.91 253.01 55.31 20 31 46 3587.7 -39.16 184.84  
 130.00 3 28 38 2718.24 -34.88 78.03 253.00 55.30 4 13 56 2118.2 -39.15 69.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4760 TRA .5453 TC3-4.3880 BAU .8201 5GT 5170.1 5GR 975.0 5G3 597.3 ST 3825.1 SR 853.4 SS 1837.5  
 RDE .5517 RRA .1401 RC3 -.4833 FAU .08729 RRT .9527 RRF .9497 RTF .9750 CRT .9998 CRS -.9963 CST -.9950  
 FDE 3.0289 FRA 1.3652 FC3-5.4382 BSP 16633 5GB 5261.3 R23 .0589 R13 .9756 LSA 4325.4 MSA 165.8 SSA 10.9  
 BDE 2.5368 BRA .5630 BC3 4.4145 FSP -2065 5G1 5253.2 5G2 291.8 THA 10.22 EL1 3919.1 EL2 16.4 ALF 12.57

LAUNCH DATE JAN 12 1969 FLIGHT TIME 178.00 ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC DISTANCE 501.803  
 RL 147.13 LAL .00 LOL 111.62 VL 27.474 GAL 2.46 AZL 85.71 HCA 232.26 SMA 126.49 ECC .16861 INC 4.2894 V1 30.281  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.279 GAP 5.48 AZP 92.63 TAL 167.71 TAP 39.97 RCA 105.16 APO 147.81 V2 34.821  
 RC 130.653 GL 35.43 GP -20.33 ZAL 72.84 ZAP 143.14 ETS 332.15 ZAE 130.77 ETE 197.49 ZAC 113.18 ETC 174.52 CLP-148.58

PLANETOCENTRIC CONIC  
 C3 13.885 VHL 3.726 DLA 46.80 RAL 25.65 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 4.609 DPA -15.24 RAP 23.71 ECC 1.2285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.04 19 37 56 4178.35 -34.40 191.60 255.66 56.05 20 47 34 3578.4 -38.58 183.52  
 128.96 3 37 16 2727.21 -34.38 78.47 255.65 56.04 4 22 44 2127.2 -38.57 70.40  
 51.04 19 37 56 4178.35 -34.40 191.60 255.66 56.05 20 47 34 3578.4 -38.58 183.52  
 128.96 3 37 16 2727.21 -34.38 78.47 255.65 56.04 4 22 44 2127.2 -38.57 70.40  
 51.04 19 37 56 4178.35 -34.40 191.60 255.66 56.05 20 47 34 3578.4 -38.58 183.52  
 128.96 3 37 16 2727.21 -34.38 78.47 255.65 56.04 4 22 44 2127.2 -38.57 70.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4571 TRA .6885 TC3-4.5290 BAU .8441 5GT 5297.0 5GR 896.3 5G3 569.2 ST 3807.8 SR 788.6 SS 1740.0  
 RDE .5092 RRA .1400 RC3 -.4057 FAU .08216 RRT .9405 RRF .9342 RTF .9751 CRT .9999 CRS -.9942 CST -.9945  
 FDE 2.7680 FRA 1.4569 FC3-5.1228 BSP 17063 5GB 5372.3 R23 .0416 R13 .9755 LSA 4256.9 MSA 165.9 SSA 11.7  
 BDE 2.5093 BRA .7026 BC3 4.5472 FSP -1973 5G1 5363.9 5G2 300.8 THA 9.07 EL1 3888.6 EL2 11.8 ALF 11.70

LAUNCH DATE JAN 12 1969 FLIGHT TIME 180.00 ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC DISTANCE 507.773  
 RL 147.13 LAL .00 LOL 111.62 VL 27.450 GAL 2.71 AZL 85.88 HCA 235.42 SMA 126.33 ECC .17116 INC 4.1233 V1 30.281  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.269 GAP 5.81 AZP 92.34 TAL 166.66 TAP 42.08 RCA 104.71 APO 147.95 V2 34.829  
 RC 132.989 GL 31.83 GP -18.87 ZAL 70.96 ZAP 145.42 ETS 332.11 ZAE 130.40 ETE 195.77 ZAC 114.19 ETC 174.30 CLP-150.47

PLANETOCENTRIC CONIC  
 C3 13.874 VHL 3.738 DLA 46.01 RAL 28.71 RAD 6567.6 VEL 11.634 PTH 2.04 VHP 4.752 DPA -13.40 RAP 24.20 ECC 1.2300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.08 19 53 54 4170.23 -33.84 190.38 258.41 56.73 21 3 24 3570.2 -37.94 182.31  
 127.92 3 45 45 2738.14 -33.82 79.06 258.40 56.72 4 31 23 2138.1 -37.93 70.99  
 52.08 19 53 54 4170.23 -33.84 190.38 258.41 56.73 21 3 24 3570.2 -37.94 182.31  
 127.92 3 45 45 2738.14 -33.82 79.06 258.40 56.72 4 31 23 2138.1 -37.93 70.99  
 52.08 19 53 54 4170.23 -33.84 190.38 258.41 56.73 21 3 24 3570.2 -37.94 182.31  
 127.92 3 45 45 2738.14 -33.82 79.06 258.40 56.72 4 31 23 2138.1 -37.93 70.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4378 TRA .8434 TC3-4.6181 BAU .8650 5GT 5417.1 5GR 832.5 5G3 541.2 ST 3779.1 SR 736.9 SS 1646.9  
 RDE .4769 RRA .1403 RC3 -.3351 FAU .07671 RRT .9252 RRF .9163 RTF .9751 CRT .9996 CRS -.9913 CST -.9941  
 FDE 2.5298 FRA 1.5416 FC3-4.7524 BSP 17381 5GB 5480.7 R23 .0291 R13 .9754 LSA 4184.4 MSA 166.8 SSA 12.4  
 BDE 2.4858 BRA .8550 BC3 4.6303 FSP -1864 5G1 5471.7 5G2 312.6 THA 8.12 EL1 3850.2 EL2 20.2 ALF 11.03

LAUNCH DATE JAN 12 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.425 GAL 2.98 AZL 86.03 HCA 238.59 SMA 126.17 ECC .17391 INC 3.9693 V1 30.281  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.258 GAP 6.15 AZP 92.07 TAL 165.57 TAP 44.16 RCA 104.22 APO 148.11 V2 34.837  
 RC 135.313 GL 30.25 GP -17.57 ZAL 69.02 ZAP 147.54 ETS 332.03 ZAE 130.01 ETE 194.30 ZAC 115.32 ETC 174.11 CLP-152.26

DISTANCE 513.722

PLANETOCENTRIC CONIC

C3 14.160 VHL 3.763 DLA 45.22 RAL 31.75 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.907 DPA -11.68 RAP 24.86 ECC 1.2330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.14 20 9 57 4163.04 -33.22 189.23 261.25 57.34 21 19 20 3563.0 -37.25 181.18  
 126.86 3 53 56 2751.16 -33.20 79.79 261.24 57.33 4 39 47 2151.2 -37.24 71.74  
 53.14 20 9 57 4163.04 -33.22 189.23 261.25 57.34 21 19 20 3563.0 -37.25 181.18  
 126.86 3 53 56 2751.16 -33.20 79.79 261.24 57.33 4 39 47 2151.2 -37.24 71.74  
 53.14 20 9 57 4163.04 -33.22 189.23 261.25 57.34 21 19 20 3563.0 -37.25 181.18  
 126.86 3 53 56 2751.16 -33.20 79.79 261.24 57.33 4 39 47 2151.2 -37.24 71.74

DIFFERENTIAL CORRECTIONS

TDE 2.4098 TRA 1.0029 TC3-4.6751 BAU .0866  
 RDE .4517 RRA .1393 RC3 -.2761 FAU .07164  
 FDE 2.3022 FRA 1.6079 FC3-4.3799 BSP 17775  
 BDE 2.4517 BRA 1.0126 BC3 4.6832 FSP -1772

MID-COURSE EXECUTION ACCURACY

SGT 5526.5 SGR 779.2 SG3 512.9  
 RRT .9076 RRF .8960 RTF .9753  
 SGB 5581.2 R23 .0183 R13 .9755  
 SG1 5571.7 S62 324.4 THA 7.32

ORBIT DETERMINATION ACCURACY

ST 3727.8 SR 693.7 SS 1551.0  
 CRT .9988 CRS -.9873 CST -.9935  
 LSA 4093.3 MSA 167.9 SSA 13.1  
 EL1 3791.7 EL2 33.1 ALF 10.53

LAUNCH DATE JAN 12 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.400 GAL 3.27 AZL 86.17 HCA 241.76 SMA 126.00 ECC .17686 INC 3.8254 V1 30.281  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.248 GAP 6.49 AZP 91.81 TAL 164.47 TAP 46.23 RCA 103.72 APO 148.28 V2 34.846  
 RC 137.625 GL 28.70 GP -16.42 ZAL 67.05 ZAP 149.52 ETS 331.91 ZAE 129.63 ETE 193.03 ZAC 116.55 ETC 173.96 CLP-153.96

DISTANCE 519.651

PLANETOCENTRIC CONIC

C3 14.444 VHL 3.800 DLA 44.42 RAL 34.75 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 5.071 DPA -10.05 RAP 25.69 ECC 1.2377  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.22 20 26 3 4156.68 -32.54 188.13 264.16 57.90 21 35 19 3556.7 -36.51 180.11  
 125.78 4 1 49 2766.27 -32.52 80.66 264.15 57.89 4 47 56 2166.3 -36.50 72.65  
 54.22 20 26 3 4156.68 -32.54 188.13 264.16 57.90 21 35 19 3556.7 -36.51 180.11  
 125.78 4 1 49 2766.27 -32.52 80.66 264.15 57.89 4 47 56 2166.3 -36.50 72.65  
 54.22 20 26 3 4156.68 -32.54 188.13 264.16 57.90 21 35 19 3556.7 -36.51 180.11  
 125.78 4 1 49 2766.27 -32.52 80.66 264.15 57.89 4 47 56 2166.3 -36.50 72.65

DIFFERENTIAL CORRECTIONS

TDE 2.3782 TRA 1.1724 TC3-4.6902 BAU .9067  
 RDE .4330 RRA .1393 RC3 -.2256 FAU .06669  
 FDE 2.0930 FRA 1.6664 FC3-3.9978 BSP 18136  
 BDE 2.4173 BRA 1.1806 BC3 4.6956 FSP -1679

MID-COURSE EXECUTION ACCURACY

SGT 5629.3 SGR 736.2 SG3 485.4  
 RRT .8879 RRF .8741 RTF .9755  
 SGB 5677.2 R23 .0106 R13 .9756  
 SG1 5667.3 S62 336.5 THA 6.65

ORBIT DETERMINATION ACCURACY

ST 3663.0 SR 658.7 SS 1458.4  
 CRT .9973 CRS -.9821 CST -.9930  
 LSA 3993.7 MSA 169.8 SSA 13.7  
 EL1 3721.4 EL2 47.3 ALF 10.17

LAUNCH DATE JAN 12 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.374 GAL 3.57 AZL 86.31 HCA 244.93 SMA 125.83 ECC .18004 INC 3.6897 V1 30.281  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.237 GAP 6.84 AZP 91.57 TAL 163.34 TAP 48.27 RCA 103.18 APO 148.49 V2 34.855  
 RC 139.923 GL 27.17 GP -15.40 ZAL 65.04 ZAP 151.58 ETS 331.71 ZAE 129.25 ETE 191.94 ZAC 117.89 ETC 173.83 CLP-155.37

DISTANCE 525.558

PLANETOCENTRIC CONIC

C3 14.827 VHL 3.851 DLA 43.61 RAL 37.72 RAD 6567.6 VEL 11.671 PTH 2.05 VHP 5.246 DPA -8.50 RAP 26.65 ECC 1.2440  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.33 20 42 14 4150.94 -31.80 187.07 267.14 58.42 21 51 25 3550.9 -35.72 179.09  
 124.67 4 9 17 2783.66 -31.79 81.69 267.13 58.40 4 55 41 2183.7 -35.70 73.72  
 55.33 20 42 14 4150.94 -31.80 187.07 267.14 58.42 21 51 25 3550.9 -35.72 179.09  
 124.67 4 9 17 2783.66 -31.79 81.69 267.13 58.40 4 55 41 2183.7 -35.70 73.72  
 55.33 20 42 14 4150.94 -31.80 187.07 267.14 58.42 21 51 25 3550.9 -35.72 179.09  
 124.67 4 9 17 2783.66 -31.79 81.69 267.13 58.40 4 55 41 2183.7 -35.70 73.72

DIFFERENTIAL CORRECTIONS

TDE 2.3417 TRA 1.3510 TC3-4.6855 BAU .9255  
 RDE .4195 RRA .1396 RC3 -.1832 FAU .06192  
 FDE 1.8992 FRA 1.7164 FC3-3.6158 BSP 18480  
 BDE 2.3790 BRA 1.3582 BC3 4.6691 FSP -1591

MID-COURSE EXECUTION ACCURACY

SGT 5723.7 SGR 701.3 SG3 458.7  
 RRT .8665 RRF .8511 RTF .9757  
 SGB 5766.4 R23 .0050 R13 .9757  
 SG1 5755.9 S62 348.0 THA 6.08

ORBIT DETERMINATION ACCURACY

ST 3584.2 SR 630.1 SS 1368.2  
 CRT .9950 CRS -.9754 CST -.9924  
 LSA 3884.0 MSA 172.7 SSA 14.2  
 EL1 3638.6 EL2 62.2 ALF 9.92

LAUNCH DATE JAN 12 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

RL 147.13 LAL .00 LOL 111.62 VL 27.348 GAL 3.89 AZL 86.44 HCA 248.10 SMA 125.66 ECC .18345 INC 3.5608 V1 30.281  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.227 GAP 7.20 AZP 91.33 TAL 162.19 TAP 50.29 RCA 102.61 APO 148.71 V2 34.865  
 RC 142.207 GL 25.66 GP -14.49 ZAL 63.02 ZAP 153.12 ETS 331.44 ZAE 128.89 ETE 191.00 ZAC 119.32 ETC 173.70 CLP-157.11

DISTANCE 531.441

PLANETOCENTRIC CONIC

C3 15.314 VHL 3.913 DLA 42.79 RAL 40.64 RAD 6567.6 VEL 11.692 PTH 2.06 VHP 5.430 DPA -7.03 RAP 27.73 ECC 1.2520  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.46 20 58 29 4145.78 -31.00 186.04 270.16 58.90 22 7 35 3545.8 -34.87 178.11  
 123.52 4 16 18 2803.31 -30.99 82.88 270.15 58.88 5 3 1 2203.3 -34.86 74.95  
 56.46 20 58 29 4145.78 -31.00 186.04 270.16 58.90 22 7 35 3545.8 -34.87 178.11  
 123.52 4 16 18 2803.31 -30.99 82.88 270.15 58.88 5 3 1 2203.3 -34.86 74.95  
 56.46 20 58 29 4145.78 -31.00 186.04 270.16 58.90 22 7 35 3545.8 -34.87 178.11  
 123.52 4 16 18 2803.31 -30.99 82.88 270.15 58.88 5 3 1 2203.3 -34.86 74.95

DIFFERENTIAL CORRECTIONS

TDE 2.3041 TRA 1.5432 TC3-4.5967 BAU .9416  
 RDE .4109 RRA .1411 RC3 -.1469 FAU .05720  
 FDE 1.7252 FRA 1.7641 FC3-3.2338 BSP 18735  
 BDE 2.3405 BRA 1.5497 BC3 4.5991 FSP -1499

MID-COURSE EXECUTION ACCURACY

SGT 5814.0 SGR 674.0 SG3 433.5  
 RRT .8445 RRF .8283 RTF .9757  
 SGB 5852.9 R23 .0021 R13 .9758  
 SG1 5841.9 S62 359.3 THA 5.61

ORBIT DETERMINATION ACCURACY

ST 3499.3 SR 607.5 SS 1284.9  
 CRT .9915 CRS -.9671 CST -.9917  
 LSA 3772.7 MSA 176.9 SSA 14.6  
 EL1 3550.8 EL2 77.7 ALF 9.77

LAUNCH DATE JAN 12 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 537.299

RL 147.13 LAL .00 LOL 111.62 VL 27.322 GAL 4.23 AZL 86.56 HCA 251.28 SMA 125.49 ECC .18712 INC 3.4374 V1 30.281  
 RP 108.86 LAP -3.26 LOP 2.86 VP 37.217 GAP 7.57 AZP 91.10 TAL 161.02 TAP 52.30 RCA 102.01 APO 148.97 V2 34.875  
 RC 144.478 GL 24.18 GP -13.67 ZAL 60.98 ZAP 134.77 ETS 331.09 ZAE 128.55 ETE 190.18 ZAC 120.84 ETC 173.58 CLP-158.59

PLANETOCENTRIC CONIC

C3 13.913 VHL 3.989 DLA 41.94 RAL 43.49 RAD 6567.6 VEL 11.717 PTH 2.06 VHP 5.624 DPA -5.62 RAP 28.93 ECC 1.2619  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.66 21 14 50 4140.94 -30.16 185.03 273.23 59.34 22 23 51 3540.9 -33.98 177.15  
 122.34 4 22 44 2825.47 -30.14 84.24 273.22 59.33 5 9 49 2225.5 -33.96 76.36  
 57.66 21 14 50 4140.94 -30.16 185.03 273.23 59.34 22 23 51 3540.9 -33.98 177.15  
 122.34 4 22 44 2825.47 -30.14 84.24 273.22 59.33 5 9 49 2225.5 -33.96 76.36  
 57.66 21 14 50 4140.94 -30.16 185.03 273.23 59.34 22 23 51 3540.9 -33.98 177.15  
 122.34 4 22 44 2825.47 -30.14 84.24 273.22 59.33 5 9 49 2225.5 -33.96 76.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2585 TRA 1.7429 TC3-4.5014 BAU .9579 SGT 5894.7 SGR 651.4 SCS 409.1 ST 3399.1 SR 588.1 SS 1202.4  
 RDE .4054 RRA .1431 RC3 -.1184 FAU .05290 RRT .8223 RRF .8055 RTF .9758 CRT .9868 CRS -.9567 CST -.9910  
 FDE 1.5611 FRA 1.8027 FC3-2.8781 BSP 19046 SGB 5930.6 R23 -.0004 R13 .9759 LSA 3648.6 MSA 182.4 SSA 14.9  
 BDE 2.2946 BRA 1.7487 BC3 4.5030 FSP -1419 SGI 5919.1 SGI 369.0 THA 5.21 EL1 3448.3 EL2 93.8 ALF 9.70

LAUNCH DATE JAN 12 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 543.130

RL 147.13 LAL .00 LOL 111.62 VL 27.295 GAL 4.59 AZL 86.68 HCA 254.45 SMA 125.32 ECC .19106 INC 3.3185 V1 30.281  
 RP 108.83 LAP -3.20 LOP 6.05 VP 37.208 GAP 7.95 AZP 90.89 TAL 159.84 TAP 54.29 RCA 101.37 APO 149.86 V2 34.885  
 RC 146.734 GL 22.72 GP -12.94 ZAL 58.95 ZAP 156.32 ETS 330.63 ZAE 128.23 ETE 189.47 ZAC 122.42 ETC 173.46 CLP-160.00

PLANETOCENTRIC CONIC

C3 16.631 VHL 4.078 DLA 41.08 RAL 46.28 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 5.828 DPA -4.27 RAP 30.22 ECC 1.2737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.89 21 31 15 4136.41 -29.26 184.03 276.32 59.76 22 40 12 3536.4 -33.03 176.20  
 121.11 4 28 33 2850.14 -29.24 85.77 276.31 59.75 5 16 4 2250.1 -33.02 77.94  
 58.89 21 31 15 4136.41 -29.26 184.03 276.32 59.76 22 40 12 3536.4 -33.03 176.20  
 121.11 4 28 33 2850.14 -29.24 85.77 276.31 59.75 5 16 4 2250.1 -33.02 77.94  
 58.89 21 31 15 4136.41 -29.26 184.03 276.32 59.76 22 40 12 3536.4 -33.03 176.20  
 121.11 4 28 33 2850.14 -29.24 85.77 276.31 59.75 5 16 4 2250.1 -33.02 77.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2089 TRA 1.9540 TC3-4.3750 BAU .9730 SGT 5969.1 SGR 633.2 SCS 385.9 ST 3291.9 SR 572.0 SS 1124.8  
 RDE .4030 RRA .1463 RC3 -.0954 FAU .04881 RRT .8011 RRF .7839 RTF .9759 CRT .9806 CRS -.9442 CST -.9903  
 FDE 1.4109 FRA 1.8373 FC3-2.5410 BSP 19337 SGB 6002.5 R23 -.0017 R13 .9759 LSA 3520.3 MSA 189.2 SSA 15.0  
 BDE 2.2454 BRA 1.9594 BC3 4.3760 FSP -1343 SGI 5990.7 SGI 377.6 THA 4.88 EL1 3339.4 EL2 110.4 ALF 9.68

LAUNCH DATE JAN 12 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 548.932

RL 147.13 LAL .00 LOL 111.62 VL 27.268 GAL 4.97 AZL 86.80 HCA 257.63 SMA 125.14 ECC .19530 INC 3.2032 V1 30.281  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.198 GAP 8.34 AZP 90.69 TAL 158.65 TAP 56.28 RCA 100.70 APO 149.58 V2 34.897  
 RC 148.977 GL 21.29 GP -12.29 ZAL 56.93 ZAP 157.80 ETS 330.07 ZAE 127.93 ETE 188.86 ZAC 124.07 ETC 173.33 CLP-161.37

PLANETOCENTRIC CONIC

C3 17.480 VHL 4.181 DLA 40.21 RAL 48.99 RAD 6567.7 VEL 11.784 PTH 2.08 VHP 6.043 DPA -2.98 RAP 31.60 ECC 1.2877  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.16 21 47 45 4132.07 -28.31 183.03 279.44 60.15 22 56 37 3532.1 -32.04 175.26  
 119.84 4 33 43 2877.45 -28.29 87.48 279.43 60.14 5 21 40 2277.4 -32.03 79.71  
 60.16 21 47 45 4132.07 -28.31 183.03 279.44 60.15 22 56 37 3532.1 -32.04 175.26  
 119.84 4 33 43 2877.45 -28.29 87.48 279.43 60.14 5 21 40 2277.4 -32.03 79.71  
 60.16 21 47 45 4132.07 -28.31 183.03 279.44 60.15 22 56 37 3532.1 -32.04 175.26  
 119.84 4 33 43 2877.45 -28.29 87.48 279.43 60.14 5 21 40 2277.4 -32.03 79.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1558 TRA 2.1772 TC3-4.2204 BAU .9864 SGT 6037.1 SGR 618.4 SCS 364.1 ST 3180.1 SR 558.4 SS 1052.6  
 RDE .4032 RRA .1506 RC3 -.0772 FAU .04494 RRT .7810 RRF .7640 RTF .9759 CRT .9728 CRS -.9295 CST -.9895  
 FDE 1.2741 FRA 1.8687 FC3-2.2255 BSP 19608 SGB 6068.7 R23 -.0021 R13 .9759 LSA 3390.3 MSA 197.4 SSA 15.1  
 BDE 2.1932 BRA 2.1824 BC3 4.2211 FSP -1271 SGI 6056.5 SGI 385.0 THA 4.59 EL1 3226.3 EL2 127.6 ALF 9.71

LAUNCH DATE JAN 12 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 554.701

RL 147.13 LAL .00 LOL 111.62 VL 27.240 GAL 5.37 AZL 86.91 HCA 260.81 SMA 124.97 ECC .19986 INC 3.0906 V1 30.281  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.189 GAP 8.74 AZP 90.49 TAL 157.44 TAP 58.26 RCA 99.99 APO 149.94 V2 34.908  
 RC 151.204 GL 19.89 GP -11.69 ZAL 54.92 ZAP 159.20 ETS 329.37 ZAE 127.65 ETE 188.32 ZAC 125.78 ETC 173.18 CLP-162.68

PLANETOCENTRIC CONIC

C3 18.474 VHL 4.298 DLA 39.33 RAL 51.62 RAD 6567.7 VEL 11.826 PTH 2.09 VHP 6.270 DPA -1.73 RAP 33.05 ECC 1.3040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.48 22 4 20 4127.71 -27.31 182.02 282.57 60.53 23 13 8 3527.7 -31.01 174.31  
 118.52 4 38 7 2907.60 -27.30 89.38 282.56 60.52 5 26 34 2307.6 -31.00 81.67  
 61.48 22 4 20 4127.71 -27.31 182.02 282.57 60.53 23 13 8 3527.7 -31.01 174.31  
 118.52 4 38 7 2907.60 -27.30 89.38 282.56 60.52 5 26 34 2307.6 -31.00 81.67  
 61.48 22 4 20 4127.71 -27.31 182.02 282.57 60.53 23 13 8 3527.7 -31.01 174.31  
 118.52 4 38 7 2907.60 -27.30 89.38 282.56 60.52 5 26 34 2307.6 -31.00 81.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1028 TRA 2.4164 TC3-4.0341 BAU .9965 SGT 6101.1 SGR 606.7 SCS 343.7 ST 3070.4 SR 546.9 SS 987.7  
 RDE .4058 RRA .1564 RC3 -.0620 FAU .04111 RRT .7628 RRF .7465 RTF .9758 CRT .9631 CRS -.9125 CST -.9888  
 FDE 1.1517 FRA 1.9003 FC3-1.9266 BSP 19776 SGB 6131.2 R23 -.0015 R13 .9758 LSA 3264.8 MSA 206.9 SSA 15.0  
 BDE 2.1414 BRA 2.4215 BC3 4.0346 FSP -1197 SGI 6118.7 SGI 391.2 THA 4.36 EL1 3115.3 EL2 145.1 ALF 9.76



LAUNCH DATE JAN 12 1969 FLIGHT TIME 198.00 ARRIVAL DATE JUL 29 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 27.213 GAL 5.80 AZL 87.02 HCA 264.00 SMA 124.79 ECC .20478 INC 2.9799 V1 30.281  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.180 GAP 9.17 AZP 90.31 TAL 156.23 TAP 60.23 RCA 99.24 APO 150.34 V2 34.920  
 RC 153.416 GL 18.52 GP -11.16 ZAL 52.94 ZAP 160.54 ETS 328.53 ZAE 127.38 ETE 187.86 ZAC 127.54 ETC 173.02 CLP-163.96

Distance 560.434

Planetocentric Conic: C3 19.630 VHL 4.431 DLA 38.43 RAL 54.16 RAD 6567.8 VEL 11.875 PTH 2.11 VHP 6.508 DPA -.52 RAP 34.58 ECC 1.3231  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.85 22 23 1 4123.23 -26.28 181.00 285.71 60.88 23 29 45 3523.2 -29.94 173.35  
 117.15 4 41 42 2940.69 -26.26 91.49 285.70 60.87 5 30 42 2340.7 -29.93 83.84  
 62.85 22 21 1 4123.23 -26.28 181.00 285.71 60.88 23 29 45 3523.2 -29.94 173.35  
 117.15 4 41 42 2940.69 -26.26 91.49 285.70 60.87 5 30 42 2340.7 -29.93 83.84  
 62.85 22 21 1 4123.23 -26.28 181.00 285.71 60.88 23 29 45 3523.2 -29.94 173.35  
 117.15 4 41 42 2940.69 -26.26 91.49 285.70 60.87 5 30 42 2340.7 -29.93 83.84

Differential Corrections: TDE 2.0420 TRA 2.6655 TC3-3.8368 BAU 1.0070 SGT 6156.1 SGR 596.2 S63 324.3 ST 2954.1 SR 536.0 SS 925.8  
 RDE .4098 RRA .1632 RC3 -.0511 FAU .03767 RRT .7463 RRF .7305 RTF .9758 CRT .9512 CRS -.8926 CST -.9880  
 FDE 1.0369 FRA 1.9268 FC3-1.6614 BSP 20024 SGB 6184.9 R23 -.0012 R13 .9758 LSA 3134.3 MSA 217.6 SSA 14.9  
 BDE 2.0827 BRA 2.6705 BC3 3.8372 FSP -1134 S61 6172.2 S62 395.8 THA 4.15 EL1 2997.9 EL2 163.0 ALF 9.82

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 12 1969 FLIGHT TIME 200.00 ARRIVAL DATE JUL 31 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 27.185 GAL 6.25 AZL 87.13 HCA 267.18 SMA 124.61 ECC .21007 INC 2.8704 V1 30.281  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.171 GAP 9.61 AZP 90.14 TAL 155.02 TAP 62.20 RCA 98.43 APO 150.79 V2 34.932  
 RC 155.612 GL 17.19 GP -10.68 ZAL 51.00 ZAP 161.82 ETS 327.52 ZAE 127.14 ETE 187.45 ZAC 129.34 ETC 172.84 CLP-165.20

Distance 566.128

Planetocentric Conic: C3 20.966 VHL 4.579 DLA 37.54 RAL 56.61 RAD 6567.9 VEL 11.931 PTH 2.12 VHP 6.760 DPA .64 RAP 36.17 ECC 1.3450  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.26 22 37 51 4118.47 -25.20 179.95 288.86 61.21 23 46 29 3518.5 -28.84 172.36  
 115.74 4 44 25 2976.88 -25.19 93.80 288.85 61.20 5 34 1 2376.9 -28.83 86.22  
 64.26 22 37 51 4118.47 -25.20 179.95 288.86 61.21 23 46 29 3518.5 -28.84 172.36  
 115.74 4 44 25 2976.88 -25.19 93.80 288.85 61.20 5 34 1 2376.9 -28.83 86.22  
 64.26 22 37 51 4118.47 -25.20 179.95 288.86 61.21 23 46 29 3518.5 -28.84 172.36  
 115.74 4 44 25 2976.88 -25.19 93.80 288.85 61.20 5 34 1 2376.9 -28.83 86.22

Differential Corrections: TDE 1.9790 TRA 2.9293 TC3-3.6229 BAU 1.0155 SGT 6205.4 SGR 587.1 S63 306.0 ST 2839.9 SR 525.9 SS 869.7  
 RDE .4153 RRA .1714 RC3 -.0426 FAU .03440 RRT .7319 RRF .7167 RTF .9758 CRT .9369 CRS -.8701 CST -.9873  
 FDE .9326 FRA 1.9522 FC3-1.4203 BSP 20245 SGB 6233.1 R23 -.0006 R13 .9758 LSA 3007.5 MSA 229.2 SSA 14.7  
 BDE 2.0221 BRA 2.9343 BC3 3.6231 FSP -1074 S61 6220.3 S62 399.1 THA 3.98 EL1 2882.5 EL2 181.1 ALF 9.88

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 12 1969 FLIGHT TIME 202.00 ARRIVAL DATE AUG 2 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 27.157 GAL 6.74 AZL 87.24 HCA 270.37 SMA 124.44 ECC .21579 INC 2.7615 V1 30.281  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.162 GAP 10.07 AZP 89.98 TAL 153.81 TAP 64.17 RCA 97.50 APO 151.29 V2 34.945  
 RC 157.792 GL 15.90 GP -10.24 ZAL 49.10 ZAP 163.04 ETS 326.31 ZAE 126.90 ETE 187.09 ZAC 131.19 ETC 172.62 CLP-166.41

Distance 571.777

Planetocentric Conic: C3 22.906 VHL 4.744 DLA 36.63 RAL 58.96 RAD 6567.9 VEL 11.995 PTH 2.14 VHP 7.026 DPA 1.77 RAP 37.82 ECC 1.3704  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.72 22 54 51 4113.20 -24.10 178.85 292.00 61.53 24 3 24 3513.2 -27.70 171.33  
 114.28 4 46 10 3016.39 -24.08 96.34 292.00 61.52 5 36 27 2416.4 -27.69 88.82  
 65.72 22 54 51 4113.20 -24.10 178.85 292.00 61.53 24 3 24 3513.2 -27.70 171.33  
 114.28 4 46 10 3016.39 -24.08 96.34 292.00 61.52 5 36 27 2416.4 -27.69 88.82  
 65.72 22 54 51 4113.20 -24.10 178.85 292.00 61.53 24 3 24 3513.2 -27.70 171.33  
 114.28 4 46 10 3016.39 -24.08 96.34 292.00 61.52 5 36 27 2416.4 -27.69 88.82

Differential Corrections: TDE 1.9133 TRA 3.2085 TC3-3.3973 BAU 1.0223 SGT 6248.8 SGR 578.9 S63 288.9 ST 2729.0 SR 516.1 SS 819.2  
 RDE .4220 RRA .1809 RC3 -.0362 FAU .03132 RRT .7197 RRF .7052 RTF .9757 CRT .9202 CRS -.8449 CST -.9867  
 FDE .8375 FRA 1.9769 FC3-1.2046 BSP 20448 SGB 6275.6 R23 .0000 R13 .9758 LSA 2885.6 MSA 241.5 SSA 14.4  
 BDE 1.9593 BRA 3.2136 BC3 3.3975 FSP -1017 S61 6262.7 S62 401.0 THA 3.83 EL1 2770.3 EL2 199.1 ALF 9.92

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 12 1969 FLIGHT TIME 204.00 ARRIVAL DATE AUG 4 1969

Heliocentric Conic: RL 147.13 LAL .00 LOL 111.62 VL 27.129 GAL 7.25 AZL 87.35 HCA 273.56 SMA 124.26 ECC .22198 INC 2.6523 V1 30.281  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.154 GAP 10.55 AZP 89.84 TAL 152.59 TAP 66.15 RCA 96.68 APO 151.84 V2 34.957  
 RC 159.953 GL 14.64 GP -9.84 ZAL 47.25 ZAP 164.21 ETS 324.87 ZAE 126.68 ETE 186.77 ZAC 133.07 ETC 172.37 CLP-167.59

Distance 577.376

Planetocentric Conic: C3 24.280 VHL 4.927 DLA 35.73 RAL 61.22 RAD 6568.0 VEL 12.069 PTH 2.16 VHP 7.309 DPA 2.85 RAP 39.53 ECC 1.3996  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.23 23 12 2 4107.30 -22.96 177.72 295.15 61.84 24 20 30 3507.3 -26.54 170.25  
 112.77 4 46 57 3059.30 -22.95 99.12 295.14 61.83 5 37 56 2459.3 -26.53 91.65  
 67.23 23 12 2 4107.30 -22.96 177.72 295.15 61.84 24 20 30 3507.3 -26.54 170.25  
 112.77 4 46 57 3059.30 -22.95 99.12 295.14 61.83 5 37 56 2459.3 -26.53 91.65  
 67.23 23 12 2 4107.30 -22.96 177.72 295.15 61.84 24 20 30 3507.3 -26.54 170.25  
 112.77 4 46 57 3059.30 -22.95 99.12 295.14 61.83 5 37 56 2459.3 -26.53 91.65

Differential Corrections: TDE 1.8498 TRA 3.5087 TC3-3.1561 BAU 1.0245 SGT 6289.8 SGR 571.6 S63 273.2 ST 2628.4 SR 506.8 SS 776.3  
 RDE .4300 RRA .1922 RC3 -.0306 FAU .02826 RRT .7101 RRF .6965 RTF .9757 CRT .9009 CRS -.8178 CST -.9864  
 FDE .7539 FRA 2.0041 FC3-1.0076 BSP 20535 SGB 6315.7 R23 .0011 R13 .9757 LSA 2775.5 MSA 254.0 SSA 14.1  
 BDE 1.8991 BRA 3.5140 BC3 3.1562 FSP -958 S61 6302.9 S62 401.6 THA 3.71 EL1 2668.0 EL2 216.7 ALF 9.92

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 12 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 582.918

RL 147.13 LAL .00 LOL 111.62 VL 27.101 GAL 7.80 AZL 87.46 HCA 276.75 SMA 124.08 ECC .22867 INC 2.5424 V1 30.281  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.146 GAP 11.07 AZP 89.70 TAL 151.39 TAP 68.14 RCA 95.71 APO 152.46 V2 34.970  
 RC 182.097 GL 13.42 GP -9.48 ZAL 45.45 ZAP 165.33 ETS 323.15 ZAE 126.47 ETE 186.49 ZAC 134.97 ETC 172.09 CLP-168.75

PLANETOCENTRIC CONIC

C3 26.319 VHL 5.130 DLA 34.84 RAL 63.37 RAD 6568.1 VEL 12.153 PTH 2.18 VHP 7.609 DPA 3.90 RAP 41.27 ECC 1.4331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.81 23 29 34 4100.33 -21.81 176.50 298.30 62.13 24 37 54 3500.3 -25.36 169.09  
 111.19 4 46 36 3106.05 -21.79 102.15 298.29 62.12 5 38 22 2506.1 -25.34 94.75  
 68.81 23 29 34 4100.33 -21.81 176.50 298.30 62.13 24 37 54 3500.3 -25.36 169.09  
 111.19 4 46 36 3106.05 -21.79 102.15 298.29 62.12 5 38 22 2506.1 -25.34 94.75  
 68.81 23 29 34 4100.33 -21.81 176.50 298.30 62.13 24 37 54 3500.3 -25.36 169.09  
 111.19 4 46 36 3106.05 -21.79 102.15 298.29 62.12 5 38 22 2506.1 -25.34 94.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7795 TRA 3.8218 TC3-2.9184 BAU 1.0269 SGT 6321.3 SGR 563.9 SG3 258.1 ST 2528.2 SR 496.8 SS 736.5  
 RDE .4385 RRA .2044 RC3 -.0269 FAU .02551 RRT .7020 RRF .6889 RTF .9758 CRT .8786 CRS -.7876 CST -.9861  
 FDE .6752 FRA 2.0284 FC3 -.8391 BSP 20720 SGB 6346.4 R23 .0016 R13 .9758 LSA 2666.4 MSA 266.5 SSA 13.8  
 BDE 1.8328 BRA 3.8273 BC3 2.9185 FSP -909 SG1 6333.7 SG2 400.8 THA 3.60 EL1 2565.9 EL2 233.7 ALF 9.88

LAUNCH DATE JAN 12 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 588.395

RL 147.13 LAL .00 LOL 111.62 VL 27.073 GAL 8.39 AZL 87.57 HCA 279.94 SMA 123.91 ECC .23593 INC 2.4309 V1 30.281  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.138 GAP 11.61 AZP 89.58 TAL 150.19 TAP 70.14 RCA 94.67 APO 153.14 V2 34.983  
 RC 164.221 GL 12.25 GP -9.15 ZAL 43.71 ZAP 166.40 ETS 321.11 ZAE 126.26 ETE 186.24 ZAC 136.90 ETC 171.76 CLP-169.89

PLANETOCENTRIC CONIC

C3 28.664 VHL 5.354 DLA 33.95 RAL 65.42 RAD 6568.2 VEL 12.249 PTH 2.20 VHP 7.929 DPA 4.92 RAP 43.07 ECC 1.4717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.45 23 47 28 4091.99 -20.63 175.18 301.43 62.42 24 55 40 3492.0 -24.15 167.83  
 109.55 4 45 2 3156.87 -20.61 105.47 301.43 62.41 5 37 39 2556.9 -24.14 98.12  
 70.45 23 47 28 4091.99 -20.63 175.18 301.43 62.42 24 55 40 3492.0 -24.15 167.83  
 109.55 4 45 2 3156.87 -20.61 105.47 301.43 62.41 5 37 39 2556.9 -24.14 98.12  
 110.00 5 18 18 3053.33 -23.60 99.16 303.03 64.52 6 9 14 2455.3 -26.83 91.48  
 110.00 4 17 18 3241.53 -17.70 110.38 299.74 60.27 5 11 19 2641.5 -21.52 103.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7077 TRA 4.1548 TC3-2.6787 BAU 1.0265 SGT 6347.8 SGR 556.1 SG3 244.2 ST 2435.7 SR 486.5 SS 701.9  
 RDE .4477 RRA .2181 RC3 -.0238 FAU .02290 RRT .6958 RRF .6832 RTF .9759 CRT .8535 CRS -.7557 CST -.9861  
 FDE .6038 FRA 2.0537 FC3 -.6918 BSP 20883 SGB 6372.1 R23 .0021 R13 .9759 LSA 2566.0 MSA 278.6 SSA 13.5  
 BDE 1.7654 BRA 4.1605 BC3 2.6788 FSP -862 SG1 6359.6 SG2 398.7 THA 3.50 EL1 2471.3 EL2 249.8 ALF 9.77

LAUNCH DATE JAN 12 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 593.796

RL 147.13 LAL .00 LOL 111.62 VL 27.046 GAL 9.02 AZL 87.68 HCA 283.14 SMA 123.73 ECC .24382 INC 2.3171 V1 30.281  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.130 GAP 12.19 AZP 89.47 TAL 149.01 TAP 72.15 RCA 93.56 APO 153.90 V2 34.996  
 RC 166.326 GL 11.12 GP -8.85 ZAL 42.04 ZAP 167.42 ETS 318.67 ZAE 126.05 ETE 186.02 ZAC 138.84 ETC 171.38 CLP-171.02

PLANETOCENTRIC CONIC

C3 31.364 VHL 5.600 DLA 33.07 RAL 67.36 RAD 6568.2 VEL 12.359 PTH 2.23 VHP 8.272 DPA 5.89 RAP 44.89 ECC 1.5162  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.17 0 9 52 4081.67 -19.44 173.72 304.56 62.71 1 17 54 3481.7 -22.94 166.42  
 107.83 4 42 6 3212.32 -19.42 109.10 304.55 62.70 5 35 38 2612.3 -22.92 101.81  
 72.17 0 9 52 4081.67 -19.44 173.72 304.56 62.71 1 17 54 3481.7 -22.94 166.42  
 107.83 4 42 6 3212.32 -19.42 109.10 304.55 62.70 5 35 38 2612.3 -22.92 101.81  
 110.00 6 1 35 2968.15 -26.04 93.56 307.92 67.03 6 51 3 2368.2 -28.91 85.56  
 110.00 3 49 34 3373.84 -13.08 117.85 300.81 58.13 4 45 47 2773.8 -17.20 111.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6351 TRA 4.5094 TC3-2.4392 BAU 1.0228 SGT 6369.2 SGR 548.1 SG3 231.1 ST 2352.1 SR 475.6 SS 672.6  
 RDE .4574 RRA .2331 RC3 -.0211 FAU .02040 RRT .6914 RRF .6793 RTF .9761 CRT .8257 CRS -.7223 CST -.9863  
 FDE .5395 FRA 2.0805 FC3 -.5632 BSP 21015 SGB 6392.8 R23 .0025 R13 .9762 LSA 2475.3 MSA 289.7 SSA 13.1  
 BDE 1.6979 BRA 4.5154 BC3 2.4392 FSP -817 SG1 6380.5 SG2 395.3 THA 3.42 EL1 2385.1 EL2 264.6 ALF 9.60

LAUNCH DATE JAN 12 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 599.111

RL 147.13 LAL .00 LOL 111.62 VL 27.018 GAL 9.69 AZL 87.80 HCA 286.34 SMA 123.56 ECC .25241 INC 2.2002 V1 30.281  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.122 GAP 12.80 AZP 89.38 TAL 147.85 TAP 74.19 RCA 92.37 APO 154.75 V2 35.010  
 RC 168.410 GL 10.03 GP -8.57 ZAL 40.43 ZAP 168.39 ETS 315.75 ZAE 125.85 ETE 185.82 ZAC 140.80 ETC 170.94 CLP-172.15

PLANETOCENTRIC CONIC

C3 34.477 VHL 5.872 DLA 32.20 RAL 69.21 RAD 6568.4 VEL 12.484 PTH 2.26 VHP 8.639 DPA 6.83 RAP 46.75 ECC 1.5674  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.99 0 29 6 4068.68 -18.23 172.08 307.68 62.99 1 36 55 3468.7 -21.71 164.82  
 106.01 4 37 34 3273.00 -18.22 113.10 307.67 62.98 5 32 7 2673.0 -21.69 105.85  
 73.99 0 29 6 4068.68 -18.23 172.08 307.68 62.99 1 36 55 3468.7 -21.71 164.82  
 106.01 4 37 34 3273.00 -18.22 113.10 307.67 62.98 5 32 7 2673.0 -21.69 105.85  
 110.00 6 30 42 2923.30 -27.19 90.59 312.06 68.44 7 19 26 2323.3 -29.87 82.42  
 110.00 3 35 9 3466.37 -9.70 122.89 302.62 57.06 4 32 55 2866.4 -13.98 116.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5612 TRA 4.8870 TC3-2.2032 BAU 1.0156 SGT 6385.4 SGR 539.6 SG3 218.9 ST 2277.0 SR 464.2 SS 647.8  
 RDE .4874 RRA .2494 RC3 -.0187 FAU .01803 RRT .6885 RRF .6768 RTF .9765 CRT .7954 CRS -.6879 CST -.9869  
 FDE .4811 FRA 2.1091 FC3 -.4327 BSP 21134 SGB 6408.2 R23 .0027 R13 .9765 LSA 2393.8 MSA 299.5 SSA 12.8  
 BDE 1.6296 BRA 4.8934 BC3 2.2033 FSP -775 SG1 6396.2 SG2 390.7 THA 3.34 EL1 2307.2 EL2 277.6 ALF 9.35

LAUNCH DATE JAN 12 1969 FLIGHT TIME 214.00 ARRIVAL DATE AUG 14 1969

DISTANCE 604.324

HELIOCENTRIC CONIC  
 RL 147.13 LAL .00 LOL 111.62 VL 26.990 GAL 10.42 AZL 87.92 HCA 289.54 SMA 123.39 ECC .26178 INC 2.0793 V1 30.281  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.115 GAP 13.46 AZP 89.30 TAL 146.72 TAP 76.26 RCA 91.09 APO 155.49 V2 35.023  
 RC 170.474 GL 8.98 GP -8.32 ZAL 38.90 ZAP 169.31 ETS 312.25 ZAE 125.64 ETE 185.65 ZAC 142.76 ETC 170.44 CLP-173.26

PLANETOCENTRIC CONIC  
 C3 38.074 VHL 6.170 DLA 31.35 RAL 70.95 RAD 6568.5 VEL 12.627 PTH 2.29 VHP 9.035 DPA 7.73 RAP 48.64 ECC 1.6266  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.96 0 49 29 4051.67 -17.02 170.14 310.79 63.28 1 57 1 3451.7 -20.47 162.93  
 104.04 4 31 5 3340.16 -17.01 117.56 310.78 63.27 5 26 45 2740.2 -20.46 110.35  
 75.96 0 49 29 4051.67 -17.02 170.14 310.79 63.28 1 57 1 3451.7 -20.47 162.93  
 104.04 4 31 5 3340.16 -17.01 117.56 310.78 63.27 5 26 45 2740.2 -20.46 110.35  
 110.00 6 54 36 2893.84 -27.91 88.60 315.94 69.42 7 42 50 2293.8 -30.45 80.33  
 110.00 3 25 8 3545.98 -6.73 127.14 304.69 56.41 4 24 14 2946.0 -11.10 120.77

MID-COURSE EXECUTION ACCURACY  
 SGT 6399.1 SGR 530.9 S63 207.6  
 RRT .6874 RRF .6762 RTF .9770  
 SGB 6421.1 R23 .0031 R13 .9770  
 S61 6409.5 S62 384.9 THA 3.28

ORBIT DETERMINATION ACCURACY  
 ST 2213.9 SR 452.3 SS 628.3  
 CRT .7636 CRS -.6543 CST -.9877  
 LSA 2325.1 MSA 307.3 SSA 12.4  
 EL1 2241.1 EL2 288.5 ALF 9.02

DIFFERENTIAL CORRECTIONS  
 TDE 1.4900 TRA 5.2939 TC3-1.9691 BAU 1.0024  
 RDE .4780 RRA .2672 RC3 -.0162 FAU .01567  
 FDE .4302 FRA 2.1417 FC3 -.3564 BSP 21152  
 BDE 1.5648 BRA 5.3006 BC3 1.9692 FSP -731

LAUNCH DATE JAN 12 1969 FLIGHT TIME 216.00 ARRIVAL DATE AUG 16 1969

DISTANCE 609.417

HELIOCENTRIC CONIC  
 RL 147.13 LAL .00 LOL 111.62 VL 26.963 GAL 11.21 AZL 88.05 HCA 292.74 SMA 123.22 ECC .27204 INC 1.9534 V1 30.281  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.107 GAP 14.17 AZP 89.24 TAL 145.61 TAP 78.36 RCA 89.70 APO 156.74 V2 35.036  
 RC 172.518 GL 7.97 GP -8.09 ZAL 37.44 ZAP 170.16 ETS 308.03 ZAE 125.42 ETE 185.49 ZAC 144.72 ETC 169.85 CLP-174.38

PLANETOCENTRIC CONIC  
 C3 42.243 VHL 6.499 DLA 30.51 RAL 72.59 RAD 6568.6 VEL 12.791 PTH 2.33 VHP 9.463 DPA 8.60 RAP 50.55 ECC 1.6952  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.14 1 11 39 4028.50 -15.82 167.77 313.88 63.57 2 18 48 3428.5 -19.24 160.60  
 101.86 4 21 58 3415.80 -15.80 122.61 313.87 63.56 5 18 54 2815.8 -19.22 115.45  
 78.14 1 11 39 4028.50 -15.82 167.77 313.88 63.57 2 18 48 3428.5 -19.24 160.60  
 101.86 4 21 58 3415.80 -15.80 122.61 313.87 63.56 5 18 54 2815.8 -19.22 115.45  
 110.00 7 15 21 2873.55 -28.39 87.22 319.67 70.11 8 3 14 2273.6 -30.83 78.87  
 110.00 3 17 27 3618.74 -3.97 130.97 308.90 56.02 4 17 46 3018.7 -8.41 124.69

MID-COURSE EXECUTION ACCURACY  
 SGT 6404.7 SGR 520.9 S63 197.0  
 RRT .6870 RRF .6762 RTF .9776  
 SGB 6425.8 R23 .0031 R13 .9777  
 S61 6414.7 S62 377.9 THA 3.21

ORBIT DETERMINATION ACCURACY  
 ST 2155.4 SR 439.4 SS 611.6  
 CRT .7295 CRS -.6198 CST -.9887  
 LSA 2261.5 MSA 313.4 SSA 12.1  
 EL1 2179.5 EL2 297.2 ALF 8.62

DIFFERENTIAL CORRECTIONS  
 TDE 1.4138 TRA 5.7245 TC3-1.7471 BAU .9867  
 RDE .4884 RRA .2880 RC3 -.0140 FAU .01351  
 FDE .3823 FRA 2.1733 FC3 -.2769 BSP 21254  
 BDE 1.4957 BRA 5.7316 BC3 1.7472 FSP -694

LAUNCH DATE JAN 12 1969 FLIGHT TIME 218.00 ARRIVAL DATE AUG 18 1969

DISTANCE 614.368

HELIOCENTRIC CONIC  
 RL 147.13 LAL .00 LOL 111.62 VL 26.935 GAL 12.06 AZL 88.18 HCA 295.95 SMA 123.05 ECC .28329 INC 1.8214 V1 30.281  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.100 GAP 14.95 AZP 89.20 TAL 144.55 TAP 80.50 RCA 88.19 APO 157.91 V2 35.050  
 RC 174.540 GL 7.01 GP -7.88 ZAL 36.07 ZAP 170.94 ETS 302.95 ZAE 125.19 ETE 185.34 ZAC 146.68 ETC 169.18 CLP-175.51

PLANETOCENTRIC CONIC  
 C3 47.091 VHL 6.862 DLA 29.69 RAL 74.12 RAD 6568.8 VEL 12.979 PTH 2.37 VHP 9.928 DPA 9.42 RAP 52.48 ECC 1.7750  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.68 1 36 52 3994.96 -14.61 164.65 316.94 63.86 2 43 27 3395.0 -18.00 157.52  
 99.32 4 8 59 3503.97 -14.59 128.56 316.93 63.85 5 7 23 2904.0 -17.99 121.43  
 100.00 4 43 27 3393.80 -17.43 121.79 318.33 65.32 5 40 1 2793.8 -20.61 114.44  
 100.00 3 45 5 3580.37 -11.81 132.78 315.48 62.34 4 44 46 2980.4 -15.42 125.85  
 110.00 7 33 48 2859.76 -28.71 86.27 323.29 70.59 8 21 28 2259.8 -31.08 77.87  
 110.00 3 11 14 3687.18 -1.36 134.55 309.20 55.84 4 12 41 3087.2 -5.84 128.32

MID-COURSE EXECUTION ACCURACY  
 SGT 6405.8 SGR 510.2 S63 187.0  
 RRT .6876 RRF .6772 RTF .9785  
 SGB 6426.1 R23 .0030 R13 .9785  
 S61 6415.4 S62 369.8 THA 3.15

ORBIT DETERMINATION ACCURACY  
 ST 2105.4 SR 425.8 SS 598.8  
 CRT .6943 CRS -.5862 CST -.9899  
 LSA 2207.2 MSA 317.3 SSA 11.7  
 EL1 2126.5 EL2 303.4 ALF 8.16

DIFFERENTIAL CORRECTIONS  
 TDE 1.3371 TRA 6.1867 TC3-1.5337 BAU .9656  
 RDE .4989 RRA .3039 RC3 -.0117 FAU .01142  
 FDE .3392 FRA 2.2127 FC3 -.2099 BSP 21340  
 BDE 1.4272 BRA 6.1942 BC3 1.5337 FSP -659

LAUNCH DATE JAN 12 1969 FLIGHT TIME 220.00 ARRIVAL DATE AUG 20 1969

DISTANCE 619.149

HELIOCENTRIC CONIC  
 RL 147.13 LAL .00 LOL 111.62 VL 26.909 GAL 12.98 AZL 88.32 HCA 299.16 SMA 122.89 ECC .29568 INC 1.6818 V1 30.281  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.093 GAP 15.78 AZP 89.18 TAL 143.54 TAP 82.69 RCA 86.55 APO 159.22 V2 35.063  
 RC 178.542 GL 6.08 GP -7.68 ZAL 34.78 ZAP 171.62 ETS 296.85 ZAE 124.94 ETE 185.21 ZAC 148.62 ETC 168.41 CLP-176.65

PLANETOCENTRIC CONIC  
 C3 52.752 VHL 7.263 DLA 28.89 RAL 75.55 RAD 6568.9 VEL 13.195 PTH 2.41 VHP 10.435 DPA 10.21 RAP 54.41 ECC 1.8682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 84.02 2 9 0 3938.33 -13.41 159.87 319.98 64.17 3 14 39 3338.3 -16.78 132.77  
 95.98 3 48 15 3617.22 -13.39 136.32 319.97 64.16 4 48 32 3017.2 -16.76 129.23  
 100.00 5 24 52 3306.81 -19.82 116.43 323.00 67.15 6 19 59 2706.8 -22.74 108.85  
 100.00 3 15 4 3723.96 -7.15 140.90 316.67 60.90 4 17 8 3124.0 -10.98 134.20  
 110.00 7 50 27 2850.96 -28.91 85.66 326.82 70.90 8 37 58 2251.0 -31.23 77.23  
 110.00 3 5 58 3752.58 1.14 137.96 311.57 55.83 4 8 31 3152.6 -3.35 131.75

MID-COURSE EXECUTION ACCURACY  
 SGT 6402.0 SGR 498.5 S63 177.8  
 RRT .6892 RRF .6792 RTF .9795  
 SGB 6421.4 R23 .0028 R13 .9795  
 S61 6411.2 S62 360.7 THA 3.08

ORBIT DETERMINATION ACCURACY  
 ST 2063.1 SR 411.5 SS 589.6  
 CRT .6588 CRS -.5542 CST -.9911  
 LSA 2161.4 MSA 318.6 SSA 11.3  
 EL1 2081.2 EL2 306.9 ALF 7.65

DIFFERENTIAL CORRECTIONS  
 TDE 1.2606 TRA 6.8839 TC3-1.3294 BAU .9376  
 RDE .5095 RRA .3288 RC3 -.0093 FAU .00937  
 FDE .3006 FRA 2.2546 FC3 -.1538 BSP 21397  
 BDE 1.3597 BRA 6.8919 BC3 1.3295 FSP -626

LAUNCH DATE JAN 13 1969 FLIGHT TIME 70.00 ARRIVAL DATE MAR 24 1969

HELIOCENTRIC CONIC DISTANCE 154.895  
 RL 147.14 LAL .00 LOL 112.64 VL 21.849 GAL 6.62 AZL 86.14 HCA 60.75 SMA 100.04 ECC .48150 INC 3.8623 V1 30.279  
 RP 107.66 LAP 3.37 LOP 173.33 VP 33.746 GAP -28.48 AZP 88.11 TAL 172.77 TAP 233.53 RCA 51.86 APO 148.22 V2 35.198  
 RC 47.437 GL 9.27 GP 3.96 ZAL 74.48 ZAP 19.28 ETS 192.89 ZAE 164.44 ETE 206.15 ZAC 105.23 ETC 165.57 CLP 18.89

PLANETOCENTRIC CONIC  
 C3 82.416 VHL 9.078 DLA 23.04 RAL 32.76 RAD 6569.6 VEL 14.275 PTH 2.60 VHP 17.219 DPA 5.63 RAP 10.81 ECC 2.3564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 3 3379.15 -23.10 123.01 288.29 73.15 3 31 22 2779.2 -25.19 114.96  
 90.00 21 29 2 4389.43 6.11 182.59 276.36 62.30 22 42 11 3789.4 2.36 175.92  
 100.00 4 13 57 3060.22 -25.47 100.31 289.06 73.80 5 4 58 2460.2 -27.45 92.07  
 100.00 22 32 48 4183.59 8.29 166.28 275.18 61.18 23 42 32 3583.6 4.39 159.67  
 110.00 5 57 55 2755.01 -31.21 77.41 290.86 75.28 6 43 30 2135.0 -32.91 68.61  
 110.00 23 5 20 4081.57 13.43 155.49 272.13 58.27 24 13 22 3481.6 9.14 149.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4245 TRA-1.1217 TC3 -.0667 BAU .0813 SGT 823.6 SGR 435.1 SG3 43.4 ST 353.6 SR 416.3 SS 313.0  
 RDE -.6571 RRA .1726 RC3 -.0315 FAU .01666 RRT .0753 RRF -.0789 RTF -.6636 CRT .6992 CRS .8260 CST .9786  
 FDE .2904 FRA .5001 FC3 -.1750 BSP 2280 SGB 931.5 R23 -.0099 R13 -.6642 LSA 589.5 MSA 220.6 SSA 13.8  
 BDE .7823 BRA 1.1349 BC3 .0738 FSP -95 SG1 824.5 SG2 433.4 THA 3.15 EL1 504.8 EL2 208.5 ALF 51.59

LAUNCH DATE JAN 13 1969 FLIGHT TIME 72.00 ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC DISTANCE 161.328  
 RL 147.14 LAL .00 LOL 112.64 VL 22.343 GAL 6.28 AZL 86.28 HCA 63.99 SMA 101.72 ECC .45713 INC 3.7180 V1 30.279  
 RP 107.69 LAP 3.34 LOP 176.57 VP 34.059 GAP -27.01 AZP 88.37 TAL 172.43 TAP 236.42 RCA 55.22 APO 148.22 V2 35.189  
 RC 46.274 GL 9.67 GP 4.13 ZAL 74.05 ZAP 17.76 ETS 194.58 ZAE 166.40 ETE 209.78 ZAC 106.76 ETC 165.36 CLP 17.29

PLANETOCENTRIC CONIC  
 C3 73.503 VHL 8.573 DLA 23.58 RAL 33.07 RAD 6569.4 VEL 13.959 PTH 2.55 VHP 16.419 DPA 6.46 RAP 12.24 ECC 2.2097  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 28 30 3380.27 -23.08 123.08 286.73 73.12 3 24 51 2780.3 -25.17 115.04  
 90.00 21 38 5 4335.54 4.40 179.55 275.38 62.00 22 50 21 3735.5 .62 172.91  
 100.00 4 8 35 3057.58 -25.92 100.13 287.52 73.89 4 59 33 2457.6 -27.49 91.88  
 100.00 22 40 41 4133.46 6.64 163.48 274.15 60.79 23 49 33 3533.5 2.70 156.91  
 110.00 5 54 22 2726.66 -31.35 76.81 289.33 75.62 6 39 49 2126.7 -33.00 67.97  
 110.00 23 11 24 4037.15 11.83 153.05 271.02 57.69 24 18 41 3437.2 7.48 146.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4244 TRA-1.1066 TC3 -.0601 BAU .0677 SGT 861.5 SGR 438.5 SG3 47.6 ST 372.9 SR 420.7 SS 329.1  
 RDE -.6274 RRA .1575 RC3 -.0337 FAU .01726 RRT .0853 RRF -.0898 RTF -.6837 CRT .7050 CRS .8302 CST .9789  
 FDE .3031 FRA .5148 FC3 -.2033 BSP 2442 SGB 966.7 R23 -.0114 R13 -.6844 LSA 611.2 MSA 224.8 SSA 14.0  
 BDE .7575 BRA 1.1177 BC3 .0689 FSP -106 SG1 862.6 SG2 436.4 THA 3.34 EL1 519.8 EL2 214.0 ALF 49.86

LAUNCH DATE JAN 13 1969 FLIGHT TIME 74.00 ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC DISTANCE 167.814  
 RL 147.14 LAL .00 LOL 112.64 VL 22.801 GAL 5.94 AZL 86.42 HCA 67.22 SMA 103.36 ECC .43387 INC 3.5815 V1 30.279  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.351 GAP -25.61 AZP 88.61 TAL 172.14 TAP 239.36 RCA 58.51 APO 148.20 V2 35.179  
 RC 45.244 GL 10.07 GP 4.31 ZAL 73.71 ZAP 16.27 ETS 196.61 ZAE 168.45 ETE 214.80 ZAC 108.28 ETC 165.13 CLP 15.70

PLANETOCENTRIC CONIC  
 C3 65.608 VHL 8.100 DLA 24.08 RAL 33.29 RAD 6569.2 VEL 13.673 PTH 2.50 VHP 15.651 DPA 7.30 RAP 13.67 ECC 2.0797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 40 3380.38 -23.08 123.09 285.02 73.12 3 18 0 2780.4 -25.17 115.04  
 90.00 21 46 41 4281.62 2.67 176.53 274.29 61.80 22 58 3 3681.6 -1.12 169.91  
 100.00 4 2 59 3053.69 -25.60 99.87 285.84 74.01 4 53 53 2453.7 -27.54 91.61  
 100.00 22 48 2 4083.54 4.97 160.71 273.02 60.49 23 56 6 3483.5 1.00 154.17  
 110.00 5 50 37 2716.95 -31.51 76.09 287.64 76.01 6 35 54 2116.9 -33.11 67.23  
 110.00 23 16 54 3993.05 10.21 150.66 269.82 57.20 24 23 27 3393.0 5.82 144.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4279 TRA-1.0933 TC3 -.0521 BAU .0554 SGT 903.4 SGR 441.4 SG3 52.2 ST 395.2 SR 424.6 SS 346.2  
 RDE -.5984 RRA .1430 RC3 -.0356 FAU .01790 RRT .0982 RRF -.1024 RTF -.7019 CRT .7132 CRS .8350 CST .9796  
 FDE .3169 FRA .5299 FC3 -.2363 BSP 2548 SGB 1005.5 R23 -.0123 R13 -.7026 LSA 635.7 MSA 228.2 SSA 14.3  
 BDE .7357 BRA 1.1026 BC3 .0631 FSP -118 SG1 904.8 SG2 438.6 THA 3.59 EL1 537.2 EL2 219.0 ALF 47.88

LAUNCH DATE JAN 13 1969 FLIGHT TIME 76.00 ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC DISTANCE 174.345  
 RL 147.14 LAL .00 LOL 112.64 VL 23.225 GAL 5.60 AZL 86.55 HCA 70.45 SMA 104.95 ECC .41178 INC 3.4513 V1 30.279  
 RP 107.75 LAP 3.25 LOP 183.05 VP 34.623 GAP -24.27 AZP 88.84 TAL 171.89 TAP 242.34 RCA 61.73 APO 148.17 V2 35.169  
 RC 44.357 GL 10.47 GP 4.51 ZAL 73.47 ZAP 14.81 ETS 199.08 ZAE 170.53 ETE 222.20 ZAC 109.80 ETC 164.86 CLP 14.12

PLANETOCENTRIC CONIC  
 C3 58.611 VHL 7.656 DLA 24.54 RAL 33.41 RAD 6569.1 VEL 13.415 PTH 2.45 VHP 14.914 DPA 8.16 RAP 15.10 ECC 1.9646  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 34 3379.42 -23.09 123.02 283.17 73.14 3 10 53 2779.4 -25.19 114.98  
 90.00 21 54 45 4227.98 .94 173.54 273.09 61.70 23 5 13 3628.0 -2.85 166.91  
 100.00 3 57 12 3048.48 -25.69 99.51 284.01 74.17 4 48 1 2448.5 -27.62 91.24  
 100.00 22 54 47 4034.15 3.31 157.99 271.77 60.27 24 2 1 3434.2 -.67 151.46  
 110.00 5 46 43 2705.88 -31.69 75.28 285.80 76.46 6 31 49 2105.9 -33.23 66.39  
 110.00 23 21 46 3949.52 8.60 148.32 268.52 56.79 24 27 35 3349.5 4.17 142.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4297 TRA-1.0767 TC3 -.0396 BAU .0426 SGT 944.4 SGR 443.5 SG3 57.3 ST 417.2 SR 428.0 SS 363.8  
 RDE -.5703 RRA .1292 RC3 -.0372 FAU .01864 RRT .1112 RRF -.1163 RTF -.7202 CRT .7213 CRS .8401 CST .9801  
 FDE .3312 FRA .5447 FC3 -.2753 BSP 2710 SGB 1043.3 R23 -.0141 R13 -.7210 LSA 660.4 MSA 230.8 SSA 14.6  
 BDE .7141 BRA 1.0845 BC3 .0543 FSP -132 SG1 946.0 SG2 440.0 THA 3.82 EL1 554.5 EL2 223.0 ALF 46.02

LAUNCH DATE JAN 13 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 1 1969

MELIOCENTRIC CONIC  
 RL 147.14 LAL .00 LOL 112.64 VL 23.618 GAL 5.26 AZL 86.67 HCA 73.68 SMA 106.50 ECC .39086 INC 3.3264 V1 30.279  
 RP 107.79 LAP 3.19 LOP 186.28 VP 34.877 GAP -23.00 AZP 89.06 TAL 171.70 TAP 243.37 RCA 64.87 APO 148.13 V2 35.158  
 RC 43.625 GL 10.87 GP 4.73 ZAL 73.34 ZAP 13.39 ETS 202.14 ZAE 172.50 ETE 233.91 ZAC 111.30 ETC 164.55 CLP 12.54

DISTANCE 180.918

PLANETOCENTRIC CONIC  
 C3 52.409 VHL 7.239 DLA 24.96 RAL 33.43 RAD 6568.9 VEL 13.182 PTH 2.41 VHP 14.207 DPA 9.04 RAP 16.52 ECC 1.8625  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 17 3377.27 -23.14 122.88 281.19 73.20 3 3 34 2777.3 -25.22 114.83  
 90.00 22 2 11 4175.03 -.77 170.59 271.78 61.69 23 11 46 3575.0 -4.55 163.95  
 100.00 3 5 18 3041.87 -25.81 99.06 282.05 74.38 4 42 0 2441.9 -27.71 90.77  
 100.00 23 0 50 3985.66 1.67 155.32 270.43 60.15 24 7 16 3385.7 -2.31 148.80  
 110.00 5 42 41 2693.44 -31.89 74.36 283.82 76.97 6 27 34 2093.4 -33.35 65.44  
 110.00 23 25 58 3906.87 7.00 146.05 267.13 56.46 24 31 4 3306.9 2.54 139.80

DIFFERENTIAL CORRECTIONS  
 TDE -.4320 TRA-1.0592 TC3 -.0231 BAU .0313 SGT 986.4 SGR 445.1 S63 62.9 ST 440.3 SR 431.0 SS 382.1  
 RDE -.5432 RRA .1159 RC3 -.0382 FAU .01945 RRT .1259 RRF -.1319 RTF -.7377 CRT .7303 CRS .8456 CST .9807  
 FDE .3466 FRA .5595 FC3 -.3213 BSP 2884 SGB 1082.2 R23 -.0161 R13 -.7386 LSA 686.5 MSA 232.6 SSA 14.8  
 BDE .6940 BRA 1.0655 BC3 .0446 FSP -148 SG1 988.4 S62 440.7 THA 4.06 EL1 573.1 EL2 226.2 ALF 44.16

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 13 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 3 1969

MELIOCENTRIC CONIC  
 RL 147.14 LAL .00 LOL 112.64 VL 23.982 GAL 4.92 AZL 86.79 HCA 76.90 SMA 108.00 ECC .37108 INC 3.2056 V1 30.279  
 RP 107.82 LAP 3.12 LOP 189.52 VP 35.113 GAP -21.78 AZP 89.27 TAL 171.56 TAP 248.46 RCA 67.92 APO 148.08 V2 35.147  
 RC 43.055 GL 11.25 GP 4.97 ZAL 73.30 ZAP 12.01 ETS 206.00 ZAE 174.06 ETE 253.22 ZAC 112.79 ETC 164.20 CLP 10.95

DISTANCE 187.526

PLANETOCENTRIC CONIC  
 C3 46.910 VHL 6.849 DLA 25.35 RAL 33.35 RAD 6568.8 VEL 12.972 PTH 2.37 VHP 13.528 DPA 9.93 RAP 17.94 ECC 1.7720  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 55 3373.72 -23.21 122.64 279.10 73.30 2 56 9 2773.7 -25.27 114.50  
 90.00 22 8 51 4123.29 -2.44 167.70 270.36 61.78 23 17 37 3523.3 -6.19 161.03  
 100.00 3 45 23 3033.72 -25.96 98.50 279.97 74.64 4 35 57 2433.7 -27.82 90.19  
 100.00 23 6 7 3938.55 .07 152.73 268.97 60.11 24 11 45 3338.5 -3.91 146.21  
 110.00 5 38 34 2679.59 -32.09 73.34 281.71 77.54 6 23 14 2079.6 -33.47 64.38  
 110.00 23 29 25 3865.42 5.44 143.86 265.63 56.20 24 33 50 3265.4 .96 137.64

DIFFERENTIAL CORRECTIONS  
 TDE -.4355 TRA-1.0411 TC3 -.0024 BAU .0242 SGT 1030.2 SGR 446.1 S63 69.1 ST 465.1 SR 433.5 SS 401.5  
 RDE -.5170 RRA .1032 RC3 -.0385 FAU .02035 RRT .1428 RRF -.1498 RTF -.7542 CRT .7405 CRS .8516 CST .9815  
 FDE .3632 FRA .5745 FC3 -.3755 BSP 3045 SGB 1122.6 R23 -.0181 R13 -.7552 LSA 714.6 MSA 233.4 SSA 15.0  
 BDE .6760 BRA 1.0462 BC3 .0386 FSP -165 SG1 1032.6 S62 440.5 THA 4.33 EL1 593.3 EL2 228.3 ALF 42.28

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 13 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 5 1969

MELIOCENTRIC CONIC  
 RL 147.14 LAL .00 LOL 112.64 VL 24.319 GAL 4.59 AZL 86.91 HCA 80.13 SMA 109.45 ECC .35242 INC 3.0880 V1 30.279  
 RP 107.86 LAP 3.04 LOP 192.75 VP 35.333 GAP -20.62 AZP 89.47 TAL 171.47 TAP 251.60 RCA 70.88 APO 148.02 V2 35.135  
 RC 42.857 GL 11.62 GP 5.23 ZAL 73.36 ZAP 10.72 ETS 210.93 ZAE 174.65 ETE 281.49 ZAC 114.26 ETC 163.80 CLP 9.36

DISTANCE 194.165

PLANETOCENTRIC CONIC  
 C3 42.036 VHL 6.484 DLA 25.68 RAL 33.17 RAD 6568.6 VEL 12.783 PTH 2.33 VHP 12.876 DPA 10.84 RAP 19.34 ECC 1.6918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 39 3368.42 -23.31 122.29 276.90 73.45 2 48 47 2768.4 -25.36 114.22  
 90.00 22 14 42 4073.41 -4.04 164.91 268.82 61.95 23 22 36 3473.4 -7.76 158.21  
 100.00 3 39 33 3023.79 -26.14 97.81 277.78 74.96 4 29 57 2423.8 -27.95 89.48  
 100.00 23 10 30 3893.27 -1.46 150.25 267.39 60.14 24 15 23 3293.3 -5.43 143.71  
 110.00 5 34 27 2664.27 -32.31 72.20 279.47 78.19 6 18 51 2064.3 -33.60 63.20  
 110.00 23 32 4 3825.55 3.92 141.77 264.04 56.02 24 35 50 3225.6 -.56 135.56

DIFFERENTIAL CORRECTIONS  
 TDE -.4387 TRA-1.0212 TC3 .0242 BAU .0252 SGT 1074.3 SGR 446.5 S63 75.9 ST 490.5 SR 435.6 SS 421.5  
 RDE -.4919 RRA .0912 RC3 -.0378 FAU .02136 RRT .1615 RRF -.1697 RTF -.7700 CRT .7512 CRS .8579 CST .9823  
 FDE .3807 FRA .5895 FC3 -.4399 BSP 3228 SGB 1163.4 R23 -.0206 R13 -.7711 LSA 743.8 MSA 233.4 SSA 15.3  
 BDE .6591 BRA 1.0253 BC3 .0449 FSP -185 SG1 1077.2 S62 439.5 THA 4.61 EL1 614.5 EL2 229.5 ALF 40.50

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 13 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 7 1969

MELIOCENTRIC CONIC  
 RL 147.14 LAL .00 LOL 112.64 VL 24.630 GAL 4.26 AZL 87.03 HCA 83.35 SMA 110.84 ECC .33487 INC 2.9728 V1 30.279  
 RP 107.89 LAP 2.95 LOP 195.97 VP 35.536 GAP -19.51 AZP 89.66 TAL 171.44 TAP 254.79 RCA 73.73 APO 147.96 V2 35.123  
 RC 42.438 GL 11.97 GP 5.53 ZAL 73.53 ZAP 9.52 ETS 217.29 ZAE 173.89 ETE 309.54 ZAC 115.71 ETC 163.36 CLP 7.76

DISTANCE 200.830

PLANETOCENTRIC CONIC  
 C3 37.716 VHL 6.141 DLA 25.96 RAL 32.89 RAD 6568.5 VEL 12.613 PTH 2.29 VHP 12.250 DPA 11.77 RAP 20.73 ECC 1.6207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 40 3360.87 -23.45 121.78 274.61 73.66 2 41 41 2760.9 -25.47 113.69  
 90.00 22 19 26 4026.18 -5.54 162.26 267.15 62.19 23 26 32 3426.2 -9.22 155.51  
 100.00 3 33 57 3011.78 -26.35 96.98 275.50 75.35 4 24 9 2411.8 -28.10 88.62  
 100.00 23 13 50 3850.50 -2.91 147.90 265.70 60.24 24 18 0 3250.5 -6.85 141.33  
 110.00 5 30 25 2647.38 -32.54 70.93 277.12 78.90 6 14 32 2047.4 -33.73 61.90  
 110.00 23 35 51 3787.67 2.48 139.79 262.34 55.90 24 36 59 3187.7 -2.01 133.58

DIFFERENTIAL CORRECTIONS  
 TDE -.4425 TRA-1.0010 TC3 .0565 BAU .0337 SGT 1119.9 SGR 446.6 S63 83.5 ST 517.3 SR 437.3 SS 442.5  
 RDE -.4680 RRA .0796 RC3 -.0358 FAU .02248 RRT .1828 RRF -.1924 RTF -.7849 CRT .7627 CRS .8646 CST .9832  
 FDE .3996 FRA .6048 FC3 -.5160 BSP 3406 SGB 1205.6 R23 -.0234 R13 -.7862 LSA 774.8 MSA 232.5 SSA 15.5  
 BDE .6441 BRA 1.0041 BC3 .0669 FSP -206 SG1 1123.4 S62 437.7 THA 4.92 EL1 637.3 EL2 229.6 ALF 38.77

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 13 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 207.515

RL 147.14 LAL .00 LOL 112.64 VL 24.918 GAL 3.94 AZL 87.14 HCA 86.57 SMA 112.18 ECC .31839 INC 2.8591 V1 30.279  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.724 GAP -18.44 AZP 89.83 TAL 171.47 TAP 258.04 RCA 76.46 APO 147.90 V2 35.111  
 RC 42.394 GL 12.30 GP 5.85 ZAL 73.79 ZAP 8.48 ETS 225.54 ZAE 172.12 ETE 328.58 ZAC 117.11 ETC 162.87 CLP 6.15

PLANETOCENTRIC CONIC

C3 33.887 VHL 5.821 DLA 26.19 RAL 32.50 RAD 6568.3 VEL 12.460 PTH 2.25 VHP 11.649 DPA 12.71 RAP 22.09 ECC 1.5577  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 14 3350.39 -23.65 121.08 272.25 73.96 2 35 5 2750.4 -25.63 112.97  
 90.00 22 22 49 3982.59 -6.92 159.80 265.35 62.47 23 29 11 3382.6 -10.56 153.00  
 100.00 3 28 45 2997.32 -26.59 95.98 273.13 75.82 4 18 43 2397.3 -28.28 87.58  
 100.00 23 15 59 3810.89 -4.25 145.72 263.89 60.38 24 19 30 3210.9 -8.16 139.12  
 110.00 5 26 33 2628.78 -32.78 69.53 274.67 79.70 6 10 21 2028.8 -33.85 60.46  
 110.00 23 34 41 3752.19 1.12 137.94 260.55 55.83 24 37 13 3152.2 -3.37 131.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4470 TRA -.9800 TC3 .0952 BAU .0455 SGT 1166.8 SGR 446.3 SG3 91.9 ST 545.5 SR 438.9 SS 464.6  
 RDE -.4453 RRA .0685 RC3 -.0321 FAU .02372 RRT .2073 RRF -.2183 RTF -.7989 CRT .7751-CRS .8716 CST .9842  
 FDE .4201 FRA .6206 FC3 -.6061 BSP 3578 SGB 1249.2 R23 -.0265 R13 -.8003 LSA 807.9 MSA 230.6 SSA 15.8  
 BDE .6310 BRA .9824 BC3 .1005 FSP -231 SG1 1171.0 SG2 435.0 THA 5.26 EL1 661.8 EL2 228.6 ALF 37.11

LAUNCH DATE JAN 13 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 214.217

RL 147.14 LAL .00 LOL 112.64 VL 25.184 GAL 3.63 AZL 87.25 HCA 89.79 SMA 113.46 ECC .30294 INC 2.7463 V1 30.279  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.898 GAP -17.42 AZP 89.99 TAL 171.56 TAP 261.34 RCA 79.09 APO 147.83 V2 35.099  
 RC 42.334 GL 12.60 GP 6.21 ZAL 74.16 ZAP 7.68 ETS 236.05 ZAE 169.88 ETE 340.23 ZAC 118.48 ETC 162.31 CLP 4.52

PLANETOCENTRIC CONIC

C3 30.496 VHL 5.522 DLA 26.35 RAL 32.03 RAD 6568.2 VEL 12.324 PTH 2.22 VHP 11.072 DPA 13.68 RAP 23.43 ECC 1.5019  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 41 3336.14 -23.92 120.12 269.84 74.37 2 29 17 2736.1 -25.83 111.97  
 90.00 22 24 34 3943.75 -8.14 157.59 263.43 62.73 23 30 18 3343.7 -11.72 150.75  
 100.00 3 24 10 2979.93 -26.88 94.76 270.69 76.40 4 13 50 2379.9 -28.48 86.33  
 100.00 23 16 46 3775.19 -5.45 143.75 261.96 60.56 24 19 41 3175.2 -9.33 137.11  
 110.00 5 22 57 2608.30 -33.01 67.98 272.14 80.59 6 6 25 2008.3 -33.96 58.87  
 110.00 23 34 29 3719.58 -1.12 136.24 258.66 55.82 24 36 28 3119.6 -4.61 130.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4510 TRA -.9577 TC3 .1420 BAU .0589 SGT 1213.7 SGR 445.8 SG3 101.3 ST 574.1 SR 440.3 SS 487.2  
 RDE -.4239 RRA .0578 RC3 -.0263 FAU .02512 RRT .2347 RRF -.2475 RTF -.8122 CRT .7877 CRS .8788 CST .9851  
 FDE .4416 FRA .6367 FC3 -.7131 BSP 3765 SGB 1293.0 R23 -.0301 R13 -.8137 LSA 841.8 MSA 228.0 SSA 16.1  
 BDE .6189 BRA .9595 BC3 .1444 FSP -258 SG1 1218.8 SG2 431.6 THA 5.64 EL1 687.1 EL2 226.7 ALF 35.59

LAUNCH DATE JAN 13 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 220.931

RL 147.14 LAL .00 LOL 112.64 VL 25.430 GAL 3.33 AZL 87.37 HCA 93.00 SMA 114.68 ECC .28850 INC 2.6336 V1 30.279  
 RP 108.01 LAP 2.63 LOP 205.64 VP 36.058 GAP -16.44 AZP 90.14 TAL 171.70 TAP 284.70 RCA 81.59 APO 147.76 V2 35.086  
 RC 42.853 GL 12.85 GP 6.62 ZAL 74.62 ZAP 7.21 ETS 248.77 ZAE 167.45 ETE 347.74 ZAC 119.80 ETC 161.70 CLP 2.87

PLANETOCENTRIC CONIC

C3 27.492 VHL 5.243 DLA 26.43 RAL 31.46 RAD 6568.1 VEL 12.201 PTH 2.19 VHP 10.519 DPA 14.67 RAP 24.73 ECC 1.4525  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 29 20 3371.21 -24.26 118.84 267.39 74.93 2 24 38 2717.2 -26.10 110.65  
 90.00 22 24 23 3910.85 -9.16 155.71 261.36 63.09 23 29 34 3310.8 -12.70 148.82  
 100.00 3 20 24 2959.15 -27.20 93.30 268.20 77.11 4 9 44 2359.1 -28.71 84.82  
 100.00 23 16 0 3744.14 -6.48 142.02 259.92 60.76 24 18 24 3144.1 -10.33 135.35  
 110.00 5 19 45 2585.75 -33.25 66.26 269.52 81.58 6 2 50 1985.8 -34.06 57.12  
 110.00 23 33 9 3690.30 -1.24 134.71 256.68 55.84 24 34 40 3090.3 -5.72 128.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4550 TRA -.9349 TC3 .1965 BAU .0725 SGT 1261.5 SGR 445.4 SG3 111.6 ST 603.7 SR 441.6 SS 510.5  
 RDE -.4038 RRA .0478 RC3 -.0176 FAU .02667 RRT .2659 RRF -.2475 RTF -.8244 CRT .8007 CRS .8860 CST .9862  
 FDE .4645 FRA .6533 FC3 -.8397 BSP 3942 SGB 1337.9 R23 -.0341 R13 -.8262 LSA 877.1 MSA 224.6 SSA 16.3  
 BDE .6084 BRA .9361 BC3 .1973 FSP -288 SG1 1267.8 SG2 427.3 THA 6.05 EL1 713.7 EL2 223.8 ALF 34.18

LAUNCH DATE JAN 13 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 227.653

RL 147.14 LAL .00 LOL 112.64 VL 25.656 GAL 3.05 AZL 87.48 HCA 96.21 SMA 115.84 ECC .27504 INC 2.5203 V1 30.279  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.206 GAP -15.50 AZP 90.27 TAL 171.90 TAP 268.12 RCA 83.98 APO 147.69 V2 35.073  
 RC 43.347 GL 13.07 GP 7.06 ZAL 75.17 ZAP 7.16 ETS 262.77 ZAE 164.99 ETE 352.98 ZAC 121.06 ETC 161.02 CLP 1.19

PLANETOCENTRIC CONIC

C3 24.834 VHL 4.983 DLA 26.44 RAL 30.81 RAD 6568.0 VEL 12.092 PTH 2.16 VHP 9.988 DPA 15.69 RAP 25.99 ECC 1.4087  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 32 3292.74 -24.68 117.17 264.92 75.66 2 21 25 2692.7 -26.41 108.93  
 90.00 22 22 0 3884.97 -9.95 154.22 259.17 63.35 23 26 45 3285.0 -13.45 147.29  
 100.00 3 17 40 2934.49 -27.57 91.56 265.67 77.95 4 6 34 2334.5 -28.95 83.03  
 100.00 23 13 34 3718.45 -7.33 140.59 257.77 60.94 24 15 32 3118.4 -11.15 133.89  
 110.00 5 17 3 2560.92 -33.48 64.36 266.84 82.68 5 59 44 1960.9 -34.13 55.18  
 110.00 23 30 39 3664.79 -2.22 133.38 254.62 55.88 24 31 44 3064.8 -6.68 127.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4588 TRA -.9117 TC3 .2600 BAU .0863 SGT 1309.8 SGR 445.4 SG3 123.2 ST 633.6 SR 443.0 SS 534.4  
 RDE -.3851 RRA .0375 RC3 -.0055 FAU .02840 RRT .3010 RRF -.3179 RTF -.8359 CRT .8137 CRS .8933 CST .9872  
 FDE .4887 FRA .6710 FC3 -.9900 BSP 4112 SGB 1383.5 R23 -.0389 R13 -.8379 LSA 913.4 MSA 220.6 SSA 16.6  
 BDE .5989 BRA .9125 BC3 .2600 FSP -322 SG1 1317.5 SG2 422.3 THA 6.52 EL1 741.1 EL2 220.2 ALF 32.90

LAUNCH DATE JAN 13 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 17 1969

Heliocentric Conic: RL 147.14 LAL .00 LOL 112.64 VL 25.865 GAL 2.77 AZL 87.59 HCA 99.42 SMA 116.93 ECC .26251 INC 2.4058 V1 30.279  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.341 GAP -14.60 AZP 90.39 TAL 172.16 TAP 271.58 RCA 86.24 APO 147.63 V2 35.060  
 RC 44.011 GL 13.22 GP 7.56 ZAL 75.82 ZAP 7.58 ETS 276.40 ZAE 162.58 ETE 356.94 ZAC 122.26 ETC 160.27 CLP -.52

Distance 234,379

Planetocentric Conic: C3 22.482 VHL 4.742 DLA 26.36 RAL 30.09 RAD 6567.9 VEL 11.994 PTH 2.14 VHP 9.479 DPA 16.73 RAP 27.21 ECC 1.3700  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 25 31 3262.14 -25.18 115.07 262.43 76.60 2 19 53 2662.1 -26.78 106.76  
 90.00 22 17 14 3866.93 -10.50 153.18 256.86 63.55 23 21 41 3266.9 -13.97 146.22  
 100.00 3 16 7 2905.56 -27.96 89.50 263.10 78.97 4 4 33 2305.6 -29.20 80.92  
 100.00 23 9 19 3698.74 -7.98 139.49 255.52 61.10 24 10 58 3098.7 -11.78 132.76  
 110.00 5 15 0 2533.57 -33.70 62.26 264.11 83.91 5 57 14 1933.6 -34.18 53.05  
 110.00 23 26 55 3643.49 -3.03 132.26 252.48 55.94 24 27 39 3043.5 -7.48 126.00

Differential Corrections: TDE -.4610 TRA -.0868 TC3 .3347 BAU .1007 SGT 1356.9 SGR 446.1 SG3 136.0  
 RDE -.3677 RRA .0278 RC3 .0109 FAU .03033 RRT .3404 RRF -.3600 RTF -.8473 CRT .8267 CRS .9007 CST .9881  
 FDE .5144 FRA .6894 FC3-1.1680 BSP 4320 SGB 1428.4 R23 -.0443 R13 -.8496 LSA 949.7 MSA 216.0 SSA 16.9  
 BDE .5897 BRA .8872 BC3 .3349 FSP -360 SG1 1366.3 SG2 416.6 THA 7.04 EL1 768.3 EL2 215.7 ALF 31.81

Mid-course Execution Accuracy: SGT 1356.9 SGR 446.1 SG3 136.0  
 RRT .3404 RRF -.3600 RTF -.8473  
 SGB 1428.4 R23 -.0443 R13 -.8496  
 SG1 1366.3 SG2 416.6 THA 7.04

Orbit Determination Accuracy: ST 662.7 SR 444.5 SS 558.7  
 CRT .8267 CRS .9007 CST .9881  
 LSA 949.7 MSA 216.0 SSA 16.9  
 EL1 768.3 EL2 215.7 ALF 31.81

LAUNCH DATE JAN 13 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 19 1969

Heliocentric Conic: RL 147.14 LAL .00 LOL 112.64 VL 26.056 GAL 2.51 AZL 87.71 HCA 102.63 SMA 117.97 ECC .25089 INC 2.2891 V1 30.279  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.465 GAP -13.74 AZP 90.50 TAL 172.47 TAP 275.10 RCA 88.37 APO 147.56 V2 35.047  
 RC 44.838 GL 13.31 GP 8.12 ZAL 76.55 ZAP 8.43 ETS 288.20 ZAE 160.26 ETE .14 ZAC 123.38 ETC 159.44 CLP -2.28

Distance 241,106

Planetocentric Conic: C3 20.403 VHL 4.517 DLA 26.19 RAL 29.30 RAD 6567.8 VEL 11.907 PTH 2.12 VHP 8.992 DPA 17.81 RAP 28.37 ECC 1.3558  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 24 3225.19 -25.74 112.50 259.94 77.77 2 20 9 2625.2 -27.17 104.13  
 90.00 22 10 3 3857.12 -10.80 152.61 254.45 63.66 23 14 20 3257.1 -14.25 145.64  
 100.00 3 15 56 2872.08 -28.37 87.10 260.51 80.17 4 3 48 2272.1 -29.44 78.46  
 100.00 23 3 13 3685.46 -8.42 138.75 255.19 61.21 24 4 38 3085.5 -12.20 132.00  
 110.00 5 13 43 2503.51 -33.89 59.93 261.34 85.27 5 55 27 1903.5 -34.18 50.70  
 110.00 23 21 54 3626.79 -3.67 131.39 250.28 55.99 24 22 21 3026.8 -8.11 125.12

Differential Corrections: TDE -.4627 TRA -.8621 TC3 .4173 BAU .1142 SGT 1404.1 SGR 447.9 SG3 150.3  
 RDE -.3518 RRA .0181 RC3 .0326 FAU .03249 RRT .3844 RRF -.4069 RTF -.8571 CRT .8395 CRS .9078 CST .9891  
 FDE .5408 FRA .7091 FC3-1.1378 BSP 4480 SGB 1473.8 R23 -.0506 R13 -.8597 LSA 985.9 MSA 210.9 SSA 17.3  
 BDE .5812 BRA .8622 BC3 .4186 FSP -403 SG1 1415.6 SG2 410.1 THA 7.64 EL1 795.6 EL2 210.8 ALF 30.85

Mid-course Execution Accuracy: SGT 1404.1 SGR 447.9 SG3 150.3  
 RRT .3844 RRF -.4069 RTF -.8571  
 SGB 1473.8 R23 -.0506 R13 -.8597  
 SG1 1415.6 SG2 410.1 THA 7.64

Orbit Determination Accuracy: ST 691.6 SR 446.3 SS 582.6  
 CRT .8395 CRS .9078 CST .9891  
 LSA 985.9 MSA 210.9 SSA 17.3  
 EL1 795.6 EL2 210.8 ALF 30.85

LAUNCH DATE JAN 13 1969 FLIGHT TIME 98.00 ARRIVAL DATE APR 21 1969

Heliocentric Conic: RL 147.14 LAL .00 LOL 112.64 VL 26.233 GAL 2.25 AZL 87.83 HCA 105.84 SMA 118.94 ECC .24012 INC 2.1696 V1 30.279  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.579 GAP -12.90 AZP 90.59 TAL 172.83 TAP 278.66 RCA 90.38 APO 147.50 V2 35.033  
 RC 45.818 GL 13.32 GP 8.75 ZAL 77.35 ZAP 9.64 ETS 297.63 ZAE 158.08 ETE 2.86 ZAC 124.41 ETC 158.54 CLP -4.07

Distance 247,830

Planetocentric Conic: C3 18.564 VHL 4.309 DLA 25.91 RAL 28.46 RAD 6567.8 VEL 11.830 PTH 2.10 VHP 8.526 DPA 18.94 RAP 29.47 ECC 1.3055  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 29 11 3182.09 -26.33 109.48 257.43 79.18 2 22 13 2582.1 -27.55 101.03  
 90.00 22 0 33 3855.50 -10.85 152.52 251.97 63.68 23 4 49 3255.5 -14.30 145.54  
 100.00 3 17 11 2833.94 -28.78 84.34 257.91 81.57 4 4 24 2233.9 -29.65 75.64  
 100.00 22 55 15 3678.88 -8.64 138.38 250.80 61.27 23 56 34 3078.9 -12.40 131.62  
 110.00 5 13 19 2470.54 -34.05 57.37 258.53 86.78 5 54 30 1870.5 -34.12 48.12  
 110.00 23 15 36 3615.04 -4.11 130.77 248.03 56.04 24 15 51 3015.0 -8.55 124.49

Differential Corrections: TDE -.4628 TRA -.8372 TC3 .5105 BAU .1276 SGT 1450.6 SGR 451.6 SG3 166.3  
 RDE -.3372 RRA .0085 RC3 .0609 FAU .03490 RRT .4328 RRF -.4587 RTF -.8663 CRT .8518 CRS .9078 CST .9900  
 FDE .5679 FRA .7305 FC3-1.6276 BSP 4659 SGB 1519.3 R23 -.0581 R13 -.8693 LSA 1021.2 MSA 205.5 SSA 17.6  
 BDE .5726 BRA .8373 BC3 .5142 FSP -451 SG1 1464.8 SG2 403.2 THA 8.31 EL1 822.0 EL2 205.5 ALF 30.05

Mid-course Execution Accuracy: SGT 1450.6 SGR 451.6 SG3 166.3  
 RRT .4328 RRF -.4587 RTF -.8663  
 SGB 1519.3 R23 -.0581 R13 -.8693  
 SG1 1464.8 SG2 403.2 THA 8.31

Orbit Determination Accuracy: ST 718.9 SR 448.4 SS 606.2  
 CRT .8518 CRS .9078 CST .9900  
 LSA 1021.2 MSA 205.5 SSA 17.6  
 EL1 822.0 EL2 205.5 ALF 30.05

LAUNCH DATE JAN 13 1969 FLIGHT TIME 100.00 ARRIVAL DATE APR 23 1969

Heliocentric Conic: RL 147.14 LAL .00 LOL 112.64 VL 26.394 GAL 2.02 AZL 87.95 HCA 109.04 SMA 119.86 ECC .23019 INC 2.0463 V1 30.279  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.682 GAP -12.10 AZP 90.67 TAL 173.23 TAP 282.27 RCA 92.27 APO 147.45 V2 35.020  
 RC 46.944 GL 13.23 GP 9.46 ZAL 78.23 ZAP 11.14 ETS 304.87 ZAE 156.05 ETE 5.31 ZAC 125.33 ETC 157.54 CLP -5.93

Distance 254,549

Planetocentric Conic: C3 16.940 VHL 4.116 DLA 25.51 RAL 27.58 RAD 6567.7 VEL 11.761 PTH 2.08 VHP 8.081 DPA 20.11 RAP 30.48 ECC 1.2788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 47 3133.31 -26.90 106.03 254.93 80.82 2 26 0 2533.3 -27.90 97.50  
 90.00 21 48 57 3861.70 -10.66 152.88 249.45 63.61 22 53 19 3261.7 -14.12 145.91  
 100.00 3 19 55 2791.15 -29.17 81.22 255.29 83.17 4 6 26 2191.2 -29.81 72.47  
 100.00 22 45 31 3679.09 -8.63 138.39 248.37 61.27 23 46 50 3079.1 -12.40 131.63  
 110.00 5 13 55 2434.48 -34.15 54.56 255.72 88.44 5 54 29 1834.5 -33.99 45.32  
 110.00 23 8 0 3608.53 -4.36 130.43 245.76 56.06 24 8 9 3008.5 -8.79 124.14

Differential Corrections: TDE -.4608 TRA -.8120 TC3 .6144 BAU .1409 SGT 1495.3 SGR 458.1 SG3 184.1  
 RDE -.3240 RRA -.0013 RC3 .0973 FAU .03760 RRT .4852 RRF -.5149 RTF -.8748 CRT .8635 CRS .9212 CST .9909  
 FDE .5949 FRA .7335 FC3-1.9217 BSP 4828 SGB 1563.9 R23 -.0668 R13 -.8784 LSA 1054.0 MSA 199.9 SSA 18.0  
 BDE .5633 BRA .8120 BC3 .6220 FSP -505 SG1 1512.9 SG2 395.9 THA 9.08 EL1 846.4 EL2 199.9 ALF 29.44

Mid-course Execution Accuracy: SGT 1495.3 SGR 458.1 SG3 184.1  
 RRT .4852 RRF -.5149 RTF -.8748  
 SGB 1563.9 R23 -.0668 R13 -.8784  
 SG1 1512.9 SG2 395.9 THA 9.08

Orbit Determination Accuracy: ST 743.6 SR 451.0 SS 628.3  
 CRT .8635 CRS .9212 CST .9909  
 LSA 1054.0 MSA 199.9 SSA 18.0  
 EL1 846.4 EL2 199.9 ALF 29.44

LAUNCH DATE JAN 13 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 261.260

RL 147.14 LAL .00 LOL 112.64 VL 26.543 GAL 1.79 AZL 88.08 HCA 112.24 SMA 120.71 ECC .22104 INC 1.9183 V1 30.279  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.776 GAP -11.33 AZP 90.73 TAL 173.67 TAP 285.91 RCA 94.03 APO 147.39 V2 35.007  
 RC 48.205 GL 13.03 GP 10.26 ZAL 79.16 ZAP 12.88 ETS 310.35 ZAE 154.19 ETE 7.62 ZAC 126.13 ETC 156.46 CLP -7.84

PLANETOCENTRIC CONIC

C3 15.505 VHL 3.938 DLA 24.98 RAL 26.68 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 7.657 DPA 21.34 RAP 31.41 ECC 1.2552  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 40 3 3079.44 -27.43 102.18 252.42 82.68 2 31 23 2479.4 -28.16 93.59  
 90.00 21 35 32 3875.23 -10.25 153.66 246.92 63.46 22 40 7 3275.2 -13.73 146.71  
 100.00 3 24 8 2743.86 -29.50 77.74 252.68 84.97 4 9 52 2143.9 -29.89 68.96  
 100.00 22 34 8 3086.04 -8.40 138.78 245.94 61.21 23 35 34 3086.0 -12.18 132.03  
 110.00 5 15 35 2395.20 -34.18 51.49 252.91 90.26 5 55 30 1795.2 -33.77 42.27  
 110.00 22 59 11 3607.48 -4.40 130.38 243.49 56.07 23 59 18 3007.5 -8.83 124.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4572 TRA -.7864 TC3 .7275 BAU .1537 SGT 1537.7 SGR 468.4 SG3 203.9 ST 765.7 SR 454.3 SS 649.2  
 RDE -.3122 RRA -.0114 RC3 .1434 FAU .04059 RRT .5413 RRF -.5750 RTF -.8828 CRT .8749 CRS .9274 CST .9917  
 FDE .6221 FRA .7789 FC3-2.2665 BSP 5001 SGB 1607.4 R23 -.0767 R13 -.8870 LSA 1084.5 MSA 193.9 SSA 18.4  
 BDE .5536 BRA .7865 BC3 .7415 FSP -566 SGT 1559.8 SGT 388.2 THA 9.99 EL1 868.9 EL2 193.9 ALF 29.01

LAUNCH DATE JAN 13 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 267.961

RL 147.14 LAL .00 LOL 112.64 VL 26.678 GAL 1.58 AZL 88.22 HCA 115.44 SMA 121.51 ECC .21265 INC 1.7843 V1 30.279  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.862 GAP -10.59 AZP 90.77 TAL 174.14 TAP 289.58 RCA 95.67 APO 147.35 V2 34.994  
 RC 49.590 GL 12.71 GP 11.16 ZAL 80.15 ZAP 14.82 ETS 314.50 ZAE 152.51 ETE 9.87 ZAC 126.79 ETC 155.29 CLP -9.82

PLANETOCENTRIC CONIC

C3 14.238 VHL 3.773 DLA 24.31 RAL 25.78 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 7.253 DPA 22.64 RAP 32.22 ECC 1.2343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 47 52 3021.03 -27.87 97.96 249.92 84.75 2 38 13 2421.0 -28.30 89.32  
 90.00 21 20 33 3895.60 -9.63 154.83 244.42 63.24 22 25 29 3295.6 -13.14 147.92  
 100.00 3 29 51 2692.23 -29.75 73.92 250.08 86.96 4 14 43 2092.2 -29.86 65.12  
 100.00 22 21 15 3699.63 -7.95 139.54 243.53 61.09 23 22 55 3099.6 -11.75 132.81  
 110.00 5 18 26 2352.55 -34.12 48.16 250.11 92.23 5 57 38 1752.5 -33.43 38.99  
 110.00 22 49 10 3612.08 -4.23 130.62 241.24 56.05 23 49 22 3012.1 -8.66 124.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4483 TRA -.7589 TC3 .8550 BAU .1672 SGT 1574.4 SGR 483.7 SG3 226.0 ST 779.6 SR 457.7 SS 665.6  
 RDE -.3013 RRA -.0217 RC3 .2021 FAU .04399 RRT .5984 RRF -.6366 RTF -.8909 CRT .8848 CRS .9328 CST .9925  
 FDE .6460 FRA .8059 FC3-2.6747 BSP 5215 SGB 1647.0 R23 -.0878 R13 -.8959 LSA 1106.6 MSA 188.1 SSA 18.8  
 BDE .5402 BRA .7592 BC3 .8785 FSP -636 SGT 1602.4 SGT 380.7 THA 11.05 EL1 884.2 EL2 188.1 ALF 28.88

LAUNCH DATE JAN 13 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 274.649

RL 147.14 LAL .00 LOL 112.64 VL 26.802 GAL 1.38 AZL 88.36 HCA 118.64 SMA 122.25 ECC .20497 INC 1.6432 V1 30.279  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.939 GAP -9.88 AZP 90.79 TAL 174.65 TAP 293.28 RCA 97.19 APO 147.30 V2 34.980  
 RC 51.091 GL 12.25 GP 12.19 ZAL 81.18 ZAP 16.96 ETS 317.64 ZAE 151.01 ETE 12.16 ZAC 127.29 ETC 154.03 CLP -11.88

PLANETOCENTRIC CONIC

C3 13.121 VHL 3.622 DLA 23.50 RAL 24.91 RAD 6567.5 VEL 11.598 PTH 2.03 VHP 6.871 DPA 24.02 RAP 32.91 ECC 1.2159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 57 9 2958.53 -28.17 93.41 247.44 87.01 2 46 27 2358.5 -28.29 84.75  
 90.00 21 4 17 3922.38 -8.80 156.37 241.99 62.98 22 9 40 3322.4 -12.36 149.50  
 100.00 3 37 3 2636.45 -29.88 69.78 247.50 89.14 4 20 59 2036.4 -29.68 60.98  
 100.00 22 7 5 3719.70 -7.29 140.66 241.18 60.93 23 9 4 3119.7 -11.11 133.96  
 110.00 5 22 32 2306.43 -33.94 44.57 247.36 94.35 6 0 58 1706.4 -32.97 35.47  
 110.00 22 38 5 3622.48 -3.83 131.16 239.05 56.01 23 38 27 3022.5 -8.27 124.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4389 TRA -.7341 TC3 .9841 BAU .1792 SGT 1610.3 SGR 506.0 SG3 250.5 ST 791.6 SR 462.0 SS 679.7  
 RDE -.2918 RRA -.0331 RC3 .2749 FAU .04769 RRT .6562 RRF -.6986 RTF -.8973 CRT .8944 CRS .9377 CST .9933  
 FDE .6686 FRA .8379 FC3-3.1470 BSP 5359 SGB 1687.9 R23 -.1009 R13 -.9034 LSA 1126.3 MSA 182.1 SSA 19.3  
 BDE .5270 BRA .7348 BC3 1.0217 FSP -711 SGT 1646.1 SGT 373.5 THA 12.29 EL1 898.3 EL2 182.1 ALF 28.86

LAUNCH DATE JAN 13 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 281.322

RL 147.14 LAL .00 LOL 112.64 VL 26.914 GAL 1.19 AZL 88.51 HCA 121.83 SMA 122.93 ECC .19796 INC 1.4933 V1 30.279  
 RP 108.38 LAP 1.27 LOP 234.47 VP 37.008 GAP -9.19 AZP 90.79 TAL 175.17 TAP 297.00 RCA 98.60 APO 147.27 V2 34.967  
 RC 52.697 GL 11.61 GP 13.37 ZAL 82.24 ZAP 19.28 ETS 320.02 ZAE 149.67 ETE 14.56 ZAC 127.60 ETC 152.68 CLP -14.03

PLANETOCENTRIC CONIC

C3 12.135 VHL 3.484 DLA 22.51 RAL 24.07 RAD 6567.5 VEL 11.555 PTH 2.02 VHP 6.509 DPA 25.49 RAP 33.45 ECC 1.1997  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 51 2892.17 -28.31 88.58 244.99 89.44 2 56 3 2292.2 -28.09 79.90  
 90.00 20 46 57 3953.37 -7.78 158.25 239.66 62.69 21 52 52 3355.4 -11.38 151.42  
 100.00 3 43 43 2578.59 -29.86 65.33 244.98 91.48 4 28 40 1978.6 -29.33 56.57  
 100.00 21 51 46 3748.17 -6.41 142.14 238.93 60.74 22 54 12 3146.2 -10.27 135.47  
 110.00 5 27 58 2256.68 -33.62 40.72 244.67 96.60 6 5 35 1656.7 -32.34 31.72  
 110.00 22 26 0 3638.86 -3.21 132.02 236.94 55.95 23 26 38 3038.9 -7.65 125.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4281 TRA -.7097 TC3 1.1185 BAU .1909 SGT 1641.6 SGR 537.2 SG3 277.7 ST 797.3 SR 466.6 SS 688.6  
 RDE -.2833 RRA -.0455 RC3 .3658 FAU .05181 RRT .7115 RRF -.7579 RTF -.9031 CRT .9031 CRS .9418 CST .9941  
 FDE .8866 FRA .8740 FC3-3.6983 BSP 5503 SGB 1727.3 R23 -.1159 R13 -.9105 LSA 1138.4 MSA 176.1 SSA 20.0  
 BDE .5117 BRA .7112 BC3 1.1768 FSP -796 SGT 1687.8 SGT 367.2 THA 13.77 EL1 906.7 EL2 176.1 ALF 29.07





LAUNCH DATE JAN 13 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 314.418

RL 147.14 LAL .00 LOL 112.64 VL 27.335 GAL .46 AZL 89.47 HCA 137.76 SMA 125.59 ECC .17179 INC .5289 V1 30.279  
 RP 108.57 LAP .36 LOP 250.39 VP 37.257 GAP -6.12 AZP 90.39 TAL 177.80 TAP 315.55 RCA 104.01 APO 147.16 V2 34.906  
 RC 61.981 GL 4.89 GP 22.44 ZAL 87.49 ZAP 34.25 ETS 325.72 ZAE 144.61 ETE 30.57 ZAC 125.19 ETC 145.00 CLP -26.58

PLANETOCENTRIC CONIC

C3 8.759 VHL 2.960 DLA 14.28 RAL 21.46 RAD 6567.3 VEL 11.408 PTH 1.97 VHP 5.053 DPA 35.10 RAP 32.73 ECC 1.1442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 25 30 2496.52 -25.26 60.16 234.40 103.24 4 7 6 1896.5 -23.19 52.10  
 90.00 19 8 28 4219.87 .68 173.09 230.92 61.69 20 18 48 3619.9 -3.11 166.46  
 100.00 4 54 27 2209.64 -26.22 38.79 234.13 104.89 5 31 16 1609.6 -23.92 30.75  
 100.00 20 22 12 3981.97 1.54 155.12 230.44 60.14 21 28 34 3382.0 -2.44 148.60  
 110.00 6 19 44 1942.78 -28.73 17.65 233.26 109.37 6 52 7 1342.8 -25.82 9.69  
 110.00 21 13 24 3821.60 3.77 141.56 229.05 56.00 22 17 6 3221.6 -.72 135.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3012 TRA -.5996 TC3 1.7107 BAU .2477 SGT 1673.4 SGR 914.5 SG3 450.1 ST 685.6 SR 468.1 SS 590.0  
 RDE -.2374 RRA -.1438 RC3 1.2447 FAU .07739 RRT .8871 RRF -.9502 RTF -.9197 CRT .9334 CRS .9366 CST .9983  
 FDE .5957 FRA 1.1535 FC3-7.6489 BSP 6139 SGB 1907.0 R23 -.1950 R13 -.9447 LSA 1007.2 MSA 148.9 SSA 25.4  
 BDE .3835 BRA .6166 BC3 2.1156 FSP -1350 SGI 1869.2 SG2 377.8 THA 27.06 EL1 818.1 EL2 140.7 ALF 33.64

LAUNCH DATE JAN 13 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 320.975

RL 147.14 LAL .00 LOL 112.64 VL 27.395 GAL .35 AZL 89.73 HCA 140.93 SMA 125.98 ECC .16807 INC .2659 V1 30.279  
 RP 108.60 LAP .17 LOP 253.57 VP 37.291 GAP -5.56 AZP 90.21 TAL 178.27 TAP 319.20 RCA 104.81 APO 147.15 V2 34.894  
 RC 64.032 GL 2.53 GP 25.16 ZAL 88.44 ZAP 38.06 ETS 326.26 ZAE 143.53 ETE 35.03 ZAC 123.62 ETC 143.44 CLP -29.56

PLANETOCENTRIC CONIC

C3 8.344 VHL 2.889 DLA 11.73 RAL 21.46 RAD 6567.3 VEL 11.390 PTH 1.97 VHP 4.847 DPA 37.66 RAP 31.55 ECC 1.1373  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 30 2399.88 -23.59 53.57 232.93 106.13 4 27 30 1799.9 -21.15 45.75  
 90.00 18 46 25 4298.13 3.20 177.46 230.09 61.85 19 58 3 3698.1 -.59 170.83  
 100.00 5 14 47 2118.35 -24.47 32.57 232.63 107.72 5 50 6 1518.3 -21.82 24.78  
 100.00 20 1 48 4054.90 4.01 159.13 229.64 60.35 21 9 23 3454.9 .03 152.60  
 110.00 6 36 29 1862.69 -26.80 12.22 231.70 112.06 7 7 32 1262.7 -23.57 4.55  
 110.00 20 56 35 3883.32 6.11 144.81 228.34 56.30 22 1 19 3283.3 1.64 138.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2824 TRA -.5791 TC3 1.7694 BAU .2621 SGT 1640.7 SGR 1055.9 SG3 487.6 ST 629.0 SR 449.0 SS 526.1  
 RDE -.2194 RRA -.1769 RC3 1.5454 FAU .08278 RRT .9002 RRF -.9664 RTF -.9201 CRT .9387 CRS .9194 CST .9963  
 FDE .5030 FRA 1.2319 FC3-8.5890 BSP 6295 SGB 1951.1 R23 -.1988 R13 -.9528 LSA 923.0 MSA 146.4 SSA 27.3  
 BDE .3420 BRA .6055 BC3 2.3493 FSP -1477 SGI 1910.7 SG2 394.9 THA 31.59 EL1 762.2 EL2 127.8 ALF 34.95

LAUNCH DATE JAN 13 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 327.510

RL 147.14 LAL .00 LOL 112.64 VL 27.448 GAL .26 AZL 90.03 HCA 144.11 SMA 126.33 ECC .16479 INC .0313 V1 30.279  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.319 GAP -5.03 AZP 89.97 TAL 178.71 TAP 322.81 RCA 105.51 APO 147.15 V2 34.883  
 RC 66.131 GL -.34 GP 28.31 ZAL 89.31 ZAP 42.21 ETS 326.77 ZAE 142.19 ETE 39.98 ZAC 121.59 ETC 141.98 CLP -32.72

PLANETOCENTRIC CONIC

C3 8.016 VHL 2.831 DLA 8.75 RAL 21.71 RAD 6567.3 VEL 11.376 PTH 1.96 VHP 4.680 DPA 40.51 RAP 29.83 ECC 1.1319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 12 44 2294.25 -21.42 46.59 231.83 108.98 4 50 58 1694.2 -18.63 39.03  
 90.00 18 23 10 4388.82 6.10 182.55 229.73 62.29 19 36 19 3788.8 2.34 175.89  
 100.00 5 38 20 2018.16 -22.24 25.97 231.51 110.51 6 11 58 1418.2 -19.25 18.45  
 100.00 19 40 15 4140.13 6.86 163.85 229.32 60.83 20 49 15 3540.1 2.92 157.28  
 110.00 6 56 16 1774.25 -24.41 6.47 230.53 114.71 7 25 51 1174.2 -20.87 359.11  
 110.00 20 38 48 3956.82 8.87 148.71 228.09 56.85 21 44 44 3356.8 4.45 142.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2246 TRA -.5617 TC3 1.7769 BAU .2784 SGT 1594.2 SGR 1228.8 SG3 522.3 ST 571.4 SR 418.0 SS 456.9  
 RDE -.1948 RRA -.2200 RC3 1.8953 FAU .08746 RRT .9071 RRF -.9778 RTF -.9181 CRT .9494 CRS .8846 CST .9826  
 FDE .3796 FRA 1.3237 FC3-9.4460 BSP 6401 SGB 2012.9 R23 -.1954 R13 -.9609 LSA 828.8 MSA 149.3 SSA 28.7  
 BDE .2973 BRA .6032 BC3 2.5980 FSP -1581 SGI 1968.8 SG2 418.9 THA 36.91 EL1 699.8 EL2 107.2 ALF 35.75

LAUNCH DATE JAN 13 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 334.022

RL 147.14 LAL .00 LOL 112.64 VL 27.495 GAL .17 AZL 90.39 HCA 147.28 SMA 126.64 ECC .16190 INC .3852 V1 30.279  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.344 GAP -4.52 AZP 89.68 TAL 179.10 TAP 326.38 RCA 106.14 APO 147.14 V2 34.873  
 RC 68.274 GL -3.80 GP 31.93 ZAL 90.10 ZAP 46.69 ETS 327.33 ZAE 140.46 ETE 45.37 ZAC 119.05 ETC 140.66 CLP -36.08

PLANETOCENTRIC CONIC

C3 7.788 VHL 2.791 DLA 5.24 RAL 22.26 RAD 6567.3 VEL 11.366 PTH 1.96 VHP 4.557 DPA 43.68 RAP 27.45 ECC 1.1282  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 42 3 2177.23 -18.64 39.13 231.23 111.71 5 18 20 1577.2 -15.53 31.84  
 90.00 17 58 15 4495.23 9.42 188.60 229.98 63.17 19 13 10 3895.2 5.74 181.85  
 100.00 6 5 52 1906.90 -19.41 18.91 230.89 113.19 6 37 39 1306.9 -16.11 11.68  
 100.00 19 17 7 4240.79 10.16 169.50 229.59 61.73 20 27 48 3640.8 6.30 162.84  
 110.00 7 19 46 1675.60 -21.46 .32 229.87 117.27 7 47 42 1075.6 -17.63 353.28  
 110.00 20 19 42 4044.86 12.11 153.47 228.43 57.79 21 27 7 3444.9 7.77 147.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1834 TRA -.5419 TC3 1.7360 BAU .2997 SGT 1526.1 SGR 1436.4 SG3 550.9 ST 505.0 SR 366.0 SS 388.9  
 RDE -.1570 RRA -.2735 RC3 2.2955 FAU .09115 RRT .9090 RRF -.9855 RTF -.9143 CRT .9695 CRS .8075 CST .9196  
 FDE .2077 FRA 1.4139 FC-10.1317 BSP 6732 SGB 2095.8 R23 -.1805 R13 -.9698 LSA 714.7 MSA 169.3 SSA 28.0  
 BDE .2414 BRA .6070 BC3 2.8780 FSP -1697 SGI 2047.8 SG2 446.1 THA 43.09 EL1 619.4 EL2 73.2 ALF 35.66

LAUNCH DATE JAN 13 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 340.511

RL 147.14 LAL .00 LOL 112.64 VL 27.536 GAL .11 AZL 90.80 HCA 150.45 SMA 126.91 ECC .15938 INC .8021 V1 30.279
RP 108.70 LAP -.40 LOP 263.09 VP 37.365 GAP -4.02 AZP 89.30 TAL 179.44 TAP 329.89 RCA 106.68 APO 147.14 V2 34.862
RC 70.456 GL -7.99 GP 36.07 ZAL 90.78 ZAP 51.51 ETS 328.05 ZAE 138.17 ETE 51.08 ZAC 115.98 ETC 139.57 CLP -39.65

PLANETOCENTRIC CONIC

C3 7.689 VHL 2.773 DLA 1.09 RAL 23.17 RAD 6567.3 VEL 11.361 PTH 1.96 VHP 4.492 DPA 47.17 RAP 24.24 ECC 1.1265
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 16 42 2045.66 -15.14 31.06 231.30 114.22 5 50 48 1445.7 -11.75 24.03
90.00 17 30 54 4622.09 13.22 195.99 231.04 64.73 18 47 56 4022.1 9.70 189.07
100.00 6 38 33 1781.65 -15.88 11.29 230.94 115.66 7 8 14 1181.6 -12.30 4.33
100.00 18 51 44 4361.34 13.95 178.44 230.67 63.29 20 4 25 3761.3 10.25 169.60
110.00 7 47 57 1564.39 -17.85 353.72 229.86 119.65 8 14 2 964.4 -13.77 346.99
110.00 19 58 49 4151.35 15.90 159.40 229.57 59.33 21 8 0 3551.4 11.71 152.80

DIFFERENTIAL CORRECTIONS

TDE -.1404 TRA -.5271 TC3 1.5926 BAU .3223
RDE -.0987 RRA -.3467 RC3 2.7014 FAU .09213
FDE -.0164 FRA 1.5186 FC-10.3743 BSP 6861
BDE .1716 BRA .6308 BC3 3.1359 FSP -1720

MID-COURSE EXECUTION ACCURACY

SGT 1432.0 SGR 1673.1 SG3 566.2
RRR .9027 RRF -.9905 RTF -.9046
SGB 2202.2 R23 -.1588 R13 -.9780
SG1 2149.4 SG2 479.7 THA 49.91

ORBIT DETERMINATION ACCURACY

ST 437.8 SR 299.6 SS 371.8
CRT .9954 CRS .7082 CST .7213
LSA 606.6 MSA 226.2 SSA 23.3
EL1 529.9 EL2 23.7 ALF 34.34

LAUNCH DATE JAN 13 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 346.975

RL 147.14 LAL .00 LOL 112.64 VL 27.571 GAL .05 AZL 91.31 HCA 153.61 SMA 127.15 ECC .15721 INC 1.3089 V1 30.279
RP 108.73 LAP -.58 LOP 266.26 VP 37.382 GAP -3.54 AZP 88.83 TAL 179.73 TAP 333.35 RCA 107.16 APO 147.14 V2 34.853
RC 72.672 GL -13.06 GP 40.77 ZAL 91.33 ZAP 56.64 ETS 329.03 ZAE 135.19 ETE 56.94 ZAC 112.35 ETC 138.77 CLP -43.43

PLANETOCENTRIC CONIC

C3 7.770 VHL 2.787 DLA -3.82 RAL 24.52 RAD 6567.3 VEL 11.365 PTH 1.96 VHP 4.499 DPA 50.96 RAP 19.94 ECC 1.1279
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 58 35 1895.08 -10.76 22.18 232.29 116.35 6 30 10 1295.1 -7.13 15.38
90.00 16 59 47 4776.52 17.50 205.30 233.20 67.37 18 19 23 4176.5 14.28 198.10
100.00 7 18 9 1638.46 -11.49 2.93 231.91 117.79 7 45 27 1038.5 -7.68 356.21
100.00 18 22 55 4508.37 18.25 185.24 232.86 65.91 19 38 3 3908.4 14.85 178.11
110.00 8 22 17 1437.66 -13.44 346.55 230.77 121.73 8 46 15 837.7 -9.14 340.08
110.00 19 35 16 4281.95 20.27 167.00 231.81 61.87 20 46 38 3681.9 16.35 160.07

DIFFERENTIAL CORRECTIONS

TDE -.1073 TRA -.5072 TC3 1.4061 BAU .3552
RDE -.0162 RRA -.4396 RC3 3.1172 FAU .09137
FDE -.2669 FRA 1.6041 FC-10.1800 BSP 7414
BDE .1085 BRA .6712 BC3 3.4196 FSP -1756

MID-COURSE EXECUTION ACCURACY

SGT 1324.6 SGR 1959.9 SG3 569.4
RRR .8920 RRF -.9959 RTF -.8913
SGB 2365.6 R23 -.1295 R13 -.9855
SG1 2310.4 SG2 508.0 THA 57.13

ORBIT DETERMINATION ACCURACY

ST 383.9 SR 278.6 SS 445.4
CRT .8761 CRS .8142 CST .4405
LSA 572.4 MSA 309.1 SSA 16.8
EL1 461.0 EL2 111.9 ALF 34.79

LAUNCH DATE JAN 13 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 353.415

RL 147.14 LAL .00 LOL 112.64 VL 27.602 GAL .01 AZL 91.94 HCA 156.78 SMA 127.35 ECC .15535 INC 1.9421 V1 30.279
RP 108.78 LAP -.77 LOP 269.42 VP 37.396 GAP -3.07 AZP 88.22 TAL 179.96 TAP 336.73 RCA 107.57 APO 147.14 V2 34.844
RC 74.919 GL -19.15 GP 46.05 ZAL 91.70 ZAP 61.97 ETS 330.38 ZAE 131.38 ETE 62.73 ZAC 108.20 ETC 138.35 CLP -47.39

PLANETOCENTRIC CONIC

C3 8.134 VHL 2.852 DLA -9.63 RAL 26.42 RAD 6567.3 VEL 11.381 PTH 1.97 VHP 4.604 DPA 55.00 RAP 14.21 ECC 1.1339
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 50 57 1718.98 -5.28 12.14 234.64 117.86 7 19 36 1119.0 -1.51 5.49
90.00 16 22 35 4969.51 22.10 217.59 236.96 71.83 17 45 25 4369.5 19.41 209.94
100.00 8 7 33 1471.83 -6.05 353.55 234.22 119.33 8 32 5 871.8 -2.10 346.99
100.00 17 48 40 4691.89 22.93 196.86 236.65 70.28 19 6 52 4091.9 20.04 189.26
110.00 9 5 2 1291.85 -8.09 338.64 232.97 123.33 9 26 34 691.9 -3.65 332.37
110.00 19 7 41 4444.64 25.15 177.11 235.68 66.04 20 21 45 3844.6 21.69 169.66

DIFFERENTIAL CORRECTIONS

TDE -.1137 TRA -.5076 TC3 .7552 BAU .3436
RDE .0781 RRA -.5860 RC3 3.0678 FAU .07715
FDE -.4646 FRA 1.7314 FC3-8.2106 BSP 6920
BDE .1379 BRA .7753 BC3 3.1594 FSP -1505

MID-COURSE EXECUTION ACCURACY

SGT 1143.5 SGR 2124.3 SG3 513.0
RRR .8040 RRF -.9954 RTF -.8032
SGB 2412.5 R23 -.1193 R13 -.9882
SG1 2331.6 SG2 619.4 THA 64.69

ORBIT DETERMINATION ACCURACY

ST 385.5 SR 394.6 SS 564.0
CRT .4997 CRS .9524 CST .2141
LSA 695.6 MSA 372.1 SSA 11.3
EL1 477.7 EL2 275.8 ALF 46.33

LAUNCH DATE JAN 13 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 359.830

RL 147.14 LAL .00 LOL 112.64 VL 27.627 GAL -.02 AZL 92.76 HCA 159.93 SMA 127.53 ECC .15378 INC 2.7619 V1 30.279
RP 108.78 LAP -.95 LOP 272.59 VP 37.407 GAP -2.62 AZP 87.41 TAL 180.13 TAP 340.06 RCA 107.92 APO 147.14 V2 34.835
RC 77.194 GL -26.37 GP 51.91 ZAL 91.91 ZAP 67.41 ETS 332.25 ZAE 126.70 ETE 68.32 ZAC 103.58 ETC 138.42 CLP -51.49

PLANETOCENTRIC CONIC

C3 8.984 VHL 2.997 DLA -16.42 RAL 28.98 RAD 6567.3 VEL 11.418 PTH 1.98 VHP 4.843 DPA 59.16 RAP 6.51 ECC 1.1478
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 0 10 1503.82 1.65 .12 239.07 118.27 8 25 14 903.8 5.41 353.46
90.00 15 33 44 5222.25 26.41 234.82 243.01 79.40 17 0 46 4622.2 24.68 226.58
100.00 9 12 16 1271.15 .72 342.50 238.56 119.88 9 33 27 671.1 4.69 335.96
100.00 17 4 18 4930.15 27.45 213.10 242.77 77.67 18 26 28 4330.1 25.47 204.85
110.00 10 0 5 1121.39 -1.63 329.67 237.09 124.15 10 18 46 521.4 2.86 323.47
110.00 18 32 59 4852.67 30.13 191.22 241.97 73.03 19 50 32 4052.7 27.51 183.01

DIFFERENTIAL CORRECTIONS

TDE -.0265 TRA -.3561 TC3 .8299 BAU .4411
RDE .3482 RRA -.5892 RC3 3.5781 FAU .07939
FDE -.9577 FRA 1.3840 FC3-7.6511 BSP 8745
BDE .3472 BRA .6884 BC3 3.6730 FSP -1570

MID-COURSE EXECUTION ACCURACY

SGT 868.0 SGR 2533.2 SG3 488.7
RRR .8489 RRF -.9971 RTF -.8444
SGB 2677.8 R23 -.0536 R13 -.9957
SG1 2641.4 SG2 440.0 THA 73.30

ORBIT DETERMINATION ACCURACY

ST 219.3 SR 752.5 SS 842.6
CRT .2573 CRS .9978 CST .1938
LSA 1130.2 MSA 216.7 SSA 7.7
EL1 754.8 EL2 211.3 ALF 85.35

LAUNCH DATE JAN 13 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 366.214

RL 147.14 LAL .00 LOL 112.64 VL 27.649 GAL -.04 AZL 93.87 HCA 163.08 SMA 127.67 ECC .15240 INC 3.8726 V1 30.279
RP 108.81 LAP -1.13 LOP 275.75 VP 37.415 GAP -2.19 AZP 86.29 TAL 180.23 TAP 343.31 RCA 108.20 APO 147.14 V2 34.827
RC 79.493 GL -34.71 GP 58.35 ZAL 91.89 ZAP 72.76 ETS 334.72 ZAE 121.11 ETE 73.54 ZAC 98.58 ETC 139.04 CLP -55.63

PLANETOCENTRIC CONIC

C3 10.753 VHL 3.279 DLA -24.13 RAL 32.37 RAD 6567.4 VEL 11.495 PTH 2.00 VHP 5.284 DPA 63.21 RAP 356.08 ECC 1.1770
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 45 47 1202.40 11.12 343.04 247.21 116.21 10 5 50 602.4 14.55 336.05
90.00 14 15 12 5594.90 28.20 261.81 251.87 92.71 15 48 27 4994.9 28.28 253.14
100.00 10 47 1 1004.77 9.61 327.73 246.42 118.44 11 3 45 404.8 13.34 320.92
100.00 15 56 40 5267.76 29.89 237.79 251.92 90.37 17 24 28 4667.8 29.62 228.99
110.00 11 15 40 914.90 6.24 310.87 244.37 123.68 11 30 55 314.9 10.62 312.52
110.00 17 44 30 4930.40 33.82 211.97 251.72 84.74 19 6 41 4330.4 32.73 202.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0646 TRA -.3667 TC3 .4423 BAU .4818 SGT 767.9 SGR 2950.5 S63 432.4 ST 239.1 SR 1155.8 SS 993.6
RDE .5925 RRA -.8873 RC3 3.3222 FAU .06650 RRT .7537 RRF -.9982 RTF -.7481 CRT -.0326 CRS .9993 CST -.0688
FDE -1.1354 FRA 1.5481 FC3 -5.3540 BSP 9747 SGB 3048.7 R23 -.0396 R13 -.9974 LSA 1524.0 MSA 240.4 SSA 5.1
BDE .5961 BRA .9601 BC3 3.3515 FSP -1382 S61 3008.3 S62 495.0 THA 78.59 EL1 1155.9 EL2 239.0 ALF 90.40

LAUNCH DATE JAN 13 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 372.568

RL 147.14 LAL .00 LOL 112.64 VL 27.666 GAL -.04 AZL 95.47 HCA 166.22 SMA 127.79 ECC .15144 INC 5.4719 V1 30.279
RP 108.83 LAP -1.30 LOP 278.92 VP 37.421 GAP -1.77 AZP 84.68 TAL 180.25 TAP 346.47 RCA 108.44 APO 147.14 V2 34.820
RC 81.813 GL -43.90 GP 65.32 ZAL 91.66 ZAP 77.77 ETS 337.88 ZAE 114.64 ETE 78.37 ZAC 93.33 ETC 140.28 CLP -59.52

PLANETOCENTRIC CONIC

C3 14.475 VHL 3.805 DLA -32.45 RAL 36.81 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 6.050 DPA 66.79 RAP 341.80 ECC 1.2382
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.45 10 10 13 1227.43 24.32 351.08 261.48 112.17 10 30 41 627.4 27.11 343.17
106.55 14 26 11 5696.50 24.34 268.25 261.49 112.15 16 1 7 5096.5 27.12 260.34
73.45 10 10 13 1227.43 24.32 351.08 261.48 112.17 10 30 41 627.4 27.11 343.17
106.55 14 26 11 5696.50 24.34 268.25 261.49 112.15 16 1 7 5096.5 27.12 260.34
110.00 13 25 39 5883.56 17.77 279.22 258.07 119.69 15 3 43 5283.6 21.58 272.17
110.00 16 9 55 5376.41 31.25 246.18 264.08 104.61 17 39 31 4776.4 32.94 237.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1325 TRA -.2953 TC3 .1365 BAU .5187 SGT 573.0 SGR 3301.7 S63 345.5 ST 254.6 SR 1611.4 SS 1086.6
RDE .9808 RRA -1.1980 RC3 2.6767 FAU .05092 RRT .5516 RRF -.9987 RTF -.5430 CRT -.4707 CRS .9998 CST -.4882
FDE -1.2761 FRA 1.4749 FC3 -3.0456 BSP 10952 SGB 3351.0 R23 -.0234 R13 -.9985 LSA 1947.3 MSA 224.2 SSA 3.4
BDE .9897 BRA 1.2339 BC3 2.6802 FSP -1136 S61 3317.1 S62 475.7 THA 84.42 EL1 1616.0 EL2 224.0 ALF 94.34

LAUNCH DATE JAN 13 1969

FLIGHT TIME 138.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 378.883

RL 147.14 LAL .00 LOL 112.64 VL 27.679 GAL -.03 AZL 97.99 HCA 169.35 SMA 127.88 ECC .15062 INC 7.9885 V1 30.279
RP 108.85 LAP -1.47 LOP 282.08 VP 37.424 GAP -1.37 AZP 82.15 TAL 180.18 TAP 349.53 RCA 108.62 APO 147.14 V2 34.813
RC 84.153 GL -53.27 GP 72.95 ZAL 91.24 ZAP 82.19 ETS 341.70 ZAE 107.22 ETE 82.80 ZAC 87.92 ETC 142.19 CLP -62.37

PLANETOCENTRIC CONIC

C3 23.037 VHL 4.800 DLA -40.68 RAL 42.41 RAD 6567.9 VEL 12.017 PTH 2.14 VHP 7.408 DPA 69.29 RAP 322.41 ECC 1.3791
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.49 9 16 21 1562.65 26.27 19.05 277.35 122.25 9 42 23 962.6 30.32 11.63
120.51 16 4 44 5578.27 26.28 259.91 277.36 122.24 17 37 42 4978.3 30.33 252.49
59.49 9 16 21 1562.65 26.27 19.05 277.35 122.25 9 42 23 962.6 30.32 11.63
120.51 16 4 44 5578.27 26.28 259.91 277.36 122.24 17 37 42 4978.3 30.33 252.49
59.49 9 16 21 1562.65 26.27 19.05 277.35 122.25 9 42 23 962.6 30.32 11.63
120.51 16 4 44 5578.27 26.28 259.91 277.36 122.24 17 37 42 4978.3 30.33 252.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2893 TRA -.1435 TC3 -.0478 BAU .5262 SGT 415.2 SGR 3497.9 S63 241.9 ST 351.9 SR 1963.4 SS 1045.5
RDE 1.5193 RRA -1.5893 RC3 1.7079 FAU .03346 RRT -.0940 RRF -.9990 RTF .1057 CRT -.8329 CRS .9999 CST -.8397
FDE -1.2704 FRA 1.2832 FC3 -1.2573 BSP 12152 SGB 3522.4 R23 -.0105 R13 -.9990 LSA 2243.9 MSA 192.6 SSA 2.3
BDE 1.5466 BRA 1.5958 BC3 1.7085 FSP -845 S61 3498.1 S62 413.3 THA 90.65 EL1 1985.4 EL2 192.6 ALF 98.57

LAUNCH DATE JAN 13 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 385.128

RL 147.14 LAL .00 LOL 112.64 VL 27.689 GAL -.00 AZL 102.54 HCA 172.43 SMA 127.94 ECC .15002 INC 12.5405 V1 30.279
RP 108.87 LAP -1.64 LOP 285.24 VP 37.426 GAP -.98 AZP 77.57 TAL 180.03 TAP 352.46 RCA 108.75 APO 147.14 V2 34.807
RC 86.508 GL -61.59 GP 81.58 ZAL 90.76 ZAP 85.75 ETS 345.98 ZAE 98.48 ETE 86.77 ZAC 82.31 ETC 144.79 CLP -59.58

PLANETOCENTRIC CONIC

C3 46.720 VHL 6.835 DLA -47.65 RAL 48.76 RAD 6568.7 VEL 12.965 PTH 2.36 VHP 10.050 DPA 69.74 RAP 297.34 ECC 1.7689
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.93 9 4 10 1839.08 22.18 40.54 296.94 133.32 9 34 49 1239.1 27.53 34.40
130.07 17 7 36 5655.90 22.19 263.42 296.95 133.32 18 41 52 5055.9 27.54 257.28
49.93 9 4 10 1839.08 22.18 40.54 296.94 133.32 9 34 49 1239.1 27.53 34.40
130.07 17 7 36 5655.90 22.19 263.42 296.95 133.32 18 41 52 5055.9 27.54 257.28
49.93 9 4 10 1839.08 22.18 40.54 296.94 133.32 9 34 49 1239.1 27.53 34.40
130.07 17 7 36 5655.90 22.19 263.42 296.95 133.32 18 41 52 5055.9 27.54 257.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.9508 TRA .1518 TC3 -.0414 BAU .5193 SGT 502.1 SGR 3727.4 S63 155.8 ST 465.2 SR 2191.7 SS 936.1
RDE 2.3951 RRA -2.3533 RC3 .8304 FAU .01940 RRT -.8252 RRF -.9994 RTF .8327 CRT -.9581 CRS 1.0000 CST -.9594
FDE -1.1804 FRA 1.1451 FC3 -.3595 BSP 16236 SGB 3761.0 R23 -.0058 R13 -.9995 LSA 2424.7 MSA 130.7 SSA 1.5
BDE 2.4576 BRA 2.3582 BC3 .8314 FSP -690 S61 3750.5 S62 281.8 THA 96.38 EL1 2236.7 EL2 130.6 ALF 101.54

LAUNCH DATE JAN 13 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 391.244

RL 147.14 LAL .00 LOL 112.64 VL 27.695 GAL .06 AZL 113.09 HCA 175.40 SMA 127.99 ECC .14963 INC23.0890 V1 30.279  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.426 GAP -.65 AZP 66.98 TAL 179.63 TAP 355.04 RCA 108.84 APO 147.14 V2 34.802  
 RC 88.877 GL -66.15 GP 85.64 ZAL 90.28 ZAP 88.21 ETS 179.64 ZAE 86.71 ETE 279.52 ZAC 75.91 ETC 337.75 CLP 65.72

PLANETOCENTRIC CONIC

C3 141.028 VHL 11.876 DLA -51.16 RAL 53.27 RAD 6570.5 VEL 16.197 PTH 2.84 VHP 16.395 DPA 66.18 RAP 267.42 ECC 3.3210  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.43 9 7 19 2122.80 10.72 56.11 314.48 140.34 9 42 42 1522.8 16.83 51.21  
 134.57 17 40 22 5868.66 10.73 271.87 314.50 140.34 19 18 10 5268.7 16.84 266.96  
 45.43 9 7 19 2122.80 10.72 56.11 314.48 140.34 9 42 42 1522.8 16.83 51.21  
 134.57 17 40 22 5868.66 10.73 271.87 314.50 140.34 19 18 10 5268.7 16.84 266.96  
 45.43 9 7 19 2122.80 10.72 56.11 314.48 140.34 9 42 42 1522.8 16.83 51.21  
 134.57 17 40 22 5868.66 10.73 271.87 314.50 140.34 19 18 10 5268.7 16.84 266.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.1349 TRA 1.6418 TC3 .0069 BAU .0526 SGT 2361.3 SGR 3193.9 SG3 93.5 ST 2030.7 SR 988.1 SS 844.4  
 RDE -.5256 RRA 4.1375 RC3 -.0270 FAU-.00037 RRT .4659 RRF .9104 RTF .0590 CRT -.0716 CRS -.6863 CST .7747  
 FDE-1.0862 FRA 1.2310 FC3 .0022 BSP 12515 SGB 3972.0 R23 .6550 R13 .7550 LSA 2146.9 MSA 1097.2 SSA 1.2  
 BDE 4.1682 BRA 4.4513 BC3 .0279 FSP -303 SGI 3477.8 SG2 1918.8 THA 61.68 EL1 2032.3 EL2 984.7 ALF 177.38

LAUNCH DATE JAN 13 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 396.660

RL 147.14 LAL .00 LOL 112.64 VL 27.698 GAL .27 AZL 151.41 HCA 177.77 SMA 128.01 ECC .14950 INC61.4057 V1 30.279  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.424 GAP -.49 AZP 28.81 TAL 178.46 TAP 356.23 RCA 108.87 APO 147.15 V2 34.797  
 RC 91.258 GL -55.01 GP 61.23 ZAL 89.92 ZAP 89.40 ETS 176.76 ZAE 61.79 ETE 276.48 ZAC 65.64 ETC 340.36 CLP 88.76

PLANETOCENTRIC CONIC

C3 881.228 VHL 29.685 DLA -41.55 RAL 45.05 RAD 6572.9 VEL 31.663 PTH 3.48 VHP 38.424 DPA 48.84 RAP 232.57 ECC15.5028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.22 9 21 21 2206.36 -.01 52.81 315.05 131.55 9 58 7 1606.4 5.29 47.22  
 121.78 16 20 48 903.26 .01 313.12 315.06 131.55 16 35 51 303.3 5.30 307.53  
 58.22 9 21 21 2206.36 -.01 52.81 315.05 131.55 9 58 7 1606.4 5.29 47.22  
 121.78 16 20 48 903.26 .01 313.12 315.06 131.55 16 35 51 303.3 5.30 307.53  
 58.22 9 21 21 2206.36 -.01 52.81 315.05 131.55 9 58 7 1606.4 5.29 47.22  
 121.78 16 20 48 903.26 .01 313.12 315.06 131.55 16 35 51 303.3 5.30 307.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.2933 TRA-1.4889 TC3 -.0873 BAU 2.9269 SGT 1208.3 SGR 3437.6 SG3 62.6 ST 1028.2 SR 1801.1 SS 1287.1  
 RDE-8.3268 RRA10.4952 RC3 .2326 FAU-.04985 RRT -.8179 RRF .9999 RTF -.8268 CRT -.9374 CRS -.9999 CST .9428  
 FDE-1.8063 FRA 2.1889 FC3 .0490 BSP 10985 SGB 3643.7 R23 -.0400 R13 .9992 LSA 2419.4 MSA 323.3 SSA .4  
 BDE 9.8668 BRA10.6003 BC3 .2484 FSP -196 SGI 3582.1 SG2 667.1 THA 106.63 EL1 2050.0 EL2 314.5 ALF 118.90

LAUNCH DATE JAN 13 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 405.193

RL 147.14 LAL .00 LOL 112.64 VL 27.699 GAL -.11 AZL 44.82 HCA 182.97 SMA 128.01 ECC .14940 INC45.1837 V1 30.279  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.420 GAP .47 AZP 135.14 TAL 180.64 TAP 3.61 RCA 108.89 APO 147.14 V2 34.793  
 RC 93.644 GL 61.30 GP -74.10 ZAL 90.36 ZAP 90.52 ETS 174.95 ZAE 74.22 ETE 77.99 ZAC 95.65 ETC 266.77 CLP 91.90

PLANETOCENTRIC CONIC

C3 501.774 VHL 22.400 DLA 61.16 RAL 337.47 RAD 6572.4 VEL 24.961 PTH 3.34 VHP 26.277 DPA -65.94 RAP 137.34 ECC 9.2579  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.23 15 29 26 5002.37 -2.20 240.08 246.28 28.87 16 52 48 4402.4 -9.19 236.60  
 146.77 1 13 34 3321.77 -2.19 101.64 246.26 28.87 2 8 56 2721.8 -9.18 98.15  
 33.23 15 29 26 5002.37 -2.20 240.08 246.28 28.87 16 52 48 4402.4 -9.19 236.60  
 146.77 1 13 34 3321.77 -2.19 101.64 246.26 28.87 2 8 56 2721.8 -9.18 98.15  
 33.23 15 29 26 5002.37 -2.20 240.08 246.28 28.87 16 52 48 4402.4 -9.19 236.60  
 146.77 1 13 34 3321.77 -2.19 101.64 246.26 28.87 2 8 56 2721.8 -9.18 98.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-3.1615 TRA 2.2244 TC3 -.1002 BAU 1.5720 SGT 1498.7 SGR 3790.7 SG3 71.4 ST 882.8 SR 3421.9 SS 1666.0  
 RD-13.2781 RRA 2.6230 RC3 -.2119 FAU-.02616 RRT .8471 RRF -.9990 RTF -.8693 CRT .9582 CRS .9999 CST .9627  
 FDE 2.8413 FRA -.6372 FC3 .0451 BSP 13136 SGB 4076.2 R23 -.0220 R13 -.9997 LSA 3899.3 MSA 245.2 SSA .8  
 BDE13.6493 BRA 3.4391 BC3 .2343 FSP -240 SGI 4006.0 SG2 753.7 THA 70.78 EL1 3525.5 EL2 245.2 ALF 76.05

LAUNCH DATE JAN 13 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 410.992

RL 147.14 LAL .00 LOL 112.64 VL 27.697 GAL .04 AZL 66.78 HCA 185.72 SMA 128.00 ECC .14952 INC23.2164 V1 30.279  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.416 GAP .72 AZP 113.11 TAL 179.79 TAP 5.51 RCA 108.86 APO 147.14 V2 34.789  
 RC 96.038 GL 66.16 GP -87.92 ZAL 90.34 ZAP 91.80 ETS 163.32 ZAE 91.10 ETE 67.84 ZAC 103.26 ETC 15.40 CLP-150.06

PLANETOCENTRIC CONIC

C3 142.492 VHL 11.937 DLA 64.01 RAL 328.92 RAD 6570.5 VEL 16.243 PTH 2.85 VHP 13.154 DPA -66.82 RAP 93.91 ECC 3.3451  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.85 14 47 13 4851.72 -12.29 237.86 232.84 26.65 16 8 4 4251.7 -19.41 234.48  
 150.15 0 47 35 3143.58 -12.28 95.46 232.82 26.65 1 39 59 2543.6 -19.40 92.08  
 29.85 14 47 13 4851.72 -12.29 237.86 232.84 26.65 16 8 4 4251.7 -19.41 234.48  
 150.15 0 47 35 3143.58 -12.28 95.46 232.82 26.65 1 39 59 2543.6 -19.40 92.08  
 29.85 14 47 13 4851.72 -12.29 237.86 232.84 26.65 16 8 4 4251.7 -19.41 234.48  
 150.15 0 47 35 3143.58 -12.28 95.46 232.82 26.65 1 39 59 2543.6 -19.40 92.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.1299 TRA 2.1028 TC3 .0072 BAU .0147 SGT 2749.8 SGR 3312.0 SG3 118.3 ST 1653.6 SR 3175.6 SS 1320.1  
 RDE-6.9873 RRA .9002 RC3 .0027 FAU .00279 RRT -.2722 RRF -.9593 RTF -.0097 CRT -.8656 CRS .9946 CST -.8091  
 FDE 2.3730 FRA -.6925 FC3 -.0169 BSP 13073 SGB 4304.7 R23 .6007 R13 -.7990 LSA 3732.8 MSA 792.3 SSA 1.2  
 BDE 7.2931 BRA 2.2874 BC3 .0077 FSP -374 SGI 3503.4 SG2 2501.5 THA 117.75 EL1 3500.7 EL2 751.0 ALF 115.52

LAUNCH DATE JAN 13 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 417.088

RL 147.14 LAL .00 LOL 112.64 VL 27.692 GAL .14 AZL 74.11 HCA 188.75 SMA 127.97 ECC .14981 INC15.8944 V1 30.279  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.410 GAP 1.04 AZP 105.72 TAL 179.23 TAP 7.98 RCA 108.80 APO 147.14 V2 34.787  
 RC 98.436 GL 64.33 GP -78.61 ZAL 90.16 ZAP 94.15 ETS 348.09 ZAE 100.66 ETE 253.14 ZAC 106.73 ETC 200.32 CLP-111.51

PLANETOCENTRIC CONIC

C3 70.806 VHL 8.415 DLA 63.15 RAL 332.59 RAD 6569.4 VEL 13.862 PTH 2.53 VHP 8.780 DPA -62.76 RAP 72.45 ECC 2.1653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.86 15 4 12 4699.29 -21.11 232.73 231.33 28.95 16 22 32 4099.3 -28.05 228.77  
 149.14 0 59 49 2998.96 -21.10 91.49 231.31 28.95 1 49 48 2399.0 -28.04 87.53  
 30.86 15 4 12 4699.29 -21.11 232.73 231.33 28.95 16 22 32 4099.3 -28.05 228.77  
 149.14 0 59 49 2998.96 -21.10 91.49 231.31 28.95 1 49 48 2399.0 -28.04 87.53  
 30.86 15 4 12 4699.29 -21.11 232.73 231.33 28.95 16 22 32 4099.3 -28.05 228.77  
 149.14 0 59 49 2998.96 -21.10 91.49 231.31 28.95 1 49 48 2399.0 -28.04 87.53

DIFFERENTIAL CORRECTIONS

TDE 3.3012 TRA -.9280 TC3 -.2028 BAU .3651  
 RDE 4.1759 RRA-1.2388 RC3 -.3281 FAU .02024  
 FDE 2.8184 FRA -.7293 FC3 -.2475 BSP 13489  
 BDE 5.3231 BRA 1.5478 BC3 .3857 F8P -633

MID-COURSE EXECUTION ACCURACY

SGT 2669.6 SGR 3446.5 SG3 194.5  
 RRT .9992 RRF .9979 RTF .9977  
 SGB 4359.5 R23 .0001 R13 .9980  
 SG1 4358.6 SG2 85.8 THA 52.25

ORBIT DETERMINATION ACCURACY

ST 2286.7 SR 2898.1 SS 1477.2  
 CRT .9999 CRS -.9997 CST -.9999  
 LSA 3976.1 MSA 33.3 SSA 2.8  
 EL1 3691.6 EL2 18.0 ALF 51.73

LAUNCH DATE JAN 13 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 423.239

RL 147.14 LAL .00 LOL 112.64 VL 27.686 GAL .23 AZL 77.65 HCA 191.85 SMA 127.92 ECC .15026 INC12.3498 V1 30.279  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.403 GAP 1.37 AZP 102.09 TAL 178.69 TAP 10.53 RCA 108.70 APO 147.14 V2 34.785  
 RC 100.837 GL 61.36 GP -70.68 ZAL 89.80 ZAP 97.37 ETS 343.47 ZAE 107.93 ETE 248.15 ZAC 108.70 ETC 195.56 CLP-112.81

PLANETOCENTRIC CONIC

C3 45.522 VHL 6.747 DLA 61.63 RAL 338.14 RAD 6568.7 VEL 12.918 PTH 2.35 VHP 6.755 DPA -58.12 RAP 59.32 ECC 1.7492  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.67 15 30 43 4583.68 -27.09 227.34 232.11 32.26 16 47 7 3983.7 -33.77 222.64  
 147.33 1 17 36 2898.25 -27.08 88.23 232.09 32.26 2 5 54 2298.3 -33.76 83.53  
 32.67 15 30 43 4583.68 -27.09 227.34 232.11 32.26 16 47 7 3983.7 -33.77 222.64  
 147.33 1 17 36 2898.25 -27.08 88.23 232.09 32.26 2 5 54 2298.3 -33.76 83.53  
 32.67 15 30 43 4583.68 -27.09 227.34 232.11 32.26 16 47 7 3983.7 -33.77 222.64  
 147.33 1 17 36 2898.25 -27.08 88.23 232.09 32.26 2 5 54 2298.3 -33.76 83.53

DIFFERENTIAL CORRECTIONS

TDE 2.7748 TRA -.8281 TC3 -.4934 BAU .4894  
 RDE 3.4003 RRA -.7677 RC3 -.6350 FAU .03777  
 FDE 3.4307 FRA -.7251 FC3 -.7183 BSP 13715  
 BDE 4.3890 BRA 1.1277 BC3 .8042 F8P -963

MID-COURSE EXECUTION ACCURACY

SGT 2859.2 SGR 3309.8 SG3 287.9  
 RRT .9933 RRF .9992 RTF .9889  
 SGB 4373.8 R23 .0799 R13 .9964  
 SG1 4366.6 SG2 250.3 THA 49.21

ORBIT DETERMINATION ACCURACY

ST 2397.7 SR 2917.0 SS 1715.4  
 CRT .9990 CRS -1.0000 CST -.9986  
 LSA 4146.4 MSA 91.9 SSA 1.5  
 EL1 3775.1 EL2 81.9 ALF 50.59

LAUNCH DATE JAN 13 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 429.400

RL 147.14 LAL .00 LOL 112.64 VL 27.677 GAL .33 AZL 79.74 HCA 194.97 SMA 127.86 ECC .15086 INC10.2640 V1 30.279  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.395 GAP 1.71 AZP 99.92 TAL 178.12 TAP 13.09 RCA 108.57 APO 147.15 V2 34.784  
 RC 103.240 GL 58.30 GP -63.68 ZAL 89.28 ZAP 101.21 ETS 340.01 ZAE 113.86 ETE 243.35 ZAC 109.81 ETC 191.63 CLP-116.01

PLANETOCENTRIC CONIC

C3 33.599 VHL 5.796 DLA 59.95 RAL 343.49 RAD 6568.3 VEL 12.449 PTH 2.25 VHP 5.649 DPA -53.40 RAP 50.12 ECC 1.5530  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.67 15 57 1 4498.11 -30.90 222.24 233.24 35.70 17 11 59 3898.1 -37.27 216.80  
 145.33 1 33 57 2830.56 -30.89 85.54 233.22 35.70 2 21 8 2230.6 -37.26 80.11  
 34.67 15 57 1 4498.11 -30.90 222.24 233.24 35.70 17 11 59 3898.1 -37.27 216.80  
 145.33 1 33 57 2830.56 -30.89 85.54 233.22 35.70 2 21 8 2230.6 -37.26 80.11  
 34.67 15 57 1 4498.11 -30.90 222.24 233.24 35.70 17 11 59 3898.1 -37.27 216.80  
 145.33 1 33 57 2830.56 -30.89 85.54 233.22 35.70 2 21 8 2230.6 -37.26 80.11

DIFFERENTIAL CORRECTIONS

TDE 2.6371 TRA -.7122 TC3 -.8437 BAU .5475  
 RDE 2.7711 RRA -.4776 RC3 -.8796 FAU .05522  
 FDE 3.9891 FRA -.6492 FC3-1.4229 BSP 13693  
 BDE 3.8254 BRA .8574 BC3 1.2188 F8P -1303

MID-COURSE EXECUTION ACCURACY

SGT 3118.9 SGR 3071.1 SG3 385.5  
 RRT .9879 RRF .9991 RTF .9839  
 SGB 4377.1 R23 .0987 R13 .9944  
 SG1 4363.9 SG2 340.2 THA 44.55

ORBIT DETERMINATION ACCURACY

ST 2640.7 SR 2753.9 SS 1933.8  
 CRT .9983 CRS -1.0000 CST -.9980  
 LSA 4275.7 MSA 123.7 SSA 2.1  
 EL1 3813.8 EL2 109.6 ALF 46.20

LAUNCH DATE JAN 13 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 435.556

RL 147.14 LAL .00 LOL 112.64 VL 27.666 GAL .44 AZL 81.11 HCA 198.11 SMA 127.79 ECC .15160 INC 8.8867 V1 30.279  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.387 GAP 2.04 AZP 98.45 TAL 177.51 TAP 15.62 RCA 108.42 APO 147.16 V2 34.783  
 RC 105.643 GL 55.40 GP -57.37 ZAL 88.61 ZAP 105.42 ETS 337.34 ZAE 118.73 ETE 238.41 ZAC 110.35 ETC 188.22 CLP-119.55

PLANETOCENTRIC CONIC

C3 26.958 VHL 5.192 DLA 58.32 RAL 348.29 RAD 6568.1 VEL 12.179 PTH 2.19 VHP 4.995 DPA -48.78 RAP 43.26 ECC 1.4437  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.63 16 21 13 4433.42 -33.28 217.61 234.41 38.92 17 35 6 3833.4 -39.34 211.54  
 143.37 1 48 7 2784.86 -33.27 83.36 234.40 38.91 2 34 31 2184.9 -39.33 77.29  
 36.63 16 21 13 4433.42 -33.28 217.61 234.41 38.92 17 35 6 3833.4 -39.34 211.54  
 143.37 1 48 7 2784.86 -33.27 83.36 234.40 38.91 2 34 31 2184.9 -39.33 77.29  
 36.63 16 21 13 4433.42 -33.28 217.61 234.41 38.92 17 35 6 3833.4 -39.34 211.54  
 143.37 1 48 7 2784.86 -33.27 83.36 234.40 38.91 2 34 31 2184.9 -39.33 77.29

DIFFERENTIAL CORRECTIONS

TDE 2.5835 TRA -.6087 TC3-1.2310 BAU .5807  
 RDE 2.2816 RRA -.2836 RC3-1.0398 FAU .07092  
 FDE 4.3997 FRA -.5080 FC3-2.2775 BSP 13701  
 BDE 3.4468 BRA .6697 BC3 1.6114 F8P -1623

MID-COURSE EXECUTION ACCURACY

SGT 3374.5 SGR 2803.6 SG3 475.6  
 RRT .9849 RRF .9987 RTF .9811  
 SGB 4387.2 R23 .1173 R13 .9919  
 SG1 4371.2 SG2 374.4 THA 39.64

ORBIT DETERMINATION ACCURACY

ST 2876.8 SR 2524.3 SS 2100.1  
 CRT .9981 CRS -1.0000 CST -.9977  
 LSA 4363.4 MSA 139.8 SSA 2.9  
 EL1 3825.5 EL2 118.5 ALF 41.26

LAUNCH DATE JAN 13 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 441.702

RL 147.14 LAL .00 LOL 112.64 VL 27.654 GAL .57 AZL 82.09 HCA 201.25 SMA 127.71 ECC .15248 INC 7.9051 V1 30.279  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.378 GAP 2.37 AZP 97.37 TAL 176.85 TAP 18.10 RCA 108.23 APO 147.18 V2 34.783  
 RC 108.045 GL 52.72 GP -51.67 ZAL 87.79 ZAP 109.79 ETS 335.34 ZAE 122.64 ETE 233.37 ZAC 110.55 ETC 185.33 CLP-123.09

PLANETOCENTRIC CONIC

C3 22.846 VHL 4.780 DLA 56.80 RAL 352.81 RAD 6567.9 VEL 12.009 PTH 2.14 VHP 4.596 DPA -44.35 RAP 38.01 ECC 1.3760  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.47 16 43 21 4383.01 -34.74 213.50 235.64 41.79 17 56 24 3783.0 -40.51 206.92  
 141.53 2 0 26 2753.84 -34.72 81.63 235.62 41.78 2 46 20 2153.8 -40.50 75.04  
 38.47 16 43 21 4383.01 -34.74 213.50 235.64 41.79 17 56 24 3783.0 -40.51 206.92  
 141.53 2 0 26 2753.84 -34.72 81.63 235.62 41.78 2 46 20 2153.8 -40.50 75.04  
 38.47 16 43 21 4383.01 -34.74 213.50 235.64 41.79 17 56 24 3783.0 -40.51 206.92  
 141.53 2 0 26 2753.84 -34.72 81.63 235.62 41.78 2 46 20 2153.8 -40.50 75.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.9596 TRA -.5045 TC3-1.6352 BAU .6056 SGT 3616.2 SGR 2531.4 SG3 550.4 ST 3086.4 SR 2272.3 SS 2208.7  
 RDE 1.8937 RRA -.1487 RC3-1.1213 FAU .08382 RRT .9832 RRF .9981 RTF .9793 CRT .9979 CRS-1.0000 CST -.9975  
 FDE 4.6361 FRA -.3156 FC3-3.1762 BSP 13690 SGB 4414.2 R23 .1337 R13 .9892 LSA 4421.1 MSA 149.2 SSA 3.5  
 BDE 3.1859 BRA .5260 BC3 1.9827 FSP -1879 SGI 4397.8 SG2 380.4 THA 34.83 EL1 3830.9 EL2 118.2 ALF 36.34

LAUNCH DATE JAN 13 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 447.834

RL 147.14 LAL .00 LOL 112.64 VL 27.640 GAL .70 AZL 82.83 HCA 204.40 SMA 127.61 ECC .15351 INC 7.1665 V1 30.279  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.369 GAP 2.70 AZP 96.53 TAL 176.15 TAP 20.55 RCA 108.02 APO 147.20 V2 34.784  
 RC 110.446 GL 50.25 GP -46.54 ZAL 86.83 ZAP 114.15 ETS 333.89 ZAE 125.65 ETE 228.31 ZAC 110.55 ETC 182.94 CLP-126.50

PLANETOCENTRIC CONIC

C3 20.113 VHL 4.485 DLA 55.40 RAL 356.56 RAD 6567.8 VEL 11.895 PTH 2.11 VHP 4.356 DPA -40.19 RAP 33.94 ECC 1.3310  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.16 17 3 44 4342.77 -35.61 209.90 236.97 44.29 18 16 7 3742.8 -41.11 202.90  
 139.84 2 11 31 2732.72 -35.59 80.27 236.96 44.29 2 57 3 2132.7 -41.10 73.28  
 40.16 17 3 44 4342.77 -35.61 209.90 236.97 44.29 18 16 7 3742.8 -41.11 202.90  
 139.84 2 11 31 2732.72 -35.59 80.27 236.96 44.29 2 57 3 2132.7 -41.10 73.28  
 40.16 17 3 44 4342.77 -35.61 209.90 236.97 44.29 18 16 7 3742.8 -41.11 202.90  
 139.84 2 11 31 2732.72 -35.59 80.27 236.96 44.29 2 57 3 2132.7 -41.10 73.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5449 TRA -.4045 TC3-2.0469 BAU .6303 SGT 3843.2 SGR 2268.3 SG3 606.1 ST 3263.2 SR 2020.5 SS 2261.6  
 RDE 1.5811 RRA -.0550 RC3-1.1421 FAU .09367 RRT .9821 RRF .9971 RTF .9781 CRT .9979 CRS-1.0000 CST -.9973  
 FDE 4.7025 FRA -.0966 FC3-4.0316 BSP 13864 SGB 4462.6 R23 .1463 R13 .9863 LSA 4452.2 MSA 154.9 SSA 4.3  
 BDE 2.9961 BRA .4082 BC3 2.3440 FSP -2087 SGI 4447.3 SG2 369.6 THA 30.33 EL1 3836.5 EL2 112.3 ALF 31.74

LAUNCH DATE JAN 13 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 453.952

RL 147.14 LAL .00 LOL 112.64 VL 27.624 GAL .84 AZL 85.41 HCA 207.55 SMA 127.50 ECC .15467 INC 6.5878 V1 30.279  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.359 GAP 3.02 AZP 95.85 TAL 175.40 TAP 22.95 RCA 107.78 APO 147.22 V2 34.786  
 RC 112.844 GL 47.95 GP -41.96 ZAL 85.75 ZAP 118.38 ETS 332.88 ZAE 127.87 ETE 223.39 ZAC 110.49 ETC 180.99 CLP-129.74

PLANETOCENTRIC CONIC

C3 18.209 VHL 4.267 DLA 54.14 RAL .23 RAD 6567.7 VEL 11.815 PTH 2.09 VHP 4.221 DPA -36.33 RAP 30.81 ECC 1.2997  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.72 17 22 49 4309.92 -36.08 206.74 238.46 46.46 18 34 38 3709.9 -41.35 199.43  
 138.28 2 21 46 2718.61 -36.07 79.25 238.45 46.45 3 7 5 2118.6 -41.34 71.95  
 41.72 17 22 49 4309.92 -36.08 206.74 238.46 46.46 18 34 38 3709.9 -41.35 199.43  
 138.28 2 21 46 2718.61 -36.07 79.25 238.45 46.45 3 7 5 2118.6 -41.34 71.95  
 41.72 17 22 49 4309.92 -36.08 206.74 238.46 46.46 18 34 38 3709.9 -41.35 199.43  
 138.28 2 21 46 2718.61 -36.07 79.25 238.45 46.45 3 7 5 2118.6 -41.34 71.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5375 TRA -.3021 TC3-2.4456 BAU .6535 SGT 4055.2 SGR 2022.5 SG3 642.4 ST 3414.0 SR 1788.5 SS 2273.3  
 RDE 1.3318 RRA .0114 RC3-1.1066 FAU .09965 RRT .9810 RRF .9956 RTF .9770 CRT .9979 CRS -.9999 CST -.9971  
 FDE 4.6410 FRA .1358 FC3-4.7378 BSP 14051 SGB 4531.6 R23 .1539 R13 .9836 LSA 4471.8 MSA 159.2 SSA 5.1  
 BDE 2.8658 BRA .3023 BC3 2.6844 FSP -2213 SGI 4517.9 SG2 352.0 THA 26.24 EL1 3852.8 EL2 103.5 ALF 27.62

LAUNCH DATE JAN 13 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 460.053

RL 147.14 LAL .00 LOL 112.64 VL 27.607 GAL .99 AZL 85.88 HCA 210.70 SMA 127.39 ECC .15598 INC 6.1195 V1 30.279  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.348 GAP 3.34 AZP 95.27 TAL 174.61 TAP 25.31 RCA 107.52 APO 147.26 V2 34.789  
 RC 115.239 GL 45.81 GP -37.90 ZAL 84.54 ZAP 122.41 ETS 332.21 ZAE 129.41 ETE 218.74 ZAC 110.46 ETC 179.43 CLP-132.78

PLANETOCENTRIC CONIC

C3 16.839 VHL 4.104 DLA 52.99 RAL 3.72 RAD 6567.7 VEL 11.757 PTH 2.08 VHP 4.159 DPA -32.77 RAP 28.43 ECC 1.2771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.14 17 40 53 4282.72 -36.30 203.98 240.12 48.32 18 52 15 3682.7 -41.36 196.44  
 136.86 2 31 33 2709.54 -36.29 78.50 240.11 48.31 3 16 43 2109.5 -41.35 70.95  
 43.14 17 40 53 4282.72 -36.30 203.98 240.12 48.32 18 52 15 3682.7 -41.36 196.44  
 136.86 2 31 33 2709.54 -36.29 78.50 240.11 48.31 3 16 43 2109.5 -41.35 70.95  
 43.14 17 40 53 4282.72 -36.30 203.98 240.12 48.32 18 52 15 3682.7 -41.36 196.44  
 136.86 2 31 33 2709.54 -36.29 78.50 240.11 48.31 3 16 43 2109.5 -41.35 70.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.9300 TRA -.1987 TC3-2.8304 BAU .6789 SGT 4253.0 SGR 1799.2 SG3 661.2 ST 3556.0 SR 1579.1 SS 2248.4  
 RDE 1.1304 RRA .0559 RC3-1.0403 FAU .10275 RRT .9801 RRF .9933 RTF .9762 CRT .9980 CRS -.9999 CST -.9969  
 FDE 4.4769 FRA .3573 FC3-5.2827 BSP 14367 SGB 4617.9 R23 .1546 R13 .9813 LSA 4475.1 MSA 161.4 SSA 6.0  
 BDE 2.7711 BRA .2065 BC3 3.0156 FSP -2288 SGI 4606.1 SG2 330.2 THA 22.64 EL1 3871.5 EL2 92.0 ALF 24.04

LAUNCH DATE JAN 13 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 466.139

RL 147.14 LAL .00 LOL 112.64 VL 27.589 GAL 1.16 AZL 84.27 HCA 213.86 SMA 127.27 ECC .15743 INC 5.7306 V1 30.279
RP 108.92 LAP -3.19 LOP 326.36 VP 37.338 GAP 3.67 AZP 94.76 TAL 173.77 TAP 27.63 RCA 107.23 APO 147.30 V2 34.792
RC 117.630 GL 43.80 GP -34.33 ZAL 83.22 ZAP 126.19 ETS 331.79 ZAE 130.40 ETE 214.45 ZAC 110.52 ETC 178.20 CLP-135.64

PLANETOCENTRIC CONIC

C3 15.837 VHL 3.980 DLA 51.94 RAL 7.09 RAD 6567.6 VEL 11.714 PTH 2.06 VHP 4.150 DPA -29.52 RAP 26.67 ECC 1.2606
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.45 17 58 15 4259.86 -36.33 201.55 241.95 49.93 19 9 15 3659.9 -41.21 193.83
135.55 2 41 3 2704.38 -36.32 77.97 241.94 49.92 3 26 7 2104.4 -41.20 70.26
44.45 17 58 15 4259.86 -36.33 201.55 241.95 49.93 19 9 15 3659.9 -41.21 193.83
135.55 2 41 3 2704.38 -36.32 77.97 241.94 49.92 3 26 7 2104.4 -41.20 70.26
44.45 17 58 15 4259.86 -36.33 201.55 241.95 49.93 19 9 15 3659.9 -41.21 193.83
135.55 2 41 3 2704.38 -36.32 77.97 241.94 49.92 3 26 7 2104.4 -41.20 70.26

DIFFERENTIAL CORRECTIONS

TDE 2.5254 TRA -.0898 TC3-3.1881 BAU .7044
RDE .9706 RRA .0873 RC3 -.9510 FAU .10311
FDE 4.2584 FRA .5696 FC3-5.6367 BSP 14707
BDE 2.7055 BRA .1252 BC3 3.3270 FSP -2306

MID-COURSE EXECUTION ACCURACY

SGT 4438.8 SGR 1602.2 SG3 666.2
RRT .9785 RRF .9900 RTF .9755
SGB 4719.1 R23 .1490 R13 .9793
SG1 4708.8 SG2 311.8 THA 19.54

ORBIT DETERMINATION ACCURACY

ST 3637.3 SR 1398.9 SS 2202.3
CRT .9981 CRS -.9998 CST -.9966
LSA 4473.3 MSA 163.4 SSA 6.9
EL1 3896.2 EL2 79.9 ALF 21.01

LAUNCH DATE JAN 13 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 472.208

RL 147.14 LAL .00 LOL 112.64 VL 27.569 GAL 1.34 AZL 84.60 HCA 217.02 SMA 127.13 ECC .15902 INC 5.4008 V1 30.279
RP 108.91 LAP -3.25 LOP 329.33 VP 37.327 GAP 3.99 AZP 94.32 TAL 172.89 TAP 29.91 RCA 106.92 APO 147.35 V2 34.796
RC 120.015 GL 41.88 GP -31.18 ZAL 81.78 ZAP 129.71 ETS 331.56 ZAE 130.97 ETE 210.58 ZAC 110.72 ETC 177.24 CLP-138.31

PLANETOCENTRIC CONIC

C3 15.101 VHL 3.866 DLA 50.97 RAL 10.38 RAD 6567.6 VEL 11.683 PTH 2.05 VHP 4.179 DPA -26.55 RAP 25.42 ECC 1.2485
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.67 18 15 9 4240.45 -36.23 199.41 243.96 51.32 19 25 49 3640.5 -40.95 191.56
134.33 2 50 22 2702.34 -36.21 77.65 243.95 51.31 3 35 25 2102.3 -40.94 69.80
45.67 18 15 9 4240.45 -36.23 199.41 243.96 51.32 19 25 49 3640.5 -40.95 191.56
134.33 2 50 22 2702.34 -36.21 77.65 243.95 51.31 3 35 25 2102.3 -40.94 69.80
45.67 18 15 9 4240.45 -36.23 199.41 243.96 51.32 19 25 49 3640.5 -40.95 191.56
134.33 2 50 22 2702.34 -36.21 77.65 243.95 51.31 3 35 25 2102.3 -40.94 69.80

DIFFERENTIAL CORRECTIONS

TDE 2.3189 TRA .0228 TC3-3.5179 BAU .7308
RDE .8420 RRA .1073 RC3 -.8531 FAU .10162
FDE 3.9956 FRA .7580 FC3-5.8257 BSP 15083
BDE 2.6558 BRA .1097 BC3 3.6199 FSP -2283

MID-COURSE EXECUTION ACCURACY

SGT 4612.1 SGR 1429.6 SG3 660.0
RRT .9762 RRF .9854 RTF .9751
SGB 4828.5 R23 .1363 R13 .9778
SG1 4819.4 SG2 296.6 THA 16.90

ORBIT DETERMINATION ACCURACY

ST 3714.8 SR 1243.8 SS 2136.6
CRT .9984 CRS -.9995 CST -.9963
LSA 4459.2 MSA 164.2 SSA 7.7
EL1 3916.9 EL2 66.8 ALF 18.49

LAUNCH DATE JAN 13 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 478.260

RL 147.14 LAL .00 LOL 112.64 VL 27.549 GAL 1.53 AZL 84.88 HCA 220.17 SMA 127.00 ECC .16076 INC 5.1159 V1 30.279
RP 108.89 LAP -3.30 LOP 332.70 VP 37.316 GAP 4.31 AZP 93.91 TAL 171.98 TAP 32.15 RCA 106.58 APO 147.41 V2 34.800
RC 122.394 GL 40.04 GP -28.43 ZAL 80.25 ZAP 132.97 ETS 331.44 ZAE 131.21 ETE 207.16 ZAC 111.06 ETC 176.49 CLP-140.81

PLANETOCENTRIC CONIC

C3 14.569 VHL 3.817 DLA 50.06 RAL 13.61 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 4.239 DPA -23.83 RAP 24.59 ECC 1.2398
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.82 18 31 42 4223.90 -36.02 197.51 246.14 52.53 19 42 6 3623.9 -40.60 189.56
133.18 2 59 38 2702.87 -36.01 77.51 246.13 52.52 3 44 40 2102.9 -40.59 69.56
46.82 18 31 42 4223.90 -36.02 197.51 246.14 52.53 19 42 6 3623.9 -40.60 189.56
133.18 2 59 38 2702.87 -36.01 77.51 246.13 52.52 3 44 40 2102.9 -40.59 69.56
46.82 18 31 42 4223.90 -36.02 197.51 246.14 52.53 19 42 6 3623.9 -40.60 189.56
133.18 2 59 38 2702.87 -36.01 77.51 246.13 52.52 3 44 40 2102.9 -40.59 69.56

DIFFERENTIAL CORRECTIONS

TDE 2.5123 TRA .1425 TC3-3.8080 BAU .7559
RDE .7400 RRA .1208 RC3 -.7493 FAU .09838
FDE 3.7222 FRA .9294 FC3-5.8465 BSP 15461
BDE 2.6190 BRA .1869 BC3 3.8810 FSP -2229

MID-COURSE EXECUTION ACCURACY

SGT 4773.3 SGR 1281.0 SG3 645.8
RRT .9725 RRF .9790 RTF .9746
SGB 4942.2 R23 .1192 R13 .9766
SG1 4933.7 SG2 288.8 THA 14.68

ORBIT DETERMINATION ACCURACY

ST 3773.6 SR 1114.2 SS 2061.1
CRT .9987 CRS -.9992 CST -.9960
LSA 4438.7 MSA 165.0 SSA 8.6
EL1 3934.3 EL2 53.7 ALF 16.43

LAUNCH DATE JAN 13 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 484.296

RL 147.14 LAL .00 LOL 112.64 VL 27.527 GAL 1.73 AZL 85.13 HCA 223.33 SMA 126.85 ECC .16266 INC 4.8658 V1 30.279
RP 108.88 LAP -3.34 LOP 335.87 VP 37.305 GAP 4.63 AZP 93.54 TAL 171.02 TAP 34.36 RCA 106.22 APO 147.49 V2 34.805
RC 124.766 GL 38.27 GP -26.01 ZAL 78.62 ZAP 135.99 ETS 331.39 ZAE 131.23 ETE 204.16 ZAC 111.55 ETC 175.91 CLP-143.15

PLANETOCENTRIC CONIC

C3 14.198 VHL 3.766 DLA 49.21 RAL 16.81 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 4.323 DPA -21.34 RAP 24.13 ECC 1.2337
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.91 18 48 3 4209.66 -35.72 195.80 248.47 53.59 19 58 13 3609.7 -40.18 187.78
132.09 3 8 49 2705.72 -35.71 77.52 248.46 53.57 3 53 55 2105.7 -40.17 69.51
47.91 18 48 3 4209.66 -35.72 195.80 248.47 53.59 19 58 13 3609.7 -40.18 187.78
132.09 3 8 49 2705.72 -35.71 77.52 248.46 53.57 3 53 55 2105.7 -40.17 69.51
47.91 18 48 3 4209.66 -35.72 195.80 248.47 53.59 19 58 13 3609.7 -40.18 187.78
132.09 3 8 49 2705.72 -35.71 77.52 248.46 53.57 3 53 55 2105.7 -40.17 69.51

DIFFERENTIAL CORRECTIONS

TDE 2.5008 TRA .2682 TC3-4.0683 BAU .7821
RDE .6578 RRA .1283 RC3 -.8516 FAU .09450
FDE 3.4397 FRA 1.0739 FC3-5.7823 BSP 15895
BDE 2.5858 BRA .2958 BC3 4.1202 FSP -2164

MID-COURSE EXECUTION ACCURACY

SGT 4923.7 SGR 1153.6 SG3 625.8
RRT .9672 RRF .9707 RTF .9744
SGB 5057.1 R23 .0984 R13 .9758
SG1 5049.0 SG2 285.6 THA 12.81

ORBIT DETERMINATION ACCURACY

ST 3808.2 SR 1004.3 SS 1974.0
CRT .9991 CRS -.9985 CST -.9956
LSA 4402.3 MSA 165.0 SSA 9.4
EL1 3938.2 EL2 40.4 ALF 14.76



LAUNCH DATE JAN 13 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 490.313

RL 147.14 LAL .00 LOL 112.64 VL 27.505 GAL 1.95 AZL 85.36 HCA 226.50 SMA 126.71 ECC .16472 INC 4.6434 V1 30.279
RP 108.86 LAP -3.37 LOP 339.04 VP 37.294 GAP 4.95 AZP 93.20 TAL 170.04 TAP 36.53 RCA 105.83 APO 147.58 V2 34.811
RC 127.128 GL 36.55 GP -23.89 ZAL 76.90 ZAP 138.78 ETS 331.38 ZAE 131.09 ETE 201.56 ZAC 112.20 ETC 175.46 CLP-145.35

PLANETOCENTRIC CONIC

C3 13.964 VHL 3.737 DLA 48.38 RAL 19.99 RAD 6567.5 VEL 11.634 PTH 2.04 VHP 4.425 DPA -19.05 RAP 23.98 ECC 1.2298
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.98 19 4 17 4197.39 -35.35 194.25 250.94 54.52 20 14 15 3597.4 -39.71 186.20
131.02 3 17 57 2710.66 -35.34 77.68 250.93 54.51 4 3 8 2110.7 -39.70 69.63
48.98 19 4 17 4197.39 -35.35 194.25 250.94 54.52 20 14 15 3597.4 -39.71 186.20
131.02 3 17 57 2710.66 -35.34 77.68 250.93 54.51 4 3 8 2110.7 -39.70 69.63
48.98 19 4 17 4197.39 -35.35 194.25 250.94 54.52 20 14 15 3597.4 -39.71 186.20
131.02 3 17 57 2710.66 -35.34 77.68 250.93 54.51 4 3 8 2110.7 -39.70 69.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4867 TRA .3967 TC3-4.2894 BAU .8075 SGT 5064.9 SGR 1046.4 SG3 602.4 ST 3823.9 SR 913.6 SS 1883.0
RDE .5928 RRA .1327 RC3 -5.5598 FAU .09002 RRT .9599 RRF .9599 RTF .9744 CRT .9995 CRS -.9976 CST -.9952
FDE 3.1648 FRA 1.1998 FC3-5.5812 BSP 16322 SGB 5171.8 R23 .0773 R13 .9753 LSA 4356.1 MSA 165.0 SSA 10.3
BDE 2.5564 BRA .4183 BC3 4.3257 FSP -2084 SG1 5163.8 SG2 287.9 THA 11.25 EL1 3931.5 EL2 27.5 ALF 13.43

LAUNCH DATE JAN 13 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 496.313

RL 147.14 LAL .00 LOL 112.64 VL 27.482 GAL 2.18 AZL 85.56 HCA 229.66 SMA 126.55 ECC .16694 INC 4.4431 V1 30.279
RP 108.84 LAP -3.39 LOP 342.21 VP 37.283 GAP 5.27 AZP 92.88 TAL 169.01 TAP 38.67 RCA 105.42 APO 147.68 V2 34.818
RC 129.481 GL 34.87 GP -22.02 ZAL 75.11 ZAP 141.36 ETS 331.38 ZAE 130.85 ETE 199.32 ZAC 113.00 ETC 175.11 CLP-147.41

PLANETOCENTRIC CONIC

C3 13.847 VHL 3.721 DLA 47.58 RAL 23.16 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.544 DPA -16.94 RAP 24.10 ECC 1.2279
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.02 19 20 30 4186.70 -34.92 192.83 253.54 55.35 20 30 17 3586.7 -39.17 184.76
129.98 3 26 59 2717.67 -34.90 77.99 253.53 55.34 4 12 17 2117.7 -39.16 69.92
50.02 19 20 30 4186.70 -34.92 192.83 253.54 55.35 20 30 17 3586.7 -39.17 184.76
129.98 3 26 59 2717.67 -34.90 77.99 253.53 55.34 4 12 17 2117.7 -39.16 69.92
50.02 19 20 30 4186.70 -34.92 192.83 253.54 55.35 20 30 17 3586.7 -39.17 184.76
129.98 3 26 59 2717.67 -34.90 77.99 253.53 55.34 4 12 17 2117.7 -39.16 69.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4698 TRA .5348 TC3-4.4682 BAU .8319 SGT 5197.1 SGR 956.8 SG3 576.9 ST 3821.7 SR 839.1 SS 1790.0
RDE .5416 RRA .1350 RC3 -4.4753 FAU .08513 RRT .9499 RRF .9467 RTF .9744 CRT .9998 CRS -.9961 CST -.9948
FDE 2.9024 FRA 1.3090 FC3-5.3226 BSP 16728 SGB 5284.4 R23 .0579 R13 .9750 LSA 4299.6 MSA 165.1 SSA 11.1
BDE 2.5285 BRA .5515 BC3 4.4934 FSP -1995 SG1 5276.2 SG2 294.5 THA 9.95 EL1 3912.7 EL2 16.1 ALF 12.38

LAUNCH DATE JAN 13 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 502.294

RL 147.14 LAL .00 LOL 112.64 VL 27.458 GAL 2.42 AZL 85.74 HCA 232.82 SMA 126.39 ECC .16935 INC 4.2606 V1 30.279
RP 108.82 LAP -3.39 LOP 345.38 VP 37.272 GAP 5.60 AZP 92.58 TAL 167.96 TAP 40.79 RCA 104.99 APO 147.80 V2 34.825
RC 131.823 GL 33.22 GP -20.38 ZAL 73.24 ZAP 143.75 ETS 331.37 ZAE 130.54 ETE 197.38 ZAC 113.94 ETC 174.83 CLP-149.36

PLANETOCENTRIC CONIC

C3 13.838 VHL 3.720 DLA 46.78 RAL 26.31 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.676 DPA -14.97 RAP 24.44 ECC 1.2277
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.06 19 36 42 4177.41 -34.41 191.52 256.26 56.10 20 46 20 3577.4 -38.59 183.44
128.94 3 35 54 2726.67 -34.40 78.44 256.25 56.09 4 21 20 2126.7 -38.58 70.36
51.06 19 36 42 4177.41 -34.41 191.52 256.26 56.10 20 46 20 3577.4 -38.59 183.44
128.94 3 35 54 2726.67 -34.40 78.44 256.25 56.09 4 21 20 2126.7 -38.58 70.36
51.06 19 36 42 4177.41 -34.41 191.52 256.26 56.10 20 46 20 3577.4 -38.59 183.44
128.94 3 35 54 2726.67 -34.40 78.44 256.25 56.09 4 21 20 2126.7 -38.58 70.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4511 TRA .6833 TC3-4.5965 BAU .8535 SGT 5320.7 SGR 882.9 SG3 550.4 ST 3804.7 SR 778.6 SS 1698.1
RDE .5019 RRA .1366 RC3 -3.9972 FAU .07983 RRT .9370 RRF .9308 RTF .9743 CRT .9999 CRS -.9939 CST -.9943
FDE 2.6574 FRA 1.4076 FC3-4.9943 BSP 17064 SGB 5393.4 R23 .0426 R13 .9747 LSA 4235.3 MSA 165.7 SSA 11.9
BDE 2.5020 BRA .6966 BC3 4.6136 FSP -1894 SG1 5384.8 SG2 304.7 THA 8.87 EL1 3883.6 EL2 12.1 ALF 11.56

LAUNCH DATE JAN 13 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 508.256

RL 147.14 LAL .00 LOL 112.64 VL 27.433 GAL 2.68 AZL 85.91 HCA 235.99 SMA 126.23 ECC .17193 INC 4.0928 V1 30.279
RP 108.79 LAP -3.39 LOP 348.56 VP 37.262 GAP 5.93 AZP 92.29 TAL 166.89 TAP 42.88 RCA 104.53 APO 147.93 V2 34.833
RC 134.153 GL 31.60 GP -18.94 ZAL 71.32 ZAP 145.98 ETS 331.33 ZAE 130.20 ETE 195.72 ZAC 115.00 ETC 174.60 CLP-151.20

PLANETOCENTRIC CONIC

C3 13.930 VHL 3.732 DLA 45.99 RAL 29.43 RAD 6567.5 VEL 11.633 PTH 2.04 VHP 4.820 DPA -13.12 RAP 24.98 ECC 1.2293
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.11 19 52 59 4169.22 -33.85 190.29 259.07 56.78 21 2 28 3569.2 -37.94 182.22
127.89 3 44 34 2737.76 -33.83 79.03 259.06 56.76 4 30 12 2137.8 -37.93 70.96
52.11 19 52 59 4169.22 -33.85 190.29 259.07 56.78 21 2 28 3569.2 -37.94 182.22
127.89 3 44 34 2737.76 -33.83 79.03 259.06 56.76 4 30 12 2137.8 -37.93 70.96
52.11 19 52 59 4169.22 -33.85 190.29 259.07 56.78 21 2 28 3569.2 -37.94 182.22
127.89 3 44 34 2737.76 -33.83 79.03 259.06 56.76 4 30 12 2137.8 -37.93 70.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4252 TRA .8370 TC3-4.8617 BAU .8759 SGT 5435.6 SGR 821.4 SG3 523.4 ST 3765.6 SR 728.3 SS 1603.4
RDE .4707 RRA .1369 RC3 -3.3110 FAU .07483 RRT .9216 RRF .9125 RTF .9745 CRT .9996 CRS -.9909 CST -.9938
FDE 2.4234 FRA 1.4880 FC3-4.6508 BSP 17457 SGB 5497.3 R23 .0292 R13 .9747 LSA 4153.7 MSA 166.3 SSA 12.6
BDE 2.4704 BRA .8481 BC3 4.7033 FSP -1803 SG1 5488.2 SG2 315.7 THA 7.95 EL1 3835.3 EL2 20.7 ALF 10.94

LAUNCH DATE JAN 13 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 514.198

RL 147.14 LAL .00 LOL 112.64 VL 27.408 GAL 2.96 AZL 86.06 HCA 239.16 SMA 126.07 ECC .17472 INC 3.9369 V1 30.279  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.251 GAP 6.27 AZP 92.02 TAL 165.78 TAP 44.94 RCA 104.04 APO 148.09 V2 34.841  
 RC 136.471 GL 30.01 GP -17.65 ZAL 69.34 ZAP 148.06 ETS 331.24 ZAE 129.85 ETE 194.29 ZAC 116.18 ETC 174.42 CLP-152.94

PLANETOCENTRIC CONIC

C3 14.120 VHL 3.758 DLA 45.19 RAL 32.53 RAD 6567.6 VEL 11.641 PTH 2.04 VHP 4.975 DPA -11.39 RAP 25.70 ECC 1.2324  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.18 20 9 18 4161.97 -33.22 189.13 261.97 57.39 21 18 40 3562.0 -37.25 181.08  
 126.82 3 52 58 2750.97 -33.21 79.77 261.96 57.38 4 38 49 2151.0 -37.23 71.72  
 53.18 20 9 18 4161.97 -33.22 189.13 261.97 57.39 21 18 40 3562.0 -37.25 181.08  
 126.82 3 52 58 2750.97 -33.21 79.77 261.96 57.38 4 38 49 2151.0 -37.23 71.72  
 53.18 20 9 18 4161.97 -33.22 189.13 261.97 57.39 21 18 40 3562.0 -37.25 181.08  
 126.82 3 52 58 2750.97 -33.21 79.77 261.96 57.38 4 38 49 2151.0 -37.23 71.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3945 TRA .9990 TC3-4.7448 BAU .8972 SGT 5542.4 SGR 770.9 SG3 496.6 ST 3709.8 SR 687.0 SS 1509.5  
 RDE .4468 RRA .1371 RC3 -.2738 FAU .06994 RRT .9039 RRF .8920 RTF .9746 CRT .9988 CRS -.9867 CST -.9933  
 FDE 2.2050 FRA 1.5569 FC3-4.2880 BSP 17834 SGB 5595.8 R23 .0187 R13 .9748 LSA 4060.2 MSA 167.6 SSA 13.3  
 BDE 2.4359 BRA 1.0084 BC3 4.7527 FSP -1714 SG1 5586.2 SG2 327.3 THA 7.19 EL1 3772.7 EL2 33.8 ALF 10.48

LAUNCH DATE JAN 13 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 520.119

RL 147.14 LAL .00 LOL 112.64 VL 27.383 GAL 3.25 AZL 86.21 HCA 242.33 SMA 125.90 ECC .17771 INC 3.7910 V1 30.279  
 RP 108.74 LAP -3.38 LOP 354.91 VP 37.240 GAP 6.61 AZP 91.76 TAL 164.66 TAP 46.98 RCA 103.52 APO 148.27 V2 34.850  
 RC 136.775 GL 28.44 GP -16.52 ZAL 67.33 ZAP 150.00 ETS 331.10 ZAE 129.49 ETE 193.06 ZAC 117.47 ETC 174.26 CLP-154.59

PLANETOCENTRIC CONIC

C3 14.408 VHL 3.796 DLA 44.38 RAL 35.60 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 5.140 DPA -9.76 RAP 26.57 ECC 1.2371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.28 20 25 42 4155.55 -32.53 188.02 264.95 57.96 21 34 57 3555.6 -36.49 180.00  
 125.72 4 1 2 2766.33 -32.52 80.66 264.94 57.95 4 47 8 2166.3 -36.48 72.64  
 54.28 20 25 42 4155.55 -32.53 188.02 264.95 57.96 21 34 57 3555.6 -36.49 180.00  
 125.72 4 1 2 2766.33 -32.52 80.66 264.94 57.95 4 47 8 2166.3 -36.48 72.64  
 54.28 20 25 42 4155.55 -32.53 188.02 264.95 57.96 21 34 57 3555.6 -36.49 180.00  
 125.72 4 1 2 2766.33 -32.52 80.66 264.94 57.95 4 47 8 2166.3 -36.48 72.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3599 TRA 1.1707 TC3-4.7551 BAU .9170 SGT 5642.1 SGR 730.1 SG3 470.4 ST 3640.1 SR 653.6 SS 1418.7  
 RDE .4291 RRA .1376 RC3 -.2247 FAU .06514 RRT .8840 RRF .8700 RTF .9748 CRT .9972 CRS -.9813 CST -.9927  
 FDE 2.0036 FRA 1.6172 FC3-3.9137 BSP 18190 SGB 5689.1 R23 .0111 R13 .9749 LSA 3957.4 MSA 169.7 SSA 13.9  
 BDE 2.3986 BRA 1.1787 BC3 4.7604 FSP -1627 SG1 5679.0 SG2 359.1 THA 6.55 EL1 3698.0 EL2 48.1 ALF 10.15

LAUNCH DATE JAN 13 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 526.018

RL 147.14 LAL .00 LOL 112.64 VL 27.356 GAL 3.56 AZL 86.35 HCA 245.50 SMA 125.73 ECC .18093 INC 3.6532 V1 30.279  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.230 GAP 6.96 AZP 91.52 TAL 163.51 TAP 49.01 RCA 102.98 APO 148.48 V2 34.860  
 RC 141.067 GL 26.89 GP -15.50 ZAL 65.28 ZAP 151.82 ETS 330.89 ZAE 129.14 ETE 192.00 ZAC 118.85 ETC 174.12 CLP-156.17

PLANETOCENTRIC CONIC

C3 14.798 VHL 3.847 DLA 43.56 RAL 38.62 RAD 6567.6 VEL 11.670 PTH 2.05 VHP 5.315 DPA -8.21 RAP 27.57 ECC 1.2435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.41 20 42 11 4149.73 -31.78 186.95 267.98 58.48 21 51 21 3549.7 -35.69 178.97  
 124.59 4 8 39 2784.01 -31.77 81.71 267.97 58.47 4 55 3 2184.0 -35.68 73.73  
 55.41 20 42 11 4149.73 -31.78 186.95 267.98 58.48 21 51 21 3549.7 -35.69 178.97  
 124.59 4 8 39 2784.01 -31.77 81.71 267.97 58.47 4 55 3 2184.0 -35.68 73.73  
 55.41 20 42 11 4149.73 -31.78 186.95 267.98 58.48 21 51 21 3549.7 -35.69 178.97  
 124.59 4 8 39 2784.01 -31.77 81.71 267.97 58.47 4 55 3 2184.0 -35.68 73.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3202 TRA 1.3520 TC3-4.7254 BAU .9356 SGT 5734.2 SGR 697.1 SG3 445.0 ST 3556.6 SR 626.2 SS 1330.5  
 RDE .4165 RRA .1388 RC3 -.1834 FAU .06052 RRT .8627 RRF .8472 RTF .9750 CRT .9947 CRS -.9742 CST -.9920  
 FDE 1.8174 FRA 1.6696 FC3-3.5404 BSP 18522 SGB 5776.4 R23 .0056 R13 .9751 LSA 3844.7 MSA 172.9 SSA 14.4  
 BDE 2.3573 BRA 1.3591 BC3 4.7290 FSP -1542 SG1 5765.8 SG2 350.5 THA 6.01 EL1 3610.8 EL2 63.2 ALF 9.94

LAUNCH DATE JAN 13 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 531.894

RL 147.14 LAL .00 LOL 112.64 VL 27.330 GAL 3.88 AZL 86.48 HCA 248.67 SMA 125.55 ECC .18439 INC 3.5222 V1 30.279  
 RP 108.68 LAP -3.28 LOP 357.22 VP 37.220 GAP 7.32 AZP 91.28 TAL 162.34 TAP 51.01 RCA 102.40 APO 148.71 V2 34.870  
 RC 143.344 GL 25.36 GP -14.60 ZAL 63.22 ZAP 153.53 ETS 330.60 ZAE 128.81 ETE 191.08 ZAC 120.32 ETC 173.99 CLP-157.68

PLANETOCENTRIC CONIC

C3 15.293 VHL 3.911 DLA 42.72 RAL 41.58 RAD 6567.6 VEL 11.691 PTH 2.06 VHP 5.500 DPA -6.74 RAP 28.69 ECC 1.2517  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.57 20 58 45 4144.39 -30.97 185.90 271.06 58.97 22 7 49 3544.4 -34.83 177.96  
 123.43 4 15 45 2804.09 -30.96 82.92 271.05 58.96 5 2 29 2204.1 -34.82 74.99  
 56.57 20 58 45 4144.39 -30.97 185.90 271.06 58.97 22 7 49 3544.4 -34.83 177.96  
 123.43 4 15 45 2804.09 -30.96 82.92 271.05 58.96 5 2 29 2204.1 -34.82 74.99  
 56.57 20 58 45 4144.39 -30.97 185.90 271.06 58.97 22 7 49 3544.4 -34.83 177.96  
 123.43 4 15 45 2804.09 -30.96 82.92 271.05 58.96 5 2 29 2204.1 -34.82 74.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2789 TRA 1.5466 TC3-4.6505 BAU .9513 SGT 5821.4 SGR 671.0 SG3 420.8 ST 3466.3 SR 604.3 SS 1248.1  
 RDE .4084 RRA .1408 RC3 -.1481 FAU .05594 RRT .8410 RRF .8246 RTF .9751 CRT .9912 CRS -.9655 CST -.9913  
 FDE 1.6488 FRA 1.7190 FC3-3.1866 BSP 18773 SGB 5859.9 R23 .0026 R13 .9751 LSA 3729.1 MSA 177.4 SSA 14.8  
 BDE 2.3152 BRA 1.5530 BC3 4.6529 FSP -1454 SG1 5848.8 SG2 361.4 THA 5.56 EL1 3517.7 EL2 78.9 ALF 9.81

LAUNCH DATE	FLIGHT TIME										ARRIVAL DATE
JAN 13 1969	190.00										JUL 22 1969
HELIOCENTRIC CONIC											
DISTANCE 537.743											
RL 147.14 LAL .00 LOL 112.64 VL 27.303 GAL 4.23 AZL 86.60 HCA 251.85 SMA 125.38 ECC .18811 INC 3.3966 V1 30.279											
RP 108.65 LAP -3.23 LOP 4.45 VP 37.210 GAP 7.69 AZP 91.06 TAL 161.16 TAP 53.01 RCA 101.79 APO 148.97 V2 34.880											
RC 145.608 GL 23.86 GP -13.79 ZAL 61.15 ZAP 155.15 ETS 330.22 ZAE 128.49 ETE 190.28 ZAC 121.87 ETC 173.86 CLP-159.12											
PLANETOCENTRIC CONIC											
C3 15.902 VHL 3.988 DLA 41.86 RAL 44.49 RAD 6567.6 VEL 11.717 PTH 2.06 VHP 5.695 DPA -5.32 RAP 29.92 ECC 1.2617											
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG											
57.78 21 15 24 4139.37 -30.11 184.86 274.17 59.42 22 24 23 3539.4 -33.92 176.97											
122.22 4 22 15 2826.73 -30.09 84.31 274.16 59.41 5 9 22 2226.7 -33.90 76.43											
57.78 21 15 24 4139.37 -30.11 184.86 274.17 59.42 22 24 23 3539.4 -33.92 176.97											
122.22 4 22 15 2826.73 -30.09 84.31 274.16 59.41 5 9 22 2226.7 -33.90 76.43											
57.78 21 15 24 4139.37 -30.11 184.86 274.17 59.42 22 24 23 3539.4 -33.92 176.97											
122.22 4 22 15 2826.73 -30.09 84.31 274.16 59.41 5 9 22 2226.7 -33.90 76.43											
DIFFERENTIAL CORRECTIONS											
TDE 2.2301 TRA 1.7486 TC3-4.5491 BAU .9674	MID-COURSE EXECUTION ACCURACY										
RDE .4034 RRA .1434 RC3 -.1203 FAU .05175	SGT 5899.9 SGR 649.4 SG3 397.4										
FDE 1.4905 FRA 1.7593 FC3-2.8175 BSP 19080	RRT .8192 RRF .8022 RTF .9752										
BDE 2.2663 BRA 1.7545 BC3 4.5507 FSP -1379	SGB 5935.5 R23 .0002 R13 .9752										
	SG1 5923.9 SG2 370.9 THA 5.17										
	ORBIT DETERMINATION ACCURACY										
	ST 3361.9 SR 585.5 SS 1167.2										
	CRT .9863 CRS -.9546 CST -.9905										
	LSA 3601.9 MSA 183.1 SSA 15.0										
	EL1 3411.2 EL2 95.3 ALF 9.75										
JAN 13 1969	192.00										JUL 24 1969
HELIOCENTRIC CONIC											
DISTANCE 543.566											
RL 147.14 LAL .00 LOL 112.64 VL 27.276 GAL 4.59 AZL 86.72 HCA 255.03 SMA 125.20 ECC .19211 INC 3.2755 V1 30.279											
RP 108.61 LAP -3.16 LOP 7.64 VP 37.200 GAP 8.07 AZP 90.85 TAL 159.96 TAP 54.99 RCA 101.15 APO 149.26 V2 34.891											
RC 147.857 GL 22.39 GP -13.07 ZAL 59.08 ZAP 156.68 ETS 329.73 ZAE 128.19 ETE 189.59 ZAC 123.48 ETC 173.73 CLP-160.51											
PLANETOCENTRIC CONIC											
C3 16.633 VHL 4.078 DLA 40.98 RAL 47.32 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 5.900 DPA -3.97 RAP 31.24 ECC 1.2737											
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG											
59.04 21 32 6 4134.66 -29.19 183.85 277.31 59.85 22 41 1 3534.7 -32.95 176.00											
120.96 4 28 7 2851.94 -29.18 85.88 277.31 59.84 5 15 39 2251.9 -32.94 78.05											
59.04 21 32 6 4134.66 -29.19 183.85 277.31 59.85 22 41 1 3534.7 -32.95 176.00											
120.96 4 28 7 2851.94 -29.18 85.88 277.31 59.84 5 15 39 2251.9 -32.94 78.05											
59.04 21 32 6 4134.66 -29.19 183.85 277.31 59.85 22 41 1 3534.7 -32.95 176.00											
120.96 4 28 7 2851.94 -29.18 85.88 277.31 59.84 5 15 39 2251.9 -32.94 78.05											
DIFFERENTIAL CORRECTIONS											
TDE 2.1772 TRA 1.9625 TC3-4.4156 BAU .9821	MID-COURSE EXECUTION ACCURACY										
RDE .4014 RRA .1472 RC3 -.0979 FAU .04777	SGT 5972.1 SGR 632.0 SG3 375.2										
FDE 1.3456 FRA 1.7962 FC3-2.4865 BSP 19362	RRT .7983 RRF .7810 RTF .9753										
BDE 2.2139 BRA 1.9660 BC3 4.4166 FSP -1306	SGB 6005.4 R23 -.0011 R13 .9753										
	SG1 5993.4 SG2 379.3 THA 4.85										
	ORBIT DETERMINATION ACCURACY										
	ST 3250.8 SR 569.9 SS 1091.3										
	CRT .9798 CRS -.9415 CST -.9897										
	LSA 3470.9 MSA 190.4 SSA 15.1										
	EL1 3298.5 EL2 112.3 ALF 9.76										
JAN 13 1969	194.00										JUL 26 1969
HELIOCENTRIC CONIC											
DISTANCE 549.358											
RL 147.14 LAL .00 LOL 112.64 VL 27.248 GAL 4.98 AZL 86.84 HCA 258.21 SMA 125.03 ECC .19640 INC 3.1578 V1 30.279											
RP 108.58 LAP -3.09 LOP 10.82 VP 37.191 GAP 8.46 AZP 90.65 TAL 158.75 TAP 56.96 RCA 100.47 APO 149.58 V2 34.902											
RC 150.092 GL 20.95 GP -12.41 ZAL 57.03 ZAP 158.13 ETS 329.12 ZAE 127.92 ETE 188.98 ZAC 125.16 ETC 173.59 CLP-161.85											
PLANETOCENTRIC CONIC											
C3 17.497 VHL 4.183 DLA 40.09 RAL 50.07 RAD 6567.7 VEL 11.785 PTH 2.08 VHP 6.116 DPA -2.67 RAP 32.65 ECC 1.2880											
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG											
60.34 21 48 55 4129.98 -28.22 182.80 280.48 60.25 22 57 45 3530.0 -31.95 175.03											
119.66 4 33 15 2879.98 -28.21 87.64 280.47 60.24 5 21 15 2280.0 -31.94 79.87											
60.34 21 48 55 4129.98 -28.22 182.80 280.48 60.25 22 57 45 3530.0 -31.95 175.03											
119.66 4 33 15 2879.98 -28.21 87.64 280.47 60.24 5 21 15 2280.0 -31.94 79.87											
60.34 21 48 55 4129.98 -28.22 182.80 280.48 60.25 22 57 45 3530.0 -31.95 175.03											
119.66 4 33 15 2879.98 -28.21 87.64 280.47 60.24 5 21 15 2280.0 -31.94 79.87											
DIFFERENTIAL CORRECTIONS											
TDE 2.1203 TRA 2.1885 TC3-4.2540 BAU .9953	MID-COURSE EXECUTION ACCURACY										
RDE .4018 RRA .1521 RC3 -.0799 FAU .04399	SGT 6037.9 SGR 617.7 SG3 354.2										
FDE 1.2128 FRA 1.8297 FC3-2.1768 BSP 19625	RRT .7786 RRF .7615 RTF .9753										
BDE 2.1580 BRA 2.1938 BC3 4.2548 FSP -1237	SGB 6069.4 R23 -.0016 R13 .9753										
	SG1 6057.1 SG2 386.4 THA 4.57										
	ORBIT DETERMINATION ACCURACY										
	ST 3135.0 SR 556.4 SS 1020.3										
	CRT .9715 CRS -.9258 CST -.9888										
	LSA 3337.5 MSA 199.1 SSA 15.2										
	EL1 3181.3 EL2 129.8 ALF 9.80										
JAN 13 1969	196.00										JUL 28 1969
HELIOCENTRIC CONIC											
DISTANCE 555.118											
RL 147.14 LAL .00 LOL 112.64 VL 27.220 GAL 5.39 AZL 86.96 HCA 261.39 SMA 124.85 ECC .20103 INC 3.0427 V1 30.279											
RP 108.54 LAP -3.01 LOP 14.01 VP 37.181 GAP 8.87 AZP 90.46 TAL 157.54 TAP 58.92 RCA 99.75 APO 149.95 V2 34.914											
RC 152.312 GL 19.53 GP -11.82 ZAL 54.99 ZAP 159.51 ETS 328.38 ZAE 127.65 ETE 188.46 ZAC 126.90 ETC 173.43 CLP-163.14											
PLANETOCENTRIC CONIC											
C3 18.510 VHL 4.302 DLA 39.19 RAL 52.73 RAD 6567.7 VEL 11.828 PTH 2.09 VHP 6.343 DPA -1.42 RAP 34.13 ECC 1.3046											
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG											
61.69 22 5 49 4125.31 -27.21 181.76 283.65 60.63 23 14 34 3525.3 -30.90 174.05											
118.31 4 37 36 2910.89 -27.20 89.59 283.64 60.62 5 26 7 2310.9 -30.89 81.89											
61.69 22 5 49 4125.31 -27.21 181.76 283.65 60.63 23 14 34 3525.3 -30.90 174.05											
118.31 4 37 36 2910.89 -27.20 89.59 283.64 60.62 5 26 7 2310.9 -30.89 81.89											
61.69 22 5 49 4125.31 -27.21 181.76 283.65 60.63 23 14 34 3525.3 -30.90 174.05											
118.31 4 37 36 2910.89 -27.20 89.59 283.64 60.62 5 26 7 2310.9 -30.89 81.89											
DIFFERENTIAL CORRECTIONS											
TDE 2.0637 TRA 2.4314 TC3-4.0604 BAU 1.0049	MID-COURSE EXECUTION ACCURACY										
RDE .4046 RRA .1586 RC3 -.0649 FAU .04025	SGT 6100.4 SGR 606.4 SG3 334.7										
FDE 1.0948 FRA 1.8639 FC3-1.8826 BSP 19783	RRT .7609 RRF .7445 RTF .9752										
BDE 2.1030 BRA 2.4366 BC3 4.0609 FSP -1165	SGB 6130.4 R23 -.0009 R13 .9753										
	SG1 6117.9 SG2 392.4 THA 4.34										
	ORBIT DETERMINATION ACCURACY										
	ST 3022.4 SR 545.0 SS 957.4										
	CRT .9613 CRS -.9078 CST -.9880										
	LSA 3210.1 MSA 209.1 SSA 15.1										
	EL1 3067.6 EL2 147.9 ALF 9.86										

LAUNCH DATE JAN 13 1969

FLIGHT TIME 198.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 560.841

RL 147.14 LAL .00 LOL 112.64 VL 27.192 GAL 5.82 AZL 87.07 HCA 264.57 SMA 124.67 ECC .20601 INC 2.9295 V1 30.279
RP 108.50 LAP -2.92 LOP 17.20 VP 37.172 GAP 9.29 AZP 90.28 TAL 156.31 TAP 60.88 RCA 98.99 APO 150.35 V2 34.926
RC 154.516 GL 18.16 GP -11.29 ZAL 52.99 ZAP 160.82 ETS 327.49 ZAE 127.41 ETE 107.99 ZAC 128.68 ETC 173.25 CLP-164.40

PLANETOCENTRIC CONIC

C3 19.687 VHL 4.437 DLA 38.28 RAL 55.30 RAD 6567.8 VEL 11.877 PTH 2.11 VHP 6.583 DPA -.22 RAP 35.68 ECC 1.3240
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.09 22 22 48 4120.50 -26.16 180.70 286.83 60.99 23 31 29 3520.5 -29.81 173.05
116.91 4 41 6 2944.81 -26.14 91.75 286.82 60.98 5 30 11 2344.8 -29.80 84.11
63.09 22 22 48 4120.50 -26.16 180.70 286.83 60.99 23 31 29 3520.5 -29.81 173.05
116.91 4 41 6 2944.81 -26.14 91.75 286.82 60.98 5 30 11 2344.8 -29.80 84.11
63.09 22 22 48 4120.50 -26.16 180.70 286.83 60.99 23 31 29 3520.5 -29.81 173.05
116.91 4 41 6 2944.81 -26.14 91.75 286.82 60.98 5 30 11 2344.8 -29.80 84.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9996 TRA 2.6835 TC3-3.8566 BAU 1.0151 SGT 6153.6 SGR 596.1 SG3 316.0 ST 2903.7 SR 534.1 SS 897.0
RDE .4087 RRA .1660 RC3 -.0541 FAU .03690 RRT .7449 RRF .7290 RTF .9752 CRT .9488 CRS -.8867 CST -.9872
FDE .9835 FRA 1.8923 FC3-1.6225 BSP 20023 SGB 6182.4 R23 -.0007 R13 .9752 LSA 3077.8 MSA 220.3 SSA 14.9
BDE 2.0409 BRA 2.6887 BC3 3.8570 FSP -1104 SG1 6169.7 SG2 396.7 THA 4.14 EL1 2947.7 EL2 166.2 ALF 9.93

LAUNCH DATE JAN 13 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 566.524

RL 147.14 LAL .00 LOL 112.64 VL 27.164 GAL 6.29 AZL 87.18 HCA 267.76 SMA 124.49 ECC .21138 INC 2.8174 V1 30.279
RP 108.47 LAP -2.82 LOP 20.39 VP 37.163 GAP 9.73 AZP 90.11 TAL 155.09 TAP 62.84 RCA 98.18 APO 150.81 V2 34.938
RC 156.704 GL 16.81 GP -10.81 ZAL 51.02 ZAP 162.08 ETS 326.42 ZAE 127.17 ETE 187.59 ZAC 130.51 ETC 173.05 CLP-165.62

PLANETOCENTRIC CONIC

C3 21.049 VHL 4.588 DLA 37.36 RAL 57.77 RAD 6567.9 VEL 11.934 PTH 2.12 VHP 6.837 DPA .94 RAP 37.30 ECC 1.3464
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.53 22 39 57 4115.29 -25.07 179.60 290.01 61.33 23 48 32 3515.3 -28.69 172.02
115.47 4 43 41 2981.97 -25.05 94.13 290.01 61.33 5 33 23 2382.0 -28.68 86.55
64.53 22 39 57 4115.29 -25.07 179.60 290.01 61.33 23 48 32 3515.3 -28.69 172.02
115.47 4 43 41 2981.97 -25.05 94.13 290.01 61.33 5 33 23 2382.0 -28.68 86.55
64.53 22 39 57 4115.29 -25.07 179.60 290.01 61.33 23 48 32 3515.3 -28.69 172.02
115.47 4 43 41 2981.97 -25.05 94.13 290.01 61.33 5 33 23 2382.0 -28.68 86.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9327 TRA 2.9504 TC3-3.6369 BAU 1.0236 SGT 6201.1 SGR 587.1 SG3 298.4 ST 2787.4 SR 523.8 SS 842.3
RDE .4142 RRA .1747 RC3 -.0458 FAU .03372 RRT .7309 RRF .7156 RTF .9752 CRT .9336 CRS -.8627 CST -.9864
FDE .8821 FRA 1.9194 FC3-1.3867 BSP 20246 SGB 6228.8 R23 -.0003 R13 .9752 LSA 2949.4 MSA 232.5 SSA 14.7
BDE 1.9765 BRA 2.9556 BC3 3.6372 FSP -1047 SG1 6216.0 SG2 399.7 THA 3.97 EL1 2830.1 EL2 164.8 ALF 9.99

LAUNCH DATE JAN 13 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 572.161

RL 147.14 LAL .00 LOL 112.64 VL 27.136 GAL 6.78 AZL 87.29 HCA 270.95 SMA 124.31 ECC .21718 INC 2.7057 V1 30.279
RP 108.43 LAP -2.71 LOP 23.58 VP 37.154 GAP 10.20 AZP 89.96 TAL 153.86 TAP 64.81 RCA 97.32 APO 151.31 V2 34.951
RC 158.875 GL 15.51 GP -10.37 ZAL 49.10 ZAP 163.28 ETS 325.14 ZAE 126.95 ETE 187.23 ZAC 132.37 ETC 172.82 CLP-166.81

PLANETOCENTRIC CONIC

C3 22.621 VHL 4.756 DLA 36.44 RAL 60.14 RAD 6567.9 VEL 12.000 PTH 2.14 VHP 7.105 DPA 2.07 RAP 38.97 ECC 1.3723
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.03 22 57 17 4109.46 -23.94 178.46 293.20 61.66 24 5 47 3509.5 -27.53 170.94
113.97 4 45 15 3022.60 -23.93 96.75 293.19 61.65 5 35 38 2422.6 -27.52 89.23
66.03 22 57 17 4109.46 -23.94 178.46 293.20 61.66 24 5 47 3509.5 -27.53 170.94
113.97 4 45 15 3022.60 -23.93 96.75 293.19 61.65 5 35 38 2422.6 -27.52 89.23
66.03 22 57 17 4109.46 -23.94 178.46 293.20 61.66 24 5 47 3509.5 -27.53 170.94
113.97 4 45 15 3022.60 -23.93 96.75 293.19 61.65 5 35 38 2422.6 -27.52 89.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8637 TRA 3.2336 TC3-3.4045 BAU 1.0297 SGT 6243.2 SGR 578.9 SG3 282.0 ST 2675.9 SR 513.9 SS 793.8
RDE .4210 RRA .1847 RC3 -.0391 FAU .03068 RRT .7191 RRF .7044 RTF .9752 CRT .9158 CRS -.8358 CST -.9858
FDE .7903 FRA 1.9464 FC3-1.1743 BSP 20435 SGB 6270.0 R23 .0003 R13 .9752 LSA 2827.4 MSA 245.3 SSA 14.4
BDE 1.9107 BRA 3.2389 BC3 3.4047 FSP -992 SG1 6257.1 SG2 401.4 THA 3.83 EL1 2717.2 EL2 203.3 ALF 10.03

LAUNCH DATE JAN 13 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 577.748

RL 147.14 LAL .00 LOL 112.64 VL 27.108 GAL 7.30 AZL 87.41 HCA 274.14 SMA 124.14 ECC .22346 INC 2.5937 V1 30.279
RP 108.39 LAP -2.59 LOP 26.78 VP 37.146 GAP 10.69 AZP 89.81 TAL 152.64 TAP 66.77 RCA 96.40 APO 151.87 V2 34.964
RC 161.027 GL 14.25 GP -9.98 ZAL 47.23 ZAP 164.42 ETS 323.62 ZAE 126.74 ETE 186.92 ZAC 134.26 ETC 172.56 CLP-167.98

PLANETOCENTRIC CONIC

C3 24.432 VHL 4.943 DLA 35.53 RAL 62.41 RAD 6568.0 VEL 12.075 PTH 2.16 VHP 7.390 DPA 3.15 RAP 40.69 ECC 1.4021
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.59 23 14 51 4102.88 -22.80 177.27 296.37 61.98 24 23 14 3502.9 -26.36 169.80
112.41 4 45 47 3066.79 -22.78 99.61 296.37 61.97 5 36 54 2466.8 -26.34 92.15
67.59 23 14 51 4102.88 -22.80 177.27 296.37 61.98 24 23 14 3502.9 -26.36 169.80
112.41 4 45 47 3066.79 -22.78 99.61 296.37 61.97 5 36 54 2466.8 -26.34 92.15
67.59 23 14 51 4102.88 -22.80 177.27 296.37 61.98 24 23 14 3502.9 -26.36 169.80
112.41 4 45 47 3066.79 -22.78 99.61 296.37 61.97 5 36 54 2466.8 -26.34 92.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7963 TRA 3.5374 TC3-3.1578 BAU 1.0315 SGT 6282.2 SGR 571.5 SG3 266.8 ST 2574.7 SR 504.3 SS 752.5
RDE .4290 RRA .1964 RC3 -.0334 FAU .02769 RRT .7098 RRF .6959 RTF .9752 CRT .8952 CRS -.8070 CST -.9854
FDE .7091 FRA 1.9754 FC3 -.9811 BSP 20519 SGB 6308.2 R23 .0013 R13 .9752 LSA 2717.1 MSA 258.2 SSA 14.2
BDE 1.8468 BRA 3.5428 BC3 3.1580 FSP -935 SG1 6295.3 SG2 401.8 THA 3.71 EL1 2614.2 EL2 221.3 ALF 10.02

LAUNCH DATE JAN 13 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 583.276

RL 147.14 LAL .00 LOL 112.64 VL 27.080 GAL 7.86 AZL 87.52 HCA 277.33 SMA 123.96 ECC .23025 INC 2.4808 V1 30.279  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.137 GAP 11.20 AZP 89.68 TAL 151.42 TAP 68.75 RCA 95.42 APO 152.50 V2 34.977  
 RC 183.161 GL 13.03 GP -9.62 ZAL 45.41 ZAP 165.52 ETS 321.81 ZAE 126.54 ETE 186.64 ZAC 136.18 ETC 172.25 CLP-169.12

PLANETOCENTRIC CONIC

C3 26.515 VHL 5.149 DLA 34.62 RAL 64.57 RAD 6568.1 VEL 12.161 PTH 2.18 VHP 7.693 DPA 4.19 RAP 42.46 ECC 1.4364  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.20 23 32 45 4095.16 -21.62 175.99 299.55 62.28 24 41 0 3495.2 -25.16 168.58  
 110.00 4 45 9 3114.91 -21.61 102.74 299.54 62.27 5 37 4 2514.9 -25.14 95.34  
 69.20 23 32 45 4095.16 -21.62 175.99 299.55 62.28 24 41 0 3495.2 -25.16 168.58  
 110.00 4 45 9 3114.91 -21.61 102.74 299.54 62.27 5 37 4 2514.9 -25.14 95.34  
 69.20 23 32 45 4095.16 -21.62 175.99 299.55 62.28 24 41 0 3495.2 -25.16 168.58  
 110.00 4 45 9 3114.91 -21.61 102.74 299.54 62.27 5 37 4 2514.9 -25.14 95.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7221 TRA 3.8546 TC3-2.9156 BAU 1.0336 SGT 6312.5 SGR 563.6 SG3 252.3 ST 2474.7 SR 494.0 SS 714.4  
 RDE .4373 RRA .2091 RC3 -.0295 FAU .02500 RRT .7019 RRF .6886 RTF .9753 CRT .8714 CRS -.7749 CST -.9851  
 FDE .6325 FRA 2.0017 FC3 -.8163 BSP 20703 SGB 6337.6 R23 .0018 R13 .9753 LSA 2608.6 MSA 271.2 SSA 13.8  
 BDE 1.7767 BRA 3.8602 BC3 2.9157 FSP -888 SG1 6325.0 SG2 400.7 THA 3.60 EL1 2512.2 EL2 238.8 ALF 9.96

LAUNCH DATE JAN 13 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 588.757

RL 147.14 LAL .00 LOL 112.64 VL 27.052 GAL 8.46 AZL 87.63 HCA 280.52 SMA 123.78 ECC .23762 INC 2.3661 V1 30.279  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.129 GAP 11.75 AZP 89.57 TAL 150.22 TAP 70.74 RCA 94.37 APO 153.19 V2 34.990  
 RC 185.276 GL 11.86 GP -9.29 ZAL 43.66 ZAP 166.57 ETS 319.66 ZAE 126.34 ETE 186.39 ZAC 138.12 ETC 171.89 CLP-170.26

PLANETOCENTRIC CONIC

C3 28.913 VHL 5.377 DLA 33.71 RAL 66.63 RAD 6568.2 VEL 12.259 PTH 2.21 VHP 8.016 DPA 5.20 RAP 44.27 ECC 1.4758  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.89 23 51 5 4085.84 -20.43 174.59 302.71 62.58 24 59 11 3485.8 -23.94 167.24  
 109.11 4 43 13 3167.34 -20.42 106.17 302.70 62.57 5 36 1 2567.3 -23.92 98.82  
 70.89 23 51 5 4085.84 -20.43 174.59 302.71 62.58 24 59 11 3485.8 -23.94 167.24  
 109.11 4 43 13 3167.34 -20.42 106.17 302.70 62.57 5 36 1 2567.3 -23.92 98.82  
 110.00 5 31 34 3019.56 -24.63 96.89 304.92 65.51 6 21 53 2419.6 -27.72 89.08  
 110.00 4 5 51 3281.63 -16.33 112.69 300.33 59.55 5 0 33 2681.6 -20.25 105.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6469 TRA 4.1919 TC3-2.6710 BAU 1.0325 SGT 6337.6 SGR 555.7 SG3 238.8 ST 2383.7 SR 483.3 SS 681.7  
 RDE .4464 RRA .2232 RC3 -.0261 FAU .02243 RRT .6959 RRF .6831 RTF .9755 CRT .8445 CRS -.7409 CST -.9852  
 FDE .5634 FRA 2.0289 FC3 -.6716 BSP 20851 SGB 6361.9 R23 .0022 R13 .9755 LSA 2510.0 MSA 283.5 SSA 13.5  
 BDE 1.7063 BRA 4.1979 BC3 2.6711 FSP -842 SG1 6349.5 SG2 398.3 THA 3.51 EL1 2418.8 EL2 255.1 ALF 9.83

LAUNCH DATE JAN 13 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 594.121

RL 147.14 LAL .00 LOL 112.64 VL 27.023 GAL 9.10 AZL 87.75 HCA 283.72 SMA 123.61 ECC .24563 INC 2.2489 V1 30.279  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.121 GAP 12.33 AZP 89.47 TAL 149.03 TAP 72.75 RCA 93.25 APO 153.97 V2 35.003  
 RC 187.370 GL 10.72 GP -8.99 ZAL 41.98 ZAP 167.57 ETS 317.11 ZAE 126.14 ETE 186.17 ZAC 140.08 ETC 171.49 CLP-171.38

PLANETOCENTRIC CONIC

C3 31.675 VHL 5.628 DLA 32.82 RAL 68.58 RAD 6568.3 VEL 12.371 PTH 2.23 VHP 8.362 DPA 6.17 RAP 46.11 ECC 1.5213  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.67 0 13 57 4074.38 -19.23 173.05 305.87 62.87 1 21 52 3474.4 -22.71 165.75  
 107.33 4 39 51 3224.58 -19.21 109.94 305.86 62.86 5 33 36 2624.6 -22.70 102.64  
 72.67 0 13 57 4074.38 -19.23 173.05 305.87 62.87 1 21 52 3474.4 -22.71 165.75  
 107.33 4 39 51 3224.58 -19.21 109.94 305.86 62.86 5 33 36 2624.6 -22.70 102.64  
 110.00 6 9 18 2949.34 -26.53 92.32 309.52 67.61 6 58 27 2349.3 -29.32 84.25  
 110.00 3 43 41 3397.62 -12.22 119.16 301.73 57.83 4 40 19 2797.6 -16.38 112.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5702 TRA 4.5511 TC3-2.4281 BAU 1.0283 SGT 6357.8 SGR 547.4 SG3 226.2 ST 2301.6 SR 472.2 SS 654.1  
 RDE .4559 RRA .2386 RC3 -.0232 FAU .01998 RRT .6915 RRF .6792 RTF .9757 CRT .8147 CRS -.7053 CST -.9855  
 FDE .3008 FRA 2.0577 FC3 -.5461 BSP 20984 SGB 6381.3 R23 .0025 R13 .9758 LSA 2421.0 MSA 294.8 SSA 13.1  
 BDE 1.6350 BRA 4.5573 BC3 2.4282 FSP -799 SG1 6369.1 SG2 394.7 THA 3.42 EL1 2334.0 EL2 270.0 ALF 9.62

LAUNCH DATE JAN 13 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 599.415

RL 147.14 LAL .00 LOL 112.64 VL 26.995 GAL 9.78 AZL 87.87 HCA 286.92 SMA 123.43 ECC .25435 INC 2.1284 V1 30.279  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.113 GAP 12.96 AZP 89.38 TAL 147.87 TAP 74.79 RCA 92.04 APO 154.83 V2 35.016  
 RC 169.445 GL 9.63 GP -8.71 ZAL 40.37 ZAP 168.52 ETS 314.05 ZAE 125.94 ETE 185.98 ZAC 142.04 ETC 171.02 CLP-172.49

PLANETOCENTRIC CONIC

C3 34.865 VHL 5.905 DLA 31.94 RAL 70.43 RAD 6568.4 VEL 12.499 PTH 2.26 VHP 8.734 DPA 7.10 RAP 47.99 ECC 1.5738  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.56 0 33 50 4059.62 -18.02 171.27 309.01 63.16 1 41 30 3459.6 -21.47 164.02  
 105.44 4 34 42 3287.69 -18.00 114.11 309.00 63.15 5 29 30 2687.7 -21.45 106.86  
 74.56 0 33 50 4059.62 -18.02 171.27 309.01 63.16 1 41 30 3459.6 -21.47 164.02  
 105.44 4 34 42 3287.69 -18.00 114.11 309.00 63.15 5 29 30 2687.7 -21.45 106.86  
 110.00 6 37 1 2908.90 -27.55 89.62 313.60 68.91 7 25 30 2308.9 -30.16 81.40  
 110.00 3 30 41 3486.41 -8.96 123.97 303.65 56.87 4 28 48 2886.4 -13.26 117.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4927 TRA 4.9339 TC3-2.1892 BAU 1.0204 SGT 6373.0 SGR 538.7 SG3 214.4 ST 2229.1 SR 460.5 SS 631.1  
 RDE .4659 RRA .2553 RC3 -.0205 FAU .01764 RRT .6887 RRF .6768 RTF .9762 CRT .7824 CRS -.6691 CST -.9861  
 FDE .4443 FRA 2.0883 FC3 -.4381 BSP 21099 SGB 6395.8 R23 .0027 R13 .9762 LSA 2342.3 MSA 304.6 SSA 12.8  
 BDE 1.5637 BRA 4.9405 BC3 2.1893 FSP -758 SG1 6383.9 SG2 389.9 THA 3.34 EL1 2258.5 EL2 283.0 ALF 9.33

LAUNCH DATE JAN 13 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 604.605

RL 147.14 LAL .00 LOL 112.64 VL 26.968 GAL 10.52 AZL 88.00 HCA 290.12 SMA 123.26 ECC .26388 INC 2.0036 V1 30.279  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.106 GAP 13.63 AZP 89.31 TAL 146.72 TAP 76.85 RCA 90.73 APO 155.79 V2 35.030  
 RC 171.498 GL 8.59 GP -8.46 ZAL 38.83 ZAP 169.41 ETS 310.39 ZAE 125.74 ETE 185.80 ZAC 144.01 ETC 170.47 CLP-173.60

PLANETOCENTRIC CONIC

C3 38.550 VHL 6.209 DLA 31.08 RAL 72.17 RAD 6568.5 VEL 12.646 PTH 2.30 VHP 9.135 DPA 8.00 RAP 49.89 ECC 1.6344  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.62 0 55 2 4040.29 -16.80 169.16 312.14 63.46 2 2 22 3440.3 -20.23 161.96  
 103.38 4 27 24 3357.83 -16.78 118.77 312.13 63.45 5 23 21 2757.8 -20.21 111.57  
 76.62 0 55 2 4040.29 -16.80 169.16 312.14 63.46 2 2 22 3440.3 -20.23 161.96  
 103.38 4 27 24 3357.83 -16.78 118.77 312.13 63.45 5 23 21 2757.8 -20.21 111.57  
 110.00 7 0 13 2881.76 -28.20 87.78 317.46 69.83 7 48 14 2281.8 -30.68 79.46  
 110.00 3 21 23 3564.35 -6.04 128.11 305.78 56.29 4 20 47 2964.4 -10.42 121.77

DIFFERENTIAL CORRECTIONS

TDE 1.4167 TRA 5.3454 TC3-1.9533 BAU 1.0067  
 RDE .4762 RRA .2734 RC3 -.0176 FAU .01534  
 FDE .3945 FRA 2.1225 FC3 -.3444 BSP 21122  
 BDE 1.4946 BRA 5.3523 BC3 1.9534 FSP -716

MID-COURSE EXECUTION ACCURACY

SGT 6384.8 SGR 529.5 SG3 203.5  
 RRT .6875 RRF .6760 RTF .9767  
 SGB 6406.7 R23 .0030 R13 .9767  
 SG1 6395.2 SG2 383.9 THA 3.27

ORBIT DETERMINATION ACCURACY

ST 2168.0 SR 448.2 SS 613.1  
 CRT .7484 CRS -.6336 CST -.9871  
 LSA 2275.8 MSA 312.3 SSA 12.4  
 EL1 2194.2 EL2 293.8 ALF 8.96

LAUNCH DATE JAN 13 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 609.672

RL 147.14 LAL .00 LOL 112.64 VL 26.940 GAL 11.32 AZL 88.13 HCA 293.33 SMA 123.09 ECC .27431 INC 1.8734 V1 30.279  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.098 GAP 14.35 AZP 89.26 TAL 145.62 TAP 78.95 RCA 89.33 APO 156.85 V2 35.043  
 RC 173.532 GL 7.58 GP -8.23 ZAL 37.37 ZAP 170.23 ETS 306.01 ZAE 125.52 ETE 185.64 ZAC 145.98 ETC 169.85 CLP-174.71

PLANETOCENTRIC CONIC

C3 42.827 VHL 6.544 DLA 30.24 RAL 73.80 RAD 6568.6 VEL 12.814 PTH 2.33 VHP 9.568 DPA 8.85 RAP 51.81 ECC 1.7048  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.92 1 18 21 4013.60 -15.58 166.54 315.25 63.75 2 25 15 3413.6 -18.98 159.37  
 101.08 4 17 6 3437.63 -15.56 124.12 315.24 63.74 5 14 24 2837.6 -18.97 116.96  
 78.92 1 18 21 4013.60 -15.58 166.54 315.25 63.75 2 25 15 3413.6 -18.98 159.37  
 101.08 4 17 6 3437.63 -15.56 124.12 315.24 63.74 5 14 24 2837.6 -18.97 116.96  
 110.00 7 20 29 2663.03 -28.63 86.49 321.17 70.48 8 8 12 2263.0 -31.02 78.10  
 110.00 3 14 9 3636.20 -3.31 131.88 308.04 55.96 4 14 45 3036.2 -7.75 125.62

DIFFERENTIAL CORRECTIONS

TDE 1.3364 TRA 5.7821 TC3-1.7292 BAU .9901  
 RDE .4865 RRA .2923 RC3 -.0151 FAU .01320  
 FDE .3480 FRA 2.1582 FC3 -.2668 BSP 21216  
 BDE 1.4222 BRA 5.7895 BC3 1.7293 FSP -680

MID-COURSE EXECUTION ACCURACY

SGT 6389.5 SGR 519.2 SG3 193.2  
 RRT .6870 RRF .6760 RTF .9774  
 SGB 6410.6 R23 .0029 R13 .9774  
 SG1 6399.5 SG2 376.7 THA 3.21

ORBIT DETERMINATION ACCURACY

ST 2112.7 SR 435.1 SS 598.1  
 CRT .7121 CRS -.5975 CST -.9882  
 LSA 2215.7 MSA 318.1 SSA 12.0  
 EL1 2135.8 EL2 302.2 ALF 8.51

LAUNCH DATE JAN 13 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 614.592

RL 147.14 LAL .00 LOL 112.64 VL 26.913 GAL 12.19 AZL 88.26 HCA 296.54 SMA 122.92 ECC .28576 INC 1.7368 V1 30.279  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.091 GAP 15.13 AZP 89.22 TAL 144.55 TAP 81.09 RCA 87.80 APO 158.05 V2 35.056  
 RC 175.544 GL 6.62 GP -8.02 ZAL 36.00 ZAP 170.97 ETS 300.75 ZAE 125.29 ETE 185.49 ZAC 147.94 ETC 169.12 CLP-175.83

PLANETOCENTRIC CONIC

C3 47.807 VHL 6.914 DLA 29.41 RAL 75.33 RAD 6568.8 VEL 13.007 PTH 2.37 VHP 10.040 DPA 9.67 RAP 53.75 ECC 1.7868  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.69 1 45 37 3973.60 -14.37 162.95 318.33 64.06 2 51 51 3373.6 -17.74 155.82  
 98.31 4 2 2 3532.90 -14.35 130.59 318.32 64.05 5 0 55 2932.9 -17.73 123.46  
 100.00 5 0 4 3347.07 -18.73 118.93 320.43 66.27 5 55 51 2747.1 -21.78 111.46  
 100.00 3 30 16 3634.65 -10.07 135.88 316.08 61.71 4 30 51 3034.7 -13.78 129.05  
 110.00 7 38 36 2850.40 -28.92 85.62 324.79 70.92 8 26 6 2250.4 -31.24 77.19  
 110.00 3 8 14 3704.09 -.72 135.43 310.39 55.82 4 9 58 3104.1 -5.20 129.21

DIFFERENTIAL CORRECTIONS

TDE 1.2556 TRA 6.2505 TC3-1.5143 BAU .9679  
 RDE .4968 RRA .3124 RC3 -.0126 FAU .01113  
 FDE .3061 FRA 2.1975 FC3 -.2015 BSP 21295  
 BDE 1.3503 BRA 6.2583 BC3 1.5143 FSP -646

MID-COURSE EXECUTION ACCURACY

SGT 6389.3 SGR 508.0 SG3 183.5  
 RRT .6875 RRF .6769 RTF .9783  
 SGB 6409.4 R23 .0028 R13 .9783  
 SG1 6398.8 SG2 368.4 THA 3.14

ORBIT DETERMINATION ACCURACY

ST 2066.0 SR 421.3 SS 586.8  
 CRT .6750 CRS -.5626 CST -.9895  
 LSA 2164.9 MSA 321.4 SSA 11.6  
 EL1 2085.9 EL2 307.9 ALF 8.01

LAUNCH DATE JAN 13 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 619.336

RL 147.14 LAL .00 LOL 112.64 VL 26.886 GAL 13.13 AZL 88.41 HCA 299.75 SMA 122.76 ECC .29837 INC 1.5922 V1 30.279  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.084 GAP 15.98 AZP 89.21 TAL 143.54 TAP 83.29 RCA 86.13 APO 159.38 V2 35.069  
 RC 177.535 GL 5.70 GP -7.82 ZAL 34.71 ZAP 171.61 ETS 294.48 ZAE 125.05 ETE 185.35 ZAC 149.89 ETC 168.29 CLP-176.97

PLANETOCENTRIC CONIC

C3 53.627 VHL 7.323 DLA 28.61 RAL 76.75 RAD 6568.9 VEL 13.228 PTH 2.42 VHP 10.554 DPA 10.44 RAP 55.69 ECC 1.8826  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 85.74 2 23 57 3896.95 -13.17 156.71 321.38 64.37 3 28 54 3296.9 -16.51 149.61  
 94.26 5 35 2 3666.74 -13.15 139.84 321.37 64.36 4 36 9 3066.7 -16.49 132.74  
 100.00 5 34 16 3283.07 -20.44 114.94 324.75 67.70 6 28 59 2683.1 -23.28 107.30  
 100.00 3 7 25 3755.85 -6.09 142.68 317.65 60.68 4 10 1 3155.8 -9.95 136.02  
 110.00 7 54 58 2842.56 -29.09 85.07 328.32 71.20 8 42 21 2242.6 -31.38 76.61  
 110.00 3 3 12 3769.13 1.77 138.82 312.79 55.86 4 6 1 3169.1 -2.72 132.62

DIFFERENTIAL CORRECTIONS

TDE 1.1748 TRA 6.7548 TC3-1.3093 BAU .9387  
 RDE .5072 RRA .3334 RC3 -.0100 FAU .00910  
 FDE .2685 FRA 2.2415 FC3 -.1470 BSP 21352  
 BDE 1.2796 BRA 6.7650 BC3 1.3093 FSP -614

MID-COURSE EXECUTION ACCURACY

SGT 6384.6 SGR 496.0 SG3 174.5  
 RRT .6888 RRF .6787 RTF .9794  
 SGB 6403.8 R23 .0026 R13 .9794  
 SG1 6393.7 SG2 359.0 THA 3.07

ORBIT DETERMINATION ACCURACY

ST 2027.3 SR 406.8 SS 579.1  
 CRT .6376 CRS -.5295 CST -.9909  
 LSA 2122.9 MSA 322.2 SSA 11.2  
 EL1 2044.2 EL2 310.8 ALF 7.46

LAUNCH DATE JAN 14 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 25 1969

HELIOCENTRIC CONIC

DISTANCE 155.627

RL 147.15 LAL .00 LOL 113.65 VL 21.994 GAL 6.17 AZL 86.17 HCA 61.35 SMA 100.53 ECC .47336 INC 3.8253 V1 30.277  
 RP 107.68 LAP 3.36 LOP 174.95 VP 33.837 GAP -27.98 AZP 88.16 TAL 173.05 TAP 234.40 RCA 52.94 APO 148.12 V2 35.194  
 RC 46.839 GL 9.46 GP 4.13 ZAL 75.21 ZAP 18.84 ETS 193.74 ZAE 165.73 ETE 208.07 ZAC 106.27 ETC 165.41 CLP 18.40

PLANETOCENTRIC CONIC

C3 78.828 VHL 8.878 DLA 23.32 RAL 32.98 RAD 6569.5 VEL 14.148 PTH 2.58 VHP 16.948 DPA 6.25 RAP 11.78 ECC 2.2973  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 20 2 3383.01 -23.02 123.26 287.79 73.04 3 24 25 2783.0 -25.13 115.23  
 90.00 21 29 57 4365.23 5.35 181.22 276.11 62.15 22 42 42 3765.2 1.58 174.57  
 100.00 4 7 32 3062.20 -25.43 100.45 288.58 73.74 4 58 34 2462.2 -27.42 92.21  
 100.00 22 33 8 4161.27 7.56 165.03 274.91 60.99 23 42 30 3561.3 3.63 158.44  
 110.00 5 52 24 2734.10 -31.22 77.35 290.40 75.32 6 37 58 2134.1 -32.92 68.54  
 110.00 23 4 45 4062.14 12.73 154.42 271.81 58.01 24 12 27 3462.1 8.42 147.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4165 TRA-1.0845 TC3 -.0806 BAU .0721 8GT 821.8 8GR 434.8 8G3 44.2 ST 354.2 SR 416.5 SS 311.9  
 RDE -.6431 RRA .1654 RC3 -.0317 FAU .01689 RRT .0790 RRF -.0832 RTF -.6651 CRT .7015 CRS .8289 CST .9782  
 FDE .2881 FRA .4907 FC3 -.1855 B8P 2296 8GB 929.7 R23 -.0106 R13 -.6657 LSA 589.7 MSA 219.7 S3A 13.8  
 BDE .7661 BRA 1.1069 BC3 .0684 F8P -97 8G1 822.8 8G2 432.7 THA 3.31 EL1 505.7 EL2 207.9 ALF 51.52

LAUNCH DATE JAN 14 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 182.077

RL 147.15 LAL .00 LOL 113.65 VL 22.479 GAL 5.85 AZL 86.32 HCA 64.58 SMA 102.20 ECC .44916 INC 3.6791 V1 30.277  
 RP 107.71 LAP 3.32 LOP 178.19 VP 34.145 GAP -28.52 AZP 88.42 TAL 172.73 TAP 237.32 RCA 56.30 APO 148.11 V2 35.184  
 RC 45.742 GL 9.86 GP 4.30 ZAL 74.83 ZAP 17.33 ETS 195.57 ZAE 167.72 ETE 212.42 ZAC 107.79 ETC 165.19 CLP 16.80

PLANETOCENTRIC CONIC

C3 70.247 VHL 8.381 DLA 23.83 RAL 33.25 RAD 6569.4 VEL 13.842 PTH 2.53 VHP 16.155 DPA 7.09 RAP 13.20 ECC 2.1581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 21 22 3383.27 -23.02 123.26 286.14 73.04 3 17 45 2783.3 -25.12 115.24  
 90.00 21 38 44 4311.24 3.62 178.19 275.06 61.90 22 50 35 3711.2 -.16 171.56  
 100.00 4 2 4 3058.60 -25.50 100.20 286.95 73.85 4 53 3 2458.6 -27.47 91.95  
 100.00 22 40 43 4111.15 5.90 162.24 273.81 60.64 23 49 14 3511.1 1.94 155.88  
 110.00 5 48 46 2724.76 -31.38 76.87 288.77 75.69 6 34 11 2124.8 -33.03 67.83  
 110.00 23 10 30 4017.75 11.12 152.00 270.64 57.47 24 17 28 3417.7 6.75 145.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4181 TRA-1.0813 TC3 -.0540 BAU .0598 8GT 862.1 8GR 438.1 8G3 48.5 ST 375.3 SR 420.9 SS 328.2  
 RDE -.8137 RRA .1907 RC3 -.0337 FAU .01750 RRT .0908 RRF -.0849 RTF -.6842 CRT .7091 CRS .8334 CST .9788  
 FDE .3010 FRA .5052 FC3 -.2156 B8P 2401 8GB 987.0 R23 -.0115 R13 -.6849 LSA 612.8 MSA 223.7 S3A 14.1  
 BDE .7432 BRA 1.0917 BC3 .0637 F8P -108 8G1 863.3 8G2 435.6 THA 3.55 EL1 522.0 EL2 213.4 ALF 49.60

LAUNCH DATE JAN 14 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 168.577

RL 147.15 LAL .00 LOL 113.65 VL 22.929 GAL 5.52 AZL 86.46 HCA 67.82 SMA 103.84 ECC .42616 INC 3.5408 V1 30.277  
 RP 107.74 LAP 3.28 LOP 181.43 VP 34.432 GAP -25.14 AZP 88.66 TAL 172.47 TAP 240.29 RCA 59.59 APO 148.09 V2 35.174  
 RC 44.782 GL 10.26 GP 4.49 ZAL 74.54 ZAP 15.84 ETS 197.78 ZAE 169.78 ETE 218.67 ZAC 109.30 ETC 164.93 CLP 18.21

PLANETOCENTRIC CONIC

C3 82.655 VHL 7.915 DLA 24.31 RAL 33.41 RAD 6569.2 VEL 13.585 PTH 2.48 VHP 15.394 DPA 7.94 RAP 14.62 ECC 2.0311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 26 3382.41 -23.04 123.22 284.34 73.06 3 10 48 2782.4 -25.14 115.18  
 90.00 21 46 39 4257.43 1.89 175.18 273.90 61.74 22 57 56 3657.4 -1.90 168.56  
 100.00 3 56 24 3053.64 -25.60 99.86 285.17 74.01 4 47 18 2453.6 -27.54 91.60  
 100.00 22 47 42 4061.42 4.23 159.49 272.80 60.38 23 53 23 3461.4 .25 152.96  
 110.00 5 44 58 2714.01 -31.56 75.88 286.98 76.13 6 30 12 2114.0 -33.14 67.01  
 110.00 23 15 38 3973.82 9.50 149.82 289.37 57.01 24 21 52 3373.8 5.09 143.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4206 TRA-1.0651 TC3 -.0433 BAU .0469 8GT 901.7 8GR 440.9 8G3 53.3 ST 396.4 SR 424.8 SS 345.1  
 RDE -.5852 RRA .1367 RC3 -.0355 FAU .01818 RRT .1031 RRF -.1079 RTF -.7033 CRT .7168 CRS .8384 CST .9793  
 FDE .3147 FRA .5194 FC3 -.2513 B8P 2556 8GB 1003.7 R23 -.0132 R13 -.7041 LSA 636.4 MSA 226.9 S3A 14.4  
 BDE .7207 BRA 1.0738 BC3 .0560 F8P -121 8G1 903.2 8G2 437.8 THA 3.77 EL1 538.6 EL2 218.0 ALF 47.77

LAUNCH DATE JAN 14 1969

FLIGHT TIME 76.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 175.122

RL 147.15 LAL .00 LOL 113.65 VL 23.346 GAL 5.19 AZL 86.59 HCA 71.04 SMA 105.43 ECC .40435 INC 3.4084 V1 30.277  
 RP 107.77 LAP 3.22 LOP 184.67 VP 34.700 GAP -23.82 AZP 88.89 TAL 172.26 TAP 243.30 RCA 62.80 APO 148.06 V2 35.164  
 RC 43.971 GL 10.65 GP 4.70 ZAL 74.36 ZAP 14.39 ETS 200.49 ZAE 171.80 ETE 228.31 ZAC 110.80 ETC 164.63 CLP 13.62

PLANETOCENTRIC CONIC

C3 55.935 VHL 7.479 DLA 24.75 RAL 33.47 RAD 6569.0 VEL 13.315 PTH 2.43 VHP 14.664 DPA 8.80 RAP 16.04 ECC 1.9205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 17 3380.32 -23.08 123.08 282.40 73.12 3 3 38 2780.3 -25.17 115.04  
 90.00 21 54 38 4204.15 .17 172.21 272.62 61.68 23 4 42 3604.2 -3.61 165.58  
 100.00 3 50 36 3047.26 -25.72 99.43 283.25 74.21 4 41 23 2447.3 -27.63 91.15  
 100.00 22 54 1 4012.45 2.58 156.79 271.28 60.21 24 0 53 3412.4 -1.41 150.27  
 110.00 5 41 0 2701.84 -31.75 74.98 285.04 76.82 6 26 2 2101.8 -33.27 66.08  
 110.00 23 20 5 3930.64 7.89 147.31 288.00 56.63 24 25 36 3330.6 3.45 141.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4226 TRA-1.0479 TC3 -.0288 BAU .0349 8GT 942.4 8GR 443.0 8G3 58.5 ST 418.5 SR 428.3 SS 362.7  
 RDE -.5575 RRA .1233 RC3 -.0388 FAU .01895 RRT .1167 RRF -.1224 RTF -.7216 CRT .7254 CRS .8437 CST .9800  
 FDE .3290 FRA .5335 FC3 -.2934 B8P 2722 8GB 1041.4 R23 -.0149 R13 -.7225 LSA 661.3 MSA 229.3 S3A 14.6  
 BDE .6996 BRA 1.0552 BC3 .0467 F8P -135 8G1 944.2 8G2 439.2 THA 4.01 EL1 556.2 EL2 221.8 ALF 45.91

LAUNCH DATE JAN 14 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 181.706

RL 147.15 LAL .00 LOL 113.65 VL 23.732 GAL 4.86 AZL 86.72 HCA 74.27 SMA 106.97 ECC .38371 INC 3.2814 V1 30.277  
 RP 107.80 LAP 3.16 LOP 187.90 VP 34.950 GAP -22.56 AZP 89.11 TAL 172.10 TAP 246.37 RCA 65.93 APO 148.02 V2 35.153  
 RC 43.319 GL 11.04 GP 4.94 ZAL 74.28 ZAP 12.99 ETS 203.87 ZAE 173.57 ETE 244.11 ZAC 112.29 ETC 164.30 CLP 12.03

PLANETOCENTRIC CONIC

C3 49.985 VHL 7.070 DLA 25.15 RAL 33.43 RAD 6560.8 VEL 13.090 PTH 2.39 VHP 13.964 DPA 9.68 RAP 17.45 ECC 1.8226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 2 3378.85 -23.14 122.85 200.34 73.21 2 56 19 2776.9 -25.23 114.80  
 90.00 22 1 34 4151.91 -1.51 169.30 271.22 61.72 23 10 46 3551.9 -5.28 162.65  
 100.00 3 44 44 3039.33 -25.86 98.88 281.20 74.46 4 35 23 2439.3 -27.74 90.59  
 100.00 22 59 33 3964.66 .96 154.17 269.85 60.12 24 5 38 3364.7 -3.02 147.64  
 110.00 5 36 57 2688.23 -31.96 73.98 282.96 77.18 6 21 45 2088.2 -33.40 65.04  
 110.00 23 23 50 3888.52 6.31 145.08 286.53 56.33 24 28 38 3288.5 1.84 138.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4253 TRA-1.0298 TC3 -.0101 BAU .0259 SGT 984.4 SCR 444.6 SCS 64.3 ST 441.9 SR 431.3 SS 381.1  
 RDE -.5309 RRA .1103 RC3 -.0374 FAU .01980 RRT .1321 RRF -.1588 RTF -.7391 CRT .7350 CRS .8495 CST .9807  
 FDE .3445 FRA .5476 FC3 -.3430 BSP 2885 SGB 1080.1 R23 -.0170 R13 -.7401 LSA 687.8 MSA 230.8 SSA 14.8  
 BDE .6802 BRA 1.0357 BC3 .0388 FSP -151 SGI 986.6 SGE 439.7 THA 4.26 EL1 575.2 EL2 224.7 ALF 44.05

LAUNCH DATE JAN 14 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 188.324

RL 147.15 LAL .00 LOL 113.65 VL 24.089 GAL 4.54 AZL 86.84 HCA 77.50 SMA 108.46 ECC .36422 INC 3.1584 V1 30.277  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.182 GAP -21.36 AZP 89.32 TAL 171.99 TAP 249.49 RCA 68.96 APO 147.97 V2 35.141  
 RC 42.834 GL 11.41 GP 5.19 ZAL 74.31 ZAP 11.64 ETS 208.12 ZAE 174.83 ETE 269.28 ZAC 113.76 ETC 163.92 CLP 10.43

PLANETOCENTRIC CONIC

C3 44.718 VHL 6.687 DLA 25.50 RAL 33.29 RAD 6560.7 VEL 12.887 PTH 2.35 VHP 13.292 DPA 10.58 RAP 18.85 ECC 1.7359  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 49 3371.69 -23.25 122.51 278.16 73.36 2 49 1 2771.7 -25.31 114.44  
 90.00 22 7 38 4101.29 -3.14 186.47 289.71 61.84 23 16 0 3501.3 -6.89 159.79  
 100.00 3 38 54 3029.66 -26.04 98.22 279.04 74.77 4 29 24 2429.7 -27.87 89.90  
 100.00 23 4 14 3918.55 -.81 151.84 288.30 60.11 24 9 33 3318.6 -4.58 145.10  
 110.00 5 32 52 2673.13 -32.19 72.86 280.75 77.81 6 17 25 2073.1 -33.53 63.88  
 110.00 23 26 46 3847.84 4.77 142.94 284.96 56.11 24 30 54 3247.8 .29 136.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4283 TRA-1.0106 TC3 .0135 BAU .0237 SGT 1027.3 SCR 445.6 SCS 70.6 ST 466.4 SR 433.8 SS 400.2  
 RDE -.9052 RRA .0983 RC3 -.0372 FAU .02075 RRT .1494 RRF -.1573 RTF -.7556 CRT .7454 CRS .8556 CST .9814  
 FDE .3608 FRA .5817 FC3 -.4017 BSP 3064 SGB 1119.8 R23 -.0193 R13 -.7567 LSA 715.6 MSA 231.4 SSA 15.1  
 BDE .6823 BRA 1.0134 BC3 .0396 FSP -170 SGI 1029.9 SGE 439.5 THA 4.54 EL1 595.3 EL2 226.6 ALF 42.22

LAUNCH DATE JAN 14 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 194.971

RL 147.15 LAL .00 LOL 113.65 VL 24.419 GAL 4.22 AZL 86.96 HCA 80.72 SMA 109.90 ECC .34587 INC 3.0384 V1 30.277  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.397 GAP -20.21 AZP 89.51 TAL 171.94 TAP 252.68 RCA 71.89 APO 147.92 V2 35.129  
 RC 42.324 GL 11.77 GP 5.47 ZAL 74.43 ZAP 10.38 ETS 213.58 ZAE 174.41 ETE 299.23 ZAC 115.21 ETC 163.50 CLP 8.83

PLANETOCENTRIC CONIC

C3 40.055 VHL 6.329 DLA 25.80 RAL 33.04 RAD 6560.5 VEL 12.705 PTH 2.31 VHP 12.646 DPA 11.50 RAP 20.24 ECC 1.6592  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 49 3364.40 -23.39 122.02 275.89 73.56 2 41 53 2764.4 -25.42 113.94  
 90.00 22 12 41 4053.05 -4.89 163.77 286.07 62.04 23 20 14 3453.1 -8.39 157.05  
 100.00 3 33 16 3017.98 -26.24 97.41 276.77 75.15 4 23 34 2418.0 -28.03 89.06  
 100.00 23 7 55 3874.71 -2.09 149.23 286.63 60.17 24 12 29 3274.7 -6.05 142.68  
 110.00 5 28 49 2656.46 -32.42 71.61 278.42 78.52 6 13 3 2056.5 -33.66 62.60  
 110.00 23 28 51 3908.99 3.29 140.90 283.28 55.96 24 32 20 3209.0 -1.20 134.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4320 TRA-.9907 TC3 .0428 BAU .0299 SGT 1071.6 SCR 446.2 SCS 77.7 ST 492.2 SR 436.0 SS 420.3  
 RDE -.4807 RRA .0887 RC3 -.0359 FAU .02180 RRT .1693 RRF -.1784 RTF -.7714 CRT .7567 CRS .8621 CST .9823  
 FDE .3785 FRA .5780 FC3 -.4712 BSP 3232 SGB 1160.7 R23 -.0219 R13 -.7726 LSA 745.2 MSA 231.1 SSA 15.4  
 BDE .6463 BRA .9945 BC3 .0558 FSP -189 SGI 1074.8 SGE 438.4 THA 4.84 EL1 617.0 EL2 227.4 ALF 40.44

LAUNCH DATE JAN 14 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 201.642

RL 147.15 LAL .00 LOL 113.65 VL 24.724 GAL 3.90 AZL 87.08 HCA 83.94 SMA 111.29 ECC .32862 INC 2.9208 V1 30.277  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.597 GAP -19.11 AZP 89.69 TAL 171.95 TAP 255.89 RCA 74.72 APO 147.86 V2 35.117  
 RC 42.392 GL 12.10 GP 5.78 ZAL 74.66 ZAP 9.24 ETS 220.62 ZAE 172.97 ETE 322.18 ZAC 116.62 ETC 163.02 CLP 7.22

PLANETOCENTRIC CONIC

C3 35.927 VHL 5.994 DLA 26.04 RAL 32.69 RAD 6560.4 VEL 12.542 PTH 2.27 VHP 12.027 DPA 12.43 RAP 21.61 ECC 1.5913  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 15 3354.39 -23.58 121.35 273.53 73.85 2 35 10 2754.4 -25.57 113.24  
 90.00 22 18 27 4008.10 -6.12 161.24 286.29 62.30 23 23 15 3408.1 -9.78 154.47  
 100.00 3 27 58 3003.94 -28.48 96.44 274.40 75.81 4 18 1 2403.9 -28.20 88.06  
 100.00 23 10 28 3833.79 -3.48 146.98 284.84 60.29 24 14 20 3233.8 -7.40 140.40  
 110.00 5 24 53 2638.09 -32.66 70.23 275.98 79.30 6 8 51 2038.1 -33.79 61.18  
 110.00 23 30 0 3772.40 1.90 138.99 281.50 55.86 24 32 52 3172.4 -2.60 132.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4582 TRA-.9701 TC3 .0783 BAU .0408 SGT 1117.1 SCR 446.3 SCS 85.5 ST 519.4 SR 437.9 SS 441.3  
 RDE -.4574 RRA .0755 RC3 -.0330 FAU .02297 RRT 1919 RRF -.2024 RTF -.7862 CRT .7688 CRS .8690 CST .9833  
 FDE .3976 FRA .5906 FC3 -.5533 BSP 3404 SGB 1203.0 R23 -.0248 R13 -.7876 LSA 776.7 MSA 229.9 SSA 15.6  
 BDE .6521 BRA .9731 BC3 .0849 FSP -212 SGI 1121.0 SGE 436.5 THA 5.17 EL1 640.3 EL2 227.2 ALF 38.71



LAUNCH DATE JAN 14 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 208.333

RL 147.15 LAL .00 LOL 113.65 VL 25.006 GAL 3.59 AZL 87.20 HCA 87.16 SMA 112.61 ECC .31244 INC 2.8047 V1 30.277
RP 107.95 LAP 2.80 LOP 200.81 VP 35.781 GAP -18.06 AZP 89.86 TAL 172.02 TAP 259.18 RCA 77.43 APO 147.79 V2 35.105
RC 42.442 GL 12.41 GP 6.13 ZAL 75.00 ZAP 8.29 ETS 229.87 ZAE 170.88 ETE 336.34 ZAC 118.00 ETC 162.49 CLP 5.59

PLANETOCENTRIC CONIC

C3 32.274 VHL 5.681 DLA 26.22 RAL 32.25 RAD 6568.3 VEL 12.395 PTH 2.24 VHP 11.433 DPA 13.38 RAP 22.96 ECC 1.5312
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 33 27 3340.89 -23.83 120.44 271.11 74.24 2 29 8 2740.9 -25.77 112.30
90.00 22 18 41 3967.50 -7.40 158.94 264.39 62.59 23 24 48 3367.5 -11.01 152.13
100.00 3 23 11 2987.12 -26.76 95.27 271.96 76.16 4 12 58 2387.1 -28.40 86.85
100.00 23 11 38 3796.51 -4.73 144.93 262.93 60.45 24 14 54 3196.5 -8.63 138.31
110.00 5 21 11 2617.89 -32.91 68.71 275.45 80.17 6 4 49 2017.9 -33.91 59.62
110.00 23 30 7 3738.51 .80 137.22 259.62 55.82 24 32 25 3138.5 -3.89 131.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4401 TRA -.9482 TC3 .1212 BAU .0537 9GT 1163.0 9GR 446.2 9G3 94.2 ST 547.1 SR 439.6 SS 462.8
RDE -.4353 RRA .0649 RC3 -.0282 FAU .02428 RRT .2171 RRF -.2293 RTF -.8001 CRT .7812 CRS .8760 CST .9843
FDE .4176 FRA .6052 FC3 -.6513 B8P 3583 9GB 1245.8 R23 -.0281 R13 -.8017 LSA 809.1 MSA 227.9 S8A 15.9
BDE .6190 BRA .9505 BC3 .1244 F8P -237 9G1 1167.8 9G2 433.8 THA 5.53 EL1 664.4 EL2 226.0 ALF 37.12

LAUNCH DATE JAN 14 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 215.038

RL 147.15 LAL .00 LOL 113.65 VL 25.267 GAL 3.30 AZL 87.31 HCA 90.38 SMA 113.88 ECC .29730 INC 2.6892 V1 30.277
RP 107.99 LAP 2.89 LOP 204.03 VP 35.951 GAP -17.05 AZP 90.02 TAL 172.15 TAP 262.52 RCA 80.02 APO 147.73 V2 35.092
RC 42.671 GL 12.99 GP 6.51 ZAL 75.43 ZAP 7.61 ETS 240.96 ZAE 168.48 ETE 345.18 ZAC 119.34 ETC 161.90 CLP 3.94

PLANETOCENTRIC CONIC

C3 29.044 VHL 5.389 DLA 26.33 RAL 31.70 RAD 6568.2 VEL 12.264 PTH 2.21 VHP 10.862 DPA 14.36 RAP 24.27 ECC 1.4780
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 28 43 3323.04 -24.16 119.23 268.64 74.76 2 24 8 2723.0 -26.02 111.06
90.00 22 19 5 3932.40 -8.49 156.94 262.34 62.88 23 24 37 3332.4 -12.06 150.08
100.00 3 19 8 2967.07 -27.08 93.86 269.46 76.84 4 8 35 2367.1 -28.62 85.40
100.00 23 11 20 3763.61 -5.83 143.11 260.90 60.63 24 14 4 3163.6 -9.70 136.46
110.00 5 17 50 2595.65 -33.15 67.02 270.82 81.14 6 1 6 1995.7 -34.02 57.89
110.00 23 29 8 3707.78 -.57 135.62 257.84 55.82 24 30 55 3107.8 -5.05 129.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4442 TRA -.9259 TC3 .1720 BAU .0673 9GT 1209.9 9GR 446.0 9G3 103.8 ST 575.9 SR 441.1 SS 485.2
RDE -.4145 RRA .0546 RC3 -.0210 FAU .02574 RRT .2460 RRF -.2600 RTF -.8133 CRT .7940 CRS .8831 CST .9853
FDE .4391 FRA .6205 FC3 -.7671 B8P 3759 9GB 1209.5 R23 -.0315 R13 -.8150 LSA 843.1 MSA 225.1 S8A 16.2
BDE .6076 BRA .9275 BC3 .1732 F8P -265 9G1 1215.8 9G2 430.3 THA 5.93 EL1 690.1 EL2 223.8 ALF 35.62

LAUNCH DATE JAN 14 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 221.755

RL 147.15 LAL .00 LOL 113.65 VL 25.507 GAL 3.01 AZL 87.43 HCA 93.59 SMA 115.08 ECC .28317 INC 2.5738 V1 30.277
RP 108.03 LAP 2.57 LOP 207.25 VP 36.108 GAP -16.08 AZP 90.16 TAL 172.33 TAP 265.92 RCA 82.49 APO 147.67 V2 35.080
RC 43.078 GL 12.92 GP 6.94 ZAL 75.96 ZAP 7.30 ETS 254.14 ZAE 166.01 ETE 351.15 ZAC 120.63 ETC 161.24 CLP 2.27

PLANETOCENTRIC CONIC

C3 26.187 VHL 5.117 DLA 26.37 RAL 31.07 RAD 6568.1 VEL 12.148 PTH 2.18 VHP 10.315 DPA 15.36 RAP 25.55 ECC 1.4310
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 25 23 3299.99 -24.56 117.66 266.14 75.44 2 20 23 2700.0 -26.32 109.44
90.00 22 17 22 3903.90 -9.37 155.31 260.16 63.16 23 22 26 3303.9 -12.90 148.41
100.00 3 16 1 2943.30 -27.44 92.18 266.90 77.65 4 5 4 2343.3 -28.86 83.67
100.00 23 9 24 3735.82 -6.76 141.56 258.76 60.81 24 11 40 3135.8 -10.60 134.88
110.00 5 14 56 2571.20 -33.39 65.15 268.13 82.22 5 57 48 1971.2 -34.11 55.98
110.00 23 26 58 3680.69 -1.61 134.21 255.58 55.85 24 28 19 3080.7 -6.08 127.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4478 TRA -.9026 TC3 .2311 BAU .0810 9GT 1258.9 9GR 446.0 9G3 114.5 ST 605.0 SR 442.7 SS 508.0
RDE -.3951 RRA .0448 RC3 -.0106 FAU .02736 RRT .2785 RRF -.2946 RTF -.8255 CRT .8070 CRS .8904 CST .9863
FDE .4617 FRA .6361 FC3 -.9045 B8P 3936 9GB 1333.7 R23 -.0363 R13 -.8274 LSA 877.9 MSA 221.6 S8A 16.5
BDE .5972 BRA .9038 BC3 .2314 F8P -296 9G1 1263.8 9G2 426.0 THA 6.37 EL1 716.4 EL2 220.8 ALF 34.26

LAUNCH DATE JAN 14 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 228.478

RL 147.15 LAL .00 LOL 113.65 VL 25.728 GAL 2.73 AZL 87.54 HCA 96.80 SMA 116.22 ECC .27001 INC 2.4576 V1 30.277
RP 108.07 LAP 2.44 LOP 210.46 VP 36.252 GAP -15.15 AZP 90.29 TAL 172.57 TAP 269.37 RCA 84.84 APO 147.60 V2 35.067
RC 43.658 GL 13.09 GP 7.41 ZAL 76.59 ZAP 7.43 ETS 287.98 ZAE 163.56 ETE 355.52 ZAC 121.85 ETC 160.92 CLP .57

PLANETOCENTRIC CONIC

C3 23.882 VHL 4.884 DLA 26.32 RAL 30.36 RAD 6568.0 VEL 12.043 PTH 2.15 VHP 9.791 DPA 16.39 RAP 26.79 ECC 1.3894
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 23 42 3271.08 -25.04 115.68 263.62 76.33 2 18 13 2671.1 -26.68 107.40
90.00 22 13 20 3882.90 -10.01 154.10 257.86 63.37 23 18 3 3282.9 -13.54 147.17
100.00 3 14 1 2915.42 -27.83 90.20 264.31 78.82 4 2 37 2315.4 -29.12 81.64
100.00 23 5 42 3713.79 -7.49 140.33 256.51 60.98 24 7 36 3113.8 -11.30 133.62
110.00 5 12 38 2544.32 -33.62 63.09 265.37 83.42 5 55 2 1944.3 -34.16 53.89
110.00 23 23 35 3657.68 -2.49 133.00 253.43 55.90 24 24 33 3057.7 -6.95 126.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4517 TRA -.8791 TC3 .2995 BAU .0947 9GT 1304.8 9GR 446.5 9G3 126.5 ST 635.0 SR 444.3 SS 531.3
RDE -.3770 RRA .0352 RC3 .0037 FAU .02918 RRT .3157 RRF -.3338 RTF -.8367 CRT .8204 CRS .8977 CST .9874
FDE .4857 FRA .6527 FC3 -1.0678 B8P 4098 9GB 1378.1 R23 -.0410 R13 -.8389 LSA 914.0 MSA 217.3 S8A 16.8
BDE .5884 BRA .8798 BC3 .2995 F8P -331 9G1 1313.3 9G2 420.9 THA 6.88 EL1 744.1 EL2 216.8 ALF 33.01

LAUNCH DATE JAN 14 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 235.204

RL 147.15 LAL .00 LOL 113.65 VL 25.932 GAL 2.46 AZL 87.66 HCA 100.01 SMA 117.30 ECC .25770 INC 2.3400 V1 30.277  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.384 GAP -14.26 AZP 90.41 TAL 172.87 TAP 272.88 RCA 87.06 APO 147.54 V2 35.053  
 RC 44.405 GL 13.21 GP 7.94 ZAL 77.31 ZAP 8.02 ETS 280.84 ZAE 161.18 ETE 358.95 ZAC 123.00 ETC 159.72 CLP -1.17

PLANETOCENTRIC CONIC

C3 21.432 VHL 4.629 DLA 26.17 RAL 29.57 RAD 6567.9 VEL 11.950 PTH 2.13 VHP 9.289 DPA 17.46 RAP 27.97 ECC 1.3527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 23 51 3235.97 -25.50 113.25 261.08 77.43 2 17 47 2636.0 -27.06 104.90  
 90.00 22 6 54 3869.94 -10.41 153.36 255.44 63.52 23 11 24 3269.9 -13.88 146.40  
 100.00 3 13 18 2883.12 -28.24 87.89 261.68 79.77 4 1 22 2283.1 -29.36 79.27  
 100.00 23 0 8 3698.03 -8.01 139.45 254.17 61.10 24 1 46 3098.0 -11.80 132.72  
 110.00 5 11 1 2514.81 -33.83 60.81 262.57 84.76 5 52 56 1914.8 -34.18 51.58  
 110.00 23 18 55 3639.11 -3.20 132.03 251.21 55.95 24 19 34 3039.1 -7.65 125.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4524 TRA -.8539 TC3 .3803 BAU .1092 SGT 1350.6 SGR 447.7 SCS 139.7 ST 662.1 SR 445.9 SS 554.0  
 RDE -.3602 RRA .0258 RC3 .0228 FAU .03121 RRT .3558 RRF -.3774 RTF -.8481 CRT .8327 CRS .9047 CST .9883  
 FDE .5101 FRA .6699 FC3-1.2809 BSP 4300 SGB 1422.9 R23 -.0471 R13 -.8507 LSA 948.0 MSA 212.7 SSA 17.1  
 BDE .5783 BRA .8543 BC3 .3810 FSP -371 SGI 1360.9 SGT 415.2 THA 7.42 EL1 769.5 EL2 212.5 ALF 32.01

LAUNCH DATE JAN 14 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 241.929

RL 147.15 LAL .00 LOL 113.65 VL 26.119 GAL 2.21 AZL 87.78 HCA 103.22 SMA 118.32 ECC .24646 INC 2.2201 V1 30.277  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.905 GAP -13.40 AZP 90.51 TAL 173.21 TAP 276.43 RCA 89.16 APO 147.48 V2 35.040  
 RC 45.309 GL 13.25 GP 8.53 ZAL 78.11 ZAP 9.02 ETS 291.63 ZAE 158.93 ETE 1.81 ZAC 124.07 ETC 158.85 CLP -2.94

PLANETOCENTRIC CONIC

C3 19.462 VHL 4.412 DLA 25.93 RAL 28.72 RAD 6567.8 VEL 11.868 PTH 2.11 VHP 8.809 DPA 18.56 RAP 29.10 ECC 1.3203  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 25 52 3194.73 -26.16 110.37 258.53 78.76 2 19 7 2594.7 -27.45 101.94  
 90.00 21 58 8 3885.13 -10.55 153.08 252.95 63.57 23 2 33 3265.1 -14.02 146.11  
 100.00 3 13 58 2846.24 -28.66 85.23 259.03 81.11 4 1 25 2246.2 -29.59 76.55  
 100.00 22 52 43 3688.85 -8.31 138.94 251.75 61.18 23 54 12 3088.9 -12.09 132.19  
 110.00 5 10 14 2482.46 -34.00 58.30 259.72 86.24 5 51 37 1882.5 -34.15 49.05  
 110.00 23 12 57 3625.39 -3.72 131.32 248.94 56.00 24 13 22 3025.4 -8.16 125.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4538 TRA -.8291 TC3 .4685 BAU .1225 SGT 1397.1 SGR 450.6 SCS 154.5 ST 690.3 SR 448.0 SS 577.1  
 RDE -.3449 RRA .0165 RC3 .0478 FAU .03347 RRT .4018 RRF -.4263 RTF -.8579 CRT .8454 CRS .9117 CST .9893  
 FDE .5359 FRA .8883 FC3-1.4890 BSP 4471 SGB 1467.9 R23 -.0539 R13 -.8608 LSA 983.3 MSA 207.5 SSA 17.5  
 BDE .5700 BRA .8293 BC3 .4710 FSP -415 SGI 1409.8 SGT 408.9 THA 8.07 EL1 796.3 EL2 207.4 ALF 31.10

LAUNCH DATE JAN 14 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 248.651

RL 147.15 LAL .00 LOL 113.65 VL 26.291 GAL 1.97 AZL 87.90 HCA 106.42 SMA 119.28 ECC .23599 INC 2.0971 V1 30.277  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.716 GAP -12.58 AZP 90.59 TAL 173.61 TAP 280.03 RCA 91.13 APO 147.43 V2 35.027  
 RC 46.364 GL 13.20 GP 9.20 ZAL 78.98 ZAP 10.35 ETS 300.14 ZAE 156.82 ETE 4.33 ZAC 125.04 ETC 157.89 CLP -4.77

PLANETOCENTRIC CONIC

C3 17.724 VHL 4.210 DLA 25.57 RAL 27.83 RAD 6567.7 VEL 11.794 PTH 2.09 VHP 8.350 DPA 19.70 RAP 30.16 ECC 1.2917  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 29 42 3147.75 -26.74 107.06 255.98 80.32 2 22 9 2547.8 -27.81 98.55  
 90.00 21 47 12 3888.21 -10.46 153.26 250.39 63.54 22 51 40 3268.2 -13.93 146.30  
 100.00 3 16 5 2804.77 -29.06 82.21 256.37 82.65 4 2 49 2204.8 -29.77 73.48  
 100.00 22 43 30 3686.42 -8.39 138.80 249.29 61.20 23 44 56 3086.4 -12.17 132.05  
 110.00 5 10 23 2447.13 -34.12 55.55 256.86 87.86 5 51 10 1847.1 -34.04 46.30  
 110.00 23 5 41 3616.82 -4.05 130.87 246.83 56.03 24 5 58 3016.8 -8.48 124.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4524 TRA -.8039 TC3 .5685 BAU .1361 SGT 1441.9 SGR 455.5 SCS 171.0 ST 715.3 SR 450.3 SS 598.4  
 RDE -.3309 RRA .0072 RC3 .0802 FAU .03601 RRT .4514 RRF -.4796 RTF -.8671 CRT .8571 CRS .9182 CST .9902  
 FDE .5612 FRA .7082 FC3-1.7589 BSP 4647 SGB 1512.1 R23 -.0618 R13 -.8705 LSA 1015.5 MSA 202.2 SSA 17.9  
 BDE .5605 BRA .8039 BC3 .5742 FSP -465 SGI 1457.7 SGT 402.0 THA 8.79 EL1 820.7 EL2 202.2 ALF 30.39

LAUNCH DATE JAN 14 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 255.367

RL 147.15 LAL .00 LOL 113.65 VL 26.449 GAL 1.74 AZL 88.03 HCA 109.62 SMA 120.18 ECC .22634 INC 1.9700 V1 30.277  
 RP 108.23 LAP 1.86 LOP 225.29 VP 36.716 GAP -11.79 AZP 90.66 TAL 174.05 TAP 283.67 RCA 92.98 APO 147.38 V2 35.013  
 RC 47.558 GL 13.05 GP 9.95 ZAL 79.93 ZAP 11.95 ETS 306.65 ZAE 154.87 ETE 6.65 ZAC 125.90 ETC 156.85 CLP -6.65

PLANETOCENTRIC CONIC

C3 18.191 VHL 4.024 DLA 25.08 RAL 28.91 RAD 6567.6 VEL 11.729 PTH 2.07 VHP 7.912 DPA 20.90 RAP 31.13 ECC 1.2665  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 35 11 3095.58 -27.28 103.33 253.41 82.11 2 26 47 2495.6 -28.09 94.76  
 90.00 21 34 21 3878.72 -10.14 153.86 247.83 63.42 22 39 0 3278.7 -13.63 146.92  
 100.00 3 19 38 2758.83 -29.41 78.84 253.70 84.39 4 5 37 2158.8 -29.88 70.07  
 100.00 22 32 35 3690.71 -8.25 139.04 246.82 61.17 23 34 6 3090.7 -12.03 132.30  
 110.00 5 11 33 2408.68 -34.18 52.54 253.99 89.64 5 51 42 1808.7 -33.85 43.31  
 110.00 22 57 10 3613.62 -4.17 130.70 244.31 56.04 25 57 23 3013.6 -8.60 124.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4500 TRA -.7786 TC3 .6780 BAU .1491 SGT 1485.5 SGR 463.6 SCS 189.5 ST 738.8 SR 453.2 SS 619.0  
 RDE -.3183 RRA -.0023 RC3 .1216 FAU .03884 RRT .5055 RRF -.5375 RTF -.8755 CRT .8687 CRS .9245 CST .9911  
 FDE .9871 FRA .7289 FC3-2.0769 BSP 4813 SGB 1556.2 R23 -.0709 R13 -.8796 LSA 1046.6 MSA 196.5 SSA 18.3  
 BDE .5512 BRA .7786 BC3 .6888 FSP -521 SGI 1505.3 SGT 394.8 THA 9.63 EL1 844.1 EL2 196.5 ALF 29.83

LAUNCH DATE JAN 14 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 262.074

RL 147.15 LAL .00 LOL 113.65 VL 26.593 GAL 1.52 AZL 88.16 MCA 112.82 SMA 121.02 ECC .21747 INC 1.8380 V1 30.277  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.808 GAP -11.03 AZP 90.71 TAL 174.52 TAP 287.34 RCA 94.70 APO 147.33 V2 35.000  
 RC 48.883 GL 12.79 GP 10.80 ZAL 80.93 ZAP 13.78 ETS 311.59 ZAE 153.10 ETE 8.88 ZAC 126.63 ETC 155.71 CLP -8.60

PLANETOCENTRIC CONIC

C3 14.840 VHL 3.852 DLA 24.46 RAL 25.98 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 7.495 DPA 22.16 RAP 32.00 ECC 1.2442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 42 14 3038.81 -27.75 99.24 250.85 84.11 2 32 53 2438.8 -28.27 90.62  
 90.00 21 19 52 3896.18 -9.61 154.87 245.27 63.24 22 24 48 3296.2 -13.13 147.95  
 100.00 3 24 39 2708.80 -29.69 75.14 251.04 86.33 4 9 48 2108.6 -29.88 66.34  
 100.00 22 20 8 3701.62 -7.89 139.65 244.35 61.07 23 21 50 3101.6 -11.69 132.93  
 110.00 5 13 51 2366.99 -34.15 49.29 251.14 91.56 5 53 18 1767.0 -33.56 40.09  
 110.00 22 47 26 3615.99 -4.08 130.82 242.01 56.03 23 47 42 3016.0 -8.51 124.54

DIFFERENTIAL CORRECTIONS

TDE -.4446 TRA -.7530 TC3 .7959 BAU .1616  
 RDE -.3068 RRA -.0120 RC3 .1737 FAU .04198  
 FDE .6112 FRA .7537 FC3-2.4488 B8P 4978  
 BDE .5402 BRA .7531 BC3 .8146 F8P -584

MID-COURSE EXECUTION ACCURACY

SGT 1525.5 SGR 476.0 SCS 209.9  
 RRT .5619 RRF -.5980 RTF -.8832  
 SGB 1598.0 R23 -.0815 R13 -.8880  
 SGI 1550.4 SGT 387.4 THA 10.61

ORBIT DETERMINATION ACCURACY

ST 757.5 SR 456.4 SS 636.5  
 CRT .8793 CRS .9301 CST .9919  
 LSA 1072.6 MSA 190.7 SSA 18.8  
 EL1 863.6 EL2 190.7 ALF 29.49

LAUNCH DATE JAN 14 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 268.769

RL 147.15 LAL .00 LOL 113.65 VL 26.724 GAL 1.31 AZL 88.30 MCA 116.02 SMA 121.80 ECC .20935 INC 1.6996 V1 30.277  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.890 GAP -10.30 AZP 90.75 TAL 175.03 TAP 291.05 RCA 96.30 APO 147.29 V2 34.987  
 RC 90.327 GL 12.39 GP 11.77 ZAL 81.98 ZAP 13.80 ETS 315.34 ZAE 151.51 ETE 11.11 ZAC 127.20 ETC 154.49 CLP -10.62

PLANETOCENTRIC CONIC

C3 13.648 VHL 3.694 DLA 23.70 RAL 25.05 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 7.099 DPA 23.49 RAP 32.75 ECC 1.2246  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 44 2977.89 -28.09 94.82 248.31 86.31 2 40 22 2377.9 -28.31 86.16  
 90.00 21 4 1 3920.15 -8.87 156.24 242.77 63.00 22 9 21 3320.2 -12.42 149.36  
 100.00 3 31 6 2654.27 -29.86 71.10 248.40 88.44 4 15 21 2054.3 -29.75 62.30  
 100.00 22 6 20 3719.01 -7.31 140.62 241.94 60.94 23 8 19 3119.0 -11.14 133.92  
 110.00 5 17 19 2321.96 -34.01 45.78 248.31 93.63 5 56 1 1722.0 -33.14 36.65  
 110.00 22 36 36 3624.08 -3.77 131.25 239.75 56.00 23 37 0 3024.1 -8.21 124.97

DIFFERENTIAL CORRECTIONS

TDE -.4345 TRA -.7264 TC3 .9289 BAU .1751  
 RDE -.2964 RRA -.0223 RC3 .2397 FAU .04554  
 FDE .6320 FRA .7798 FC3-2.8887 B8P 5188  
 BDE .5259 BRA .7267 BC3 .9594 F8P -657

MID-COURSE EXECUTION ACCURACY

SGT 1561.6 SGR 494.0 SCS 232.8  
 RRT .6192 RRF -.6598 RTF -.8913  
 SGB 1637.9 R23 -.0931 R13 -.8970  
 SGI 1593.2 SGT 380.2 THA 11.76

ORBIT DETERMINATION ACCURACY

ST 766.6 SR 459.8 SS 649.6  
 CRT .8885 CRS .9350 CST .9926  
 LSA 1090.6 MSA 185.0 SSA 19.3  
 EL1 876.3 EL2 185.0 ALF 29.44

LAUNCH DATE JAN 14 1969

FLIGHT TIME 106.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 275.451

RL 147.15 LAL .00 LOL 113.65 VL 26.844 GAL 1.12 AZL 88.45 MCA 119.21 SMA 122.52 ECC .20193 INC 1.5536 V1 30.277  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.985 GAP -9.60 AZP 90.76 TAL 175.56 TAP 294.77 RCA 97.78 APO 147.26 V2 34.974  
 RC 51.881 GL 11.83 GP 12.86 ZAL 83.06 ZAP 18.02 ETS 318.20 ZAE 150.09 ETE 13.41 ZAC 127.61 ETC 153.18 CLP -12.73

PLANETOCENTRIC CONIC

C3 12.599 VHL 3.550 DLA 22.78 RAL 24.16 RAD 6567.5 VEL 11.575 PTH 2.02 VHP 6.724 DPA 24.92 RAP 33.37 ECC 1.2074  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 37 2913.19 -28.29 90.10 245.79 88.67 2 49 10 2313.2 -28.17 81.44  
 90.00 20 47 2 3950.30 -7.93 157.96 240.36 62.73 21 52 52 3350.3 -11.53 151.13  
 100.00 3 38 59 2595.99 -29.88 66.77 245.80 90.72 4 22 15 1998.0 -29.46 57.99  
 100.00 21 51 21 3742.73 -6.53 141.95 239.60 60.76 22 53 43 3142.7 -10.38 135.27  
 110.00 5 22 4 2273.49 -33.74 42.02 245.34 95.84 5 59 58 1673.5 -32.56 32.98  
 110.00 22 24 45 3638.00 -3.24 131.98 237.57 55.95 23 25 23 3038.0 -7.69 125.71

DIFFERENTIAL CORRECTIONS

TDE -.4233 TRA -.7020 TC3 1.0818 BAU .1889  
 RDE -.2871 RRA -.0335 RC3 .3212 FAU .04941  
 FDE .6504 FRA .8105 FC3-3.3954 B8P 5335  
 BDE .5114 BRA .7028 BC3 1.1093 F8P -736

MID-COURSE EXECUTION ACCURACY

SGT 1593.4 SGR 519.8 SCS 258.1  
 RRT .6759 RRF -.7208 RTF -.8975  
 SGB 1678.0 R23 -.1070 R13 -.9045  
 SGI 1635.8 SGT 373.6 THA 13.11

ORBIT DETERMINATION ACCURACY

ST 776.7 SR 463.8 SS 659.5  
 CRT .8974 CRS .9392 CST .9934  
 LSA 1104.8 MSA 179.3 SSA 19.9  
 EL1 886.7 EL2 179.3 ALF 29.51

LAUNCH DATE JAN 14 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 282.117

RL 147.15 LAL .00 LOL 113.65 VL 26.953 GAL .94 AZL 88.60 MCA 122.41 SMA 123.19 ECC .19518 INC 1.3983 V1 30.277  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.032 GAP -8.92 AZP 90.75 TAL 176.10 TAP 298.51 RCA 99.14 APO 147.23 V2 34.961  
 RC 53.536 GL 11.10 GP 14.11 ZAL 84.17 ZAP 20.43 ETS 320.39 ZAE 148.84 ETE 13.85 ZAC 127.81 ETC 151.79 CLP -14.93

PLANETOCENTRIC CONIC

C3 11.677 VHL 3.417 DLA 21.68 RAL 23.33 RAD 6567.4 VEL 11.535 PTH 2.01 VHP 6.370 DPA 26.44 RAP 33.83 ECC 1.1922  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 11 52 2844.85 -28.29 85.10 243.33 91.17 2 59 17 2244.9 -27.83 76.47  
 90.00 20 29 7 3986.49 -6.80 160.02 238.08 62.43 21 35 34 3386.5 -10.44 153.23  
 100.00 3 48 18 2533.83 -29.74 62.16 243.26 93.15 4 30 32 1935.8 -28.99 53.44  
 100.00 21 35 21 3772.74 -5.53 143.61 237.38 60.58 22 38 14 3172.7 -9.41 136.97  
 110.00 5 28 11 2221.43 -33.31 38.02 242.85 98.17 6 5 12 1621.4 -31.82 29.10  
 110.00 22 11 59 3657.91 -2.48 133.02 235.49 55.90 23 12 57 3057.9 -6.94 126.77

DIFFERENTIAL CORRECTIONS

TDE -.4091 TRA -.8777 TC3 1.1986 BAU .1984  
 RDE -.2786 RRA -.0457 RC3 .4225 FAU .05370  
 FDE .6633 FRA .8446 FC3-3.9818 B8P 5457  
 BDE .4949 BRA .8793 BC3 1.2709 F8P -822

MID-COURSE EXECUTION ACCURACY

SGT 1623.8 SGR 553.3 SCS 286.1  
 RRT .7294 RRF -.7782 RTF -.9030  
 SGB 1716.1 R23 -.1224 R13 -.9116  
 SGI 1676.2 SGT 368.0 THA 14.73

ORBIT DETERMINATION ACCURACY

ST 778.2 SR 467.8 SS 663.4  
 CRT .9055 CRS .9426 CST .9942  
 LSA 1110.9 MSA 173.4 SSA 20.6  
 EL1 891.3 EL2 173.3 ALF 29.80

LAUNCH DATE JAN 14 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 288.767

RL 147.15 LAL .00 LOL 113.65 VL 27.052 GAL .78 AZL 88.77 HCA 125.59 SMA 123.80 ECC .18906 INC 1.2317 V1 30.277  
 RP 108.43 LAP 1.00 LOP 239.28 VP 37.092 GAP -8.28 AZP 90.72 TAL 178.66 TAP 302.25 RCA 100.39 APO 147.21 V2 34.948  
 RC 55.282 GL 10.16 GP 15.54 ZAL 85.29 ZAP 23.05 ETS 322.07 ZAE 147.73 ETE 18.49 ZAC 127.78 ETC 150.31 CLP -17.23

PLANETOCENTRIC CONIC

CS 10.888 VHL 3.298 DLA 20.38 RAL 22.58 RAD 6567.4 VEL 11.500 PTH 2.00 VHP 6.039 DPA 28.09 RAP 34.10 ECC 1.1788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 24 32 2772.83 -28.08 79.84 240.95 93.80 3 10 45 2172.6 -27.26 71.27  
 90.00 20 10 26 4028.75 -5.48 162.40 235.95 62.17 21 17 35 3428.8 -9.15 155.66  
 100.00 3 59 10 2467.72 -29.39 57.27 240.82 95.69 4 40 17 1867.7 -28.30 48.64  
 100.00 21 18 30 3809.10 -4.31 145.62 235.32 60.39 22 21 59 3209.1 -8.22 139.02  
 110.00 5 35 44 2165.57 -32.89 33.78 240.27 100.61 6 11 50 1565.6 -30.86 25.02  
 110.00 21 58 24 3684.01 -1.48 134.38 233.56 55.85 22 59 48 3084.0 -5.95 128.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3904 TRA -.6951 TC3 1.3350 BAU .2093 96T 1845.7 96R 602.6 96S 316.7 ST 770.8 SR 471.2 SS 659.5  
 RDE -.2704 RRA -.0397 RC3 .5471 FAU .05836 RRT .7787 RRF -.8295 RTF -.9076 CRT .9122 CRS .9447 CST .9951  
 FDE .6675 FRA .8855 FC3-4.6498 B8P 5575 96B 1752.6 96Z -.1398 R13 -.9183 LSA 1105.6 MSA 168.0 SSA 21.4  
 BDE .4749 BRA .6578 BC3 1.4409 F8P -917 96I 1714.3 96Z 384.4 THA 16.65 EL1 887.7 EL2 167.7 ALF 30.34

LAUNCH DATE JAN 14 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 295.398

RL 147.15 LAL .00 LOL 113.65 VL 27.142 GAL .63 AZL 88.95 HCA 128.78 SMA 124.36 ECC .18353 INC 1.0514 V1 30.277  
 RP 108.47 LAP .82 LOP 242.44 VP 37.146 GAP -7.63 AZP 90.66 TAL 177.21 TAP 305.99 RCA 101.54 APO 147.19 V2 34.936  
 RC 57.109 GL 8.99 GP 17.18 ZAL 86.41 ZAP 25.88 ETS 323.35 ZAE 146.74 ETE 21.41 ZAC 127.49 ETC 148.78 CLP -19.86

PLANETOCENTRIC CONIC

CS 10.156 VHL 3.187 DLA 18.88 RAL 21.93 RAD 6567.4 VEL 11.469 PTH 1.99 VHP 5.731 DPA 29.88 RAP 34.14 ECC 1.1671  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 38 44 2896.89 -27.62 74.34 238.68 96.52 3 23 41 2096.9 -26.43 65.87  
 90.00 19 51 3 4077.36 -3.91 165.13 234.05 61.93 20 59 1 3477.4 -7.64 158.43  
 100.00 4 11 36 2397.41 -28.81 52.13 238.50 98.34 4 51 34 1797.4 -27.36 43.63  
 100.00 21 0 52 3852.07 -2.86 147.99 233.45 60.23 22 5 4 3252.1 -6.80 141.42  
 110.00 5 44 52 2105.62 -31.85 29.30 237.84 103.13 6 19 58 1505.6 -29.71 20.74  
 110.00 21 44 6 3716.82 -.24 136.08 231.81 55.82 22 46 3 3116.6 -4.72 129.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3670 TRA -.6312 TC3 1.4702 BAU .2212 96T 1858.8 96R 664.8 96S 350.1 ST 752.0 SR 473.1 SS 645.2  
 RDE -.2619 RRA -.0755 RC3 .7010 FAU .06347 RRT .8174 RRF -.8733 RTF -.9124 CRT .9179 CRS .9451 CST .9960  
 FDE .6595 FRA .9301 FC3-5.4099 B8P 5756 96B 1787.1 96Z -.1558 R13 -.9259 LSA 1085.7 MSA 162.5 SSA 22.4  
 BDE .4509 BRA .6357 BC3 1.8287 F8P -1028 96I 1749.8 96Z 363.1 THA 18.99 EL1 873.6 EL2 161.6 ALF 31.19

LAUNCH DATE JAN 14 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 302.010

RL 147.15 LAL .00 LOL 113.65 VL 27.222 GAL .49 AZL 89.15 HCA 131.97 SMA 124.87 ECC .17856 INC .8544 V1 30.277  
 RP 108.51 LAP .84 LOP 245.62 VP 37.193 GAP -7.03 AZP 90.57 TAL 177.75 TAP 309.72 RCA 102.58 APO 147.17 V2 34.923  
 RC 59.010 GL 7.55 GP 19.06 ZAL 87.50 ZAP 28.96 ETS 324.35 ZAE 145.82 ETE 24.68 ZAC 126.90 ETC 147.21 CLP -22.23

PLANETOCENTRIC CONIC

CS 9.538 VHL 3.088 DLA 17.13 RAL 21.41 RAD 6567.3 VEL 11.442 PTH 1.98 VHP 5.448 DPA 31.85 RAP 33.92 ECC 1.1370  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 54 38 2816.57 -28.86 68.58 236.57 99.31 3 38 14 2016.6 -25.30 60.26  
 90.00 19 31 4 4132.78 -2.13 168.25 232.35 61.76 20 39 57 3532.8 -5.89 161.57  
 100.00 4 25 49 2322.51 -27.95 48.73 236.35 101.06 5 4 32 1722.5 -26.14 58.40  
 100.00 20 42 34 3802.08 -1.17 150.74 231.81 60.13 21 47 36 3302.1 -5.13 144.19  
 110.00 5 55 45 2041.15 -30.75 24.60 235.59 105.72 6 29 46 1441.1 -28.29 18.26  
 110.00 21 29 8 3756.20 1.28 138.15 230.29 55.84 22 31 44 3156.2 -3.21 131.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5418 TRA -.6116 TC3 1.5804 BAU .2311 96T 1882.7 96R 743.9 96S 385.3 ST 727.6 SR 472.5 SS 620.7  
 RDE -.2528 RRA -.0848 RC3 .8863 FAU .08870 RRT .8489 RRF -.9085 RTF -.9144 CRT .9231 CRS .9432 CST .9971  
 FDE .6389 FRA .9859 FC3-6.2352 B8P 5799 96B 1821.5 96Z -.1747 R13 -.9318 LSA 1054.8 MSA 157.2 SSA 23.7  
 BDE .4250 BRA .6189 BC3 1.8119 F8P -1134 96I 1784.3 96Z 366.4 THA 21.76 EL1 853.6 EL2 154.9 ALF 32.12

LAUNCH DATE JAN 14 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 308.601

RL 147.15 LAL .00 LOL 113.65 VL 27.295 GAL .36 AZL 89.36 HCA 135.15 SMA 125.34 ECC .17410 INC .8369 V1 30.277  
 RP 108.55 LAP .45 LOP 248.80 VP 37.235 GAP -6.44 AZP 90.45 TAL 178.28 TAP 313.43 RCA 103.52 APO 147.16 V2 34.911  
 RC 80.976 GL 5.80 GP 21.23 ZAL 88.56 ZAP 32.31 ETS 325.13 ZAE 144.91 ETE 28.35 ZAC 125.96 ETC 145.62 CLP -24.94

PLANETOCENTRIC CONIC

CS 9.005 VHL 3.001 DLA 15.11 RAL 21.06 RAD 6567.3 VEL 11.419 PTH 1.98 VHP 5.192 DPA 34.01 RAP 33.37 ECC 1.1482  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 12 28 2331.12 -25.78 62.56 234.67 102.14 3 54 39 1931.1 -23.85 54.42  
 90.00 19 10 25 4195.87 -.09 171.75 230.96 61.68 20 20 21 3595.9 -3.88 165.11  
 100.00 4 42 1 2242.32 -26.77 41.06 234.41 103.82 5 19 24 1642.3 -24.61 32.93  
 100.00 20 23 33 3859.90 .80 153.91 230.46 60.12 21 29 33 3359.9 -3.19 147.38  
 110.00 6 8 34 1971.51 -29.36 19.65 233.57 108.35 6 41 26 1371.5 -26.58 11.57  
 110.00 21 13 29 3803.48 3.08 140.61 229.03 55.94 22 18 53 3203.5 -1.41 134.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3095 TRA -.5893 TC3 1.6914 BAU .2439 96T 1854.8 96R 844.5 96S 422.8 ST 687.2 SR 465.9 SS 579.8  
 RDE -.2411 RRA -.1170 RC3 1.1148 FAU .07437 RRT .8738 RRF -.9359 RTF -.9175 CRT .9271 CRS .9370 CST .9980  
 FDE .5899 FRA 1.0443 FC3-7.1493 B8P 6000 96B 1857.6 96Z -.1867 R13 -.9397 LSA 1000.7 MSA 152.5 SSA 25.2  
 BDE .3923 BRA .8008 BC3 2.0257 F8P -1264 96I 1819.7 96Z 373.4 THA 25.17 EL1 817.2 EL2 146.8 ALF 33.37

LAUNCH DATE JAN 14 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 12 1969

## HELIOCENTRIC CONIC

DISTANCE 315.171

RL 147.15 LAL .00 LOL 113.65 VL 27.359 GAL .25 AZL 89.81 HCA 138.33 SMA 125.76 ECC .17013 INC .3937 V1 30.277  
 RP 108.58 LAP .26 LOP 251.98 VP 37.271 GAP -5.88 AZP 90.29 TAL 178.78 TAP 317.11 RCA 104.36 APO 147.15 V2 34.900  
 RC 63.000 GL 3.89 GP 23.73 ZAL 89.57 ZAP 35.94 ETS 325.77 ZAE 143.93 ETE 32.49 ZAC 124.63 ETC 144.06 CLP -27.82

## PLANETOCENTRIC CONIC

C3 8.554 VHL 2.925 DLA 12.77 RAL 20.91 RAD 6567.3 VEL 11.399 PTH 1.97 VHP 4.967 DPA 36.41 RAP 32.44 ECC 1.1408  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 36 2439.54 -24.32 56.25 233.03 104.98 4 13 16 1639.5 -22.02 48.33  
 90.00 18 49 2 4267.03 2.23 175.76 229.91 61.76 20 0 10 3667.8 -1.57 169.14  
 100.00 5 0 33 2155.94 -25.23 35.11 232.74 106.59 5 36 29 1555.9 -22.71 27.21  
 100.00 20 3 47 4026.66 3.06 157.57 229.45 60.25 21 10 54 3426.7 -.93 151.05  
 110.00 6 23 39 1895.90 -27.63 14.45 231.63 110.98 6 55 15 1295.9 -24.52 6.66  
 110.00 20 57 10 3859.47 5.21 143.55 228.11 56.17 22 1 30 3259.5 .73 137.33

## DIFFERENTIAL CORRECTIONS

TDE -.2762 TRA -.5725 TC3 1.7653 BAU .2567  
 RDE -.2265 RRA -.1459 RC3 1.3870 FAU .07990  
 FDE .5210 FRA 1.1199 FC3-8.0862 B8P 6072  
 BDE .3572 BRA .5908 BC3 2.2450 F8P -1379

## MID-COURSE EXECUTION ACCURACY

S6T 1637.5 S6R 970.0 S6S 461.0  
 RRT .8907 RRF -.9562 RTF -.9182  
 S6B 1903.3 R23 -.1963 R13 -.9472  
 S6I 1863.4 S6Z 387.5 THA 29.20

## ORBIT DETERMINATION ACCURACY

ST 642.5 SR 453.0 SS 528.5  
 CRT .9310 CR5 .9241 CST .9976  
 LSA 935.1 MSA 149.1 SSA 27.1  
 EL1 774.2 EL2 136.5 ALF 34.53

LAUNCH DATE JAN 14 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 14 1969

## HELIOCENTRIC CONIC

DISTANCE 321.719

RL 147.15 LAL .00 LOL 113.65 VL 27.417 GAL .15 AZL 89.88 HCA 141.50 SMA 126.14 ECC .16660 INC .1175 V1 30.277  
 RP 108.62 LAP .07 LOP 255.16 VP 37.303 GAP -5.33 AZP 90.09 TAL 179.25 TAP 320.76 RCA 105.12 APO 147.15 V2 34.889  
 RC 65.076 GL 1.14 GP 26.61 ZAL 90.52 ZAP 39.89 ETS 326.34 ZAE 142.78 ETE 37.11 ZAC 122.87 ETC 142.56 CLP -30.89

## PLANETOCENTRIC CONIC

C3 8.186 VHL 2.861 DLA 10.05 RAL 20.98 RAD 6567.3 VEL 11.383 PTH 1.97 VHP 4.775 DPA 39.07 RAP 31.04 ECC 1.1347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 55 31 2340.42 -22.41 49.61 231.72 107.78 4 34 31 1740.4 -19.77 41.94  
 90.00 18 26 43 4350.42 4.88 100.39 229.29 62.07 19 39 14 3750.4 1.10 173.74  
 100.00 5 21 50 2062.05 -25.26 28.83 231.41 109.33 5 56 12 1462.1 -20.41 21.20  
 100.00 19 43 6 4104.02 5.66 161.84 228.86 60.60 20 51 30 3504.0 1.70 155.29  
 110.00 6 41 22 1813.17 -25.49 8.97 230.44 113.59 7 11 35 1213.2 -22.08 1.48  
 110.00 20 40 3 3925.67 7.71 147.05 227.60 56.59 21 45 29 3325.7 5.26 140.79

## DIFFERENTIAL CORRECTIONS

TDE -.2387 TRA -.5537 TC3 1.7862 BAU .2700  
 RDE -.2090 RRA -.1808 RC3 1.7024 FAU .08479  
 FDE .4137 FRA 1.1978 FC3-8.0877 B8P 6211  
 BDE .3146 BRA .5824 BC3 2.4676 F8P -1498

## MID-COURSE EXECUTION ACCURACY

S6T 1594.1 S6R 1119.1 S6S 496.0  
 RRT .8999 RRF -.9704 RTF -.9162  
 S6B 1947.7 R23 -.1996 R13 -.9547  
 S6I 1904.4 S6Z 408.4 THA 34.07

## ORBIT DETERMINATION ACCURACY

ST 586.1 SR 426.0 SS 460.2  
 CRT .9384 CR5 .8946 CST .9906  
 LSA 844.8 MSA 149.C SSA 29.1  
 EL1 714.4 EL2 120.7 ALF 35.46

LAUNCH DATE JAN 14 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 16 1969

## HELIOCENTRIC CONIC

DISTANCE 328.244

RL 147.15 LAL .00 LOL 113.65 VL 27.468 GAL .06 AZL 90.20 HCA 144.68 SMA 126.47 ECC .16350 INC .1975 V1 30.277  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.330 GAP -4.81 AZP 89.84 TAL 179.68 TAP 324.36 RCA 105.79 APO 147.15 V2 34.878  
 RC 67.198 GL -1.93 GP 29.91 ZAL 91.37 ZAP 44.16 ETS 326.93 ZAE 141.33 ETE 42.21 ZAC 120.64 ETC 141.18 CLP -34.15

## PLANETOCENTRIC CONIC

C3 7.908 VHL 2.812 DLA 6.88 RAL 21.32 RAD 6567.3 VEL 11.371 PTH 1.96 VHP 4.625 DPA 42.01 RAP 29.06 ECC 1.1301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 21 52 2231.87 -19.98 42.58 230.83 110.49 4 59 4 1631.9 -17.02 35.16  
 90.00 18 3 8 4446.17 7.90 185.80 229.19 62.72 19 17 14 3846.2 4.18 179.09  
 100.00 5 46 29 1958.91 -20.78 22.18 230.50 111.99 6 19 8 1358.9 -17.61 14.81  
 100.00 19 21 11 4194.36 8.65 166.88 228.78 61.27 20 31 6 3994.4 4.75 160.27  
 110.00 7 2 15 1721.83 -22.87 3.17 229.50 116.12 7 30 57 1121.8 -19.18 355.98  
 110.00 20 21 55 4004.20 10.62 151.26 227.59 57.32 21 28 39 3404.2 6.24 144.91

## DIFFERENTIAL CORRECTIONS

TDE -.2048 TRA -.5356 TC3 1.7628 BAU .2869  
 RDE -.1773 RRA -.2247 RC3 2.0631 FAU .08880  
 FDE .2839 FRA 1.2832 FC3-9.7215 B8P 6291  
 BDE .2709 BRA .5808 BC3 2.7136 F8P -1582

## MID-COURSE EXECUTION ACCURACY

S6T 1537.9 S6R 1299.8 S6S 526.7  
 RRT .9044 RRF -.9803 RTF -.9127  
 S6B 2013.6 R23 -.1925 R13 -.9631  
 S6I 1966.3 S6Z 433.7 THA 39.71

## ORBIT DETERMINATION ACCURACY

ST 532.7 SR 388.4 SS 396.7  
 CRT .9541 CR5 .8402 CST .9583  
 LSA 752.6 MSA 156.9 SSA 29.8  
 EL1 652.3 EL2 95.0 ALF 35.70

LAUNCH DATE JAN 14 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 18 1969

## HELIOCENTRIC CONIC

DISTANCE 334.747

RL 147.15 LAL .00 LOL 113.65 VL 27.512 GAL -.01 AZL 90.57 HCA 147.85 SMA 126.77 ECC .16078 INC .5675 V1 30.277  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.353 GAP -4.30 AZP 89.52 TAL 180.06 TAP 327.91 RCA 106.38 APO 147.15 V2 34.867  
 RC 69.360 GL -5.62 GP 33.89 ZAL 92.12 ZAP 48.77 ETS 327.62 ZAE 139.43 ETE 47.70 ZAC 117.89 ETC 139.98 CLP -37.61

## PLANETOCENTRIC CONIC

C3 7.737 VHL 2.782 DLA 3.17 RAL 21.99 RAD 6567.3 VEL 11.363 PTH 1.96 VHP 4.523 DPA 45.25 RAP 26.37 ECC 1.1273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 52 36 2111.39 -16.94 39.05 230.51 113.04 5 27 47 1511.4 -15.67 27.90  
 90.00 17 37 43 4558.65 11.34 192.27 229.75 63.88 18 53 42 3958.7 7.74 185.44  
 100.00 6 15 25 1844.25 -17.69 15.06 230.16 114.50 6 46 10 1244.2 -14.24 7.97  
 100.00 18 37 35 4301.03 12.08 172.95 229.37 62.45 20 9 16 3701.0 8.29 168.20  
 110.00 7 27 4 1620.02 -19.69 356.98 229.11 118.52 7 54 4 1020.0 -15.73 350.10  
 110.00 20 2 26 4098.02 14.02 156.41 228.24 58.50 21 10 44 3498.0 9.75 149.91

## DIFFERENTIAL CORRECTIONS

TDE -.1461 TRA -.5888 TC3 1.8662 BAU .3105  
 RDE -.1175 RRA -.3309 RC3 2.4837 FAU .09228  
 FDE .0334 FRA 1.5813 FC-10.3256 B8P 6854  
 BDE .1875 BRA .6754 BC3 3.0020 F8P -1734

## MID-COURSE EXECUTION ACCURACY

S6T 1564.0 S6R 1580.1 S6S 570.8  
 RRT .9010 RRF -.9878 RTF -.9071  
 S6B 2209.0 R23 -.1820 R13 -.9717  
 S6I 2153.7 S6Z 491.6 THA 44.92

## ORBIT DETERMINATION ACCURACY

ST 473.5 SR 319.8 SS 389.2  
 CRT .9818 CR5 .7059 CST .8103  
 LSA 856.5 MSA 215.3 SSA 26.2  
 EL1 569.2 EL2 50.5 ALF 33.85

LAUNCH DATE JAN 14 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 341.225

RL 147.15 LAL .00 LOL 113.65 VL 27.551 GAL -.07 AZL 91.01 HCA 151.01 SMA 127.03 ECC .15842 INC 1.0087 V1 30.277
RP 108.72 LAP -.49 LOP 264.67 VP 37.373 GAP -3.81 AZP 89.12 TAL 180.39 TAP 331.41 RCA 106.90 APO 147.15 V2 34.858
RC 71.580 GL -10.06 GP 37.98 ZAL 92.74 ZAP 53.68 ETS 328.50 ZAE 136.95 ETE 53.48 ZAC 114.62 ETC 139.04 CLP -41.29

PLANETOCENTRIC CONIC

C3 7.708 VHL 2.776 DLA -1.19 RAL 23.04 RAD 6567.3 VEL 11.362 PTH 1.96 VHP 4.482 DPA 48.80 RAP 22.76 ECC 1.1269
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 29 8 1975.53 -13.14 26.88 230.93 115.31 6 2 3 1375.5 -9.63 19.97
90.00 17 9 34 4693.15 15.24 200.22 231.21 65.84 18 27 47 4093.1 11.85 193.19
100.00 6 49 55 1714.92 -13.88 7.35 230.56 116.74 7 18 30 1114.9 -10.18 .51
100.00 18 31 27 4428.99 15.98 180.44 230.85 64.40 19 45 16 3829.0 12.40 173.48
110.00 7 56 54 1505.26 -15.82 350.33 229.46 120.70 8 21 59 905.3 -11.63 343.73
110.00 19 40 58 4211.41 17.95 182.85 229.78 60.41 20 31 10 3611.4 13.87 156.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1153 TRA -.4905 TC3 1.5811 BAU .3429 SGT 1361.0 SCR 1781.0 SCS 567.5 ST 386.8 SR 250.2 SS 375.5
RDE -.0588 RRA -1.3481 RC3 2.9273 FAU .09384 RRT .9003 RRF -.9916 RTF -.9010 CRT .9783 CRS .8574 CST .5121
FDE -.1678 FRA 1.4352 FC-10.5391 BSP 7114 SGB 2241.5 R23 -.1413 R13 -.9817 LSA 527.1 MSA 273.7 S3A 21.4
BDE .1286 BRA .6014 BC3 3.3270 FSP -1753 SGI 2189.1 SGI 482.0 THA 53.41 EL1 458.5 EL2 43.7 ALF 32.66

LAUNCH DATE JAN 14 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 347.677

RL 147.15 LAL .00 LOL 113.65 VL 27.584 GAL -.12 AZL 91.55 HCA 154.18 SMA 127.25 ECC .15638 INC 1.5472 V1 30.277
RP 108.74 LAP -.67 LOP 267.84 VP 37.389 GAP -3.33 AZP 88.61 TAL 180.67 TAP 334.84 RCA 107.35 APO 147.15 V2 34.848
RC 73.792 GL -15.38 GP 42.82 ZAL 93.20 ZAP 58.86 ETS 329.70 ZAE 135.74 ETE 59.29 ZAC 110.82 ETC 138.44 CLP -45.18

PLANETOCENTRIC CONIC

C3 7.885 VHL 2.808 DLA -6.32 RAL 24.55 RAD 6567.3 VEL 11.370 PTH 1.96 VHP 4.519 DPA 52.61 RAP 17.97 ECC 1.1298
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 13 39 1819.45 -8.44 17.83 232.39 117.13 6 43 58 1219.5 -4.73 11.11
90.00 16 37 5 4857.52 19.54 210.37 233.90 69.09 17 58 3 4257.5 16.53 202.99
100.00 7 31 59 1566.73 -9.18 358.85 231.99 118.57 7 58 6 966.7 -5.30 352.22
100.00 18 1 26 4585.48 20.33 190.03 233.57 67.60 19 17 52 3985.5 17.11 182.71
110.00 8 33 22 1374.58 -11.15 343.09 230.81 122.52 8 56 16 774.6 -6.78 336.72
110.00 19 16 33 4350.40 22.41 171.16 232.55 63.48 20 29 3 3750.4 18.87 184.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0745 TRA -.4647 TC3 1.3438 BAU .3760 SGT 1225.8 SCR 2066.5 SCS 561.3 ST 324.8 SR 295.7 SS 518.8
RDE -.0512 RRA -1.4399 RC3 3.3045 FAU .09151 RRT .8887 RRF -.9945 RTF -.8857 CRT .6550 CRS .9111 CST .2905
FDE -.4606 FRA 1.5000 FC-10.0478 BSP 7816 SGB 2402.8 R23 -.1088 R13 -.9885 LSA 604.7 MSA 310.1 S3A 14.9
BDE .0904 BRA .6399 BC3 3.5673 FSP -1783 SGI 2350.5 SGI 498.3 THA 60.82 EL1 400.0 EL2 181.4 ALF 40.91

LAUNCH DATE JAN 14 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 354.106

RL 147.15 LAL .00 LOL 113.65 VL 27.813 GAL -.16 AZL 92.22 HCA 157.34 SMA 127.44 ECC .15466 INC 2.2241 V1 30.277
RP 108.77 LAP -.86 LOP 271.01 VP 37.401 GAP -2.87 AZP 87.95 TAL 180.87 TAP 338.21 RCA 107.73 APO 147.15 V2 34.839
RC 78.053 GL -21.72 GP 48.20 ZAL 93.45 ZAP 64.21 ETS 331.32 ZAE 129.72 ETE 65.01 ZAC 106.54 ETC 138.26 CLP -49.24

PLANETOCENTRIC CONIC

C3 8.390 VHL 2.896 DLA -12.32 RAL 26.63 RAD 6567.3 VEL 11.392 PTH 1.97 VHP 4.661 DPA 56.60 RAP 11.63 ECC 1.1381
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 10 3 1635.33 -2.60 7.46 235.38 118.21 7 37 18 1035.3 1.19 .83
90.00 15 57 18 5064.71 23.98 223.93 238.35 74.47 17 21 43 4464.7 21.62 216.05
100.00 8 25 4 1393.26 -3.42 349.20 234.92 119.71 8 48 18 793.3 .56 342.68
100.00 17 24 57 4782.02 24.87 202.85 238.06 72.87 18 44 39 4182.0 22.29 195.00
110.00 9 19 4 1224.15 -5.54 335.06 233.60 123.79 9 39 28 624.2 -1.07 328.83
110.00 18 47 27 4523.90 27.23 182.33 237.14 68.49 20 2 51 3923.9 24.07 174.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0882 TRA -.4421 TC3 1.0091 BAU .4117 SGT 1075.8 SCR 2379.5 SCS 532.2 ST 294.3 SR 517.4 SS 695.7
RDE .1915 RRA -.5713 RC3 3.5293 FAU .08503 RRT .8538 RRF -.9963 RTF -.8509 CRT .3230 CRS .9875 CST .1720
FDE -.7249 FRA 1.5660 FC3-8.7743 BSP 8358 SGB 2611.4 R23 -.0814 R13 -.9930 LSA 867.4 MSA 293.0 S3A 10.1
BDE .2007 BRA .7224 BC3 3.6707 FSP -1686 SGI 2558.9 SGI 520.7 THA 67.93 EL1 529.3 EL2 272.3 ALF 75.75

LAUNCH DATE JAN 14 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 360.508

RL 147.15 LAL .00 LOL 113.65 VL 27.636 GAL -.18 AZL 93.11 HCA 160.49 SMA 127.60 ECC .15321 INC 3.1068 V1 30.277
RP 108.80 LAP -1.04 LOP 274.17 VP 37.411 GAP -2.43 AZP 87.07 TAL 181.01 TAP 341.50 RCA 108.05 APO 147.15 V2 34.831
RC 78.340 GL -29.13 GP 54.12 ZAL 93.46 ZAP 69.56 ETS 335.48 ZAE 124.84 ETE 70.47 ZAC 101.84 ETC 138.58 CLP -53.43

PLANETOCENTRIC CONIC

C3 9.468 VHL 3.077 DLA -19.24 RAL 29.42 RAD 6567.3 VEL 11.439 PTH 1.98 VHP 4.951 DPA 60.61 RAP 3.18 ECC 1.1558
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 28 47 1404.95 4.82 354.59 240.78 117.94 8 50 12 805.0 8.52 347.86
90.00 15 2 47 5341.50 27.62 243.33 243.25 83.50 16 31 48 4741.5 26.43 234.87
100.00 9 36 13 1180.91 3.77 337.54 240.21 119.68 9 55 54 580.9 7.70 350.95
100.00 16 38 2 5040.77 28.80 221.04 245.07 81.64 18 0 3 4440.8 27.35 212.54
110.00 10 18 42 1047.80 1.18 325.83 238.59 124.17 10 36 9 447.8 5.66 319.61
110.00 18 10 3 4746.85 31.80 198.04 244.41 76.74 19 29 10 4146.6 29.65 189.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0584 TRA -.4012 TC3 .8388 BAU .4518 SGT 890.1 SCR 2708.9 SCS 479.1 ST 261.3 SR 872.6 SS 889.1
RDE .4047 RRA -.7358 RC3 3.5098 FAU .07490 RRT .7942 RRF -.9975 RTF -.7899 CRT .0973 CRS .9981 CST .0362
FDE -.9969 FRA 1.5859 FC3-6.8481 BSP 9078 SGB 2851.4 R23 -.0542 R13 -.9960 LSA 1245.3 MSA 263.5 S3A 6.8
BDE .4089 BRA .8379 BC3 3.5673 FSP -1521 SGI 2803.1 SGI 522.7 THA 74.83 EL1 873.0 EL2 260.0 ALF 88.17

LAUNCH DATE JAN 14 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.656 GAL -.19 AZL 94.31 HCA 163.64 SMA 127.73 ECC .15203 INC 4.3138 V1 30.277
RP 108.82 LAP -1.21 LOP 277.34 VP 37.418 GAP -2.00 AZP 85.86 TAL 181.08 TAP 344.72 RCA 108.31 APO 147.15 V2 34.824
RC 80.851 GL -37.55 GP 60.55 ZAL 93.20 ZAP 74.73 ETS 336.29 ZAE 119.12 ETE 75.59 ZAC 96.84 ETC 139.47 CLP -57.62

DISTANCE 366.881

PLANETOCENTRIC CONIC

C3 11.652 VHL 3.414 DLA -26.95 RAL 33.09 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 5.464 DPA 64.41 RAP 351.81 ECC 1.1918
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 42 15 1023.47 16.26 332.41 250.98 113.51 10 59 19 423.5 19.30 325.06
90.00 13 16 35 5807.00 26.56 277.09 254.32 100.19 14 53 22 5207.0 27.70 268.61
100.00 11 29 47 869.93 13.87 319.98 249.82 116.75 11 44 17 269.9 17.35 312.92
100.00 15 11 44 5435.78 29.17 250.21 254.77 96.86 16 42 20 4835.8 29.81 241.47
110.00 11 43 20 827.42 9.52 314.21 247.27 122.99 11 57 7 227.4 13.79 307.73
110.00 17 14 41 5051.05 34.18 221.37 255.13 90.29 18 38 52 4451.1 33.84 212.14

DIFFERENTIAL CORRECTIONS

TDE -.0976 TRA -.3457 TC3 .2786 BAU .4902
RDE .6888 RRA -.9682 RC3 3.1341 FAU .06129
FDE-1.1936 FRA 1.5285 FC3-4.5534 B8P 10036
BDE .7056 BRA 1.0290 BC3 3.1465 F8P -1305

MID-COURSE EXECUTION ACCURACY

86T 697.6 86R 3047.1 86S 404.9
86T .6598 86R -.9982 86S -.6534
86B 3125.9 86S -.0330 86T -.9977
86I 3082.7 86J 518.2 86K 81.16

ORBIT DETERMINATION ACCURACY

ST 255.0 SR 1296.0 SS 1030.8
CRT -.2571 CRS .9995 CST -.2859
LSA 1657.2 MSA 246.6 S8A 4.6
EL1 1297.7 EL2 246.1 ALF 93.00

LAUNCH DATE JAN 14 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.671 GAL -.19 AZL 96.07 HCA 166.77 SMA 127.84 ECC .15109 INC 6.0746 V1 30.277
RP 108.84 LAP -1.39 LOP 280.50 VP 37.423 GAP -1.59 AZP 84.09 TAL 181.07 TAP 347.84 RCA 108.52 APO 147.15 V2 34.816
RC 82.981 GL -46.61 GP 67.52 ZAL 92.69 ZAP 79.48 ETS 339.81 ZAE 112.54 ETE 80.36 ZAC 91.65 ETC 141.02 CLP -61.48

DISTANCE 373.221

PLANETOCENTRIC CONIC

C3 16.256 VHL 4.029 DLA -35.06 RAL 37.82 RAD 6567.7 VEL 11.731 PTH 2.07 VHP 6.342 DPA 67.58 RAP 336.48 ECC 1.2672
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.41 9 39 18 1348.32 25.44 1.00 265.14 114.99 10 1 46 748.3 28.58 353.16
111.59 14 57 19 5827.24 25.45 263.41 265.15 114.97 16 31 7 5027.2 28.59 255.56
68.41 9 39 18 1348.32 25.44 1.00 265.14 114.99 10 1 46 748.3 28.58 353.16
111.59 14 57 19 5827.24 25.45 263.41 265.15 114.97 16 31 7 5027.2 28.59 255.56
68.41 9 39 18 1348.32 25.44 1.00 265.14 114.99 10 1 46 748.3 28.58 353.16
111.59 14 57 19 5827.24 25.45 263.41 265.15 114.97 16 31 7 5027.2 28.59 255.56

DIFFERENTIAL CORRECTIONS

TDE -.2002 TRA -.2506 TC3 .0089 BAU .5171
RDE 1.1062 RRA-1.2982 RC3 2.3822 FAU .04515
FDE-1.2600 FRA 1.4271 FC3-2.4075 B8P 10775
BDE 1.1242 BRA 1.3202 BC3 2.3822 F8P -1009

MID-COURSE EXECUTION ACCURACY

86T 520.2 86R 3351.1 86S 314.2
86T .3134 86R -.9987 86S -.3041
86B 3391.3 86S -.0167 86T -.9986
86I 3355.2 86J 493.4 86K 87.15

ORBIT DETERMINATION ACCURACY

ST 313.2 SR 1712.9 SS 1077.9
CRT -.8702 CRS .9998 CST -.6833
LSA 2034.9 MSA 230.7 S8A 3.2
EL1 1725.9 EL2 230.7 ALF 97.11

LAUNCH DATE JAN 14 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.683 GAL -.17 AZL 98.90 HCA 169.89 SMA 127.92 ECC .15037 INC 8.9001 V1 30.277
RP 108.86 LAP -1.56 LOP 283.66 VP 37.426 GAP -1.19 AZP 81.24 TAL 180.97 TAP 350.86 RCA 108.68 APO 147.15 V2 34.810
RC 85.328 GL -55.59 GP 75.16 ZAL 91.98 ZAP 83.55 ETS 344.05 ZAE 105.03 ETE 84.85 ZAC 86.33 ETC 143.32 CLP -63.99

DISTANCE 379.518

PLANETOCENTRIC CONIC

C3 26.947 VHL 5.191 DLA -42.81 RAL 43.69 RAD 6568.1 VEL 12.179 PTH 2.19 VHP 7.904 DPA 69.52 RAP 316.16 ECC 1.4435
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.45 9 4 31 1636.93 25.98 25.30 281.93 125.30 9 31 48 1036.9 30.40 18.16
123.55 16 18 53 5581.16 25.99 259.95 281.94 125.29 17 51 55 4981.2 30.42 252.80
56.45 9 4 31 1636.93 25.98 25.30 281.93 125.30 9 31 48 1036.9 30.40 18.16
123.55 16 18 53 5581.16 25.99 259.95 281.94 125.29 17 51 55 4981.2 30.42 252.80
56.45 9 4 31 1636.93 25.98 25.30 281.93 125.30 9 31 48 1036.9 30.40 18.16
123.55 16 18 53 5581.16 25.99 259.95 281.94 125.29 17 51 55 4981.2 30.42 252.80

DIFFERENTIAL CORRECTIONS

TDE -.4052 TRA -.0776 TC3 -.1099 BAU .5133
RDE 1.6847 RRA-1.8082 RC3 1.4207 FAU .02845
FDE-1.2419 FRA 1.2912 FC3 -.9140 B8P 11592
BDE 1.7327 BRA 1.8099 BC3 1.4249 F8P -716

MID-COURSE EXECUTION ACCURACY

86T 476.0 86R 3610.3 86S 221.2
86T -.3970 86R -.9991 86S .4058
86B 3641.5 86S -.0036 86T -.9991
86I 3615.3 86J 436.3 86K 93.04

ORBIT DETERMINATION ACCURACY

ST 448.6 SR 2031.2 SS 1017.4
CRT -.8815 CRS .9999 CST -.8869
LSA 2306.2 MSA 208.0 S8A 2.2
EL1 2069.7 EL2 207.9 ALF 101.13

LAUNCH DATE JAN 14 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.691 GAL -.13 AZL 104.18 HCA 172.96 SMA 127.97 ECC .14985 INC14.1770 V1 30.277
RP 108.88 LAP -1.72 LOP 286.83 VP 37.426 GAP -.82 AZP 75.93 TAL 180.74 TAP 353.70 RCA 108.80 APO 147.15 V2 34.804
RC 87.691 GL -63.15 GP 83.90 ZAL 91.21 ZAP 86.70 ETS 349.11 ZAE 96.07 ETE 89.34 ZAC 80.75 ETC 146.75 CLP -57.22

DISTANCE 385.744

PLANETOCENTRIC CONIC

C3 57.783 VHL 7.602 DLA -48.96 RAL 50.04 RAD 6569.1 VEL 13.384 PTH 2.45 VHP 11.005 DPA 69.19 RAP 290.77 ECC 1.9510
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.24 8 59 34 1905.89 20.11 44.92 301.43 135.63 9 31 20 1305.9 25.72 39.14
131.76 17 14 31 5694.55 20.13 265.04 301.45 135.63 18 49 26 5094.5 25.73 259.25
48.24 8 59 34 1905.89 20.11 44.92 301.43 135.63 9 31 20 1305.9 25.72 39.14
131.76 17 14 31 5694.55 20.13 265.04 301.45 135.63 18 49 26 5094.5 25.73 259.25
48.24 8 59 34 1905.89 20.11 44.92 301.43 135.63 9 31 20 1305.9 25.72 39.14
131.76 17 14 31 5694.55 20.13 265.04 301.45 135.63 18 49 26 5094.5 25.73 259.25

DIFFERENTIAL CORRECTIONS

TDE -.7486 TRA .3794 TC3 -.0820 BAU .4106
RDE 2.6116 RRA-2.7292 RC3 .5252 FAU .01266
FDE-1.1253 FRA 1.1766 FC3 -.1897 B8P 12282
BDE 2.7168 BRA 2.7555 BC3 .5315 F8P -457

MID-COURSE EXECUTION ACCURACY

86T 723.6 86R 3785.1 86S 140.0
86T -.9400 86R -.9994 86S .9403
86B 3653.7 86S .0090 86T -.9994
86I 3648.0 86J 242.9 86K 100.23

ORBIT DETERMINATION ACCURACY

ST 579.2 SR 2181.5 SS 893.8
CRT -.9783 CRS 1.0000 CST -.9763
LSA 2424.5 MSA 121.8 S8A 1.5
EL1 2253.8 EL2 121.2 ALF 104.58

LAUNCH DATE JAN 14 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 391.788

RL 147.15 LAL .00 LOL 113.65 VL 27.696 GAL -.05 AZL 117.16 HCA 175.86 SMA 128.01 ECC .14953 INC27.1599 V1 30.277  
 RP 108.90 LAP -3.88 LOP 289.99 VP 37.425 GAP -.50 AZP 82.90 TAL 180.27 TAP 356.15 RCA 108.87 APO 147.15 V2 34.799  
 RC 90.065 GL -65.97 GP 82.67 ZAL 90.50 ZAP 88.74 ET8 171.86 ZAE 83.29 ETE 271.08 ZAC 74.03 ETC 329.22 CLP 80.11

PLANETOCENTRIC CONIC

C3 191.605 VHL 13.842 DLA -50.91 RAL 53.35 RAD 6571.0 VEL 17.690 PTH 2.98 VHP 18.825 DPA 64.19 RAP 260.98 ECC 4.1533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.75 9 4 45 2173.23 7.92 57.93 316.85 140.46 9 40 58 1573.2 14.05 53.10  
 134.25 17 35 46 635.74 7.93 296.26 316.87 140.46 17 46 22 35.7 14.06 291.44  
 45.75 9 4 45 2173.23 7.92 57.93 316.85 140.46 9 40 58 1573.2 14.05 53.10  
 134.25 17 35 46 635.74 7.93 296.26 316.87 140.46 17 46 22 35.7 14.06 291.44  
 45.75 9 4 45 2173.23 7.92 57.93 316.85 140.46 9 40 58 1573.2 14.05 53.10  
 134.25 17 35 46 635.74 7.93 296.26 316.87 140.46 17 46 22 35.7 14.06 291.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.9483 TRA .4654 TC3 -.0186 BAU .1787 SGT 1259.1 SGR 3778.2 SCS 84.2 ST 1223.8 SR 1919.4 SS 871.1  
 RDE-3.9253 RRA 5.1888 RC3 .0664 FAU-.00515 RRT -.2001 RRF .9981 RTF -.2588 CRT -.8043 CRS -.9979 CST .8408  
 FDE-1.1378 FRA 1.2970 FC3 .0233 B8P 12145 SGB 3982.5 R23 .0361 R13 .9992 LSA 2350.7 MSA 644.2 SSA .7  
 BDE 4.9094 BRA 5.2096 BC3 .0690 FSP -265 SGI 3787.6 SGT 1230.6 THA 94.27 EL1 2184.9 EL2 638.9 ALF 119.97

LAUNCH DATE JAN 14 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 396.816

RL 147.15 LAL .00 LOL 113.65 VL 27.698 GAL .24 AZL 166.05 HCA 177.91 SMA 128.02 ECC .14947 INC76.0497 V1 30.277  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.423 GAP -.45 AZP 13.96 TAL 178.65 TAP 356.56 RCA 108.89 APO 147.15 V2 34.795  
 RC 92.449 GL -48.72 GP 53.16 ZAL 89.97 ZAP 89.54 ET8 177.05 ZAE 53.84 ETE 276.78 ZAC 62.56 ETC 343.07 CLP 89.24

PLANETOCENTRIC CONIC

C31279.527 VHL 35.770 DLA -35.73 RAL 41.91 RAD 6573.1 VEL 37.427 PTH 3.54 VHP 45.865 DPA 41.58 RAP 227.29 ECC22.0578  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.24 9 49 1 2095.27 -.65 43.10 312.80 125.72 10 23 56 1495.3 4.01 37.02  
 112.76 15 20 12 1046.66 -.63 324.47 312.81 125.72 15 37 39 446.7 4.03 318.39  
 67.24 9 49 1 2095.27 -.65 43.10 312.80 125.72 10 23 56 1495.3 4.01 37.02  
 112.76 15 20 12 1046.66 -.63 324.47 312.81 125.72 15 37 39 446.7 4.03 318.39  
 67.24 9 49 1 2095.27 -.65 43.10 312.80 125.72 10 23 56 1495.3 4.01 37.02  
 112.76 15 20 12 1046.66 -.63 324.47 312.81 125.72 15 37 39 446.7 4.03 318.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.9689 TRA -1.9019 TC3 -.0958 BAU 4.1985 SGT 1228.6 SGR 3145.3 SCS 60.4 ST 961.9 SR 1589.5 SS 1401.5  
 RDE-8.7947 RRA11.8821 RC3 .2260 FAU-.07375 RRT -.8488 RRF 1.0000 RTF -.8505 CRT -.9412 CRS -1.0000 CST .9441  
 FDE-1.9900 FRA 2.5819 FC3 .0499 B8P 9981 SGB 3376.8 R23 -.0570 R13 .9984 LSA 2294.7 MSA 294.9 SSA .6  
 BDE10.6278 BRA11.8005 BC3 .2454 F8P -187 SGI 3319.5 SGT 619.2 THA 108.99 EL1 1819.4 EL2 280.3 ALF 120.79

LAUNCH DATE JAN 14 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 405.704

RL 147.15 LAL .00 LOL 113.65 VL 27.697 GAL -.21 AZL 50.61 HCA 183.44 SMA 128.01 ECC .14950 INC39.3873 V1 30.277  
 RP 108.92 LAP -2.10 LOP 296.31 VP 37.419 GAP .60 AZP 129.34 TAL 181.20 TAP 4.64 RCA 108.88 APO 147.15 V2 34.791  
 RC 94.840 GL 83.21 GP -77.86 ZAL 90.58 ZAP 90.83 ET8 174.61 ZAE 78.01 ETE 78.52 ZAC 97.09 ETC 27.52 CLP 93.96

PLANETOCENTRIC CONIC

C3 387.628 VHL 19.688 DLA 62.53 RAL 334.61 RAD 6572.1 VEL 22.559 PTH 3.26 VHP 22.891 DPA -67.52 RAP 128.41 ECC 7.3794  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.60 15 10 7 4985.94 -3.63 240.46 242.73 27.53 16 33 13 4385.9 -10.71 237.13  
 148.40 1 2 11 3291.57 -3.62 100.09 242.71 27.53 1 57 2 2691.6 -10.70 96.75  
 31.60 15 10 7 4985.94 -3.63 240.46 242.73 27.53 16 33 13 4385.9 -10.71 237.13  
 148.40 1 2 11 3291.57 -3.62 100.09 242.71 27.53 1 57 2 2691.6 -10.70 96.75  
 31.60 15 10 7 4985.94 -3.63 240.46 242.73 27.53 16 33 13 4385.9 -10.71 237.13  
 148.40 1 2 11 3291.57 -3.62 100.09 242.71 27.53 1 57 2 2691.6 -10.70 96.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-2.4053 TRA 2.0455 TC3 -.0902 BAU 1.0946 SGT 1510.3 SGR 3844.1 SCS 76.0 ST 799.9 SR 3441.0 SS 1523.2  
 RD-11.7062 RRA 2.5592 RC3 -.1910 FAU-.01857 RRT .8155 RRF -.9986 RTF -.8436 CRT .9345 CRS .9998 CST .9413  
 FDE 2.6121 FRA -.6523 FC3 .0415 B8P 12303 SGB 4130.2 R23 -.0180 R13 -.9997 LSA 3837.1 MSA 278.3 SSA .9  
 BDE11.9508 BRA 3.2762 BC3 .2112 FSP -236 SGI 4045.8 SGT 830.5 THA 71.42 EL1 3521.8 EL2 278.3 ALF 77.67

LAUNCH DATE JAN 14 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 411.583

RL 147.15 LAL .00 LOL 113.65 VL 27.694 GAL -.07 AZL 68.22 HCA 186.26 SMA 127.99 ECC .14967 INC21.7805 V1 30.277  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.413 GAP .87 AZP 111.66 TAL 180.42 TAP 6.68 RCA 108.84 APO 147.15 V2 34.788  
 RC 97.236 GL 66.06 GP -86.50 ZAL 90.68 ZAP 92.42 ETS 298.91 ZAE 92.64 ETE 204.04 ZAC 103.62 ETC 152.13 CLP-133.68

PLANETOCENTRIC CONIC

C3 126.405 VHL 11.243 DLA 84.02 RAL 329.21 RAD 6570.3 VEL 15.740 PTH 2.79 VHP 12.315 DPA -66.62 RAP 89.76 ECC 3.0803  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.84 14 44 22 4829.02 -13.68 237.25 232.41 26.80 16 4 51 4229.0 -20.78 233.82  
 150.16 0 44 49 3120.75 -13.67 94.83 232.39 26.80 1 36 50 2520.8 -20.78 91.40  
 29.84 14 44 22 4829.02 -13.68 237.25 232.41 26.80 16 4 51 4229.0 -20.78 233.82  
 150.16 0 44 49 3120.75 -13.67 94.83 232.39 26.80 1 36 50 2520.8 -20.78 91.40  
 29.84 14 44 22 4829.02 -13.68 237.25 232.41 26.80 16 4 51 4229.0 -20.78 233.82  
 150.16 0 44 49 3120.75 -13.67 94.83 232.39 26.80 1 36 50 2520.8 -20.78 91.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 6.4117 TRA 1.2879 TC3 -.0686 BAU .1176 SGT 3597.9 SGR 2381.0 SCS 126.5 ST 3298.2 SR 1281.1 SS 1304.6  
 RDE-2.1875 RRA-1.8083 RC3 .0120 FAU .00826 RRT -.7938 RRF .1182 RTF .5103 CRT -.9292 CRS .7515 CST -.9421  
 FDE 2.3554 FRA -.7162 FC3 -.0429 B8P 13884 SGB 4314.5 R23 -.9379 R13 -.3467 LSA 3715.6 MSA 644.5 SSA .6  
 BDE 6.7748 BRA 2.2201 BC3 .0696 FSP -426 SGI 4125.3 SGT 1263.4 THA 149.07 EL1 3510.2 EL2 444.7 ALF 159.82



LAUNCH DATE JAN 14 1969 FLIGHT TIME 150.00 ARRIVAL DATE JUN 13 1969

Heliocentric Conic: RL 147.15 LAL .00 LOL 113.65 VL 27.688 GAL .03 AZL 74.65 HCA 189.31 SMA 127.95 ECC .15001 INC15.3452 V1 30.277  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.407 GAP 1.19 AZP 105.15 TAL 179.84 TAP 9.15 RCA 108.76 APO 147.15 V2 34.786  
 RC 99.636 GL 63.98 GP -77.49 ZAL 90.59 ZAP 95.01 ETS 344.63 ZAE 101.59 ETE 250.11 ZAC 106.79 ETC 198.00 CLP-113.79

Distance 417.684

Planetary Conic: C3 66.484 VHL 8.154 DLA 62.96 RAL 333.24 RAD 6589.3 VEL 13.705 PTH 2.50 VHP 8.490 DPA -62.40 RAP 70.12 ECC 2.0942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.09 15 3 24 4683.44 -21.96 232.05 231.37 29.35 16 21 27 4083.4 -28.87 228.00  
 148.91 0 57 56 2984.90 -21.95 91.08 231.35 29.35 1 47 41 2384.9 -28.86 87.03  
 31.09 15 3 24 4683.44 -21.96 232.05 231.37 29.35 16 21 27 4083.4 -28.87 228.00  
 148.91 0 57 56 2984.90 -21.95 91.08 231.35 29.35 1 47 41 2384.9 -28.86 87.03  
 31.09 15 3 24 4683.44 -21.96 232.05 231.37 29.35 16 21 27 4083.4 -28.87 228.00  
 148.91 0 57 56 2984.90 -21.95 91.08 231.35 29.35 1 47 41 2384.9 -28.86 87.03

Differential Corrections: TDE 3.2863 TRA -.9933 TC3 -.2520 BAU .3864 SGT 2809.2 SCR 3335.8 SCS 202.6 ST 2361.7 SR 2800.2 SS 1479.0  
 RDE 3.9100 RRA -1.1652 RC3 -.3543 FAU .02211 RRT .9996 RRF .9982 RTF .9968 CRT 1.0000 CRS -.9998 CST -.9997  
 FDE 2.8264 FRA -.7472 FC3 -.2879 BSP 13296 SGB 4361.1 R23 .0483 R13 .9977 LSA 3950.3 HSA 30.9 SSA 1.5  
 BDE 5.1140 BRA 1.5312 BC3 .4348 FSP -649 SGI 4360.7 SGT 59.6 THA 49.90 EL1 3663.1 EL2 4.2 ALF 49.86

LAUNCH DATE JAN 14 1969 FLIGHT TIME 152.00 ARRIVAL DATE JUN 15 1969

Heliocentric Conic: RL 147.15 LAL .00 LOL 113.65 VL 27.680 GAL .15 AZL 77.92 HCA 192.41 SMA 127.90 ECC .15051 INC12.0843 V1 30.277  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.400 GAP 1.52 AZP 101.81 TAL 179.27 TAP 11.68 RCA 108.65 APO 147.15 V2 34.784  
 RC 102.038 GL 81.01 GP -69.80 ZAL 90.30 ZAP 98.40 ETS 341.08 ZAE 108.53 ETE 246.00 ZAC 108.64 ETC 194.28 CLP-115.04

Distance 423.831

Planetary Conic: C3 43.887 VHL 6.625 DLA 61.59 RAL 358.68 RAD 6568.7 VEL 12.855 PTH 2.34 VHP 6.644 DPA -57.73 RAP 57.78 ECC 1.7223  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.95 15 29 36 4573.32 -27.56 226.73 232.16 32.69 16 45 50 3973.3 -34.19 221.93  
 147.05 1 15 9 2890.22 -27.55 87.94 232.14 32.68 2 3 20 2290.2 -34.18 83.15  
 32.95 15 29 36 4573.32 -27.56 226.73 232.16 32.69 16 45 50 3973.3 -34.19 221.93  
 147.05 1 15 9 2890.22 -27.55 87.94 232.14 32.68 2 3 20 2290.2 -34.18 83.15  
 32.95 15 29 36 4573.32 -27.56 226.73 232.16 32.69 16 45 50 3973.3 -34.19 221.93  
 147.05 1 15 9 2890.22 -27.55 87.94 232.14 32.68 2 3 20 2290.2 -34.18 83.15

Differential Corrections: TDE 2.8201 TRA -.8625 TC3 -.5570 BAU .3041 SGT 2986.8 SCR 3198.5 SCS 293.2 ST 2483.5 SR 2805.5 SS 1707.4  
 RDE 3.2107 RRA -.7562 RC3 -.6540 FAU .03954 RRT .9980 RRF .9991 RTF .9885 CRT .9989 CRS -1.0000 CST -.9985  
 FDE 3.4076 FRA -.7353 FC3 -.7799 BSP 15687 SGB 4376.2 R23 .0842 R13 .9960 LSA 4116.3 HSA 97.6 SSA 1.6  
 BDE 4.2733 BRA 1.1339 BC3 .8591 FSP -979 SGI 4368.4 SGT 262.2 THA 46.97 EL1 3745.8 EL2 86.7 ALF 48.49

LAUNCH DATE JAN 14 1969 FLIGHT TIME 154.00 ARRIVAL DATE JUN 17 1969

Heliocentric Conic: RL 147.15 LAL .00 LOL 113.65 VL 27.670 GAL .24 AZL 79.88 HCA 195.53 SMA 127.85 ECC .15116 INC10.1160 V1 30.277  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.392 GAP 1.85 AZP 99.75 TAL 178.68 TAP 14.21 RCA 108.51 APO 147.15 V2 34.783  
 RC 104.441 GL 58.00 GP -62.96 ZAL 89.83 ZAP 102.35 ETS 338.07 ZAE 114.23 ETE 241.49 ZAC 109.69 ETC 190.78 CLP-118.06

Distance 429.984

Planetary Conic: C3 32.844 VHL 5.751 DLA 59.73 RAL 343.89 RAD 6568.3 VEL 12.418 PTH 2.24 VHP 5.615 DPA -53.02 RAP 49.03 ECC 1.5405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.93 15 55 21 4491.16 -31.14 221.71 233.25 36.08 17 10 12 3891.2 -37.47 216.20  
 145.07 1 30 59 2826.05 -31.13 85.34 233.24 36.08 2 18 5 2226.1 -37.46 79.83  
 34.93 15 55 21 4491.16 -31.14 221.71 233.25 36.08 17 10 12 3891.2 -37.47 216.20  
 145.07 1 30 59 2826.05 -31.13 85.34 233.24 36.08 2 18 5 2226.1 -37.46 79.83  
 34.93 15 55 21 4491.16 -31.14 221.71 233.25 36.08 17 10 12 3891.2 -37.47 216.20  
 145.07 1 30 59 2826.05 -31.13 85.34 233.24 36.08 2 18 5 2226.1 -37.46 79.83

Differential Corrections: TDE 2.6737 TRA -.7440 TC3 -.9190 BAU .5618 SGT 3229.9 SCR 2967.7 SCS 386.3 ST 2709.6 SR 2640.9 SS 1908.1  
 RDE 2.6265 RRA -.4706 RC3 -.8902 FAU .05670 RRT .9881 RRF .9990 RTF .9842 CRT .9983 CRS -1.0000 CST -.9980  
 FDE 3.9140 FRA -.6632 FC3 -1.4946 BSP 13802 SGB 4386.3 R23 .1026 R13 .9939 LSA 4235.8 HSA 124.7 SSA 2.3  
 BDE 3.7480 BRA .8803 BC3 1.2795 FSP -1315 SGI 4373.3 SGT 337.5 THA 42.55 EL1 3782.2 EL2 109.5 ALF 44.26

LAUNCH DATE JAN 14 1969 FLIGHT TIME 156.00 ARRIVAL DATE JUN 19 1969

Heliocentric Conic: RL 147.15 LAL .00 LOL 113.65 VL 27.658 GAL .35 AZL 81.20 HCA 198.67 SMA 127.75 ECC .15195 INC 8.7951 V1 30.277  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.383 GAP 2.18 AZP 98.34 TAL 178.04 TAP 16.71 RCA 108.34 APO 147.16 V2 34.783  
 RC 106.844 GL 55.15 GP -56.77 ZAL 89.19 ZAP 106.61 ETS 355.71 ZAE 118.90 ETE 236.75 ZAC 110.25 ETC 187.66 CLP-121.43

Distance 436.133

Planetary Conic: C3 26.558 VHL 5.153 DLA 58.12 RAL 348.61 RAD 6568.1 VEL 12.163 PTH 2.18 VHP 4.999 DPA -48.41 RAP 42.50 ECC 1.4371  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.86 16 19 9 4428.52 -33.40 217.17 234.42 39.24 17 32 58 3828.5 -39.42 211.05  
 143.14 1 44 48 2782.36 -33.38 83.22 234.40 39.23 2 31 11 2182.4 -39.41 77.09  
 36.86 16 19 9 4428.52 -33.40 217.17 234.42 39.24 17 32 58 3828.5 -39.42 211.05  
 143.14 1 44 48 2782.36 -33.38 83.22 234.40 39.23 2 31 11 2182.4 -39.41 77.09  
 36.86 16 19 9 4428.52 -33.40 217.17 234.42 39.24 17 32 58 3828.5 -39.42 211.05  
 143.14 1 44 48 2782.36 -33.38 83.22 234.40 39.23 2 31 11 2182.4 -39.41 77.09

Differential Corrections: TDE 2.6161 TRA -.6324 TC3 -1.3080 BAU .5911 SGT 3471.3 SCR 2705.7 SCS 470.5 ST 2936.1 SR 2424.0 SS 2064.8  
 RDE 2.1742 RRA -.2811 RC3 -1.0300 FAU .07120 RRT .9849 RRF .9986 RTF .9812 CRT .9980 CRS -1.0000 CST -.9977  
 FDE 4.2892 FRA -.5181 FC3 -2.3209 BSP 13646 SGB 4401.2 R23 .1212 R13 .9913 LSA 4329.0 HSA 140.9 SSA 3.0  
 BDE 3.4017 BRA .6921 BC3 1.6648 FSP -1591 SGI 4385.5 SGT 371.2 THA 37.83 EL1 3805.6 EL2 118.0 ALF 39.53

LAUNCH DATE JAN 14 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 442.270

RL 147.15 LAL .00 LOL 113.65 VL 27.645 GAL .48 AZL 82.16 HCA 201.81 SMA 127.66 ECC .15267 INC 7.8432 V1 30.277  
 RP 108.84 LAP -2.91 LOP 315.28 VP 37.374 GAP 2.51 AZP 97.29 TAL 177.35 TAP 19.17 RCA 108.14 APO 147.18 V2 34.784  
 RC 109.246 GL 52.50 GP -51.16 ZAL 86.39 ZAP 110.98 ETS 333.93 ZAE 122.64 ETE 231.88 ZAC 110.48 ETC 184.99 CLP-124.61

PLANETOCENTRIC CONIC

C3 22.810 VHL 4.755 DLA 56.63 RAL 352.88 RAD 6567.9 VEL 12.000 PTH 2.14 VHP 4.622 DPA -43.99 RAP 37.50 ECC 1.3721  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.67 16 41 0 4379.43 -34.79 213.14 235.66 42.05 17 53 59 3779.4 -40.53 206.52  
 141.33 1 57 2 2752.38 -34.78 81.52 235.65 42.04 2 42 54 2152.4 -40.52 74.90  
 38.67 16 41 0 4379.43 -34.79 213.14 235.66 42.05 17 53 59 3779.4 -40.53 206.52  
 141.33 1 57 2 2752.38 -34.78 81.52 235.65 42.04 2 42 54 2152.4 -40.52 74.90  
 38.67 16 41 0 4379.43 -34.79 213.14 235.66 42.05 17 53 59 3779.4 -40.53 206.52  
 141.33 1 57 2 2752.38 -34.78 81.52 235.65 42.04 2 42 54 2152.4 -40.52 74.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5823 TRA -.5297 TC3-1.7197 BAU .6185 9GT 3701.8 9GR 2442.8 9G3 539.8 ST 3131.3 SR 2180.3 SS 2160.7  
 RDE 1.0075 RRA -.1535 RC3-1.1087 FAU .08367 RRT .9832 RRF .9979 RTF .9794 CRT .9979 CRS-1.0000 CST -.9975  
 FDE 4.4857 FRA -.3349 FC3-3.2037 BSP 13799 9GB 4435.1 RZ3 .1367 R13 .9885 LSA 4382.4 MSA 149.0 SSA 3.7  
 BDE 3.1519 BRA .5515 BC3 2.0461 FSP -1851 9G1 4419.4 9G2 373.6 THA 33.24 EL1 3813.9 EL2 116.5 ALF 34.83

LAUNCH DATE JAN 14 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 448.394

RL 147.15 LAL .00 LOL 113.65 VL 27.630 GAL .61 AZL 82.88 HCA 204.96 SMA 127.56 ECC .15394 INC 7.1211 V1 30.277  
 RP 108.84 LAP -3.00 LOP 318.45 VP 37.364 GAP 2.84 AZP 96.46 TAL 176.62 TAP 21.58 RCA 107.92 APO 147.19 V2 34.785  
 RC 111.845 GL 50.05 GP -46.13 ZAL 87.44 ZAP 113.31 ETS 332.65 ZAE 125.53 ETE 227.00 ZAC 110.56 ETC 182.77 CLP-128.08

PLANETOCENTRIC CONIC

C3 19.980 VHL 4.468 DLA 55.27 RAL 356.81 RAD 6567.8 VEL 11.889 PTH 2.11 VHP 4.395 DPA -39.84 RAP 33.66 ECC 1.3285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.33 17 1 15 4340.00 -35.63 209.60 237.03 44.50 18 13 35 3740.0 -41.11 202.58  
 139.67 2 8 8 2731.85 -35.62 80.20 237.02 44.49 2 53 40 2131.9 -41.10 73.18  
 40.33 17 1 15 4340.00 -35.63 209.60 237.03 44.50 18 13 35 3740.0 -41.11 202.58  
 139.67 2 8 8 2731.85 -35.62 80.20 237.02 44.49 2 53 40 2131.9 -41.10 73.18  
 40.33 17 1 15 4340.00 -35.63 209.60 237.03 44.50 18 13 35 3740.0 -41.11 202.58  
 139.67 2 8 8 2731.85 -35.62 80.20 237.02 44.49 2 53 40 2131.9 -41.10 73.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5829 TRA -.4288 TC3-2.1293 BAU .6418 9GT 3917.4 9GR 2188.2 9G3 590.5 ST 3299.9 SR 1942.6 SS 2208.7  
 RDE 1.5142 RRA -.0610 RC3-1.1182 FAU .09242 RRT .9818 RRF .9966 RTF .9779 CRT .9978 CRS-1.0000 CST -.9975  
 FDE 4.5359 FRA -.1181 FC3-4.0087 BSP 13938 9GB 4487.1 RZ3 .1488 R13 .9856 LSA 4417.9 MSA 155.1 SSA 4.5  
 BDE 2.9768 BRA .4311 BC3 2.4050 FSP -2031 9G1 4472.3 9G2 364.4 THA 28.95 EL1 3827.7 EL2 110.9 ALF 30.46

LAUNCH DATE JAN 14 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 454.503

RL 147.15 LAL .00 LOL 113.65 VL 27.613 GAL .76 AZL 83.45 HCA 208.11 SMA 127.45 ECC .15514 INC 6.5516 V1 30.277  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.353 GAP 3.16 AZP 95.78 TAL 175.84 TAP 23.96 RCA 107.67 APO 147.22 V2 34.787  
 RC 114.042 GL 47.77 GP -41.63 ZAL 86.38 ZAP 119.48 ETS 331.78 ZAE 127.65 ETE 222.26 ZAC 110.59 ETC 180.95 CLP-131.18

PLANETOCENTRIC CONIC

C3 18.100 VHL 4.254 DLA 54.03 RAL 356.81 RAD 6567.7 VEL 11.810 PTH 2.09 VHP 4.269 DPA -35.99 RAP 30.71 ECC 1.2979  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.85 17 20 19 4307.68 -36.09 206.50 238.57 46.62 18 32 6 3707.7 -41.34 199.17  
 138.15 2 18 30 2718.04 -36.08 79.20 238.55 46.61 3 3 48 2118.0 -41.33 71.87  
 41.85 17 20 19 4307.68 -36.09 206.50 238.57 46.62 18 32 6 3707.7 -41.34 199.17  
 138.15 2 18 30 2718.04 -36.08 79.20 238.55 46.61 3 3 48 2118.0 -41.33 71.87  
 41.85 17 20 19 4307.68 -36.09 206.50 238.57 46.62 18 32 6 3707.7 -41.34 199.17  
 138.15 2 18 30 2718.04 -36.08 79.20 238.55 46.61 3 3 48 2118.0 -41.33 71.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5905 TRA -.3236 TC3-2.5304 BAU .6660 9GT 4121.3 9GR 1953.3 9G3 623.4 ST 3442.7 SR 1722.7 SS 2216.7  
 RDE 1.2790 RRA .0031 RC3-1.0825 FAU .09797 RRT .9807 RRF .9951 RTF .9768 CRT .9978 CRS -.9999 CST -.9971  
 FDE 4.4614 FRA .1043 FC3-4.8859 BSP 14147 9GB 4560.7 RZ3 .1548 R13 .9830 LSA 4439.4 MSA 158.6 SSA 5.3  
 BDE 2.8532 BRA .3236 BC3 2.7523 FSP -2146 9G1 4547.5 9G2 346.3 THA 25.08 EL1 3848.3 EL2 101.6 ALF 26.55

LAUNCH DATE JAN 14 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 460.596

RL 147.15 LAL .00 LOL 113.65 VL 27.596 GAL .92 AZL 83.91 HCA 211.27 SMA 127.33 ECC .15649 INC 6.0886 V1 30.277  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.343 GAP 3.48 AZP 95.21 TAL 175.02 TAP 26.29 RCA 107.40 APO 147.25 V2 34.790  
 RC 116.435 GL 45.84 GP -37.65 ZAL 85.14 ZAP 123.44 ETS 331.21 ZAE 129.13 ETE 217.79 ZAC 110.65 ETC 179.50 CLP-134.11

PLANETOCENTRIC CONIC

C3 16.754 VHL 4.093 DLA 52.90 RAL 4.01 RAD 6567.7 VEL 11.753 PTH 2.07 VHP 4.213 DPA -32.45 RAP 28.50 ECC 1.2757  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.25 17 38 26 4280.83 -36.30 203.78 240.28 48.45 18 49 47 3680.8 -41.35 196.22  
 136.75 2 28 27 2709.12 -36.29 78.45 240.27 48.44 3 13 36 2109.1 -41.34 70.90  
 43.25 17 38 26 4280.83 -36.30 203.78 240.28 48.45 18 49 47 3680.8 -41.35 196.22  
 136.75 2 28 27 2709.12 -36.29 78.45 240.27 48.44 3 13 36 2109.1 -41.34 70.90  
 43.25 17 38 26 4280.83 -36.30 203.78 240.28 48.45 18 49 47 3680.8 -41.35 196.22  
 136.75 2 28 27 2709.12 -36.29 78.45 240.27 48.44 3 13 36 2109.1 -41.34 70.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5384 TRA -.2185 TC3-2.9146 BAU .6913 9GT 4311.0 9GR 1739.9 9G3 639.9 ST 3558.5 SR 1525.1 SS 2191.5  
 RDE 1.0891 RRA .0478 RC3-1.0154 FAU .10060 RRT .9794 RRF .9926 RTF .9759 CRT .9979 CRS -.9999 CST -.9968  
 FDE 4.2973 FRA .3209 FC3-5.1980 BSP 14480 9GB 4648.9 RZ3 .1548 R13 .9806 LSA 4445.8 MSA 161.0 SSA 6.2  
 BDE 2.7831 BRA .2236 BC3 3.0864 FSP -2214 9G1 4637.4 9G2 326.6 THA 21.68 EL1 3870.5 EL2 90.5 ALF 23.17

LAUNCH DATE JAN 14 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 466.674

RL 147.15 LAL .00 LOL 113.65 VL 27.577 GAL 1.09 AZL 84.30 HCA 214.42 SMA 127.20 ECC .15797 INC 5.7025 V1 30.277
RP 108.91 LAP -3.22 LOP 327.95 VP 37.332 GAP 3.80 AZP 94.71 TAL 174.16 TAP 28.58 RCA 107.10 APO 147.29 V2 34.794
RC 118.823 GL 43.63 GP -34.14 ZAL 83.80 ZAP 127.15 ETS 330.87 ZAE 130.09 ETE 213.60 ZAC 110.81 ETC 176.35 CLP-136.85

PLANETOCENTRIC CONIC

C3 15.786 VHL 3.971 DLA 51.87 RAL 7.42 RAD 6567.6 VEL 11.711 PTH 2.06 VHP 4.207 DPA -29.21 RAP 26.87 ECC 1.2595
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.54 17 55 55 4258.23 -36.33 201.39 242.18 50.04 19 6 53 3658.2 -41.20 193.65
135.46 2 38 9 2703.99 -36.32 77.94 242.16 50.03 3 23 13 2104.0 -41.19 70.21
44.54 17 55 55 4258.23 -36.33 201.39 242.18 50.04 19 6 53 3658.2 -41.20 193.65
135.46 2 38 9 2703.99 -36.32 77.94 242.16 50.03 3 23 13 2104.0 -41.19 70.21
44.54 17 55 55 4258.23 -36.33 201.39 242.18 50.04 19 6 53 3658.2 -41.20 193.65
135.46 2 38 9 2703.99 -36.32 77.94 242.16 50.03 3 23 13 2104.0 -41.19 70.21

DIFFERENTIAL CORRECTIONS

TDE 2.9306 TRA -.1067 TC3-3.2743 BAU .7174
RDE .9377 RRA .0786 RC3 -.9294 FAU .10084
FDE 4.0800 FRA .5259 FC3-5.5375 B8P 14838
BDE 2.6987 BRA .1342 BC3 3.4036 F8P -2231

MID-COURSE EXECUTION ACCURACY

SGT 4489.9 SGR 1532.2 SG3 643.7
RRT .9776 RRF .9890 RTF .9751
SG8 4750.7 R23 .1481 R13 .9787
SG1 4740.6 SG2 309.3 THA 18.76

ORBIT DETERMINATION ACCURACY

ST 3653.2 SR 1354.4 SS 2144.9
CRT .9981 CRS -.9997 CST -.9965
LSA 4444.6 HSA 162.7 SSA 7.1
EL1 3895.4 EL2 78.4 ALF 20.31

LAUNCH DATE JAN 14 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 472.735

RL 147.15 LAL .00 LOL 113.65 VL 27.556 GAL 1.28 AZL 84.63 HCA 217.58 SMA 127.06 ECC .15960 INC 5.3738 V1 30.277
RP 108.90 LAP -3.27 LOP 331.11 VP 37.321 GAP 4.11 AZP 94.26 TAL 173.25 TAP 30.83 RCA 106.78 APO 147.34 V2 34.798
RC 121.206 GL 41.71 GP -31.05 ZAL 82.34 ZAP 130.60 ETS 330.69 ZAE 130.64 ETE 209.97 ZAC 111.10 ETC 177.44 CLP-139.43

PLANETOCENTRIC CONIC

C3 15.038 VHL 3.878 DLA 50.92 RAL 10.76 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 4.240 DPA -26.25 RAP 25.74 ECC 1.2475
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.74 18 12 56 4239.03 -36.23 199.27 244.25 51.41 19 23 35 3639.0 -40.94 191.41
134.26 2 47 44 2701.90 -36.22 77.61 244.24 51.40 3 32 46 2101.9 -40.94 69.75
45.74 18 12 56 4239.03 -36.23 199.27 244.25 51.41 19 23 35 3639.0 -40.94 191.41
134.26 2 47 44 2701.90 -36.22 77.61 244.24 51.40 3 32 46 2101.9 -40.94 69.75
45.74 18 12 56 4239.03 -36.23 199.27 244.25 51.41 19 23 35 3639.0 -40.94 191.41
134.26 2 47 44 2701.90 -36.22 77.61 244.24 51.40 3 32 46 2101.9 -40.94 69.75

DIFFERENTIAL CORRECTIONS

TDE 2.5195 TRA .0050 TC3-3.6051 BAU .7440
RDE .8154 RRA .0990 RC3 -.8345 FAU .09929
FDE 3.8243 FRA .7092 FC3-5.7159 B8P 15242
BDE 2.6481 BRA .0991 BC3 3.7004 F8P -2214

MID-COURSE EXECUTION ACCURACY

SGT 4655.6 SGR 1387.1 SG3 636.9
RRT .9751 RRF .9840 RTF .9746
SG8 4857.9 R23 .1346 R13 .9771
SG1 4848.9 SG2 295.4 THA 16.26

ORBIT DETERMINATION ACCURACY

ST 3723.4 SR 1206.9 SS 2078.6
CRT .9984 CRS -.9995 CST -.9962
LSA 4428.8 HSA 163.4 SSA 7.9
EL1 3913.6 EL2 65.5 ALF 17.94

LAUNCH DATE JAN 14 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 478.780

RL 147.15 LAL .00 LOL 113.65 VL 27.535 GAL 1.47 AZL 84.91 HCA 220.74 SMA 126.92 ECC .16138 INC 5.0890 V1 30.277
RP 108.89 LAP -3.32 LOP 334.28 VP 37.310 GAP 4.43 AZP 93.86 TAL 172.31 TAP 33.05 RCA 106.44 APO 147.40 V2 34.803
RC 123.981 GL 39.86 GP -28.34 ZAL 80.78 ZAP 133.79 ETS 330.61 ZAE 130.89 ETE 206.68 ZAC 111.53 ETC 176.74 CLP-141.84

PLANETOCENTRIC CONIC

C3 14.511 VHL 3.809 DLA 50.02 RAL 14.05 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 4.302 DPA -23.54 RAP 25.02 ECC 1.2388
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.87 18 29 42 4222.98 -36.03 197.38 246.49 52.60 19 40 4 3622.6 -40.60 189.42
133.13 2 57 15 2702.44 -36.01 77.47 246.48 52.59 3 42 17 2102.4 -40.59 69.52
46.87 18 29 42 4222.98 -36.03 197.38 246.49 52.60 19 40 4 3622.6 -40.60 189.42
133.13 2 57 15 2702.44 -36.01 77.47 246.48 52.59 3 42 17 2102.4 -40.59 69.52
46.87 18 29 42 4222.98 -36.03 197.38 246.49 52.60 19 40 4 3622.6 -40.60 189.42
133.13 2 57 15 2702.44 -36.01 77.47 246.48 52.59 3 42 17 2102.4 -40.59 69.52

DIFFERENTIAL CORRECTIONS

TDE 2.5112 TRA .1272 TC3-3.8943 BAU .7688
RDE .7195 RRA .1137 RC3 -.7334 FAU .09804
FDE 3.5650 FRA .8804 FC3-5.7298 B8P 15583
BDE 2.6125 BRA .1707 BC3 3.9827 F8P -2153

MID-COURSE EXECUTION ACCURACY

SGT 4812.3 SGR 1246.7 SG3 623.4
RRT .9709 RRF .9773 RTF .9740
SG8 4971.1 R23 .1177 R13 .9759
SG1 4962.7 SG2 289.6 THA 14.17

ORBIT DETERMINATION ACCURACY

ST 3779.3 SR 1085.2 SS 2006.9
CRT .9987 CRS -.9991 CST -.9959
LSA 4411.5 HSA 164.5 SSA 8.8
EL1 3931.6 EL2 52.8 ALF 16.01

LAUNCH DATE JAN 14 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 484.807

RL 147.15 LAL .00 LOL 113.65 VL 27.513 GAL 1.68 AZL 85.16 HCA 223.90 SMA 126.77 ECC .16331 INC 4.8385 V1 30.277
RP 108.87 LAP -3.35 LOP 337.45 VP 37.299 GAP 4.75 AZP 93.49 TAL 171.33 TAP 35.23 RCA 106.07 APO 147.48 V2 34.808
RC 125.948 GL 38.08 GP -25.96 ZAL 79.12 ZAP 136.75 ETS 330.59 ZAE 130.93 ETE 203.81 ZAC 112.11 ETC 176.18 CLP-144.10

PLANETOCENTRIC CONIC

C3 14.144 VHL 3.761 DLA 49.17 RAL 17.31 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.387 DPA -21.05 RAP 24.66 ECC 1.2328
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.96 18 46 15 4208.45 -35.73 195.68 248.88 53.66 19 56 23 3608.5 -40.19 187.66
132.04 3 6 43 2705.24 -35.72 77.48 248.87 53.64 3 51 48 2105.2 -40.18 69.46
47.96 18 46 15 4208.45 -35.73 195.68 248.88 53.66 19 56 23 3608.5 -40.19 187.66
132.04 3 6 43 2705.24 -35.72 77.48 248.87 53.64 3 51 48 2105.2 -40.18 69.46
47.96 18 46 15 4208.45 -35.73 195.68 248.88 53.66 19 56 23 3608.5 -40.19 187.66
132.04 3 6 43 2705.24 -35.72 77.48 248.87 53.64 3 51 48 2105.2 -40.18 69.46

DIFFERENTIAL CORRECTIONS

TDE 2.4974 TRA .2528 TC3-4.1516 BAU .7942
RDE .6418 RRA .1221 RC3 -.6376 FAU .09212
FDE 3.2955 FRA 1.0240 FC3-5.6385 B8P 15991
BDE 2.5785 BRA .2808 BC3 4.2002 F8P -2086

MID-COURSE EXECUTION ACCURACY

SGT 4957.2 SGR 1125.7 SG3 604.1
RRT .9651 RRF .9684 RTF .9738
SG8 5083.4 R23 .0973 R13 .9751
SG1 5075.3 SG2 287.8 THA 12.40

ORBIT DETERMINATION ACCURACY

ST 3810.0 SR 981.7 SS 1922.9
CRT .9991 CRS -.9985 CST -.9955
LSA 4376.1 HSA 164.5 SSA 9.7
EL1 3934.2 EL2 39.8 ALF 14.44

LAUNCH DATE JAN 14 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC  
 RL 147.15 LAL .00 LOL 113.65 VL 27.490 GAL 1.90 AZL 85.38 MCA 227.06 SMA 126.62 ECC .16540 INC 4.6150 V1 30.277  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.286 GAP 5.07 AZP 93.15 TAL 170.32 TAP 37.38 RCA 105.66 APO 147.56 V2 34.815  
 RC 128.306 GL 36.35 GP -23.87 ZAL 77.37 ZAP 139.48 ETS 330.60 ZAE 130.81 ETE 201.31 ZAC 112.84 ETC 175.75 CLP-146.23

PLANETOCENTRIC CONIC  
 C3 13.912 VHL 3.730 DLA 48.35 RAL 20.55 RAD 6567.5 VEL 11.632 PTH 2.04 VHP 4.491 DPA -18.76 RAP 24.59 ECC 1.2290  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.02 19 2 44 4196.18 -35.37 194.14 251.42 54.59 20 12 40 3596.2 -39.71 186.08  
 130.98 3 16 5 2710.23 -35.35 77.65 251.41 54.57 4 1 16 2110.2 -39.70 69.59  
 49.02 19 2 44 4196.18 -35.37 194.14 251.42 54.59 20 12 40 3596.2 -39.71 186.08  
 130.98 3 16 5 2710.23 -35.35 77.65 251.41 54.57 4 1 16 2110.2 -39.70 69.59  
 49.02 19 2 44 4196.18 -35.37 194.14 251.42 54.59 20 12 40 3596.2 -39.71 186.08  
 130.98 3 16 5 2710.23 -35.35 77.65 251.41 54.57 4 1 16 2110.2 -39.70 69.59

DIFFERENTIAL CORRECTIONS  
 TDE 2.4817 TRA .3898 TC3-4.3701 BAU .8192 3GT 5094.6 3GR 1024.2 3G3 581.9 ST 3822.8 SR 896.0 SS 1835.0  
 RDE .5804 RRA .1274 RC3 -5.5485 FAU .08773 RRT .9573 RRF .9575 RTF .9737 CRT .9995 CRS -.9974 CST -.9951  
 FDE 3.0336 FRA 1.1500 FC3-5.4595 B8P 16394 8CB 5196.6 R23 .0764 R13 .9746 LSA 4330.9 MSA 164.5 S8A 10.5  
 BDE 2.5486 BRA .4063 BC3 4.4044 F8P -2007 3G1 5188.4 3G2 290.7 THA 10.93 EL1 3926.3 EL2 27.1 ALF 13.19

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 14 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC  
 RL 147.15 LAL .00 LOL 113.65 VL 27.486 GAL 2.14 AZL 85.59 MCA 230.23 SMA 126.46 ECC .16767 INC 4.4134 V1 30.277  
 RP 108.85 LAP -3.39 LOP 343.80 VP 37.277 GAP 5.40 AZP 92.83 TAL 169.28 TAP 39.51 RCA 105.26 APO 147.66 V2 34.821  
 RC 130.653 GL 34.65 GP -22.04 ZAL 75.54 ZAP 142.00 ETS 330.61 ZAE 130.60 ETE 199.14 ZAC 113.71 ETC 175.41 CLP-148.23

PLANETOCENTRIC CONIC  
 C3 13.798 VHL 3.715 DLA 47.54 RAL 23.78 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 4.610 DPA -16.64 RAP 24.77 ECC 1.2271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.06 19 19 11 4185.96 -34.92 192.73 254.09 55.42 20 28 56 3585.6 -39.18 184.65  
 129.94 3 25 23 2717.23 -34.91 77.95 254.08 55.40 4 10 41 2117.2 -39.17 69.87  
 50.06 19 19 11 4185.96 -34.92 192.73 254.09 55.42 20 28 56 3585.6 -39.18 184.65  
 129.94 3 25 23 2717.23 -34.91 77.95 254.08 55.40 4 10 41 2117.2 -39.17 69.87  
 50.06 19 19 11 4185.96 -34.92 192.73 254.09 55.42 20 28 56 3585.6 -39.18 184.65  
 129.94 3 25 23 2717.23 -34.91 77.95 254.08 55.40 4 10 41 2117.2 -39.17 69.87

DIFFERENTIAL CORRECTIONS  
 TDE 2.4810 TRA .5253 TC3-4.5483 BAU .8434 3GT 5221.9 3GR 938.9 3G3 557.5 ST 3814.5 SR 824.9 SS 1743.2  
 RDE .5316 RRA .1304 RC3 -4.4670 FAU .08302 RRT .8469 RRF .9435 RTF .9737 CRT .9998 CRS -.9959 CST -.9946  
 FDE 2.7804 FRA 1.2584 FC3-5.2093 B8P 16811 8CB 5305.7 R23 .0975 R13 .9743 LSA 4271.1 MSA 164.6 S8A 11.3  
 BDE 2.5178 BRA .5412 BC3 4.5722 F8P -1926 3G1 5297.3 3G2 297.5 THA 9.69 EL1 3902.7 EL2 15.9 ALF 12.20

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 14 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC  
 RL 147.15 LAL .00 LOL 113.65 VL 27.442 GAL 2.39 AZL 85.77 MCA 233.39 SMA 126.30 ECC .17010 INC 4.2294 V1 30.277  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.266 GAP 5.72 AZP 92.53 TAL 168.21 TAP 41.60 RCA 104.82 APO 147.78 V2 34.829  
 RC 132.989 GL 32.99 GP -20.42 ZAL 73.63 ZAP 144.35 ETS 330.60 ZAE 130.32 ETE 197.28 ZAC 114.71 ETC 175.13 CLP-150.12

PLANETOCENTRIC CONIC  
 C3 13.791 VHL 3.714 DLA 46.75 RAL 26.99 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 4.743 DPA -14.67 RAP 25.18 ECC 1.2270  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.11 19 35 40 4176.23 -34.42 191.41 256.87 56.16 20 45 17 3576.2 -38.58 183.33  
 128.89 3 34 31 2726.35 -34.41 78.41 256.86 56.15 4 19 57 2126.4 -38.57 70.33  
 51.11 19 35 40 4176.23 -34.42 191.41 256.87 56.16 20 45 17 3576.2 -38.58 183.33  
 128.89 3 34 31 2726.35 -34.41 78.41 256.86 56.15 4 19 57 2126.4 -38.57 70.33  
 51.11 19 35 40 4176.23 -34.42 191.41 256.87 56.16 20 45 17 3576.2 -38.58 183.33  
 128.89 3 34 31 2726.35 -34.41 78.41 256.86 56.15 4 19 57 2126.4 -38.57 70.33

DIFFERENTIAL CORRECTIONS  
 TDE 2.4402 TRA .6758 TC3-4.6729 BAU .8646 3GT 5341.8 3GR 868.9 3G3 532.3 ST 3793.9 SR 787.7 SS 1653.9  
 RDE .4941 RRA .1327 RC3 -3.9910 FAU .07785 RRT .9336 RRF .9272 RTF .9736 CRT .9999 CRS -.9936 CST -.9941  
 FDE 2.5465 FRA 1.3572 FC3-4.8874 B8P 17131 8CB 5412.0 R23 .0425 R13 .9740 LSA 4206.1 MSA 165.1 S8A 12.1  
 BDE 2.4897 BRA .6887 BC3 4.6892 F8P -1829 3G1 5403.3 3G2 307.8 THA 8.66 EL1 3870.8 EL2 12.4 ALF 11.44

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 14 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC  
 RL 147.15 LAL .00 LOL 113.65 VL 27.417 GAL 2.65 AZL 85.94 MCA 236.56 SMA 126.13 ECC .17275 INC 4.0599 V1 30.277  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.255 GAP 6.05 AZP 92.24 TAL 167.11 TAP 43.67 RCA 104.35 APO 147.92 V2 34.837  
 RC 135.313 GL 31.38 GP -18.99 ZAL 71.67 ZAP 146.53 ETS 330.56 ZAE 130.01 ETE 195.67 ZAC 115.83 ETC 174.91 CLP-151.91

PLANETOCENTRIC CONIC  
 C3 13.886 VHL 3.726 DLA 45.95 RAL 30.18 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 4.888 DPA -12.83 RAP 25.78 ECC 1.2285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.17 19 52 12 4168.05 -33.84 190.18 259.75 56.84 21 1 40 3568.1 -37.93 182.11  
 127.83 3 43 26 2737.54 -33.84 79.01 259.74 56.83 4 29 3 2137.5 -37.93 70.93  
 52.17 19 52 12 4168.05 -33.84 190.18 259.75 56.84 21 1 40 3568.1 -37.93 182.11  
 127.83 3 43 26 2737.54 -33.84 79.01 259.74 56.83 4 29 3 2137.5 -37.93 70.93  
 52.17 19 52 12 4168.05 -33.84 190.18 259.75 56.84 21 1 40 3568.1 -37.93 182.11  
 127.83 3 43 26 2737.54 -33.84 79.01 259.74 56.83 4 29 3 2137.5 -37.93 70.93

DIFFERENTIAL CORRECTIONS  
 TDE 2.4112 TRA .8513 TC3-4.7858 BAU .8868 3GT 5453.4 3GR 810.5 3G3 506.6 ST 3749.7 SR 719.7 SS 1560.9  
 RDE .4645 RRA .1337 RC3 -3.2714 FAU .07305 RRT .9179 RRF .9085 RTF .9738 CRT .9995 CRS -.9904 CST -.9936  
 FDE 2.3215 FRA 1.4380 FC3-4.5542 B8P 17317 8CB 5513.3 R23 .0292 R13 .9740 LSA 4121.6 MSA 165.8 S8A 12.8  
 BDE 2.4555 BRA .6420 BC3 4.7770 F8P -1743 3G1 5504.1 3G2 318.8 THA 7.79 EL1 3818.1 EL2 21.3 ALF 10.86

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 14 1969

FLIGHT TIME 102.00

ARRIVAL DATE JUL 15 1969

Heliocentric Conic

RL 147.15 LAL .00 LOL 113.65 VL 27.391 GAL 2.93 AZL 86.10 MCA 239.73 SMA 125.97 ECC .17555 INC 3.9023 V1 30.277  
 RP 100.75 LAP -3.37 LOP 353.32 VP 37.244 GAP 6.39 AZP 91.97 TAL 165.99 TAP 45.71 RCA 103.85 APO 148.08 V2 34.846  
 RC 137.825 GL 29.74 GP -17.73 ZAL 69.66 ZAP 148.56 ETS 330.46 ZAE 129.69 ETE 194.28 ZAC 117.06 ETC 174.73 CLP-153.61

Distance 514.872

Planetocentric Conic

C3 14.080 VHL 3.752 DLA 45.14 RAL 33.34 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 5.043 DPA -11.10 RAP 26.54 ECC 1.2317  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.25 20 8 49 4160.74 -33.21 189.01 262.71 57.46 21 18 10 3560.7 -37.23 180.95  
 126.75 3 52 1 2750.95 -33.20 79.76 262.70 57.45 4 37 52 2151.0 -37.22 71.71  
 53.25 20 8 49 4160.74 -33.21 189.01 262.71 57.46 21 18 10 3560.7 -37.23 180.95  
 126.75 3 52 1 2750.95 -33.20 79.76 262.70 57.45 4 37 52 2151.0 -37.22 71.71  
 53.25 20 8 49 4160.74 -33.21 189.01 262.71 57.46 21 18 10 3560.7 -37.23 180.95  
 126.75 3 52 1 2750.95 -33.20 79.76 262.70 57.45 4 37 52 2151.0 -37.22 71.71

Differential Corrections

TDE 2.3779 TRA .9981 TC3-4.8133 BAU .9075  
 RDE .4419 RRA .1348 RC3 -.2713 FAU .06826  
 FDE 2.1118 FRA 1.5091 FC3-4.1973 B8P 17884  
 BDE 2.4186 BRA 1.0052 BC3 4.8210 F8P -1658

Mid-Course Execution Accuracy

8GT 5557.2 8GR 762.8 8G3 481.0  
 RRT .8999 RRF .8878 RTF .9759  
 8GB 5609.3 8Z3 .0190 R13 .9741  
 8G1 5599.6 8G2 330.1 THA 7.07

Orbit Determination Accuracy

ST 3669.7 SR 680.4 SS 1469.1  
 CRT .9987 CR8 -.9861 CST -.9930  
 LSA 4025.8 MSA 167.3 SSA 13.5  
 EL1 3751.8 EL2 34.5 ALF 10.44

LAUNCH DATE JAN 14 1969

FLIGHT TIME 104.00

ARRIVAL DATE JUL 17 1969

Heliocentric Conic

RL 147.15 LAL .00 LOL 113.65 VL 27.365 GAL 3.23 AZL 86.25 MCA 242.90 SMA 125.79 ECC .17859 INC 3.7544 V1 30.277  
 RP 100.72 LAP -3.34 LOP 356.50 VP 37.233 GAP 6.73 AZP 91.71 TAL 164.84 TAP 47.74 RCA 103.33 APO 148.26 V2 34.855  
 RC 139.823 GL 28.16 GP -16.60 ZAL 67.60 ZAP 150.47 ETS 330.30 ZAE 129.37 ETE 193.09 ZAC 118.39 ETC 174.57 CLP-155.22

Distance 520.585

Planetocentric Conic

C3 14.374 VHL 3.791 DLA 44.32 RAL 36.46 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 5.209 DPA -9.46 RAP 27.46 ECC 1.2366  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.36 20 25 31 4154.19 -32.51 187.88 265.74 58.03 21 34 45 3554.2 -36.46 179.86  
 125.64 4 0 14 2768.82 -32.50 80.67 265.74 58.02 4 46 20 2168.6 -36.46 72.65  
 54.36 20 25 31 4154.19 -32.51 187.88 265.74 58.03 21 34 45 3554.2 -36.46 179.86  
 125.64 4 0 14 2768.82 -32.50 80.67 265.74 58.02 4 46 20 2168.6 -36.46 72.65  
 54.36 20 25 31 4154.19 -32.51 187.88 265.74 58.03 21 34 45 3554.2 -36.46 179.86  
 125.64 4 0 14 2768.82 -32.50 80.67 265.74 58.02 4 46 20 2168.6 -36.46 72.65

Differential Corrections

TDE 2.3597 TRA 1.1695 TC3-4.8196 BAU .9271  
 RDE .4251 RRA .1358 RC3 -.2238 FAU .06362  
 FDE 1.9172 FRA 1.5099 FC3-3.8320 B8P 18234  
 BDE 2.3780 BRA 1.1775 BC3 4.8248 F8P -1576

Mid-Course Execution Accuracy

8GT 5653.3 8GR 723.8 8G3 455.8  
 RRT .8799 RRF .8657 RTF .9742  
 8GB 5699.5 8Z3 .0114 R13 .9743  
 8G1 5689.2 8G2 341.7 THA 6.45

Orbit Determination Accuracy

ST 3614.3 SR 648.3 SS 1379.2  
 CRT .9971 CR8 -.9803 CST -.9923  
 LSA 3918.8 MSA 169.5 SSA 14.1  
 EL1 3671.7 EL2 48.9 ALF 10.14

LAUNCH DATE JAN 14 1969

FLIGHT TIME 106.00

ARRIVAL DATE JUL 19 1969

Heliocentric Conic

RL 147.15 LAL .00 LOL 113.65 VL 27.338 GAL 3.54 AZL 86.39 MCA 246.07 SMA 125.62 ECC .18185 INC 3.6147 V1 30.277  
 RP 100.69 LAP -3.30 LOP 359.68 VP 37.223 GAP 7.08 AZP 91.47 TAL 163.67 TAP 49.74 RCA 102.78 APO 148.47 V2 34.865  
 RC 142.807 GL 26.59 GP -15.60 ZAL 65.52 ZAP 152.25 ETS 330.07 ZAE 129.05 ETE 192.05 ZAC 119.82 ETC 174.42 CLP-156.76

Distance 526.476

Planetocentric Conic

C3 14.770 VHL 3.843 DLA 43.49 RAL 39.53 RAD 6567.6 VEL 11.669 PTH 2.05 VHP 5.385 DPA -7.91 RAP 28.50 ECC 1.2431  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.51 20 42 19 4148.21 -31.75 186.79 268.83 58.56 21 51 27 3548.2 -35.65 178.80  
 124.49 4 7 57 2784.68 -31.73 81.75 268.82 58.55 4 54 22 2184.7 -35.63 73.76  
 55.51 20 42 19 4148.21 -31.75 186.79 268.83 58.56 21 51 27 3548.2 -35.65 178.80  
 124.49 4 7 57 2784.68 -31.73 81.75 268.82 58.55 4 54 22 2184.7 -35.63 73.76  
 55.51 20 42 19 4148.21 -31.75 186.79 268.83 58.56 21 51 27 3548.2 -35.65 178.80  
 124.49 4 7 57 2784.68 -31.73 81.75 268.82 58.55 4 54 22 2184.7 -35.63 73.76

Differential Corrections

TDE 2.2969 TRA 1.3536 TC3-4.7847 BAU .9455  
 RDE .4133 RRA .1377 RC3 -.1837 FAU .05914  
 FDE 1.7379 FRA 1.6249 FC3-3.4667 B8P 18584  
 BDE 2.3338 BRA 1.3605 BC3 4.7883 F8P -1495

Mid-Course Execution Accuracy

8GT 5743.4 8GR 692.6 8G3 431.7  
 RRT .8588 RRF .8431 RTF .9743  
 8GB 5785.0 8Z3 .0062 R13 .9744  
 8G1 5774.3 8G2 353.0 THA 5.93

Orbit Determination Accuracy

ST 3526.3 SR 622.1 SS 1292.8  
 CRT .9945 CR8 -.9730 CST -.9916  
 LSA 3803.0 MSA 173.0 SSA 14.6  
 EL1 3580.1 EL2 64.2 ALF 9.95

LAUNCH DATE JAN 14 1969

FLIGHT TIME 108.00

ARRIVAL DATE JUL 21 1969

Heliocentric Conic

RL 147.15 LAL .00 LOL 113.65 VL 27.311 GAL 3.88 AZL 86.52 MCA 249.24 SMA 125.45 ECC .18536 INC 3.4815 V1 30.277  
 RP 100.66 LAP -3.26 LOP 362 VP 37.213 GAP 7.44 AZP 91.23 TAL 162.49 TAP 51.75 RCA 102.19 APO 148.70 V2 34.875  
 RC 144.478 GL 25.05 GP -14.70 ZAL 63.42 ZAP 153.93 ETS 329.76 ZAE 128.74 ETE 191.15 ZAC 121.32 ETC 174.28 CLP-158.23

Distance 532.343

Planetocentric Conic

C3 15.274 VHL 3.908 DLA 42.83 RAL 42.55 RAD 6567.6 VEL 11.690 PTH 2.06 VHP 5.570 DPA -6.43 RAP 29.66 ECC 1.2514  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.70 20 59 10 4142.75 -30.92 185.72 271.97 59.05 22 8 13 3542.7 -34.77 177.78  
 123.30 4 15 10 2805.16 -30.91 82.99 271.96 59.04 5 1 55 2205.2 -34.76 75.05  
 56.70 20 59 10 4142.75 -30.92 185.72 271.97 59.05 22 8 13 3542.7 -34.77 177.78  
 123.30 4 15 10 2805.16 -30.91 82.99 271.96 59.04 5 1 55 2205.2 -34.76 75.05  
 56.70 20 59 10 4142.75 -30.92 185.72 271.97 59.05 22 8 13 3542.7 -34.77 177.78  
 123.30 4 15 10 2805.16 -30.91 82.99 271.96 59.04 5 1 55 2205.2 -34.76 75.05

Differential Corrections

TDE 2.2528 TRA 1.5510 TC3-4.7024 BAU .9807  
 RDE .4059 RRA .1406 RC3 -.1490 FAU .05466  
 FDE 1.5758 FRA 1.6769 FC3-3.0982 B8P 18792  
 BDE 2.2891 BRA 1.5574 BC3 4.7047 F8P -1409

Mid-Course Execution Accuracy

8GT 5826.3 8GR 666.0 8G3 408.6  
 RRT .8372 RRF .8208 RTF .9744  
 8GB 5866.4 8Z3 .0034 R13 .9744  
 8G1 5855.1 8G2 363.7 THA 5.50

Orbit Determination Accuracy

ST 3432.1 SR 601.1 SS 1212.5  
 CRT .9908 CR8 -.9638 CST -.9908  
 LSA 3684.9 MSA 177.9 SSA 15.0  
 EL1 3483.4 EL2 80.3 ALF 9.85

LAUNCH DATE JAN 14 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 536.185

RL 147.15 LAL .00 LOL 113.65 VL 27.284 GAL 4.23 AZL 86.65 HCA 252.42 SMA 125.27 ECC .18913 INC 3.3538 V1 30.277
RP 106.63 LAP -3.20 LOP 6.03 VP 37.202 GAP 7.81 AZP 91.01 TAL 161.29 TAP 53.71 RCA 101.58 APO 148.96 V2 34.885
RC 146.734 GL 23.53 GP -13.90 ZAL 61.31 ZAP 155.52 ETS 329.35 ZAE 126.45 ETE 190.37 ZAC 122.91 ETC 174.15 CLP-159.65

PLANETOCENTRIC CONIC

C3 15.893 VHL 3.987 DLA 41.75 RAL 45.50 RAD 8567.6 VEL 11.717 PTH 2.06 VHP 5.766 DPA -5.02 RAP 30.92 ECC 1.2616
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.93 21 16 7 4137.54 -30.04 184.66 275.13 59.52 22 25 5 3537.5 -33.84 176.77
122.07 4 21 44 2826.32 -30.03 84.41 275.12 59.51 5 8 52 2226.3 -33.83 176.53
57.93 21 16 7 4137.54 -30.04 184.66 275.13 59.52 22 25 5 3537.5 -33.84 176.77
122.07 4 21 44 2826.32 -30.03 84.41 275.12 59.51 5 8 52 2226.3 -33.83 176.53
57.93 21 16 7 4137.54 -30.04 184.66 275.13 59.52 22 25 5 3537.5 -33.84 176.77
122.07 4 21 44 2826.32 -30.03 84.41 275.12 59.51 5 8 52 2226.3 -33.83 176.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2005 TRA 1.7959 TC3 -4.5947 BAU .9766 SGT 5904.7 SGR 647.4 SCS 386.2 ST 3325.2 SR 582.8 SS 1132.9
RDE .4014 RRA .1439 RC3 -.1221 FAU .03061 RRT .8158 RRF .7988 RTF .9746 CRT .9856 CRS -.9523 CST -.9900
FDE 1.4227 FRA 1.7190 FC3 -2.7569 BSP 19094 SGB 5940.1 R23 .0009 R13 .9746 LSA 3554.2 MSA 184.0 SSA 15.2
BDE 2.2368 BRA 1.7818 BC3 4.5963 FSP -1337 SGI 5928.4 SGE 372.9 THA 5.13 EL1 3372.5 EL2 97.0 ALF 9.82

LAUNCH DATE JAN 14 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 543.998

RL 147.15 LAL .00 LOL 113.65 VL 27.256 GAL 4.60 AZL 86.77 HCA 255.60 SMA 125.09 ECC .19317 INC 3.2304 V1 30.277
RP 106.59 LAP -3.13 LOP 9.23 VP 37.193 GAP 8.19 AZP 90.80 TAL 160.08 TAP 55.68 RCA 100.93 APO 149.26 V2 34.897
RC 148.877 GL 22.05 GP -13.18 ZAL 59.21 ZAP 157.02 ETS 328.82 ZAE 128.17 ETE 189.69 ZAC 124.55 ETC 174.00 CLP-161.01

PLANETOCENTRIC CONIC

C3 16.637 VHL 4.079 DLA 40.86 RAL 46.37 RAD 8567.7 VEL 11.748 PTH 2.07 VHP 5.972 DPA -3.66 RAP 32.27 ECC 1.2758
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.21 21 33 9 4132.56 -29.11 183.60 278.32 59.95 22 42 1 3532.6 -32.86 175.77
120.79 4 27 37 2854.16 -29.10 86.02 278.31 59.94 5 15 11 2254.2 -32.85 175.19
59.21 21 33 9 4132.56 -29.11 183.60 278.32 59.95 22 42 1 3532.6 -32.86 175.77
120.79 4 27 37 2854.16 -29.10 86.02 278.31 59.94 5 15 11 2254.2 -32.85 175.19
59.21 21 33 9 4132.56 -29.11 183.60 278.32 59.95 22 42 1 3532.6 -32.86 175.77
120.79 4 27 37 2854.16 -29.10 86.02 278.31 59.94 5 15 11 2254.2 -32.85 175.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1441 TRA 1.9727 TC3 -4.4541 BAU .9909 SGT 5974.9 SGR 630.7 SCS 365.0 ST 3208.0 SR 567.5 SS 1058.5
RDE .3997 RRA .1483 RC3 -.1001 FAU .04673 RRT .7933 RRF .7781 RTF .9746 CRT .9789 CRS -.9364 CST -.9891
FDE 1.2825 FRA 1.7580 FC3 -2.4319 BSP 19368 SGB 6008.1 R23 -.0004 R13 .9747 LSA 3420.0 MSA 191.7 SSA 15.3
BDE 2.1810 BRA 1.9783 BC3 4.4552 FSP -1268 SGI 5996.0 SGE 381.0 THA 4.82 EL1 3255.8 EL2 114.3 ALF 9.84

LAUNCH DATE JAN 14 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 549.782

RL 147.15 LAL .00 LOL 113.65 VL 27.228 GAL 4.99 AZL 86.89 HCA 258.78 SMA 124.91 ECC .19753 INC 3.1104 V1 30.277
RP 106.58 LAP -3.05 LOP 12.42 VP 37.183 GAP 8.58 AZP 90.61 TAL 158.86 TAP 57.63 RCA 100.24 APO 149.59 V2 34.908
RC 151.204 GL 20.59 GP -12.53 ZAL 57.12 ZAP 158.45 ETS 328.18 ZAE 127.91 ETE 189.10 ZAC 126.26 ETC 173.85 CLP-162.32

PLANETOCENTRIC CONIC

C3 17.517 VHL 4.185 DLA 39.98 RAL 51.16 RAD 8567.7 VEL 11.786 PTH 2.08 VHP 6.189 DPA -2.36 RAP 33.70 ECC 1.2883
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.54 21 50 16 4127.60 -28.13 182.53 281.53 60.37 22 59 4 3527.6 -31.84 174.77
119.46 4 32 43 2882.90 -28.11 87.82 281.52 60.35 5 20 46 2282.9 -31.83 174.77
60.54 21 50 16 4127.60 -28.13 182.53 281.53 60.37 22 59 4 3527.6 -31.84 174.77
119.46 4 32 43 2882.90 -28.11 87.82 281.52 60.35 5 20 46 2282.9 -31.83 174.77
60.54 21 50 16 4127.60 -28.13 182.53 281.53 60.37 22 59 4 3527.6 -31.84 174.77
119.46 4 32 43 2882.90 -28.11 87.82 281.52 60.35 5 20 46 2282.9 -31.83 174.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0838 TRA 2.2018 TC3 -4.2856 BAU 1.0038 SGT 6038.8 SGR 616.9 SCS 344.8 ST 3086.7 SR 554.2 SS 989.1
RDE .4003 RRA .1538 RC3 -.0825 FAU .04305 RRT .7761 RRF .7590 RTF .9747 CRT .9702 CRS -.9219 CST -.9881
FDE 1.1540 FRA 1.7934 FC3 -2.1278 BSP 19626 SGB 6070.3 R23 -.0009 R13 .9747 LSA 3284.1 MSA 200.9 SSA 15.3
BDE 2.1219 BRA 2.2071 BC3 4.2864 FSP -1202 SGI 6057.9 SGE 387.8 THA 4.55 EL1 3135.3 EL2 132.3 ALF 9.89

LAUNCH DATE JAN 14 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 555.532

RL 147.15 LAL .00 LOL 113.65 VL 27.200 GAL 5.41 AZL 87.01 HCA 261.96 SMA 124.73 ECC .20222 INC 2.9929 V1 30.277
RP 106.52 LAP -2.96 LOP 15.80 VP 37.173 GAP 8.99 AZP 90.42 TAL 157.62 TAP 59.59 RCA 99.51 APO 149.96 V2 34.920
RC 153.416 GL 19.17 GP -11.95 ZAL 55.06 ZAP 159.80 ETS 327.59 ZAE 127.66 ETE 188.58 ZAC 126.02 ETC 173.68 CLP-163.59

PLANETOCENTRIC CONIC

C3 18.549 VHL 4.307 DLA 39.04 RAL 55.85 RAD 8567.8 VEL 11.829 PTH 2.10 VHP 6.417 DPA -1.11 RAP 35.21 ECC 1.3053
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.93 22 7 27 4122.66 -27.10 181.46 284.74 60.75 23 16 9 3522.7 -30.77 173.75
118.07 4 37 2 2914.54 -27.08 89.83 284.73 60.74 5 25 36 2314.5 -30.76 173.75
61.93 22 7 27 4122.66 -27.10 181.46 284.74 60.75 23 16 9 3522.7 -30.77 173.75
118.07 4 37 2 2914.54 -27.08 89.83 284.73 60.74 5 25 36 2314.5 -30.76 173.75
61.93 22 7 27 4122.66 -27.10 181.46 284.74 60.75 23 16 9 3522.7 -30.77 173.75
118.07 4 37 2 2914.54 -27.08 89.83 284.73 60.74 5 25 36 2314.5 -30.76 173.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0233 TRA 2.4471 TC3 -4.0858 BAU 1.0133 SGT 6098.9 SGR 605.9 SCS 326.0 ST 2972.7 SR 542.8 SS 927.3
RDE .4033 RRA .1808 RC3 -.0879 FAU .03942 RRT .7588 RRF .7424 RTF .9746 CRT .9594 CRS -.9027 CST -.9872
FDE 1.0394 FRA 1.8288 FC3 -1.8399 BSP 19787 SGB 6128.9 R23 -.0004 R13 .9747 LSA 3153.8 MSA 211.4 SSA 15.2
BDE 2.0831 BRA 2.4523 BC3 4.0863 FSP -1134 SGI 6116.2 SGE 393.5 THA 4.33 EL1 3018.1 EL2 150.8 ALF 9.96

LAUNCH DATE JAN 14 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.172 GAL 5.85 AZL 87.12 HCA 265.15 SMA 124.55 ECC .20727 INC 2.8772 V1 30.273
RP 108.48 LAP -2.87 LOP 18.79 VP 37.164 GAP 9.42 AZP 90.24 TAL 156.39 TAP 61.54 RCA 98.74 APO 150.37 V2 34.932
RC 155.812 GL 17.78 GP -11.42 ZAL 53.03 ZAP 161.09 ETS 326.45 ZAE 127.43 ETE 188.13 ZAC 129.83 ETC 173.49 CLP-164.83

DISTANCE 561.245

PLANETOCENTRIC CONIC

C3 19.749 VHL 4.444 DLA 38.11 RAL 56.44 RAD 8567.8 VEL 11.880 PTH 2.11 VHP 6.659 DPA .09 RAP 36.79 ECC 1.3250
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.36 22 24 47 4117.36 -26.03 180.36 287.96 61.12 23 33 24 3517.4 -29.66 172.71
116.64 4 40 24 2949.43 -26.01 92.05 287.95 61.11 5 29 34 2349.4 -29.65 84.41
63.36 22 24 47 4117.36 -26.03 180.36 287.96 61.12 23 33 24 3517.4 -29.66 172.71
116.64 4 40 24 2949.43 -26.01 92.05 287.95 61.11 5 29 34 2349.4 -29.65 84.41
63.36 22 24 47 4117.36 -26.03 180.36 287.96 61.12 23 33 24 3517.4 -29.66 172.71
116.64 4 40 24 2949.43 -26.01 92.05 287.95 61.11 5 29 34 2349.4 -29.65 84.41

DIFFERENTIAL CORRECTIONS

TDE 1.9556 TRA 2.7024 TC3-3.8751 BAU 1.0232
RDE .4075 RRA 1.687 RC3 -.0571 FAU .03614
FDE .9315 FRA 1.8591 FC3-1.5844 BSP 20021
BDE 1.9976 BRA 2.7077 BC3 3.8755 FSP -1076

MID-COURSE EXECUTION ACCURACY

96T 6150.3 96R 595.8 96S 308.0
96T .7432 96R .7273 96S .9747
96B 6179.1 96S -.0003 96T .9747
96I 6186.3 96E 397.6 96H 4.14

ORBIT DETERMINATION ACCURACY

ST 2851.7 SR 551.9 SS 868.6
CRT .9461 CR8 -.8802 CST -.9863
LSA 3019.9 MSA 223.2 SSA 15.0
EL1 2895.9 EL2 169.7 ALF 10.04

LAUNCH DATE JAN 14 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.143 GAL 6.32 AZL 87.24 HCA 268.35 SMA 124.37 ECC .21272 INC 2.7625 V1 30.277
RP 108.45 LAP -2.76 LOP 21.99 VP 37.155 GAP 9.86 AZP 90.08 TAL 155.15 TAP 63.48 RCA 97.92 APO 150.83 V2 34.945
RC 157.792 GL 18.43 GP -10.94 ZAL 51.04 ZAP 162.32 ETS 325.31 ZAE 127.22 ETE 187.73 ZAC 131.67 ETC 173.27 CLP-166.03

DISTANCE 566.917

PLANETOCENTRIC CONIC

C3 21.139 VHL 4.598 DLA 37.17 RAL 58.94 RAD 8567.9 VEL 11.938 PTH 2.12 VHP 6.914 DPA 1.25 RAP 38.42 ECC 1.3479
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.84 22 42 15 4111.67 -24.92 179.22 291.18 61.47 23 50 47 3511.7 -28.52 171.64
115.16 4 42 50 2987.61 -24.90 94.50 291.17 61.46 5 32 37 2387.6 -28.51 86.92
64.84 22 42 15 4111.67 -24.92 179.22 291.18 61.47 23 50 47 3511.7 -28.52 171.64
115.16 4 42 50 2987.61 -24.90 94.50 291.17 61.46 5 32 37 2387.6 -28.51 86.92
64.84 22 42 15 4111.67 -24.92 179.22 291.18 61.47 23 50 47 3511.7 -28.52 171.64
115.16 4 42 50 2987.61 -24.90 94.50 291.17 61.46 5 32 37 2387.6 -28.51 86.92

DIFFERENTIAL CORRECTIONS

TDE 1.8852 TRA 2.9731 TC3-3.6489 BAU 1.0313
RDE .4130 RRA 1.780 RC3 -.0487 FAU .03305
FDE .8334 FRA 1.8887 FC3-1.5926 BSP 20236
BDE 1.9299 BRA 2.9784 BC3 3.6492 FSP -1021

MID-COURSE EXECUTION ACCURACY

96T 8196.6 96R 586.9 96S 291.1
96T .7297 96R .7143 96S .9747
96B 8224.4 96S .0002 96T .9747
96I 8211.5 96E 400.3 96H 3.97

ORBIT DETERMINATION ACCURACY

ST 2734.1 SR 521.5 SS 815.9
CRT .9300 CR8 -.8546 CST -.9855
LSA 2890.8 MSA 236.0 SSA 14.8
EL1 2777.0 EL2 188.8 ALF 10.11

LAUNCH DATE JAN 14 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.115 GAL 6.82 AZL 87.35 HCA 271.52 SMA 124.19 ECC .21860 INC 2.6481 V1 30.277
RP 108.41 LAP -2.65 LOP 25.18 VP 37.146 GAP 10.33 AZP 89.93 TAL 153.91 TAP 63.44 RCA 97.04 APO 151.34 V2 34.957
RC 159.953 GL 15.12 GP -10.50 ZAL 49.09 ZAP 163.50 ETS 323.96 ZAE 127.01 ETE 187.38 ZAC 133.55 ETC 173.02 CLP-167.21

DISTANCE 572.543

PLANETOCENTRIC CONIC

C3 22.743 VHL 4.789 DLA 36.24 RAL 61.33 RAD 8567.9 VEL 12.005 PTH 2.14 VHP 7.184 DPA 2.37 RAP 40.12 ECC 1.3743
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.37 22 59 55 4105.33 -23.78 178.03 294.39 61.81 24 8 20 3505.3 -27.35 170.51
113.63 4 44 13 3029.33 -23.77 97.20 294.38 61.80 5 34 42 2429.3 -27.34 89.68
66.37 22 59 55 4105.33 -23.78 178.03 294.39 61.81 24 8 20 3505.3 -27.35 170.51
113.63 4 44 13 3029.33 -23.77 97.20 294.38 61.80 5 34 42 2429.3 -27.34 89.68
66.37 22 59 55 4105.33 -23.78 178.03 294.39 61.81 24 8 20 3505.3 -27.35 170.51
113.63 4 44 13 3029.33 -23.77 97.20 294.38 61.80 5 34 42 2429.3 -27.34 89.68

DIFFERENTIAL CORRECTIONS

TDE 1.8127 TRA 3.2600 TC3-3.4102 BAU 1.0369
RDE .4198 RRA 1.885 RC3 -.0420 FAU .03005
FDE .7443 FRA 1.9173 FC3-1.1440 BSP 20416
BDE 1.8607 BRA 3.2654 BC3 3.4104 FSP -967

MID-COURSE EXECUTION ACCURACY

96T 8237.3 96R 578.6 96S 275.2
96T .7183 96R .7035 96S .9747
96B 8264.1 96S .0007 96T .9747
96I 8251.2 96E 401.7 96H 3.83

ORBIT DETERMINATION ACCURACY

ST 2622.0 SR 511.3 SS 769.0
CRT .9109 CR8 -.8259 CST -.9848
LSA 2768.7 MSA 249.3 SSA 14.5
EL1 2663.3 EL2 207.7 ALF 10.14

LAUNCH DATE JAN 14 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

RL 147.15 LAL .00 LOL 113.65 VL 27.086 GAL 7.35 AZL 87.47 HCA 274.71 SMA 124.01 ECC .22496 INC 2.5333 V1 30.277
RP 108.37 LAP -2.52 LOP 28.37 VP 37.138 GAP 10.82 AZP 89.79 TAL 152.68 TAP 67.40 RCA 96.11 APO 151.91 V2 34.970
RC 162.097 GL 13.85 GP -10.11 ZAL 47.20 ZAP 164.63 ETS 322.36 ZAE 126.81 ETE 187.06 ZAC 135.46 ETC 172.73 CLP-168.36

DISTANCE 578.116

PLANETOCENTRIC CONIC

C3 24.592 VHL 4.959 DLA 35.31 RAL 63.61 RAD 8568.0 VEL 12.082 PTH 2.16 VHP 7.472 DPA 3.45 RAP 41.86 ECC 1.4047
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.97 23 17 50 4098.09 -22.61 176.78 297.60 62.13 24 26 8 3498.1 -26.16 169.32
112.03 4 44 30 3074.79 -22.60 100.15 297.60 62.12 5 35 45 2474.8 -26.15 92.69
67.97 23 17 50 4098.09 -22.61 176.78 297.60 62.13 24 26 8 3498.1 -26.16 169.32
112.03 4 44 30 3074.79 -22.60 100.15 297.60 62.12 5 35 45 2474.8 -26.15 92.69
67.97 23 17 50 4098.09 -22.61 176.78 297.60 62.13 24 26 8 3498.1 -26.16 169.32
112.03 4 44 30 3074.79 -22.60 100.15 297.60 62.12 5 35 45 2474.8 -26.15 92.69

DIFFERENTIAL CORRECTIONS

TDE 1.7414 TRA 3.5873 TC3-3.1587 BAU 1.0385
RDE .4277 RRA 2.007 RC3 -.0361 FAU .02713
FDE .8654 FRA 1.9480 FC3 -.9552 BSP 20501
BDE 1.7932 BRA 3.5729 BC3 3.1589 FSP -913

MID-COURSE EXECUTION ACCURACY

96T 8274.7 96R 571.2 96S 260.6
96T .7092 96R .6952 96S .9747
96B 8300.6 96S .0016 96T .9747
96I 8287.8 96E 401.9 96H 3.71

ORBIT DETERMINATION ACCURACY

ST 2520.5 SR 501.5 SS 729.4
CRT .8889 CR8 -.7951 CST -.9844
LSA 2856.4 MSA 262.7 SSA 14.2
EL1 2559.9 EL2 226.2 ALF 10.11

LAUNCH DATE JAN 14 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 503.630

RL 147.15 LAL .00 LOL 113.65 VL 27.050 GAL 7.92 AZL 87.50 HCA 277.91 SMA 123.83 ECC .23185 INC 2.4173 V1 30.277  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.129 GAP 11.34 AZP 89.67 TAL 151.46 TAP 69.37 RCA 95.12 APO 152.55 V2 34.983  
 RC 164.221 GL 12.85 GP -9.75 ZAL 45.38 ZAP 165.70 ETS 320.46 ZAE 126.62 ETE 186.79 ZAC 137.40 ETC 172.40 CLP-169.49

PLANETOCENTRIC CONIC

C3 26.721 VHL 5.169 DLA 34.38 RAL 65.78 RAD 6566.1 VEL 12.169 PTH 2.18 VHP 7.777 DPA 4.49 RAP 43.64 ECC 1.4398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.63 23 36 9 4089.45 -21.43 175.43 300.80 62.44 24 44 18 3489.5 -24.94 168.03  
 110.37 4 43 31 3124.45 -21.41 103.38 300.80 62.43 5 35 36 2524.4 -24.93 95.98  
 69.63 23 36 9 4089.45 -21.43 175.43 300.80 62.44 24 44 18 3489.5 -24.94 168.03  
 110.37 4 43 31 3124.45 -21.41 103.38 300.80 62.43 5 35 36 2524.4 -24.93 95.98  
 69.63 23 36 9 4089.45 -21.43 175.43 300.80 62.44 24 44 18 3489.5 -24.94 168.03  
 110.37 4 43 31 3124.45 -21.41 103.38 300.80 62.43 5 35 36 2524.4 -24.93 95.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6637 TRA 3.8887 TC3-2.8110 BAU 1.0400 SGT 6305.8 SCR 563.2 SCS 246.6 ST 2421.5 SR 490.9 SS 693.1  
 RDE .4360 RRA .2138 RC3 -.0319 FAU .02449 RRT .7015 RRF .6881 RTF .9748 CRT .8633 CRS -.7809 CST -.9841  
 FDE .5912 FRA 1.9762 FC3 -.7934 BSP 20678 SGB 6328.7 R23 .0020 R13 .9748 LSA 2551.2 MSA 276.1 SSA 13.8  
 BDE 1.7199 BRA 3.8946 BC3 2.8111 FSP -.867 SGI 6316.0 S62 400.5 THA 3.60 EL1 2458.7 EL2 244.0 ALF 10.03

LAUNCH DATE JAN 14 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 509.075

RL 147.15 LAL .00 LOL 113.65 VL 27.029 GAL 8.53 AZL 87.70 HCA 281.10 SMA 123.66 ECC .23933 INC 2.2994 V1 30.277  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.121 GAP 11.90 AZP 89.56 TAL 150.24 TAP 71.35 RCA 94.06 APO 153.25 V2 34.996  
 RC 166.326 GL 11.45 GP -9.42 ZAL 43.61 ZAP 166.79 ETS 318.21 ZAE 126.43 ETE 186.54 ZAC 139.35 ETC 172.02 CLP-170.61

PLANETOCENTRIC CONIC

C3 29.173 VHL 5.401 DLA 33.47 RAL 87.84 RAD 6566.2 VEL 12.270 PTH 2.21 VHP 8.104 DPA 5.49 RAP 45.47 ECC 1.4801  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.37 23 54 57 4079.05 -20.22 175.95 304.00 62.75 25 2 56 3479.0 -23.71 166.60  
 108.63 4 41 11 3178.62 -20.21 108.93 303.99 62.74 5 34 10 2578.6 -23.70 99.59  
 71.37 23 54 57 4079.05 -20.22 175.95 304.00 62.75 25 2 56 3479.0 -23.71 166.60  
 108.63 4 41 11 3178.62 -20.21 108.93 303.99 62.74 5 34 10 2578.6 -23.70 99.59  
 110.00 5 42 30 2990.84 -25.42 95.04 306.86 66.34 6 32 21 2390.8 -28.40 87.13  
 110.00 3 56 44 3514.85 -15.18 114.57 301.05 59.00 4 51 59 2714.8 -19.17 107.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5845 TRA 4.2303 TC3-2.6626 BAU 1.0385 SGT 6327.3 SCR 595.0 SCS 233.6 ST 2331.7 SR 480.0 SS 662.3  
 RDE .4450 RRA .2283 RC3 -.0283 FAU .02197 RRT .6957 RRF .6827 RTF .9750 CRT .8345 CRS -.7247 CST -.9842  
 FDE .9240 FRA 2.0054 FC3 -.6519 BSP 20626 SGB 6351.6 R23 .0023 R13 .9750 LSA 2494.1 MSA 288.7 SSA 13.5  
 BDE 1.6458 BRA 4.2364 BC3 2.6627 FSP -.823 SGI 6339.2 S62 397.9 THA 3.51 EL1 2366.3 EL2 260.6 ALF 9.87

LAUNCH DATE JAN 14 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 594.441

RL 147.15 LAL .00 LOL 113.65 VL 27.001 GAL 9.18 AZL 87.82 HCA 284.30 SMA 123.48 ECC .24747 INC 2.1788 V1 30.277  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.113 GAP 12.48 AZP 89.46 TAL 149.05 TAP 73.35 RCA 92.92 APO 154.04 V2 35.010  
 RC 168.410 GL 10.32 GP -9.12 ZAL 41.92 ZAP 167.71 ETS 315.53 ZAE 126.24 ETE 186.32 ZAC 141.32 ETC 171.58 CLP-171.72

PLANETOCENTRIC CONIC

C3 32.001 VHL 5.657 DLA 32.56 RAL 89.80 RAD 6566.3 VEL 12.384 PTH 2.24 VHP 8.453 DPA 6.45 RAP 47.33 ECC 1.5267  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.20 0 18 22 4066.14 -19.01 172.30 307.18 63.05 1 26 9 3466.1 -22.47 165.00  
 106.80 4 37 18 3237.97 -19.00 110.84 307.17 63.04 5 31 16 2638.0 -22.46 103.55  
 73.20 0 18 22 4066.14 -19.01 172.30 307.18 63.05 1 26 9 3466.1 -22.47 165.00  
 106.80 4 37 18 3237.97 -19.00 110.84 307.17 63.04 5 31 16 2638.0 -22.46 103.55  
 110.00 6 16 46 2931.32 -26.99 91.12 311.10 68.18 7 5 37 2331.3 -29.71 82.99  
 110.00 3 38.5 3420.79 -11.58 120.43 302.67 57.55 4 35 6 2820.8 -15.58 113.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5040 TRA 4.5938 TC3-2.4161 BAU 1.0337 SGT 6346.0 SCR 546.4 SCS 221.4 ST 2251.7 SR 468.5 SS 636.3  
 RDE .4544 RRA .2440 RC3 -.0251 FAU .01957 RRT .6914 RRF .6788 RTF .9754 CRT .8026 CRS -.6870 CST -.9846  
 FDE .4631 FRA 2.0357 FC3 -.5294 BSP 20956 SGB 6369.4 R23 .0025 R13 .9754 LSA 2367.4 MSA 300.1 SSA 13.1  
 BDE 1.5711 BRA 4.6003 BC3 2.4163 FSP -.782 SGI 6357.2 S62 394.1 THA 3.42 EL1 2283.4 EL2 275.6 ALF 9.62

LAUNCH DATE JAN 14 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 599.715

RL 147.15 LAL .00 LOL 113.65 VL 26.973 GAL 9.88 AZL 87.95 HCA 287.50 SMA 123.31 ECC .25633 INC 2.0547 V1 30.277  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.105 GAP 13.11 AZP 89.38 TAL 147.88 TAP 75.38 RCA 91.70 APO 154.91 V2 35.023  
 RC 170.474 GL 9.23 GP -8.85 ZAL 40.30 ZAP 168.63 ETS 312.34 ZAE 126.04 ETE 186.12 ZAC 143.29 ETC 171.08 CLP-172.83

PLANETOCENTRIC CONIC

C3 35.287 VHL 5.939 DLA 31.68 RAL 71.85 RAD 6566.4 VEL 12.515 PTH 2.27 VHP 8.829 DPA 7.37 RAP 49.22 ECC 1.5804  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.17 0 38 56 4049.51 -17.79 170.38 310.34 63.35 1 46 26 3449.5 -21.22 163.13  
 104.83 4 31 28 3303.61 -17.77 115.19 310.33 63.34 5 26 32 2703.6 -21.21 107.95  
 75.17 0 38 56 4049.51 -17.79 170.38 310.34 63.35 1 46 26 3449.5 -21.22 163.13  
 104.83 4 31 28 3303.61 -17.77 115.19 310.33 63.34 5 26 32 2703.6 -21.21 107.95  
 110.00 6 43 18 2894.65 -27.90 88.66 315.13 69.39 7 31 32 2294.7 -30.44 80.38  
 110.00 3 26 17 3506.46 -8.21 125.04 304.69 56.70 4 24 44 2906.5 -12.54 118.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4267 TRA 4.9857 TC3-2.1695 BAU 1.0229 SGT 6362.6 SCR 537.8 SCS 210.1 ST 2185.4 SR 456.8 SS 616.3  
 RDE .4644 RRA .2613 RC3 -.0217 FAU .01717 RRT .6890 RRF .6770 RTF .9758 CRT .7888 CRS -.6502 CST -.9855  
 FDE .4103 FRA 2.0701 FC3 -.4215 BSP 20964 SGB 6385.3 R23 .0029 R13 .9758 LSA 2295.4 MSA 309.5 SSA 12.7  
 BDE 1.5004 BRA 4.9925 BC3 2.1696 FSP -.738 SGI 6373.5 S62 389.1 THA 3.35 EL1 2214.0 EL2 288.4 ALF 9.29



LAUNCH DATE JAN 14 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 604.881

RL 147.15 LAL .00 LOL 113.65 VL 26.945 GAL 10.63 AZL 88.07 HCA 290.71 SMA 123.13 ECC .26602 INC 1.9259 V1 30.277  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.097 GAP 13.79 AZP 89.32 TAL 146.73 TAP 77.44 RCA 90.38 APO 155.89 V2 35.036  
 RC 172.518 GL 8.19 GP -8.59 ZAL 38.76 ZAP 169.49 ET8 309.53 ZAE 125.84 ETE 185.95 ZAC 145.27 ETC 170.50 CLP-173.93

PLANETOCENTRIC CONIC

C3 39.047 VHL 6.249 DLA 30.81 RAL 73.39 RAD 6568.5 VEL 12.665 PTH 2.30 VHP 9.235 DPA 8.25 RAP 51.14 ECC 1.6426  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.33 1 1 2 4027.47 -16.56 168.08 313.49 63.65 2 8 10 3427.5 -19.97 160.87  
 102.67 4 23 14 3377.11 -16.55 120.10 313.48 63.64 5 19 32 2777.1 -19.96 112.89  
 77.33 1 1 2 4027.47 -16.56 168.08 313.49 63.65 2 8 10 3427.5 -19.97 160.87  
 102.67 4 23 14 3377.11 -16.55 120.10 313.48 63.64 5 19 32 2777.1 -19.96 112.89  
 110.00 7 5 49 2869.67 -28.48 86.95 318.97 70.25 7 53 59 2269.7 -30.90 78.59  
 110.00 3 17 38 3582.91 -5.33 129.09 308.88 56.19 4 17 21 2982.9 -9.74 122.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3429 TRA 5.3985 TC3-1.9359 BAU 1.0106 86T 6370.8 86R 527.9 863 199.4 ST 2123.8 SR 444.1 SS 598.8  
 RDE .4744 RRA 2.794 RC3 -.0190 FAU .01499 RRT .6874 RRF .6757 RTF .9764 CRT .7319 CRS -.6117 CST -.9865  
 FDE .3599 FRA 2.1043 FC3 -.3324 B8P 21081 86B 6392.4 R25 .0029 R13 .9764 LSA 2228.4 MSA 317.2 S8A 12.4  
 BDE 1.4242 BRA 5.4057 BC3 1.9360 F8P -702 86I 6380.9 86E 382.8 THA 3.27 EL1 2149.1 EL2 299.0 ALF 8.87

LAUNCH DATE JAN 14 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 609.920

RL 147.15 LAL .00 LOL 113.65 VL 28.917 GAL 11.44 AZL 88.21 HCA 293.91 SMA 122.96 ECC .27662 INC 1.7916 V1 30.277  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.009 GAP 14.52 AZP 89.27 TAL 145.82 TAP 79.54 RCA 88.95 APO 156.98 V2 35.050  
 RC 174.540 GL 7.19 GP -8.36 ZAL 37.30 ZAP 170.28 ET8 303.96 ZAE 125.63 ETE 185.78 ZAC 147.24 ETC 169.82 CLP-175.04

PLANETOCENTRIC CONIC

C3 43.436 VHL 6.591 DLA 29.96 RAL 75.02 RAD 6568.6 VEL 12.838 PTH 2.34 VHP 9.675 DPA 9.10 RAP 53.07 ECC 1.7149  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.79 1 25 48 3996.32 -15.34 165.13 316.82 63.95 2 32 25 3396.3 -18.72 157.96  
 100.21 4 11 29 3482.02 -15.32 125.82 316.81 63.94 5 9 11 2882.0 -18.70 118.65  
 79.79 1 25 48 3996.32 -15.34 165.13 316.82 63.95 2 32 25 3396.3 -18.72 157.96  
 100.21 4 11 29 3482.02 -15.32 125.82 316.81 63.94 5 9 11 2882.0 -18.70 118.65  
 110.00 7 25 39 2852.43 -28.87 85.76 322.60 70.85 8 13 11 2252.4 -31.21 77.33  
 110.00 3 10 49 3653.91 -2.83 132.81 309.19 55.91 4 11 43 3053.9 -7.09 126.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2582 TRA 5.8409 TC3-1.7104 BAU .9933 86T 6374.0 86R 517.3 863 189.4 ST 2071.8 SR 430.8 SS 585.4  
 RDE .4844 RRA 2.9985 RC3 -.0162 FAU .01289 RRT .6868 RRF .6755 RTF .9772 CRT .6935 CRS -.5739 CST -.9878  
 FDE .3145 FRA 2.1418 FC3 -.2589 B8P 21177 86B 6395.0 R25 .0028 R13 .9772 LSA 2171.7 MSA 322.6 S8A 12.0  
 BDE 1.3483 BRA 5.8485 BC3 1.7105 F8P -667 86I 6384.0 86E 375.4 THA 3.20 EL1 2093.7 EL2 307.0 ALF 8.38

LAUNCH DATE JAN 14 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 614.808

RL 147.15 LAL .00 LOL 113.65 VL 26.889 GAL 12.32 AZL 88.35 HCA 297.12 SMA 122.79 ECC .28827 INC 1.6502 V1 30.277  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.082 GAP 15.31 AZP 89.25 TAL 144.56 TAP 81.68 RCA 87.39 APO 158.19 V2 35.063  
 RC 178.542 GL 6.23 GP -8.15 ZAL 35.93 ZAP 170.99 ET8 298.56 ZAE 125.40 ETE 185.63 ZAC 149.21 ETC 169.04 CLP-176.15

PLANETOCENTRIC CONIC

C3 48.551 VHL 6.968 DLA 29.13 RAL 76.54 RAD 6568.8 VEL 13.035 PTH 2.38 VHP 10.153 DPA 9.90 RAP 55.02 ECC 1.7990  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.88 1 55 57 3947.16 -14.12 160.87 319.72 64.26 3 1 44 3347.2 -17.47 153.74  
 97.12 3 53 30 3587.07 -14.11 132.99 319.71 64.25 4 52 57 2987.1 -17.46 125.85  
 100.00 5 12 51 3312.52 -19.67 118.79 322.34 67.02 6 8 3 2712.5 -22.61 109.23  
 100.00 3 19 17 3676.94 -8.70 138.27 318.87 61.29 4 20 33 3076.9 -12.47 131.50  
 110.00 7 43 25 2840.96 -29.13 84.96 326.29 71.26 8 30 46 2241.0 -31.40 76.50  
 110.00 3 5 11 3721.27 -.06 136.32 311.58 55.82 4 7 13 3121.3 -4.54 130.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1731 TRA 6.3159 TC3-1.4942 BAU .9699 86T 6372.8 86R 505.7 863 180.1 ST 2028.7 SR 416.8 SS 575.8  
 RDE .4948 RRA 3.187 RC3 -.0134 FAU .01084 RRT .6871 RRF .6763 RTF .9782 CRT .6542 CRS -.5378 CST -.9892  
 FDE .2737 FRA 2.1831 FC3 -.1933 B8P 21249 86B 6392.8 R25 .0028 R13 .9782 LSA 2124.8 MSA 325.4 S8A 11.6  
 BDE 1.2731 BRA 6.3239 BC3 1.4943 F8P -634 86I 6382.3 86E 386.9 THA 3.13 EL1 2047.4 EL2 312.2 ALF 7.83

LAUNCH DATE JAN 14 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 619.514

RL 147.15 LAL .00 LOL 113.65 VL 28.862 GAL 13.28 AZL 88.50 HCA 300.33 SMA 122.63 ECC .30111 INC 1.5003 V1 30.277  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.073 GAP 16.18 AZP 89.24 TAL 143.55 TAP 83.88 RCA 85.70 APO 159.55 V2 35.076  
 RC 178.523 GL 5.32 GP -7.96 ZAL 34.65 ZAP 171.59 ET8 292.14 ZAE 125.16 ETE 185.50 ZAC 151.15 ETC 168.14 CLP-177.28

PLANETOCENTRIC CONIC

C3 54.537 VHL 7.385 DLA 28.32 RAL 77.95 RAD 6569.0 VEL 13.263 PTH 2.42 VHP 10.875 DPA 10.86 RAP 56.98 ECC 1.8975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 89.71 2 57 57 3793.78 -12.92 149.03 322.78 64.58 4 1 11 3193.8 -16.24 141.93  
 90.29 3 2 45 3778.23 -12.91 147.89 322.77 64.57 4 5 44 3178.2 -16.23 140.78  
 100.00 5 43 0 3281.35 -20.99 115.57 326.46 68.22 6 37 22 2661.4 -23.76 105.87  
 100.00 3 0 24 3785.89 -3.09 144.34 318.86 60.50 4 3 29 3185.9 -8.98 137.71  
 110.00 7 59 31 2834.06 -29.28 84.48 329.81 71.51 8 46 45 2234.1 -31.52 75.99  
 110.00 3 0 22 3785.94 2.41 139.70 314.02 55.89 4 3 28 3185.9 -2.08 133.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0877 TRA 6.8274 TC3-1.2884 BAU .9394 86T 6367.1 86R 493.2 863 171.4 ST 1993.5 SR 401.9 SS 569.5  
 RDE .5049 RRA 3.397 RC3 -.0105 FAU .00883 RRT .6883 RRF .6779 RTF .9793 CRT .6150 CRS -.5036 CST -.9907  
 FDE .2370 FRA 2.2292 FC3 -.1402 B8P 21298 86B 6386.1 R25 .0024 R13 .9793 LSA 2086.6 MSA 325.5 S8A 11.2  
 BDE 1.1992 BRA 6.8359 BC3 1.2885 F8P -603 86I 6376.1 86E 357.3 THA 3.06 EL1 2009.1 EL2 314.4 ALF 7.25

LAUNCH DATE JAN 15 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 26 1969

HELIOCENTRIC CONIC

DISTANCE 156.363

RL 147.16 LAL .00 LOL 114.67 VL 22.130 GAL 5.73 AZL 86.21 HCA 61.95 SMA 101.03 ECC .46515 INC 3.7860 V1 30.275  
 RP 107.69 LAP 3.34 LOP 176.37 VP 33.927 GAP -27.48 AZP 88.22 TAL 173.34 TAP 235.29 RCA 54.03 APO 146.02 V2 35.189  
 RC 46.274 GL 9.65 GP 4.30 ZAL 75.98 ZAP 18.40 ETS 194.65 ZAE 167.03 ETE 210.37 ZAC 107.30 ETC 165.25 CLP 17.91

PLANETOCENTRIC CONIC

C3 75.361 VHL 8.681 DLA 23.58 RAL 33.16 RAD 6569.5 VEL 14.025 PTH 2.56 VHP 16.678 DPA 6.88 RAP 12.74 ECC 2.2403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 20 58 3386.15 -22.96 123.47 267.23 72.96 3 17 24 2786.2 -25.08 115.44  
 90.00 21 30 35 4341.30 4.58 179.80 275.81 62.03 22 42 56 3741.3 .81 173.23  
 100.00 4 1 3 3083.45 -25.41 100.55 288.03 73.70 4 52 7 2463.5 -27.40 92.30  
 100.00 22 33 11 4139.23 6.83 163.80 274.58 60.83 23 42 10 3539.2 2.89 157.23  
 110.00 5 46 50 2732.52 -31.25 77.23 289.86 75.38 6 32 23 2132.5 -32.84 68.42  
 110.00 23 3 53 4042.94 12.04 153.37 271.45 57.76 24 11 16 3442.9 7.70 146.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4113 TRA-1.0701 TC3 -.0553 BAU .0643 8GT 822.6 8GR 434.2 8G3 45.1 ST 356.6 SR 416.7 SS 311.0  
 RDE -.6292 RRA .1585 RC3 -.0319 FAU .01711 RRT .0842 RRF -.0880 RTF -.6655 CRT .7055 CRS .8321 CST .9782  
 FDE .2880 FRA .4815 FC3 -.1965 BSP 2249 8GB 930.2 R23 -.0106 R13 -.6662 LSA 591.2 MSA 216.6 SSA 13.9  
 BDE .7517 BRA 1.0818 BC3 .0638 F8P -99 8G1 823.8 8G2 432.1 THA 3.51 EL1 507.7 EL2 207.4 ALF 51.25

LAUNCH DATE JAN 15 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

DISTANCE 162.829

RL 147.16 LAL .00 LOL 114.67 VL 22.815 GAL 5.42 AZL 86.36 HCA 65.18 SMA 102.70 ECC .44121 INC 3.6380 V1 30.275  
 RP 107.72 LAP 3.30 LOP 179.81 VP 34.231 GAP -26.04 AZP 88.47 TAL 173.06 TAP 238.24 RCA 57.39 APO 148.01 V2 35.179  
 RC 45.244 GL 10.04 GP 4.48 ZAL 75.65 ZAP 16.89 ETS 196.84 ZAE 169.05 ETE 215.71 ZAC 108.81 ETC 165.00 CLP 16.31

PLANETOCENTRIC CONIC

C3 67.106 VHL 8.192 DLA 24.07 RAL 33.37 RAD 6569.3 VEL 13.728 PTH 2.51 VHP 15.892 DPA 7.71 RAP 14.15 ECC 2.1044  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 13 3365.44 -22.97 123.42 285.48 72.98 3 10 36 2785.4 -25.09 115.39  
 90.00 21 39 2 4287.36 2.86 176.86 274.68 61.82 22 30 29 3687.4 -.94 170.23  
 100.00 3 55 31 3038.79 -25.50 100.22 286.31 73.85 4 46 30 2458.8 -27.47 91.97  
 100.00 22 40 24 4069.23 5.16 161.02 273.41 60.52 23 48 33 3489.2 1.20 154.48  
 110.00 5 43 8 2722.13 -31.43 76.47 288.13 75.80 6 28 30 2122.1 -33.06 67.63  
 110.00 23 9 17 3988.66 10.42 150.96 270.21 57.26 24 15 56 3398.7 6.03 144.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4120 TRA-1.0338 TC3 -.0480 BAU .0512 8GT 860.4 8GR 437.6 8G3 49.5 ST 376.4 SR 421.1 SS 327.1  
 RDE -.6002 RRA .1443 RC3 -.0357 FAU .01776 RRT .0954 RRF -.1000 RTF -.6856 CRT .7125 CRS .8368 CST .9786  
 FDE -.2988 FRA .4950 FC3 -.2291 BSP 2408 8GB 965.3 R23 -.0122 R13 -.6863 LSA 613.5 MSA 222.4 SSA 14.1  
 BDE .7280 BRA 1.0836 BC3 .0570 F8P -111 8G1 861.8 8G2 434.9 THA 3.73 EL1 523.3 EL2 212.5 ALF 49.48

LAUNCH DATE JAN 15 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 169.344

RL 147.16 LAL .00 LOL 114.67 VL 23.057 GAL 5.11 AZL 86.50 HCA 68.41 SMA 104.33 ECC .41848 INC 3.4977 V1 30.275  
 RP 107.75 LAP 3.25 LOP 183.05 VP 34.514 GAP -24.67 AZP 88.71 TAL 172.83 TAP 241.24 RCA 60.67 APO 147.99 V2 35.169  
 RC 44.337 GL 10.44 GP 4.69 ZAL 75.42 ZAP 15.42 ETS 199.05 ZAE 171.08 ETE 223.71 ZAC 110.30 ETC 164.72 CLP 14.70

PLANETOCENTRIC CONIC

C3 59.811 VHL 7.734 DLA 24.53 RAL 33.48 RAD 6569.1 VEL 13.460 PTH 2.46 VHP 15.138 DPA 8.57 RAP 15.56 ECC 1.9843  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 13 3383.47 -23.01 123.29 283.59 73.03 3 3 37 2783.5 -25.12 115.26  
 90.00 21 46 53 4233.82 1.13 173.87 273.44 61.70 22 57 27 3633.8 -2.66 167.24  
 100.00 3 49 49 3052.87 -25.61 99.80 284.43 74.04 4 40 42 2452.7 -27.56 91.54  
 100.00 22 46 58 4039.84 3.50 158.30 272.12 60.29 23 54 18 3439.8 -.48 151.77  
 110.00 5 39 16 2710.27 -31.82 75.61 286.25 76.28 6 24 26 2110.3 -33.18 66.73  
 110.00 23 14 1 3955.01 8.80 148.62 288.87 56.84 24 19 56 3355.0 4.38 142.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4136 TRA-1.0369 TC3 -.0334 BAU .0388 8GT 899.7 8GR 440.4 8G3 34.4 ST 397.6 SR 425.1 SS 343.9  
 RDE -.5721 RRA .1308 RC3 -.0352 FAU .01848 RRT .1080 RRF -.1135 RTF -.7048 CRT .7207 CRS .8419 CST .9792  
 FDE .3123 FRA .5085 FC3 -.2675 BSP 2589 8GB 1001.7 R23 -.0139 R13 -.7056 LSA 637.2 MSA 225.4 SSA 14.4  
 BDE .7060 BRA 1.0431 BC3 .0485 F8P -124 8G1 901.4 8G2 437.0 THA 3.96 EL1 540.1 EL2 216.9 ALF 47.65

LAUNCH DATE JAN 15 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 175.902

RL 147.16 LAL .00 LOL 114.67 VL 23.486 GAL 4.79 AZL 86.84 HCA 71.64 SMA 105.91 ECC .39695 INC 3.3635 V1 30.275  
 RP 107.79 LAP 3.19 LOP 186.28 VP 34.778 GAP -23.37 AZP 88.94 TAL 172.65 TAP 244.29 RCA 63.87 APO 147.95 V2 35.158  
 RC 43.625 GL 10.83 GP 4.91 ZAL 75.30 ZAP 13.98 ETS 202.03 ZAE 172.98 ETE 236.59 ZAC 111.79 ETC 164.39 CLP 13.10

PLANETOCENTRIC CONIC

C3 53.382 VHL 7.305 DLA 24.94 RAL 33.48 RAD 6568.9 VEL 13.218 PTH 2.41 VHP 14.415 DPA 9.44 RAP 16.97 ECC 1.8782  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 5 3380.10 -23.08 123.07 281.56 73.12 2 56 25 2780.1 -25.17 113.02  
 90.00 21 34 2 4181.14 -.57 170.93 272.08 61.89 23 3 44 3581.1 -4.35 184.29  
 100.00 3 44 1 3045.00 -25.76 99.27 282.42 74.28 4 34 46 2445.0 -27.66 90.99  
 100.00 22 52 47 3991.47 1.87 155.84 270.72 60.16 23 59 19 3391.5 -2.12 149.12  
 110.00 5 35 16 2896.94 -31.83 74.62 284.21 76.83 6 20 13 2096.9 -33.31 65.71  
 110.00 23 18 2 3912.29 7.21 146.34 287.42 56.49 24 23 14 3312.3 2.75 140.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4156 TRA-1.0191 TC3 -.0170 BAU .0285 8GT 940.2 8GR 442.6 8G3 59.8 ST 419.9 SR 428.5 SS 361.5  
 RDE -.5450 RRA .1178 RC3 -.0362 FAU .01928 RRT .1223 RRF -.1287 RTF -.7230 CRT .7299 CRS .8473 CST .9798  
 FDE .3288 FRA .5219 FC3 -.3128 BSP 2729 8GB 1039.2 R23 -.0159 R13 -.7240 LSA 662.3 MSA 227.5 SSA 14.7  
 BDE .6855 BRA 1.0259 BC3 .0399 F8P -139 8G1 942.2 8G2 438.3 THA 4.21 EL1 558.0 EL2 220.4 ALF 45.80

LAUNCH DATE JAN 15 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 23.845 GAL 4.47 AZL 86.77 HCA 74.87 SMA 107.45 ECC .37661 INC 3.2344 V1 30.275
RP 107.82 LAP 3.12 LOP 189.52 VP 35.023 GAP -22.12 AZP 89.16 TAL 172.52 TAP 247.39 RCA 66.98 APO 147.91 V2 35.147
RC 43.055 GL 11.20 GP 5.15 ZAL 75.28 ZAP 12.59 ETS 205.74 ZAE 174.39 ETE 257.86 ZAC 113.26 ETC 164.03 CLP 11.50

DISTANCE 182.497

PLANETOCENTRIC CONIC

C3 47.660 VHL 6.904 DLA 25.31 RAL 33.38 RAD 8568.8 VEL 13.001 PTH 2.37 VHP 13.722 DPA 10.32 RAP 18.37 ECC 1.7844
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 52 56 3375.08 -23.18 122.73 279.42 73.26 2 49 11 2775.1 -25.25 114.68
90.00 22 0 23 4129.87 -2.22 168.07 270.59 61.76 23 9 12 3529.9 -5.98 161.40
100.00 3 30 14 3035.60 -25.93 98.63 280.29 74.58 4 28 50 2435.6 -27.79 90.32
100.00 22 57 46 3944.59 .28 153.07 269.20 60.11 24 3 30 3344.6 -3.70 146.54
110.00 5 31 13 2682.09 -32.06 73.52 282.03 77.44 6 15 55 2082.1 -33.45 64.57
110.00 23 21 16 3870.86 5.64 144.15 265.87 56.23 24 25 47 3270.9 1.17 137.92

DIFFERENTIAL CORRECTIONS

TDE -.4188 TRA -1.0005 TC3 .0041 BAU .0233
RDE -.5188 RRA .1055 RC3 -.0364 FAU .02017
FDE .3422 FRA .5352 FC3 -.3664 BSP 2897
BDE .6667 BRA 1.0060 BC3 .0366 FSP -155

MID-COURSE EXECUTION ACCURACY

SGT 982.1 SGR 444.2 SCS 85.7
RRT .1385 RRF -.1459 RTF -.7404
SGB 1077.9 R23 -.0180 R13 -.7415
S61 984.5 S62 438.8 THA 4.48

ORBIT DETERMINATION ACCURACY

ST 443.8 SR 431.6 SS 379.8
CRT .7400 CRS .8534 CST .9806
LSA 689.0 MSA 228.8 SSA 14.9
EL1 577.3 EL2 223.0 ALF 43.94

LAUNCH DATE JAN 15 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 24.195 GAL 4.16 AZL 86.89 HCA 78.09 SMA 106.93 ECC .35742 INC 3.1092 V1 30.275
RP 107.86 LAP 3.04 LOP 192.75 VP 35.251 GAP -20.93 AZP 89.36 TAL 172.45 TAP 250.54 RCA 70.00 APO 147.87 V2 35.135
RC 42.857 GL 11.57 GP 5.42 ZAL 75.37 ZAP 11.27 ETS 210.44 ZAE 174.72 ETE 287.48 ZAC 114.71 ETC 163.82 CLP 9.90

DISTANCE 189.124

PLANETOCENTRIC CONIC

C3 42.618 VHL 6.528 DLA 25.62 RAL 33.17 RAD 8568.6 VEL 12.806 PTH 2.35 VHP 13.056 DPA 11.23 RAP 19.76 ECC 1.7014
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 56 3368.04 -23.32 122.28 277.16 73.46 2 42 4 2768.0 -25.36 114.19
90.00 22 5 43 4080.72 -3.00 165.32 288.98 61.92 23 13 44 3480.7 -7.53 158.62
100.00 3 32 34 3024.24 -26.13 97.64 278.04 74.94 4 22 58 2424.2 -27.94 89.51
100.00 23 1 46 3899.76 -1.24 150.81 267.56 60.13 24 6 46 3299.8 -5.21 144.07
110.00 5 27 11 2665.66 -32.29 72.30 279.72 78.13 6 11 36 2065.7 -33.59 63.31
110.00 23 23 39 3831.10 4.13 142.06 264.21 56.04 24 27 30 3231.1 -3.35 135.85

DIFFERENTIAL CORRECTIONS

TDE -.4222 TRA -.9809 TC3 .0304 BAU .0287
RDE -.4937 RRA .0838 RC3 -.0356 FAU .02116
FDE .3588 FRA .5488 FC3 -.4299 BSP 3064
BDE .6496 BRA .9854 BC3 .0468 FSP -174

MID-COURSE EXECUTION ACCURACY

SGT 1024.9 SGR 445.3 SCS 72.3
RRT .1368 RRF -.1694 RTF -.7570
SGB 1117.5 R23 -.0203 R13 -.7582
S61 1027.9 S62 438.5 THA 4.77

ORBIT DETERMINATION ACCURACY

ST 468.4 SR 434.2 SS 399.0
CRT .7510 CRS .8597 CST .9815
LSA 717.2 MSA 229.1 SSA 13.2
EL1 597.9 EL2 224.6 ALF 42.12

LAUNCH DATE JAN 15 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 24.519 GAL 3.85 AZL 87.01 HCA 81.31 SMA 110.36 ECC .33938 INC 2.9870 V1 30.275
RP 107.89 LAP 2.95 LOP 195.97 VP 35.482 GAP -19.80 AZP 89.55 TAL 172.44 TAP 253.75 RCA 72.91 APO 147.81 V2 35.123
RC 42.436 GL 11.91 GP 5.72 ZAL 75.56 ZAP 10.05 ETS 216.47 ZAE 173.71 ETE 314.29 ZAC 116.13 ETC 163.17 CLP 8.28

DISTANCE 195.780

PLANETOCENTRIC CONIC

C3 38.161 VHL 6.177 DLA 25.89 RAL 32.86 RAD 8568.5 VEL 12.630 PTH 2.29 VHP 12.418 DPA 12.15 RAP 21.13 ECC 1.6280
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 17 3358.44 -23.50 121.82 274.81 75.73 2 35 15 2758.4 -25.51 113.53
90.00 22 9 52 4034.53 -5.28 162.73 287.23 62.14 23 17 6 3434.5 -8.97 155.99
100.00 3 27 11 3010.60 -26.37 96.90 275.68 75.39 4 17 21 2410.6 -28.12 88.54
100.00 23 4 39 3857.61 -2.67 148.29 265.79 60.22 24 8 57 3257.6 -6.62 141.73
110.00 5 23 13 2647.54 -32.54 70.94 277.30 78.90 6 7 21 2047.5 -33.73 61.91
110.00 23 25 6 3793.44 2.70 140.09 262.44 55.91 24 28 19 3193.4 -1.79 133.89

DIFFERENTIAL CORRECTIONS

TDE -.4238 TRA -.9604 TC3 .0630 BAU .0364
RDE -.4698 RRA .0826 RC3 -.0335 FAU .02227
FDE .3783 FRA .5620 FC3 -.5032 BSP 3238
BDE .6340 BRA .9640 BC3 .0714 FSP -195

MID-COURSE EXECUTION ACCURACY

SGT 1068.8 SGR 445.9 SCS 79.5
RRT .1774 RRF -.1874 RTF -.7727
SGB 1158.1 R23 -.0231 R13 -.7740
S61 1072.4 S62 437.4 THA 5.08

ORBIT DETERMINATION ACCURACY

ST 494.2 SR 436.5 SS 418.8
CRT .7626 CRS .8664 CST .9824
LSA 746.7 MSA 228.6 SSA 13.4
EL1 619.7 EL2 225.1 ALF 40.36

LAUNCH DATE JAN 15 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 24.818 GAL 3.55 AZL 87.13 HCA 84.53 SMA 111.73 ECC .32244 INC 2.8670 V1 30.275
RP 107.93 LAP 2.85 LOP 199.20 VP 35.658 GAP -18.71 AZP 89.73 TAL 172.49 TAP 257.02 RCA 75.71 APO 147.78 V2 35.111
RC 42.394 GL 12.23 GP 6.05 ZAL 75.86 ZAP 8.99 ETS 224.23 ZAE 171.80 ETE 331.62 ZAC 117.52 ETC 162.66 CLP 6.66

DISTANCE 202.457

PLANETOCENTRIC CONIC

C3 34.221 VHL 5.850 DLA 26.09 RAL 32.44 RAD 8568.3 VEL 12.474 PTH 2.26 VHP 11.805 DPA 13.09 RAP 22.48 ECC 1.5632
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 33 16 3345.62 -23.74 120.76 272.39 74.10 2 29 2 2745.6 -25.70 112.63
90.00 22 12 33 3992.31 -0.62 160.35 265.34 62.40 23 19 5 3392.3 -10.26 153.56
100.00 3 22 14 2994.32 -26.64 95.77 273.25 75.92 4 12 9 2394.3 -28.32 87.37
100.00 23 6 16 3818.84 -3.98 148.16 263.90 60.35 24 9 55 3218.8 -7.80 139.56
110.00 5 19 27 2627.60 -32.79 69.44 274.77 79.75 6 3 14 2027.6 -33.86 60.37
110.00 23 23 33 3758.33 1.36 138.28 260.58 55.84 24 28 11 3158.3 -3.13 132.05

DIFFERENTIAL CORRECTIONS

TDE -.4316 TRA -.9412 TC3 .1000 BAU .0477
RDE -.4471 RRA .0718 RC3 -.0297 FAU .02348
FDE .3955 FRA .5761 FC3 -.5939 BSP 3361
BDE .6214 BRA .9440 BC3 .1043 FSP -217

MID-COURSE EXECUTION ACCURACY

SGT 1116.2 SGR 446.2 SCS 87.6
RRT .2020 RRF -.2128 RTF -.7865
SGB 1202.1 R23 -.0259 R13 -.7880
S61 1120.5 S62 435.3 THA 5.44

ORBIT DETERMINATION ACCURACY

ST 525.0 SR 438.5 SS 439.9
CRT .7755 CRS .8733 CST .9836
LSA 779.4 MSA 227.2 SSA 15.8
EL1 644.5 EL2 224.7 ALF 38.57

LAUNCH DATE JAN 15 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 209.153

RL 147.16 LAL .00 LOL 114.67 VL 25.094 GAL 3.25 AZL 87.25 HCA 87.75 SMA 113.04 ECC .30657 INC 2.7484 V1 30.275  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.838 GAP -17.67 AZP 89.89 TAL 172.60 TAP 260.35 RCA 76.39 APO 147.70 V2 35.099  
 RC 42.534 GL 12.51 GP 6.41 ZAL 76.27 ZAP 8.13 ETS 234.08 ZAE 169.49 ETE 342.19 ZAC 118.87 ETC 162.09 CLP 5.01

PLANETOCENTRIC CONIC

C3 30.740 VML 5.544 DLA 26.22 RAL 31.92 RAD 6566.2 VEL 12.333 PTH 2.22 VMP 11.217 DPA 14.06 RAP -23.81 ECC 1.5059  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 12 3328.73 -24.05 119.62 269.91 74.59 2 23 41 2728.7 -25.94 111.46  
 90.00 22 13 29 3955.17 -7.78 158.24 263.32 82.69 23 19 25 3355.2 -11.38 151.41  
 100.00 3 17 57 2974.94 -26.96 94.41 270.73 76.57 4 7 32 2374.9 -26.54 85.97  
 100.00 23 8 26 3784.19 -5.14 144.25 261.88 60.51 24 9 30 3184.2 -9.03 137.62  
 110.00 5 15 58 2605.68 -33.04 67.78 272.15 80.70 5 59 23 2005.7 -33.97 58.67  
 110.00 23 24 54 3726.22 .13 136.58 258.61 55.82 24 27 1 3126.2 -4.36 130.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4355 TRA -.9188 TC3 .1466 BAW .0610 SGT 1161.6 SGR 446.3 SCS 96.5 ST 550.8 SR 440.3 SS 461.1  
 RDE -.4256 RRA .0618 RC3 -.0237 FAU .02484 RRT .2288 RRF -.2411 RTF -.8003 CRT 7.882 CRS .8804 CST .9846  
 FDE .4155 FRA .5897 FC3 -.8996 B8P 3540 SGB 1244.4 R23 -.0294 R13 -.8020 LSA 811.9 MSA 224.9 SSA 16.1  
 BDE .6089 BRA .9209 BC3 .1485 F8P -243 SGT 1166.8 SGR 432.6 THA 5.82 EL1 669.0 EL2 223.1 ALF 37.01

LAUNCH DATE JAN 15 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 215.862

RL 147.16 LAL .00 LOL 114.67 VL 25.349 GAL 2.96 AZL 87.37 HCA 90.97 SMA 114.29 ECC .29174 INC 2.6304 V1 30.275  
 RP 106.01 LAP 2.63 LOP 203.64 VP 36.005 GAP -16.68 AZP 90.04 TAL 172.76 TAP 263.73 RCA 80.95 APO 147.64 V2 35.086  
 RC 42.853 GL 12.76 GP 6.82 ZAL 76.77 ZAP 7.59 ETS 246.06 ZAE 167.04 ETE 349.08 ZAC 120.18 ETC 161.46 CLP 3.35

PLANETOCENTRIC CONIC

C3 27.865 VML 5.260 DLA 26.28 RAL 31.31 RAD 6566.1 VEL 12.208 PTH 2.19 VMP 10.654 DPA 15.05 RAP 25.10 ECC 1.4553  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 24 24 3306.98 -24.44 118.14 267.38 75.23 2 19 31 2707.0 -26.23 109.93  
 90.00 22 12 25 3924.20 -8.75 156.47 261.15 82.96 23 17 49 3324.2 -12.30 149.80  
 100.00 3 14 30 2952.01 -27.31 92.80 268.16 77.35 4 3 42 2352.0 -28.78 84.31  
 100.00 23 5 0 3754.59 -8.14 142.59 259.75 60.69 24 7 34 3154.4 -10.00 135.93  
 110.00 5 12 53 2581.80 -33.29 65.95 269.44 81.76 5 55 55 1981.6 -34.07 56.79  
 110.00 23 23 6 3697.58 -.96 135.09 256.54 55.83 24 24 44 3097.6 -5.44 128.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4398 TRA -.8984 TC3 .2013 BAW .0746 SGT 1208.5 SGR 446.4 SCS 106.5 ST 579.9 SR 442.1 SS 483.3  
 RDE -.4055 RRA .0518 RC3 -.0149 FAU .02637 RRT .2590 RRF -.2733 RTF -.8133 CRT .8013 CRS .8876 CST .9857  
 FDE .4369 FRA .6042 FC3 -.8251 B8P 3705 SGB 1288.5 R23 -.0335 R13 -.8132 LSA 846.0 MSA 221.9 SSA 16.4  
 BDE .5882 BRA .8979 BC3 .2018 F8P -271 SGT 1214.8 SGR 429.0 THA 6.25 EL1 695.0 EL2 220.7 ALF 35.54

LAUNCH DATE JAN 15 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 222.580

RL 147.16 LAL .00 LOL 114.67 VL 25.584 GAL 2.68 AZL 87.49 HCA 94.18 SMA 115.48 ECC .27792 INC 2.5122 V1 30.275  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.158 GAP -15.72 AZP 90.18 TAL 172.99 TAP 267.17 RCA 83.39 APO 147.58 V2 35.073  
 RC 43.347 GL 12.96 GP 7.27 ZAL 77.38 ZAP 7.45 ETS 239.48 ZAE 164.58 ETE 353.96 ZAC 121.42 ETC 160.78 CLP 1.66

PLANETOCENTRIC CONIC

C3 24.951 VML 4.995 DLA 26.28 RAL 30.61 RAD 6566.0 VEL 12.097 PTH 2.17 VMP 10.113 DPA 16.06 RAP 26.36 ECC 1.4106  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 22 7 3279.63 -24.90 118.27 264.83 76.06 2 18 47 2679.6 -26.57 108.00  
 90.00 22 9 6 3900.38 -9.48 155.11 258.86 83.19 23 14 6 3500.4 -13.00 148.20  
 100.00 3 12 5 2925.12 -27.70 90.90 265.54 78.28 4 0 50 2325.1 -29.03 82.35  
 100.00 23 1 49 3730.13 -8.95 141.24 257.50 60.85 24 3 59 3130.1 -10.78 134.56  
 110.00 5 10 20 2555.14 -33.53 63.92 266.66 82.94 5 52 55 1955.1 -34.15 54.73  
 110.00 23 20 4 3672.87 -1.91 133.80 254.39 55.86 24 21 17 3072.9 -6.38 127.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4405 TRA -.8702 TC3 .2694 BAW .0899 SGT 1251.7 SGR 446.7 SCS 117.5 ST 605.7 SR 443.7 SS 504.6  
 RDE -.3865 RRA .0424 RC3 -.0024 FAU .02811 RRT .2915 RRF -.3091 RTF -.8267 CRT .8134 CRS .8947 CST .9865  
 FDE .4583 FRA .6178 FC3 -.9754 B8P 3941 SGB 1329.0 R23 -.0384 R13 -.8289 LSA 877.7 MSA 218.3 SSA 16.7  
 BDE .5861 BRA .8713 BC3 .2695 F8P -305 SGT 1259.3 SGR 424.7 THA 6.70 EL1 718.6 EL2 217.5 ALF 34.37

LAUNCH DATE JAN 15 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 229.304

RL 147.16 LAL .00 LOL 114.67 VL 25.800 GAL 2.41 AZL 87.61 HCA 97.39 SMA 116.61 ECC .26507 INC 2.3932 V1 30.275  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.298 GAP -14.80 AZP 90.31 TAL 173.27 TAP 270.66 RCA 85.70 APO 147.52 V2 35.060  
 RC 44.011 GL 13.10 GP 7.77 ZAL 78.08 ZAP 7.77 ETS 272.91 ZAE 162.14 ETE 357.69 ZAC 122.60 ETC 160.00 CLP -.06

PLANETOCENTRIC CONIC

C3 22.555 VML 4.749 DLA 26.15 RAL 29.83 RAD 6567.9 VEL 11.997 PTH 2.14 VMP 9.596 DPA 17.11 RAP 27.56 ECC 1.3712  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 21 35 3246.28 -25.43 113.97 262.25 77.10 2 15 41 2646.3 -26.95 105.63  
 90.00 22 3 25 3884.36 -9.97 154.19 256.45 83.36 23 8 9 3284.4 -13.47 147.26  
 100.00 3 10 53 2993.84 -28.11 88.67 262.88 79.38 3 59 7 2293.9 -29.29 80.06  
 100.00 22 56 48 3711.94 -7.55 140.23 255.15 60.99 23 58 40 3111.9 -11.36 133.52  
 110.00 5 8 26 2526.14 -33.75 61.68 263.83 84.25 5 50 32 1926.1 -34.18 52.47  
 110.00 23 15 45 3652.50 -2.89 132.74 252.16 55.91 24 16 37 3052.5 -7.14 126.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4422 TRA -.8439 TC3 .3440 BAW .1038 SGT 1295.2 SGR 447.7 SCS 129.8 ST 632.8 SR 445.5 SS 526.8  
 RDE -.3691 RRA .0333 RC3 .0142 FAU .03001 RRT .3298 RRF -.3498 RTF -.8387 CRT .8264 CRS .9018 CST .9876  
 FDE .4815 FRA .6332 FC3 -1.1517 B8P 4150 SGB 1370.4 R23 -.0433 R13 -.8411 LSA 911.2 MSA 213.8 SSA 17.0  
 BDE .5759 BRA .8446 BC3 .3443 F8P -341 SGT 1304.6 SGR 419.6 THA 7.26 EL1 743.9 EL2 213.4 ALF 33.28

LAUNCH DATE JAN 15 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 19 1969

Table with columns for Heliocentric Conic, Planetocentric Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2, ALF.

LAUNCH DATE JAN 15 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 21 1969

Table with columns for Heliocentric Conic, Planetocentric Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2, ALF.

LAUNCH DATE JAN 15 1969 FLIGHT TIME 98.00 ARRIVAL DATE APR 23 1969

Table with columns for Heliocentric Conic, Planetocentric Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2, ALF.

LAUNCH DATE JAN 15 1969 FLIGHT TIME 100.00 ARRIVAL DATE APR 25 1969

Table with columns for Heliocentric Conic, Planetocentric Conic, and Differential Corrections. Includes parameters like RL, RP, RC, C3, LNCH AZMTH, LNCH TIME, L-I TIME, INJ LAT, INJ LONG, INJ RT ASC, INJ AZMTH, INJ TIME, PO CST TIM, INJ 2 LAT, INJ 2 LONG, TDE, RDE, FDE, BDE, SGT, RRT, SGB, SGI, ST, CRT, LSA, EL1, EL2, ALF.

LAUNCH DATE JAN 15 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 262.887

RL 147.16 LAL .00 LOL 114.67 VL 26.642 GAL 1.25 AZL 88.24 HCA 113.40 SMA 121.32 ECC .21400 INC 1.7557 V1 30.275  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.839 GAP -10.73 AZP 90.70 TAL 175.40 TAP 288.81 RCA 95.36 APO 147.29 V2 34.994  
 RC 49.590 GL 12.50 GP 11.37 ZAL 82.77 ZAP 14.71 ETS 312.70 ZAE 152.07 ETE 10.10 ZAC 127.07 ETC 154.94 CLP -9.39

PLANETOCENTRIC CONIC

C3 14.224 VHL 3.771 DLA 23.88 RAL 25.22 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 7.335 DPA 22.99 RAP 32.56 ECC 1.2341  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 44 42 2996.63 -20.01 96.19 249.22 85.63 2 34 38 2396.6 -20.32 87.53  
 90.00 21 3 30 3919.95 -8.89 156.21 243.59 63.00 22 8 50 3319.5 -12.44 149.33  
 100.00 3 25 31 2671.58 -29.82 72.39 249.34 87.77 4 10 2 2071.6 -29.81 63.59  
 100.00 22 5 23 3719.83 -7.29 140.67 242.73 60.93 23 7 22 3119.8 -11.11 133.97  
 110.00 5 12 24 2337.20 -34.07 46.96 249.31 92.93 5 51 21 1737.2 -33.29 37.81  
 110.00 22 34 59 3626.97 -3.66 131.40 240.50 55.99 23 35 26 3027.0 -8.10 125.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4321 TRA -.7220 TC3 .8647 BAU .1691 SGT 1515.0 SGR 484.6 SCS 216.3 ST 748.9 SR 458.4 SS 622.4  
 RDE -.3017 RRA -.0125 RC3 .2070 FAU .04339 RRT .5824 RRF -.6212 RTF -.8834 CRT .8833 CRS .9326 CST .9920  
 FDE .5993 FRA .7289 FC3-2.6411 BSP 4942 SGB 1590.6 R23 -.0870 R13 -.8889 LSA 1059.6 MSA 187.7 SSA 19.3  
 BDE .5270 BRA .7221 BC3 .8892 FSP -602 SGI 1542.9 SGI 386.8 THA 11.27 EL1 857.7 EL2 187.6 ALF 29.98

LAUNCH DATE JAN 15 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 269.576

RL 147.16 LAL .00 LOL 114.67 VL 26.770 GAL 1.05 AZL 88.39 HCA 116.60 SMA 122.08 ECC .20615 INC 1.6129 V1 30.275  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.919 GAP -10.01 AZP 90.72 TAL 175.94 TAP 292.54 RCA 96.92 APO 147.25 V2 34.980  
 RC 51.091 GL 12.01 GP 12.40 ZAL 83.88 ZAP 16.81 ETS 316.11 ZAE 150.56 ETE 12.33 ZAC 127.56 ETC 153.67 CLP -11.45

PLANETOCENTRIC CONIC

C3 13.106 VHL 3.620 DLA 23.01 RAL 24.28 RAD 6567.5 VEL 11.597 PTH 2.03 VHP 6.947 DPA 24.36 RAP 33.25 ECC 1.2157  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 48 2933.48 -28.25 91.58 246.63 87.92 2 42 41 2333.5 -28.24 82.92  
 90.00 20 46 53 3946.93 -8.04 157.77 241.11 62.76 21 52 40 3346.9 -11.63 150.93  
 100.00 3 32 39 2614.76 -29.89 80.17 246.67 89.99 4 16 14 2014.8 -29.57 59.38  
 100.00 21 50 43 3740.89 -6.59 141.84 240.32 60.78 22 53 4 3140.9 -10.44 135.17  
 110.00 5 16 30 2289.86 -33.85 43.29 246.48 95.10 5 54 40 1689.9 -32.77 34.21  
 110.00 22 23 22 3638.54 -3.22 132.01 238.24 55.95 23 24 0 3038.5 -7.67 125.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4205 TRA -.6944 TC3 1.0019 BAU .1823 SGT 1547.5 SGR 505.6 SCS 239.8 ST 756.1 SR 461.5 SS 631.4  
 RDE -.2915 RRA -.0223 RC3 .2808 FAU .04712 RRT .6393 RRF -.6826 RTF -.8914 CRT .8920 CRS .9369 CST .9928  
 FDE .6184 FRA .7523 FC3-3.1125 BSP 5162 SGB 1628.0 R23 -.0967 R13 -.8979 LSA 1072.3 MSA 182.0 SSA 19.8  
 BDE .5116 BRA .6947 BC3 1.0405 FSP -680 SGI 1583.0 SGI 380.0 THA 12.54 EL1 866.9 EL2 181.9 ALF 30.03

LAUNCH DATE JAN 15 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 276.252

RL 147.16 LAL .00 LOL 114.67 VL 26.887 GAL .87 AZL 88.54 HCA 119.79 SMA 122.79 ECC .19900 INC 1.4620 V1 30.275  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.991 GAP -9.31 AZP 90.73 TAL 176.50 TAP 296.29 RCA 98.35 APO 147.23 V2 34.967  
 RC 52.697 GL 11.36 GP 13.56 ZAL 85.02 ZAP 19.12 ETS 318.73 ZAE 149.23 ETE 14.65 ZAC 127.86 ETC 152.31 CLP -13.60

PLANETOCENTRIC CONIC

C3 12.123 VHL 3.482 DLA 21.98 RAL 23.38 RAD 6567.5 VEL 11.555 PTH 2.02 VHP 6.579 DPA 25.83 RAP 33.79 ECC 1.1995  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 4 14 2866.81 -28.31 86.71 244.10 90.37 2 52 0 2266.8 -27.96 78.06  
 90.00 20 29 18 3980.30 -6.99 159.67 238.73 62.49 21 35 38 3380.3 -10.63 152.87  
 100.00 3 41 10 2534.21 -29.81 63.67 244.06 92.35 4 23 45 1954.2 -29.16 54.92  
 100.00 21 35 2 3768.13 -5.68 143.36 238.01 60.60 22 37 50 3168.1 -9.56 136.71  
 110.00 5 21 53 2239.15 -33.47 39.37 243.89 97.39 5 59 12 1639.2 -32.09 30.42  
 110.00 22 10 49 3655.95 -2.56 132.92 236.07 55.90 23 11 45 3056.0 -7.01 126.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4085 TRA -.6721 TC3 1.1314 BAU .1930 SGT 1579.6 SGR 534.9 SCS 265.8 ST 761.9 SR 465.0 SS 636.7  
 RDE -.2823 RRA -.0335 RC3 .3711 FAU .05111 RRT .6945 RRF -.7420 RTF -.8963 CRT .9001 CRS .9403 CST .9936  
 FDE .6301 FRA .7825 FC3-3.6500 BSP 5251 SGB 1667.7 R23 -.1146 R13 -.9044 LSA 1081.9 MSA 176.5 SSA 20.6  
 BDE .4966 BRA .6729 BC3 1.1907 FSP -757 SGI 1625.2 SGI 374.1 THA 13.99 EL1 875.0 EL2 176.4 ALF 30.13

LAUNCH DATE JAN 15 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 282.912

RL 147.16 LAL .00 LOL 114.67 VL 26.992 GAL .70 AZL 88.70 HCA 122.98 SMA 123.44 ECC .19251 INC 1.3012 V1 30.275  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.056 GAP -8.64 AZP 90.71 TAL 177.06 TAP 300.05 RCA 99.68 APO 147.20 V2 34.954  
 RC 54.398 GL 10.52 GP 14.89 ZAL 86.18 ZAP 21.82 ETS 320.74 ZAE 148.05 ETE 17.15 ZAC 127.95 ETC 150.87 CLP -15.86

PLANETOCENTRIC CONIC

C3 11.261 VHL 3.356 DLA 20.77 RAL 22.55 RAD 6567.4 VEL 11.517 PTH 2.01 VHP 6.234 DPA 27.40 RAP 34.16 ECC 1.1853  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 16 0 2796.86 -28.18 81.58 241.83 92.93 3 2 37 2196.7 -27.47 72.99  
 90.00 20 10 53 4019.59 -5.75 161.89 236.50 62.23 21 17 53 3419.6 -9.43 155.13  
 100.00 3 51 8 2489.92 -29.53 58.91 241.52 94.84 4 32 38 1889.9 -28.55 50.24  
 100.00 21 18 27 3801.57 -4.56 145.21 235.85 60.43 22 21 49 3201.6 -8.47 138.59  
 110.00 5 28 37 2184.90 -32.92 35.24 241.02 99.78 6 5 2 1584.9 -31.22 26.43  
 110.00 21 57 27 3679.36 -1.66 134.14 234.04 55.85 22 58 46 3079.4 -6.13 127.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3924 TRA -.6480 TC3 1.2696 BAU .2045 SGT 1604.6 SGR 575.0 SCS 294.5 ST 758.7 SR 468.2 SS 636.0  
 RDE -.2738 RRA -.0457 RC3 .4830 FAU .05554 RRT .7459 RRF -.7973 RTF -.9022 CRT .9074 CRS .9429 CST .9945  
 FDE .6380 FRA .8159 FC3-4.2698 BSP 5399 SGB 1704.5 R23 -.1300 R13 -.9121 LSA 1081.5 MSA 170.8 SSA 21.4  
 BDE .4785 BRA .6496 BC3 1.3583 FSP -847 SGI 1664.1 SGI 369.3 THA 15.76 EL1 875.1 EL2 170.6 ALF 30.54

LAUNCH DATE JAN 15 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 289.554

RL 147.16 LAL .00 LOL 114.67 VL 27.088 GAL .54 AZL 88.87 MCA 126.17 SMA 124.04 ECC .18663 INC 1.1284 V1 30.275  
 RP 108.45 LAP .91 LOP 240.85 VP 37.114 GAP -8.00 AZP 90.67 TAL 177.64 TAP 303.81 RCA 100.89 APO 147.19 V2 34.942  
 RC 56.188 GL 9.47 GP 18.40 ZAL 87.34 ZAP 24.35 ETS 322.29 ZAE 147.01 ETE 19.88 ZAC 127.80 ETC 149.37 CLP -18.22

PLANETOCENTRIC CONIC

C3 10.508 VHL 3.241 DLA 19.35 RAL 21.81 RAD 6567.4 VEL 11.485 PTH 2.00 VHP 5.912 DPA 29.11 RAP 34.33 ECC 1.1729  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 12 2722.94 -27.80 76.22 239.27 95.59 3 14 34 2122.9 -26.74 67.72  
 90.00 19 51 49 4064.93 -4.31 164.43 234.46 61.99 20 59 34 3464.9 -8.02 157.72  
 100.00 4 2 35 2421.79 -29.04 53.91 239.11 97.43 4 42 57 1821.8 -27.70 45.36  
 100.00 21 1 7 5841.30 -3.22 147.40 233.86 60.27 22 5 8 3241.3 -7.16 140.82  
 110.00 5 36 50 2126.89 -32.16 30.88 238.48 102.25 6 12 17 1526.9 -30.14 22.25  
 110.00 21 43 21 3708.97 -.53 135.68 232.18 55.82 22 45 10 3109.0 -5.01 129.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3716 TRA -.8251 TC3 1.4055 BAU .2158  
 RDE -.2651 RRA -.0595 RC3 .6210 FAU .06041  
 FDE .6345 FRA .8540 FC3-4.9780 BSP 5528  
 BOE .4565 BRA .6279 BC3 1.5366 FSP -946

9GT 1622.8 9GR 627.8 9G3 325.9  
 RRT .7904 RRF -.8458 RTF -.9067  
 9GB 1740.0 R23 -.1473 R13 -.9192  
 9G1 1700.9 9G2 368.9 THA 17.86

ST 745.5 SR 470.0 SS 625.1  
 CRT .9132 CRS .9438 CST .9954  
 LSA 1067.5 MSA 165.6 SSA 22.4  
 EL1 865.7 EL2 165.0 ALF 31.19

LAUNCH DATE JAN 15 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 296.177

RL 147.16 LAL .00 LOL 114.67 VL 27.174 GAL .40 AZL 89.08 MCA 129.36 SMA 124.58 ECC .18134 INC .9412 V1 30.275  
 RP 108.49 LAP .73 LOP 244.03 VP 37.165 GAP -7.38 AZP 90.60 TAL 178.20 TAP 307.56 RCA 101.99 APO 147.17 V2 34.929  
 RC 58.051 GL 8.18 GP 18.14 ZAL 88.49 ZAP 27.27 ETS 323.50 ZAE 146.07 ETE 22.92 ZAC 127.37 ETC 147.82 CLP -20.72

PLANETOCENTRIC CONIC

C3 9.848 VHL 3.138 DLA 17.72 RAL 21.19 RAD 6567.4 VEL 11.456 PTH 1.99 VHP 5.614 DPA 30.97 RAP 34.25 ECC 1.1621  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 43 56 2645.31 -27.16 70.63 237.05 98.33 3 28 1 2045.3 -25.73 62.26  
 90.00 19 32 9 4116.83 -2.65 167.33 232.64 61.80 20 40 46 3516.6 -6.40 160.66  
 100.00 4 15 39 2349.53 -28.29 48.87 236.84 100.09 4 54 49 1749.5 -26.80 40.27  
 100.00 20 43 7 3887.64 -1.65 149.94 232.09 60.15 21 47 55 3287.6 -5.61 143.39  
 110.00 5 46 39 2064.81 -31.18 26.31 236.11 104.79 6 21 4 1464.8 -28.83 17.89  
 110.00 21 28 36 3745.12 .85 137.57 230.52 55.83 22 31 2 3145.1 -3.64 131.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3487 TRA -.6058 TC3 1.5214 BAU .2255  
 RDE -.2563 RRA -.0781 RC3 .7867 FAU .06542  
 FDE .6203 FRA .9020 FC3-5.7514 BSP 5631  
 BOE .4328 BRA .6099 BC3 1.7128 FSP -1052

9GT 1631.8 9GR 695.7 9G3 359.4  
 RRT .8288 RRF -.8862 RTF -.9095  
 9GB 1773.9 R23 -.1663 R13 -.9254  
 9G1 1735.3 9G2 368.0 THA 20.38

ST 726.2 SR 470.2 SS 606.5  
 CRT .9184 CRS .9427 CST .9964  
 LSA 1044.0 MSA 160.5 SSA 23.6  
 EL1 850.4 EL2 158.8 ALF 31.99

LAUNCH DATE JAN 15 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 302.780

RL 147.16 LAL .00 LOL 114.67 VL 27.252 GAL .27 AZL 89.26 MCA 132.54 SMA 125.08 ECC .17658 INC .7362 V1 30.275  
 RP 108.53 LAP .54 LOP 247.21 VP 37.211 GAP -6.78 AZP 90.50 TAL 178.76 TAP 311.29 RCA 102.99 APO 147.16 V2 34.917  
 RC 59.985 GL 6.60 GP 20.14 ZAL 89.61 ZAP 30.47 ETS 324.45 ZAE 145.17 ETE 26.32 ZAC 126.81 ETC 146.25 CLP -23.36

PLANETOCENTRIC CONIC

C3 9.278 VHL 3.046 DLA 15.84 RAL 20.72 RAD 6567.3 VEL 11.431 PTH 1.98 VHP 5.342 DPA 33.01 RAP 33.89 ECC 1.1527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 0 25 2563.24 -26.22 64.81 235.01 101.10 3 43 8 1963.2 -24.42 56.60  
 90.00 19 11 55 4175.30 -.76 170.60 231.09 61.69 20 21 31 3575.3 -4.54 163.96  
 100.00 4 30 31 2272.64 -27.25 43.19 234.77 102.79 5 8 24 1672.6 -25.21 34.98  
 100.00 20 24 30 3941.13 .16 152.88 230.57 60.11 21 30 11 3341.1 -3.82 146.35  
 110.00 5 58 14 1998.18 -29.92 21.53 235.95 107.36 6 31 33 1398.2 -27.25 13.35  
 110.00 21 13 16 3788.35 2.51 139.82 229.11 55.90 22 16 24 3188.4 -1.99 133.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3174 TRA -.5840 TC3 1.6492 BAU .2388  
 RDE -.2450 RRA -.0954 RC3 .9937 FAU .07110  
 FDE .5816 FRA .9544 FC3-6.6344 BSP 5731  
 BOE .4010 BRA .5918 BC3 1.9254 FSP -1163

9GT 1634.0 9GR 783.4 9G3 396.1  
 RRT .8585 RRF -.9187 RTF -.9138  
 9GB 1812.0 R23 -.1796 R13 -.9339  
 9G1 1775.3 9G2 372.5 THA 23.42

ST 689.0 SR 464.6 SS 569.9  
 CRT .9211 CRS .9372 CST .9974  
 LSA .995.1 MSA 156.4 SSA 25.0  
 EL1 816.9 EL2 152.5 ALF 33.15

LAUNCH DATE JAN 15 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 309.362

RL 147.16 LAL .00 LOL 114.67 VL 27.321 GAL .15 AZL 89.49 MCA 135.72 SMA 125.53 ECC .17234 INC .5093 V1 30.275  
 RP 108.57 LAP .36 LOP 250.39 VP 37.250 GAP -6.20 AZP 90.38 TAL 179.29 TAP 315.01 RCA 103.89 APO 147.16 V2 34.906  
 RC 61.981 GL 4.70 GP 22.43 ZAL 90.68 ZAP 33.93 ETS 325.21 ZAE 144.26 ETE 30.16 ZAC 125.50 ETC 144.68 CLP -26.15

PLANETOCENTRIC CONIC

C3 8.791 VHL 2.965 DLA 13.67 RAL 20.43 RAD 6567.3 VEL 11.410 PTH 1.97 VHP 5.097 DPA 35.26 RAP 33.18 ECC 1.1447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 18 55 2475.92 -24.93 59.74 233.22 103.88 4 0 11 1875.9 -22.78 50.73  
 90.00 18 51 5 4241.85 1.39 174.31 229.85 61.71 20 1 46 3641.8 -2.40 167.69  
 100.00 4 47 27 2190.39 -25.88 37.46 232.94 105.51 5 23 37 1590.4 -23.50 29.47  
 100.00 20 5 14 4002.61 2.24 156.25 229.38 60.18 21 11 56 3402.6 -1.74 149.73  
 110.00 6 11 50 1926.34 -28.35 16.52 232.05 109.95 6 43 57 1326.3 -25.37 8.62  
 110.00 20 57 20 3839.42 4.45 142.50 228.00 56.07 22 1 19 3239.4 -.03 136.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2849 TRA -.5634 TC3 1.7247 BAU .2493  
 RDE -.2312 RRA -.1191 RC3 1.2352 FAU .07843  
 FDE .5222 FRA 1.0168 FC3-7.5289 BSP 5931  
 BOE .3669 BRA .5778 BC3 2.1214 FSP -1296

9GT 1616.8 9GR 890.1 9G3 432.3  
 RRT .8788 RRF -.9430 RTF -.9142  
 9GB 1845.5 R23 -.1936 R13 -.9407  
 9G1 1805.2 9G2 383.5 THA 27.09

ST 646.4 SR 453.0 SS 521.9  
 CRT .9243 CRS .9258 CST .9978  
 LSA 933.4 MSA 152.8 SSA 26.8  
 EL1 776.1 EL2 144.0 ALF 34.28

LAUNCH DATE JAN 15 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC DISTANCE 315.923  
 RL 147.16 LAL .00 LOL 114.67 VL 27.383 GAL .04 AZL 89.74 HCA 138.90 SMA 125.93 ECC .16056 INC .2550 V1 30.275  
 RP 108.60 LAP .17 LOP 253.57 VP 37.285 GAP -5.64 AZP 90.19 TAL 179.79 TAP 318.68 RCA 104.70 APO 147.16 V2 34.894  
 RC 84.032 GL 2.42 GP 25.07 ZAL 91.69 ZAP 37.69 ETS 325.87 ZAE 143.24 ETE 34.46 ZAC 123.99 ETC 143.15 CLP -29.12

PLANETOCENTRIC CONIC  
 CS 8.386 VHL 2.806 DLA 11.18 RAL 20.35 RAD 6567.3 VEL 11.392 PTH 1.97 VHP 4.885 DPA 37.74 RAP 32.08 ECC 1.1380  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 39 50 2382.28 -23.25 52.39 231.72 106.63 4 19 32 1782.3 -20.75 44.61  
 90.00 18 29 31 4317.61 3.83 178.55 229.00 61.92 19 41 29 3717.6 .04 171.91  
 100.00 5 6 48 2101.81 -24.13 31.47 231.42 108.20 5 41 49 1501.8 -21.41 23.72  
 100.00 19 45 14 4073.31 4.63 160.14 228.55 60.44 20 55 8 3473.3 .66 153.61  
 110.00 6 27 46 1848.43 -26.43 11.28 230.48 112.51 6 58 34 1248.4 -23.15 3.66  
 110.00 20 40 45 3899.45 6.72 145.66 227.26 56.41 21 45 45 3299.5 2.26 139.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2722 TRA -.5604 TC3 1.7170 BAU .2561 SGT 1598.8 SCR 1022.8 SCS 467.3 ST 637.1 SR 447.3 SS 493.2  
 RDE -.2208 RRA -.1523 RC3 1.5061 FAU .08081 RRT .8866 RRF -.9609 RTF -.9071 CRT .9381 CRS .9159 CST .9955  
 FDE .4778 FRA 1.1097 FC3-.83422 BSP 5681 SGB 1898.0 R23 -.2157 R13 -.9439 LSA 909.3 MSA 146.5 SSA 29.1  
 BDE .3503 BRA .5807 BC3 2.2639 FSP -1362 SGI 1853.7 S62 408.0 THA 31.25 EL1 767.7 EL2 126.6 ALF 34.47

LAUNCH DATE JAN 15 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC DISTANCE 322.482  
 RL 147.16 LAL .00 LOL 114.67 VL 27.438 GAL -.05 AZL 90.03 HCA 142.07 SMA 126.29 ECC .16523 INC .0313 V1 30.275  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.315 GAP -5.10 AZP 89.97 TAL 180.25 TAP 322.32 RCA 105.42 APO 147.16 V2 34.883  
 RC 84.131 GL -.32 GP 28.09 ZAL 92.82 ZAP 41.77 ETS 326.51 ZAE 142.01 ETE 39.25 ZAC 122.03 ETC 141.72 CLP -32.28

PLANETOCENTRIC CONIC  
 CS 8.063 VHL 2.840 DLA 8.29 RAL 20.31 RAD 6567.3 VEL 11.378 PTH 1.97 VHP 4.709 DPA 40.48 RAP 30.42 ECC 1.1327  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 3 41 2280.70 -21.12 45.71 230.60 109.32 4 41 41 1680.7 -18.29 38.18  
 90.00 18 6 56 4404.61 6.59 183.44 226.59 62.40 19 20 21 3804.6 2.85 176.77  
 100.00 5 29 2 2005.39 -21.93 25.15 230.28 110.84 6 2 27 1405.4 -18.90 17.66  
 100.00 19 24 18 4155.14 7.36 164.69 228.18 60.95 20 33 31 3555.1 3.43 158.10  
 110.00 6 46 26 1763.17 -24.09 9.76 229.28 115.02 7 15 49 1183.2 -20.52 358.44  
 110.00 20 23 21 3970.13 9.37 149.43 226.96 56.97 21 29 31 3370.1 4.95 143.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2054 TRA -.5018 TC3 1.8797 BAU .2886 SGT 1535.6 SCR 1195.7 SCS 508.0 ST 516.7 SR 386.8 SS 371.3  
 RDE -.1839 RRA -.1704 RC3 1.9056 FAU .08880 RRT .9066 RRF -.9742 RTF -.9196 CRT .9348 CRS .8418 CST .9728  
 FDE .2966 FRA 1.0948 FC3-9.5194 BSP 6447 SGB 1946.3 R23 -.1811 R13 -.9611 LSA 728.0 MSA 153.5 SSA 31.1  
 BDE .2757 BRA .5299 BC3 2.6766 FSP -1580 SGI 1903.2 S62 407.2 THA 37.21 EL1 635.7 EL2 111.7 ALF 36.28

LAUNCH DATE JAN 15 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC DISTANCE 328.976  
 RL 147.16 LAL .00 LOL 114.67 VL 27.487 GAL -.13 AZL 90.37 HCA 145.24 SMA 126.61 ECC .16230 INC .3653 V1 30.275  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.341 GAP -4.58 AZP 89.70 TAL 180.67 TAP 325.91 RCA 106.06 APO 147.16 V2 34.873  
 RC 88.274 GL -3.59 GP 31.55 ZAL 93.45 ZAP 46.16 ETS 327.19 ZAE 140.43 ETE 44.49 ZAC 119.59 ETC 140.45 CLP -35.64

PLANETOCENTRIC CONIC  
 CS 7.838 VHL 2.800 DLA 4.95 RAL 20.96 RAD 6567.3 VEL 11.368 PTH 1.96 VHP 4.576 DPA 43.51 RAP 28.16 ECC 1.1290  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 31 12 2169.29 -18.44 38.63 229.95 111.87 5 7 21 1569.3 -15.31 31.36  
 90.00 17 43 0 4505.51 9.73 189.20 228.77 63.28 18 58 5 3905.5 6.07 182.43  
 100.00 5 54 52 1899.41 -19.21 16.45 229.61 113.35 6 26 31 1299.4 -15.89 11.23  
 100.00 19 2 1 4250.61 10.47 170.06 228.38 61.84 20 12 51 3650.6 6.63 163.39  
 110.00 7 8 27 1669.11 -21.26 359.93 228.58 117.42 7 36 16 1069.1 -17.42 352.91  
 110.00 20 4 55 4053.68 12.43 153.96 227.22 57.90 21 12 29 3453.7 8.10 147.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1693 TRA -.5028 TC3 1.7784 BAU .3017 SGT 1476.0 SCR 1382.8 SCS 534.8 ST 465.7 SR 334.0 SS 323.3  
 RDE -.1473 RRA -.2248 RC3 2.2647 FAU .09137 RRT .9036 RRF -.9826 RTF -.9105 CRT .9547 CRS .7153 CST .8795  
 FDE .1390 FRA 1.2221 FC-10.0923 BSP 6576 SGB 2022.5 R23 -.1791 R13 -.9676 LSA 633.8 MSA 177.8 SSA 30.4  
 BDE .2244 BRA .5908 BC3 2.8795 FSP -1659 SGI 1975.4 S62 443.1 THA 42.94 EL1 567.2 EL2 81.6 ALF 35.23

LAUNCH DATE JAN 15 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC DISTANCE 335.467  
 RL 147.16 LAL .00 LOL 114.67 VL 27.529 GAL -.20 AZL 90.76 HCA 148.41 SMA 126.89 ECC .15974 INC .7554 V1 30.275  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.363 GAP -4.08 AZP 89.36 TAL 181.04 TAP 329.45 RCA 106.62 APO 147.16 V2 34.862  
 RC 70.456 GL -7.50 GP 35.48 ZAL 94.14 ZAP 50.68 ETS 328.01 ZAE 138.36 ETE 50.07 ZAC 116.85 ETC 139.39 CLP -39.21

PLANETOCENTRIC CONIC  
 CS 7.728 VHL 2.780 DLA 1.05 RAL 21.74 RAD 6567.3 VEL 11.363 PTH 1.96 VHP 4.496 DPA 46.82 RAP 25.12 ECC 1.1272  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 3 26 2045.32 -15.13 31.04 229.92 114.22 5 37 32 1445.3 -11.74 24.01  
 90.00 17 17 2 4824.28 13.28 196.12 229.67 64.76 18 34 6 4024.3 9.77 189.19  
 100.00 6 25 16 1781.37 -19.87 11.27 229.57 115.67 6 54 58 1181.4 -12.29 4.31  
 100.00 18 37 53 4363.47 14.01 176.57 229.31 63.32 19 50 37 3763.5 10.32 169.72  
 110.00 7 34 38 1984.25 -17.84 353.71 228.49 119.65 8 0 42 964.3 -13.76 346.98  
 110.00 19 45 1 4153.35 15.98 159.32 228.20 59.37 20 54 14 3553.3 11.78 152.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1308 TRA -.4908 TC3 1.8538 BAU .3243 SGT 1393.5 SCR 1608.4 SCS 554.4 ST 406.9 SR 263.8 SS 329.4  
 RDE -.0821 RRA -.2872 RC3 2.6481 FAU .09323 RRT .8987 RRF -.9885 RTF -.9015 CRT .9906 CRS .5663 CST .6250  
 FDE -.0675 FRA 1.3233 FC-10.4445 BSP 6786 SGB 2128.1 R23 -.1593 R13 -.9760 LSA 535.7 MSA 236.6 SSA 25.8  
 BDE .1600 BRA .5687 BC3 3.1391 FSP -1713 SGI 2074.7 S62 473.9 THA 49.55 EL1 484.0 EL2 30.3 ALF 32.86



LAUNCH DATE JAN 15 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 21 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.565 GAL -25 AZL 91.22 HCA 151.58 SMA 127.14 ECC .15753 INC 1.2219 V1 30.275  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.381 GAP -3.60 AZP 88.93 TAL 181.35 TAP 332.93 RCA 107.11 APO 147.16 V2 34.855  
 RC 72.672 GL -12.17 GP 39.91 ZAL 94.68 ZAP 55.88 ETS 329.08 ZAE 135.67 ETE 55.84 ZAC 113.19 ETC 136.43 CLP -43.00

Distance 341.935

Planetocentric Conic: CS 7.775 VHL 2.788 DLA -3.50 RAL 22.98 RAD 8567.3 VEL 11.365 PTH 1.96 VHP 4.480 DPA 50.40 RAP 21.09 ECC 1.1280  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 42 0 1905.14 -11.06 22.76 230.73 116.23 6 15 45 1305.1 -7.44 15.95  
 90.00 16 47 58 4766.69 17.24 204.70 231.56 67.18 18 7 25 4166.7 14.00 197.52  
 100.00 7 1 42 1640.03 -11.79 3.46 230.35 117.67 7 29 11 1048.0 -8.00 356.74  
 100.00 18 10 57 4499.03 17.99 184.67 231.22 65.72 19 25 56 3899.0 14.56 177.56  
 110.00 8 6 12 1446.15 -13.74 347.02 229.21 121.61 8 30 18 846.1 -9.46 340.53  
 110.00 19 22 57 4273.66 20.00 166.51 230.17 61.68 20 34 11 3673.7 16.06 159.80

Differential Corrections: TDE -.0921 TRA -.4689 TC3 1.4854 BAU .3563 SGT 1286.0 SGR 1877.4 SCS 563.0 ST 346.8 SR 230.2 SS 426.9  
 RDE -.0089 RRA -.3620 RC3 3.0898 FAU .09355 RRT .8906 RRF -.9924 RTF -.8907 CRT .8705 CRS .7480 CST .33669  
 FDE -.3230 FRA 1.3981 FC-10.4141 B8P 7259 SGB 2275.7 R23 -.1282 R13 -.9842 LSA 507.7 HSA 312.0 S8A 19.2  
 BDE .0925 BRA .5924 BC3 3.4283 F8P -1754 SGI 2221.3 SGI 494.4 THA 56.76 EL1 404.8 EL2 97.1 ALF 32.09

Mid-Course Execution Accuracy: SGT 1286.0 SGR 1877.4 SCS 563.0  
 RRT .8906 RRF -.9924 RTF -.8907  
 SGB 2275.7 R23 -.1282 R13 -.9842  
 SGI 2221.3 SGI 494.4 THA 56.76

Orbit Determination Accuracy: ST 346.8 SR 230.2 SS 426.9  
 CRT .8705 CRS .7480 CST .33669  
 LSA 507.7 HSA 312.0 S8A 19.2  
 EL1 404.8 EL2 97.1 ALF 32.09

LAUNCH DATE JAN 15 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 23 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.597 GAL -.29 AZL 91.79 HCA 154.74 SMA 127.35 ECC .15564 INC 1.7945 V1 30.275  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.393 GAP -3.13 AZP 88.38 TAL 181.60 TAP 336.34 RCA 107.53 APO 147.17 V2 34.844  
 RC 74.919 GL -17.73 GP 44.86 ZAL 95.01 ZAP 61.09 ETS 330.50 ZAE 132.25 ETE 61.63 ZAC 109.24 ETC 138.23 CLP -47.00

Distance 348.377

Planetocentric Conic: CS 8.057 VHL 2.858 DLA -8.82 RAL 24.61 RAD 8567.3 VEL 11.377 PTH 1.97 VHP 4.549 DPA 54.20 RAP 15.79 ECC 1.1326  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 29 27 1743.34 -6.05 13.52 232.70 117.72 6 58 31 1143.3 -2.29 6.85  
 90.00 16 13 55 4941.59 21.40 215.76 234.82 71.11 17 36 17 4341.6 18.72 208.19  
 100.00 7 48 30 1494.78 -8.82 354.82 232.28 119.18 8 11 25 894.8 -2.68 348.25  
 100.00 17 39 35 4665.39 22.31 195.13 234.51 69.58 18 57 19 4065.4 19.33 187.60  
 110.00 8 44 57 1311.74 -8.83 339.70 231.05 123.16 9 6 49 711.7 -4.41 353.41  
 110.00 18 57 35 4421.19 24.49 175.61 235.52 65.37 20 11 17 3821.2 20.96 168.24

Differential Corrections: TDE -.0650 TRA -.4471 TC3 1.2019 BAU .3898 SGT 1147.6 SGR 2188.0 SCS 549.5 ST 304.5 SR 363.0 SS 594.1  
 RDE .1081 RRA -.4638 RC3 3.4134 FAU .08976 RRT .8677 RRF -.9949 RTF -.8660 CRT .4565 CRS .9622 CST .2007  
 FDE -.5959 FRA 1.4698 FC3-9.8454 B8P 7750 SGB 2435.0 R23 -.0982 R13 -.9901 LSA 697.0 HSA 302.4 S8A 13.3  
 BDE .1261 BRA .6443 BC3 3.6188 F8P -1714 SGI 2398.2 SGI 515.7 THA 64.04 EL1 407.9 EL2 241.1 ALF 55.57

Mid-Course Execution Accuracy: SGT 1147.6 SGR 2188.0 SCS 549.5  
 RRT .8677 RRF -.9949 RTF -.8660  
 SGB 2435.0 R23 -.0982 R13 -.9901  
 SGI 2398.2 SGI 515.7 THA 64.04

Orbit Determination Accuracy: ST 304.5 SR 363.0 SS 594.1  
 CRT .4565 CRS .9622 CST .2007  
 LSA 697.0 HSA 302.4 S8A 13.3  
 EL1 407.9 EL2 241.1 ALF 55.57

LAUNCH DATE JAN 15 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 25 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.623 GAL -.32 AZL 92.52 HCA 157.90 SMA 127.53 ECC .15404 INC 2.5184 V1 30.275  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.407 GAP -2.88 AZP 87.67 TAL 181.78 TAP 339.68 RCA 107.88 APO 147.17 V2 34.855  
 RC 77.194 GL -24.27 GP 50.33 ZAL 95.10 ZAP 66.40 ETS 332.40 ZAE 128.02 ETE 67.26 ZAC 104.86 ETC 138.29 CLP -51.17

Distance 354.794

Planetocentric Conic: CS 8.720 VHL 2.953 DLA -14.98 RAL 26.89 RAD 8567.3 VEL 11.407 PTH 1.97 VHP 4.732 DPA 58.10 RAP 8.82 ECC 1.1435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 30 34 1550.13 .15 2.70 236.40 118.32 7 56 24 950.1 3.93 356.07  
 90.00 15 30 58 5164.52 25.62 230.77 240.00 77.52 16 57 3 4564.5 23.65 222.66  
 100.00 8 43 47 1313.87 -.73 344.84 235.91 119.88 9 5 41 713.9 3.25 338.32  
 100.00 17 0 26 4876.01 26.60 209.30 239.74 75.84 18 21 42 4276.0 24.39 201.19  
 110.00 9 33 55 1156.83 -2.96 331.52 234.50 124.07 9 53 12 556.8 1.51 325.32  
 110.00 18 26 47 4605.81 29.15 187.93 238.89 71.30 19 43 33 4005.8 26.32 179.89

Differential Corrections: TDE -.0520 TRA -.4143 TC3 .8530 BAU .4274 SGT 978.3 SGR 2479.2 SCS 513.1 ST 269.7 SR 648.2 SS 788.6  
 RDE .2765 RRA -.5942 RC3 3.5655 FAU .08226 RRT .8250 RRF -.9965 RTF -.8218 CRT .2072 CRS .9950 CST .1098  
 FDE -.8745 FRA 1.5032 FC3-8.1674 B8P 8444 SGB 2665.3 R23 -.0687 R13 -.9942 LSA 1020.4 HSA 271.0 S8A 9.0  
 BDE .2814 BRA .7244 BC3 3.6663 F8P -1616 SGI 2613.2 SGI 524.5 THA 71.18 EL1 651.0 EL2 262.7 ALF 84.11

Mid-Course Execution Accuracy: SGT 978.3 SGR 2479.2 SCS 513.1  
 RRT .8250 RRF -.9965 RTF -.8218  
 SGB 2665.3 R23 -.0687 R13 -.9942  
 SGI 2613.2 SGI 524.5 THA 71.18

Orbit Determination Accuracy: ST 269.7 SR 648.2 SS 788.6  
 CRT .2072 CRS .9950 CST .1098  
 LSA 1020.4 HSA 271.0 S8A 9.0  
 EL1 651.0 EL2 262.7 ALF 84.11

LAUNCH DATE JAN 15 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 27 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.645 GAL -.34 AZL 93.47 HCA 161.05 SMA 127.87 ECC .15272 INC 3.4892 V1 30.275  
 RP 108.81 LAP -1.13 LOP 273.73 VP 37.413 GAP -2.24 AZP 86.72 TAL 181.90 TAP 342.95 RCA 108.18 APO 147.17 V2 34.827  
 RC 79.493 GL -31.83 GP 56.28 ZAL 94.90 ZAP 71.64 ETS 334.88 ZAE 122.98 ETE 72.62 ZAC 100.12 ETC 138.87 CLP -55.44

Distance 361.184

Planetocentric Conic: CS 10.061 VHL 3.172 DLA -21.98 RAL 29.91 RAD 8567.4 VEL 11.465 PTH 1.99 VHP 5.078 DPA 61.94 RAP 359.59 ECC 1.1656  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 57 20 1297.87 8.20 348.53 242.93 117.20 9 18 58 697.9 11.78 341.68  
 90.00 14 20 18 5472.60 28.27 252.86 247.67 88.23 15 59 30 4872.6 27.72 244.24  
 100.00 10 3 5 1085.71 6.98 332.27 242.28 119.14 10 21 10 485.7 10.79 325.58  
 100.00 16 5 15 5159.99 29.67 229.79 247.59 86.16 17 31 15 4560.0 28.82 221.09  
 110.00 10 38 51 973.55 4.02 321.95 240.44 123.97 10 55 5 373.6 8.45 315.67  
 110.00 17 45 57 4844.92 33.10 205.40 247.13 80.92 19 6 42 4244.9 31.49 196.55

Differential Corrections: TDE -.0877 TRA -.3709 TC3 .4893 BAU .4689 SGT 795.9 SGR 2813.0 SCS 455.7 ST 249.0 SR 1029.1 SS 963.5  
 RDE .5108 RRA -.7730 RC3 3.4518 FAU .07140 RRT .7392 RRF -.9976 RTF -.7340 CRT -.0553 CRS .9990 CST -.0988  
 FDE -1.1127 FRA 1.9039 FC3-8.1443 B8P 9219 SGB 2923.4 R23 -.0445 R13 -.9966 LSA 1409.5 HSA 250.2 S8A 6.1  
 BDE .5151 BRA .8574 BC3 3.4863 F8P -1439 SGI 2876.1 SGI 524.2 THA 77.77 EL1 1029.2 EL2 248.6 ALF 90.81

Mid-Course Execution Accuracy: SGT 795.9 SGR 2813.0 SCS 455.7  
 RRT .7392 RRF -.9976 RTF -.7340  
 SGB 2923.4 R23 -.0445 R13 -.9966  
 SGI 2876.1 SGI 524.2 THA 77.77

Orbit Determination Accuracy: ST 249.0 SR 1029.1 SS 963.5  
 CRT -.0553 CRS .9990 CST -.0988  
 LSA 1409.5 HSA 250.2 S8A 6.1  
 EL1 1029.2 EL2 248.6 ALF 90.81

LAUNCH DATE JAN 15 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 367.544

RL 147.16 LAL .00 LOL 114.67 VL 27.662 GAL -.35 AZL 94.78 HCA 164.19 SMA 127.79 ECC .15164 INC 4.7821 V1 30.275
RP 108.83 LAP -1.30 LOP 278.92 VP 37.422 GAP -1.82 AZP 85.40 TAL 181.93 TAP 346.13 RCA 108.41 APO 147.17 V2 34.820
RC 81.813 GL -40.26 GP 82.71 ZAL 94.38 ZAP 76.81 ETS 338.04 ZAE 117.14 ETE 77.65 ZAC 95.15 ETC 140.05 CLP -59.67

PLANETOCENTRIC CONIC

C3 12.733 VHL 3.568 DLA -29.63 RAL 33.85 RAD 6567.5 VEL 11.581 PTH 2.03 VHP 5.667 DPA 65.44 RAP 347.31 ECC 1.2096
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.88 10 43 54 1030.96 22.95 335.74 255.73 109.28 11 1 5 431.0 25.37 327.80
90.12 13 13 11 5837.04 22.96 278.24 255.74 109.27 14 50 28 5237.0 25.38 270.30
100.00 12 46 47 835.46 20.58 305.63 254.77 112.17 12 57 20 33.5 25.41 297.98
100.00 13 52 59 5709.78 25.37 269.84 256.59 108.37 15 28 9 5109.8 27.37 261.41
110.00 12 16 1 730.47 13.06 308.94 250.77 121.87 12 28 11 130.5 17.18 302.25
110.00 16 40 15 5185.53 33.64 231.82 258.50 96.45 18 6 40 4585.5 34.17 222.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1294 TRA -.3027 TC3 .1475 BAU .5036 96T 605.8 96R 3124.1 96S 378.3 ST 267.0 SR 1453.8 SS 1075.1
RDE .8339 RRA-1.0157 RC3 2.9548 FAU .05692 RRT .5247 RRF -.9983 RTF -.5170 CRT -.4727 CRS .9997 CST -.4932
FDE -1.2717 FRA 1.4485 FC3-3.8698 B8P 10087 96B 3182.3 96Z -.0251 R13 -.9980 LSA 1812.7 MSA 234.5 S8A 4.3
BDE .8439 BRA 1.0599 BC3 2.9585 F8P -1202 96I 3140.7 96J 512.8 THA 84.03 EL1 1459.5 EL2 234.4 ALF 95.09

LAUNCH DATE JAN 15 1969

FLIGHT TIME 136.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 375.870

RL 147.16 LAL .00 LOL 114.67 VL 27.676 GAL -.33 AZL 96.72 HCA 167.32 SMA 127.89 ECC .15080 INC 6.7243 V1 30.275
RP 108.85 LAP -1.47 LOP 282.08 VP 37.425 GAP -1.41 AZP 83.44 TAL 181.89 TAP 349.21 RCA 108.60 APO 147.17 V2 34.813
RC 84.193 GL -49.15 GP 89.68 ZAL 93.58 ZAP 81.07 ETS 341.94 ZAE 110.49 ETE 82.41 ZAC 90.03 ETC 141.93 CLP -63.49

PLANETOCENTRIC CONIC

C3 18.357 VHL 4.284 DLA -37.47 RAL 38.89 RAD 6567.7 VEL 11.821 PTH 2.09 VHP 6.669 DPA 68.18 RAP 331.02 ECC 1.3021
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
84.36 9 17 41 1441.79 26.17 0.91 289.00 117.84 9 41 43 841.8 29.67 1.18
115.64 15 19 33 5590.52 26.18 260.87 289.01 117.83 16 52 43 4990.5 29.68 253.14
84.36 9 17 41 1441.79 26.17 0.91 289.00 117.84 9 41 43 841.8 29.67 1.18
115.64 15 19 33 5590.52 26.18 260.87 289.01 117.83 16 52 43 4990.5 29.68 253.14
84.36 9 17 41 1441.79 26.17 0.91 289.00 117.84 9 41 43 841.8 29.67 1.18
115.64 15 19 33 5590.52 26.18 260.87 289.01 117.83 16 52 43 4990.5 29.68 253.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2641 TRA -.1890 TC3 -.0762 BAU .5230 96T 480.0 96R 3408.4 96S 286.6 ST 365.9 SR 1847.7 SS 1089.8
RDE 1.2797 RRA-1.3738 RC3 2.1296 FAU .04058 RRT .0082 RRF -.9987 RTF .0020 CRT -.7961 CRS .9999 CST -.8052
FDE -1.3179 FRA 1.3539 FC3-1.9139 B8P 10919 96B 3442.1 96Z -.0104 R13 -.9987 LSA 2165.1 MSA 218.7 S8A 3.0
BDE 1.3067 BRA 1.3067 BC3 2.1310 F8P -921 96I 3408.4 96J 480.0 THA 89.93 EL1 1870.9 EL2 218.7 ALF 99.08

LAUNCH DATE JAN 15 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 380.149

RL 147.16 LAL .00 LOL 114.67 VL 27.688 GAL -.31 AZL 99.91 HCA 170.43 SMA 127.95 ECC .15017 INC 9.9074 V1 30.275
RP 108.87 LAP -1.64 LOP 285.24 VP 37.427 GAP -1.02 AZP 80.23 TAL 181.74 TAP 352.18 RCA 108.74 APO 147.17 V2 34.807
RC 86.508 GL -57.89 GP 77.31 ZAL 92.59 ZAP 84.78 ETS 346.68 ZAE 102.88 ETE 87.08 ZAC 84.79 ETC 144.72 CLP -65.55

PLANETOCENTRIC CONIC

C3 31.768 VHL 5.836 DLA -44.69 RAL 44.98 RAD 6568.3 VEL 12.375 PTH 2.23 VHP 8.463 DPA 69.53 RAP 310.00 ECC 1.5228
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.88 8 55 31 1705.35 25.25 30.86 286.50 128.19 9 23 56 1105.3 30.01 24.02
126.14 16 30 21 5595.11 25.26 260.60 286.51 128.18 18 3 37 4995.1 30.02 253.75
53.88 8 55 31 1705.35 25.25 30.86 286.50 128.19 9 23 56 1105.3 30.01 24.02
126.14 16 30 21 5595.11 25.26 260.60 286.51 128.18 18 3 37 4995.1 30.02 253.75
53.88 8 55 31 1705.35 25.25 30.86 286.50 128.19 9 23 56 1105.3 30.01 24.02
126.14 16 30 21 5595.11 25.26 260.60 286.51 128.18 18 3 37 4995.1 30.02 253.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5219 TRA .0390 TC3 -.1412 BAU .5054 96T 356.2 96R 3637.9 96S 198.1 ST 530.8 SR 2116.7 SS 1004.6
RDE 1.9148 RRA-1.9371 RC3 1.1816 FAU .02445 RRT -.8837 RRF -.9991 RTF .6907 CRT -.9304 CRS .9999 CST -.9341
FDE -1.2482 FRA 1.2278 FC3 -.8662 B8P 11700 96B 3680.2 96Z .0013 R13 -.9991 LSA 2394.9 MSA 189.6 S8A 2.0
BDE 1.9846 BRA 1.9375 BC3 1.1900 F8P -641 96I 3658.0 96J 403.6 THA 96.04 EL1 2174.0 EL2 189.4 ALF 103.23

LAUNCH DATE JAN 15 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 386.344

RL 147.16 LAL .00 LOL 114.67 VL 27.693 GAL -.26 AZL 106.07 HCA 175.48 SMA 128.00 ECC .14973 INC16.0660 V1 30.275
RP 108.89 LAP -1.80 LOP 288.41 VP 37.427 GAP -.66 AZP 74.03 TAL 181.46 TAP 354.94 RCA 108.83 APO 147.17 V2 34.802
RC 88.877 GL -84.40 GP 86.18 ZAL 91.55 ZAP 87.53 ETS 358.56 ZAE 93.62 ETE 93.19 ZAC 79.19 ETC 150.07 CLP -49.80

PLANETOCENTRIC CONIC

C3 72.212 VHL 8.498 DLA -49.98 RAL 51.20 RAD 6569.4 VEL 13.913 PTH 2.54 VHP 12.116 DPA 68.41 RAP 284.49 ECC 2.1884
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.95 8 56 3 1989.49 17.78 48.89 305.57 137.51 9 28 52 1369.5 23.57 43.22
133.05 17 19 24 5738.02 17.77 266.78 305.58 137.50 18 55 2 5138.0 23.58 261.31
46.95 8 56 3 1989.49 17.76 48.89 305.57 137.51 9 28 52 1369.5 23.57 43.22
133.05 17 19 24 5738.02 17.77 266.78 305.58 137.50 18 55 2 5138.0 23.58 261.31
46.95 8 56 3 1989.49 17.76 48.89 305.57 137.51 9 28 52 1369.5 23.57 43.22
133.05 17 19 24 5738.02 17.77 266.78 305.58 137.50 18 55 2 5138.0 23.58 261.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.8419 TRA .7911 TC3 -.0806 BAU .3802 96T 1033.3 96R 3728.4 96S 124.1 ST 682.0 SR 2209.9 SS 882.9
RDE 2.9772 RRA-2.9390 RC3 .5843 FAU .00936 RRT -.9965 RRF -.9994 RTF .9962 CRT -.9983 CRS .9999 CST -.9977
FDE -1.1308 FRA 1.1489 FC3 -.1124 B8P 12370 96B 3874.4 96Z .0028 R13 -.9994 LSA 2475.2 MSA 40.0 S8A 1.6
BDE 3.1226 BRA 3.0436 BC3 .3751 F8P -406 96I 3873.4 96J 84.6 THA 105.73 EL1 2312.5 EL2 37.9 ALF 107.13

LAUNCH DATE JAN 15 1969 FLIGHT TIME 142.00 ARRIVAL DATE JUN 6 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.696 GAL -.15 AZL 122.24 HCA 176.33 SMA 128.02 ECC .14947 INC32.2412 V1 30.275  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.425 GAP -.36 AZP 57.81 TAL 180.87 TAP 357.21 RCA 108.89 APO 147.16 V2 34.797  
 RC 91.256 GL -65.12 GP 79.08 ZAL 90.83 ZAP 89.17 ETS 172.01 ZAE 79.47 EYE 270.59 ZAC 71.97 ETC 328.85 CLP 85.61

Distance 392.298

Planetary Centric Conic: C3 263.262 VHL 16.287 DLA -50.04 RAL 52.97 RAD 6571.5 VEL 19.861 PTH 3.12 VHP 21.842 DPA 61.68 RAP 254.82 ECC 5.3655  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.85 9 2 48 2211.90 5.38 58.85 318.43 139.83 9 39 40 1611.9 11.47 34.01  
 133.15 17 26 49 690.81 5.40 298.87 318.45 139.82 17 38 20 90.8 11.48 294.03  
 46.85 9 2 48 2211.90 5.38 58.85 318.43 139.83 9 39 40 1611.9 11.47 34.01  
 133.15 17 26 49 690.81 5.40 298.87 318.45 139.82 17 38 20 90.8 11.48 294.03  
 46.85 9 2 48 2211.90 5.38 58.85 318.43 139.83 9 39 40 1611.9 11.47 34.01  
 133.15 17 26 49 690.81 5.40 298.87 318.45 139.82 17 38 20 90.8 11.48 294.03

Differential Corrections: TDE 3.0542 TRA .0320 TC3 -.0352 BAU .4693 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE-5.1394 RRA 5.9955 RC3 .1276 FAU-.01019 SGT 1080.7 SGR 3771.7 SCS 75.9 ST 1074.5 SR 2059.0 SS 941.1  
 FDE-1.2655 FRA 1.3674 FC3 .0333 B8P 12530 RRT -.4742 RRF .9994 RTF -.5034 CRT -.8757 CRS -.9995 CST .6905  
 BDE 5.9785 BRA 5.9956 BC3 .1323 F8P -250 SGB 3923.5 R23 -.0023 R13 .9999 LSA 2460.9 HSA 473.2 SSA .6  
 SGI 3808.6 SGI 942.3 THA 98.25 EL1 2274.6 EL2 469.6 ALF 115.74

LAUNCH DATE JAN 15 1969 FLIGHT TIME 144.00 ARRIVAL DATE JUN 8 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.697 GAL -.66 AZL 1.54 HCA 182.11 SMA 128.03 ECC .14985 INC88.4546 V1 30.275  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.422 GAP .76 AZP 178.46 TAL 183.76 TAP 5.86 RCA 108.84 APO 147.21 V2 34.793  
 RC 93.844 GL 43.15 GP -49.34 ZAL 90.60 ZAP 90.50 ETS 177.46 ZAE 49.68 ETE 78.91 ZAC 82.48 ETC 29.16 CLP 90.77

Distance 401.451

Planetary Centric Conic: C31838.545 VHL 40.479 DLA 48.14 RAL 359.87 RAD 8573.2 VEL 41.950 PTH 3.57 VHP 49.191 DPA -50.81 RAP 176.27 ECC27.9663  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.28 17 37 12 4963.84 1.22 230.95 270.98 41.87 18 59 56 4363.8 -4.73 226.02  
 130.72 1 48 46 3482.27 1.24 114.88 270.97 41.87 2 46 49 2882.3 -4.72 109.95  
 49.28 17 37 12 4963.84 1.22 230.95 270.98 41.87 18 59 56 4363.8 -4.73 226.02  
 130.72 1 48 46 3482.27 1.24 114.88 270.97 41.87 2 46 49 2882.3 -4.72 109.95  
 49.28 17 37 12 4963.84 1.22 230.95 270.98 41.87 18 59 56 4363.8 -4.73 226.02  
 130.72 1 48 46 3482.27 1.24 114.88 270.97 41.87 2 46 49 2882.3 -4.72 109.95

Differential Corrections: TDE-6.2112 TRA 2.6631 TC3 -.1171 BAU 5.3541 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RD-16.7288 RRA -.0233 RC3 -.2145 FAU-.09518 SGT 1411.2 SGR 2936.5 SCS 59.5 ST 895.8 SR 2368.5 SS 2360.8  
 FDE 3.9234 FRA -.0277 FC3 .0503 B8P 10453 RRT .8991 RRF -.9999 RTF -.9032 CRT .9818 CRS 1.0000 CST .9825  
 BDE17.8448 BRA 2.6632 BC3 .2444 F8P -202 SGB 3258.0 R23 -.0895 R13 -.9976 LSA 3458.2 HSA 163.2 SSA .5  
 SGI 3208.6 SGI 585.2 THA 65.83 EL1 2527.2 EL2 159.6 ALF 69.54

LAUNCH DATE JAN 15 1969 FLIGHT TIME 146.00 ARRIVAL DATE JUN 10 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.695 GAL -.31 AZL 55.01 HCA 183.93 SMA 128.01 ECC .14964 INC34.9881 V1 30.275  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.417 GAP .74 AZP 124.93 TAL 181.79 TAP 5.71 RCA 108.86 APO 147.17 V2 34.789  
 RC 96.038 GL 84.45 GP -80.86 ZAL 90.84 ZAP 91.22 ETS 174.75 ZAE 81.11 ETE 79.43 ZAC 98.23 ETC 28.76 CLP 97.68

Distance 406.241

Planetary Centric Conic: C3 309.791 VHL 17.601 DLA 63.59 RAL 332.61 RAD 6571.8 VEL 20.763 PTH 3.18 VHP 20.295 DPA -68.43 RAP 120.33 ECC 6.0984  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.59 14 55 47 4965.75 -5.13 240.47 240.04 26.73 16 18 33 4365.7 -12.26 237.21  
 149.41 0 52 41 3263.30 -5.12 98.91 240.02 26.73 1 47 4 2663.3 -12.25 95.66  
 30.59 14 55 47 4965.75 -5.13 240.47 240.04 26.73 16 18 33 4365.7 -12.26 237.21  
 149.41 0 52 41 3263.30 -5.12 98.91 240.02 26.73 1 47 4 2663.3 -12.25 95.66  
 30.59 14 55 47 4965.75 -5.13 240.47 240.04 26.73 16 18 33 4365.7 -12.26 237.21  
 149.41 0 52 41 3263.30 -5.12 98.91 240.02 26.73 1 47 4 2663.3 -12.25 95.66

Differential Corrections: TDE-1.6800 TRA 1.9099 TC3 -.0753 BAU .7344 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RD-10.3934 RRA 2.5011 RC3 -.1605 FAU-.01251 SGT 1515.0 SGR 3881.9 SCS 81.3 ST 687.4 SR 3427.0 SS 1415.9  
 FDE 2.4393 FRA -.6728 FC3 .0350 B8P 12711 RRT .7689 RRF -.9982 RTF -.8037 CRT .8619 CRS .9997 CST .8924  
 BDE10.5263 BRA 3.1470 BC3 .1773 F8P -258 SGB 4167.1 R23 -.0157 R13 -.9997 LSA 3757.7 HSA 319.2 SSA 1.0  
 SGI 4063.0 SGI 925.4 THA 72.35 EL1 3480.7 EL2 319.1 ALF 79.88

LAUNCH DATE JAN 15 1969 FLIGHT TIME 148.00 ARRIVAL DATE JUN 12 1969

Heliocentric Conic: RL 147.16 LAL .00 LOL 114.67 VL 27.690 GAL -.18 AZL 89.44 HCA 186.81 SMA 127.98 ECC .14986 INC20.5620 V1 30.275  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.411 GAP 1.02 AZP 110.43 TAL 181.05 TAP 7.86 RCA 108.80 APO 147.16 V2 34.787  
 RC 98.436 GL 85.88 GP -85.04 ZAL 91.05 ZAP 93.09 ETS 334.42 ZAE 94.05 ETE 240.11 ZAC 103.92 ETC 188.78 CLP-128.56

Distance 412.175

Planetary Centric Conic: C3 113.335 VHL 10.655 DLA 63.97 RAL 329.80 RAD 6570.2 VEL 15.326 PTH 2.74 VHP 11.611 DPA -66.35 RAP 85.96 ECC 2.8685  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.90 14 42 10 4807.35 -14.97 236.61 232.11 27.02 16 2 18 4207.4 -22.06 233.12  
 150.10 0 42 19 3099.57 -14.96 94.27 232.09 27.02 1 33 59 2499.6 -22.05 90.77  
 29.90 14 42 10 4807.35 -14.97 236.61 232.11 27.02 16 2 18 4207.4 -22.06 233.12  
 150.10 0 42 19 3099.57 -14.96 94.27 232.09 27.02 1 33 59 2499.6 -22.05 90.77  
 29.90 14 42 10 4807.35 -14.97 236.61 232.11 27.02 16 2 18 4207.4 -22.06 233.12  
 150.10 0 42 19 3099.57 -14.96 94.27 232.09 27.02 1 33 59 2499.6 -22.05 90.77

Differential Corrections: TDE 6.1895 TRA-1.0502 TC3 -.0787 BAU .1773 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE 1.4976 RRA-1.8470 RC3 -.0863 FAU .00857 SGT 3572.2 SGR 2409.1 SCS 134.1 ST 3350.5 SR 1053.3 SS 1298.8  
 FDE 2.3585 FRA -.7224 FC3 -.0854 B8P 13547 RRT .6534 RRF .8155 RTF .9704 CRT .8337 CRS -.8805 CST -.9959  
 BDE 6.3681 BRA 2.1247 BC3 .1168 F8P -440 SGB 4308.7 R23 .0177 R13 .9994 LSA 3701.8 HSA 565.0 SSA 1.3  
 SGI 3986.8 SGI 1634.1 THA 29.13 EL1 3466.9 EL2 562.1 ALF 15.09

LAUNCH DATE JAN 15 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.683 GAL -.08 AZL 75.15 HCA 189.88 SMA 127.93 ECC .15026 INC14.8484 V1 30.275
RP 108.84 LAP -2.52 LOP 304.21 VP 37.404 GAP 1.34 AZP 104.64 TAL 180.45 TAP 10.31 RCA 108.71 APO 147.16 V2 34.785
RC 100.857 GL 85.62 GP -76.39 ZAL 91.04 ZAP 95.91 ETS 341.63 ZAE 102.47 ETE 247.48 ZAC 106.85 ETC 196.13 CLP-115.95

DISTANCE 410.279

PLANETOCENTRIC CONIC

CS 82.713 VHL 7.919 DLA 62.75 RAL 333.88 RAD 6569.2 VEL 13.567 PTH 2.48 VHP 8.235 DPA -82.01 RAP 67.90 ECC 2.0321
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.34 15 2 30 4688.41 -22.75 251.37 231.42 29.77 16 20 27 4068.4 -29.63 227.23
148.66 0 55 59 2971.87 -22.74 90.68 231.41 29.76 1 45 31 2371.9 -29.62 86.54
31.34 15 2 30 4688.41 -22.75 251.37 231.42 29.77 16 20 27 4068.4 -29.63 227.23
148.66 0 55 59 2971.87 -22.74 90.68 231.41 29.76 1 45 31 2371.9 -29.62 86.54
31.34 15 2 30 4688.41 -22.75 251.37 231.42 29.77 16 20 27 4068.4 -29.63 227.23
148.66 0 55 59 2971.87 -22.74 90.68 231.41 29.76 1 45 31 2371.9 -29.62 86.54

DIFFERENTIAL CORRECTIONS

TDE 3.2752 TRA-1.0485 TC3 -.3086 BAW .4231
RDE 3.6537 NRA-1.1045 FC3 -.3993 FAU .02494
FDE 2.8194 FRA -.7874 RC3 -.3444 B8P 13836
BDE 4.8068 BRA 1.5236 BC3 .5046 F8P -706

MID-COURSE EXECUTION ACCURACY

8GT 2933.4 8GR 3230.3 8G3 210.4
RRT .9992 RRF .9985 RTF .9956
8GB 4363.4 R23 .0704 R13 .9974
8G1 4362.6 8G2 86.6 THA 47.76

ORBIT DETERMINATION ACCURACY

ST 2421.3 SR 2694.9 SS 1474.3
CRT .9999 CRS -.9998 CST -.9995
LSA 3911.2 MSA 38.9 SSA .7
EL1 3622.8 EL2 20.6 ALF 48.06

LAUNCH DATE JAN 15 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.674 GAL .03 AZL 78.17 HCA 192.97 SMA 127.87 ECC .15080 INC11.8339 V1 30.275
RP 108.95 LAP -2.64 LOP 307.38 VP 37.397 GAP 1.67 AZP 101.54 TAL 179.85 TAP 12.82 RCA 108.59 APO 147.16 V2 34.784
RC 103.240 GL 80.86 GP -68.92 ZAL 90.82 ZAP 99.46 ETS 338.84 ZAE 109.11 ETE 243.97 ZAC 108.58 ETC 193.14 CLP-117.17

DISTANCE 424.421

PLANETOCENTRIC CONIC

CS 42.387 VHL 6.511 DLA 61.15 RAL 339.22 RAD 6568.6 VEL 12.797 PTH 2.33 VHP 6.545 DPA -57.32 RAP 56.28 ECC 1.6976
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.23 15 28 33 4563.30 -27.99 226.11 232.22 33.12 16 44 37 3963.3 -34.59 221.22
146.77 1 12 41 2882.73 -27.98 87.66 232.20 33.11 2 0 44 2282.7 -34.58 82.78
33.23 15 28 33 4563.30 -27.99 226.11 232.22 33.12 16 44 37 3963.3 -34.59 221.22
146.77 1 12 41 2882.73 -27.98 87.66 232.20 33.11 2 0 44 2282.7 -34.58 82.78
33.23 15 28 33 4563.30 -27.99 226.11 232.22 33.12 16 44 37 3963.3 -34.59 221.22
146.77 1 12 41 2882.73 -27.98 87.66 232.20 33.11 2 0 44 2282.7 -34.58 82.78

DIFFERENTIAL CORRECTIONS

TDE 2.8592 TRA -.8929 TC3 -.6084 BAW .4961
RDE 3.0384 NRA -.6955 FC3 -.8295 FAU .03920
FDE 3.3867 FRA -.7339 RC3 -.8005 B8P 13280
BDE 4.1722 BRA 1.1318 BC3 .8755 F8P -958

MID-COURSE EXECUTION ACCURACY

8GT 3100.5 8GR 3071.1 8G3 296.3
RRT .9919 RRF .9991 RTF .9881
8GB 4363.9 R23 .0889 R13 .9955
8G1 4355.0 8G2 277.9 THA 44.73

ORBIT DETERMINATION ACCURACY

ST 2563.4 SR 2701.0 SS 1700.8
CRT .9987 CRS -1.0000 CST -.9983
LSA 4092.4 MSA 105.5 SSA 1.9
EL1 3722.6 EL2 93.7 ALF 46.50

LAUNCH DATE JAN 15 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.663 GAL .14 AZL 80.03 HCA 196.10 SMA 127.80 ECC .15150 INC 9.9716 V1 30.275
RP 108.85 LAP -2.75 LOP 310.54 VP 37.388 GAP 2.00 AZP 99.59 TAL 179.22 TAP 15.32 RCA 108.44 APO 147.16 V2 34.783
RC 105.843 GL 57.88 GP -62.22 ZAL 90.39 ZAP 103.49 ETS 336.23 ZAE 114.58 ETE 239.72 ZAC 109.81 ETC 190.01 CLP-120.03

DISTANCE 430.566

PLANETOCENTRIC CONIC

CS 32.127 VHL 5.668 DLA 59.50 RAL 344.31 RAD 6568.3 VEL 12.389 PTH 2.24 VHP 5.585 DPA -52.60 RAP 47.98 ECC 1.5287
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.21 15 53 48 4484.30 -31.36 221.18 233.28 36.47 17 8 32 3884.3 -37.66 215.60
144.79 1 28 1 2821.79 -31.35 85.14 233.27 36.46 2 15 3 2221.8 -37.65 79.56
35.21 15 53 48 4484.30 -31.36 221.18 233.28 36.47 17 8 32 3884.3 -37.66 215.60
144.79 1 28 1 2821.79 -31.35 85.14 233.27 36.46 2 15 3 2221.8 -37.65 79.56
35.21 15 53 48 4484.30 -31.36 221.18 233.28 36.47 17 8 32 3884.3 -37.66 215.60
144.79 1 28 1 2821.79 -31.35 85.14 233.27 36.46 2 15 3 2221.8 -37.65 79.56

DIFFERENTIAL CORRECTIONS

TDE 2.7071 TRA -.7712 TC3 -.9895 BAW .5704
RDE 2.4948 NRA -.4551 RC3 -.8857 FAU .05741
FDE 3.8458 FRA -.6887 FC3 -1.5470 B8P 13674
BDE 3.6813 BRA .8935 BC3 1.3280 F8P -1299

MID-COURSE EXECUTION ACCURACY

8GT 3332.6 8GR 2881.7 8G3 386.0
RRT .9877 RRF .9989 RTF .9840
8GB 4392.7 R23 .1070 R13 .9933
8G1 4379.4 8G2 340.5 THA 40.60

ORBIT DETERMINATION ACCURACY

ST 2775.2 SR 2536.6 SS 1886.1
CRT .9982 CRS -1.0000 CST -.9979
LSA 4204.4 MSA 127.8 SSA 2.4
EL1 3758.2 EL2 111.2 ALF 42.42

LAUNCH DATE JAN 15 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.650 GAL .28 AZL 81.30 HCA 199.23 SMA 127.71 ECC .15233 INC 8.7030 V1 30.275
RP 108.85 LAP -2.88 LOP 313.70 VP 37.379 GAP 2.33 AZP 98.22 TAL 178.55 TAP 17.79 RCA 108.28 APO 147.17 V2 34.783
RC 108.045 GL 54.87 GP -56.14 ZAL 89.78 ZAP 107.78 ETS 334.15 ZAE 119.07 ETE 235.16 ZAC 110.17 ETC 187.16 CLP-123.24

DISTANCE 436.706

PLANETOCENTRIC CONIC

CS 26.188 VHL 5.115 DLA 57.92 RAL 348.94 RAD 6568.1 VEL 12.147 PTH 2.18 VHP 5.006 DPA -47.99 RAP 41.77 ECC 1.4307
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.11 16 17 12 4423.80 -33.50 216.72 234.44 39.56 17 30 56 3823.6 -39.50 210.54
142.89 1 41 35 2779.94 -33.49 83.08 234.43 39.56 2 27 55 2179.9 -39.49 76.90
37.11 16 17 12 4423.80 -33.50 216.72 234.44 39.56 17 30 56 3823.6 -39.50 210.54
142.89 1 41 35 2779.94 -33.49 83.08 234.43 39.56 2 27 55 2179.9 -39.49 76.90
37.11 16 17 12 4423.80 -33.50 216.72 234.44 39.56 17 30 56 3823.6 -39.50 210.54
142.89 1 41 35 2779.94 -33.49 83.08 234.43 39.56 2 27 55 2179.9 -39.49 76.90

DIFFERENTIAL CORRECTIONS

TDE 2.6395 TRA -.6584 TC3 -1.3888 BAW .6024
RDE 2.0687 NRA -.2780 RC3 -1.0207 FAU .07153
FDE 4.1738 FRA -.9272 FC3 -2.3883 B8P 13707
BDE 3.3536 BRA .7147 BC3 1.7219 F8P -1576

MID-COURSE EXECUTION ACCURACY

8GT 3581.0 8GR 2808.3 8G3 484.9
RRT .9847 RRF .9984 RTF .9811
8GB 4414.1 R23 .1252 R13 .9906
8G1 4398.7 8G2 368.3 THA 36.09

ORBIT DETERMINATION ACCURACY

ST 2985.9 SR 2324.0 SS 2027.2
CRT .9979 CRS -1.0000 CST -.9976
LSA 4290.2 MSA 142.1 SSA 3.1
EL1 3781.8 EL2 117.7 ALF 37.88

LAUNCH DATE JAN 15 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.636 GAL .39 AZL 82.22 HCA 202.38 SMA 127.61 ECC .15330 INC 7.7792 V1 30.275  
 RP 108.84 LAP -2.95 LOP 316.87 VP 37.369 GAP 2.65 AZP 97.20 TAL 177.84 TAP 20.22 RCA 108.05 APO 147.18 V2 34.784  
 RC 110.448 GL 52.26 GP -50.64 ZAL 89.00 ZAP 112.15 ET8 332.56 ZAE 122.65 ETE 230.45 ZAC 110.46 ETC 184.70 CLP-126.47

DISTANCE 442.835

PLANETOCENTRIC CONIC

C3 22.375 VHL 4.730 DLA 56.46 RAL 353.17 RAD 6567.9 VEL 11.990 PTH 2.14 VHP 4.650 DPA -43.59 RAP 37.03 ECC 1.3682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.88 16 36 50 4375.68 -34.84 212.76 235.71 42.32 17 51 46 3775.7 -40.55 208.10  
 141.12 1 53 41 2751.05 -34.83 81.43 235.69 42.31 2 39 32 2151.1 -40.54 74.76  
 36.88 16 36 50 4375.68 -34.84 212.76 235.71 42.32 17 51 46 3775.7 -40.55 208.10  
 141.12 1 53 41 2751.05 -34.83 81.43 235.69 42.31 2 39 32 2151.1 -40.54 74.76  
 36.88 16 36 50 4375.68 -34.84 212.76 235.71 42.32 17 51 46 3775.7 -40.55 208.10  
 141.12 1 53 41 2751.05 -34.83 81.43 235.69 42.31 2 39 32 2151.1 -40.54 74.76

DIFFERENTIAL CORRECTIONS

TDE 2.6002 TRA -.5534 TC3-1.0004 BAU .6293  
 RDE 1.7251 RRA -.1932 RC3-1.0003 FAU .08506  
 FDE 4.3410 FRA -.3472 FC3-3.2139 B8P 13828  
 BDE 3.1204 BRA .5748 BC3 2.1038 F8P -1807

MID-COURSE EXECUTION ACCURACY

86T 3780.5 86R 2354.2 86S 528.9  
 86T .9829 86R .9976 86S .9793  
 86B 4455.6 86Z .1400 R13 .9878  
 86I 4438.3 86E 369.5 THA 31.71

ORBIT DETERMINATION ACCURACY

ST 3170.9 SR 2092.3 SS 2114.6  
 CRT .9978 CRS-1.0000 CST -.9974  
 LSA 4345.3 MSA 149.8 SSA 5.9  
 EL1 3797.3 EL2 115.6 ALF 33.40

LAUNCH DATE JAN 15 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.620 GAL .53 AZL 82.93 HCA 205.53 SMA 127.50 ECC .15440 INC 7.0730 V1 30.275  
 RP 108.84 LAP -3.04 LOP 320.03 VP 37.359 GAP 2.97 AZP 96.39 TAL 177.08 TAP 22.60 RCA 107.82 APO 147.19 V2 34.786  
 RC 112.844 GL 49.85 GP -45.70 ZAL 88.05 ZAP 116.44 ET8 331.47 ZAE 125.41 ETE 225.74 ZAC 110.60 ETC 182.64 CLP-129.60

DISTANCE 448.951

PLANETOCENTRIC CONIC

C3 19.805 VHL 4.450 DLA 55.12 RAL 357.09 RAD 6567.8 VEL 11.882 PTH 2.11 VHP 4.436 DPA -39.46 RAP 33.40 ECC 1.3259  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.51 16 50 50 4337.05 -35.64 209.28 237.12 44.72 18 11 16 3737.0 -41.10 202.23  
 139.49 2 4 49 2731.08 -35.63 80.13 237.10 44.71 2 50 20 2131.1 -41.09 73.09  
 40.51 16 50 50 4337.05 -35.64 209.28 237.12 44.72 18 11 16 3737.0 -41.10 202.23  
 139.49 2 4 49 2731.08 -35.63 80.13 237.10 44.71 2 50 20 2131.1 -41.09 73.09  
 40.51 16 50 50 4337.05 -35.64 209.28 237.12 44.71 2 50 20 2131.1 -41.09 202.23  
 139.49 2 4 49 2731.08 -35.63 80.13 237.10 44.71 2 50 20 2131.1 -41.09 73.09

DIFFERENTIAL CORRECTIONS

TDE 2.5756 TRA -.4507 TC3-2.2159 BAU .6548  
 RDE 1.4494 RRA -.0678 RC3-1.0000 FAU .09145  
 FDE 4.3698 FRA -.1422 FC3-3.9977 B8P 14086  
 BDE 2.9554 BRA .4557 BC3 2.4730 F8P -1991

MID-COURSE EXECUTION ACCURACY

86T 3989.4 86R 2111.9 86S 575.8  
 86T .9816 86R .9964 86S .9779  
 86B 4513.9 86Z .1503 R13 .9850  
 86I 4499.7 86E 358.0 THA 27.65

ORBIT DETERMINATION ACCURACY

ST 3330.5 SR 1866.8 SS 2156.7  
 CRT .9978 CRS-1.0000 CST -.9972  
 LSA 4382.3 MSA 154.7 SSA 4.7  
 EL1 3816.5 EL2 109.1 ALF 29.24

LAUNCH DATE JAN 15 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.603 GAL .69 AZL 83.49 HCA 208.68 SMA 127.39 ECC .15564 INC 6.5126 V1 30.275  
 RP 108.83 LAP -3.12 LOP 323.20 VP 37.348 GAP 3.29 AZP 95.72 TAL 176.27 TAP 24.95 RCA 107.56 APO 147.21 V2 34.789  
 RC 115.239 GL 47.57 GP -41.29 ZAL 86.96 ZAP 120.56 ET8 330.72 ZAE 127.45 ETE 221.18 ZAC 110.72 ETC 180.95 CLP-132.58

DISTANCE 455.052

PLANETOCENTRIC CONIC

C3 17.887 VHL 4.241 DLA 53.91 RAL 357.79 RAD 6567.7 VEL 11.805 PTH 2.09 VHP 4.318 DPA -35.62 RAP 30.64 ECC 1.2960  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.00 17 17 59 4305.30 -36.09 206.23 238.70 46.80 18 29 44 3705.3 -41.33 198.89  
 138.00 2 15 19 2717.52 -36.08 79.14 238.69 46.80 3 0 36 2117.5 -41.32 71.80  
 42.00 17 17 59 4305.30 -36.09 206.23 238.70 46.80 18 29 44 3705.3 -41.33 198.89  
 138.00 2 15 19 2717.52 -36.08 79.14 238.69 46.80 3 0 36 2117.5 -41.32 71.80  
 42.00 17 17 59 4305.30 -36.09 206.23 238.70 46.80 18 29 44 3705.3 -41.33 198.89  
 138.00 2 15 19 2717.52 -36.08 79.14 238.69 46.80 3 0 36 2117.5 -41.32 71.80

DIFFERENTIAL CORRECTIONS

TDE 2.5598 TRA -.3440 TC3-2.6143 BAU .6781  
 RDE 1.2283 RRA -.0030 RC3-1.0865 FAU .09619  
 FDE 4.2901 FRA .0806 FC3-4.6295 B8P 14243  
 BDE 2.8392 BRA .3440 BC3 2.8197 F8P -2080

MID-COURSE EXECUTION ACCURACY

86T 4183.1 86R 1885.9 86S 605.1  
 86T .9800 86R .9945 86S .9764  
 86B 4588.5 86Z .1564 R13 .9822  
 86I 4575.7 86E 343.2 THA 23.98

ORBIT DETERMINATION ACCURACY

ST 3466.8 SR 1659.6 SS 2162.5  
 CRT .9977 CRS -.9999 CST -.9970  
 LSA 4407.3 MSA 158.9 SSA 5.5  
 EL1 3842.3 EL2 100.4 ALF 25.55

LAUNCH DATE JAN 15 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.584 GAL .85 AZL 83.95 HCA 211.83 SMA 127.28 ECC .15702 INC 6.0546 V1 30.275  
 RP 108.82 LAP -3.19 LOP 326.36 VP 37.337 GAP 3.61 AZP 95.15 TAL 175.42 TAP 27.26 RCA 107.28 APO 147.24 V2 34.792  
 RC 117.830 GL 45.45 GP -37.38 ZAL 85.73 ZAP 124.45 ET8 330.25 ZAE 128.87 ETE 216.88 ZAC 110.88 ETC 179.59 CLP-135.39

DISTANCE 461.137

PLANETOCENTRIC CONIC

C3 16.867 VHL 4.082 DLA 52.80 RAL 4.34 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 4.267 DPA -32.10 RAP 28.58 ECC 1.2743  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.37 17 36 10 4278.78 -36.30 203.55 240.47 48.81 18 47 29 3678.8 -41.33 195.98  
 136.63 2 25 25 2708.78 -36.29 78.41 240.45 48.80 3 10 34 2108.8 -41.32 70.84  
 43.37 17 36 10 4278.78 -36.30 203.55 240.47 48.81 18 47 29 3678.8 -41.33 195.98  
 136.63 2 25 25 2708.78 -36.29 78.41 240.45 48.80 3 10 34 2108.8 -41.32 70.84  
 43.37 17 36 10 4278.78 -36.30 203.55 240.47 48.81 18 47 29 3678.8 -41.33 195.98  
 136.63 2 25 25 2708.78 -36.29 78.41 240.45 48.80 3 10 34 2108.8 -41.32 70.84

DIFFERENTIAL CORRECTIONS

TDE 2.5447 TRA -.2503 TC3-3.0023 BAU .7046  
 RDE 1.0489 RRA .0399 RC3 -.9935 FAU .09873  
 FDE 4.1241 FRA .2875 FC3-5.1285 B8P 14616  
 BDE 2.7524 BRA .2416 BC3 3.1824 F8P -2150

MID-COURSE EXECUTION ACCURACY

86T 4366.8 86R 1883.3 86S 619.9  
 86T .9787 86R .9918 86S .9756  
 86B 4680.1 86Z .1547 R13 .9800  
 86I 4669.0 86E 323.0 THA 20.77

ORBIT DETERMINATION ACCURACY

ST 3576.0 SR 1472.5 SS 2135.7  
 CRT .9979 CRS -.9999 CST -.9967  
 LSA 4414.9 MSA 160.5 SSA 6.4  
 EL1 3866.3 EL2 89.0 ALF 22.33

LAUNCH DATE JAN 15 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUN 30 1969

MELIOCENTRIC CONIC

DISTANCE 467.207

RL 147.16 LAL .00 LOL 114.67 VL 27.564 GAL 1.03 AZL 84.33 HCA 214.99 SMA 127.13 ECC .15854 INC 5.6713 V1 30.275
RP 108.91 LAP -3.25 LOP 329.53 VP 37.328 GAP 3.93 AZP 94.65 TAL 174.53 TAP 29.52 RCA 106.97 APO 147.28 V2 34.796
RC 120.015 GL 43.43 GP -33.93 ZAL 84.37 ZAP 128.09 ETS 329.98 ZAE 129.79 EYE 212.94 ZAC 111.14 ETC 178.51 CLP-138.03

PLANETOCENTRIC CONIC

CS 19.692 VHL 3.961 DLA 51.79 RAL 7.78 RAD 6567.6 VEL 11.708 PTH 2.06 VHP 4.266 DPA -28.87 RAP 27.10 ECC 1.2583
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.64 17 53 46 4256.43 -36.33 201.19 242.42 50.16 19 4 42 3656.4 -41.19 193.45
135.36 2 35 21 2703.68 -36.32 77.90 242.41 50.15 3 20 24 2103.7 -41.18 70.16
44.64 17 53 46 4256.43 -36.33 201.19 242.42 50.16 19 4 42 3656.4 -41.19 193.45
135.36 2 35 21 2703.68 -36.32 77.90 242.41 50.15 3 20 24 2103.7 -41.18 70.16
44.64 17 53 46 4256.43 -36.33 201.19 242.42 50.16 19 4 42 3656.4 -41.19 193.45
135.36 2 35 21 2703.68 -36.32 77.90 242.41 50.15 3 20 24 2103.7 -41.18 70.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5390 TRA -.1200 TC3-3.3588 BAU .7299 86T 4537.7 86R 1503.8 86S 622.3 ST 3665.6 SR 1311.4 SS 2089.5
RDE .9039 RRA .0713 RC3 -.9067 FAU .09856 RRT .9765 RRF .9879 RTF .9748 CRT .9980 CRS -.9997 CST -.9984
FDE 3.9116 FRA .4897 FC3-5.4372 BSP 14935 86B 4780.4 86Z .1475 R13 .9779 LSA 4415.5 MSA 162.3 SSA 7.3
BOE 2.6902 BRA .1449 BC3 3.4791 FSP -2153 86I 4770.4 86E 307.9 THA 18.01 EL1 3892.4 EL2 77.2 ALF 19.66

LAUNCH DATE JAN 15 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 2 1969

MELIOCENTRIC CONIC

DISTANCE 473.260

RL 147.16 LAL .00 LOL 114.67 VL 27.543 GAL 1.22 AZL 84.66 HCA 218.15 SMA 126.99 ECC<.16020 INC 5.3439 V1 30.275
RP 108.89 LAP -3.30 LOP 332.70 VP 37.315 GAP 4.24 AZP 94.21 TAL 173.80 TAP 31.75 RCA 106.64 APO 147.33 V2 34.800
RC 122.384 GL 41.51 GP -30.90 ZAL 82.89 ZAP 131.47 ETS 329.85 ZAE 130.34 EYE 209.38 ZAC 111.92 ETC 177.66 CLP-140.51

PLANETOCENTRIC CONIC

CS 14.973 VHL 3.870 DLA 50.84 RAL 11.17 RAD 6567.6 VEL 11.877 PTH 2.05 VHP 4.301 DPA -25.92 RAP 26.09 ECC 1.2464
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.83 18 10 56 4237.41 -36.23 199.10 244.55 51.52 19 21 33 3637.4 -40.93 191.23
134.17 2 45 10 2701.58 -36.22 77.50 244.54 51.51 3 30 11 2101.6 -40.92 69.71
45.83 18 10 56 4237.41 -36.23 199.10 244.55 51.52 19 21 33 3637.4 -40.93 191.23
134.17 2 45 10 2701.58 -36.22 77.50 244.54 51.51 3 30 11 2101.6 -40.92 69.71
45.83 18 10 56 4237.41 -36.23 199.10 244.55 51.52 19 21 33 3637.4 -40.93 191.23
134.17 2 45 10 2701.58 -36.22 77.50 244.54 51.51 3 30 11 2101.6 -40.92 69.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5195 TRA -.0109 TC3-3.6887 BAU .7582 86T 4697.8 86R 1346.8 86S 615.2 ST 3731.6 SR 1172.5 SS 2025.3
RDE .7805 RRA .0921 RC3 -.8139 FAU .09685 RRT .9736 RRF .9826 RTF .9740 CRT .9983 CRS -.9995 CST -.9961
FDE 3.6656 FRA .6688 FC3-5.5999 BSP 15336 86B 4888.8 86Z .1334 R13 .9764 LSA 4401.6 MSA 163.0 SSA 8.1
BOE 2.6406 BRA .0927 BC3 3.7774 FSP -2154 86I 4877.8 86E 295.8 THA 15.65 EL1 3910.8 EL2 64.6 ALF 17.42

LAUNCH DATE JAN 15 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 4 1969

MELIOCENTRIC CONIC

DISTANCE 479.297

RL 147.16 LAL .00 LOL 114.67 VL 27.521 GAL 1.42 AZL 84.94 HCA 221.30 SMA 126.84 ECC .16202 INC 5.0594 V1 30.275
RP 108.88 LAP -3.34 LOP 335.87 VP 37.304 GAP 4.56 AZP 93.80 TAL 178.64 TAP 33.94 RCA 106.29 APO 147.39 V2 34.805
RC 124.786 GL 39.68 GP -28.24 ZAL 81.30 ZAP 134.60 ETS 329.81 ZAE 130.59 EYE 208.23 ZAC 112.04 ETC 176.99 CLP-142.84

PLANETOCENTRIC CONIC

CS 14.451 VHL 3.801 DLA 49.96 RAL 14.51 RAD 6567.6 VEL 11.655 PTH 2.05 VHP 4.365 DPA -23.22 RAP 25.47 ECC 1.2378
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.95 18 27 51 4221.11 -36.03 197.23 246.86 52.70 19 38 12 3621.1 -40.59 189.26
133.05 2 54 56 2702.08 -36.02 77.44 246.85 52.69 3 39 58 2102.1 -40.58 69.47
46.95 18 27 51 4221.11 -36.03 197.23 246.86 52.70 19 38 12 3621.1 -40.59 189.26
133.05 2 54 56 2702.08 -36.02 77.44 246.85 52.69 3 39 58 2102.1 -40.58 69.47
46.95 18 27 51 4221.11 -36.03 197.23 246.86 52.70 19 38 12 3621.1 -40.59 189.26
133.05 2 54 56 2702.08 -36.02 77.44 246.85 52.69 3 39 58 2102.1 -40.58 69.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5084 TRA .1120 TC3-3.9777 BAU .7808 86T 4848.7 86R 1213.1 86S 601.9 ST 3782.6 SR 1057.4 SS 1954.8
RDE .8997 RRA .1071 RC3 -.7182 FAU .09365 RRT .9691 RRF .9754 RTF .9735 CRT .9987 CRS -.9991 CST -.9957
FDE 3.4157 FRA .8356 FC3-5.6103 BSP 15671 86B 4988.1 86Z .1161 R13 .9752 LSA 4384.2 MSA 163.8 SSA 9.0
BOE 2.6042 BRA .1555 BC3 4.0417 FSP -2074 86I 4989.8 86E 290.8 THA 13.68 EL1 3927.3 EL2 51.9 ALF 15.60

LAUNCH DATE JAN 15 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 6 1969

MELIOCENTRIC CONIC

DISTANCE 485.316

RL 147.16 LAL .00 LOL 114.67 VL 27.498 GAL 1.83 AZL 85.19 HCA 224.47 SMA 126.69 ECC .16398 INC 4.8085 V1 30.275
RP 108.86 LAP -3.37 LOP 339.04 VP 37.292 GAP 4.88 AZP 93.44 TAL 171.64 TAP 36.10 RCA 105.91 APO 147.46 V2 34.811
RC 127.128 GL 37.87 GP -25.90 ZAL 79.84 ZAP 137.49 ETS 329.81 ZAE 130.85 EYE 205.46 ZAC 112.70 ETC 176.46 CLP-145.03

PLANETOCENTRIC CONIC

CS 14.088 VHL 3.753 DLA 49.12 RAL 17.83 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 4.452 DPA -20.74 RAP 25.20 ECC 1.2318
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.03 18 44 38 4207.03 -35.74 195.54 249.32 53.74 19 54 45 3607.0 -40.18 187.52
131.97 3 4 38 2704.90 -35.72 77.45 249.31 53.73 3 49 43 2104.9 -40.17 69.42
48.03 18 44 38 4207.03 -35.74 195.54 249.32 53.74 19 54 45 3607.0 -40.18 187.52
131.97 3 4 38 2704.90 -35.72 77.45 249.31 53.73 3 49 43 2104.9 -40.17 69.42
48.03 18 44 38 4207.03 -35.74 195.54 249.32 53.74 19 54 45 3607.0 -40.18 187.52
131.97 3 4 38 2704.90 -35.72 77.45 249.31 53.73 3 49 43 2104.9 -40.17 69.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4917 TRA .2400 TC3-4.2356 BAU .8083 86T 4989.1 86R 1088.3 86S 583.4 ST 3808.6 SR 959.2 SS 1872.4
RDE .8280 RRA .1161 RC3 -.6243 FAU .09968 RRT .9630 RRF .9661 RTF .9732 CRT .9991 CRS -.9984 CST -.9953
FDE 3.1582 FRA .9772 FC3-5.5237 BSP 16085 86B 5108.5 86Z .0956 R13 .9744 LSA 4347.9 MSA 163.8 SSA 9.9
BOE 2.5892 BRA .2666 BC3 4.2814 FSP -2013 86I 5100.3 86E 289.6 THA 12.01 EL1 3927.3 EL2 39.1 ALF 14.13

LAUNCH DATE JAN 15 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

DISTANCE 491.319

RL 147.16 LAL .00 LOL 114.67 VL 27.475 GAL 1.06 AZL 85.42 MCA 227.63 SMA 126.53 ECC .16611 INC 4.5842 V1 30.275  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.201 GAP 5.20 AZP 93.09 TAL 170.60 TAP 38.23 RCA 105.51 APO 147.55 V2 34.818  
 RC 129.481 GL 36.13 GP -23.85 ZAL 77.83 ZAP 140.16 ETS 329.84 ZAE 130.55 ETE 201.06 ZAC 113.50 ETC 176.04 CLP-147.09

PLANETOCENTRIC CONIC

C3 13.850 VHL 3.723 DLA 46.30 RAL 21.14 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.557 DPA -16.45 RAP 25.21 ECC 1.2281  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.08 19 1 20 4194.83 -35.37 194.01 251.92 54.67 20 11 15 3594.8 -39.70 185.94  
 130.92 3 14 17 2709.88 -35.36 77.62 251.91 54.65 3 59 27 2109.9 -39.69 69.55  
 49.08 19 1 20 4194.83 -35.37 194.01 251.92 54.67 20 11 15 3594.8 -39.70 185.94  
 130.92 3 14 17 2709.88 -35.36 77.62 251.91 54.65 3 59 27 2109.9 -39.69 69.55  
 49.08 19 1 20 4194.83 -35.37 194.01 251.92 54.67 20 11 15 3594.8 -39.70 185.94  
 130.92 3 14 17 2709.88 -35.36 77.62 251.91 54.65 3 59 27 2109.9 -39.69 69.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4729 TRA .3745 TC3-4.4522 BAU .8309  
 RDE .5678 RRA .1221 RC3 -.5373 FAU .08553  
 FDE 2.9050 FRA 1.1023 FC3-5.3428 B8P 16491  
 BDE 2.5373 BRA .3939 BC3 4.4645 F8P -1940

8GT 5121.0 8GR 1001.8 8G3 562.1  
 RRT .9545 RRF .9543 RTF .9730  
 8GB 5218.1 R23 .0756 R13 .9738  
 8G1 5209.9 8G2 293.5 THA 10.61

ST 3816.2 SR 878.1 S8 1786.5  
 CRT .9995 CR8 -.9973 C8T -.9949  
 LSA 4301.1 MSA 163.9 S8A 10.7  
 EL1 3915.9 EL2 26.6 ALF 12.95

LAUNCH DATE JAN 15 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 497.303

RL 147.16 LAL .00 LOL 114.67 VL 27.450 GAL 2.10 AZL 85.62 MCA 230.79 SMA 126.57 ECC .16841 INC 4.3814 V1 30.275  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.270 GAP 5.52 AZP 92.77 TAL 169.54 TAP 40.33 RCA 105.09 APO 147.65 V2 34.825  
 RC 131.823 GL 34.42 GP -22.04 ZAL 75.96 ZAP 142.63 ETS 329.85 ZAE 130.37 ETE 198.98 ZAC 114.43 ETC 175.71 CLP-149.03

PLANETOCENTRIC CONIC

C3 13.747 VHL 3.708 DLA 47.50 RAL 24.42 RAD 6567.5 VEL 11.625 PTH 2.04 VHP 4.677 DPA -16.34 RAP 25.46 ECC 1.2262  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.13 19 18 3 4184.20 -34.92 192.60 254.65 55.49 20 27 47 3584.2 -39.17 184.51  
 129.07 3 23 49 2716.97 -34.91 77.93 254.64 55.48 4 9 6 2117.0 -39.16 69.84  
 50.13 19 18 3 4184.20 -34.92 192.60 254.65 55.49 20 27 47 3584.2 -39.17 184.51  
 129.07 3 23 49 2716.97 -34.91 77.93 254.64 55.48 4 9 6 2117.0 -39.16 69.84  
 50.13 19 18 3 4184.20 -34.92 192.60 254.65 55.49 20 27 47 3584.2 -39.17 184.51  
 129.07 3 23 49 2716.97 -34.91 77.93 254.64 55.48 4 9 6 2117.0 -39.16 69.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4501 TRA .9159 TC3-4.6281 BAU .8547  
 RDE .5217 RRA .1250 RC3 -.4583 FAU .08094  
 FDE 2.8631 FRA 1.2104 FC3-5.0974 B8P 16887  
 BDE 2.5050 BRA .5310 BC3 4.6508 F8P -1859

8GT 5244.6 8GR 921.1 8G3 538.8  
 RRT .9437 RRF .9400 RTF .9729  
 8GB 5324.9 R23 .0570 R13 .9735  
 8G1 5316.4 8G2 300.6 THA 9.44

ST 3804.1 SR 810.9 S8 1697.1  
 CRT .9998 CR8 -.9956 C8T -.9944  
 LSA 4240.5 MSA 163.9 S8A 11.6  
 EL1 3889.6 EL2 15.7 ALF 12.03

LAUNCH DATE JAN 15 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 503.269

RL 147.16 LAL .00 LOL 114.67 VL 27.425 GAL 2.35 AZL 85.80 MCA 235.96 SMA 126.21 ECC .17088 INC 4.1959 V1 30.275  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.259 GAP 5.84 AZP 92.47 TAL 168.44 TAP 42.40 RCA 104.64 APO 147.77 V2 34.833  
 RC 134.153 GL 32.74 GP -20.45 ZAL 74.02 ZAP 144.93 ETS 329.84 ZAE 130.12 ETE 197.17 ZAC 115.49 ETC 175.44 CLP-150.86

PLANETOCENTRIC CONIC

C3 13.743 VHL 3.707 DLA 46.70 RAL 27.70 RAD 6567.5 VEL 11.624 PTH 2.04 VHP 4.810 DPA -14.36 RAP 25.93 ECC 1.2262  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.18 19 34 48 4174.87 -34.41 191.28 257.50 56.24 20 44 23 3574.9 -38.57 183.19  
 128.82 3 33 10 2726.19 -34.40 78.39 257.49 56.23 4 18 36 2126.2 -38.56 70.30  
 51.18 19 34 48 4174.87 -34.41 191.28 257.50 56.24 20 44 23 3574.9 -38.57 183.19  
 128.82 3 33 10 2726.19 -34.40 78.39 257.49 56.23 4 18 36 2126.2 -38.56 70.30  
 51.18 19 34 48 4174.87 -34.41 191.28 257.50 56.24 20 44 23 3574.9 -38.57 183.19  
 128.82 3 33 10 2726.19 -34.40 78.39 257.49 56.23 4 18 36 2126.2 -38.56 70.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4289 TRA .6891 TC3-4.7503 BAU .8736  
 RDE .4883 RRA .1291 RC3 -.3851 FAU .07597  
 FDE 2.4391 FRA 1.3106 FC3-4.7858 B8P 17198  
 BDE 2.4752 BRA .6815 BC3 4.7659 F8P -1788

8GT 5361.7 8GR 855.1 8G3 515.0  
 RRT .9300 RRF .9234 RTF .9729  
 8GB 5429.4 R23 .0423 R13 .9733  
 8G1 5420.5 8G2 310.9 THA 8.46

ST 3779.6 SR 756.7 S8 1610.0  
 CRT .9999 CR8 -.9932 C8T -.9939  
 LSA 4174.1 MSA 164.7 S8A 12.3  
 EL1 3854.6 EL2 12.8 ALF 11.32

LAUNCH DATE JAN 15 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 509.216

RL 147.16 LAL .00 LOL 114.67 VL 27.400 GAL 2.62 AZL 85.98 MCA 237.13 SMA 126.04 ECC .17355 INC 4.0248 V1 30.275  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.248 GAP 6.17 AZP 92.19 TAL 167.33 TAP 44.45 RCA 104.16 APO 147.91 V2 34.841  
 RC 136.471 GL 31.09 GP -19.04 ZAL 72.01 ZAP 147.06 ETS 329.79 ZAE 129.85 ETE 195.62 ZAC 116.67 ETC 175.22 CLP-152.60

PLANETOCENTRIC CONIC

C3 13.841 VHL 3.720 DLA 45.89 RAL 30.95 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.956 DPA -12.52 RAP 26.58 ECC 1.2278  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.24 19 51 38 4166.58 -33.84 190.04 260.44 56.92 21 1 4 3566.6 -37.92 181.96  
 127.76 3 42 16 2737.60 -33.82 79.01 260.43 56.91 4 27 53 2137.6 -37.90 70.93  
 52.24 19 51 38 4166.58 -33.84 190.04 260.44 56.92 21 1 4 3566.6 -37.92 181.96  
 127.76 3 42 16 2737.60 -33.82 79.01 260.43 56.91 4 27 53 2137.6 -37.90 70.93  
 52.24 19 51 38 4166.58 -33.84 190.04 260.44 56.92 21 1 4 3566.6 -37.92 181.96  
 127.76 3 42 16 2737.60 -33.82 79.01 260.43 56.91 4 27 53 2137.6 -37.90 70.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3951 TRA .8263 TC3-4.8397 BAU .8976  
 RDE .4582 RRA .1308 RC3 -.3231 FAU .07130  
 FDE 2.2227 FRA 1.3917 FC3-4.4597 B8P 17580  
 BDE 2.4385 BRA .6366 BC3 4.8504 F8P -1687

8GT 5469.8 8GR 799.7 8G3 490.4  
 RRT .9140 RRF .9043 RTF .9731  
 8GB 5527.7 R23 .0293 R13 .9733  
 8G1 5518.3 8G2 321.6 THA 7.64

ST 3730.6 SR 711.0 S8 1518.6  
 CRT .9995 CR8 -.9899 C8T -.9933  
 LSA 4086.8 MSA 163.4 S8A 13.1  
 EL1 3797.7 EL2 22.0 ALF 10.79

LAUNCH DATE JAN 15 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 515.143

RL 147.16 LAL .00 LOL 114.67 VL 27.373 GAL 2.91 AZL 86.13 HCA 240.30 SMA 125.87 ECC .17641 INC 3.8654 V1 30.275  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.237 GAP 6.51 AZP 91.92 TAL 166.18 TAP 46.48 RCA 103.66 APO 148.07 V2 34.830  
 RC 138.775 GL 29.46 GP -17.79 ZAL 69.96 ZAP 149.06 ETS 329.69 ZAE 129.55 ETE 194.27 ZAC 117.95 ETC 175.04 CLP-154.26

PLANETOCENTRIC CONIC

C3 14.040 VHL 3.747 DLA 45.08 RAL 34.17 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 5.112 DPA -10.79 RAP 27.40 ECC 1.2311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.33 20 8 32 4159.22 -33.19 188.86 263.46 57.54 21 17 51 3559.2 -37.20 180.80  
 126.67 3 51 2 2751.22 -33.18 79.77 263.45 57.53 4 36 54 2151.2 -37.19 71.71  
 53.33 20 8 32 4159.22 -33.19 188.86 263.46 57.54 21 17 51 3559.2 -37.20 180.80  
 126.67 3 51 2 2751.22 -33.18 79.77 263.45 57.53 4 36 54 2151.2 -37.19 71.71  
 53.33 20 8 32 4159.22 -33.19 188.86 263.46 57.54 21 17 51 3559.2 -37.20 180.80  
 126.67 3 51 2 2751.22 -33.18 79.77 263.45 57.53 4 36 54 2151.2 -37.19 71.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3594 TRA .9936 TC3-4.8825 BAU .9178 8GT 5570.7 8GR 754.7 8G3 466.0 ST 3666.7 SR 673.8 SS 1429.4  
 RDE .4370 RRA .1325 RC3 -.2688 FAU .06663 RRT .8957 RRF .8835 RTF .9732 CRT .9986 CRS -.9854 CST -.9926  
 FDE 1.0222 FRA 1.4642 FC3-4.1088 B8P 17929 8GB 5621.6 8Z3 .0196 R13 .9734 LSA 3989.2 MSA 167.0 SSA 13.7  
 BDE 2.3995 BRA 1.0024 BC3 4.8899 F8P -1604 8G1 5611.7 8G2 353.2 THA 6.94 EL1 3727.9 EL2 35.2 ALF 10.40

LAUNCH DATE JAN 15 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 521.048

RL 147.16 LAL .00 LOL 114.67 VL 27.347 GAL 3.21 AZL 86.28 HCA 243.47 SMA 125.69 ECC .17949 INC 3.7157 V1 30.275  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.226 GAP 6.85 AZP 91.66 TAL 165.02 TAP 48.48 RCA 103.13 APO 148.25 V2 34.660  
 RC 141.067 GL 27.86 GP -18.67 ZAL 67.87 ZAP 150.92 ETS 329.51 ZAE 129.25 ETE 193.11 ZAC 119.33 ETC 174.87 CLP-155.83

PLANETOCENTRIC CONIC

C3 14.340 VHL 3.787 DLA 44.25 RAL 37.34 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 5.278 DPA -9.15 RAP 28.35 ECC 1.2360  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.46 20 25 32 4152.57 -32.40 187.72 266.55 58.12 21 34 44 3552.6 -36.42 179.69  
 125.54 3 59 24 2767.18 -32.47 80.70 266.54 58.11 4 45 31 2167.2 -36.41 72.67  
 54.46 20 25 32 4152.57 -32.40 187.72 266.55 58.12 21 34 44 3552.6 -36.42 179.69  
 125.54 3 59 24 2767.18 -32.47 80.70 266.54 58.11 4 45 31 2167.2 -36.41 72.67  
 54.46 20 25 32 4152.57 -32.40 187.72 266.55 58.12 21 34 44 3552.6 -36.42 179.69  
 125.54 3 59 24 2767.18 -32.47 80.70 266.54 58.11 4 45 31 2167.2 -36.41 72.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3179 TRA 1.1605 TC3-4.8838 BAU .9372 8GT 5664.2 8GR 717.7 8G3 442.1 ST 3586.3 SR 643.0 SS 1340.7  
 RDE .4212 RRA .1344 RC3 -.2228 FAU .06216 RRT .8758 RRF .8614 RTF .9735 CRT .9969 CRS -.9793 CST -.9919  
 FDE 1.8340 FRA 1.5267 FC3-3.7528 B8P 18277 8GB 5709.5 8Z3 .0119 R13 .9736 LSA 3878.6 MSA 169.5 SSA 14.3  
 BDE 2.3559 BRA 1.1772 BC3 4.8889 F8P -1527 8G1 5699.1 8G2 344.4 THA 6.36 EL1 3643.2 EL2 49.9 ALF 10.14

LAUNCH DATE JAN 15 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 526.931

RL 147.16 LAL .00 LOL 114.67 VL 27.320 GAL 3.53 AZL 86.43 HCA 246.64 SMA 125.52 ECC .18279 INC 3.5740 V1 30.275  
 RP 108.68 LAP -3.28 LOP 357.21 VP 37.215 GAP 7.20 AZP 91.42 TAL 163.83 TAP 50.47 RCA 102.57 APO 148.46 V2 34.870  
 RC 143.344 GL 26.28 GP -19.68 ZAL 65.74 ZAP 152.88 ETS 329.26 ZAE 128.96 ETE 192.10 ZAC 120.79 ETC 174.72 CLP-157.33

PLANETOCENTRIC CONIC

C3 14.743 VHL 3.840 DLA 45.40 RAL 40.47 RAD 6567.6 VEL 11.667 PTH 2.05 VHP 5.454 DPA -7.60 RAP 29.43 ECC 1.2426  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.63 20 42 36 4146.52 -31.70 186.61 269.70 58.65 21 51 42 3546.5 -35.59 178.62  
 124.37 4 7 17 2785.96 -31.69 81.79 269.69 58.64 4 53 42 2185.6 -35.58 73.81  
 55.63 20 42 36 4146.52 -31.70 186.61 269.70 58.65 21 51 42 3546.5 -35.59 178.62  
 124.37 4 7 17 2785.96 -31.69 81.79 269.69 58.64 4 53 42 2185.6 -35.58 73.81  
 55.63 20 42 36 4146.52 -31.70 186.61 269.70 58.65 21 51 42 3546.5 -35.59 178.62  
 124.37 4 7 17 2785.96 -31.69 81.79 269.69 58.64 4 53 42 2185.6 -35.58 73.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2757 TRA 1.3596 TC3-4.8330 BAU .9533 8GT 5753.4 8GR 688.9 8G3 419.2 ST 3499.3 SR 618.6 SS 1258.7  
 RDE .4106 RRA .1373 RC3 -.1822 FAU .05759 RRT .8547 RRF .8392 RTF .9735 CRT .9942 CRS -.9716 CST -.9912  
 FDE 1.8650 FRA 1.5871 FC3-3.3815 B8P 18905 8GB 5794.5 8Z3 .0076 R13 .9736 LSA 3765.9 MSA 173.4 SSA 14.8  
 BDE 2.3124 BRA 1.3685 BC3 4.8364 F8P -1439 8G1 5783.5 8G2 355.8 THA 5.87 EL1 3552.9 EL2 65.4 ALF 9.97

LAUNCH DATE JAN 15 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 532.790

RL 147.16 LAL .00 LOL 114.67 VL 27.292 GAL 3.87 AZL 86.56 HCA 249.81 SMA 125.34 ECC .18634 INC 3.4588 V1 30.275  
 RP 108.65 LAP -3.23 LOP 357.20 VP 37.205 GAP 7.56 AZP 91.19 TAL 162.63 TAP 52.45 RCA 101.98 APO 148.69 V2 34.880  
 RC 145.808 GL 24.72 GP -14.80 ZAL 63.81 ZAP 154.32 ETS 328.92 ZAE 128.68 ETE 191.22 ZAC 122.34 ETC 174.57 CLP-158.78

PLANETOCENTRIC CONIC

C3 15.256 VHL 3.906 DLA 42.53 RAL 43.53 RAD 6567.6 VEL 11.689 PTH 2.06 VHP 5.640 DPA -6.12 RAP 30.63 ECC 1.2511  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.84 20 59 46 4140.82 -30.87 185.51 272.88 59.16 22 8 47 3540.8 -34.70 177.57  
 123.16 4 14 33 2806.57 -30.85 83.07 272.88 59.14 5 1 19 2206.6 -34.69 75.13  
 56.84 20 59 46 4140.82 -30.87 185.51 272.88 59.16 22 8 47 3540.8 -34.70 177.57  
 123.16 4 14 33 2806.57 -30.85 83.07 272.88 59.14 5 1 19 2206.6 -34.69 75.13  
 56.84 20 59 46 4140.82 -30.87 185.51 272.88 59.16 22 8 47 3540.8 -34.70 177.57  
 123.16 4 14 33 2806.57 -30.85 83.07 272.88 59.14 5 1 19 2206.6 -34.69 75.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2246 TRA 1.5559 TC3-4.7547 BAU .9703 8GT 5834.1 8GR 664.7 8G3 396.8 ST 3394.8 SR 597.5 SS 1176.7  
 RDE .4033 RRA .1403 RC3 -.1502 FAU .05346 RRT .8333 RRF .8188 RTF .9737 CRT .9903 CRS -.9619 CST -.9903  
 FDE 1.5045 FRA 1.6361 FC3-3.0335 B8P 18827 8GB 5871.8 8Z3 .0039 R13 .9736 LSA 3637.9 MSA 178.4 SSA 15.1  
 BDE 2.2609 BRA 1.5623 BC3 4.7571 F8P -1369 8G1 5880.4 8G2 365.8 THA 5.44 EL1 3446.0 EL2 81.7 ALF 9.89



LAUNCH DATE JAN 15 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 538.623

RL 147.16 LAL .00 LOL 114.67 VL 27.264 GAL 4.23 AZL 86.69 HCA 252.99 SMA 123.16 ECC .19016 INC 3.3090 V1 30.275  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.195 GAP 7.93 AZP 90.97 TAL 161.42 TAP 54.41 RCA 101.36 APO 148.96 V2 34.891  
 RC 147.857 GL 23.19 GP -14.00 ZAL 61.46 ZAP 155.88 ETS 328.48 ZAE 126.41 ETE 190.48 ZAC 123.95 ETC 174.43 CLP-160.16

PLANETOCENTRIC CONIC

C3 15.887 VHL 3.986 DLA 41.63 RAL 46.53 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 5.837 DPA -4.70 RAP 31.92 ECC 1.2615  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.10 21 17 1 4135.44 -29.97 184.42 276.10 59.63 22 25 57 3535.4 -33.76 176.54  
 121.90 4 21 10 2630.23 -29.96 84.53 276.09 59.61 5 8 20 2230.2 -33.74 76.64  
 58.10 21 17 1 4135.44 -29.97 184.42 276.10 59.63 22 25 57 3535.4 -33.76 176.54  
 121.90 4 21 10 2630.23 -29.96 84.53 276.09 59.61 5 8 20 2230.2 -33.74 76.64  
 58.10 21 17 1 4135.44 -29.97 184.42 276.10 59.63 22 25 57 3535.4 -33.76 176.54  
 121.90 4 21 10 2630.23 -29.96 84.53 276.09 59.61 5 8 20 2230.2 -33.74 76.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1689 TRA 1.7636 TC3-4.6398 BAU .9858 SGT 5908.2 SGR 645.0 SCS 375.4 ST 3281.6 SR 579.9 SS 1098.7  
 RDE .3992 RRA .1443 RC3 -.1239 FAU .04951 RRT .8123 RRF .7951 RTF .9739 CRT .9849 CRS -.8498 CST -.9894  
 FDE 1.3565 FRA 1.6805 FC3-2.6980 B8P 19114 SGB 5943.3 R23 .0015 R13 .9739 LSA 3503.9 HSA 185.0 SSA 15.4  
 BDE 2.2033 BRA 1.7695 BC3 4.6415 F8P -1299 SGI 5931.5 SGT 374.7 THA 5.09 EL1 3350.9 EL2 98.8 ALF 9.88

LAUNCH DATE JAN 15 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 544.428

RL 147.16 LAL .00 LOL 114.67 VL 27.236 GAL 4.61 AZL 86.82 HCA 256.17 SMA 124.98 ECC .19426 INC 3.1834 V1 30.275  
 RP 108.58 LAP -3.09 LOP 10.62 VP 37.185 GAP 8.31 AZP 90.76 TAL 160.19 TAP 56.36 RCA 100.70 APO 149.26 V2 34.902  
 RC 150.092 GL 21.69 GP -13.29 ZAL 59.33 ZAP 157.36 ETS 327.92 ZAE 128.15 ETE 189.80 ZAC 125.63 ETC 174.27 CLP-161.50

PLANETOCENTRIC CONIC

C3 16.644 VHL 4.080 DLA 40.73 RAL 49.44 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 6.044 DPA -3.35 RAP 33.30 ECC 1.2739  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.41 21 34 21 4130.20 -29.02 183.34 279.34 60.07 22 43 11 3530.2 -32.76 175.51  
 120.59 4 27 3 2856.71 -29.01 86.18 279.33 60.06 5 14 40 2256.7 -32.75 78.35  
 59.41 21 34 21 4130.20 -29.02 183.34 279.34 60.07 22 43 11 3530.2 -32.76 175.51  
 120.59 4 27 3 2856.71 -29.01 86.18 279.33 60.06 5 14 40 2256.7 -32.75 78.35  
 59.41 21 34 21 4130.20 -29.02 183.34 279.34 60.07 22 43 11 3530.2 -32.76 175.51  
 120.59 4 27 3 2856.71 -29.01 86.18 279.33 60.06 5 14 40 2256.7 -32.75 78.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1091 TRA 1.9833 TC3-4.4922 BAU .9996 SGT 5976.4 SGR 629.0 SCS 355.0 ST 3162.6 SR 564.9 SS 1025.7  
 RDE .3978 RRA .1493 RC3 -.1024 FAU .04573 RRT .7922 RRF .7748 RTF .9740 CRT .9778 CRS -.9351 CST -.9884  
 FDE 1.2208 FRA 1.7211 FC3-2.3788 B8P 19381 SGB 6009.4 R23 .0002 R13 .9740 LSA 3366.8 HSA 193.2 SSA 15.4  
 BDE 2.1463 BRA 1.9889 BC3 4.4933 F8P -1233 SGI 5997.2 SGT 382.6 THA 4.79 EL1 3210.5 EL2 116.6 ALF 9.92

LAUNCH DATE JAN 15 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 550.203

RL 147.16 LAL .00 LOL 114.67 VL 27.208 GAL 5.01 AZL 86.94 HCA 259.35 SMA 124.80 ECC .19888 INC 3.0611 V1 30.275  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.175 GAP 8.70 AZP 90.57 TAL 158.95 TAP 58.31 RCA 100.00 APO 149.59 V2 34.914  
 RC 152.312 GL 20.22 GP -12.64 ZAL 57.21 ZAP 158.75 ETS 327.23 ZAE 127.91 ETE 189.22 ZAC 127.36 ETC 174.11 CLP-162.79

PLANETOCENTRIC CONIC

C3 17.541 VHL 4.188 DLA 39.60 RAL 52.26 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 6.262 DPA -2.05 RAP 34.76 ECC 1.2887  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.77 21 51 46 4124.97 -28.02 182.24 282.58 60.49 23 0 31 3525.0 -31.71 174.47  
 119.23 4 32 8 2886.15 -28.00 88.03 282.58 60.48 5 20 14 2286.2 -31.70 80.26  
 60.77 21 51 46 4124.97 -28.02 182.24 282.58 60.49 23 0 31 3525.0 -31.71 174.47  
 119.23 4 32 8 2886.15 -28.00 88.03 282.58 60.48 5 20 14 2286.2 -31.70 80.26  
 60.77 21 51 46 4124.97 -28.02 182.24 282.58 60.49 23 0 31 3525.0 -31.71 174.47  
 119.23 4 32 8 2886.15 -28.00 88.03 282.58 60.48 5 20 14 2286.2 -31.70 80.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0455 TRA 2.2152 TC3-4.3164 BAU 1.0124 SGT 6038.3 SGR 615.8 SCS 335.6 ST 3040.1 SR 551.8 SS 958.1  
 RDE .3988 RRA .1554 RC3 -.0852 FAU .04214 RRT .7734 RRF .7563 RTF .9741 CRT .9687 CRS -.9175 CST -.9873  
 FDE 1.0967 FRA 1.7583 FC3-2.0798 B8P 19632 SGB 6069.7 R23 -.0003 R13 .9741 LSA 3228.5 HSA 202.8 SSA 15.4  
 BDE 2.0840 BRA 2.2206 BC3 4.3173 F8P -1169 SGI 6057.2 SGT 389.2 THA 4.53 EL1 3086.8 EL2 135.0 ALF 9.99

LAUNCH DATE JAN 15 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 555.943

RL 147.16 LAL .00 LOL 114.67 VL 27.179 GAL 5.43 AZL 87.08 HCA 262.54 SMA 124.61 ECC .20343 INC 2.9413 V1 30.275  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.186 GAP 9.11 AZP 90.38 TAL 157.71 TAP 60.25 RCA 99.26 APO 149.97 V2 34.926  
 RC 154.516 GL 18.78 GP -12.06 ZAL 55.12 ZAP 160.09 ETS 326.40 ZAE 127.68 ETE 188.71 ZAC 129.15 ETC 173.92 CLP-164.04

PLANETOCENTRIC CONIC

C3 18.592 VHL 4.312 DLA 38.86 RAL 54.98 RAD 6567.8 VEL 11.831 PTH 2.10 VHP 6.492 DPA -.80 RAP 36.30 ECC 1.3060  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.19 22 9 17 4119.59 -26.97 181.13 285.84 60.89 23 17 57 3519.6 -30.63 173.42  
 117.81 4 36 20 2918.70 -26.96 90.09 285.83 60.87 5 24 59 2318.7 -30.62 82.39  
 62.19 22 9 17 4119.59 -26.97 181.13 285.84 60.89 23 17 57 3519.6 -30.63 173.42  
 117.81 4 36 20 2918.70 -26.96 90.09 285.83 60.87 5 24 59 2318.7 -30.62 82.39  
 62.19 22 9 17 4119.59 -26.97 181.13 285.84 60.89 23 17 57 3519.6 -30.63 173.42  
 117.81 4 36 20 2918.70 -26.96 90.09 285.83 60.87 5 24 59 2318.7 -30.62 82.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9813 TRA 2.4839 TC3-4.1099 BAU 1.0217 SGT 6097.0 SGR 605.1 SCS 317.6 ST 2921.3 SR 540.4 SS 897.8  
 RDE .4018 RRA .1630 RC3 -.0708 FAU .03861 RRT .7566 RRF .7401 RTF .9741 CRT .9572 CRS -.8971 CST -.9864  
 FDE .9854 FRA 1.7956 FC3-1.7979 B8P 19788 SGB 6126.9 R23 .0000 R13 .9741 LSA 3096.1 HSA 214.0 SSA 15.3  
 BDE 2.0216 BRA 2.4693 BC3 4.1105 F8P -1104 SGI 6114.2 SGT 394.6 THA 4.31 EL1 2966.9 EL2 154.0 ALF 10.07

LAUNCH DATE JAN 15 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 561.646

RL 147.16 LAL .00 LOL 114.67 VL 27.151 GAL 5.88 AZL 87.18 HCA 265.72 SMA 124.43 ECC .20855 INC 2.8231 V1 30.275
RP 108.47 LAP -2.82 LOP 20.39 VP 37.156 GAP 9.54 AZP 90.21 TAL 156.46 TAP 62.18 RCA 98.48 APO 150.38 VE 34.938
RC 196.704 GL 17.39 GP -11.54 ZAL 53.06 ZAP 181.35 ETS 325.40 ZAE 127.46 ETE 188.26 ZAC 130.98 ETC 173.71 CLP-165.25

PLANETOCENTRIC CONIC

C3 19.816 VHL 4.451 DLA 37.92 RAL 57.60 RAD 6567.8 VEL 11.883 PTH 2.11 VHP 6.735 DPA .40 RAP 37.90 ECC 1.3261
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.65 22 26 56 4113.89 -25.88 179.98 289.09 61.26 23 35 29 3513.9 -29.50 172.34
116.35 4 39 36 2954.51 -25.87 92.38 289.09 61.25 5 28 51 2354.5 -29.49 84.74
63.65 22 26 56 4113.89 -25.88 179.98 289.09 61.26 23 35 29 3513.9 -29.50 172.34
116.35 4 39 36 2954.51 -25.87 92.38 289.09 61.25 5 28 51 2354.5 -29.49 84.74
63.65 22 26 56 4113.89 -25.88 179.98 289.09 61.26 23 35 29 3513.9 -29.50 172.34
116.35 4 39 36 2954.51 -25.87 92.38 289.09 61.25 5 28 51 2354.5 -29.49 84.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9100 TRA 2.7227 TC3-3.8920 BAU 1.0312
RDE .4061 RRA .1715 RC3 -.0600 FAU .03939
FDE .8809 FRA 1.8279 FC3-1.5464 B8P 20016
BOE 1.9527 BRA 2.7280 BC3 3.8924 F8P -1048

86T 6146.8 86R 595.3 86S 300.2
RRT .7414 RRF .7254 RTF .9741
86B 6175.6 86Z .0002 R13 .9741
86I 6162.7 86E 398.4 THA 4.12

ST 2798.3 SR 529.4 SS 840.8
CRT .9430 CRS -.8730 CST -.9853
LSA 2980.8 MSA 226.4 S8A 15.1
EL1 2642.7 EL2 173.4 ALF 10.15

LAUNCH DATE JAN 15 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 567.307

RL 147.16 LAL .00 LOL 114.67 VL 27.122 GAL 6.36 AZL 87.29 HCA 268.91 SMA 124.25 ECC .21407 INC 2.7088 V1 30.275
RP 108.43 LAP -2.71 LOP 23.58 VP 37.147 GAP 9.99 AZP 90.05 TAL 155.21 TAP 64.12 RCA 97.65 APO 150.85 VE 34.951
RC 158.875 GL 16.03 GP -11.06 ZAL 51.04 ZAP 182.56 ETS 324.20 ZAE 127.26 ETE 187.86 ZAC 132.84 ETC 173.48 CLP-166.44

PLANETOCENTRIC CONIC

C3 21.234 VHL 4.608 DLA 36.97 RAL 60.11 RAD 6567.9 VEL 11.942 PTH 2.13 VHP 6.992 DPA 1.56 RAP 39.56 ECC 1.3495
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.17 22 44 44 4107.87 -24.76 178.80 292.35 61.62 23 53 11 3507.7 -28.34 171.22
114.83 4 41 51 2993.77 -24.74 94.91 292.34 61.61 5 31 45 2393.8 -28.33 87.33
65.17 22 44 44 4107.87 -24.76 178.80 292.35 61.62 23 53 11 3507.7 -28.34 171.22
114.83 4 41 51 2993.77 -24.74 94.91 292.34 61.61 5 31 45 2393.8 -28.33 87.33
65.17 22 44 44 4107.87 -24.76 178.80 292.35 61.62 23 53 11 3507.7 -28.34 171.22
114.83 4 41 51 2993.77 -24.74 94.91 292.34 61.61 5 31 45 2393.8 -28.33 87.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8364 TRA 2.9967 TC3-3.6587 BAU 1.0387
RDE .4117 RRA .1812 RC3 -.0515 FAU .03234
FDE .7840 FRA 1.8592 FC3-1.3186 B8P 20220
BOE 1.8820 BRA 3.0022 BC3 3.6591 F8P -995

86T 6191.4 86R 586.4 86S 284.0
RRT .7285 RRF .7128 RTF .9741
86B 6219.2 86Z .0006 R13 .9741
86I 6206.2 86E 300.9 THA 3.96

ST 2679.9 SR 518.9 SS 789.9
CRT .9259 CRS -.8457 CST -.9844
LSA 2631.5 MSA 239.7 S8A 14.8
EL1 2722.8 EL2 193.0 ALF 10.22

LAUNCH DATE JAN 15 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 572.920

RL 147.16 LAL .00 LOL 114.67 VL 27.093 GAL 6.88 AZL 87.41 HCA 272.10 SMA 124.07 ECC .22004 INC 2.5867 V1 30.275
RP 108.39 LAP -2.59 LOP 26.78 VP 37.138 GAP 10.46 AZP 89.90 TAL 153.96 TAP 66.06 RCA 96.77 APO 151.37 VE 34.964
RC 181.027 GL 14.72 GP -10.63 ZAL 49.08 ZAP 183.72 ETS 322.78 ZAE 127.07 ETE 187.52 ZAC 134.74 ETC 173.21 CLP-167.60

PLANETOCENTRIC CONIC

C3 22.871 VHL 4.782 DLA 36.02 RAL 62.52 RAD 6567.9 VEL 12.010 PTH 2.14 VHP 7.264 DPA 2.67 RAP 41.27 ECC 1.3764
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.75 23 2 45 4100.69 -23.60 177.56 295.60 61.96 24 11 6 3500.7 -27.16 170.04
113.25 4 43 1 3036.72 -23.59 97.68 295.59 61.95 5 33 37 2436.7 -27.14 90.17
66.75 23 2 45 4100.69 -23.60 177.56 295.60 61.96 24 11 6 3500.7 -27.16 170.04
113.25 4 43 1 3036.72 -23.59 97.68 295.59 61.95 5 33 37 2436.7 -27.14 90.17
66.75 23 2 45 4100.69 -23.60 177.56 295.60 61.96 24 11 6 3500.7 -27.16 170.04
113.25 4 43 1 3036.72 -23.59 97.68 295.59 61.95 5 33 37 2436.7 -27.14 90.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7800 TRA 3.2870 TC3-3.4146 BAU 1.0442
RDE .4184 RRA .1923 RC3 -.0448 FAU .02945
FDE .6893 FRA 1.8898 FC3-1.1146 B8P 20406
BOE 1.8090 BRA 3.2927 BC3 3.4149 F8P -945

86T 6230.5 86R 578.1 86S 288.7
RRT .7172 RRF .7023 RTF .9741
86B 6257.2 86Z .0010 R13 .9742
86I 6244.3 86E 402.0 THA 3.82

ST 2566.9 SR 508.5 SS 744.7
CRT .9054 CRS -.8149 CST -.9837
LSA 2708.8 MSA 253.6 S8A 14.5
EL1 2608.2 EL2 212.4 ALF 10.24

LAUNCH DATE JAN 15 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 578.481

RL 147.16 LAL .00 LOL 114.67 VL 27.084 GAL 7.41 AZL 87.55 HCA 275.29 SMA 123.89 ECC .22649 INC 2.4710 V1 30.275
RP 108.35 LAP -2.46 LOP 29.97 VP 37.129 GAP 10.96 AZP 89.77 TAL 152.72 TAP 68.01 RCA 95.83 APO 151.95 VE 34.977
RC 183.181 GL 13.45 GP -10.23 ZAL 47.18 ZAP 184.83 ETS 321.10 ZAE 126.88 ETE 187.21 ZAC 136.67 ETC 172.90 CLP-166.74

PLANETOCENTRIC CONIC

C3 24.780 VHL 4.976 DLA 35.07 RAL 64.81 RAD 6568.0 VEL 12.089 PTH 2.16 VHP 7.554 DPA 3.75 RAP 43.03 ECC 1.4075
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.38 23 21 4 4092.67 -22.42 176.24 298.84 62.29 24 29 16 3492.7 -25.95 168.78
111.82 4 43 0 3083.57 -22.41 100.73 298.83 62.29 5 34 24 2483.6 -25.95 93.27
68.38 23 21 4 4092.67 -22.42 176.24 298.84 62.29 24 29 16 3492.7 -25.95 168.78
111.82 4 43 0 3083.57 -22.41 100.73 298.83 62.29 5 34 24 2483.6 -25.95 93.27
68.38 23 21 4 4092.67 -22.42 176.24 298.84 62.29 24 29 16 3492.7 -25.95 168.78
111.82 4 43 0 3083.57 -22.41 100.73 298.83 62.29 5 34 24 2483.6 -25.95 93.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8851 TRA 3.5978 TC3-3.1579 BAU 1.0454
RDE .4263 RRA .2049 RC3 -.0387 FAU .02858
FDE .6229 FRA 1.9217 FC3 -.9295 B8P 20486
BOE 1.7382 BRA 3.6037 BC3 3.1581 F8P -892

86T 6266.1 86R 570.6 86S 254.6
RRT .7084 RRF .6942 RTF .9742
86B 6292.0 86Z .0018 R13 .9742
86I 6279.2 86E 401.9 THA 3.71

ST 2465.7 SR 498.5 SS 706.9
CRT .8819 CRS -.7821 CST -.9833
LSA 2599.3 MSA 267.4 S8A 14.2
EL1 2504.9 EL2 231.3 ALF 10.20

LAUNCH DATE JAN 15 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.036 GAL 7.98 AZL 87.65 HCA 278.49 SMA 123.71 ECC .28349 INC 2.3520 V1 30.275
RP 108.31 LAP -2.33 LOP 33.17 VP 37.121 GAP 11.48 AZP 89.65 TAL 151.49 TAP 89.98 RCA 94.82 APO 152.59 V2 34.990
RC 165.276 GL 12.22 GP -9.88 ZAL 45.33 ZAP 165.88 ETS 319.10 ZAE 126.89 ETE 186.93 ZAC 138.62 ETC 172.95 CLP-169.86

DISTANCE 563.980

PLANETOCENTRIC CONIC

C3 26.937 VHL 5.190 DLA 34.13 RAL 66.99 RAD 6568.1 VEL 12.178 PTH 2.19 VHP 7.862 DPA 4.78 RAP 44.83 ECC 1.4433
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.09 22 39 48 4083.07 -21.22 174.82 302.07 62.61 24 47 51 3483.1 -24.72 167.41
109.91 4 41 40 3134.83 -21.21 104.08 302.06 62.60 5 33 55 2534.8 -24.70 96.68
70.09 23 39 48 4083.07 -21.22 174.82 302.07 62.61 24 47 51 3483.1 -24.72 167.41
109.91 4 41 40 3134.83 -21.21 104.08 302.06 62.60 5 33 55 2534.8 -24.70 96.68
110.00 4 56 5 3090.90 -22.54 101.58 302.79 63.59 5 47 36 2490.9 -25.90 93.83
110.00 4 28 29 3175.00 -19.90 108.48 301.32 61.62 5 21 24 2575.0 -23.54 99.22

DIFFERENTIAL CORRECTIONS

TDE 1.6038 TRA 3.9255 TC3-2.9055 BAU 1.0463
RDE .4346 RRA .2184 RC3 -.0343 FAU .02599
FDE .3508 FRA 1.9518 FC3 -.7711 BSP 20649
BDE 1.6616 BRA 3.9296 BC3 2.9055 F8P -847

MID-COURSE EXECUTION ACCURACY

86T 6293.8 86R 582.4 86S 241.1
RRT .7010 RRF .6873 RTF .9744
86B 6318.9 86Z .0021 R13 .9744
86I 6306.2 86E 400.3 THA 3.60

ORBIT DETERMINATION ACCURACY

ST 2368.0 SR 487.7 SS 672.5
CRT .8545 CR8 -.7437 CST -.9831
LSA 2493.6 MSA 281.2 SSA 13.8
EL1 2404.8 EL2 249.5 ALF 10.09

LAUNCH DATE JAN 15 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 27.007 GAL 8.60 AZL 87.77 HCA 281.89 SMA 123.55 ECC .24108 INC 2.2309 V1 30.275
RP 108.26 LAP -2.18 LOP 36.37 VP 37.112 GAP 12.04 AZP 89.85 TAL 150.27 TAP 71.93 RCA 93.75 APO 153.31 V2 35.003
RC 167.370 GL 11.04 GP -9.55 ZAL 43.56 ZAP 166.89 ETS 316.74 ZAE 126.51 ETE 186.69 ZAC 140.58 ETC 172.14 CLP-170.87

DISTANCE 589.409

PLANETOCENTRIC CONIC

C3 29.446 VHL 5.426 DLA 33.21 RAL 69.06 RAD 6568.2 VEL 12.261 PTH 2.21 VHP 8.192 DPA 5.77 RAP 46.68 ECC 1.4846
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.88 0 3 3 4071.40 -20.01 173.24 305.28 62.93 1 10 54 3471.4 -23.47 163.90
108.12 4 38 32 3190.93 -19.99 107.77 305.28 62.92 5 32 3 2590.9 -23.46 100.42
71.88 0 3 3 4071.40 -20.01 173.24 305.28 62.93 1 10 54 3471.4 -23.47 163.90
108.12 4 38 32 3190.93 -19.99 107.77 305.28 62.92 5 32 3 2590.9 -23.46 100.42
110.00 5 52 16 2965.73 -26.10 93.40 308.37 67.10 6 41 41 2365.7 -26.97 85.39
110.00 3 48 30 3544.59 -14.13 116.23 301.84 58.54 4 44 34 2744.6 -18.19 109.47

DIFFERENTIAL CORRECTIONS

TDE 1.5206 TRA 4.2682 TC3-2.6529 BAU 1.0444
RDE .4434 RRA .2333 RC3 -.0304 FAU .02152
FDE .4853 FRA 1.9824 FC3 -.6328 BSP 20602
BDE 1.5840 BRA 4.2756 BC3 2.6531 F8P -805

MID-COURSE EXECUTION ACCURACY

86T 6318.1 86R 554.0 86S 228.5
RRT .8952 RRF .6819 RTF .9746
86B 6340.4 86Z .0023 R13 .9746
86I 6327.9 86E 397.5 THA 3.50

ORBIT DETERMINATION ACCURACY

ST 2279.9 SR 476.4 SS 643.4
CRT .8235 CR8 -.7071 CST -.9832
LSA 2398.3 MSA 294.0 SSA 13.5
EL1 2313.8 EL2 266.3 ALF 9.90

LAUNCH DATE JAN 15 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 26.978 GAL 9.26 AZL 87.89 HCA 284.89 SMA 123.55 ECC .24934 INC 2.1069 V1 30.275
RP 108.22 LAP -2.04 LOP 39.57 VP 37.104 GAP 12.64 AZP 89.46 TAL 149.06 TAP 73.93 RCA 92.60 APO 154.11 V2 35.016
RC 169.445 GL 9.91 GP -9.25 ZAL 41.86 ZAP 167.84 ETS 313.94 ZAE 126.33 ETE 186.47 ZAC 142.56 ETC 171.67 CLP-172.07

DISTANCE 594.756

PLANETOCENTRIC CONIC

C3 32.341 VHL 5.687 DLA 32.29 RAL 71.02 RAD 6568.3 VEL 12.398 PTH 2.24 VHP 8.545 DPA 6.72 RAP 48.55 ECC 1.5322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.79 0 23 9 4056.88 -18.78 171.47 308.49 63.23 1 30 46 3456.9 -22.22 164.17
106.21 4 34 24 3252.55 -18.77 111.84 308.48 63.22 5 28 36 2652.6 -22.21 104.54
73.79 0 23 9 4056.88 -18.78 171.47 308.49 63.23 1 30 46 3456.9 -22.22 164.17
106.21 4 34 24 3252.55 -18.77 111.84 308.48 63.22 5 28 36 2652.6 -22.21 104.54
110.00 6 24 1 2913.93 -27.43 89.96 312.67 68.75 7 12 35 2313.9 -30.06 81.76
110.00 3 32 42 3443.50 -10.55 121.66 303.63 57.30 4 30 5 2843.5 -14.79 115.12

DIFFERENTIAL CORRECTIONS

TDE 1.4369 TRA 4.8379 TC3-2.4026 BAU 1.0369
RDE .4527 RRA .2494 RC3 -.0269 FAU .01915
FDE .4265 FRA 2.0149 FC3 -.5127 BSP 20918
BDE 1.5065 BRA 4.6446 BC3 2.4026 F8P -765

MID-COURSE EXECUTION ACCURACY

86T 6334.0 86R 545.3 86S 216.7
RRT .8911 RRF .6782 RTF .9750
86B 6357.4 86Z .0025 R13 .9750
86I 6345.2 86E 393.4 THA 3.42

ORBIT DETERMINATION ACCURACY

ST 2202.8 SR 464.7 SS 619.5
CRT .7895 CR8 -.6674 CST -.9837
LSA 2314.9 MSA 303.4 SSA 13.1
EL1 2233.7 EL2 281.3 ALF 9.61

LAUNCH DATE JAN 15 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

RL 147.16 LAL .00 LOL 114.67 VL 26.950 GAL 9.97 AZL 88.02 HCA 288.09 SMA 123.18 ECC .25835 INC 1.9791 V1 30.275
RP 108.18 LAP -1.88 LOP 42.77 VP 37.096 GAP 13.27 AZP 89.39 TAL 147.89 TAP 75.97 RCA 91.35 APO 155.00 V2 35.030
RC 171.498 GL 8.83 GP -8.98 ZAL 40.23 ZAP 168.73 ETS 310.62 ZAE 126.14 ETE 186.27 ZAC 144.54 ETC 171.13 CLP-173.16

DISTANCE 600.009

PLANETOCENTRIC CONIC

C3 35.687 VHL 5.974 DLA 31.40 RAL 72.87 RAD 6568.4 VEL 12.532 PTH 2.27 VHP 8.926 DPA 7.64 RAP 50.46 ECC 1.5873
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.84 0 44 28 4038.07 -17.55 189.39 311.68 63.54 1 51 46 3438.1 -20.96 162.14
104.16 4 27 49 3321.03 -17.54 116.39 311.67 63.53 5 23 10 2721.0 -20.95 109.14
75.84 0 44 28 4038.07 -17.55 189.39 311.68 63.54 1 51 46 3438.1 -20.96 162.14
104.16 4 27 49 3321.03 -17.54 116.39 311.67 63.53 5 23 10 2721.0 -20.95 109.14
110.00 6 49 31 2880.56 -28.23 87.70 318.66 69.87 7 37 31 2280.6 -30.70 79.37
110.00 3 21 58 3526.54 -7.46 126.11 305.73 56.54 4 20 43 2926.5 -11.81 119.71

DIFFERENTIAL CORRECTIONS

TDE 1.3953 TRA 5.0347 TC3-2.1532 BAU 1.0274
RDE .4626 RRA .2669 RC3 -.0232 FAU .01679
FDE .3750 FRA 2.0509 FC3 -.4074 BSP 20922
BDE 1.4321 BRA 5.0418 BC3 2.1533 F8P -722

MID-COURSE EXECUTION ACCURACY

86T 6349.2 86R 536.3 86S 205.9
RRT .6887 RRF .6784 RTF .9755
86B 6371.8 86Z .0029 R13 .9755
86I 6360.0 86E 388.2 THA 3.34

ORBIT DETERMINATION ACCURACY

ST 2139.2 SR 452.7 SS 601.1
CRT .7533 CR8 -.6286 CST -.9848
LSA 2245.7 MSA 314.8 SSA 12.7
EL1 2166.7 EL2 294.0 ALF 9.23

LAUNCH DATE JAN 15 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 605.151

RL 147.16 LAL .00 LOL 114.67 VL 26.922 GAL 10.74 AZL 88.15 MCA 291.29 SMA 123.00 ECC .26819 INC 1.8463 V1 30.275
RP 108.14 LAP -1.72 LOP 45.98 VP 37.088 GAP 13.96 AZP 89.33 TAL 146.74 TAP 78.03 RCA 90.02 APO 155.89 V2 35.043
RC 173.532 GL 7.79 GP -8.72 ZAL 38.69 ZAP 189.37 ETB 308.66 ZAE 125.95 ETE 186.09 ZAC 146.53 ETC 170.50 CLP-174.26

PLANETOCENTRIC CONIC

C3 39.564 VHL 6.290 DLA 30.52 RAL 74.60 RAD 6568.5 VEL 12.686 PTH 2.30 VHP 9.337 DPA 8.51 RAP 52.39 ECC 1.6511
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.11 1 7 41 4012.71 -16.32 166.85 314.85 63.85 2 14 33 3412.7 -19.70 159.64
101.89 4 18 27 3598.52 -16.30 121.58 314.84 63.84 5 15 6 2798.5 -19.69 114.37
78.11 1 7 41 4012.71 -16.32 166.85 314.85 63.85 2 14 33 3412.7 -19.70 159.64
101.89 4 18 27 3598.52 -16.30 121.58 314.84 63.84 5 15 6 2798.5 -19.69 114.37
110.00 7 11 26 2857.58 -28.76 86.12 320.48 70.67 7 59 3 2257.6 -31.12 77.71
110.00 3 13 53 3601.85 -4.62 130.07 307.99 56.09 4 13 54 3001.6 -9.04 123.77

DIFFERENTIAL CORRECTIONS

TDE 1.2676 TRA 5.4550 TC3-1.9174 BAU 1.0143
RDE .4724 RRA .2852 RC3 -.0202 FAU .01485
FDE .3281 FRA 2.0870 FC3 -.3205 B8P 21035
BOE 1.3527 BRA 5.4604 BC3 1.9176 F8P -687

MID-COURSE EXECUTION ACCURACY

86T 6356.0 86R 526.1 86S 195.5
RRT .6870 RRF .6751 RTF .9781
86B 6377.7 R23 .0028 R13 .9762
861 6366.3 862 381.7 THA 3.27

ORBIT DETERMINATION ACCURACY

ST 2081.0 SR 439.7 SS 565.4
CRT .7141 CR8 -.5883 CST -.9860
LSA 2182.4 MSA 322.2 S8A 12.3
EL1 2105.1 EL2 304.3 ALF 8.76

LAUNCH DATE JAN 15 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 610.162

RL 147.16 LAL .00 LOL 114.67 VL 26.894 GAL 11.56 AZL 88.29 HCA 294.30 SMA 122.83 ECC .27898 INC 1.7076 V1 30.275
RP 108.10 LAP -1.55 LOP 49.18 VP 37.080 GAP 14.70 AZP 89.29 TAL 145.63 TAP 80.13 RCA 88.56 APO 157.10 V2 35.056
RC 175.544 GL 6.79 GP -8.50 ZAL 37.23 ZAP 170.33 ETB 301.93 ZAE 125.74 ETE 185.93 ZAC 148.51 ETC 169.78 CLP-175.36

PLANETOCENTRIC CONIC

C3 44.070 VHL 6.639 DLA 29.66 RAL 78.23 RAD 6568.7 VEL 12.862 PTH 2.34 VHP 9.782 DPA 9.34 RAP 54.34 ECC 1.7253
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.78 1 34 14 3975.90 -15.09 163.49 317.99 64.16 2 40 30 3376.0 -18.44 156.32
99.22 4 4 53 3489.66 -15.08 127.75 317.98 64.15 5 3 2 2889.7 -18.43 120.56
100.00 4 42 1 3370.95 -18.07 120.39 316.44 65.76 5 38 12 2771.0 -21.19 112.99
100.00 3 39 47 3568.92 -12.14 132.18 316.46 62.47 4 39 17 2969.0 -15.73 125.23
110.00 7 30 49 2841.78 -29.11 85.02 324.18 71.23 8 18 11 2241.8 -31.39 76.56
110.00 3 7 28 3671.86 -1.25 133.75 310.35 55.87 4 8 39 3071.9 -8.41 127.51

DIFFERENTIAL CORRECTIONS

TDE 1.1788 TRA 5.9012 TC3-1.6904 BAU .9980
RDE .4823 RRA .3046 RC3 -.0171 FAU .01297
FDE .2620 FRA 2.1283 FC3 -.2469 B8P 21127
BOE 1.2738 BRA 5.9091 BC3 1.6905 F8P -633

MID-COURSE EXECUTION ACCURACY

86T 6358.3 86R 515.1 86S 185.9
RRT .6863 RRF .6748 RTF .9770
86B 6379.1 R23 .0027 R13 .9770
861 6368.1 862 374.1 THA 3.19

ORBIT DETERMINATION ACCURACY

ST 2032.7 SR 426.1 SS 573.7
CRT .6734 CR8 -.5492 CST -.9874
LSA 2129.7 MSA 327.0 S8A 11.9
EL1 2053.3 EL2 311.8 ALF 8.23

LAUNCH DATE JAN 15 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 615.016

RL 147.16 LAL .00 LOL 114.67 VL 26.866 GAL 12.46 AZL 88.44 MCA 297.71 SMA 122.66 ECC .29084 INC 1.5615 V1 30.275
RP 108.06 LAP -1.38 LOP 52.39 VP 37.073 GAP 15.50 AZP 89.27 TAL 144.56 TAP 82.27 RCA 86.99 APO 158.34 V2 35.069
RC 177.535 GL 9.84 GP -8.28 ZAL 35.86 ZAP 171.00 ETB 296.37 ZAE 125.51 ETE 185.78 ZAC 150.47 ETC 168.94 CLP-176.47

PLANETOCENTRIC CONIC

C3 49.326 VHL 7.023 DLA 28.83 RAL 77.75 RAD 6568.8 VEL 13.065 PTH 2.38 VHP 10.267 DPA 10.13 RAP 56.30 ECC 1.8118
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
84.36 2 6 44 3912.74 -13.87 158.22 321.11 64.47 3 13 37 3312.7 -17.20 151.08
95.64 3 42 28 3609.40 -13.86 135.98 321.10 64.47 4 42 37 3009.4 -17.18 128.85
100.00 5 23 51 3293.59 -20.42 114.97 324.14 67.69 6 18 34 2883.6 -23.27 107.33
100.00 3 10 2 3713.78 -7.49 140.33 317.76 60.98 4 11 56 3113.8 -11.30 133.62
110.00 7 48 15 2831.44 -28.33 84.30 327.78 71.61 8 35 27 2231.4 -31.56 75.80
110.00 3 2 7 3738.89 .61 137.23 312.78 55.82 4 4 26 3138.7 -3.88 131.02

DIFFERENTIAL CORRECTIONS

TDE 1.0893 TRA 6.3828 TC3-1.4732 BAU .9715
RDE .4923 RRA .3248 RC3 -.0141 FAU .01059
FDE .2421 FRA 2.1893 FC3 -.1851 B8P 21199
BOE 1.1954 BRA 6.3909 BC3 1.4733 F8P -622

MID-COURSE EXECUTION ACCURACY

86T 6355.9 86R 503.2 86S 176.8
RRT .6865 RRF .6754 RTF .9780
86B 6375.8 R23 .0025 R13 .9780
861 6365.3 862 365.3 THA 3.12

ORBIT DETERMINATION ACCURACY

ST 1993.2 SR 411.8 SS 565.5
CRT .6321 CR8 -.5117 CST -.9890
LSA 2086.6 MSA 329.2 S8A 11.5
EL1 2010.6 EL2 316.3 ALF 7.63

LAUNCH DATE JAN 15 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 619.885

RL 147.16 LAL .00 LOL 114.67 VL 26.839 GAL 13.44 AZL 88.59 HCA 300.92 SMA 122.90 ECC .30391 INC 1.4063 V1 30.275
RP 108.02 LAP -1.21 LOP 55.60 VP 37.065 GAP 16.38 AZP 89.28 TAL 143.55 TAP 84.47 RCA 85.27 APO 159.73 V2 35.083
RC 178.306 GL 4.93 GP -8.09 ZAL 34.58 ZAP 171.96 ETB 299.83 ZAE 125.27 ETE 185.84 ZAC 152.42 ETC 167.96 CLP-177.60

PLANETOCENTRIC CONIC

C3 55.484 VHL 7.449 DLA 28.02 RAL 79.15 RAD 6569.0 VEL 13.298 PTH 2.43 VHP 10.798 DPA 10.88 RAP 58.27 ECC 1.9131
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 37 24 3672.70 -16.12 141.88 325.80 66.40 4 38 37 3072.7 -19.17 134.34
90.00 2 25 1 3607.79 -9.25 155.53 322.48 63.12 3 30 8 3307.8 -12.79 148.64
100.00 5 51 16 3241.14 -21.50 112.28 328.14 68.71 6 45 17 2841.1 -24.20 104.52
100.00 2 53 50 3814.59 -4.12 145.92 319.71 60.37 3 57 24 3214.6 -8.04 139.33
110.00 8 4 4 2825.49 -29.46 85.88 331.30 71.82 8 51 9 2225.5 -31.86 75.38
110.00 2 57 31 3803.01 3.06 140.59 315.25 65.94 4 0 54 3203.0 -1.43 134.38

DIFFERENTIAL CORRECTIONS

TDE .9995 TRA 6.9015 TC3-1.2669 BAU .9398
RDE .5024 RRA .3458 RC3 -.0110 FAU .00856
FDE .2083 FRA 2.2178 FC3 -.1336 B8P 21244
BOE 1.1187 BRA 6.9102 BC3 1.2670 F8P -591

MID-COURSE EXECUTION ACCURACY

86T 6349.3 86R 480.3 86S 168.4
RRT .6874 RRF .6768 RTF .9792
86B 6368.2 R23 .0023 R13 .9792
861 6358.3 862 355.6 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 1961.8 SR 396.9 SS 560.8
CRT .5911 CR8 -.4768 CST -.9906
LSA 2032.5 MSA 328.6 S8A 11.1
EL1 1978.2 EL2 317.8 ALF 7.00

LAUNCH DATE JAN 16 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 27 1969

HELIOCENTRIC CONIC

DISTANCE 157.105

RL 147.17 LAL .00 LOL 115.69 VL 22.281 GAL 5.29 AZL 86.26 HCA 62.55 SMA 101.53 ECC .45696 INC 3.7446 V1 30.273
RP 107.71 LAP 3.32 LOP 178.19 VP 34.016 GAP -26.98 AZP 88.27 TAL 173.65 TAP 236.20 RCA 55.14 APO 147.93 V2 35.184
RC 45.742 GL 9.83 GP 4.48 ZAL 76.79 ZAP 17.96 ETS 195.63 ZAE 168.33 EYE 213.19 ZAC 108.32 ETC 165.06 CLP 17.41

PLANETOCENTRIC CONIC

C3 72.016 VML 8.486 DLA 25.82 RAL 33.30 RAD 8569.4 VEL 13.906 PTH 2.54 VHP 16.409 DPA 7.50 RAP 13.89 ECC 2.1852
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 13 53 3388.48 -22.91 123.63 286.60 72.89 3 10 22 2788.5 -25.04 115.60
90.00 21 30 53 4317.75 3.83 178.56 275.45 61.92 22 42 50 3717.8 .05 171.92
100.00 3 54 33 3063.90 -25.40 100.56 287.42 73.89 4 45 37 2463.9 -27.39 92.33
100.00 22 32 54 4117.56 6.11 162.59 274.20 60.68 23 41 31 3517.6 2.16 156.04
110.00 5 41 13 2730.21 -31.29 77.06 289.26 75.47 6 26 43 2130.2 -32.96 68.24
110.00 23 2 43 4024.02 11.35 152.34 271.03 57.54 24 9 47 3424.0 6.99 145.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4042 TRA-1.0433 TC3 -.0482 BAU .0556 86T 821.0 86R 433.8 86S 46.0 ST 357.6 SR 416.9 SS 309.7
RDE -.6154 RRA .1520 RC3 -.0319 FAU .01735 RRT .0883 RRF -.0926 RTF -.6669 CRT .7087 CRS .8353 CST .9779
FDE .2838 FRA .4717 FC3 -.2086 B8P 2259 86B 928.6 82S -.0113 R13 -.6677 LSA 591.7 HSA 217.5 SSA 13.9
BDE .7363 BRA 1.0543 BC3 .0578 F8P -101 861 822.3 862 431.4 THA 3.69 EL1 508.8 EL2 206.7 ALF 51.15

LAUNCH DATE JAN 16 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 29 1969

HELIOCENTRIC CONIC

DISTANCE 163.587

RL 147.17 LAL .00 LOL 115.69 VL 22.750 GAL 4.99 AZL 86.41 HCA 65.78 SMA 103.20 ECC .43328 INC 3.5949 V1 30.273
RP 107.74 LAP 3.28 LOP 181.43 VP 34.317 GAP -25.56 AZP 88.92 TAL 173.40 TAP 239.18 RCA 58.48 APO 147.91 V2 35.174
RC 44.782 GL 10.23 GP 4.67 ZAL 76.52 ZAP 16.46 ETS 197.79 ZAE 170.36 ETE 219.91 ZAC 109.81 ETC 164.79 CLP 15.80

PLANETOCENTRIC CONIC

C3 64.080 VML 8.005 DLA 24.29 RAL 33.45 RAD 8569.2 VEL 13.617 PTH 2.49 VHP 15.630 DPA 8.34 RAP 15.09 ECC 2.0546
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 7 3 3386.87 -22.93 123.51 284.78 72.94 3 3 30 2788.7 -25.07 115.48
90.00 21 38 56 4264.01 2.10 175.55 274.25 61.75 22 50 0 3684.0 -1.69 168.92
100.00 3 48 56 3059.09 -25.51 100.17 285.60 73.87 4 39 56 2458.1 -27.48 91.92
100.00 22 39 43 4067.82 4.44 159.84 272.95 60.41 23 47 31 3467.8 .47 153.31
110.00 5 37 27 2718.72 -31.48 76.22 287.43 75.94 6 22 45 2118.7 -33.09 67.37
110.00 23 7 44 3979.96 9.73 149.95 269.72 57.07 24 14 4 3380.0 5.32 143.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4048 TRA-1.0281 TC3 -.0371 BAU .0429 86T 858.4 86R 437.2 86S 50.5 ST 377.4 SR 421.3 SS 325.6
RDE -.5888 RRA .1363 RC3 -.0336 FAU .01804 RRT .0997 RRF -.1049 RTF -.6870 CRT .7180 CRS .8402 CST .9783
FDE .2963 FRA .4844 FC3 -.2437 B8P 2425 86B 963.3 82S -.0130 R13 -.6878 LSA 613.9 HSA 221.0 SSA 14.2
BDE .7129 BRA 1.0354 BC3 .0501 F8P -113 861 859.9 862 434.2 THA 3.90 EL1 524.5 EL2 211.6 ALF 49.38

LAUNCH DATE JAN 16 1969

FLIGHT TIME 74.00

ARRIVAL DATE MAR 31 1969

HELIOCENTRIC CONIC

DISTANCE 170.116

RL 147.17 LAL .00 LQL 115.69 VL 23.184 GAL 4.69 AZL 86.55 HCA 69.01 SMA 104.82 ECC .41084 INC 3.4527 V1 30.273
RP 107.77 LAP 3.22 LOP 184.67 VP 34.595 GAP -24.21 AZP 88.76 TAL 173.20 TAP 242.21 RCA 61.76 APO 147.89 V2 35.184
RC 43.971 GL 10.61 GP 4.88 ZAL 76.35 ZAP 14.99 ETS 200.42 ZAE 172.32 ETE 230.45 ZAC 111.29 ETC 164.48 CLP 14.19

PLANETOCENTRIC CONIC

C3 57.075 VML 7.555 DLA 24.72 RAL 33.50 RAD 8569.0 VEL 13.358 PTH 2.44 VHP 14.883 DPA 9.20 RAP 16.49 ECC 1.9393
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 0 3 3383.44 -23.01 123.29 282.78 73.03 2 56 27 2783.4 -25.12 115.25
90.00 21 46 20 4210.96 .39 172.59 272.92 61.69 22 56 31 3611.0 -3.40 165.96
100.00 3 43 16 3090.70 -25.65 99.66 285.63 74.10 4 34 6 2450.7 -27.58 91.39
100.00 22 45 48 4018.93 2.90 157.15 271.58 60.25 23 52 .17 3418.9 -1.19 150.63
110.00 5 33 32 2705.70 -31.69 75.27 285.44 76.47 6 18 38 2105.7 -33.23 66.38
110.00 23 12 1 3936.69 8.12 147.64 268.30 56.68 24 17 38 3356.7 3.88 141.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4070 TRA-1.0089 TC3 -.0229 BAU .0318 86T 897.8 86R 440.0 86S 55.5 ST 398.9 SR 423.3 SS 342.6
RDE -.5593 RRA .1252 RC3 -.0348 FAU .01879 RRT .1131 RRF -.1193 RTF -.7062 CRT .7249 CRS .8456 CST .9790
FDE .3101 FRA .4973 FC3 -.2890 B8P 2573 86B 999.8 82S -.0148 R13 -.7071 LSA 638.1 HSA 223.8 SSA 14.5
BDE .6917 BRA 1.0167 BC3 .0416 F8P -127 861 899.8 862 436.3 THA 4.15 EL1 541.7 EL2 215.7 ALF 47.93

LAUNCH DATE JAN 16 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 2 1969

HELIOCENTRIC CONIC

DISTANCE 176.686

RL 147.17 LAL .00 LOL 115.69 VL 23.586 GAL 4.39 AZL 86.88 HCA 72.24 SMA 106.40 ECC .38960 INC 3.3166 V1 30.273
RP 107.80 LAP 3.16 LOP 187.90 VP 34.853 GAP -22.82 AZP 88.99 TAL 173.06 TAP 245.30 RCA 64.95 APO 147.86 V2 35.153
RC 43.319 GL 10.99 GP 5.12 ZAL 76.29 ZAP 13.57 ETS 203.68 ZAE 173.98 ETE 247.93 ZAC 112.76 ETC 164.14 CLP 12.58

PLANETOCENTRIC CONIC

C3 50.892 VML 7.134 DLA 25.10 RAL 33.44 RAD 8568.9 VEL 13.125 PTH 2.40 VHP 14.167 DPA 10.07 RAP 17.89 ECC 1.8375
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 53 0 3378.59 -23.11 122.97 280.88 73.17 2 49 18 2778.6 -25.20 114.92
90.00 21 52 35 4150.12 -1.28 169.70 271.46 61.71 23 2 14 3559.1 -5.05 163.05
100.00 3 37 31 3041.59 -25.82 99.04 281.53 74.39 4 28 13 2441.6 -27.71 90.75
100.00 22 51 4 3971.35 1.18 154.54 270.09 60.13 23 57 16 3371.4 -2.80 148.01
110.00 5 29 32 2891.13 -31.92 74.19 283.30 77.06 6 14 23 2091.1 -33.37 65.26
110.00 23 15 33 3894.57 6.54 145.40 266.77 56.37 24 20 28 3294.6 2.07 139.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4093 TRA -.9903 TC3 -.0040 BAU .0242 86T 937.8 86R 442.1 86S 61.1 ST 421.3 SR 428.8 SS 360.0
RDE -.5328 RRA .1127 RC3 -.0354 FAU .01963 RRT .1279 RRF -.1351 RTF -.7245 CRT .7346 CRS .8514 CST .9797
FDE .3243 FRA .5098 FC3 -.3339 B8P 2742 86B 1036.9 82S -.0168 R13 -.7256 LSA 663.2 HSA 225.7 SSA 14.7
BDE .6716 BRA .9967 BC3 .0356 F8P -142 861 940.0 862 437.3 THA 4.41 EL1 559.8 EL2 218.9 ALF 45.69

LAUNCH DATE JAN 16 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 4 1969

Heliocentric Conic: RL 147.17 LAL .00 LOL 115.69 VL 23.957 GAL 4.09 AZL 86.81 HCA 75.46 SMA 107.93 ECC .36956 INC 3.1655 V1 30.273  
 RP 107.84 LAP 3.08 LOP 191.13 VP 35.096 GAP -21.89 AZP 89.20 TAL 172.97 TAP 248.43 RCA 68.04 APO 147.82 VE 35.141  
 RC 42.834 GL 11.36 GP 5.38 ZAL 76.33 ZAP 12.20 ETS 207.77 ZAE 174.81 ETE 275.06 ZAC 114.21 ETC 163.74 CLP 10.97

Distance 183.292

Planetocentric Conic: C3 45.432 WHL 6.740 DLA 25.44 RAL 33.27 RAD 6568.7 VEL 12.915 PTH 2.35 VHP 13.480 DPA 10.97 RAP 19.28 ECC 1.7477  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 46 1 3371.79 -23.24 122.51 278.45 73.36 2 42 13 2771.8 -23.30 114.45  
 90.00 21 58 33 4109.15 -2.89 166.91 269.88 61.82 23 7 3 3509.2 -6.84 160.23  
 100.00 3 31 51 3030.56 -26.02 98.28 279.31 74.74 4 22 22 2430.6 -27.66 89.96  
 100.00 22 55 24 3925.62 -.37 152.03 268.47 60.11 24 0 50 3325.6 -4.34 145.49  
 110.00 5 25 31 2874.96 -32.16 72.99 281.03 77.74 6 10 6 2075.0 -33.51 64.02  
 110.00 23 18 14 3653.97 5.00 143.26 265.13 56.14 24 22 28 3254.0 .52 137.04

Differential Corrections: TDE -.4141 TRA -.9729 TC3 .0181 BAU .0240 RDE -.5070 RRA .1009 RC3 -.0351 FAU .02055 FDE .3402 FRA .5226 FC3 -.3916 B8P 2863 BOE .6546 BRA .9781 BC3 .0395 F8P -159

Mid-Course Execution Accuracy: 86T 981.4 86R 443.8 863 67.2 86T .1460 RRF -.1535 RTF -.7408 86B 1077.1 R23 -.0187 R13 -.7420 861 984.1 86E 437.9 THA 4.71

Orbit Determination Accuracy: ST 446.5 SR 431.9 SS 378.6 CRT .7460 CR8 .8576 CST .9807 LSA 691.1 MSA 226.6 S8A 15.0 EL1 580.5 EL2 221.2 ALF 43.72

LAUNCH DATE JAN 16 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 6 1969

Heliocentric Conic: RL 147.17 LAL .00 LOL 115.69 VL 24.501 GAL 3.78 AZL 86.84 HCA 78.69 SMA 109.40 ECC .35069 INC 3.0581 V1 30.273  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.319 GAP -20.31 AZP 89.40 TAL 172.94 TAP 251.82 RCA 71.04 APO 147.77 V2 35.129  
 RC 42.924 GL 11.71 GP 5.66 ZAL 76.49 ZAP 10.92 ETS 212.97 ZAE 174.31 ETE 304.71 ZAC 115.64 ETC 163.31 CLP 9.33

Distance 189.929

Planetocentric Conic: C3 40.610 WHL 6.373 DLA 25.72 RAL 32.99 RAD 6568.6 VEL 12.727 PTH 2.31 VHP 12.822 DPA 11.88 RAP 20.65 ECC 1.6683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 19 3382.57 -23.42 121.90 276.10 73.82 2 35 21 2762.6 -23.45 113.81  
 90.00 22 3 3 4081.85 -4.41 164.26 268.16 62.00 23 10 45 3461.8 -6.12 157.55  
 100.00 3 26 24 3017.32 -26.25 97.37 278.97 75.17 4 16 42 2417.3 -28.03 89.02  
 100.00 22 58 39 3882.33 -1.83 149.85 268.73 60.16 24 3 21 3282.3 -5.79 143.10  
 110.00 5 21 32 2857.10 -32.41 71.66 278.62 78.49 6 5 49 2057.1 -33.66 62.65  
 110.00 23 20 0 3615.31 3.53 141.23 263.39 55.98 24 23 36 3215.3 -.96 135.03

Differential Corrections: TDE -.4179 TRA -.9531 TC3 .0471 BAU .0314 RDE -.4824 RRA .0898 RC3 -.0337 FAU .02158 FDE .3566 FRA .5353 FC3 -.4601 B8P 3024 BOE .6365 BRA .9573 BC3 .0579 F8P -178

Mid-Course Execution Accuracy: 86T 1024.4 86R 445.0 863 73.9 86T .1654 RRF -.1740 RTF -.7573 86B 1116.9 R23 -.0211 R13 -.7586 861 1027.7 86E 437.4 THA 5.02

Orbit Determination Accuracy: ST 471.8 SR 434.6 SS 397.7 CRT .7575 CR8 .8641 CST .9817 LSA 719.7 MSA 226.7 S8A 15.3 EL1 601.6 EL2 222.5 ALF 41.90

LAUNCH DATE JAN 16 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 8 1969

Heliocentric Conic: RL 147.17 LAL .00 LOL 115.69 VL 24.618 GAL 3.48 AZL 87.07 HCA 81.91 SMA 110.82 ECC .33295 INC 2.9337 V1 30.273  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.527 GAP -19.39 AZP 89.59 TAL 172.97 TAP 254.87 RCA 73.92 APO 147.72 V2 35.117  
 RC 42.392 GL 12.04 GP 5.97 ZAL 76.75 ZAP 9.75 ETS 219.63 ZAE 172.69 ETE 325.82 ZAC 117.04 ETC 162.82 CLP 7.73

Distance 196.591

Planetocentric Conic: C3 36.334 WHL 6.029 DLA 25.94 RAL 32.81 RAD 6568.4 VEL 12.559 PTH 2.28 VHP 12.190 DPA 12.81 RAP 22.00 ECC 1.5983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 9 3350.32 -23.65 121.00 273.68 73.96 2 28 59 2750.3 -23.63 112.96  
 90.00 22 6 10 4018.14 -5.80 161.80 266.30 62.23 23 13 8 3418.1 -9.47 155.05  
 100.00 3 21 20 3001.53 -26.52 96.27 274.54 75.68 4 11 22 2401.5 -26.23 87.88  
 100.00 23 0 40 3842.17 -3.19 147.44 264.86 60.26 24 4 42 3242.2 -7.13 140.87  
 110.00 5 17 42 2837.44 -32.67 70.18 276.10 79.33 6 1 40 2037.4 -33.79 61.13  
 110.00 23 20 47 3779.03 2.15 139.34 261.53 55.88 24 23 46 3179.0 -2.34 133.13

Differential Corrections: TDE -.4219 TRA -.9324 TC3 .0824 BAU .0427 RDE -.4591 RRA .0788 RC3 -.0307 FAU .02273 FDE .3744 FRA .5479 FC3 -.5413 B8P 3187 BOE .6235 BRA .9357 BC3 .0879 F8P -199

Mid-Course Execution Accuracy: 86T 1068.4 86R 445.7 863 81.4 86T .1872 RRF -.1972 RTF -.7728 86B 1157.6 R23 -.0240 R13 -.7743 861 1072.3 86E 436.2 THA 5.35

Orbit Determination Accuracy: ST 498.1 SR 437.0 SS 417.5 CRT .7696 CR8 .8709 CST .9827 LSA 749.7 MSA 225.9 S8A 15.6 EL1 624.0 EL2 222.7 ALF 40.16

LAUNCH DATE JAN 16 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 10 1969

Heliocentric Conic: RL 147.17 LAL .00 LOL 115.69 VL 24.911 GAL 3.19 AZL 87.19 HCA 85.12 SMA 112.18 ECC .31633 INC 2.8114 V1 30.273  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.718 GAP -18.32 AZP 89.78 TAL 173.06 TAP 258.18 RCA 76.70 APO 147.67 V2 35.105  
 RC 42.442 GL 12.34 GP 6.32 ZAL 77.13 ZAP 8.77 ETS 228.14 ZAE 170.49 ETE 338.63 ZAC 118.40 ETC 162.27 CLP 8.08

Distance 203.275

Planetocentric Conic: C3 32.598 WHL 5.709 DLA 26.10 RAL 32.12 RAD 6568.3 VEL 12.408 PTH 2.24 VHP 11.584 DPA 13.76 RAP 23.34 ECC 1.5365  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ABC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 27 48 3334.30 -23.95 120.00 271.19 74.43 2 23 22 2734.3 -23.86 111.85  
 90.00 22 7 38 3979.11 -7.03 159.80 264.29 62.50 23 13 57 3379.1 -10.66 152.80  
 100.00 3 16 50 2982.78 -28.83 94.96 272.02 78.31 4 6 33 2382.8 -28.45 86.53  
 100.00 23 1 16 3805.86 -4.42 143.44 268.86 60.41 24 4 42 3205.9 -8.32 138.84  
 110.00 5 14 7 2815.82 -32.93 68.55 273.48 80.26 5 57 43 2015.8 -33.92 59.46  
 110.00 23 20 29 3745.59 .87 137.59 259.57 53.83 24 22 54 3145.6 -3.62 131.38

Differential Corrections: TDE -.4255 TRA -.9102 TC3 .1236 BAU .0559 RDE -.4370 RRA .0688 RC3 -.0258 FAU .02402 FDE .3930 FRA .5604 FC3 -.6380 B8P 3367 BOE .6099 BRA .9128 BC3 .1282 F8P -223

Mid-Course Execution Accuracy: 86T 1112.5 86R 446.1 863 89.7 86T .2116 RRF -.2233 RTF -.7876 86B 1198.6 R23 -.0273 R13 -.7892 861 1117.2 86E 434.2 THA 5.72

Orbit Determination Accuracy: ST 524.9 SR 439.1 SS 437.8 CRT .7820 CR8 .8776 CST .9837 LSA 780.6 MSA 224.3 S8A 15.9 EL1 647.3 EL2 221.9 ALF 38.54

LAUNCH DATE JAN 16 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 12 1969

MELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 25.181 GAL 2.90 AZL 87.31 HCA 88.34 SMA 113.48 ECC .30078 INC 2.6903 V1 30.273  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.895 GAP -17.29 AZP 89.92 TAL 173.20 TAP 261.55 RCA 79.35 APO 147.61 V2 35.092  
 RC 42.671 GL 12.60 GP 6.71 ZAL 77.60 ZAP 8.03 ETS 238.76 ZAE 168.07 ETE 346.71 ZAC 119.72 ETC 161.67 CLP 4.42

PLANETOCENTRIC CONIC  
 C3 29.283 VHL 5.411 DLA 26.19 RAL 31.54 RAD 6568.2 VEL 12.274 PTH 2.21 VHP 11.003 DPA 14.73 RAP 24.64 ECC 1.4819  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 23 34 3313.72 -24.32 118.60 268.65 75.03 2 18 48 2713.7 -26.14 110.40  
 90.00 22 7 10 3945.83 -8.07 157.71 262.15 62.77 23 12 56 3345.8 -11.66 150.87  
 100.00 3 13 5 2960.64 -27.18 93.41 269.44 77.05 4 2 26 2360.6 -28.69 84.93  
 100.00 23 0 20 3774.15 -5.48 143.69 260.74 60.57 24 3 14 3174.1 -9.36 137.05  
 110.00 5 10 53 2592.09 -33.19 66.75 270.77 81.30 5 54 5 1992.1 -34.03 57.61  
 110.00 23 19 2 3715.46 -1.28 136.02 257.51 55.82 24 20 57 3115.5 -4.76 129.80

DIFFERENTIAL CORRECTIONS  
 TOE -.4295 TRA -.8880 TC3 .1763 BAU .0694 SGT 1198.0 SGR 446.5 SG3 99.0 ST 552.8 SR 441.1 SS 458.8  
 ROE -.4161 RRA .0588 RC3 -.0184 FAU .02545 RRT .2396 RRF -.2532 RTF -.8015 CRT .7948 CRS .8850 CST .9848  
 FOE .4129 FRA .5734 FC3 -.7524 BSP 3530 SGB 1241.1 R23 -.0311 R13 -.8033 LSA 813.2 MSA 221.8 SSA 16.2  
 BOE .5980 BRA .8899 BC3 .1773 FSP -249 SGI 1163.7 SG2 431.4 THA 6.12 EL1 672.1 EL2 220.2 ALF 37.01

LAUNCH DATE JAN 16 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 14 1969

MELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 25.430 GAL 2.63 AZL 87.43 HCA 91.55 SMA 114.72 ECC .28627 INC 2.5697 V1 30.273  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.058 GAP -16.30 AZP 90.07 TAL 173.41 TAP 264.97 RCA 81.88 APO 147.56 V2 35.080  
 RC 43.078 GL 12.82 GP 7.14 ZAL 78.19 ZAP 7.64 ETS 251.27 ZAE 165.59 ETE 352.23 ZAC 120.99 ETC 161.00 CLP 2.74

PLANETOCENTRIC CONIC  
 C3 26.360 VHL 5.134 DLA 26.19 RAL 30.85 RAD 6568.1 VEL 12.155 PTH 2.18 VHP 10.446 DPA 15.73 RAP 25.91 ECC 1.4338  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 45 3287.84 -24.76 116.83 266.07 75.81 2 15 33 2687.8 -26.47 108.58  
 90.00 22 4 32 3919.33 -8.90 156.19 259.87 63.01 23 9 52 3319.3 -12.45 149.32  
 100.00 3 10 18 2934.68 -27.56 91.97 266.80 77.95 3 59 13 2534.7 -28.95 83.04  
 100.00 22 57 41 3747.72 -6.36 142.22 258.50 60.73 24 0 8 3147.7 -10.22 135.56  
 110.00 5 8 7 2566.06 -33.44 64.76 267.97 82.45 5 50 53 1966.1 -34.12 55.58  
 110.00 23 16 21 3689.11 -1.29 134.65 255.38 55.84 24 17 50 3089.1 -5.76 128.42

DIFFERENTIAL CORRECTIONS  
 TOE -.4330 TRA -.8649 TC3 .2360 BAU .0832 SGT 1203.8 SGR 446.9 SG3 109.2 ST 581.1 SR 443.0 SS 480.1  
 ROE -.3966 RRA .0494 RC3 -.0079 FAU .02705 RRT .2709 RRF -.2868 RTF -.8143 CRT .8077 CRS .8921 CST .9858  
 FOE .4337 FRA .5864 FC3 -.8885 BSP 3708 SGB 1284.1 R23 -.0355 R13 -.8164 LSA 846.3 MSA 218.7 SSA 16.6  
 BOE .5872 BRA .8663 BC3 .2361 FSP -279 SGI 1210.8 SG2 427.7 THA 6.57 EL1 697.5 EL2 217.6 ALF 35.61

LAUNCH DATE JAN 16 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 16 1969

MELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 25.660 GAL 2.36 AZL 87.55 HCA 94.77 SMA 115.89 ECC .27276 INC 2.4488 V1 30.273  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.207 GAP -15.36 AZP 90.20 TAL 173.68 TAP 268.45 RCA 84.28 APO 147.50 V2 35.067  
 RC 43.658 GL 12.98 GP 7.61 ZAL 78.87 ZAP 7.68 ETS 264.69 ZAE 163.13 ETE 356.33 ZAC 122.19 ETC 160.26 CLP 1.03

PLANETOCENTRIC CONIC  
 C3 23.784 VHL 4.877 DLA 26.11 RAL 30.09 RAD 6568.0 VEL 12.048 PTH 2.15 VHP 9.913 DPA 16.76 RAP 27.14 ECC 1.3914  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 34 3256.17 -25.28 114.65 263.46 76.79 2 13 50 2656.2 -26.84 106.34  
 90.00 21 59 36 3900.33 -9.48 155.11 257.46 63.19 23 4 36 3300.3 -13.00 148.20  
 100.00 3 8 38 2904.57 -27.97 89.43 264.11 79.01 3 57 2 2304.6 -29.20 80.84  
 100.00 22 53 13 3727.17 -7.04 141.08 256.15 60.87 23 55 20 3127.2 -10.88 134.39  
 110.00 5 5 56 2537.53 -33.67 62.96 265.11 83.75 5 48 14 1937.5 -34.17 53.36  
 110.00 23 12 24 3666.97 -2.13 133.49 253.12 55.88 24 13 31 3067.0 -6.60 127.25

DIFFERENTIAL CORRECTIONS  
 TOE -.4361 TRA -.8408 TC3 .3054 BAU .0971 SGT 1249.6 SGR 447.7 SG3 120.7 ST 609.5 SR 444.9 SS 501.3  
 ROE -.3784 RRA .0404 RC3 .0066 FAU .02884 RRT .3067 RRF -.3246 RTF -.8265 CRT .8208 CRS .8991 CST .9869  
 FOE .4554 FRA .5999 FC3 -1.0499 BSP 3879 SGB 1327.4 R23 -.0401 R13 -.8289 LSA 879.9 MSA 214.8 SSA 16.9  
 BOE .5774 BRA .8418 BC3 .3055 FSP -313 SGI 1258.1 SG2 423.3 THA 7.08 EL1 723.6 EL2 214.1 ALF 34.35

LAUNCH DATE JAN 16 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 18 1969

MELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 25.871 GAL 2.10 AZL 87.67 HCA 97.98 SMA 117.00 ECC .26022 INC 2.3269 V1 30.273  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.344 GAP -14.45 AZP 90.32 TAL 174.00 TAP 271.98 RCA 86.56 APO 147.45 V2 35.053  
 RC 44.403 GL 13.08 GP 8.15 ZAL 79.64 ZAP 8.18 ETS 277.52 ZAE 160.75 ETE 359.57 ZAC 123.33 ETC 159.44 CLP -.72

PLANETOCENTRIC CONIC  
 C3 21.515 VHL 4.638 DLA 25.92 RAL 29.24 RAD 6567.9 VEL 11.954 PTH 2.13 VHP 9.402 DPA 17.82 RAP 28.32 ECC 1.3541  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 8 3218.53 -25.83 112.04 260.83 77.99 2 13 47 2618.5 -27.23 103.65  
 90.00 21 52 18 3889.25 -9.82 154.47 254.95 63.31 22 57 7 3289.3 -13.33 147.55  
 100.00 3 8 13 2870.07 -28.40 86.95 261.38 80.24 3 56 3 2270.1 -29.45 78.31  
 100.00 22 46 54 3712.94 -7.52 140.29 253.71 60.98 23 48 47 3112.9 -11.33 133.57  
 110.00 5 4 28 2506.34 -33.88 60.15 262.20 85.14 5 46 15 1906.3 -34.18 50.92  
 110.00 23 7 8 3649.44 -2.80 132.58 250.81 55.92 24 7 58 3049.4 -7.26 126.32

DIFFERENTIAL CORRECTIONS  
 TOE -.4376 TRA -.8157 TC3 .3853 BAU .1111 SGT 1294.2 SGR 449.4 SG3 133.4 ST 636.6 SR 446.8 SS 522.5  
 ROE -.3616 RRA .0316 RC3 .0260 FAU .03084 RRT .3463 RRF -.3672 RTF -.8381 CRT .8334 CRS .9061 CST .9879  
 FOE .4779 FRA .6139 FC3 -1.2411 BSP 4066 SGB 1370.0 R23 -.0459 R13 -.8409 LSA 912.9 MSA 210.4 SSA 17.3  
 BOE .5676 BRA .8163 BC3 .3861 FSP -351 SGI 1304.6 SG2 418.2 THA 7.65 EL1 748.9 EL2 209.9 ALF 33.28

LAUNCH DATE JAN 16 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC DISTANCE 236.856  
 RL 147.17 LAL .00 LOL 115.69 VL 26.065 GAL 1.85 AZL 87.80 HCA 101.18 SMA 118.05 ECC .24861 INC 2.2031 V1 30.273  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.470 GAP -13.58 AZP 90.43 TAL 174.38 TAP 275.56 RCA 88.70 APO 147.40 V2 35.040  
 RC 45.309 GL 13.10 GP 8.74 ZAL 80.51 ZAP 9.09 ETS 288.58 ZAE 158.50 ETE 2.30 ZAC 124.38 ETC 158.55 CLP -2.50

PLANETOCENTRIC CONIC  
 C3 19.516 VHL 4.418 OLA 25.64 RAL 28.34 RAD 6567.8 VEL 11.870 PTH 2.11 VHP 8.914 DPA 18.92 RAP 29.44 ECC 1.3212  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 22 28 3175.08 -26.41 108.99 258.18 79.41 2 15 23 2575.1 -27.61 100.53  
 90.00 21 42 45 3886.09 -9.92 154.29 252.36 63.34 22 47 31 3286.1 -13.42 147.36  
 100.00 3 9 9 2831.10 -28.81 84.13 258.63 81.67 3 56 20 2231.1 -29.66 75.43  
 100.00 22 38 44 3705.30 -7.77 139.86 251.21 61.04 23 40 29 3105.3 -11.57 133.14  
 110.00 5 3 50 2472.32 -34.04 57.51 259.26 86.70 5 45 2 1872.3 -34.13 48.26  
 110.00 23 0 33 3636.85 -3.28 131.92 248.45 55.96 24 1 10 3036.8 -7.73 125.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4377 TRA -.7914 TC3 .4750 BAU .1247 SGT 1339.6 SGR 452.3 SG3 147.6 ST 662.7 SR 449.0 SS 542.9  
 RDE -.3461 RRA .0230 RC3 .0513 FAU .03307 RRT .3899 RRF -.4146 RTF -.8486 CRT .8452 CRS .9128 CST .9887  
 FDE .5008 FRA .6287 FC3-1.4669 BSP 4236 SGB 1413.9 R23 -.0532 R13 -.8518 LSA 944.9 MSA 205.8 SSA 17.7  
 BDE .5580 BRA .7917 BC3 .4778 FSP -393 SG1 1352.4 SG2 412.6 THA 8.28 EL1 773.6 EL2 205.5 ALF 32.36

LAUNCH DATE JAN 16 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC DISTANCE 243.578  
 RL 147.17 LAL .00 LOL 115.69 VL 26.243 GAL 1.62 AZL 87.92 HCA 104.39 SMA 119.04 ECC .23788 INC 2.0766 V1 30.273  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.585 GAP -12.75 AZP 90.52 TAL 174.80 TAP 279.19 RCA 90.72 APO 147.36 V2 35.027  
 RC 46.364 GL 13.04 GP 9.41 ZAL 81.46 ZAP 10.35 ETS 297.48 ZAE 156.39 ETE 4.72 ZAC 125.34 ETC 157.58 CLP -4.34

PLANETOCENTRIC CONIC  
 C3 17.758 VHL 4.214 OLA 25.23 RAL 27.38 RAD 6567.7 VEL 11.796 PTH 2.09 VHP 8.448 DPA 20.06 RAP 30.49 ECC 1.2922  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 28 3126.27 -26.98 105.53 255.52 81.06 2 18 34 2526.3 -27.94 96.99  
 90.00 21 31 7 3890.56 -9.78 154.54 249.72 63.29 22 35 58 3290.6 -13.29 147.62  
 100.00 3 11 28 2787.71 -29.20 80.96 255.87 83.30 3 57 56 2187.7 -29.82 72.21  
 100.00 22 28 48 3704.34 -7.80 139.81 248.66 61.05 23 30 32 3104.3 -11.60 133.08  
 110.00 5 4 6 2435.34 -34.15 54.62 256.29 88.40 5 44 41 1835.3 -35.99 45.38  
 110.00 22 52 40 3629.48 -3.56 131.53 246.06 55.98 23 53 9 3029.5 -8.01 125.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4338 TRA -.7637 TC3 .5810 BAU .1394 SGT 1380.4 SGR 457.1 SG3 163.5 ST 683.2 SR 451.0 SS 560.5  
 RDE -.3317 RRA .0146 RC3 .0844 FAU .03562 RRT .4370 RRF -.4659 RTF -.8596 CRT .8561 CRS .9188 CST .9895  
 FDE .5219 FRA .6432 FC3-1.7363 BSP 4462 SGB 1494.1 R23 -.0607 R13 -.8633 LSA 971.4 MSA 200.8 SSA 18.1  
 BDE .5461 BRA .7639 BC3 .5871 FSP -443 SG1 1396.1 SG2 406.5 THA 9.00 EL1 793.6 EL2 200.7 ALF 31.74

LAUNCH DATE JAN 16 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC DISTANCE 250.294  
 RL 147.17 LAL .00 LOL 115.69 VL 26.406 GAL 1.39 AZL 88.05 HCA 107.59 SMA 119.96 ECC .22801 INC 1.9466 V1 30.273  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.689 GAP -11.94 AZP 90.59 TAL 175.27 TAP 282.86 RCA 92.61 APO 147.31 V2 35.013  
 RC 47.558 GL 12.87 GP 10.16 ZAL 82.48 ZAP 11.90 ETS 304.39 ZAE 154.44 ETE 6.96 ZAC 126.18 ETC 156.52 CLP -6.23

PLANETOCENTRIC CONIC  
 C3 16.211 VHL 4.026 OLA 24.70 RAL 26.40 RAD 6567.6 VEL 11.730 PTH 2.07 VHP 8.003 DPA 21.25 RAP 31.45 ECC 1.2668  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 1 3072.66 -27.49 101.69 252.85 82.92 2 23 14 2472.7 -28.18 93.09  
 90.00 21 17 42 3902.20 -9.42 155.21 247.07 63.17 22 22 44 3302.2 -12.95 148.31  
 100.00 3 15 10 2740.09 -29.53 77.46 253.09 85.11 4 0 50 2140.1 -29.89 68.68  
 100.00 22 17 14 3710.00 -7.61 140.12 246.10 61.01 23 19 4 3110.0 -11.42 133.41  
 110.00 5 5 22 2395.33 -34.18 51.50 253.31 90.25 5 45 17 1795.3 -33.77 42.28  
 110.00 22 43 32 3627.53 -3.64 131.43 243.66 55.99 23 43 59 3027.5 -8.08 125.16

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4319 TRA -.7397 TC3 .6899 BAU .1520 SGT 1424.4 SGR 465.1 SG3 181.2 ST 706.2 SR 453.8 SS 578.8  
 RDE -.3189 RRA .0058 RC3 .1259 FAU .03838 RRT .4901 RRF -.5228 RTF -.8682 CRT .8673 CRS .9248 CST .9904  
 FDE .5451 FRA .6611 FC3-2.0496 BSP 4610 SGB 1498.4 R23 -.0698 R13 -.8726 LSA 1000.6 MSA 195.5 SSA 18.6  
 BDE .5368 BRA .7397 BC3 .7013 FSP -495 SG1 1444.0 SG2 399.9 THA 9.85 EL1 816.4 EL2 195.4 ALF 31.11

LAUNCH DATE JAN 16 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC DISTANCE 257.002  
 RL 147.17 LAL .00 LOL 115.69 VL 26.556 GAL 1.18 AZL 88.19 HCA 110.79 SMA 120.83 ECC .21894 INC 1.8120 V1 30.273  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.784 GAP -11.17 AZP 90.64 TAL 175.78 TAP 286.57 RCA 94.37 APO 147.28 V2 35.000  
 RC 48.883 GL 12.58 GP 11.01 ZAL 83.58 ZAP 13.68 ETS 309.68 ZAE 152.67 ETE 9.13 ZAC 126.90 ETC 155.37 CLP -8.18

PLANETOCENTRIC CONIC  
 C3 14.852 VHL 3.854 OLA 24.04 RAL 25.40 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 7.579 DPA 22.51 RAP 32.32 ECC 1.2444  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 2 3014.79 -27.90 97.50 250.18 84.97 2 29 16 2414.8 -28.31 88.86  
 90.00 21 2 45 3920.56 -8.86 156.27 244.45 62.99 22 8 5 3320.6 -12.41 149.39  
 100.00 3 20 15 2688.44 -29.77 73.64 250.53 87.11 4 5 3 2088.4 -29.85 64.84  
 100.00 22 4 13 3722.14 -7.21 140.80 243.56 60.91 23 6 15 3122.1 -11.04 134.10  
 110.00 5 7 43 2392.20 -34.12 48.13 250.36 92.24 5 46 55 1752.2 -33.43 38.96  
 110.00 22 33 13 3631.15 -3.50 131.82 241.28 55.97 23 33 45 3031.1 -7.94 125.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4299 TRA -.7139 TC3 .8101 BAU .1647 SGT 1463.3 SGR 476.8 SG3 200.9 ST 723.0 SR 456.5 SS 592.8  
 RDE -.3070 RRA -.0029 RC3 .1785 FAU .04149 RRT .5453 RRF -.5823 RTF -.8763 CRT .8774 CRS .9300 CST .9913  
 FDE .5652 FRA .6793 FC3-2.4187 BSP 4777 SGB 1539.1 R23 -.0801 R13 -.8815 LSA 1022.8 MSA 190.0 SSA 19.2  
 BDE .5250 BRA .7139 BC3 .8295 FSP -556 SG1 1488.0 SG2 393.0 THA 10.84 EL1 833.7 EL2 190.0 ALF 30.75



LAUNCH DATE JAN 16 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 26.692 GAL .98 AZL 86.53 HCA 113.98 SMA 121.63 ECC .21064 INC 1.6717 V1 30.273
RP 108.31 LAP 1.53 LOP 229.68 VP 36.870 GAP -10.43 AZP 90.68 TAL 176.32 TAP 290.31 RCA 96.01 APO 147.25 V2 34.987
RC 90.327 GL 12.16 GP 11.97 ZAL 84.69 ZAP 15.68 ETS 313.72 ZAE 151.08 ETE 11.29 ZAC 127.47 ETC 154.14 CLP -10.21

DISTANCE 263.699

PLANETOCENTRIC CONIC

C3 13.658 VHL 3.696 DLA 23.22 RAL 24.41 RAD 6567.5 VEL 11.621 PTH 2.04 VHP 7.177 DPA 23.63 RAP 33.08 ECC 1.2248
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 47 23 2953.12 -28.19 93.02 247.53 87.21 2 36 36 2353.1 -28.28 84.35
90.00 20 46 30 3945.22 -8.09 157.67 241.69 62.77 21 52 16 3345.2 -11.68 150.83
100.00 3 26 40 2632.98 -29.88 69.52 247.59 89.27 4 10 33 2033.0 -29.67 60.73
100.00 21 49 54 3740.59 -6.60 141.83 241.08 60.78 22 52 15 3140.6 -10.45 135.15
110.00 5 11 13 2305.90 -33.94 44.53 247.44 94.37 5 49 39 1705.9 -32.96 35.43
110.00 22 21 51 3640.43 -3.15 132.10 238.95 55.94 23 22 31 3040.4 -7.60 125.84

DIFFERENTIAL CORRECTIONS

TDE -.4170 TRA -.6891 TC3 .9401 BAU .1774
RDE -.2963 RRA -.0122 RC3 .2445 FAU .04497
FDE .5830 FRA .7004 FC3-2.8505 B8P 4939
BDE .5116 BRA .6892 BC3 .9714 F8P -624

MID-COURSE EXECUTION ACCURACY

86T 1500.8 86R 494.0 86J 222.8
86T .6021 RRF -.6437 RTF -.8841
86B 1580.1 R23 -.0920 R13 -.8903
86I 1532.1 86E 386.4 THA 11.98

ORBIT DETERMINATION ACCURACY

ST 734.9 SR 459.4 SS 603.4
CRT .8863 CR8 .9345 CST .9920
LSA 1039.6 MSA 184.7 SBA 19.8
EL1 846.8 EL2 184.6 ALF 30.60

LAUNCH DATE JAN 16 1969

FLIGHT TIME 104.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 26.816 GAL .79 AZL 86.48 HCA 117.18 SMA 122.37 ECC .20306 INC 1.5242 V1 30.273
RP 108.36 LAP 1.36 LOP 232.88 VP 36.948 GAP -9.72 AZP 90.70 TAL 176.89 TAP 294.06 RCA 97.52 APO 147.22 V2 34.974
RC 51.881 GL 11.59 GP 13.05 ZAL 85.86 ZAP 17.87 ETS 316.83 ZAE 149.66 ETE 13.53 ZAC 127.86 ETC 152.82 CLP -12.31

DISTANCE 270.384

PLANETOCENTRIC CONIC

C3 12.610 VHL 3.551 DLA 22.25 RAL 23.46 RAD 6567.5 VEL 11.576 PTH 2.02 VHP 6.797 DPA 25.24 RAP 33.70 ECC 1.2075
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 57 2 2887.98 -28.31 88.28 244.91 89.59 2 45 10 2288.0 -28.07 79.60
90.00 20 29 14 3675.86 -7.13 159.41 239.43 62.52 21 35 30 3375.9 -10.76 152.61
100.00 3 34 26 2573.89 -29.85 65.13 244.90 91.58 4 17 20 1973.9 -29.32 56.37
100.00 21 34 30 3765.18 -5.78 143.19 238.69 60.62 22 37 16 3165.2 -9.65 136.54
110.00 5 15 56 2256.38 -33.61 40.70 244.58 96.61 5 53 32 1656.4 -32.33 31.70
110.00 22 9 31 3655.46 -2.57 132.89 236.70 55.90 23 10 26 3055.5 -7.03 126.64

DIFFERENTIAL CORRECTIONS

TDE -.4066 TRA -.8656 TC3 1.0712 BAU .1888
RDE -.2888 RRA -.0222 RC3 .3257 FAU .04875
FDE .5981 FRA .7256 FC3-3.3468 B8P 5073
BDE .4974 BRA .8660 BC3 1.1196 F8P -698

MID-COURSE EXECUTION ACCURACY

86T 1534.8 86R 518.4 86J 247.1
86T .6589 RRF -.7047 RTF -.8905
86B 1620.0 R23 -.1057 R13 -.8980
86I 1574.8 86E 380.1 THA 13.34

ORBIT DETERMINATION ACCURACY

ST 743.0 SR 482.6 SS 610.4
CRT .8948 CR8 .9383 CST .9929
LSA 1051.7 MSA 179.2 SBA 20.5
EL1 856.7 EL2 179.1 ALF 30.60

LAUNCH DATE JAN 16 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 26.929 GAL .62 AZL 88.63 HCA 120.37 SMA 123.06 ECC .19618 INC 1.3683 V1 30.273
RP 108.40 LAP 1.18 LOP 236.07 VP 37.017 GAP -9.03 AZP 90.69 TAL 177.47 TAP 297.84 RCA 98.92 APO 147.20 V2 34.961
RC 53.536 GL 10.84 GP 14.29 ZAL 87.05 ZAP 20.26 ETS 319.23 ZAE 148.41 ETE 15.90 ZAC 128.06 ETC 151.42 CLP -14.52

DISTANCE 277.053

PLANETOCENTRIC CONIC

C3 11.691 VHL 3.419 DLA 21.11 RAL 22.56 RAD 6567.4 VEL 11.536 PTH 2.01 VHP 6.438 DPA 26.78 RAP 34.16 ECC 1.1924
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 7 58 2819.52 -28.25 83.25 242.36 92.10 2 54 58 2219.5 -27.66 74.63
90.00 20 11 7 4012.33 -5.98 161.48 237.10 62.27 21 17 59 3412.3 -9.63 154.72
100.00 3 43 34 2511.23 -29.65 60.49 242.28 94.02 4 25 26 1911.2 -28.77 51.79
100.00 21 18 12 3795.84 -4.75 144.89 236.43 60.45 22 21 27 3195.8 -8.65 138.27
110.00 5 21 56 2203.53 -33.13 38.65 241.82 98.96 5 58 39 1603.5 -31.53 27.79
110.00 21 56 20 3676.32 -1.78 133.98 234.58 55.88 22 57 36 3076.3 -6.25 127.74

DIFFERENTIAL CORRECTIONS

TDE -.3901 TRA -.6402 TC3 1.2110 BAU .2007
RDE -.2771 RRA -.0328 RC3 .4265 FAU .05298
FDE .6049 FRA .7517 FC3-3.9231 B8P 5235
BDE .4785 BRA .6411 BC3 1.2839 F8P -782

MID-COURSE EXECUTION ACCURACY

86T 1560.6 86R 551.5 86J 273.9
86T .7120 RRF -.7624 RTF -.8969
86B 1655.2 R23 -.1203 R13 -.9061
86I 1612.2 86E 374.9 THA 14.95

ORBIT DETERMINATION ACCURACY

ST 739.5 SR 464.8 SS 608.8
CRT .9015 CR8 .9407 CST .9937
LSA 1050.2 MSA 174.0 SBA 21.3
EL1 856.0 EL2 173.8 ALF 30.95

LAUNCH DATE JAN 16 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 27.031 GAL .46 AZL 88.80 HCA 123.58 SMA 123.69 ECC .18994 INC 1.2019 V1 30.273
RP 108.43 LAP 1.00 LOP 239.26 VP 37.080 GAP -8.37 AZP 90.66 TAL 178.06 TAP 301.61 RCA 100.20 APO 147.19 V2 34.948
RC 55.282 GL 9.89 GP 15.70 ZAL 88.25 ZAP 22.85 ETS 321.08 ZAE 147.31 ETE 18.47 ZAC 128.03 ETC 149.95 CLP -16.83

DISTANCE 283.705

PLANETOCENTRIC CONIC

C3 10.887 VHL 3.300 DLA 19.78 RAL 21.74 RAD 6567.4 VEL 11.501 PTH 2.00 VHP 6.101 DPA 28.38 RAP 34.44 ECC 1.1792
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 20 14 2747.75 -27.96 78.02 239.91 94.70 3 8 2 2147.7 -27.01 69.48
90.00 19 52 19 4054.64 -4.64 163.86 234.95 62.03 20 59 53 3454.6 -8.34 157.14
100.00 3 34 7 2445.03 -29.23 55.61 239.77 96.56 4 34 52 1845.0 -28.01 47.02
100.00 21 1 7 3632.59 -3.52 146.82 234.33 60.30 22 5 0 3232.6 -7.44 140.33
110.00 5 29 18 2147.22 -32.45 32.40 239.17 101.40 6 5 5 1547.2 -30.54 23.70
110.00 21 42 25 3703.16 -.75 135.38 232.60 55.82 22 44 8 3103.2 -5.23 129.16

DIFFERENTIAL CORRECTIONS

TDE -.3722 TRA -.6181 TC3 1.3488 BAU .2121
RDE -.2882 RRA -.0450 RC3 .5504 FAU .05761
FDE .6056 FRA .7843 FC3-4.5812 B8P 5393
BDE .4588 BRA .6196 BC3 1.4569 F8P -879

MID-COURSE EXECUTION ACCURACY

86T 1584.7 86R 596.4 86J 303.3
86T .7608 RRF -.8152 RTF -.9021
86B 1693.2 R23 -.1369 R13 -.9135
86I 1652.0 86E 371.3 THA 16.86

ORBIT DETERMINATION ACCURACY

ST 731.8 SR 466.5 SS 601.6
CRT .9073 CR8 .9420 CST .9945
LSA 1042.1 MSA 168.9 SBA 22.2
EL1 851.3 EL2 168.4 ALF 31.42

LAUNCH DATE JAN 16 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 290.339

RL 147.17 LAL .00 LOL 115.69 VL 27.123 GAL .31 AZL 88.98 HCA 126.74 SMA 124.27 ECC .18430 INC 1.0229 V1 30.273
RP 108.47 LAP .82 LOP 242.44 VP 37.135 GAP -7.73 AZP 90.81 TAL 178.64 TAP 305.39 RCA 101.37 APO 147.18 V2 34.936
RC 97.109 GL 8.73 GP 17.30 ZAL 89.45 ZAP 25.67 ETS 322.53 ZAE 146.33 ETE 21.30 ZAC 127.74 ETC 148.43 CLP -19.25

PLANETOCENTRIC CONIC

C3 10.186 VHL 3.192 DLA 18.25 RAL 21.02 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.768 DPA 30.15 RAP 34.50 ECC 1.1676
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 35 55 2672.46 -27.42 72.58 237.59 97.38 3 18 28 2072.5 -26.11 64.15
90.00 19 32 56 4102.97 -3.09 166.57 233.00 61.84 20 41 19 3503.0 -6.83 159.88
100.00 4 6 9 2375.06 -26.58 50.51 237.39 99.16 4 45 44 1775.1 -27.02 42.06
100.00 20 43 24 3875.60 -2.06 149.28 232.43 60.17 21 47 59 3275.6 -6.02 142.73
110.00 5 38 9 2087.21 -31.55 27.95 236.89 103.89 6 12 56 1487.2 -29.32 19.45
110.00 21 27 53 3736.21 .51 137.10 230.82 55.82 22 30 9 3136.2 -3.97 130.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3499 TRA -.5985 TC3 1.4759 BAU .2225 8GT 1597.9 8GR 654.8 8G3 335.4 ST 714.0 SR 466.0 SS 563.7
RDE -.2588 RRA -.0590 RC3 .7010 FAU .08256 RRT .8022 RRF -.8806 RTF -.9059 CRT .9125 CRS .9410 CST .9956
FDE .5933 FRA .8223 FC3-5.3171 B8P 5490 8GB 1726.8 R23 -.1547 R13 -.9203 LSA 1019.9 MSA 164.0 SSA 23.4
BOE .4352 BRA .5994 BC3 1.6339 F8P -977 8G1 1686.6 8G2 370.2 THA 19.15 EL1 836.9 EL2 162.8 ALF 32.13

LAUNCH DATE JAN 16 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 296.954

RL 147.17 LAL .00 LOL 115.69 VL 27.206 GAL .17 AZL 89.17 HCA 129.93 SMA 124.80 ECC .17924 INC .8285 V1 30.273
RP 108.51 LAP .84 LOP 245.62 VP 37.184 GAP -7.12 AZP 90.53 TAL 179.22 TAP 309.15 RCA 102.43 APO 147.17 V2 34.923
RC 99.010 GL 7.30 GP 19.15 ZAL 90.62 ZAP 28.72 ETS 323.67 ZAE 145.45 ETE 24.47 ZAC 127.16 ETC 146.87 CLP -21.82

PLANETOCENTRIC CONIC

C3 9.578 VHL 3.095 DLA 16.49 RAL 20.44 RAD 6567.3 VEL 11.444 PTH 1.99 VHP 5.500 DPA 32.08 RAP 34.30 ECC 1.1576
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 49 12 2593.26 -26.60 66.93 235.43 100.10 3 32 25 1993.3 -24.93 58.65
90.00 19 13 2 4157.73 -1.33 169.82 231.30 61.71 20 22 20 3557.7 -5.10 162.97
100.00 4 19 50 2300.98 -27.66 45.20 235.20 101.81 4 58 11 1701.0 -25.75 36.91
100.00 20 25 5 3925.24 -.38 152.01 230.77 60.11 21 30 31 3325.2 -4.35 145.47
110.00 5 48 38 2023.14 -30.41 23.30 234.41 106.42 6 22 21 1423.1 -27.86 15.04
110.00 21 12 47 3775.85 2.03 139.17 229.27 55.87 22 15 42 3175.9 -2.46 132.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3284 TRA -.5741 TC3 1.5871 BAU .2338 8GT 1603.4 8GR 730.8 8G3 370.0 ST 690.4 SR 464.0 SS 559.6
RDE -.2494 RRA -.0749 RC3 .8849 FAU .06792 RRT .8370 RRF -.8984 RTF -.9094 CRT .9175 CRS .9387 CST .9966
FDE .5725 FRA .8638 FC3-6.1387 B8P 5593 8GB 1782.1 R23 -.1707 R13 -.9278 LSA 989.6 MSA 158.6 SSA 24.8
BOE .4108 BRA .5789 BC3 1.8258 F8P -1086 8G1 1722.3 8G2 372.3 THA 21.96 EL1 817.1 EL2 155.9 ALF 33.02

LAUNCH DATE JAN 16 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 303.548

RL 147.17 LAL .00 LOL 115.69 VL 27.281 GAL .05 AZL 89.38 HCA 133.11 SMA 125.28 ECC .17471 INC .6153 V1 30.273
RP 108.55 LAP .45 LOP 248.80 VP 37.228 GAP -6.53 AZP 90.42 TAL 179.78 TAP 312.89 RCA 103.39 APO 147.17 V2 34.911
RC 80.976 GL 5.59 GP 21.26 ZAL 91.78 ZAP 32.02 ETS 324.58 ZAE 144.55 ETE 28.02 ZAC 126.25 ETC 145.30 CLP -24.53

PLANETOCENTRIC CONIC

C3 9.056 VHL 3.009 DLA 14.47 RAL 20.03 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 5.239 DPA 34.19 RAP 33.79 ECC 1.1490
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 8 16 2509.59 -25.46 61.06 233.50 102.83 3 48 5 1909.6 -25.44 52.98
90.00 18 52 39 4219.56 .67 173.07 229.89 61.69 20 2 58 3619.6 -3.12 166.44
100.00 4 35 21 2222.29 -26.44 39.67 233.25 104.48 5 12 23 1622.3 -24.19 31.59
100.00 20 6 15 3982.10 1.55 155.12 229.40 60.14 21 12 37 3382.1 -2.43 148.60
110.00 6 0 56 1954.54 -20.99 18.47 232.37 108.96 6 33 30 1354.5 -26.13 10.46
110.00 20 57 10 3822.62 3.81 141.62 227.99 56.00 22 0 52 3222.6 -.68 135.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3089 TRA -.5719 TC3 1.6226 BAU .2365 8GT 1601.3 8GR 821.5 8G3 403.6 ST 678.7 SR 460.2 SS 533.2
RDE -.2395 RRA -.0992 RC3 1.0880 FAU .07232 RRT .8588 RRF -.9269 RTF -.9032 CRT .9238 CRS .9317 CST .9977
FDE .5413 FRA .9433 FC3-6.9135 B8P 5096 8GB 1799.7 R23 -.2032 R13 -.9288 LSA 965.5 MSA 154.2 SSA 26.9
BOE .3909 BRA .5804 BC3 1.9536 F8P -1110 8G1 1757.9 8G2 385.9 THA 25.02 EL1 806.5 EL2 148.2 ALF 33.54

LAUNCH DATE JAN 16 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 310.122

RL 147.17 LAL .00 LOL 115.69 VL 27.348 GAL -.06 AZL 89.62 HCA 136.29 SMA 125.71 ECC .17067 INC .3788 V1 30.273
RP 108.58 LAP .26 LOP 251.98 VP 37.266 GAP -5.96 AZP 90.27 TAL 180.31 TAP 316.60 RCA 104.26 APO 147.17 V2 34.900
RC 83.000 GL 3.53 GP 23.68 ZAL 92.84 ZAP 35.61 ETS 325.35 ZAE 143.62 ETE 32.02 ZAC 124.96 ETC 143.76 CLP -27.41

PLANETOCENTRIC CONIC

C3 8.615 VHL 2.935 DLA 12.17 RAL 19.80 RAD 6567.3 VEL 11.402 PTH 1.97 VHP 5.007 DPA 36.52 RAP 32.90 ECC 1.1418
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 25 27 2420.45 -25.97 54.96 231.83 105.94 4 5 47 1820.4 -21.81 47.08
90.00 18 31 38 4289.80 2.93 176.98 228.83 61.82 19 43 7 3689.6 -.86 170.35
100.00 4 53 0 2138.06 -24.88 33.90 231.54 107.13 5 28 38 1538.1 -22.29 26.05
100.00 19 46 45 4047.22 3.75 158.70 228.37 60.32 20 54 12 3447.2 -.23 152.18
110.00 6 15 17 1880.60 -27.25 13.42 230.81 111.48 6 46 38 1280.6 -24.09 5.68
110.00 20 40 58 3877.45 5.89 144.50 227.04 56.27 21 45 35 3277.4 1.42 138.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2513 TRA -.5272 TC3 1.7768 BAU .2584 8GT 1581.1 8GR 936.6 8G3 441.0 ST 584.3 SR 428.5 SS 442.1
RDE -.2183 RRA -.1145 RC3 1.3889 FAU .07901 RRT .8799 RRF -.9490 RTF -.9132 CRT .9169 CRS .9033 CST .9961
FDE .4283 FRA .9530 FC3-7.9404 B8P 6053 8GB 1820.8 R23 -.1918 R13 -.9439 LSA 834.2 MSA 154.0 SSA 28.9
BOE .3316 BRA .5595 BC3 2.2436 F8P -1354 8G1 1776.1 8G2 380.7 THA 29.39 EL1 710.8 EL2 140.5 ALF 35.52

LAUNCH DATE JAN 16 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 316.672

RL 147.17 LAL .00 LOL 115.69 VL 27.407 GAL -.16 AZL 89.89 HCA 139.46 SMA 126.10 ECC .16709 INC .1130 V1 30.273  
 RP 108.62 LAP .07 LOP 255.16 VP 37.299 GAP -5.41 AZP 90.09 TAL 180.81 TAP 320.28 RCA 105.03 APO 147.17 V2 34.889  
 RC 65.076 GL 1.08 GP 26.45 ZAL 93.84 ZAP 39.50 ETS 326.04 ZAE 142.55 ETE 36.50 ZAC 123.25 ETC 142.30 CLP -30.47

PLANETOCENTRIC CONIC

C3 8.255 VHL 2.873 DLA 9.52 RAL 19.79 RAD 6567.3 VEL 11.386 PTH 1.97 VHP 4.809 DPA 39.09 RAP 31.56 ECC 1.1359  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 9 2324.75 -22.08 48.58 230.50 108.19 4 25 54 1724.8 -19.39 40.94  
 90.00 18 9 52 4369.24 5.47 181.45 228.17 62.17 19 22 42 3769.2 1.71 174.79  
 100.00 5 13 10 2047.32 -22.92 27.87 230.18 109.73 5 47 18 1447.3 -20.02 20.27  
 100.00 19 26 32 4121.90 6.25 182.84 227.75 60.71 20 35 14 3521.9 2.30 156.28  
 110.00 6 32 3 1800.48 -25.14 8.15 229.21 113.96 7 2 4 1200.5 -21.69 .70  
 110.00 20 24 9 3941.51 8.30 147.89 226.49 56.72 21 29 50 3341.5 3.86 141.62

DIFFERENTIAL CORRECTIONS

TDE -.2175 TRA -.5133 TC3 1.8226 BAU .2740  
 RDE -.1944 RRA -.1452 RC3 1.6855 FAU .00459  
 FDE .3275 FRA 1.0278 FC3-8.8711 B8P 6125  
 BDE .2917 BRA .5335 BC3 2.4825 F8P -1466

MID-COURSE EXECUTION ACCURACY

S6T 1537.0 S6R 1083.8 S63 479.0  
 RRT .8928 RRF -.9655 RTF -.9130  
 S6B 1880.6 R23 -.1958 R13 -.9526  
 S61 1835.7 S62 408.7 THA 34.12

ORBIT DETERMINATION ACCURACY

ST 534.8 SR 398.6 SS 380.5  
 CRT .9216 CRS .8582 CST .9845  
 LSA 751.3 MSA 155.8 SSA 31.2  
 EL1 654.9 EL2 126.4 ALF 36.04

LAUNCH DATE JAN 16 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 323.200

RL 147.17 LAL .00 LOL 115.69 VL 27.459 GAL -.25 AZL 90.19 HCA 142.64 SMA 126.44 ECC .16394 INC .1882 V1 30.273  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.327 GAP -4.87 AZP 89.85 TAL 181.27 TAP 323.90 RCA 105.71 APO 147.17 V2 34.878  
 RC 67.198 GL -1.85 GP 29.62 ZAL 94.74 ZAP 43.70 ETS 326.75 ZAE 141.22 ETE 41.45 ZAC 121.10 ETC 140.96 CLP -33.73

PLANETOCENTRIC CONIC

C3 7.982 VHL 2.825 DLA 6.48 RAL 20.05 RAD 6567.3 VEL 11.374 PTH 1.96 VHP 4.649 DPA 41.91 RAP 29.67 ECC 1.1314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 11 59 2220.86 -19.72 41.88 229.58 110.74 4 49 0 1620.9 -16.72 34.49  
 90.00 17 47 5 4480.82 8.35 186.82 228.02 62.84 19 1 25 3880.6 4.64 179.91  
 100.00 5 36 24 1948.55 -20.51 21.52 229.25 112.24 6 8 53 1348.6 -17.32 14.18  
 100.00 19 5 20 4208.16 9.10 167.86 227.81 61.40 20 15 28 3608.2 5.21 161.03  
 110.00 6 51 42 1712.90 -22.81 2.61 228.23 116.35 7 20 15 1112.9 -18.88 355.46  
 110.00 20 8 32 4016.58 11.08 151.93 226.43 57.45 21 13 28 3416.6 6.71 145.57

DIFFERENTIAL CORRECTIONS

TDE -.1823 TRA -.4893 TC3 1.8049 BAU .2906  
 RDE -.1659 RRA -.1838 RC3 2.0396 FAU .00910  
 FDE .1928 FRA 1.1102 FC3-9.8840 B8P 6279  
 BDE .2452 BRA .5321 BC3 2.7235 F8P -1571

MID-COURSE EXECUTION ACCURACY

S6T 1488.4 S6R 1256.7 S63 511.9  
 RRT .8984 RRF -.9768 RTF -.9097  
 S6B 1948.0 R23 -.1881 R13 -.9613  
 S61 1899.4 S62 432.4 THA 39.64

ORBIT DETERMINATION ACCURACY

ST 480.8 SR 352.7 SS 321.8  
 CRT .9342 CRS .7509 CST .9280  
 LSA 655.6 MSA 168.0 SSA 32.2  
 EL1 587.3 EL2 103.0 ALF 35.69

LAUNCH DATE JAN 16 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 329.705

RL 147.17 LAL .00 LOL 115.69 VL 27.505 GAL -.32 AZL 90.54 HCA 145.81 SMA 126.75 ECC .16118 INC .5372 V1 30.273  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.352 GAP -4.36 AZP 89.56 TAL 181.67 TAP 327.48 RCA 106.32 APO 147.18 V2 34.867  
 RC 68.360 GL -5.30 GP 33.23 ZAL 95.52 ZAP 48.21 ETS 327.54 ZAE 139.50 ETE 46.80 ZAC 118.46 ETC 139.80 CLP -37.20

PLANETOCENTRIC CONIC

C3 7.808 VHL 2.794 DLA 2.96 RAL 20.60 RAD 6567.3 VEL 11.387 PTH 1.96 VHP 4.535 DPA 45.01 RAP 27.11 ECC 1.1285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 40 44 2106.63 -16.81 34.78 229.19 113.13 5 15 51 1506.6 -13.54 27.61  
 90.00 17 22 46 4586.77 11.59 192.74 228.48 63.98 18 38 53 3966.8 8.00 185.90  
 100.00 6 3 28 1839.80 -17.56 14.79 228.84 114.58 6 34 7 1239.8 -14.10 7.71  
 100.00 18 42 44 4308.84 12.32 173.40 228.10 62.55 19 54 32 3708.8 8.55 166.64  
 110.00 7 14 53 1816.27 -19.57 356.76 227.79 118.60 7 41 49 1016.3 -15.60 349.89  
 110.00 19 47 48 4105.13 14.27 156.80 226.97 58.60 20 58 13 3505.1 10.01 150.29

DIFFERENTIAL CORRECTIONS

TDE -.1425 TRA -.4815 TC3 1.7475 BAU .3135  
 RDE -.1180 RRA -.2308 RC3 2.4417 FAU .09279  
 FDE .0091 FRA 1.1883 FC3-10.2878 B8P 6552  
 BDE .1850 BRA .5339 BC3 3.0026 F8P -1665

MID-COURSE EXECUTION ACCURACY

S6T 1419.8 S6R 1464.6 S63 539.6  
 RRT .9000 RRF -.9845 RTF -.9057  
 S6B 2039.9 R23 -.1890 R13 -.9710  
 S61 1988.3 S62 456.0 THA 45.99

ORBIT DETERMINATION ACCURACY

ST 417.3 SR 283.5 SS 294.7  
 CRT .9636 CRS .5421 CST .7250  
 LSA 545.4 MSA 207.5 SSA 29.9  
 EL1 500.5 EL2 63.2 ALF 33.82

LAUNCH DATE JAN 16 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 338.186

RL 147.17 LAL .00 LOL 115.69 VL 27.545 GAL -.38 AZL 90.95 HCA 148.98 SMA 127.02 ECC .15879 INC .9484 V1 30.273  
 RP 108.72 LAP -.49 LOP 264.87 VP 37.372 GAP -3.87 AZP 89.19 TAL 182.02 TAP 331.00 RCA 106.85 APO 147.18 V2 34.858  
 RC 71.560 GL -9.42 GP 37.30 ZAL 96.14 ZAP 53.03 ETS 328.52 ZAE 137.25 ETE 52.45 ZAC 115.33 ETC 138.90 CLP -40.88

PLANETOCENTRIC CONIC

C3 7.762 VHL 2.786 DLA -1.11 RAL 21.52 RAD 6567.3 VEL 11.385 PTH 1.96 VHP 4.477 DPA 48.37 RAP 23.70 ECC 1.1277  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 14 36 1979.23 -13.25 27.10 229.49 115.26 5 47 55 1379.2 -9.74 20.18  
 90.00 16 56 12 4691.97 15.21 200.15 229.76 65.82 18 14 24 4092.0 11.82 193.12  
 100.00 6 35 26 1718.51 -13.99 7.56 229.12 116.89 7 4 4 1118.5 -10.29 .72  
 100.00 18 18 3 4427.93 15.95 180.38 229.40 64.38 19 31 51 3827.9 12.37 173.41  
 110.00 7 42 29 1508.58 -15.94 350.52 228.02 120.85 8 7 38 908.6 -11.75 343.91  
 110.00 19 27 29 4210.62 17.92 162.80 228.32 60.39 20 37 40 3610.6 13.85 156.06

DIFFERENTIAL CORRECTIONS

TDE -.1068 TRA -.4842 TC3 1.5892 BAU .3380  
 RDE -.0529 RRA -.2923 RC3 2.8435 FAU .09392  
 FDE -.2109 FRA 1.2711 FC3-10.4753 B8P 6876  
 BDE .1192 BRA .5486 BC3 3.2574 F8P -1721

MID-COURSE EXECUTION ACCURACY

S6T 1320.6 S6R 1888.1 S63 553.9  
 RRT .8822 RRF -.9896 RTF -.8942  
 S6B 2151.2 R23 -.1453 R13 -.9792  
 S61 2096.3 S62 483.1 THA 52.95

ORBIT DETERMINATION ACCURACY

ST 381.9 SR 215.9 SS 353.2  
 CRT .9829 CRS .5207 CST .4057  
 LSA 489.6 MSA 285.1 SSA 23.9  
 EL1 420.0 EL2 34.2 ALF 30.61

LAUNCH DATE JAN 16 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 342.642

RL 147.17 LAL .00 LOL 115.69 VL 27.579 GAL -.43 AZL 91.44 HCA 152.14 SMA 127.25 ECC .15672 INC 1.4422 V1 30.273  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.388 GAP -3.39 AZP 86.72 TAL 182.31 TAP 334.45 RCA 107.30 APO 147.19 V2 34.848  
 RC 73.792 GL -14.31 GP 41.86 ZAL 96.57 ZAP 58.08 ETS 329.79 ZAE 134.36 ETE 58.23 ZAC 111.71 ETC 138.32 CLP -44.78

PLANETOCENTRIC CONIC

C3 7.891 VML 2.809 DLA -5.84 RAL 22.86 RAD 6567.3 VEL 11.370 PTH 1.96 VHP 4.488 DPA 51.96 RAP 19.23 ECC 1.1299  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 55 23 1834.63 -8.91 18.70 230.71 116.99 6 25 58 1234.6 -5.22 11.97  
 90.00 16 26 6 4842.62 19.18 209.43 232.11 68.76 17 46 49 4242.6 16.12 202.08  
 100.00 7 13 58 1581.17 -9.65 359.67 230.32 118.43 7 40 19 981.2 -5.78 353.02  
 100.00 17 50 13 4571.34 19.96 189.14 231.78 67.27 19 6 24 3971.3 16.71 181.86  
 110.00 8 15 52 1387.33 -11.62 343.78 229.14 122.38 8 39 0 787.3 -7.26 337.40  
 110.00 19 4 47 4337.94 22.03 170.40 230.76 63.17 20 17 5 3737.9 18.25 163.30

DIFFERENTIAL CORRECTIONS

TDE -.0778 TRA -.4473 TC3 1.3584 BAU .3688  
 RDE .0394 RRA -.3750 RC3 3.2207 FAU .09254  
 FDE -.4602 FRA 1.3561 FC3-10.1521 BSP 7290  
 BDE .0872 BRA .5837 BC3 3.4954 FSP -1723

MID-COURSE EXECUTION ACCURACY

8GT 1203.6 8GR 1967.7 8G3 554.2  
 RRT .8755 RRF -.9931 RTF -.8748  
 8GB 2306.6 R23 -.1166 R13 -.9863  
 8G1 2249.8 8G2 508.8 THA 60.15

ORBIT DETERMINATION ACCURACY

ST 318.4 SR 250.2 S3 491.4  
 CRT .6521 CRS .8739 CST .2093  
 LSA 552.5 MSA 316.2 SSA 17.2  
 EL1 370.8 EL2 162.9 ALF 34.77

LAUNCH DATE JAN 16 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 349.074

RL 147.17 LAL .00 LOL 115.69 VL 27.609 GAL -.47 AZL 92.05 HCA 155.30 SMA 127.44 ECC .15497 INC 2.0508 V1 30.273  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.402 GAP -2.93 AZP 86.14 TAL 182.54 TAP 337.84 RCA 107.69 APO 147.19 V2 34.839  
 RC 76.053 GL -20.07 GP 46.90 ZAL 96.76 ZAP 63.30 ETS 331.46 ZAE 130.73 ETE 63.96 ZAC 107.63 ETC 138.15 CLP -48.89

PLANETOCENTRIC CONIC

C3 8.289 VML 2.879 DLA -11.32 RAL 24.71 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.590 DPA 55.71 RAP 13.40 ECC 1.1364  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 46 8 1866.61 -3.80 9.20 233.23 118.11 7 13 55 1066.6 .18 2.57  
 90.00 15 30 8 5028.90 23.30 221.52 235.97 73.44 17 13 57 4428.9 20.81 213.73  
 100.00 8 1 46 1422.58 -4.40 350.82 232.79 119.60 8 25 29 822.6 -.43 344.29  
 100.00 17 17 11 4748.16 24.18 200.57 235.67 71.86 18 36 19 4148.2 21.47 192.82  
 110.00 8 57 6 1249.31 -6.49 336.38 231.50 123.63 9 17 55 649.3 -2.03 330.14  
 110.00 18 38 20 4494.20 26.48 180.35 234.73 67.54 19 53 15 3894.2 23.20 172.72

DIFFERENTIAL CORRECTIONS

TDE -.0554 TRA -.4209 TC3 1.0588 BAU .4051  
 RDE .1750 RRA -.4791 RC3 3.4989 FAU .08789  
 FDE -.7385 FRA 1.4118 FC3-9.1798 BSP 7920  
 BDE .1836 BRA .6377 BC3 3.8556 FSP -1680

MID-COURSE EXECUTION ACCURACY

8GT 1055.3 8GR 2264.0 8G3 534.8  
 RRT .8457 RRF -.9953 RTF -.8433  
 8GB 2497.9 R23 -.0852 R13 -.9917  
 8G1 2442.8 8G2 522.0 THA 67.40

ORBIT DETERMINATION ACCURACY

ST 279.6 SR 458.4 S3 678.2  
 CRT .2921 CRS .9853 CST .1278  
 LSA 817.7 MSA 281.8 SSA 11.8  
 EL1 469.0 EL2 261.3 ALF 75.21

LAUNCH DATE JAN 16 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 355.479

RL 147.17 LAL .00 LOL 115.69 VL 27.633 GAL -.49 AZL 92.83 HCA 158.46 SMA 127.61 ECC .15350 INC 2.8252 V1 30.273  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.412 GAP -2.48 AZP 87.37 TAL 182.70 TAP 341.15 RCA 108.02 APO 147.20 V2 34.831  
 RC 78.340 GL -26.79 GP 52.42 ZAL 96.65 ZAP 68.55 ETS 333.65 ZAE 126.32 ETE 69.50 ZAC 103.18 ETC 138.45 CLP -53.16

PLANETOCENTRIC CONIC

C3 9.130 VML 3.022 DLA -17.60 RAL 27.19 RAD 6567.3 VEL 11.425 PTH 1.98 VHP 4.816 DPA 59.50 RAP 5.76 ECC 1.1503  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 52 55 1462.31 2.98 357.80 237.72 118.17 8 17 18 862.3 6.73 351.12  
 90.00 15 3 9 5269.99 26.96 238.20 241.88 81.01 16 30 59 4870.0 25.44 229.87  
 100.00 9 4 0 1232.98 2.01 340.41 237.18 119.83 9 24 33 633.0 5.97 333.85  
 100.00 16 34 46 4974.56 28.05 216.26 241.67 79.23 17 57 40 4374.6 26.28 207.91  
 110.00 9 49 42 1089.78 -.42 328.02 235.66 124.18 10 7 52 489.8 4.07 321.81  
 110.00 18 5 33 4690.53 30.85 193.94 240.92 74.49 19 23 43 4090.5 28.41 185.58

DIFFERENTIAL CORRECTIONS

TDE -.0552 TRA -.3863 TC3 .6969 BAU .4438  
 RDE .3623 RRA -.6175 RC3 3.5685 FAU .07935  
 FDE -.9984 FRA 1.4404 FC3-7.5238 BSP 8621  
 BDE .3665 BRA .7284 BC3 3.6359 FSP -1556

MID-COURSE EXECUTION ACCURACY

8GT 882.5 8GR 2575.2 8G3 492.3  
 RRT .7834 RRF -.9967 RTF -.7793  
 8GB 2722.2 R23 -.0577 R13 -.9951  
 8G1 2670.3 8G2 529.0 THA 74.34

ORBIT DETERMINATION ACCURACY

ST 253.5 SR 782.3 S3 867.0  
 CRT .0700 CRS .9977 CST .0033  
 LSA 1167.1 MSA 256.3 SSA 8.1  
 EL1 782.5 EL2 252.8 ALF 88.55

LAUNCH DATE JAN 16 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 361.857

RL 147.17 LAL .00 LOL 115.69 VL 27.653 GAL -.50 AZL 93.85 HCA 161.81 SMA 127.74 ECC .15229 INC 3.8501 V1 30.273  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.420 GAP -2.05 AZP 86.35 TAL 182.78 TAP 344.39 RCA 108.29 APO 147.20 V2 34.824  
 RC 80.651 GL -34.45 GP 58.38 ZAL 96.21 ZAP 73.65 ETS 336.45 ZAE 121.14 ETE 74.76 ZAC 98.43 ETC 139.30 CLP -57.52

PLANETOCENTRIC CONIC

C3 10.774 VML 3.282 DLA -24.63 RAL 30.45 RAD 6567.4 VEL 11.496 PTH 2.00 VHP 5.218 DPA 63.12 RAP 355.76 ECC 1.1773  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 34 39 1173.99 11.97 341.39 245.60 115.86 9 54 13 574.0 15.35 334.34  
 90.00 13 47 27 5824.12 28.08 283.94 250.12 93.77 15 21 11 5024.1 28.31 255.28  
 100.00 10 34 24 981.07 10.38 326.38 244.77 118.19 10 50 45 381.1 14.07 319.54  
 100.00 15 30 23 5292.28 29.87 259.61 250.21 91.32 18 58 35 4692.3 29.73 230.81  
 110.00 11 1 0 897.65 6.89 317.96 242.66 123.56 11 15 58 297.6 11.26 311.58  
 110.00 17 20 18 4948.47 33.93 213.37 250.08 85.56 18 42 45 4348.5 32.94 204.27

DIFFERENTIAL CORRECTIONS

TDE -.0668 TRA -.3357 TC3 .3297 BAU .4823  
 RDE .6223 RRA -.8049 RC3 3.3320 FAU .06724  
 FDE -1.2115 FRA 1.4309 FC3-5.4026 BSP 9412  
 BDE .6283 BRA .8721 BC3 3.3483 FSP -1362

MID-COURSE EXECUTION ACCURACY

8GT 896.7 8GR 2890.2 8G3 428.5  
 RRT .6483 RRF -.9977 RTF -.6421  
 8GB 2973.0 R23 -.0350 R13 -.9971  
 8G1 2926.5 8G2 523.9 THA 80.82

ORBIT DETERMINATION ACCURACY

ST 245.7 SR 1182.9 S3 1024.4  
 CRT -.2560 CRS .9995 CST -.2866  
 LSA 1566.0 MSA 237.7 SSA 5.6  
 EL1 1184.7 EL2 237.2 ALF 93.17

LAUNCH DATE JAN 16 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 368.205

RL 147.17 LAL .00 LOL 115.69 VL 27.669 GAL -.50 AZL 95.28 HCA 164.75 SMA 127.85 ECC .15132 INC 5.2800 V1 30.273
RP 108.84 LAP -1.39 LOP 280.50 VP 37.425 GAP -1.63 AZP 84.90 TAL 182.78 TAP 347.53 RCA 108.51 APO 147.20 V2 34.816
RC 82.981 GL -42.84 GP 64.80 ZAL 95.42 ZAP 78.39 ETS 339.96 ZAE 115.20 ETE 79.74 ZAC 93.50 ETC 140.78 CLP -61.80

PLANETOCENTRIC CONIC

C3 14.020 VHL 3.744 DLA -32.16 RAL 34.67 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 5.693 DPA 66.29 RAP 342.61 ECC 1.2307
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.07 9 54 0 1207.63 24.30 349.56 258.76 111.75 10 14 8 607.6 27.03 341.63
105.93 14 1 46 5702.20 24.31 268.67 258.77 111.73 15 36 48 5102.2 27.04 260.75
74.07 9 54 0 1207.63 24.30 349.56 258.76 111.75 10 14 8 607.6 27.03 341.63
105.93 14 1 46 5702.20 24.31 268.67 258.77 111.73 15 36 48 5102.2 27.04 260.75
110.00 12 58 56 608.83 17.32 302.08 255.15 119.94 13 9 5 8.8 21.17 295.07
110.00 15 58 0 5349.00 31.70 244.17 261.43 103.50 17 25 9 4749.0 33.24 235.28

DIFFERENTIAL CORRECTIONS

TDE -.1732 TRA -.2566 TC3 .0289 BAU .5153
RDE .9759 RRA-1.0676 RC3 2.7490 FAU .05252
FDE-1.3337 FRA 1.3781 FC3-3.2430 BSP 10219
BDE .9912 BRA 1.0980 BC3 2.7491 FSP -1111

MID-COURSE EXECUTION ACCURACY

SGT 534.6 SGR 3192.5 SCS 348.5
RRT .3107 RRF -.9985 RTF -.3094
SCB 3236.9 R23 -.0178 R13 -.9982
SG1 3197.1 SGT 506.0 THA 86.87

ORBIT DETERMINATION ACCURACY

ST 299.3 SR 1602.8 SS 1107.1
CRT -.6569 CRS .9998 CST -.6711
LSA 1958.1 HSA 223.9 SSA 4.0
EL1 1615.1 EL2 223.9 ALF 97.13

LAUNCH DATE JAN 16 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 374.515

RL 147.17 LAL .00 LOL 115.69 VL 27.681 GAL -.48 AZL 97.43 HCA 167.87 SMA 127.93 ECC .15057 INC 7.4274 V1 30.273
RP 108.86 LAP -1.56 LOP 283.66 VP 37.428 GAP -1.23 AZP 82.74 TAL 182.70 TAP 350.57 RCA 108.67 APO 147.20 V2 34.810
RC 85.328 GL -51.50 GP 71.72 ZAL 94.33 ZAP 82.54 ETS 344.27 ZAE 108.48 ETE 84.55 ZAC 86.48 ETC 143.01 CLP -55.56

PLANETOCENTRIC CONIC

C3 20.906 VHL 4.572 DLA -39.68 RAL 39.99 RAD 6567.8 VEL 11.928 PTH 2.12 VHP 7.033 DPA 68.58 RAP 325.51 ECC 1.3441
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.95 9 1 35 1520.40 26.51 15.64 273.01 120.67 9 26 56 920.4 30.37 8.08
119.05 15 36 38 5573.57 26.53 259.68 273.02 120.66 17 9 31 4973.6 30.38 252.12
60.95 9 1 35 1520.40 26.51 15.64 273.01 120.67 9 26 56 920.4 30.37 8.08
119.05 15 36 38 5573.57 26.53 259.68 273.02 120.66 17 9 31 4973.6 30.38 252.12
60.95 9 1 35 1520.40 26.51 15.64 273.01 120.67 9 26 56 920.4 30.37 8.08
119.05 15 36 38 5573.57 26.53 259.68 273.02 120.66 17 9 31 4973.6 30.38 252.12

DIFFERENTIAL CORRECTIONS

TDE -.3476 TRA -.1178 TC3 -.1431 BAU .5285
RDE 1.4595 RRA-1.4539 RC3 1.8856 FAU .03640
FDE-1.3410 FRA 1.2837 FC3-1.5078 BSP 11034
BDE 1.5004 BRA 1.4586 BC3 1.8911 FSP -836

MID-COURSE EXECUTION ACCURACY

SGT 493.7 SGR 3452.8 SCS 260.5
RRT -.3333 RRF -.9987 RTF .3435
SCB 3488.0 R23 -.0048 R13 -.9988
SG1 3456.8 SGT 464.9 THA 92.78

ORBIT DETERMINATION ACCURACY

ST 439.4 SR 1962.7 SS 1090.2
CRT -.8766 CRS .9999 CST -.8830
LSA 2278.3 HSA 207.5 SSA 2.8
EL1 2000.5 EL2 207.4 ALF 101.23

LAUNCH DATE JAN 16 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 380.773

RL 147.17 LAL .00 LOL 115.69 VL 27.689 GAL -.44 AZL 101.03 HCA 170.97 SMA 127.99 ECC .15002 INC11.0273 V1 30.273
RP 108.88 LAP -1.72 LOP 286.83 VP 37.428 GAP -.85 AZP 79.11 TAL 182.51 TAP 353.48 RCA 108.79 APO 147.19 V2 34.804
RC 87.691 GL -59.55 GP 79.42 ZAL 93.07 ZAP 85.89 ETS 349.67 ZAE 100.75 ETE 89.61 ZAC 83.29 ETC 146.47 CLP -67.01

PLANETOCENTRIC CONIC

C3 37.741 VHL 6.143 DLA -46.32 RAL 46.28 RAD 6568.5 VEL 12.614 PTH 2.29 VHP 9.095 DPA 69.35 RAP 304.01 ECC 1.6211
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.68 8 48 39 1769.74 24.10 35.80 290.98 130.83 9 18 9 1169.7 29.17 29.29
128.32 16 39 43 5617.65 24.11 261.65 290.99 130.83 18 13 21 5017.6 29.18 255.14
51.68 8 48 39 1769.74 24.10 35.80 290.98 130.83 9 18 9 1169.7 29.17 29.29
128.32 16 39 43 5617.65 24.11 261.65 290.99 130.83 18 13 21 5017.6 29.18 255.14
51.68 8 48 39 1769.74 24.10 35.80 290.98 130.83 9 18 9 1169.7 29.17 29.29
128.32 16 39 43 5617.65 24.11 261.65 290.99 130.83 18 13 21 5017.6 29.18 255.14

DIFFERENTIAL CORRECTIONS

TDE -.6719 TRA .1787 TC3 -.1607 BAU .4959
RDE 2.1546 RRA-2.0748 RC3 .9697 FAU .02093
FDE-1.2465 FRA 1.1721 FC3 -.4802 BSP 11891
BDE 2.2570 BRA 2.0821 BC3 .9829 FSP -578

MID-COURSE EXECUTION ACCURACY

SGT 699.0 SGR 3647.8 SCS 177.2
RRT -.8483 RRF -.9991 RTF .8531
SCB 3714.1 R23 .0059 R13 -.9991
SG1 3696.1 SGT 365.3 THA 99.33

ORBIT DETERMINATION ACCURACY

ST 630.7 SR 2178.5 SS 986.9
CRT -.9604 CRS 1.0000 CST -.9627
LSA 2467.5 HSA 169.7 SSA 1.9
EL1 2261.6 EL2 169.3 ALF 105.63

LAUNCH DATE JAN 16 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 386.933

RL 147.17 LAL .00 LOL 115.69 VL 27.694 GAL -.38 AZL 108.27 HCA 174.00 SMA 128.03 ECC .14966 INC18.2684 V1 30.273
RP 108.90 LAP -1.88 LOP 289.99 VP 37.427 GAP -.50 AZP 71.83 TAL 182.17 TAP 356.17 RCA 108.87 APO 147.19 V2 34.799
RC 90.065 GL -65.34 GP 88.14 ZAL 91.79 ZAP 88.24 ETS 2.11 ZAE 91.09 ETE 101.09 ZAC 77.62 ETC 157.51 CLP -18.88

PLANETOCENTRIC CONIC

C3 91.251 VHL 9.553 DLA -50.64 RAL 52.21 RAD 6568.8 VEL 14.581 PTH 2.84 VHP 13.421 DPA 67.39 RAP 278.51 ECC 2.5018
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.08 8 53 24 2029.32 15.22 51.85 309.30 138.91 9 27 14 1429.3 21.18 46.64
133.92 17 22 18 5784.83 15.24 268.61 309.32 138.91 18 58 42 5184.8 21.19 263.39
46.08 8 53 24 2029.32 15.22 51.85 309.30 138.91 9 27 14 1429.3 21.18 46.64
133.92 17 22 18 5784.83 15.24 268.61 309.32 138.91 18 58 42 5184.8 21.19 263.39
46.08 8 53 24 2029.32 15.22 51.85 309.30 138.91 9 27 14 1429.3 21.18 46.64
133.92 17 22 18 5784.83 15.24 268.61 309.32 138.91 18 58 42 5184.8 21.19 263.39

DIFFERENTIAL CORRECTIONS

TDE-1.1966 TRA 1.8780 TC3 -.0794 BAU .2881
RDE 3.3776 RRA-2.9403 RC3 .2224 FAU .00615
FDE-1.1409 FRA 1.1318 FC3 -.0584 BSP 12402
BDE 3.5833 BRA 3.3854 BC3 .2362 FSP -361

MID-COURSE EXECUTION ACCURACY

SGT 1748.4 SGR 3486.7 SCS 110.2
RRT -.9787 RRF -.9975 RTF .9897
SCB 3882.7 R23 -.0241 R13 -.9994
SG1 3889.3 SGT 321.8 THA 116.47

ORBIT DETERMINATION ACCURACY

ST 861.3 SR 2191.0 SS 876.6
CRT -.9810 CRS .9988 CST -.9892
LSA 2507.2 HSA 156.8 SSA 1.1
EL1 2349.0 EL2 155.7 ALF 111.19

LAUNCH DATE JAN 16 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 392.769

RL 147.17 LAL .00 LOL 115.69 VL 27.696 GAL -.25 AZL 126.66 HCA 176.75 SMA 126.04 ECC .14945 INC38.6558 V1 30.273  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.425 GAP -.24 AZP 51.39 TAL 181.43 TAP 358.18 RCA 108.90 APO 147.17 V2 34.795  
 RC 92.449 GL -63.44 GP 74.84 ZAL 90.70 ZAP 89.49 ETS 172.91 ZAE 75.09 ETE 270.86 ZAC 69.65 ETC 329.52 CLP 88.05

PLANETOCENTRIC CONIC

C3 374.076 VHL 19.341 DLA -48.41 RAL 52.07 RAD 6572.0 VEL 22.257 PTH 3.25 VHP 25.606 DPA 58.49 RAP 248.94 ECC 7.1565  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.94 9 2 9 2235.11 3.25 58.68 319.18 138.33 9 39 24 1635.1 9.18 53.72  
 131.06 17 12 23 747.18 3.25 302.02 319.20 138.33 17 24 50 147.2 9.20 297.06  
 48.94 9 2 9 2235.11 3.25 58.68 319.18 138.33 9 39 24 1635.1 9.18 53.72  
 131.06 17 12 23 747.18 3.25 302.02 319.20 138.33 17 24 50 147.2 9.20 297.06  
 48.94 9 2 9 2235.11 3.25 58.68 319.18 138.33 9 39 24 1635.1 9.18 53.72  
 131.06 17 12 23 747.18 3.25 302.02 319.20 138.33 17 24 50 147.2 9.20 297.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.5011 TRA -.2781 TC3 -.0500 BAU .9063 SGT 1062.3 SGR 3716.0 SCS 69.8 ST 1037.9 SR 2086.3 SS 1029.2  
 RDE-6.2007 RRA 7.0479 RC3 .1742 FAU-.01715 RRT -.6207 RRF .9997 RTF -.6386 CRT -.9075 CRS -.9998 CST .9159  
 FDE-1.4146 FRA 1.5080 FC3 .0396 BSP 12735 SGB 3864.9 R23 -.0174 R13 .9998 LSA 2315.7 HSA 400.1 SSA .5  
 BDE 7.1908 BRA 7.0534 BC3 .1812 FSP -236 SGI 3777.0 S62 819.4 THA 100.57 EL1 2296.3 EL2 396.1 ALF 115.10

LAUNCH DATE JAN 16 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 401.628

RL 147.17 LAL .00 LOL 115.69 VL 27.695 GAL -.70 AZL 15.85 HCA 182.27 SMA 128.03 ECC .14992 INC74.1550 V1 30.273  
 RP 108.92 LAP -2.16 LOP 296.31 VP 37.421 GAP .81 AZP 164.14 TAL 183.97 TAP 6.23 RCA 108.84 APO 147.23 V2 34.791  
 RC 94.840 GL 49.55 GP -57.11 ZAL 90.74 ZAP 90.64 ETS 177.14 ZAE 57.40 ETE 80.27 ZAC 85.78 ETC 30.76 CLP 91.17

PLANETOCENTRIC CONIC

C31225.771 VHL 35.011 DLA 53.65 RAL 354.64 RAD 6573.1 VEL 36.702 PTH 3.53 VHP 42.264 DPA -57.37 RAP 168.86 ECC21.1731  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.33 16 50 27 5005.23 .79 235.76 265.24 36.36 18 13 52 4405.2 -5.65 231.43  
 137.67 1 45 54 3421.55 .81 109.12 265.22 36.36 2 42 55 2821.6 -5.63 104.78  
 42.33 16 50 27 5005.23 .79 235.76 265.24 36.36 18 13 52 4405.2 -5.65 231.43  
 137.67 1 45 54 3421.55 .81 109.12 265.22 36.36 2 42 55 2821.6 -5.63 104.78  
 42.33 16 50 27 5005.23 .79 235.76 265.24 36.36 18 13 52 4405.2 -5.65 231.43  
 137.67 1 45 54 3421.55 .81 109.12 265.22 36.36 2 42 55 2821.6 -5.63 104.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.3271 TRA 2.6322 TC3 -.1144 BAU 4.1828 SGT 1409.8 SGR 3251.4 SCS 60.7 ST 930.7 SR 2810.2 SS 2212.5  
 RD-17.1559 RRA 1.3371 RC3 -.2282 FAU-.06975 RRT .8917 RRF -.9999 RTF -.8981 CRT .9806 CRS 1.0000 CST .9817  
 FDE 3.6982 FRA -.3276 FC3 .0493 BSP 11868 SGB 3543.9 R23 -.0535 R13 -.9986 LSA 3691.6 HSA 175.1 SSA .6  
 BDE18.0243 BRA 2.9523 BC3 .2552 FSP -215 SGI 3493.8 S62 593.9 THA 68.20 EL1 2955.2 EL2 173.4 ALF 71.94

LAUNCH DATE JAN 16 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 406.794

RL 147.17 LAL .00 LOL 115.69 VL 27.692 GAL -.42 AZL 58.44 HCA 184.43 SMA 128.01 ECC .14983 INC31.5636 V1 30.273  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.415 GAP .89 AZP 121.49 TAL 182.39 TAP 6.82 RCA 108.83 APO 147.19 V2 34.788  
 RC 97.236 GL 65.24 GP -83.28 ZAL 91.14 ZAP 91.67 ETS 175.71 ZAE 83.70 ETE 81.11 ZAC 99.15 ETC 30.84 CLP 104.41

PLANETOCENTRIC CONIC

C3 254.804 VHL 15.963 DLA 63.91 RAL 381.28 RAD 6571.5 VEL 19.394 PTH 3.10 VHP 18.267 DPA -68.90 RAP 113.11 ECC 5.1934  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.97 14 45 5 4943.72 -6.65 240.23 238.02 26.28 16 7 28 4343.7 -13.80 237.01  
 150.03 0 44 55 3236.44 -6.64 97.96 238.00 26.28 1 38 51 2636.4 -13.80 94.75  
 29.97 14 45 5 4943.72 -6.65 240.23 238.02 26.28 16 7 28 4343.7 -13.80 237.01  
 150.03 0 44 55 3236.44 -6.64 97.96 238.00 26.28 1 38 51 2636.4 -13.80 94.75  
 29.97 14 45 5 4943.72 -6.65 240.23 238.02 26.28 16 7 28 4343.7 -13.80 237.01  
 150.03 0 44 55 3236.44 -6.64 97.96 238.00 26.28 1 38 51 2636.4 -13.80 94.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.8064 TRA 1.7688 TC3 -.0583 BAU .4812 SGT 1492.4 SGR 3917.8 SCS 87.0 ST 541.9 SR 3412.5 SS 1340.9  
 RDE-9.3634 RRA 2.4148 RC3 -.1287 FAU-.00793 RRT .6871 RRF -.9980 RTF -.7281 CRT .7299 CRS .9997 CST .7463  
 FDE 2.3205 FRA -.6841 FC3 .0270 BSP 12695 SGB 4192.4 R23 -.0141 R13 -.9996 LSA 3688.0 HSA 368.3 SSA 1.1  
 BDE 9.4072 BRA 2.9939 BC3 .1413 FSP -273 SGI 4059.7 S62 1046.5 THA 74.26 EL1 3435.6 EL2 368.0 ALF 83.31

LAUNCH DATE JAN 16 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 412.766

RL 147.17 LAL .00 LOL 115.69 VL 27.688 GAL -.29 AZL 70.49 HCA 187.36 SMA 127.97 ECC .15009 INC19.5132 V1 30.273  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.409 GAP 1.17 AZP 109.36 TAL 181.67 TAP 9.03 RCA 108.78 APO 147.18 V2 34.786  
 RC 99.636 GL 65.65 GP -83.63 ZAL 91.45 ZAP 93.81 ETS 335.81 ZAE 95.34 ETE 240.02 ZAC 104.19 ETC 189.31 CLP-126.82

PLANETOCENTRIC CONIC

C3 103.036 VHL 10.151 DLA 63.86 RAL 330.09 RAD 6570.0 VEL 14.979 PTH 2.70 VHP 11.013 DPA -66.04 RAP 82.47 ECC 2.6957  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.02 14 40 27 4786.73 -16.18 235.94 231.91 27.30 16 0 14 4186.7 -23.25 232.38  
 149.98 0 40 1 3079.88 -16.17 93.74 231.90 27.30 1 31 21 2479.9 -23.24 90.18  
 30.02 14 40 27 4786.73 -16.18 235.94 231.91 27.30 16 0 14 4186.7 -23.25 232.38  
 149.98 0 40 1 3079.88 -16.17 93.74 231.90 27.30 1 31 21 2479.9 -23.24 90.18  
 30.02 14 40 27 4786.73 -16.18 235.94 231.91 27.30 16 0 14 4186.7 -23.25 232.38  
 149.98 0 40 1 3079.88 -16.17 93.74 231.90 27.30 1 31 21 2479.9 -23.24 90.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.3660 TRA-1.3384 TC3 -.1188 BAU .2386 SGT 3489.4 SGR 2535.4 SCS 141.9 ST 3072.7 SR 1633.5 SS 1293.4  
 RDE 2.6885 RRA-1.5724 RC3 -.1283 FAU .01119 RRT .9172 RRF .9538 RTF .9936 CRT .9779 CRS -.9858 CST -.9991  
 FDE 2.3550 FRA -.7383 FC3 -.0940 BSP 13698 SGB 4313.3 R23 -.0313 R13 .9988 LSA 3700.1 HSA 303.0 SSA 1.7  
 BDE 6.0025 BRA 2.0649 BC3 .1732 FSP -471 SGI 4232.1 S62 833.0 THA 35.25 EL1 3466.7 EL2 303.0 ALF 27.70

LAUNCH DATE JAN 16 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 27.678 GAL -.19 AZL 75.60 HCA 190.42 SMA 127.92 ECC .15054 INC14.3955 V1 30.273  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.402 GAP 1.49 AZP 104.17 TAL 181.05 TAP 11.47 RCA 108.66 APO 147.17 V2 34.784  
 RC 102.030 GL 63.24 GP -75.31 ZAL 91.52 ZAP 96.84 ETS 338.96 ZAE 103.31 ETE 245.16 ZAC 106.90 ETC 194.58 CLP-118.00

DISTANCE 418.871

PLANETOCENTRIC CONIC  
 C3 59.391 VHL 7.707 DLA 62.53 RAL 334.54 RAD 6569.1 VEL 13.444 PTH 2.46 VHP 8.009 DPA -61.59 RAP 63.78 ECC 1.9774  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.61 15 1 58 4654.11 -23.48 230.69 231.49 30.20 16 19 32 4054.1 -30.32 226.45  
 148.39 0 54 1 2959.75 -23.47 90.31 231.48 30.20 1 43 21 2359.7 -30.31 86.08  
 31.61 15 1 58 4654.11 -23.48 230.69 231.49 30.20 16 19 32 4054.1 -30.32 226.45  
 148.39 0 54 1 2959.75 -23.47 90.31 231.48 30.20 1 43 21 2359.7 -30.31 86.08  
 31.61 15 1 58 4654.11 -23.48 230.69 231.49 30.20 16 19 32 4054.1 -30.32 226.45  
 148.39 0 54 1 2959.75 -23.47 90.31 231.48 30.20 1 43 21 2359.7 -30.31 86.08

DIFFERENTIAL CORRECTIONS  
 TDE 3.2597 TRA-1.0945 TC3 -.3652 BAU .4469 SGT 3049.7 SGR 3116.7 SCS 217.2 ST 2480.6 SR 2598.1 SS 1472.7  
 RDE 3.4292 RRA-1.0343 RC3 -.4284 FAU .02707 RRT .9984 RRF .9987 RTF .9943 CRT .9990 CRS -.9999 CST -.9993  
 FDE 2.8176 FRA -.7761 FC3 -.3948 BSP 13769 SGB 4360.6 R23 .0772 R13 .9970 LSA 3882.0 HSA 52.7 SSA .5  
 BDE 4.7313 BRA 1.5059 BC3 .5629 FSP -726 SGI 4358.9 SGI 123.1 THA 45.62 EL1 3592.0 EL2 38.2 ALF 46.33

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 16 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 27.668 GAL -.08 AZL 78.40 HCA 193.53 SMA 127.85 ECC .15113 INC11.5965 V1 30.273  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.393 GAP 1.82 AZP 101.28 TAL 180.42 TAP 13.96 RCA 108.52 APO 147.17 V2 34.783  
 RC 104.441 GL 80.29 GP -88.03 ZAL 91.35 ZAP 100.52 ETS 336.74 ZAE 109.67 ETE 242.05 ZAC 108.54 ETC 192.13 CLP-119.22

DISTANCE 425.007

PLANETOCENTRIC CONIC  
 C3 41.003 VHL 6.403 DLA 60.90 RAL 339.77 RAD 6568.6 VEL 12.742 PTH 2.32 VHP 6.457 DPA -56.88 RAP 54.83 ECC 1.6748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.53 15 27 33 4553.61 -28.39 225.48 232.28 33.56 16 43 26 3953.6 -34.95 220.51  
 146.47 1 10 12 2875.66 -28.38 87.39 232.26 33.55 1 58 8 2275.7 -34.94 82.43  
 33.53 15 27 33 4553.61 -28.39 225.48 232.28 33.56 16 43 26 3953.6 -34.95 220.51  
 146.47 1 10 12 2875.66 -28.38 87.39 232.26 33.55 1 58 8 2275.7 -34.94 82.43  
 33.53 15 27 33 4553.61 -28.39 225.48 232.28 33.56 16 43 26 3953.6 -34.95 220.51  
 146.47 1 10 12 2875.66 -28.38 87.39 232.26 33.55 1 58 8 2275.7 -34.94 82.43

DIFFERENTIAL CORRECTIONS  
 TDE 2.8571 TRA -.9319 TC3 -.6878 BAU .5457 SGT 3205.4 SGR 2974.7 SCS 301.3 ST 2607.9 SR 2564.8 SS 1669.4  
 RDE 2.8550 RRA -.8848 RC3 -.7099 FAU .04410 RRT .9919 RRF .9991 RTF .9878 CRT .9987 CRS -1.0000 CST -.9983  
 FDE 3.3110 FRA -.7811 FC3 -.9312 BSP 13927 SGB 4373.0 R23 .0938 R13 .9950 LSA 4019.3 HSA 105.1 SSA 1.8  
 BDE 4.0250 BRA 1.1564 BC3 .9955 FSP -1030 SGI 4364.2 SGI 277.2 THA 42.85 EL1 3656.6 EL2 92.6 ALF 44.52

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 16 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 27.656 GAL .04 AZL 80.17 HCA 196.66 SMA 127.76 ECC .15187 INC 9.8305 V1 30.273  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.384 GAP 2.15 AZP 99.43 TAL 179.77 TAP 16.43 RCA 108.36 APO 147.17 V2 34.783  
 RC 106.844 GL 57.36 GP -61.47 ZAL 90.96 ZAP 104.63 ETS 334.49 ZAE 114.93 ETE 238.01 ZAC 109.54 ETC 189.32 CLP-121.93

DISTANCE 431.143

PLANETOCENTRIC CONIC  
 C3 31.443 VHL 5.607 DLA 59.26 RAL 344.74 RAD 6568.3 VEL 12.362 PTH 2.23 VHP 5.560 DPA -52.15 RAP 46.96 ECC 1.5175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.49 15 52 21 4477.49 -31.57 220.62 233.32 36.87 17 6 58 3877.5 -37.83 214.97  
 144.51 1 25 5 2817.78 -31.56 84.95 233.30 36.86 2 12 2 2217.8 -37.82 79.30  
 35.49 15 52 21 4477.49 -31.57 220.62 233.32 36.87 17 6 58 3877.5 -37.83 214.97  
 144.51 1 25 5 2817.78 -31.56 84.95 233.30 36.86 2 12 2 2217.8 -37.82 79.30  
 35.49 15 52 21 4477.49 -31.57 220.62 233.32 36.87 17 6 58 3877.5 -37.83 214.97  
 144.51 1 25 5 2817.78 -31.56 84.95 233.30 36.86 2 12 2 2217.8 -37.82 79.30

DIFFERENTIAL CORRECTIONS  
 TDE 2.7182 TRA -.8074 TC3-1.0719 BAU .5888 SGT 3428.2 SGR 2760.8 SCS 385.6 ST 2817.5 SR 2416.5 SS 1848.4  
 RDE 2.3495 RRA -.4575 RC3 -.9017 FAU .05923 RRT .9883 RRF .9988 RTF .9846 CRT .9983 CRS -1.0000 CST -.9980  
 FDE 3.7427 FRA -.6978 FC3-1.6309 BSP 14206 SGB 4401.7 R23 .1092 R13 .9929 LSA 4144.7 HSA 125.7 SSA 2.5  
 BDE 3.5913 BRA .9280 BC3 1.4007 FSP -1358 SGI 4389.4 SGI 328.4 THA 38.77 EL1 3710.3 EL2 108.1 ALF 40.61

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 16 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC  
 RL 147.17 LAL .00 LOL 115.69 VL 27.642 GAL .17 AZL 81.39 HCA 199.80 SMA 127.67 ECC .15274 INC 8.6105 V1 30.273  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.375 GAP 2.47 AZP 98.11 TAL 179.06 TAP 18.86 RCA 108.17 APO 147.17 V2 34.784  
 RC 109.246 GL 54.58 GP -55.50 ZAL 90.37 ZAP 108.95 ETS 332.66 ZAE 119.24 ETE 233.62 ZAC 110.13 ETC 186.72 CLP-124.99

DISTANCE 437.277

PLANETOCENTRIC CONIC  
 C3 25.788 VHL 5.078 DLA 57.71 RAL 349.31 RAD 6568.0 VEL 12.131 PTH 2.17 VHP 5.014 DPA -47.55 RAP 41.08 ECC 1.4244  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.37 16 15 25 4418.60 -33.61 216.25 234.49 39.90 17 29 4 3818.6 -39.57 210.02  
 142.63 1 38 24 2777.67 -33.59 82.94 234.47 39.90 2 24 42 2177.7 -39.56 76.71  
 57.37 16 15 25 4418.60 -33.61 216.25 234.49 39.90 17 29 4 3818.6 -39.57 210.02  
 142.63 1 38 24 2777.67 -33.59 82.94 234.47 39.90 2 24 42 2177.7 -39.56 76.71  
 57.37 16 15 25 4418.60 -33.61 216.25 234.49 39.90 17 29 4 3818.6 -39.57 210.02  
 142.63 1 38 24 2777.67 -33.59 82.94 234.47 39.90 2 24 42 2177.7 -39.56 76.71

DIFFERENTIAL CORRECTIONS  
 TDE 2.8570 TRA -.6848 TC3-1.4650 BAU .6130 SGT 3645.9 SGR 2513.6 SCS 459.2 ST 3029.5 SR 2227.6 SS 1990.2  
 RDE 1.9880 RRA -.2759 RC3-1.0080 FAU .07166 RRT .9845 RRF .9982 RTF .9812 CRT .9979 CRS -1.0000 CST -.9976  
 FDE 4.0595 FRA -.5382 FC3-2.4080 BSP 13695 SGB 4428.4 R23 .1283 R13 .9900 LSA 4252.1 HSA 142.7 SSA 3.2  
 BDE 3.3065 BRA .7383 BC3 1.7783 FSP -1548 SGI 4413.5 SGI 363.8 THA 34.43 EL1 3758.5 EL2 116.9 ALF 36.31

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 16 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 443.598

RL 147.17 LAL .00 LOL 115.69 VL 27.627 GAL .31 AZL 82.29 HCA 202.94 SMA 127.57 ECC .15575 INC 7.7132 V1 30.273
RP 108.84 LAP -3.00 LOP 318.45 VP 37.365 GAP 2.79 AZP 97.11 TAL 178.32 TAP 21.26 RCA 107.95 APO 147.18 V2 34.785
RC 111.845 GL 52.00 GP -50.10 ZAL 89.60 ZAP 113.30 ETS 331.30 ZAE 122.67 ETE 229.07 ZAC 110.46 ETC 184.45 CLP-128.07

PLANETOCENTRIC CONIC

C3 22.140 VML 4.705 DLA 56.27 RAL 353.50 RAD 8567.9 VEL 11.980 PTH 2.14 VHP 4.678 DPA -43.16 RAP 36.60 ECC 1.3644
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.11 16 36 49 4371.87 -34.88 212.36 235.77 42.60 17 49 41 3771.9 -40.57 205.66
140.89 1 50 26 2749.75 -34.87 81.33 235.76 42.59 2 36 15 2149.8 -40.56 74.63
39.11 16 36 49 4371.87 -34.88 212.36 235.77 42.60 17 49 41 3771.9 -40.57 205.66
140.89 1 50 26 2749.75 -34.87 81.33 235.76 42.59 2 36 15 2149.8 -40.56 74.63
39.11 16 36 49 4371.87 -34.88 212.36 235.77 42.60 17 49 41 3771.9 -40.57 205.66
140.89 1 50 26 2749.75 -34.87 81.33 235.76 42.59 2 36 15 2149.8 -40.56 74.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6135 TRA -.5760 TC3-1.8802 BAU .6398 SGT 3854.1 SGR 2267.7 SCS 518.1 ST 3205.4 SR 2007.6 SS 2069.7
RDE 1.8464 RRA -.1552 RC3-1.0665 FAU .08237 RRT .9824 RRF .9975 RTF .9790 CRT .9977 CRS-1.0000 CST -.9973
FDE 4.2002 FRA -.3552 FC3-3.2207 BSP 13837 SGB 4471.7 R23 .1433 R13 .9870 LSA 4308.8 HSA 150.9 S8A 4.0
BDE 3.0889 BRA .5985 BC3 2.1616 FSP -1760 SGI 4456.7 SGE 366.5 THA 30.25 EL1 3780.4 EL2 115.1 ALF 32.03

LAUNCH DATE JAN 16 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 449.505

RL 147.17 LAL .00 LOL 115.69 VL 27.810 GAL .45 AZL 82.80 HCA 206.09 SMA 127.45 ECC .15489 INC 7.0222 V1 30.273
RP 108.93 LAP -3.08 LOP 321.81 VP 37.354 GAP 3.11 AZP 96.31 TAL 177.53 TAP 23.62 RCA 107.71 APO 147.19 V2 34.787
RC 114.042 GL 49.60 GP -45.25 ZAL 88.66 ZAP 117.55 ETS 330.34 ZAE 125.32 ETE 224.53 ZAC 110.69 ETC 182.54 CLP-131.07

PLANETOCENTRIC CONIC

C3 19.647 VML 4.432 DLA 54.96 RAL 357.41 RAD 8567.8 VEL 11.876 PTH 2.11 VHP 4.476 DPA -39.04 RAP 33.18 ECC 1.3233
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
40.71 16 56 52 4333.97 -35.65 208.84 237.22 44.96 18 9 6 3734.0 -41.09 201.87
139.29 2 1 35 2730.36 -35.64 80.06 237.20 44.95 2 47 5 2130.4 -41.08 72.99
40.71 16 56 52 4333.97 -35.65 208.84 237.22 44.96 18 9 6 3734.0 -41.09 201.87
139.29 2 1 35 2730.36 -35.64 80.06 237.20 44.95 2 47 5 2130.4 -41.08 72.99
40.71 16 56 52 4333.97 -35.65 208.84 237.22 44.96 18 9 6 3734.0 -41.09 201.87
139.29 2 1 35 2730.36 -35.64 80.06 237.20 44.95 2 47 5 2130.4 -41.08 72.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5839 TRA -.4723 TC3-2.2982 BAU .6662 SGT 4054.3 SGR 2035.6 SCS 560.9 ST 3355.8 SR 1793.1 SS 2105.2
RDE 1.3865 RRA -.0717 RC3-1.0735 FAU .09020 RRT .9810 RRF .9960 RTF .9775 CRT .9977 CRS-1.0000 CST -.9971
FDE 4.2093 FRA -.1578 FC3-3.9745 BSP 14132 SGB 4536.6 R23 .1528 R13 .9842 LSA 4345.7 HSA 155.0 S8A 4.8
BDE 2.9324 BRA .4777 BC3 2.5365 FSP -1933 SGI 4522.8 SGE 353.7 THA 26.40 EL1 3803.3 EL2 107.9 ALF 28.09

LAUNCH DATE JAN 16 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 455.598

RL 147.17 LAL .00 LOL 115.69 VL 27.591 GAL .61 AZL 83.53 HCA 209.24 SMA 127.33 ECC .15617 INC 6.4706 V1 30.273
RP 108.93 LAP -3.16 LOP 324.78 VP 37.343 GAP 3.43 AZP 95.65 TAL 176.69 TAP 25.94 RCA 107.44 APO 147.21 V2 34.790
RC 116.435 GL 47.35 GP -40.92 ZAL 87.56 ZAP 121.61 ETS 329.70 ZAE 127.27 ETE 220.14 ZAC 110.89 ETC 180.97 CLP-133.93

PLANETOCENTRIC CONIC

C3 17.872 VML 4.228 DLA 53.77 RAL 1.12 RAD 8567.7 VEL 11.801 PTH 2.09 VHP 4.367 DPA -35.22 RAP 30.60 ECC 1.2941
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.17 17 15 52 4302.71 -36.09 205.94 238.85 47.00 18 27 34 3702.7 -41.30 198.57
137.83 2 12 11 2717.11 -36.08 79.09 238.84 46.99 2 57 28 2117.1 -41.29 71.72
42.17 17 15 52 4302.71 -36.09 205.94 238.85 47.00 18 27 34 3702.7 -41.30 198.57
137.83 2 12 11 2717.11 -36.08 79.09 238.84 46.99 2 57 28 2117.1 -41.29 71.72
42.17 17 15 52 4302.71 -36.09 205.94 238.85 47.00 18 27 34 3702.7 -41.30 198.57
137.83 2 12 11 2717.11 -36.08 79.09 238.84 46.99 2 57 28 2117.1 -41.29 71.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5640 TRA -.3630 TC3-2.7000 BAU .6907 SGT 4241.2 SGR 1820.2 SCS 587.4 ST 3484.7 SR 1597.0 SS 2107.5
RDE 1.1782 RRA -.0096 RC3-1.0331 FAU .09463 RRT .9794 RRF .9930 RTF .9761 CRT .9977 CRS -.9999 CST -.9969
FDE 4.1208 FRA .0555 FC3-4.9837 BSP 14344 SGB 4815.3 R23 .1571 R13 .9815 LSA 4371.5 HSA 158.5 S8A 5.7
BDE 2.8217 BRA .3652 BC3 2.8909 FSP -2020 SGI 4602.8 SGE 336.3 THA 22.93 EL1 3831.9 EL2 98.8 ALF 24.59

LAUNCH DATE JAN 16 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 461.675

RL 147.17 LAL .00 LOL 115.69 VL 27.572 GAL .78 AZL 85.98 HCA 212.40 SMA 127.20 ECC .15758 INC 6.0178 V1 30.273
RP 108.91 LAP -3.22 LOP 327.95 VP 37.332 GAP 3.74 AZP 95.09 TAL 175.82 TAP 28.22 RCA 107.15 APO 147.24 V2 34.794
RC 118.823 GL 45.23 GP -37.09 ZAL 86.32 ZAP 125.44 ETS 329.32 ZAE 128.63 ETE 216.01 ZAC 111.14 ETC 179.70 CLP-136.63

PLANETOCENTRIC CONIC

C3 16.576 VML 4.071 DLA 52.68 RAL 4.69 RAD 8567.7 VEL 11.748 PTH 2.07 VHP 4.322 DPA -31.72 RAP 28.70 ECC 1.2728
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.52 17 34 5 4276.57 -36.29 203.30 240.67 48.77 18 45 22 3676.6 -41.30 195.71
136.48 2 22 29 2708.46 -36.28 78.37 240.66 48.76 3 7 37 2108.5 -41.29 70.78
43.52 17 34 5 4276.57 -36.29 203.30 240.67 48.77 18 45 22 3676.6 -41.30 195.71
136.48 2 22 29 2708.46 -36.28 78.37 240.66 48.76 3 7 37 2108.5 -41.29 70.78
43.52 17 34 5 4276.57 -36.29 203.30 240.67 48.77 18 45 22 3676.6 -41.30 195.71
136.48 2 22 29 2708.46 -36.28 78.37 240.66 48.76 3 7 37 2108.5 -41.29 70.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5465 TRA -.2587 TC3-3.0880 BAU .7187 SGT 4417.3 SGR 1626.7 SCS 600.2 ST 3588.9 SR 1421.3 SS 2080.8
RDE 1.0097 RRA .0338 RC3 -.9878 FAU .09461 RRT .9777 RRF .9909 RTF .9750 CRT .9978 CRS -.9999 CST -.9966
FDE 3.9588 FRA .2809 FC3-5.0480 BSP 14684 SGB 4707.3 R23 .1551 R13 .9792 LSA 4382.3 HSA 160.6 S8A 6.6
BDE 2.7394 BRA .2590 BC3 3.2342 FSP -2072 SGI 4696.3 SGE 321.1 THA 19.90 EL1 3859.1 EL2 87.9 ALF 21.57



LAUNCH DATE JAN 16 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 27.551 GAL .96 AZL 84.36 HCA 215.55 SMA 127.06 ECC .15914 INC 5.6373 V1 30.273
RP 108.90 LAP -3.27 LOP 331.11 VP 37.321 GAP 4.06 AZP 94.59 TAL 174.90 TAP 30.45 RCA 106.84 APO 147.28 V2 34.798
RC 121.206 GL 43.22 GP -33.71 ZAL 84.94 ZAP 129.01 ETS 329.12 ZAE 129.53 ETE 212.23 ZAC 111.49 ETC 178.69 CLP-139.17

DISTANCE 467.737

PLANETOCENTRIC CONIC

C3 15.616 VHL 3.952 DLA 51.69 RAL 8.18 RAD 6567.6 VEL 11.705 PTH 2.06 VHP 4.324 DPA -28.50 RAP 27.35 ECC 1.2570
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.77 17 51 47 4254.47 -36.32 200.97 242.68 50.31 19 2 41 3654.5 -41.16 193.21
135.23 2 32 36 2703.46 -36.31 77.87 242.67 50.30 3 17 39 2103.5 -41.15 70.11
44.77 17 51 47 4254.47 -36.32 200.97 242.68 50.31 19 2 41 3654.5 -41.16 193.21
135.23 2 32 36 2703.46 -36.31 77.87 242.67 50.30 3 17 39 2103.5 -41.15 70.11
44.77 17 51 47 4254.47 -36.32 200.97 242.68 50.31 19 2 41 3654.5 -41.16 193.21
135.23 2 32 36 2703.46 -36.31 77.87 242.67 50.30 3 17 39 2103.5 -41.15 70.11

DIFFERENTIAL CORRECTIONS

TDE 2.5513 TRA -.1439 TC3-3.4449 BAU .7425
RDE .8745 RRA .0645 RC3 -.8846 FAU .09637
FDE 3.7475 FRA .4551 FC3-5.3425 BSP 15049
BDE 2.6781 BRA .1577 BC3 3.5566 FSP -2082

MID-COURSE EXECUTION ACCURACY

SGT 4582.1 SGR 1455.7 SCS 601.6
RRT .9754 RRF .9887 RTF .9741
SGB 4807.8 RZ3 .1466 R13 .9772
SGI 4798.0 SGE 306.6 THA 17.29

ORBIT DETERMINATION ACCURACY

ST 3672.4 SR 1268.9 SS 2034.1
CRT .9980 CRS -.9997 CST -.9963
LSA 4382.7 MSA 161.9 SSA 7.5
EL1 3884.7 EL2 76.0 ALF 19.03

LAUNCH DATE JAN 16 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.89 VL 27.530 GAL 1.16 AZL 84.69 HCA 218.71 SMA 126.91 ECC .16083 INC 5.3112 V1 30.273
RP 108.89 LAP -3.32 LOP 334.28 VP 37.309 GAP 4.37 AZP 94.15 TAL 173.95 TAP 32.66 RCA 106.50 APO 147.32 V2 34.803
RC 123.581 GL 41.29 GP -30.74 ZAL 83.44 ZAP 132.32 ETS 389.03 ZAE 130.06 ETE 208.82 ZAC 111.96 ETC 177.88 CLP-141.56

DISTANCE 473.782

PLANETOCENTRIC CONIC

C3 14.908 VHL 3.861 DLA 50.76 RAL 11.61 RAD 6567.6 VEL 11.674 PTH 2.05 VHP 4.363 DPA -25.57 RAP 26.45 ECC 1.2453
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.94 18 9 7 4235.57 -36.22 198.90 244.88 51.64 19 19 42 3635.6 -40.91 191.02
134.06 2 42 38 2701.41 -36.21 77.55 244.86 51.63 3 27 39 2101.4 -40.90 69.67
45.94 18 9 7 4235.57 -36.22 198.90 244.88 51.64 19 19 42 3635.6 -40.91 191.02
134.06 2 42 38 2701.41 -36.21 77.55 244.86 51.63 3 27 39 2101.4 -40.90 69.67
45.94 18 9 7 4235.57 -36.22 198.90 244.88 51.64 19 19 42 3635.6 -40.91 191.02
134.06 2 42 38 2701.41 -36.21 77.55 244.86 51.63 3 27 39 2101.4 -40.90 69.67

DIFFERENTIAL CORRECTIONS

TDE 2.5188 TRA -.0244 TC3-3.7677 BAU .7672
RDE .7670 RRA .0865 RC3 -.7915 FAU .09434
FDE 3.5174 FRA .6360 FC3-5.4790 BSP 15370
BDE 2.6530 BRA .0899 BC3 3.8499 FSP -2048

MID-COURSE EXECUTION ACCURACY

SGT 4737.1 SGR 1307.8 SCS 594.7
RRT .9719 RRF .9810 RTF .9733
SGB 4914.3 RZ3 .1327 R13 .9756
SGI 4905.3 SGE 297.1 THA 15.08

ORBIT DETERMINATION ACCURACY

ST 3739.0 SR 1140.0 SS 1975.3
CRT .9983 CRS -.9995 CST -.9959
LSA 4376.7 MSA 182.9 SSA 8.4
EL1 3908.5 EL2 63.7 ALF 16.93

LAUNCH DATE JAN 16 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 27.507 GAL 1.36 AZL 84.97 HCA 221.87 SMA 126.76 ECC .16268 INC 5.0271 V1 30.273
RP 108.87 LAP -3.35 LOP 337.45 VP 37.298 GAP 4.69 AZP 93.75 TAL 172.96 TAP 34.83 RCA 106.14 APO 147.38 V2 34.808
RC 123.848 GL 39.44 GP -28.12 ZAL 81.82 ZAP 135.38 ETS 329.02 ZAE 130.32 ETE 205.79 ZAC 112.56 ETC 177.25 CLP-143.81

DISTANCE 479.811

PLANETOCENTRIC CONIC

C3 14.389 VHL 3.793 DLA 49.88 RAL 15.01 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 4.429 DPA -22.87 RAP 25.94 ECC 1.2368
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.05 18 26 12 4219.40 -36.02 197.05 247.24 52.81 19 36 32 3619.4 -40.57 189.08
132.95 2 52 39 2701.89 -36.01 77.41 247.23 52.80 3 37 41 2101.9 -40.56 69.44
47.05 18 26 12 4219.40 -36.02 197.05 247.24 52.81 19 36 32 3619.4 -40.57 189.08
132.95 2 52 39 2701.89 -36.01 77.41 247.23 52.80 3 37 41 2101.9 -40.56 69.44
47.05 18 26 12 4219.40 -36.02 197.05 247.24 52.81 19 36 32 3619.4 -40.57 189.08
132.95 2 52 39 2701.89 -36.01 77.41 247.23 52.80 3 37 41 2101.9 -40.56 69.44

DIFFERENTIAL CORRECTIONS

TDE 2.5023 TRA .0989 TC3-4.0621 BAU .7929
RDE .6801 RRA .1012 RC3 -.6992 FAU .09135
FDE 3.2713 FRA .7960 FC3-5.4958 BSP 15763
BDE 2.5931 BRA .1415 BC3 4.1218 FSP -2000

MID-COURSE EXECUTION ACCURACY

SGT 4882.2 SGR 1180.3 SCS 581.4
RRT .9671 RRF .9733 RTF .9727
SGB 5022.9 RZ3 .1150 R13 .9744
SGI 5014.3 SGE 292.5 THA 13.20

ORBIT DETERMINATION ACCURACY

ST 3781.3 SR 1029.9 SS 1903.2
CRT .9987 CRS -.9990 CST -.9955
LSA 4353.7 MSA 163.4 SSA 9.2
EL1 3918.7 EL2 51.2 ALF 15.22

LAUNCH DATE JAN 16 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

RL 147.17 LAL .00 LOL 115.69 VL 27.483 GAL 1.58 AZL 85.22 HCA 225.03 SMA 126.81 ECC .16468 INC 4.7759 V1 30.273
RP 108.85 LAP -3.38 LOP 340.82 VP 37.286 GAP 5.00 AZP 93.38 TAL 171.93 TAP 36.96 RCA 105.76 APO 147.45 V2 34.815
RC 128.306 GL 37.64 GP -25.83 ZAL 80.10 ZAP 138.21 ETS 329.05 ZAE 130.39 ETE 203.14 ZAC 113.30 ETC 176.74 CLP-145.93

DISTANCE 485.823

PLANETOCENTRIC CONIC

C3 14.030 VHL 3.746 DLA 49.05 RAL 18.38 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 4.517 DPA -20.40 RAP 25.75 ECC 1.2309
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.12 18 43 11 4205.43 -35.73 195.38 249.77 53.84 19 53 16 3605.4 -40.16 187.34
131.88 3 2 37 2704.69 -35.72 77.42 249.76 53.83 3 47 41 2104.7 -40.15 69.39
48.12 18 43 11 4205.43 -35.73 195.38 249.77 53.84 19 53 16 3605.4 -40.16 187.34
131.88 3 2 37 2704.69 -35.72 77.42 249.76 53.83 3 47 41 2104.7 -40.15 69.39
48.12 18 43 11 4205.43 -35.73 195.38 249.77 53.84 19 53 16 3605.4 -40.16 187.34
131.88 3 2 37 2704.69 -35.72 77.42 249.76 53.83 3 47 41 2104.7 -40.15 69.39

DIFFERENTIAL CORRECTIONS

TDE 2.4834 TRA .2272 TC3-4.3215 BAU .8186
RDE .8106 RRA .1105 RC3 -.8114 FAU .08775
FDE 3.0229 FRA .9337 FC3-5.4148 BSP 16186
BDE 2.5574 BRA .2527 BC3 4.3645 FSP -1945

MID-COURSE EXECUTION ACCURACY

SGT 5019.2 SGR 1071.7 SCS 563.8
RRT .9607 RRF .9635 RTF .9725
SGB 5132.3 RZ3 .0940 R13 .9737
SGI 5124.0 SGE 291.6 THA 11.63

ORBIT DETERMINATION ACCURACY

ST 3803.4 SR 937.3 SS 1823.0
CRT .9991 CRS -.9983 CST -.9951
LSA 4317.5 MSA 163.2 SSA 10.1
EL1 3916.9 EL2 38.4 ALF 13.83

LAUNCH DATE JAN 16 1969 FLIGHT TIME 174.00 ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC DISTANCE 491.818  
 RL 147.17 LAL .00 LOL 115.69 VL 27.459 GAL 1.81 AZL 85.45 HCA 228.19 SMA 126.44 ECC .16684 INC 4.5508 V1 30.273  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.275 GAP 5.32 AZP 93.04 TAL 170.87 TAP 39.07 RCA 105.35 APO 147.54 V2 34.821  
 RC 130.653 GL 35.88 GP -23.81 ZAL 78.28 ZAP 140.82 ETS 329.08 ZAE 130.32 ETE 200.82 ZAC 114.18 ETC 176.34 CLP-147.92

PLANETOCENTRIC CONIC  
 C3 13.804 VHL 3.715 DLA 48.23 RAL 21.75 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 4.622 DPA -18.12 RAP 25.84 ECC 1.2272  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.17 19 0 8 4193.23 -35.36 193.85 252.44 54.76 20 10 1 3593.2 -39.69 185.77  
 130.83 3 12 29 2709.75 -35.35 77.60 252.42 54.75 3 57 39 2109.8 -39.67 69.52  
 49.17 19 0 8 4193.23 -35.36 193.85 252.44 54.76 20 10 1 3593.2 -39.69 185.77  
 130.83 3 12 29 2709.75 -35.35 77.60 252.42 54.75 3 57 39 2109.8 -39.67 69.52  
 49.17 19 0 8 4193.23 -35.36 193.85 252.44 54.76 20 10 1 3593.2 -39.69 185.77  
 130.83 3 12 29 2709.75 -35.35 77.60 252.42 54.75 3 57 39 2109.8 -39.67 69.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4624 TRA .3638 TC3-4.5360 BAU .8427 SGT 5146.8 SGR 980.3 SCS 543.3 ST 3807.1 SR 860.7 SS 1739.2  
 RDE .5556 RRA .1172 RC3 -.5271 FAU .08349 RRT .9517 RRF .9513 RTF .9723 CRT .9995 CRS -.9971 CST -.9947  
 FDE 2.7822 FRA 1.0581 FC3-5.2361 BSP 16582 SGB 5239.4 R23 .0744 R13 .9731 LSA 4270.0 MSA 163.3 SSA 11.0  
 BDE 2.5243 BRA .3822 BC3 4.5665 FSP -1875 SGI 5231.0 SGT 296.0 THA 10.31 EL1 3903.1 EL2 26.1 ALF 12.73

LAUNCH DATE JAN 16 1969 FLIGHT TIME 176.00 ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC DISTANCE 497.794  
 RL 147.17 LAL .00 LOL 115.69 VL 27.434 GAL 2.06 AZL 85.65 HCA 231.36 SMA 126.28 ECC .16917 INC 4.3469 V1 30.273  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.263 GAP 5.64 AZP 92.72 TAL 169.79 TAP 41.15 RCA 104.92 APO 147.64 V2 34.829  
 RC 132.989 GL 34.16 GP -22.03 ZAL 76.37 ZAP 143.24 ETS 329.11 ZAE 130.16 ETE 198.81 ZAC 115.18 ETC 176.02 CLP-149.80

PLANETOCENTRIC CONIC  
 C3 13.695 VHL 3.701 DLA 47.43 RAL 25.10 RAD 6567.5 VEL 11.622 PTH 2.04 VHP 4.744 DPA -16.01 RAP 26.16 ECC 1.2254  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.21 19 17 5 4182.62 -34.92 192.44 255.23 55.59 20 26 48 3582.6 -39.15 184.34  
 129.79 3 22 15 2716.90 -34.90 77.91 255.22 55.57 4 7 32 2116.9 -39.14 69.82  
 50.21 19 17 5 4182.62 -34.92 192.44 255.23 55.59 20 26 48 3582.6 -39.15 184.34  
 129.79 3 22 15 2716.90 -34.90 77.91 255.22 55.57 4 7 32 2116.9 -39.14 69.82  
 50.21 19 17 5 4182.62 -34.92 192.44 255.23 55.59 20 26 48 3582.6 -39.15 184.34  
 129.79 3 22 15 2716.90 -34.90 77.91 255.22 55.57 4 7 32 2116.9 -39.14 69.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4374 TRA .5080 TC3-4.7085 BAU .8660 SGT 5266.6 SGR 903.8 SCS 521.1 ST 3791.2 SR 797.1 SS 1651.8  
 RDE .5119 RRA .1218 RC3 -.4502 FAU .07898 RRT .9403 RRF .9365 RTF .9722 CRT .9998 CRS -.9954 CST -.9942  
 FDE 2.5501 FRA 1.1674 FC3-4.9928 BSP 16961 SGB 5343.6 R23 .0565 R13 .9727 LSA 4208.3 MSA 163.5 SSA 11.8  
 BDE 2.4906 BRA .5224 BC3 4.7300 FSP -1797 SGI 5335.0 SGT 303.6 THA 9.20 EL1 3874.1 EL2 15.5 ALF 11.87

LAUNCH DATE JAN 16 1969 FLIGHT TIME 178.00 ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC DISTANCE 503.753  
 RL 147.17 LAL .00 LOL 115.69 VL 27.409 GAL 2.32 AZL 85.84 HCA 234.53 SMA 126.11 ECC .17168 INC 4.1601 V1 30.273  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.252 GAP 5.96 AZP 92.42 TAL 168.67 TAP 43.20 RCA 104.46 APO 147.76 V2 34.837  
 RC 135.313 GL 32.47 GP -20.46 ZAL 74.39 ZAP 145.49 ETS 329.09 ZAE 129.94 ETE 197.07 ZAC 116.30 ETC 175.76 CLP-151.59

PLANETOCENTRIC CONIC  
 C3 13.695 VHL 3.701 DLA 46.63 RAL 28.43 RAD 6567.5 VEL 11.622 PTH 2.04 VHP 4.878 DPA -14.04 RAP 26.69 ECC 1.2254  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.27 19 34 7 4173.28 -34.40 191.12 258.14 56.33 20 43 40 3573.3 -38.54 183.02  
 128.73 3 31 50 2726.24 -34.39 78.38 258.13 56.32 4 17 16 2126.2 -38.53 70.29  
 51.27 19 34 7 4173.28 -34.40 191.12 258.14 56.33 20 43 40 3573.3 -38.54 183.02  
 128.73 3 31 50 2726.24 -34.39 78.38 258.13 56.32 4 17 16 2126.2 -38.53 70.29  
 51.27 19 34 7 4173.28 -34.40 191.12 258.14 56.33 20 43 40 3573.3 -38.54 183.02  
 128.73 3 31 50 2726.24 -34.39 78.38 258.13 56.32 4 17 16 2126.2 -38.53 70.29

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4117 TRA .6627 TC3-4.8278 BAU .8866 SGT 5379.8 SGR 841.3 SCS 498.3 ST 3762.3 SR 745.8 SS 1566.6  
 RDE .4785 RRA .1256 RC3 -.3791 FAU .07414 RRT .9262 RRF .9194 RTF .9722 CRT .9998 CRS -.9929 CST -.9936  
 FDE 2.3354 FRA 1.2664 FC3-4.6872 BSP 17261 SGB 5445.2 R23 .0421 R13 .9725 LSA 4139.8 MSA 164.1 SSA 12.6  
 BDE 2.4587 BRA .6745 BC3 4.8427 FSP -1709 SGI 5436.2 SGT 313.9 THA 8.27 EL1 3835.5 EL2 13.2 ALF 11.21

LAUNCH DATE JAN 16 1969 FLIGHT TIME 180.00 ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC DISTANCE 509.692  
 RL 147.17 LAL .00 LOL 115.69 VL 27.382 GAL 2.60 AZL 86.01 HCA 237.69 SMA 125.94 ECC .17438 INC 3.9875 V1 30.273  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.241 GAP 6.29 AZP 92.13 TAL 167.54 TAP 45.23 RCA 103.98 APO 147.90 V2 34.846  
 RC 137.825 GL 30.80 GP -19.07 ZAL 72.35 ZAP 147.59 ETS 329.04 ZAE 129.69 ETE 195.57 ZAC 117.53 ETC 175.54 CLP-153.28

PLANETOCENTRIC CONIC  
 C3 13.797 VHL 3.714 DLA 45.82 RAL 31.74 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 5.024 DPA -12.20 RAP 27.40 ECC 1.2271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.34 19 51 12 4164.99 -33.81 189.87 261.14 57.01 21 0 37 3565.0 -37.88 181.78  
 127.66 3 41 9 2737.78 -33.80 79.00 261.14 57.00 4 26 47 2137.8 -37.87 70.92  
 52.34 19 51 12 4164.99 -33.81 189.87 261.14 57.01 21 0 37 3565.0 -37.88 181.78  
 127.66 3 41 9 2737.78 -33.80 79.00 261.14 57.00 4 26 47 2137.8 -37.87 70.92  
 52.34 19 51 12 4164.99 -33.81 189.87 261.14 57.01 21 0 37 3565.0 -37.88 181.78  
 127.66 3 41 9 2737.78 -33.80 79.00 261.14 57.00 4 26 47 2137.8 -37.87 70.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3772 TRA .8225 TC3-4.9125 BAU .9080 SGT 5484.4 SGR 788.9 SCS 474.8 ST 3708.9 SR 702.3 SS 1476.9  
 RDE .4519 RRA .1280 RC3 -.3190 FAU .06980 RRT .9099 RRF .9000 RTF .9723 CRT .9995 CRS -.9893 CST -.9930  
 FDE 2.1273 FRA 1.3485 FC3-4.3676 BSP 17830 SGB 5540.8 R23 .0292 R13 .9726 LSA 4050.1 MSA 165.0 SSA 13.3  
 BDE 2.4198 BRA .8324 BC3 4.9228 FSP -1631 SGI 5531.3 SGT 324.5 THA 7.48 EL1 3774.8 EL2 22.7 ALF 10.72

LAUNCH DATE JAN 16 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 17 1969

Heliocentric Conic  
 RL 147.17 LAL .00 LOL 115.69 VL 27.356 GAL 2.89 AZL 86.17 HCA 240.86 SMA 125.76 ECC .17728 INC 3.8264 V1 30.273  
 RP .08.72 LAP -3.34 LOP 356.50 VP 37.230 GAP 6.63 AZP 91.86 TAL 166.37 TAP 47.24 RCA 103.47 APO 148.06 V2 34.855  
 RC 135.923 GL 29.16 GP -17.84 ZAL 70.25 ZAP 149.54 ETS 328.92 ZAE 129.42 ETE 194.26 ZAC 118.86 ETC 175.35 CLP-154.89

Distance 515.611

Planetocentric Conic  
 C3 14.000 VHL 3.742 DLA 45.00 RAL 35.01 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 5.180 DPA -10.46 RAP 28.26 ECC 1.2304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.44 20 8 24 4157.51 -33.16 188.68 264.23 57.64 21 17 42 3557.5 -37.16 180.61  
 126.56 3 50 4 2751.69 -33.15 79.79 264.22 57.63 4 35 56 2151.7 -37.15 71.73  
 53.44 20 8 24 4157.51 -33.16 188.68 264.23 57.64 21 17 42 3557.5 -37.16 180.61  
 126.56 3 50 4 2751.69 -33.15 79.79 264.22 57.63 4 35 56 2151.7 -37.15 71.73  
 53.44 20 8 24 4157.51 -33.16 188.68 264.23 57.64 21 17 42 3557.5 -37.16 180.61  
 126.56 3 50 4 2751.69 -33.15 79.79 264.22 57.63 4 35 56 2151.7 -37.15 71.73

Differential Corrections  
 TDE 2.3386 TRA .9918 TC3-4.9518 BAU .9282 SGT 5582.8 SGR 746.5 SCS 451.6 ST 3640.2 SR 666.9 SS 1389.2  
 RDE .4320 RRA .1303 RC3 -.2666 FAU .06510 RRT .8914 RRF .8790 RTF .9725 CRT .9985 CRS -.9846 CST -.9923  
 FDE 1.9343 FRA 1.4213 FC3-4.0254 BSP 17981 SGB 5632.5 R23 .0196 R13 .9727 LSA 3949.4 MSA 166.6 SSA 14.0  
 BDE 2.3782 BRA 1.0003 BC3 4.9590 FSP -1555 SGI 5622.5 SGI 335.9 THA 6.82 EL1 3700.7 EL2 36.1 ALF 10.37

Orbit Determination Accuracy

LAUNCH DATE JAN 16 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 19 1969

Heliocentric Conic  
 RL 147.17 LAL .00 LOL 115.69 VL 27.328 GAL 3.20 AZL 86.33 HCA 244.04 SMA 125.59 ECC .18040 INC 3.6749 V1 30.273  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.219 GAP 6.97 AZP 91.61 TAL 165.19 TAP 49.23 RCA 102.93 APO 148.24 V2 34.865  
 RC 142.207 GL 27.54 GP -16.74 ZAL 68.12 ZAP 151.37 ETS 328.73 ZAE 129.15 ETE 193.13 ZAC 120.28 ETC 175.18 CLP-156.43

Distance 521.509

Planetocentric Conic  
 C3 14.306 VHL 3.782 DLA 44.15 RAL 38.25 RAD 6567.6 VEL 11.649 PTH 2.04 VHP 5.347 DPA -8.83 RAP 29.26 ECC 1.2354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.59 20 25 41 4150.79 -32.43 187.52 267.38 58.22 21 34 51 3550.8 -36.37 179.49  
 125.41 3 58 35 2767.94 -32.42 80.74 267.37 58.21 4 44 43 2167.9 -36.36 72.71  
 54.59 20 25 41 4150.79 -32.43 187.52 267.38 58.22 21 34 51 3550.8 -36.37 179.49  
 125.41 3 58 35 2767.94 -32.42 80.74 267.37 58.21 4 44 43 2167.9 -36.36 72.71  
 54.59 20 25 41 4150.79 -32.43 187.52 267.38 58.22 21 34 51 3550.8 -36.37 179.49  
 125.41 3 58 35 2767.94 -32.42 80.74 267.37 58.21 4 44 43 2167.9 -36.36 72.71

Differential Corrections  
 TDE 2.2950 TRA 1.1708 TC3-4.9458 BAU .9469 SGT 5674.0 SGR 711.7 SCS 428.8 ST 3556.5 SR 637.7 SS 1303.2  
 RDE .4173 RRA .1330 RC3 -.2214 FAU .06068 RRT .8713 RRF .8569 RTF .9727 CRT .9967 CRS -.9782 CST -.9915  
 FDE 1.7545 FRA 1.4885 FC3-3.8720 BSP 18308 SGB 5718.4 R23 .0127 R13 .9726 LSA 3837.3 MSA -169.5 SSA 14.6  
 BDE 2.3326 BRA 1.1783 BC3 4.9507 FSP -1478 SGI 5707.9 SGI 347.2 THA 6.26 EL1 3612.8 EL2 50.9 ALF 10.14

Orbit Determination Accuracy

LAUNCH DATE JAN 16 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 21 1969

Heliocentric Conic  
 RL 147.17 LAL .00 LOL 115.69 VL 27.301 GAL 3.52 AZL 86.47 HCA 247.21 SMA 125.41 ECC .18375 INC 3.5313 V1 30.273  
 RP 108.66 LAP -3.26 LOP 359.68 VP 37.208 GAP 7.32 AZP 91.37 TAL 163.99 TAP 51.20 RCA 102.36 APO 148.45 V2 34.875  
 RC 144.478 GL 25.94 GP -15.76 ZAL 65.96 ZAP 153.09 ETS 328.45 ZAE 128.88 ETE 192.15 ZAC 121.78 ETC 175.02 CLP-157.90

Distance 527.364

Planetocentric Conic  
 C3 14.718 VHL 3.836 DLA 43.29 RAL 41.42 RAD 6567.6 VEL 11.666 PTH 2.05 VHP 5.524 DPA -7.27 RAP 30.38 ECC 1.2422  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.77 20 43 4 4144.53 -31.63 186.39 270.58 58.76 21 52 9 3544.5 -35.52 178.40  
 124.23 4 6 33 2786.78 -31.63 81.86 270.57 58.75 4 53 0 2186.8 -35.51 73.88  
 55.77 20 43 4 4144.53 -31.63 186.39 270.58 58.76 21 52 9 3544.5 -35.52 178.40  
 124.23 4 6 33 2786.78 -31.63 81.86 270.57 58.75 4 53 0 2186.8 -35.51 73.88  
 55.77 20 43 4 4144.53 -31.63 186.39 270.58 58.76 21 52 9 3544.5 -35.52 178.40  
 124.23 4 6 33 2786.78 -31.63 81.86 270.57 58.75 4 53 0 2186.8 -35.51 73.88

Differential Corrections  
 TDE 2.2489 TRA 1.3627 TC3-4.8916 BAU .9631 SGT 5780.6 SGR 884.2 SCS 406.9 ST 3463.7 SR 614.2 SS 1221.9  
 RDE .4073 RRA .1365 RC3 -.1826 FAU .05631 RRT .8505 RRF .8348 RTF .9728 CRT .9939 CRS -.9701 CST -.9907  
 FDE 1.5904 FRA 1.5472 FC3-3.3126 BSP 18542 SGB 5801.1 R23 .0081 R13 .9729 LSA 3719.8 MSA 173.6 SSA 15.0  
 BDE 2.2854 BRA 1.3695 BC3 4.8950 FSP -1397 SGI 5790.0 SGI 358.1 THA 5.79 EL1 3517.0 EL2 66.7 ALF 10.00

Orbit Determination Accuracy

LAUNCH DATE JAN 16 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 23 1969

Heliocentric Conic  
 RL 147.17 LAL .00 LOL 115.69 VL 27.273 GAL 3.87 AZL 86.61 HCA 250.39 SMA 125.23 ECC .18735 INC 3.3941 V1 30.273  
 RP 108.63 LAP -3.20 LOP 359.68 VP 37.198 GAP 7.68 AZP 91.14 TAL 162.77 TAP 53.16 RCA 101.77 APO 148.69 V2 34.885  
 RC 148.734 GL 24.37 GP -14.88 ZAL 63.79 ZAP 154.70 ETS 328.08 ZAE 128.62 ETE 191.30 ZAC 123.36 ETC 174.86 CLP-159.31

Distance 533.255

Planetocentric Conic  
 C3 15.240 VHL 3.804 DLA 42.40 RAL 44.53 RAD 6567.6 VEL 11.689 PTH 2.06 VHP 5.711 DPA -5.79 RAP 31.61 ECC 1.2508  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.01 21 0 31 4138.71 -30.79 185.27 273.81 59.27 22 9 30 3538.7 -34.62 177.33  
 122.99 4 13 55 2808.20 -30.78 83.17 273.81 59.26 5 0 43 2208.2 -34.61 75.23  
 57.01 21 0 31 4138.71 -30.79 185.27 273.81 59.27 22 9 30 3538.7 -34.62 177.33  
 122.99 4 13 55 2808.20 -30.78 83.17 273.81 59.26 5 0 43 2208.2 -34.61 75.23  
 57.01 21 0 31 4138.71 -30.79 185.27 273.81 59.27 22 9 30 3538.7 -34.62 177.33  
 122.99 4 13 55 2808.20 -30.78 83.17 273.81 59.26 5 0 43 2208.2 -34.61 75.23

Differential Corrections  
 TDE 2.1949 TRA 1.5622 TC3-4.8057 BAU .9796 SGT 5839.4 SGR 861.4 SCS 385.5 ST 3355.3 SR 593.9 SS 1141.6  
 RDE .4006 RRA .1402 RC3 -.1512 FAU .05227 RRT .8293 RRF .8127 RTF .9730 CRT .9898 CRS -.9598 CST -.9897  
 FDE 1.4357 FRA 1.5985 FC3-2.9694 BSP 18846 SGB 5876.7 R23 .0046 R13 .9731 LSA 3589.1 MSA 179.1 SSA 15.3  
 BDE 2.2312 BRA 1.5685 BC3 4.8080 FSP -1328 SGI 5865.2 SGI 367.9 THA 5.39 EL1 3406.5 EL2 83.3 ALF 9.94

Orbit Determination Accuracy

LAUNCH DATE JAN 16 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 539.060

RL 147.17 LAL .00 LOL 115.69 VL 27.245 GAL 4.23 AZL 86.74 HCA 253.56 SMA 125.05 ECC .19122 INC 3.2622 V1 30.273
RP 108.59 LAP -3.13 LOP 9.27 VP 37.187 GAP 8.05 AZP 90.92 TAL 161.54 TAP 55.11 RCA 101.15 APO 148.96 V2 34.897
RC 148.977 GL 22.83 GP -14.09 ZAL 61.61 ZAP 156.23 ETS 327.61 ZAE 128.37 ETE 190.55 ZAC 125.01 ETC 174.71 CLP-160.67

PLANETOCENTRIC CONIC

C3 15.882 VHL 3.985 DLA 41.50 RAL 47.57 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 5.908 DPA -4.38 RAP 32.93 ECC 1.2614
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.30 21 18 5 4133.06 -29.88 184.16 277.08 59.75 22 26 58 3533.1 -33.65 176.27
121.70 4 20 33 2832.48 -29.87 84.66 277.07 59.74 5 7 46 2232.5 -33.64 76.78
58.30 21 18 5 4133.06 -29.88 184.16 277.08 59.75 22 26 58 3533.1 -33.65 176.27
121.70 4 20 33 2832.48 -29.87 84.66 277.07 59.74 5 7 46 2232.5 -33.64 76.78
58.30 21 18 5 4133.06 -29.88 184.16 277.08 59.75 22 26 58 3533.1 -33.65 176.27
121.70 4 20 33 2832.48 -29.87 84.66 277.07 59.74 5 7 46 2232.5 -33.64 76.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1358 TRA 1.7723 TC3-4.6844 BAU .9950 SGT 5911.3 SGR 642.6 SCS 364.9 ST 3237.7 SR 576.8 SS 1065.0
RDE .3970 RRA .1447 RC3 -.1257 FAU .04844 RRT .8088 RRF .7914 RTF .9732 CRT .9842 CRS -.9470 CST -.9887
FDE 1.2924 FRA 1.6439 FC3-2.6407 BSP 19134 SGB 5946.1 R23 .0020 R13 .9733 LSA 3451.8 MSA 186.0 SSA 15.5
BDE 2.1724 BRA 1.7782 BC3 4.6861 FSP -1262 SGI 5934.2 SGI 376.6 THA 5.04 EL1 3287.2 EL2 100.7 ALF 9.95

LAUNCH DATE JAN 16 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 544.856

RL 147.17 LAL .00 LOL 115.69 VL 27.218 GAL 4.61 AZL 86.87 HCA 256.74 SMA 124.86 ECC .19538 INC 3.1345 V1 30.273
RP 108.56 LAP -3.05 LOP 12.42 VP 37.177 GAP 8.43 AZP 90.72 TAL 160.30 TAP 57.04 RCA 100.47 APO 149.26 V2 34.908
RC 151.204 GL 21.31 GP -13.39 ZAL 59.44 ZAP 157.68 ETS 327.02 ZAE 128.14 ETE 189.90 ZAC 126.72 ETC 174.54 CLP-161.98

PLANETOCENTRIC CONIC

C3 16.854 VHL 4.081 DLA 40.57 RAL 50.52 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 6.116 DPA -3.03 RAP 34.34 ECC 1.2741
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.64 21 35 43 4127.55 -28.92 183.04 280.36 60.20 22 44 31 3527.5 -32.64 175.21
120.36 4 28 26 2859.64 -28.90 86.36 280.35 60.19 5 14 5 2259.6 -32.63 76.53
59.64 21 35 43 4127.55 -28.92 183.04 280.36 60.20 22 44 31 3527.5 -32.64 175.21
120.36 4 28 26 2859.64 -28.90 86.36 280.35 60.19 5 14 5 2259.6 -32.63 76.53
59.64 21 35 43 4127.55 -28.92 183.04 280.36 60.20 22 44 31 3527.5 -32.64 175.21
120.36 4 28 26 2859.64 -28.90 86.36 280.35 60.19 5 14 5 2259.6 -32.63 76.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0729 TRA 1.9950 TC3-4.5292 BAU 1.0087 SGT 5977.8 SGR 627.3 SCS 345.4 ST 3115.5 SR 562.1 SS 993.8
RDE .3959 RRA .1504 RC3 -.1047 FAU .04476 RRT .7889 RRF .7716 RTF .9733 CRT .9766 CRS -.9314 CST -.9876
FDE 1.1614 FRA 1.6863 FC3-2.3286 BSP 19395 SGB 6010.6 R23 .0008 R13 .9734 LSA 3312.4 MSA 194.7 SSA 15.6
BDE 2.1104 BRA 2.0007 BC3 4.5304 FSP -1199 SGI 5988.3 SGI 384.2 THA 4.75 EL1 3163.6 EL2 118.9 ALF 10.01

LAUNCH DATE JAN 16 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 550.621

RL 147.17 LAL .00 LOL 115.69 VL 27.187 GAL 5.02 AZL 86.99 HCA 259.93 SMA 124.68 ECC .19985 INC 3.0099 V1 30.273
RP 108.92 LAP -2.96 LOP 15.60 VP 37.187 GAP 8.83 AZP 90.53 TAL 159.05 TAP 58.97 RCA 99.76 APO 149.60 V2 34.920
RC 153.416 GL 19.83 GP -12.75 ZAL 57.29 ZAP 159.06 ETS 326.29 ZAE 127.91 ETE 189.33 ZAC 128.48 ETC 174.36 CLP-163.24

PLANETOCENTRIC CONIC

C3 17.588 VHL 4.191 DLA 39.63 RAL 53.37 RAD 6567.7 VEL 11.788 PTH 2.08 VHP 6.335 DPA -1.73 RAP 35.83 ECC 1.2891
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.03 21 53 27 4121.98 -27.90 181.91 283.65 60.63 23 2 9 3522.0 -31.58 174.15
118.97 4 31 27 2889.85 -27.88 88.26 283.64 60.61 5 19 37 2289.9 -31.57 80.50
61.03 21 53 27 4121.98 -27.90 181.91 283.65 60.63 23 2 9 3522.0 -31.58 174.15
118.97 4 31 27 2889.85 -27.88 88.26 283.64 60.61 5 19 37 2289.9 -31.57 80.50
61.03 21 53 27 4121.98 -27.90 181.91 283.65 60.63 23 2 9 3522.0 -31.58 174.15
118.97 4 31 27 2889.85 -27.88 88.26 283.64 60.61 5 19 37 2289.9 -31.57 80.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0058 TRA 2.2302 TC3-4.3456 BAU 1.0208 SGT 6038.0 SGR 614.6 SCS 326.8 ST 2990.1 SR 549.2 SS 927.7
RDE .3971 RRA .1571 RC3 -.0877 FAU .04125 RRT .7706 RRF .7534 RTF .9734 CRT .9669 CRS -.9127 CST -.9865
FDE 1.0412 FRA 1.7254 FC3-2.0327 BSP 19636 SGB 6069.2 R23 .0003 R13 .9734 LSA 3171.9 MSA 205.0 SSA 15.5
BDE 2.0448 BRA 2.2357 BC3 4.3464 FSP -1138 SGI 6058.6 SGI 390.5 THA 4.50 EL1 3037.0 EL2 137.9 ALF 10.09

LAUNCH DATE JAN 16 1969

FLIGHT TIME 196.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 556.352

RL 147.17 LAL .00 LOL 115.69 VL 27.159 GAL 5.45 AZL 87.11 HCA 263.11 SMA 124.50 ECC .20466 INC 2.8878 V1 30.273
RP 108.48 LAP -2.87 LOP 18.79 VP 37.158 GAP 9.24 AZP 90.35 TAL 157.79 TAP 60.90 RCA 99.02 APO 149.98 V2 34.932
RC 155.612 GL 18.39 GP -12.17 ZAL 55.17 ZAP 160.36 ETS 325.40 ZAE 127.70 ETE 188.83 ZAC 130.28 ETC 174.16 CLP-164.47

PLANETOCENTRIC CONIC

C3 18.639 VHL 4.317 DLA 38.68 RAL 56.12 RAD 6567.8 VEL 11.833 PTH 2.10 VHP 6.567 DPA -.48 RAP 37.39 ECC 1.3068
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.47 22 11 16 4116.23 -26.83 180.76 286.94 61.03 23 19 53 3516.2 -30.47 173.06
117.53 4 35 35 2923.25 -26.82 90.39 286.94 61.02 5 24 18 2323.2 -30.46 82.68
62.47 22 11 16 4116.23 -26.83 180.76 286.94 61.03 23 19 53 3516.2 -30.47 173.06
117.53 4 35 35 2923.25 -26.82 90.39 286.94 61.02 5 24 18 2323.2 -30.46 82.68
62.47 22 11 16 4116.23 -26.83 180.76 286.94 61.03 23 19 53 3516.2 -30.47 173.06
117.53 4 35 35 2923.25 -26.82 90.39 286.94 61.02 5 24 18 2323.2 -30.46 82.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9381 TRA 2.4818 TC3-4.1318 BAU 1.0298 SGT 6094.5 SGR 604.2 SCS 309.4 ST 2868.6 SR 537.9 SS 868.9
RDE .4003 RRA .1652 RC3 -.0735 FAU .03780 RRT .7543 RRF .7377 RTF .9734 CRT .9548 CRS -.8908 CST -.9854
FDE .9332 FRA 1.7642 FC3-1.7557 BSP 19786 SGB 6124.4 R23 .0008 R13 .9734 LSA 3037.4 MSA 216.7 SSA 15.4
BDE 1.9790 BRA 2.4873 BC3 4.1325 FSP -1075 SGI 6111.6 SGI 395.6 THA 4.29 EL1 2914.3 EL2 157.4 ALF 10.18

LAUNCH DATE JAN 16 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 562.044

RL 147.17 LAL .00 LOL 115.69 VL 27.130 GAL 5.91 AZL 87.23 MCA 266.30 SMA 124.31 ECC .20985 INC 2.7671 V1 30.273  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.148 GAP 9.67 AZP 90.18 TAL 156.53 TAP 62.83 RCA 98.23 APO 150.40 V2 34.945  
 RC 157.792 GL 18.99 GP -11.65 ZAL 53.08 ZAP 161.61 ETS 324.34 ZAE 127.50 ETE 188.39 ZAC 132.13 ETC 173.94 CLP-165.67

PLANETOCENTRIC CONIC

C3 19.888 VHL 4.460 DLA 37.71 RAL 58.76 RAD 6567.8 VEL 11.886 PTH 2.11 VHP 6.811 DPA .72 RAP 39.01 ECC 1.3273  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.97 22 29 16 4110.02 -25.73 179.57 290.24 61.41 23 37 46 3510.0 -29.33 171.93  
 116.03 4 38 41 2960.11 -25.71 92.75 290.23 61.40 5 28 1 2360.1 -29.32 85.11  
 63.97 22 29 16 4110.02 -25.73 179.57 290.24 61.41 23 37 46 3510.0 -29.33 171.93  
 116.03 4 38 41 2960.11 -25.71 92.75 290.23 61.40 5 28 1 2360.1 -29.32 85.11  
 63.97 22 29 16 4110.02 -25.73 179.57 290.24 61.41 23 37 46 3510.0 -29.33 171.93  
 116.03 4 38 41 2960.11 -25.71 92.75 290.23 61.40 5 28 1 2360.1 -29.32 85.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8635 TRA 2.7437 TC3-3.9076 BAU 1.0391 SGT 6142.9 SGR 594.5 SCS 292.8 ST 2744.1 SR 526.8 SS 813.6  
 RDE .4047 RRA .1742 RC3 -.0629 FAU .03467 RRT .7595 RRF .7234 RTF .9735 CRT .9397 CRS -.8652 CST -.9843  
 FDE .8320 FRA 1.7979 FC3-1.5092 BSP 20011 SGB 6171.6 R23 .0007 R13 .9735 LSA 2901.1 MSA 229.7 SSA 15.1  
 BDE 1.9069 BRA 2.7492 BC3 3.9081 FSP -1022 SGI 6158.7 SGT 399.2 THA 4.11 EL1 2788.6 EL2 177.3 ALF 10.27

LAUNCH DATE JAN 16 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 567.694

RL 147.17 LAL .00 LOL 115.69 VL 27.101 GAL 8.39 AZL 87.35 MCA 269.49 SMA 124.13 ECC .21545 INC 2.6473 V1 30.273  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.139 GAP 10.12 AZP 90.02 TAL 155.27 TAP 64.75 RCA 97.39 APO 150.87 V2 34.957  
 RC 159.953 GL 15.82 GP -11.18 ZAL 51.05 ZAP 162.80 ETS 323.08 ZAE 127.31 ETE 188.00 ZAC 134.02 ETC 173.69 CLP-166.84

PLANETOCENTRIC CONIC

C3 21.335 VHL 4.619 DLA 36.75 RAL 61.29 RAD 6567.9 VEL 11.946 PTH 2.13 VHP 7.070 DPA 1.87 RAP 40.69 ECC 1.3511  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.53 22 47 24 4103.26 -24.58 178.34 293.52 61.78 23 55 47 3503.3 -26.15 170.76  
 114.47 4 40 45 3000.47 -24.57 95.35 293.52 61.77 5 30 45 2400.5 -26.14 87.77  
 65.53 22 47 24 4103.26 -24.58 178.34 293.52 61.78 23 55 47 3503.3 -26.15 170.76  
 114.47 4 40 45 3000.47 -24.57 95.35 293.52 61.77 5 30 45 2400.5 -26.14 87.77  
 65.53 22 47 24 4103.26 -24.58 178.34 293.52 61.78 23 55 47 3503.3 -26.15 170.76  
 114.47 4 40 45 3000.47 -24.57 95.35 293.52 61.77 5 30 45 2400.5 -26.14 87.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7860 TRA 3.0211 TC3-3.6680 BAU 1.0463 SGT 6185.8 SGR 585.7 SCS 277.1 ST 2624.4 SR 516.1 SS 764.3  
 RDE .4103 RRA .1844 RC3 -.0544 FAU .03169 RRT .7267 RRF .7111 RTF .9735 CRT .9213 CRS -.8358 CST -.9833  
 FDE .7596 FRA 1.8307 FC3-1.2660 BSP 20211 SGB 6213.5 R23 .0009 R13 .9735 LSA 2771.0 MSA 243.7 SSA 14.9  
 BDE 1.8325 BRA 3.0268 BC3 3.6684 FSP -971 SGI 6200.5 SGT 401.4 THA 3.95 EL1 2667.3 EL2 197.4 ALF 10.33

LAUNCH DATE JAN 16 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 573.295

RL 147.17 LAL .00 LOL 115.69 VL 27.071 GAL 6.91 AZL 87.47 MCA 272.68 SMA 123.95 ECC .22150 INC 2.5275 V1 30.273  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.130 GAP 10.59 AZP 89.88 TAL 154.01 TAP 66.69 RCA 96.49 APO 151.40 V2 34.970  
 RC 182.097 GL 14.31 GP -10.75 ZAL 49.06 ZAP 163.93 ETS 321.59 ZAE 127.13 ETE 187.65 ZAC 135.93 ETC 173.40 CLP-167.98

PLANETOCENTRIC CONIC

C3 23.007 VHL 4.797 DLA 35.78 RAL 63.71 RAD 6567.9 VEL 12.016 PTH 2.14 VHP 7.344 DPA 2.98 RAP 42.43 ECC 1.3786  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.15 23 5 47 4095.58 -23.41 177.04 296.80 62.13 24 14 3 3495.6 -26.93 169.53  
 112.85 4 41 39 3044.71 -23.40 98.22 296.80 62.12 5 32 24 2444.7 -26.94 90.70  
 67.15 23 5 47 4095.58 -23.41 177.04 296.80 62.13 24 14 3 3495.6 -26.93 169.53  
 112.85 4 41 39 3044.71 -23.40 98.22 296.80 62.12 5 32 24 2444.7 -26.94 90.70  
 67.15 23 5 47 4095.58 -23.41 177.04 296.80 62.13 24 14 3 3495.6 -26.93 169.53  
 112.85 4 41 39 3044.71 -23.40 98.22 296.80 62.12 5 32 24 2444.7 -26.94 90.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7082 TRA 3.3150 TC3-3.4176 BAU 1.0513 SGT 6223.3 SGR 577.4 SCS 262.4 ST 2511.5 SR 505.6 SS 721.1  
 RDE .4170 RRA .1939 RC3 -.0475 FAU .02885 RRT .7160 RRF .7008 RTF .9736 CRT .8994 CRS -.8030 CST -.9825  
 FDE .6557 FRA 1.8620 FC3-1.0857 BSP 20390 SGB 6250.0 R23 .0012 R13 .9736 LSA 2648.9 MSA 258.1 SSA 14.5  
 BDE 1.7564 BRA 3.3208 BC3 3.4180 FSP -922 SGI 6237.0 SGT 402.2 THA 3.82 EL1 2552.7 EL2 217.4 ALF 10.34

LAUNCH DATE JAN 16 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 578.842

RL 147.17 LAL .00 LOL 115.69 VL 27.042 GAL 7.46 AZL 87.59 MCA 275.87 SMA 123.77 ECC .22805 INC 2.4069 V1 30.273  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.121 GAP 11.09 AZP 89.75 TAL 152.76 TAP 68.63 RCA 95.54 APO 151.99 V2 34.983  
 RC 184.221 GL 13.03 GP -10.35 ZAL 47.14 ZAP 165.02 ETS 319.82 ZAE 126.95 ETE 187.35 ZAC 137.88 ETC 173.07 CLP-169.11

PLANETOCENTRIC CONIC

C3 24.937 VHL 4.994 DLA 34.82 RAL 68.02 RAD 6568.0 VEL 12.096 PTH 2.17 VHP 7.636 DPA 4.04 RAP 44.21 ECC 1.4104  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.83 23 24 32 4086.58 -22.22 175.65 300.08 62.47 24 32 39 3486.6 -25.72 168.19  
 111.17 4 41 17 3093.17 -22.20 101.37 300.07 62.46 5 32 51 2493.2 -25.71 93.92  
 68.83 23 24 32 4086.58 -22.22 175.65 300.08 62.47 24 32 39 3486.6 -25.72 168.19  
 111.17 4 41 17 3093.17 -22.20 101.37 300.07 62.46 5 32 51 2493.2 -25.71 93.92  
 68.83 23 24 32 4086.58 -22.22 175.65 300.08 62.47 24 32 39 3486.6 -25.72 168.19  
 111.17 4 41 17 3093.17 -22.20 101.37 300.07 62.46 5 32 51 2493.2 -25.71 93.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6277 TRA 3.8302 TC3-3.1555 BAU 1.0520 SGT 6257.8 SGR 569.8 SCS 248.7 ST 2411.1 SR 495.3 SS 685.1  
 RDE .4248 RRA .2090 RC3 -.0412 FAU .02604 RRT .7074 RRF .6931 RTF .9737 CRT .8742 CRS -.7679 CST -.9821  
 FDE .5814 FRA 1.8969 FC3 -.9041 BSP 20460 SGB 6283.7 R23 .0020 R13 .9737 LSA 2540.5 MSA 272.4 SSA 14.2  
 BDE 1.6823 BRA 3.6362 BC3 3.1555 FSP -871 SGI 6270.9 SGT 401.9 THA 3.70 EL1 2450.1 EL2 236.7 ALF 10.28

LAUNCH DATE JAN 16 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 584.326

RL 147.17 LAL .00 LOL 115.69 VL 27.013 GAL 8.05 AZL 87.72 HCA 279.07 SMA 123.58 ECC .23515 INC 2.2849 V1 30.273
RP 108.29 LAP -2.26 LOP 34.77 VP 37.112 GAP 11.62 AZP 89.64 TAL 151.51 TAP 70.58 RCA 94.52 APO 152.64 V2 34.996
RC 166.326 GL 11.81 GP -10.00 ZAL 45.29 ZAP 166.05 ETS 317.74 ZAE 126.77 ETE 187.07 ZAC 139.84 ETC 172.69 CLP-170.22

PLANETOCENTRIC CONIC

C3 27.163 VHL 5.212 DLA 33.87 RAL 68.21 RAD 6568.1 VEL 12.188 PTH 2.19 VHP 7.948 DPA 5.07 RAP 46.03 ECC 1.4470
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.59 23 43 43 4075.98 -21.01 174.14 303.33 62.80 24 51 39 3476.0 -24.48 166.74
109.41 4 39 35 3146.08 -20.99 104.84 303.32 62.79 5 32 1 2546.1 -24.47 97.44
70.59 23 43 43 4075.98 -21.01 174.14 303.33 62.80 24 51 39 3476.0 -24.48 166.74
109.41 4 39 35 3146.08 -20.99 104.84 303.32 62.79 5 32 1 2546.1 -24.47 97.44
110.00 5 18 8 3028.38 -24.38 97.45 305.11 65.26 6 8 36 2428.4 -27.50 89.68
110.00 4 8 17 3241.68 -17.70 110.39 301.43 60.27 5 2 18 2641.7 -21.52 103.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5425 TRA 3.9595 TC3-2.8983 BAU 1.0526
RDE .4330 RRA .2230 RC3 -.0365 FAU .02350
FDE .5113 FRA 1.9284 FC3 -.7491 B9P 20631
BDE 1.6022 BRA 3.9658 BC3 2.8986 F9P -828

SGT 6283.9 SGR 561.4 SCS 235.7
RRT .7002 RRF .6862 RTF .9739
SGB 6308.9 R23 .0022 R13 .9739
SGI 6296.2 SGI 400.1 THA 3.59

ST 2314.6 SR 484.2 SS 652.6
CRT .8447 CRS -.7290 CST -.9819
LSA 2436.3 MSA 286.5 SSA 13.8
EL1 2350.9 EL2 255.2 ALF 10.14

LAUNCH DATE JAN 16 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 589.738

RL 147.17 LAL .00 LOL 115.69 VL 26.984 GAL 8.67 AZL 87.84 HCA 282.27 SMA 123.40 ECC .24286 INC 2.1606 V1 30.273
RP 108.24 LAP -2.11 LOP 37.97 VP 37.104 GAP 12.19 AZP 89.54 TAL 150.29 TAP 72.55 RCA 93.43 APO 153.37 V2 35.010
RC 168.410 GL 10.63 GP -9.67 ZAL 43.50 ZAP 167.03 ETS 315.27 ZAE 126.60 ETE 186.83 ZAC 141.82 ETC 172.25 CLP-171.32

PLANETOCENTRIC CONIC

C3 29.731 VHL 5.453 DLA 32.93 RAL 70.28 RAD 6568.2 VEL 12.292 PTH 2.21 VHP 8.281 DPA 6.05 RAP 47.89 ECC 1.4893
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.44 0 7 28 4063.01 -19.78 172.47 306.58 63.12 1 15 11 2604.1 -23.22 165.13
107.56 4 36 18 3204.14 -19.77 108.66 306.57 63.11 5 29 42 2604.1 -23.21 101.32
72.44 0 7 28 4063.01 -19.78 172.47 306.58 63.12 1 15 11 3463.0 -23.22 165.13
107.56 4 36 18 3204.14 -19.77 108.66 306.57 63.11 5 29 42 2604.1 -23.21 101.32
110.00 6 1 16 2942.88 -26.70 91.89 310.01 67.81 6 50 19 2342.9 -29.46 83.80
110.00 3 41 41 3372.27 -13.14 117.77 302.68 58.16 4 37 53 2772.3 -17.25 111.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4563 TRA 4.3099 TC3-2.6415 BAU 1.0500
RDE .4418 RRA .2382 RC3 -.0324 FAU .02107
FDE .4482 FRA 1.9609 FC3 -.6136 B9P 20765
BDE 1.5219 BRA 4.3184 BC3 2.6417 F9P -787

SGT 6305.2 SGR 552.9 SCS 223.6
RRT .6946 RRF .6811 RTF .9742
SGB 6329.4 R23 .0024 R13 .9742
SGI 6316.9 SGI 397.0 THA 3.50

ST 2229.3 SR 472.7 SS 625.6
CRT .8116 CRS -.6883 CST -.9822
LSA 2344.1 MSA 299.5 SSA 13.4
EL1 2262.6 EL2 272.1 ALF 9.91

LAUNCH DATE JAN 16 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 595.067

RL 147.17 LAL .00 LOL 115.69 VL 26.955 GAL 9.35 AZL 87.97 HCA 285.47 SMA 123.23 ECC .25125 INC 2.0332 V1 30.273
RP 108.20 LAP -1.98 LOP 41.17 VP 37.095 GAP 12.79 AZP 89.46 TAL 149.08 TAP 74.55 RCA 92.27 APO 154.19 V2 35.023
RC 170.474 GL 9.30 GP -9.37 ZAL 41.79 ZAP 167.96 ETS 312.35 ZAE 126.42 ETE 186.61 ZAC 143.80 ETC 171.75 CLP-172.41

PLANETOCENTRIC CONIC

C3 32.896 VHL 5.718 DLA 32.01 RAL 72.24 RAD 6568.3 VEL 12.412 PTH 2.24 VHP 8.638 DPA 7.00 RAP 49.78 ECC 1.5381
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
74.41 0 28 16 4046.57 -18.54 170.56 309.81 63.43 1 35 43 3446.6 -21.96 163.26
105.59 4 31 8 3268.36 -18.53 112.92 309.80 63.42 5 25 37 2668.4 -21.95 105.62
74.41 0 28 16 4046.57 -18.54 170.56 309.81 63.43 1 35 43 3446.6 -21.96 163.26
105.59 4 31 8 3268.36 -18.53 112.92 309.80 63.42 5 25 37 2668.4 -21.95 105.62
110.00 6 31 6 2897.06 -27.84 88.82 314.22 69.31 7 19 23 2297.1 -30.39 80.56
110.00 3 27 29 3465.87 -9.72 122.87 304.81 57.07 4 25 15 2865.9 -13.99 116.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3681 TRA 4.6828 TC3-2.3883 BAU 1.0440
RDE .4509 RRA .2547 RC3 -.0286 FAU .01875
FDE .3907 FRA 1.9949 FC3 -.4964 B9P 20886
BDE 1.4405 BRA 4.6898 BC3 2.3885 F9P -748

SGT 6321.5 SGR 543.8 SCS 212.2
RRT .6905 RRF .6774 RTF .9746
SGB 6344.8 R23 .0025 R13 .9746
SGI 6332.6 SGI 392.7 THA 3.41

ST 2154.5 SR 460.8 SS 603.4
CRT .7750 CRS -.6463 CST -.9829
LSA 2263.1 MSA 310.9 SSA 13.1
EL1 2184.4 EL2 287.2 ALF 9.58

LAUNCH DATE JAN 16 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 600.298

RL 147.17 LAL .00 LOL 115.69 VL 26.927 GAL 10.07 AZL 88.10 HCA 288.67 SMA 123.05 ECC .26040 INC 1.9016 V1 30.273
RP 108.16 LAP -1.80 LOP 44.37 VP 37.087 GAP 13.43 AZP 89.39 TAL 147.89 TAP 76.57 RCA 91.01 APO 155.09 V2 35.036
RC 172.518 GL 8.42 GP -9.10 ZAL 40.16 ZAP 168.83 ETS 308.89 ZAE 126.24 ETE 186.41 ZAC 145.80 ETC 171.17 CLP-173.50

PLANETOCENTRIC CONIC

C3 36.125 VHL 6.010 DLA 31.10 RAL 74.09 RAD 6568.4 VEL 12.550 PTH 2.27 VHP 9.023 DPA 7.90 RAP 51.70 ECC 1.5945
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.56 0 50 28 4025.21 -17.30 168.29 313.02 63.74 1 57 33 3425.2 -20.69 161.04
103.44 4 23 41 3340.06 -17.29 117.70 313.01 63.73 5 19 21 2740.1 -20.68 110.45
76.56 0 50 28 4025.21 -17.30 168.29 313.02 63.74 1 57 33 3425.2 -20.69 161.04
103.44 4 23 41 3340.06 -17.29 117.70 313.01 63.73 5 19 21 2740.1 -20.68 110.45
110.00 6 55 41 2866.61 -28.55 86.74 318.18 70.35 7 43 28 2266.6 -30.96 78.36
110.00 3 17 38 3546.66 -6.70 127.17 306.79 58.40 4 16 45 2946.7 -11.07 120.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2826 TRA 5.0843 TC3-2.1568 BAU 1.0320
RDE .4607 RRA .2725 RC3 -.0247 FAU .01643
FDE .3406 FRA 2.0324 FC3 -.3937 B9P 20899
BDE 1.3628 BRA 5.0916 BC3 2.1568 F9P -708

SGT 6335.1 SGR 534.8 SCS 201.7
RRT .6881 RRF .6756 RTF .9751
SGB 6357.6 R23 .0026 R13 .9752
SGI 6345.8 SGI 387.2 THA 3.34

ST 2093.9 SR 448.5 SS 586.8
CRT .7364 CRS -.6055 CST -.9841
LSA 2197.1 MSA 320.0 SSA 12.7
EL1 2120.4 EL2 299.6 ALF 9.15

LAUNCH DATE JAN 16 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 605.415

RL 147.17 LAL .00 LOL 115.69 VL 26.898 GAL 10.85 AZL 88.24 HCA 291.88 SMA 122.87 ECC .27041 INC 1.7648 V1 30.273  
 RP 108.12 LAP -1.84 LOP 47.58 VP 37.079 GAP 14.13 AZP 89.34 TAL 146.74 TAP 78.62 RCA 89.65 APO 156.10 V2 35.050  
 RC 174.540 GL 7.38 GP -8.85 ZAL 36.62 ZAP 189.84 ETS 304.78 ZAE 126.05 ETE 186.23 ZAC 147.79 ETC 170.49 CLP-174.59

PLANETOCENTRIC CONIC

C3 40.103 VHL 6.333 DLA 30.22 RAL 75.82 RAD 6568.5 VEL 12.707 PTH 2.31 VHP 9.439 DPA 8.76 RAP 53.65 ECC 1.6600  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.98 1 15 0 3995.76 -16.07 165.45 316.20 64.06 2 21 36 3395.8 -19.43 158.24  
 101.02 4 12 58 3422.30 -16.05 123.23 316.20 64.05 5 10 0 2822.3 -19.41 116.02  
 78.98 1 15 0 3995.76 -16.07 165.45 316.20 64.06 2 21 36 3395.8 -19.43 158.24  
 101.02 4 12 58 3422.30 -16.05 123.23 316.20 64.05 5 10 0 2822.3 -19.41 116.02  
 110.00 7 17 1 2845.52 -29.03 85.28 321.98 71.10 8 4 27 2245.5 -31.33 76.83  
 110.00 3 10 8 3620.54 -3.90 131.06 309.11 56.01 4 10 28 3020.5 -8.34 124.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1908 TRA 5.5082 TC3-1.8989 BAU 1.0181 SGT 6341.0 SGR 524.0 SCS 191.7 ST 2039.5 SR 435.2 SS 572.8  
 RDE .4703 RRA .2910 RC3 -.0213 FAU .01432 RRT .6863 RRF .6742 RTF .9759 CRT .6947 CRS -.5635 CST -.9854  
 FDE .2930 FRA 2.0703 FC3 -.3091 B8P 21002 SGB 6362.8 R23 .0027 R13 .9759 LSA 2137.8 MSA 327.0 SSA 12.3  
 BDE 1.2803 BRA 5.5159 BC3 1.8990 F8P -673 SGI 6351.2 SGI 360.5 THA 3.26 EL1 2062.3 EL2 309.6 ALF 8.63

LAUNCH DATE JAN 16 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 610.397

RL 147.17 LAL .00 LOL 115.89 VL 26.870 GAL 11.69 AZL 88.38 HCA 295.09 SMA 122.70 ECC .28138 INC 1.6217 V1 30.273  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.071 GAP 14.88 AZP 89.31 TAL 145.63 TAP 80.71 RCA 88.18 APO 157.23 V2 35.063  
 RC 176.542 GL 6.39 GP -8.62 ZAL 37.16 ZAP 170.36 ETS 299.93 ZAE 125.85 ETE 186.07 ZAC 149.77 ETC 169.71 CLP-175.68

PLANETOCENTRIC CONIC

C3 44.730 VHL 6.688 DLA 29.36 RAL 77.44 RAD 6568.7 VEL 12.888 PTH 2.35 VHP 9.891 DPA 9.58 RAP 55.61 ECC 1.7361  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.91 1 43 59 3951.35 -14.84 161.54 319.37 64.37 2 49 50 3351.4 -18.17 154.37  
 98.09 3 56 56 3521.76 -14.82 130.00 319.36 64.37 4 55 38 2921.8 -18.15 122.83  
 100.00 4 59 14 3322.17 -19.41 117.39 321.54 66.81 5 54 37 2722.2 -22.38 109.85  
 100.00 3 24 21 3626.17 -10.35 135.40 317.03 61.80 4 24 47 3026.2 -14.04 128.55  
 110.00 7 36 0 2831.10 -29.34 84.27 325.67 71.62 8 23 11 2231.1 -31.57 75.78  
 110.00 3 4 5 3690.01 -1.25 134.89 311.51 55.84 4 5 35 3090.0 -5.73 128.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0980 TRA 5.9826 TC3-1.6702 BAU .9988 SGT 6342.3 SGR 512.7 SCS 182.4 ST 1995.2 SR 421.4 SS 562.8  
 RDE .4801 RRA .3104 RC3 -.0180 FAU .01227 RRT .6855 RRF .6738 RTF .9768 CRT .6517 CRS -.5229 CST -.9871  
 FDE .2500 FRA 2.1115 FC3 -.2374 B8P 21088 SGB 6363.0 R23 .0025 R13 .9768 LSA 2089.3 MSA 331.3 SSA 11.9  
 BDE 1.1984 BRA 5.9707 BC3 1.6703 F8P -641 SGI 6352.1 SGI 372.7 THA 3.18 EL1 2014.5 EL2 316.5 ALF 8.04

LAUNCH DATE JAN 16 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 615.217

RL 147.17 LAL .00 LOL 115.69 VL 26.842 GAL 12.60 AZL 88.53 HCA 298.30 SMA 122.53 ECC .29345 INC 1.4707 V1 30.273  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.063 GAP 15.69 AZP 89.30 TAL 144.56 TAP 82.86 RCA 86.58 APO 158.49 V2 35.076  
 RC 178.523 GL 5.45 GP -8.41 ZAL 35.79 ZAP 171.00 ETS 294.21 ZAE 125.62 ETE 185.92 ZAC 151.74 ETC 168.80 CLP-176.79

PLANETOCENTRIC CONIC

C3 50.133 VHL 7.080 DLA 28.52 RAL 78.95 RAD 6568.8 VEL 13.096 PTH 2.39 VHP 10.383 DPA 10.36 RAP 57.58 ECC 1.8251  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 86.46 2 26 53 3860.99 -13.62 154.29 322.50 64.70 3 31 14 3261.0 -16.91 147.15  
 93.54 3 26 4 3669.23 -13.60 140.25 322.49 64.69 4 27 13 3069.2 -16.90 133.11  
 100.00 5 33 46 3258.04 -21.08 113.35 325.89 68.30 6 28 4 2658.0 -23.84 105.65  
 100.00 3 1 51 3747.42 -6.37 142.21 318.71 60.73 4 4 19 3147.4 -10.23 135.54  
 110.00 7 53 6 2821.87 -29.54 83.63 329.27 71.95 8 40 8 2221.9 -31.71 75.10  
 110.00 2 59 1 3756.35 1.28 138.15 313.98 55.84 4 1 37 3156.3 -3.21 131.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0045 TRA 6.4506 TC3-1.4519 BAU .9731 SGT 6338.9 SGR 500.4 SCS 173.6 ST 1959.8 SR 406.9 SS 556.2  
 RDE .4900 RRA .3307 RC3 -.0147 FAU .01026 RRT .6856 RRF .6743 RTF .9779 CRT .6084 CRS -.4845 CST -.9888  
 FDE .2112 FRA 2.1567 FC3 -.1772 B8P 21153 SGB 6358.6 R23 .0023 R13 .9779 LSA 2050.6 MSA 332.7 SSA 11.5  
 BDE 1.1176 BRA 6.4591 BC3 1.4520 F8P -610 SGI 6348.2 SGI 365.8 THA 3.11 EL1 1975.8 EL2 320.3 ALF 7.39

LAUNCH DATE JAN 16 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC

DISTANCE 619.843

RL 147.17 LAL .00 LOL 115.69 VL 26.815 GAL 13.60 AZL 88.69 HCA 301.51 SMA 122.37 ECC .30676 INC 1.3102 V1 30.273  
 RP 108.00 LAP -1.12 LOP 57.21 VP 37.056 GAP 16.58 AZP 89.31 TAL 143.55 TAP 85.06 RCA 84.83 APO 159.91 V2 35.089  
 RC 180.483 GL 4.55 GP -8.22 ZAL 34.52 ZAP 171.52 ETS 287.54 ZAE 125.57 ETE 185.77 ZAC 153.69 ETC 167.74 CLP-177.92

PLANETOCENTRIC CONIC

C3 56.470 VHL 7.515 DLA 27.71 RAL 80.35 RAD 6569.0 VEL 13.335 PTH 2.44 VHP 10.922 DPA 11.10 RAP 59.56 ECC 1.9293  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 40 3626.56 -17.35 138.86 327.85 67.27 4 54 7 3026.6 -20.28 131.41  
 90.00 2 10 24 3962.60 -7.55 158.66 323.16 62.63 3 16 27 3362.6 -11.16 151.84  
 100.00 5 59 8 3222.11 -21.96 111.05 329.80 69.20 6 52 50 2622.1 -24.60 103.25  
 100.00 2 47 38 3842.28 -3.19 147.45 320.78 60.26 3 51 40 3242.3 -7.12 140.87  
 110.00 8 8 38 2816.85 -29.64 83.28 332.79 72.14 8 55 34 2216.9 -31.79 74.73  
 110.00 2 54 37 3820.30 3.72 141.49 316.49 56.00 3 58 18 3220.3 -7.77 135.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9100 TRA 6.9788 TC3-1.2451 BAU .9400 SGT 6331.2 SGR 487.1 SCS 165.4 ST 1932.3 SR 391.8 SS 552.8  
 RDE .4999 RRA .3517 RC3 -.0114 FAU .00829 RRT .6862 RRF .6755 RTF .9791 CRT .5656 CRS -.4488 CST -.9906  
 FDE .1782 FRA 2.2069 FC3 -.1272 B8P 21188 SGB 6349.9 R23 .0021 R13 .9791 LSA 2020.6 MSA 331.3 SSA 11.1  
 BDE 1.0583 BRA 6.9857 BC3 1.2452 F8P -580 SGI 6340.0 SGI 355.8 THA 3.03 EL1 1945.3 EL2 320.9 ALF 6.73

LAUNCH DATE JAN 17 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 28 1969

HELIOCENTRIC CONIC

DISTANCE 157.852

RL 147.18 LAL .00 LOL 116.71 VL 22.425 GAL 4.85 AZL 86.30 HCA 63.15 SMA 102.04 ECC .44878 INC 3.7012 V1 30.271
RP 107.72 LAP 3.30 LOP 179.81 VP 34.109 GAP -26.49 AZP 88.33 TAL 173.99 TAP 237.14 RCA 56.25 APO 147.84 V2 35.179
RC 45.244 GL 10.02 GP 4.66 ZAL 77.65 ZAP 17.52 ETS 196.67 ZAE 169.64 ETE 216.74 ZAC 109.33 ETC 164.86 CLP 16.91

PLANETOCENTRIC CONIC

C3 68.793 VHL 8.294 DLA 24.04 RAL 33.38 RAD 6569.3 VEL 13.789 PTH 2.52 VHP 16.140 DPA 8.12 RAP 14.63 ECC 2.1322
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 6 48 3389.90 -22.89 123.72 285.91 72.85 3 3 18 2789.9 -25.02 115.70
90.00 21 30 48 4294.70 3.09 177.27 275.03 61.84 22 42 23 3694.7 -7.70 170.64
100.00 3 48 3 3063.48 -25.41 100.54 286.74 73.70 4 39 6 2463.5 -27.40 92.30
100.00 22 32 15 4096.36 5.40 161.42 273.76 60.56 23 40 31 3496.4 1.44 154.87
110.00 5 35 33 2727.13 -31.34 76.84 288.59 75.60 6 21 0 2127.1 -33.00 68.01
110.00 23 1 13 4005.47 10.67 151.33 270.56 57.33 24 7 59 3405.5 6.29 144.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3974 TRA -1.0164 TC3 -.0402 BAU .0472 SGT 819.1 SGR 433.4 SCS 46.9 ST 358.6 SR 417.1 SS 308.3
RDE -.8018 RRA .1459 RC3 -.0319 FAU .01761 RRT .0925 RRF -.0973 RTF -.6684 CRT .7122 CRS .8388 CST .9776
FDE .2814 FRA .4614 FC3 -.2216 BSP 2273 SGB 926.7 R23 -.0119 R13 -.6692 LSA 592.1 HSA 216.2 SSA 14.0
BDE .7212 BRA 1.0268 BC3 .0513 FSP -103 SGI 820.5 SGT 430.8 THA 3.87 EL1 510.0 EL2 205.8 ALF 51.01

LAUNCH DATE JAN 17 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 164.349

RL 147.18 LAL .00 LOL 116.71 VL 22.885 GAL 4.57 AZL 86.45 HCA 66.38 SMA 103.71 ECC .42539 INC 3.5498 V1 30.271
RP 107.75 LAP 3.25 LOP 183.03 VP 34.403 GAP -25.08 AZP 88.58 TAL 173.77 TAP 240.15 RCA 59.59 APO 147.82 V2 35.169
RC 44.357 GL 10.40 GP 4.86 ZAL 77.44 ZAP 16.02 ETS 199.02 ZAE 171.63 ETE 225.43 ZAC 110.80 ETC 164.57 CLP 15.28

PLANETOCENTRIC CONIC

C3 61.169 VHL 7.821 DLA 24.49 RAL 33.48 RAD 6569.1 VEL 13.510 PTH 2.47 VHP 15.368 DPA 8.97 RAP 16.02 ECC 2.0067
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 59 57 3386.86 -22.95 123.52 283.98 72.94 2 56 24 2786.9 -25.07 115.49
90.00 21 38 25 4241.35 1.37 174.29 273.74 61.71 22 49 6 3641.3 -2.42 167.66
100.00 3 42 26 3056.41 -25.34 100.05 284.83 73.92 4 33 23 2456.4 -27.50 91.80
100.00 22 38 36 4047.02 3.74 158.89 272.43 60.32 23 46 3 3447.0 -.23 152.17
110.00 5 31 44 2714.48 -31.55 75.91 286.66 76.11 6 18 58 2114.5 -33.14 67.03
110.00 23 5 48 3981.72 9.05 148.97 269.17 56.90 24 11 50 3361.7 4.63 142.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3984 TRA -.9989 TC3 -.0276 BAU .0353 SGT 856.5 SGR 436.8 SCS 51.6 ST 378.7 SR 421.5 SS 324.4
RDE -.9737 RRA .1326 RC3 -.0333 FAU .01832 RRT .1045 RRF -.1104 RTF -.6884 CRT .7202 CRS .8439 CST .9781
FDE .2842 FRA .4736 FC3 -.2593 BSP 2430 SGB 981.5 R23 -.0137 R13 -.6894 LSA 614.7 HSA 219.5 SSA 14.2
BDE .6985 BRA 1.0076 BC3 .0432 FSP -116 SGI 858.2 SGT 433.5 THA 4.10 EL1 526.1 EL2 210.5 ALF 49.24

LAUNCH DATE JAN 17 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 170.892

RL 147.18 LAL .00 LOL 116.71 VL 23.311 GAL 4.28 AZL 86.59 HCA 69.81 SMA 105.33 ECC .40323 INC 3.4058 V1 30.271
RP 107.79 LAP 3.19 LOP 186.29 VP 34.677 GAP -23.74 AZP 88.81 TAL 173.61 TAP 243.21 RCA 62.85 APO 147.80 V2 35.158
RC 43.825 GL 10.79 GP 5.09 ZAL 77.33 ZAP 14.56 ETS 201.90 ZAE 173.44 ETE 239.65 ZAC 112.27 ETC 164.24 CLP 13.67

PLANETOCENTRIC CONIC

C3 54.449 VHL 7.379 DLA 24.89 RAL 33.46 RAD 6569.0 VEL 13.259 PTH 2.42 VHP 14.628 DPA 9.83 RAP 17.41 ECC 1.8961
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 52 59 3382.19 -23.04 123.21 281.90 73.07 2 49 21 2782.2 -25.14 115.17
90.00 21 45 15 4189.02 -.32 171.37 272.32 61.68 22 55 4 3589.0 -4.10 164.73
100.00 3 36 48 3047.61 -25.71 99.45 282.76 74.20 4 27 34 2447.6 -27.63 91.17
100.00 22 44 10 3998.83 2.12 156.04 270.97 60.18 23 50 49 3398.8 -1.87 149.52
110.00 5 27 48 2700.23 -31.78 74.87 284.56 76.69 6 12 48 2100.2 -33.28 65.96
110.00 23 9 37 3918.97 7.48 148.69 267.67 56.54 24 14 56 3319.0 3.01 140.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4006 TRA -.9809 TC3 -.0112 BAU .0262 SGT 895.6 SGR 439.5 SCS 56.7 ST 400.3 SR 425.5 SS 341.1
RDE -.5466 RRA .1200 RC3 -.0341 FAU .01911 RRT .1184 RRF -.1252 RTF -.7076 CRT .7295 CRS .8493 CST .9788
FDE .3078 FRA .4856 FC3 -.3038 BSP 2587 SGB 997.6 R23 -.0156 R13 -.7086 LSA 638.8 HSA 222.0 SSA 14.5
BDE .6776 BRA .9882 BC3 .0359 FSP -130 SGI 897.5 SGT 435.5 THA 4.35 EL1 543.4 EL2 214.4 ALF 47.40

LAUNCH DATE JAN 17 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 177.474

RL 147.18 LAL .00 LOL 116.71 VL 23.705 GAL 3.99 AZL 86.73 HCA 72.83 SMA 106.90 ECC .38250 INC 3.2678 V1 30.271
RP 107.82 LAP 3.12 LOP 189.52 VP 34.932 GAP -22.47 AZP 89.03 TAL 173.50 TAP 246.33 RCA 66.03 APO 147.76 V2 35.147
RC 43.055 GL 11.16 GP 5.33 ZAL 77.33 ZAP 13.16 ETS 205.49 ZAE 174.68 ETE 263.02 ZAC 113.72 ETC 163.86 CLP 12.05

PLANETOCENTRIC CONIC

C3 48.525 VHL 6.966 DLA 25.24 RAL 33.34 RAD 6568.8 VEL 13.034 PTH 2.38 VHP 13.919 DPA 10.71 RAP 18.80 ECC 1.7986
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 46 3 3375.63 -23.17 122.77 279.70 73.25 2 42 19 2775.6 -25.24 114.72
90.00 21 51 11 4138.32 -1.95 168.54 270.77 61.74 23 0 10 3538.3 -5.71 161.88
100.00 3 31 7 3036.92 -25.91 98.72 280.57 74.54 4 21 44 2436.9 -27.78 90.42
100.00 22 48 49 3952.27 .54 153.49 269.38 60.11 23 54 41 3352.3 -3.44 146.96
110.00 5 23 48 2684.36 -32.02 73.69 282.32 77.35 6 8 32 2084.4 -33.43 64.74
110.00 23 12 37 3877.59 5.90 144.51 266.05 56.27 24 17 15 3277.6 1.43 138.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4050 TRA -.9637 TC3 .0085 BAU .0229 SGT 937.6 SGR 441.8 SCS 62.4 ST 424.4 SR 429.1 SS 358.8
RDE -.5204 RRA .1080 RC3 -.0343 FAU .01998 RRT .1351 RRF -.1422 RTF -.7248 CRT .7406 CRS .8555 CST .9799
FDE .3223 FRA .4977 FC3 -.3564 BSP 2704 SGB 1036.5 R23 -.0173 R13 -.7260 LSA 665.4 HSA 223.6 SSA 14.8
BDE .6595 BRA .9697 BC3 .0353 FSP -145 SGI 940.0 SGT 436.8 THA 4.65 EL1 563.0 EL2 217.3 ALF 45.42



LAUNCH DATE JAN 17 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 184.090

RL 147.18 LAL .00 LOL 116.71 VL 24.070 GAL 3.70 AZL 86.87 HCA 76.06 SMA 108.42 ECC .36257 INC 3.1346 V1 30.271
RP 107.86 LAP 3.04 LOP 192.75 VP 35.169 GAP -21.26 AZP 89.24 TAL 173.45 TAP 249.50 RCA 69.11 APO 147.72 V2 35.135
RC 42.857 GL 11.51 GP 5.61 ZAL 77.45 ZAP 11.82 ETS 209.99 ZAE 174.73 ETE 293.49 ZAC 115.15 ETC 163.44 CLP 10.42

PLANETOCENTRIC CONIC

C3 43.301 VHL 6.580 DLA 25.55 RAL 33.10 RAD 6568.6 VEL 12.832 PTH 2.34 VHP 13.240 DPA 11.61 RAP 20.17 ECC 1.7126
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 20 3366.76 -23.34 122.18 277.39 73.50 2 35 27 2766.8 -25.38 114.10
90.00 21 56 1 4090.01 -3.51 165.84 269.08 61.88 23 4 11 3490.0 -7.24 159.15
100.00 3 25 38 3024.07 -26.14 97.83 278.26 74.95 4 16 2 2424.1 -27.95 89.50
100.00 22 52 25 3907.93 -.97 151.06 267.67 60.12 23 57 33 3307.9 -4.93 144.52
110.00 5 19 50 2666.78 -32.28 72.38 279.94 78.08 6 4 16 2066.8 -33.58 63.39
110.00 23 14 42 3837.99 4.40 142.42 264.33 56.07 24 18 40 3238.0 -.09 136.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4084 TRA -.9442 TC3 .0346 BAU .0278 SGT 979.2 SGR 443.5 SCS 68.7 ST 448.6 SR 432.2 SS 377.1
RDE -.4953 RRA .0968 RC3 -.0334 FAU .02095 RRT .1530 RRF -.1612 RTF -.7421 CRT .7517 CRS .8619 CST .9808
FDE .3381 FRA .5095 FC3 -.4189 BSP 2861 SGB 1075.0 R23 -.0197 R13 -.7434 LSA 692.6 MSA 224.4 SSA 15.1
BDE .6420 BRA .9492 BC3 .0481 FSP -163 SGI 982.2 SGT 436.9 THA 4.94 EL1 583.0 EL2 219.3 ALF 43.59

LAUNCH DATE JAN 17 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 190.736

RL 147.18 LAL .00 LOL 116.71 VL 24.406 GAL 3.41 AZL 86.99 HCA 79.28 SMA 109.88 ECC .34401 INC 3.0052 V1 30.271
RP 107.89 LAP 2.95 LOP 195.97 VP 35.388 GAP -20.10 AZP 89.44 TAL 173.46 TAP 252.73 RCA 72.08 APO 147.68 V2 35.123
RC 42.436 GL 11.85 GP 5.91 ZAL 77.67 ZAP 10.58 ETS 215.73 ZAE 173.48 ETE 318.67 ZAC 116.55 ETC 162.97 CLP 8.80

PLANETOCENTRIC CONIC

C3 38.694 VHL 6.220 DLA 25.79 RAL 32.75 RAD 6568.5 VEL 12.652 PTH 2.30 VHP 12.588 DPA 12.53 RAP 21.53 ECC 1.6366
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 33 3 3355.04 -23.57 121.39 274.98 73.83 2 28 58 2755.0 -25.56 113.29
90.00 21 59 33 4044.96 -4.95 163.31 267.24 62.08 23 6 58 3445.0 -8.64 156.59
100.00 3 20 27 3008.76 -26.40 96.77 275.84 75.45 4 10 36 2408.8 -28.14 88.40
100.00 22 54 49 3866.47 -2.37 148.78 265.82 60.19 23 59 16 3266.5 -6.32 142.22
110.00 5 15 57 2847.40 -32.54 70.93 277.44 78.90 6 0 5 2047.4 -33.73 61.90
110.00 23 15 49 3800.60 2.97 140.46 262.49 55.93 24 19 9 3200.6 -1.52 134.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4121 TRA -.9238 TC3 .0669 BAU .0382 SGT 1021.8 SGR 444.7 SCS 75.7 ST 473.7 SR 435.0 SS 396.0
RDE -.4714 RRA .0858 RC3 -.0313 FAU .02203 RRT .1730 RRF -.1826 RTF -.7585 CRT .7635 CRS .8685 CST .9817
FDE .3345 FRA .5212 FC3 -.4930 BSP 3026 SGB 1114.3 R23 -.0224 R13 -.7600 LSA 721.1 MSA 224.2 SSA 15.4
BDE .6261 BRA .9278 BC3 .0738 FSP -183 SGI 1025.3 SGT 436.5 THA 5.26 EL1 604.3 EL2 220.3 ALF 41.81

LAUNCH DATE JAN 17 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 197.406

RL 147.18 LAL .00 LOL 116.71 VL 24.717 GAL 3.12 AZL 87.12 HCA 82.50 SMA 111.29 ECC .32659 INC 2.8786 V1 30.271
RP 107.93 LAP 2.85 LOP 199.20 VP 35.591 GAP -18.99 AZP 89.62 TAL 173.52 TAP 256.02 RCA 74.94 APO 147.63 V2 35.111
RC 42.394 GL 12.16 GP 6.24 ZAL 78.01 ZAP 9.48 ETS 223.06 ZAE 171.46 ETE 334.35 ZAC 117.92 ETC 162.44 CLP 7.15

PLANETOCENTRIC CONIC

C3 34.834 VHL 5.885 DLA 25.97 RAL 32.30 RAD 6568.4 VEL 12.490 PTH 2.26 VHP 11.963 DPA 13.47 RAP 22.87 ECC 1.5700
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 27 28 3339.80 -23.85 120.37 272.49 74.27 2 23 7 2739.8 -25.78 112.23
90.00 22 1 30 4004.18 -6.24 161.02 265.27 62.32 23 8 14 3404.2 -9.90 154.25
100.00 3 15 46 2990.61 -26.71 95.51 273.32 76.05 4 5 37 2390.6 -28.36 87.10
100.00 22 55 52 3828.60 -3.65 146.70 263.84 60.31 23 59 41 3228.6 -7.58 140.11
110.00 5 12 17 2828.09 -32.81 69.33 274.82 79.82 5 56 3 2028.1 -33.87 60.25
110.00 23 15 51 3763.89 1.65 138.65 260.54 55.85 24 18 37 3163.9 -2.84 132.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4159 TRA -.9022 TC3 .1059 BAU .0506 SGT 1064.9 SGR 445.5 SCS 83.4 ST 499.9 SR 437.5 SS 415.4
RDE -.4486 RRA .0755 RC3 -.0274 FAU .02324 RRT .1959 RRF -.2069 RTF -.7740 CRT .7758 CRS .8754 CST .9828
FDE .3720 FRA .5328 FC3 -.5809 BSP 3195 SGB 1154.4 R23 -.0254 R13 -.7757 LSA 750.9 MSA 223.2 SSA 15.7
BDE .6118 BRA .9054 BC3 .1093 FSP -204 SGI 1069.2 SGT 435.2 THA 5.62 EL1 626.7 EL2 220.2 ALF 40.11

LAUNCH DATE JAN 17 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 204.095

RL 147.18 LAL .00 LOL 116.71 VL 25.004 GAL 2.84 AZL 87.25 HCA 85.72 SMA 112.63 ECC .31029 INC 2.7540 V1 30.271
RP 107.97 LAP 2.75 LOP 202.42 VP 35.778 GAP -17.93 AZP 89.79 TAL 173.65 TAP 259.37 RCA 77.68 APO 147.58 V2 35.099
RC 42.534 GL 12.43 GP 6.61 ZAL 78.46 ZAP 8.59 ETS 232.33 ZAE 169.10 ETE 343.95 ZAC 119.26 ETC 161.86 CLP 5.50

PLANETOCENTRIC CONIC

C3 31.056 VHL 5.573 DLA 26.08 RAL 31.74 RAD 6568.2 VEL 12.346 PTH 2.23 VHP 11.364 DPA 14.43 RAP 24.18 ECC 1.5111
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 22 52 3320.28 -24.21 119.05 269.93 74.84 2 18 12 2720.3 -26.05 110.86
90.00 22 1 37 3968.75 -7.36 159.01 263.14 62.58 23 7 46 3368.8 -10.97 152.20
100.00 3 11 46 2969.20 -27.05 94.01 270.73 76.76 4 1 15 2369.2 -28.60 85.55
100.00 22 55 24 3795.06 -4.78 144.85 261.74 60.46 23 58 39 3195.1 -8.68 138.23
110.00 5 8 54 2802.70 -33.08 67.56 272.11 80.83 5 52 17 2002.7 -33.99 58.44
110.00 23 14 45 3734.33 .44 137.00 258.49 55.82 24 17 0 3134.3 -4.05 130.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4194 TRA -.8798 TC3 .1533 BAU .0643 SGT 1108.8 SGR 446.2 SCS 92.0 ST 526.5 SR 439.7 SS 435.3
RDE -.4271 RRA .0858 RC3 -.0212 FAU .02439 RRT .2213 RRF -.2344 RTF -.7888 CRT .7884 CRS .8824 CST .9838
FDE .3904 FRA .5442 FC3 -.6856 BSP 3366 SGB 1195.2 R23 -.0291 R13 -.7907 LSA 781.6 MSA 221.3 SSA 16.0
BDE .5986 BRA .8823 BC3 .1548 FSP -229 SGI 1114.0 SGT 433.1 THA 6.00 EL1 650.1 EL2 219.1 ALF 38.53

LAUNCH DATE JAN 17 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC  
 RL 147.18 LAL .00 LOL 116.71 VL 25.268 GAL 2.56 AZL 87.37 HCA 88.93 SMA 113.92 ECC .29506 INC 2.6304 V1 30.271  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.951 GAP -16.91 AZP 89.95 TAL 173.85 TAP 262.78 RCA 80.31 APO 147.53 V2 35.086  
 RC 42.853 GL 12.67 GP 7.01 ZAL 79.01 ZAP 7.98 ETS 243.65 ZAE 166.63 ETE 350.29 ZAC 120.54 ETC 161.22 CLP 3.82

DISTANCE 210.799

PLANETOCENTRIC CONIC  
 C3 27.904 VHL 5.282 DLA 26.11 RAL 31.08 RAD 6568.1 VEL 12.218 PTH 2.20 VHP 10.790 DPA 15.41 RAP 25.46 ECC 1.4592  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 34 3295.76 -24.63 117.38 267.33 75.57 2 14 30 2695.0 -26.38 109.14  
 90.00 21 59 39 3939.70 -8.26 157.36 260.88 62.82 23 5 19 3339.7 -11.84 150.51  
 100.00 3 8 38 2944.13 -27.43 92.24 266.07 77.62 3 5 42 2344.1 -28.86 85.73  
 100.00 22 53 16 3766.56 -5.73 143.27 259.50 60.61 23 56 3 3166.6 -9.61 136.62  
 110.00 5 5 57 2577.06 -33.34 65.60 269.31 81.96 5 48 54 1977.1 -34.09 56.44  
 110.00 23 12 27 3706.39 -.63 135.55 256.34 55.82 24 14 13 3106.4 -5.11 129.33

DIFFERENTIAL CORRECTIONS  
 TDE -.4292 TRA -.8589 TC3 .2086 BAU .0779  
 RDE -.4069 RRA .0564 RC3 -.0122 FAU .02610  
 FDE .4099 FRA .5560 FC3 -.8097 BSP 3542  
 BDE .5871 BRA .8587 BC3 .2089 FSP -257

MID-COURSE EXECUTION ACCURACY  
 SGT 1153.5 SGR 446.8 SG3 101.5  
 RRT .2507 RRF -.2655 RTF -.8026  
 SGB 1237.0 R23 -.0329 R13 -.8046  
 SGI 1159.8 SGT 430.2 THA 6.43

ORBIT DETERMINATION ACCURACY  
 ST 554.2 SR 441.8 SS 455.7  
 CRT .8014 CRS .8895 CST .9849  
 LSA 813.6 MSA 218.6 SSA 16.4  
 EL1 674.7 EL2 217.1 ALF 37.04

LAUNCH DATE JAN 17 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC  
 RL 147.18 LAL .00 LOL 116.71 VL 25.512 GAL 2.30 AZL 87.49 HCA 92.14 SMA 115.14 ECC .28088 INC 2.5073 V1 30.271  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.110 GAP -15.94 AZP 90.09 TAL 174.10 TAP 266.24 RCA 82.80 APO 147.48 V2 35.073  
 RC 43.347 GL 12.85 GP 7.47 ZAL 79.67 ZAP 7.78 ETS 256.51 ZAE 164.14 ETE 354.85 ZAC 121.77 ETC 160.51 CLP 2.12

DISTANCE 217.514

PLANETOCENTRIC CONIC  
 C3 25.129 VHL 5.013 DLA 26.05 RAL 30.33 RAD 6568.0 VEL 12.104 PTH 2.17 VHP 10.240 DPA 16.42 RAP 26.71 ECC 1.4136  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 17 47 3265.66 -25.13 115.31 264.69 76.49 2 12 13 2665.7 -26.74 107.01  
 90.00 21 55 26 3917.85 -8.94 158.11 258.48 63.02 23 0 44 3317.9 -12.49 149.23  
 100.00 3 6 33 2915.03 -27.83 90.18 265.36 78.64 3 55 8 2315.0 -29.12 81.61  
 100.00 22 49 21 3743.72 -6.50 142.00 257.16 60.76 23 51 45 3143.7 -10.34 135.33  
 110.00 5 3 32 2548.99 -33.58 63.45 266.43 83.22 5 46 1 1949.0 -34.16 54.25  
 110.00 23 8 52 3682.52 -1.54 134.30 254.09 55.85 24 10 14 3082.5 -6.01 128.07

DIFFERENTIAL CORRECTIONS  
 TDE -.4282 TRA -.8333 TC3 .2735 BAU .0919  
 RDE -.3880 RRA .0475 RC3 .0003 FAU .02778  
 FDE .4302 FRA .5679 FC3 -.9571 BSP 3708  
 BDE .5764 BRA .8347 BC3 .2735 FSP -288

MID-COURSE EXECUTION ACCURACY  
 SGT 1198.5 SGR 447.6 SG3 112.1  
 RRT .2835 RRF -.3007 RTF -.8156  
 SGB 1279.4 R23 -.0375 R13 -.8179  
 SGI 1206.2 SGT 426.5 THA 6.91

ORBIT DETERMINATION ACCURACY  
 ST 581.8 SR 443.9 SS 476.1  
 CRT .8142 CRS .8965 CST .9860  
 LSA 845.9 MSA 215.3 SSA 16.8  
 EL1 699.7 EL2 214.3 ALF 35.70

LAUNCH DATE JAN 17 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC  
 RL 147.18 LAL .00 LOL 116.71 VL 25.736 GAL 2.04 AZL 87.82 HCA 95.35 SMA 116.30 ECC .26769 INC 2.3837 V1 30.271  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.257 GAP -15.00 AZP 90.22 TAL 174.41 TAP 269.76 RCA 85.17 APO 147.43 V2 35.060  
 RC 44.011 GL 12.98 GP 7.97 ZAL 80.43 ZAP 7.98 ETS 269.69 ZAE 161.72 ETE 358.36 ZAC 122.94 ETC 159.73 CLP .38

DISTANCE 224.235

PLANETOCENTRIC CONIC  
 C3 22.686 VHL 4.763 DLA 25.90 RAL 29.49 RAD 6567.9 VEL 12.003 PTH 2.14 VHP 9.714 DPA 17.46 RAP 27.91 ECC 1.3734  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 17 41 3229.73 -25.67 112.82 262.03 77.63 2 11 31 2629.7 -27.12 104.45  
 90.00 21 48 53 3903.73 -9.38 155.30 255.97 63.16 22 53 56 3303.7 -12.91 148.40  
 100.00 3 5 39 2881.65 -28.26 87.79 262.61 79.82 3 53 41 2281.6 -29.37 79.16  
 100.00 22 43 36 3727.04 -7.05 141.07 254.72 60.88 23 45 43 3127.0 -10.88 134.38  
 110.00 5 1 46 2518.32 -33.81 61.08 263.49 84.60 5 43 45 1918.3 -34.18 51.86  
 110.00 23 3 58 3663.13 -2.28 133.29 251.77 55.88 24 5 1 3063.1 -6.74 127.05

DIFFERENTIAL CORRECTIONS  
 TDE -.4281 TRA -.8101 TC3 .3444 BAU .1046  
 RDE -.3704 RRA .0389 RC3 .0172 FAU .02966  
 FDE .4510 FRA .5801 FC3 -1.1317 BSP 3872  
 BDE .5681 BRA .8110 BC3 .3448 FSP -323

MID-COURSE EXECUTION ACCURACY  
 SGT 1243.5 SGR 448.9 SG3 124.0  
 RRT .3198 RRF -.3401 RTF -.8259  
 SGB 1322.1 R23 -.0438 R13 -.8286  
 SGI 1252.9 SGT 422.2 THA 7.43

ORBIT DETERMINATION ACCURACY  
 ST 609.0 SR 445.9 SS 496.2  
 CRT .8264 CRS .9034 CST .9869  
 LSA 877.9 MSA 211.6 SSA 17.2  
 EL1 724.7 EL2 211.0 ALF 34.51

LAUNCH DATE JAN 17 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC  
 RL 147.18 LAL .00 LOL 116.71 VL 25.942 GAL 1.79 AZL 87.74 HCA 98.56 SMA 117.40 ECC .25547 INC 2.2588 V1 30.271  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.390 GAP -14.11 AZP 90.34 TAL 174.77 TAP 273.33 RCA 87.41 APO 147.39 V2 35.047  
 RC 44.838 GL 13.03 GP 8.53 ZAL 81.29 ZAP 8.65 ETS 281.78 ZAE 159.39 ETE 359.59 ZAC 124.02 ETC 158.87 CLP -1.39

DISTANCE 230.980

PLANETOCENTRIC CONIC  
 C3 20.539 VHL 4.532 DLA 25.65 RAL 28.59 RAD 6567.8 VEL 11.913 PTH 2.12 VHP 9.210 DPA 18.54 RAP 29.05 ECC 1.3380  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 17 3186.02 -26.25 109.90 259.34 78.98 2 12 25 2588.0 -27.51 101.48  
 90.00 21 40 2 3897.46 -9.57 154.94 255.36 63.22 22 45 0 3297.5 -13.09 148.03  
 100.00 3 6 2 2843.87 -28.68 85.06 259.82 81.20 3 53 26 2243.9 -29.60 76.38  
 100.00 22 35 58 3716.85 -7.39 140.50 252.20 60.95 23 37 55 3116.8 -11.20 133.80  
 110.00 5 0 46 2484.90 -33.99 58.49 260.51 86.12 5 42 11 1884.9 -34.15 49.24  
 110.00 22 57 44 3648.58 -2.84 132.53 249.39 55.92 23 58 32 3048.6 -7.29 126.27

DIFFERENTIAL CORRECTIONS  
 TDE -.4286 TRA -.7848 TC3 .4329 BAU .1194  
 RDE -.3542 RRA .0305 RC3 .0394 FAU .03174  
 FDE .4728 FRA .5929 FC3 -1.3378 BSP 4051  
 BDE .5588 BRA .7853 BC3 .4347 FSP -361

MID-COURSE EXECUTION ACCURACY  
 SGT 1288.5 SGR 451.3 SG3 137.1  
 RRT .3615 RRF -.3848 RTF -.8389  
 SGB 1365.2 R23 -.0491 R13 -.8420  
 SGI 1300.0 SGT 417.1 THA 8.05

ORBIT DETERMINATION ACCURACY  
 ST 635.7 SR 448.0 SS 516.2  
 CRT .8392 CRS .9102 CST .9880  
 LSA 910.1 MSA 207.0 SSA 17.6  
 EL1 749.8 EL2 206.6 ALF 33.48

LAUNCH DATE JAN 17 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 237.683

RL 147.18 LAL .00 LOL 116.71 VL 26.131 GAL 1.55 AZL 87.87 HCA 101.77 SMA 118.43 ECC .24417 INC 2.1320 V1 30.271  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.513 GAP -13.25 AZP 90.44 TAL 175.19 TAP 276.95 RCA 89.51 APO 147.33 V2 35.033  
 RC 45.818 GL 13.00 GP 9.17 ZAL 82.23 ZAP 9.70 ETS 291.92 ZAE 157.21 ETE 3.75 ZAC 125.02 ETC 157.93 CLP -3.20

PLANETOCENTRIC CONIC

C3 18.631 VHL 4.319 DLA 25.28 RAL 27.82 RAD 8567.8 VEL 11.834 PTH 2.10 VHP 8.729 DPA 19.66 RAP 30.14 ECC 1.3069  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 22 34 3140.88 -26.82 106.57 256.63 80.56 2 14 55 2540.9 -27.85 98.05  
 90.00 21 29 4 3898.89 -9.53 155.02 250.70 63.21 22 34 3 3298.9 -13.05 148.11  
 100.00 3 7 46 2801.71 -29.08 81.99 257.01 82.77 3 54 28 2201.7 -29.78 73.25  
 100.00 22 26 33 3713.29 -7.50 140.31 249.62 60.98 23 28 27 3113.3 -11.32 133.59  
 110.00 5 0 38 2448.59 -34.12 55.66 257.49 87.79 5 41 27 1848.6 -34.05 46.41  
 110.00 22 50 11 3639.17 -3.20 132.04 246.97 55.95 23 50 50 3039.2 -7.64 125.78

DIFFERENTIAL CORRECTIONS

TDE -.4286 TRA -.7594 TC3 .5283 BAU .1328  
 RDE -.3393 RRA .0223 RC3 .0684 FAU .03408  
 FDE .4941 FRA .6060 FC3-1.5819 BSP 4232  
 BDE .5467 BRA .7588 BC3 .5327 FSP -406

MID-COURSE EXECUTION ACCURACY

SGT 1331.8 SGR 455.2 SCS 151.8  
 RRT .4067 RRF -.4335 RTF -.8492  
 SGB 1407.2 R23 -.0565 R13 -.8528  
 SGI 1345.8 SGT 411.5 THA 8.74

ORBIT DETERMINATION ACCURACY

ST 659.8 SR 450.2 SS 534.6  
 CRT .8507 CRS .9165 CST .9888  
 LSA 939.5 HSA 202.3 SSA 18.0  
 EL1 772.8 EL2 202.0 ALF 32.65

LAUNCH DATE JAN 17 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 244.403

RL 147.18 LAL .00 LOL 116.71 VL 26.305 GAL 1.32 AZL 88.00 HCA 104.97 SMA 119.40 ECC .23375 INC 2.0022 V1 30.271  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.624 GAP -12.42 AZP 90.52 TAL 175.65 TAP 280.82 RCA 91.49 APO 147.31 V2 35.020  
 RC 46.944 GL 12.88 GP 9.87 ZAL 83.25 ZAP 11.09 ETS 299.97 ZAE 155.18 ETE 6.02 ZAC 125.92 ETC 156.91 CLP -5.07

PLANETOCENTRIC CONIC

C3 16.993 VHL 4.122 DLA 24.79 RAL 26.62 RAD 8567.7 VEL 11.763 PTH 2.08 VHP 8.270 DPA 20.82 RAP 31.14 ECC 1.2797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 27 25 3088.82 -27.35 102.85 253.91 82.35 2 18 54 2488.8 -28.12 94.27  
 90.00 21 16 13 3907.82 -9.26 155.52 248.02 63.12 22 21 20 3307.6 -12.79 148.63  
 100.00 3 10 51 2755.32 -29.43 78.58 254.18 84.53 3 56 47 2155.3 -29.88 68.81  
 100.00 22 15 27 3716.36 -7.40 140.48 247.02 60.96 23 17 24 3116.4 -11.22 133.77  
 110.00 5 1 27 2409.32 -34.18 52.59 254.47 89.61 5 41 36 1809.3 -33.86 43.36  
 110.00 22 41 21 3635.12 -3.35 151.83 244.52 55.96 23 41 56 3035.1 -7.80 125.56

DIFFERENTIAL CORRECTIONS

TDE -.4250 TRA -.7327 TC3 .6380 BAU .1469  
 RDE -.3256 RRA .0141 RC3 .1056 FAU .03672  
 FDE .5148 FRA .6198 FC3-1.8709 BSP 4437  
 BDE .5354 BRA .7328 BC3 .6467 FSP -457

MID-COURSE EXECUTION ACCURACY

SGT 1372.8 SGR 461.3 SCS 168.2  
 RRT .4561 RRF -.4871 RTF -.8600  
 SGB 1448.0 R23 -.0844 R13 -.8642  
 SGI 1390.1 SGT 405.4 THA 9.53

ORBIT DETERMINATION ACCURACY

ST 680.0 SR 452.6 SS 551.2  
 CRT .8616 CRS .9224 CST .9897  
 LSA 965.3 HSA 197.2 SSA 18.5  
 EL1 792.7 EL2 197.1 ALF 32.05

LAUNCH DATE JAN 17 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 251.116

RL 147.18 LAL .00 LOL 116.71 VL 26.463 GAL 1.11 AZL 88.13 HCA 108.17 SMA 120.30 ECC .22417 INC 1.8687 V1 30.271  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.726 GAP -11.63 AZP 90.58 TAL 176.16 TAP 284.33 RCA 93.34 APO 147.27 V2 35.007  
 RC 48.205 GL 12.64 GP 10.67 ZAL 84.34 ZAP 12.73 ETS 306.20 ZAE 153.32 ETE 8.18 ZAC 126.69 ETC 155.80 CLP -6.99

PLANETOCENTRIC CONIC

C3 15.537 VHL 3.942 DLA 24.17 RAL 25.59 RAD 8567.6 VEL 11.701 PTH 2.06 VHP 7.832 DPA 22.04 RAP 32.06 ECC 1.2557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 33 42 3032.43 -27.79 98.78 251.18 84.34 2 24 15 2432.4 -28.29 90.15  
 90.00 21 1 44 3923.17 -8.78 156.41 245.34 62.97 22 7 7 3323.2 -12.33 149.54  
 100.00 3 15 17 2704.91 -29.70 74.86 251.36 86.47 4 0 22 2104.9 -29.88 66.06  
 100.00 22 2 50 3725.91 -7.09 141.01 244.43 60.88 23 4 56 3125.9 -10.92 134.31  
 110.00 5 3 17 2367.02 -34.15 49.29 251.45 91.56 5 42 44 1767.0 -33.56 40.10  
 110.00 22 31 19 3636.57 -3.29 151.90 242.09 55.96 23 31 56 3036.6 -7.74 125.64

DIFFERENTIAL CORRECTIONS

TDE -.4199 TRA -.7076 TC3 .7548 BAU .1600  
 RDE -.3130 RRA .0059 RC3 .1527 FAU .03967  
 FDE .5339 FRA .6353 FC3-2.2102 BSP 4603  
 BDE .5237 BRA .7077 BC3 .7701 FSP -513

MID-COURSE EXECUTION ACCURACY

SGT 1413.4 SGR 470.7 SCS 186.6  
 RRT .5092 RRF -.5444 RTF -.8688  
 SGB 1489.8 R23 -.0740 R13 -.8737  
 SGI 1435.3 SGT 399.0 THA 10.44

ORBIT DETERMINATION ACCURACY

ST 698.0 SR 455.0 SS 565.0  
 CRT .8716 CRS .9276 CST .9905  
 LSA 988.1 HSA 192.2 SSA 19.1  
 EL1 810.8 EL2 192.1 ALF 31.58

LAUNCH DATE JAN 17 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 257.820

RL 147.18 LAL .00 LOL 116.71 VL 26.608 GAL .90 AZL 88.27 HCA 111.37 SMA 121.15 ECC .21540 INC 1.7302 V1 30.271  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.818 GAP -10.87 AZP 90.63 TAL 176.70 TAP 288.07 RCA 95.05 APO 147.24 V2 34.994  
 RC 49.990 GL 12.28 GP 11.57 ZAL 85.49 ZAP 14.61 ETS 310.98 ZAE 151.64 ETE 10.30 ZAC 127.33 ETC 154.60 CLP -8.98

PLANETOCENTRIC CONIC

C3 14.280 VHL 3.776 DLA 23.41 RAL 24.56 RAD 8567.6 VEL 11.647 PTH 2.04 VHP 7.416 DPA 23.33 RAP 32.87 ECC 1.2347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 41 20 2972.19 -28.12 94.41 248.47 86.51 2 30 52 2372.2 -28.31 85.75  
 90.00 20 45 54 3945.11 -8.10 157.67 242.72 62.77 21 51 39 3345.1 -11.68 150.82  
 100.00 3 21 2 2650.74 -29.86 70.84 248.55 88.58 4 5 13 2050.7 -29.74 62.04  
 100.00 21 48 53 3741.79 -6.56 141.89 241.89 60.77 22 51 15 3141.8 -10.41 135.22  
 110.00 5 6 13 2321.67 -34.01 45.75 248.46 93.65 5 44 55 1721.7 -33.13 36.63  
 110.00 22 20 12 3643.83 -3.03 132.27 239.70 55.93 23 20 55 3043.6 -7.48 126.01

DIFFERENTIAL CORRECTIONS

TDE -.4130 TRA -.6828 TC3 .8790 BAU .1724  
 RDE -.3016 RRA -.0028 RC3 .2115 FAU .04291  
 FDE .5517 FRA .6526 FC3-2.8050 BSP 4748  
 BDE .5114 BRA .6828 BC3 .9041 FSP -574

MID-COURSE EXECUTION ACCURACY

SGT 1431.9 SGR 484.7 SCS 206.9  
 RRT .5652 RRF -.8048 RTF -.8768  
 SGB 1530.7 R23 -.0849 R13 -.8827  
 SGI 1479.5 SGT 392.4 THA 11.51

ORBIT DETERMINATION ACCURACY

ST 712.6 SR 457.7 SS 576.3  
 CRT .8810 CRS .9323 CST .9913  
 LSA 1007.0 HSA 186.9 SSA 19.7  
 EL1 826.1 EL2 186.8 ALF 31.28

LAUNCH DATE JAN 17 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.741 GAL .71 AZL 88.41 HCA 114.56 SMA 121.93 ECC .20738 INC 1.5857 V1 30.271  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.901 GAP -10.13 AZP 90.66 TAL 177.27 TAP 291.83 RCA 96.65 APO 147.22 V2 34.980  
 RC 51.091 GL 11.78 GP 12.58 ZAL 86.68 ZAP 16.69 ETS 314.86 ZAE 150.14 ETE 12.47 ZAC 127.81 ETC 153.32 CLP -11.05

DISTANCE 264.512

PLANETOCENTRIC CONIC

C3 13.141 VHL 3.625 DLA 22.49 RAL 23.56 RAD 6567.5 VEL 11.599 PTH 2.03 VHP 7.022 DPA 24.69 RAP 33.57 ECC 1.2163  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 30 15 2908.49 -28.30 89.76 245.78 88.84 2 38 43 2308.5 -28.16 81.09  
 90.00 20 28 57 3973.08 -7.22 159.26 240.18 62.55 21 35 10 3373.1 -10.84 152.45  
 100.00 3 28 5 2593.00 -29.88 66.55 245.79 90.84 4 11 18 1993.0 -29.45 57.77  
 100.00 21 33 48 3763.80 -5.83 143.12 239.42 60.63 22 36 32 3163.8 -9.70 136.47  
 110.00 5 10 18 2273.22 -33.74 42.00 245.52 95.86 5 48 11 1673.2 -32.56 32.96  
 110.00 22 8 4 3856.35 -2.54 132.94 237.38 55.90 23 9 1 3056.3 -7.00 126.69

DIFFERENTIAL CORRECTIONS

TDE -.4037 TRA -.6580 TC3 1.0005 BAU .1841  
 RDE -.2912 RRA -.0115 RC3 .2845 FAU .04650  
 FDE .5667 FRA .6715 FC3-3.0633 BSP 4888  
 BDE .4978 BRA .6581 BC3 1.0479 FSP -643

MID-COURSE EXECUTION ACCURACY

SGT 1486.1 SGR 504.8 SCS 229.5  
 RRT .6221 RRF -.6661 RTF -.8838  
 SGB 1569.5 R23 -.0976 R13 -.8908  
 SGI 1521.3 SGT 386.1 THA 12.77

ORBIT DETERMINATION ACCURACY

ST 722.2 SR 460.4 SS 583.7  
 CRT .8897 CRS .9364 CST .9921  
 LSA 1020.2 MSA 181.4 SSA 20.4  
 EL1 837.1 EL2 181.3 ALF 31.19

LAUNCH DATE JAN 17 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.861 GAL .53 AZL 88.57 HCA 117.76 SMA 122.66 ECC .20008 INC 1.4337 V1 30.271  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.976 GAP -9.43 AZP 90.67 TAL 177.86 TAP 295.62 RCA 98.12 APO 147.20 V2 34.967  
 RC 52.897 GL 11.11 GP 13.74 ZAL 87.90 ZAP 18.97 ETS 317.50 ZAE 148.81 ETE 14.75 ZAC 128.11 ETC 151.96 CLP -13.21

DISTANCE 271.190

PLANETOCENTRIC CONIC

C3 12.161 VHL 3.487 DLA 21.42 RAL 22.59 RAD 6567.5 VEL 11.556 PTH 2.02 VHP 6.649 DPA 26.14 RAP 34.11 ECC 1.2001  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 24 2841.58 -28.29 84.86 243.16 91.29 2 47 45 2241.6 -27.81 76.23  
 90.00 20 11 7 4006.84 -8.16 161.17 237.76 62.31 21 17 54 3406.8 -9.82 154.40  
 100.00 3 36 26 2531.85 -29.73 62.01 243.09 95.22 4 18 38 1931.8 -28.97 53.29  
 100.00 21 17 45 3791.81 -4.89 144.87 237.06 60.47 22 20 57 3191.8 -8.78 138.05  
 110.00 5 15 37 2221.63 -33.31 38.03 242.67 98.17 5 52 38 1621.6 -31.82 29.12  
 110.00 21 55 5 3674.79 -1.84 133.90 235.17 55.86 22 56 20 3074.8 -6.30 127.66

DIFFERENTIAL CORRECTIONS

TDE -.3882 TRA -.6357 TC3 1.1398 BAU .1951  
 RDE -.2817 RRA -.0215 RC3 .3744 FAU .05044  
 FDE .5779 FRA .6953 FC3-3.5909 BSP 4988  
 BDE .4829 BRA .6361 BC3 1.1997 FSP -717

MID-COURSE EXECUTION ACCURACY

SGT 1518.6 SGR 532.7 SCS 254.5  
 RRT .6775 RRF -.7261 RTF -.8895  
 SGB 1609.3 R23 -.1128 R13 -.8982  
 SGI 1563.7 SGT 380.5 THA 14.23

ORBIT DETERMINATION ACCURACY

ST 727.5 SR 463.0 SS 586.6  
 CRT .8974 CRS .9395 CST .9930  
 LSA 1027.7 MSA 176.2 SSA 21.3  
 EL1 844.1 EL2 176.1 ALF 31.24

LAUNCH DATE JAN 17 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.970 GAL .37 AZL 88.73 HCA 120.95 SMA 123.33 ECC .19346 INC 1.2726 V1 30.271  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.043 GAP -8.75 AZP 90.65 TAL 178.47 TAP 299.41 RCA 99.47 APO 147.19 V2 34.954  
 RC 54.388 GL 10.26 GP 15.05 ZAL 89.15 ZAP 21.45 ETS 319.70 ZAE 147.64 ETE 17.16 ZAC 128.19 ETC 150.52 CLP -15.46

DISTANCE 277.852

PLANETOCENTRIC CONIC

C3 11.304 VHL 3.362 DLA 20.16 RAL 21.70 RAD 6567.4 VEL 11.519 PTH 2.01 VHP 6.299 DPA 27.70 RAP 34.49 ECC 1.1860  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 11 48 2771.52 -28.08 79.75 240.61 93.85 2 58 0 2171.5 -27.25 71.18  
 90.00 19 52 34 4046.32 -4.90 163.39 235.50 62.08 21 0 1 3446.3 -8.60 156.66  
 100.00 3 46 9 2467.31 -29.39 57.24 240.49 95.71 4 27 16 1867.3 -28.29 48.81  
 100.00 21 0 55 3825.77 -3.75 146.54 234.86 60.32 22 4 41 3225.8 -7.67 139.95  
 110.00 5 22 12 2166.79 -32.70 33.87 239.93 100.56 5 58 19 1566.8 -30.90 25.11  
 110.00 21 41 21 3699.05 -.91 135.17 235.09 55.83 22 43 0 3099.1 -5.39 128.94

DIFFERENTIAL CORRECTIONS

TDE -.3731 TRA -.6099 TC3 1.2836 BAU .2074  
 RDE -.2720 RRA -.0316 RC3 .4861 FAU .05488  
 FDE .5786 FRA .7190 FC3-4.2034 BSP 5181  
 BDE .4618 BRA .6108 BC3 1.3726 FSP -807

MID-COURSE EXECUTION ACCURACY

SGT 1541.2 SGR 570.1 SCS 282.2  
 RRT .7288 RRF -.7820 RTF -.8964  
 SGB 1643.3 R23 -.1271 R13 -.9070  
 SGI 1599.7 SGT 376.1 THA 15.99

ORBIT DETERMINATION ACCURACY

ST 717.9 SR 464.0 SS 579.2  
 CRT .9029 CRS .9409 CST .9937  
 LSA 1018.0 MSA 171.3 SSA 22.1  
 EL1 837.5 EL2 171.0 ALF 31.74

LAUNCH DATE JAN 17 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.089 GAL .21 AZL 88.90 HCA 124.13 SMA 123.95 ECC .18747 INC 1.1006 V1 30.271  
 RP 108.45 LAP .91 LOP 240.85 VP 37.103 GAP -8.10 AZP 90.62 TAL 179.07 TAP 303.21 RCA 100.71 APO 147.18 V2 34.942  
 RC 56.186 GL 9.21 GP 16.54 ZAL 90.39 ZAP 24.14 ETS 321.42 ZAE 146.61 ETE 19.81 ZAC 128.04 ETC 149.03 CLP -17.83

DISTANCE 284.497

PLANETOCENTRIC CONIC

C3 10.557 VHL 3.249 DLA 18.72 RAL 20.90 RAD 6567.4 VEL 11.487 PTH 2.00 VHP 5.971 DPA 29.38 RAP 34.67 ECC 1.1737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 24 33 2698.27 -27.63 74.44 238.19 96.47 3 9 31 2098.3 -26.44 65.97  
 90.00 19 33 27 4091.55 -3.46 165.93 233.43 61.88 20 41 38 3491.5 -7.19 159.24  
 100.00 3 57 15 2599.33 -28.83 52.27 238.01 98.27 4 37 14 1799.3 -27.38 43.77  
 100.00 20 43 26 3865.72 -2.40 148.74 232.84 60.19 21 47 52 3265.7 -6.35 142.18  
 110.00 5 30 11 2108.57 -31.89 29.52 237.34 103.01 6 5 20 1508.6 -29.77 20.95  
 110.00 21 28 59 3729.25 .25 136.74 231.19 55.82 22 29 8 3129.3 -4.24 130.53

DIFFERENTIAL CORRECTIONS

TDE -.3541 TRA -.5884 TC3 1.4091 BAU .2173  
 RDE -.2826 RRA -.0437 RC3 .8204 FAU .05955  
 FDE .5720 FRA .7505 FC3-4.8837 BSP 5296  
 BDE .4409 BRA .5900 BC3 1.5396 FSP -901

MID-COURSE EXECUTION ACCURACY

SGT 1558.4 SGR 619.4 SCS 312.0  
 RRT .7744 RRF -.8317 RTF -.9003  
 SGB 1677.0 R23 -.1450 R13 -.9136  
 SGI 1634.9 SGT 373.6 THA 18.08

ORBIT DETERMINATION ACCURACY

ST 706.2 SR 463.9 SS 565.7  
 CRT .9082 CRS .9407 CST .9948  
 LSA 1002.8 MSA 168.3 SSA 23.3  
 EL1 828.6 EL2 165.5 ALF 32.27

LAUNCH DATE JAN 17 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 291.123

RL 147.18 LAL .00 LOL 116.71 VL 27.158 GAL .07 AZL 89.08 HCA 127.32 SMA 124.51 ECC .18208 INC .9150 V1 30.271  
 RP 108.49 LAP .73 LOP 244.03 VP 37.157 GAP -7.47 AZP 90.56 TAL 179.67 TAP 306.99 RCA 101.84 APO 147.18 V2 34.929  
 RC 98.051 GL 7.92 GP 18.24 ZAL 91.61 ZAP 27.05 ETS 322.78 ZAE 145.68 ETE 22.76 ZAC 127.61 ETC 147.49 CLP -20.33

PLANETOCENTRIC CONIC

C3 9.908 VHL 3.148 DLA 17.07 RAL 20.22 RAD 6567.4 VEL 11.458 PTH 1.99 VHP 5.668 DPA 31.21 RAP 34.61 ECC 1.1631  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 38 43 2621.56 -26.92 68.94 235.92 99.14 3 22 25 2021.6 -25.38 60.61  
 90.00 19 13 50 4142.79 -1.81 168.79 231.59 61.74 20 22 53 3542.8 -3.57 162.13  
 100.00 4 9 51 2327.89 -28.02 47.10 235.70 100.87 4 48 39 1727.7 -26.23 38.75  
 100.00 20 25 24 3911.90 -.83 151.27 231.05 60.12 21 30 36 3311.9 -4.80 144.74  
 110.00 5 39 39 2046.70 -30.85 25.00 234.94 105.50 6 13 46 1446.7 -28.42 16.64  
 110.00 21 12 5 3785.65 1.64 138.64 229.50 55.85 22 14 50 3165.7 -2.85 132.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3320 TRA -.5672 TC3 1.5396 BAU .2290 SGT 1572.0 SCR 685.2 SCS 345.4 ST 686.3 SR 461.9 SS 544.1  
 RDE -.2530 RRA -.0576 RC3 .7869 FAU .06482 RRT .8142 RRF -.8747 RTF -.9047 CRT .9128 CRS .9386 CST .9959  
 FDE .5551 FRA .7871 FC3-5.6443 BSP 5404 SGB 1714.8 R23 -.164 R13 -.9214 LSA 976.6 MSA 161.4 SSA 24.7  
 BDE .4174 BRA .5701 BC3 1.7291 FSP -1004 SGI 1673.6 SGT 373.7 THA 20.61 EL1 811.7 EL2 159.5 ALF 33.00

LAUNCH DATE JAN 17 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 297.730

RL 147.18 LAL .00 LOL 116.71 VL 27.238 GAL -.06 AZL 89.29 HCA 130.50 SMA 125.02 ECC .17725 INC .7133 V1 30.271  
 RP 108.53 LAP .54 LOP 247.21 VP 37.204 GAP -8.86 AZP 90.46 TAL 180.26 TAP 310.76 RCA 102.86 APO 147.18 V2 34.917  
 RC 99.985 GL 6.37 GP 20.19 ZAL 92.81 ZAP 30.21 ETS 323.86 ZAE 144.81 ETE 26.07 ZAC 126.88 ETC 145.93 CLP -22.96

PLANETOCENTRIC CONIC

C3 9.348 VHL 3.057 DLA 15.18 RAL 19.68 RAD 6567.3 VEL 11.434 PTH 1.98 VHP 5.390 DPA 33.20 RAP 34.27 ECC 1.1538  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 54 31 2540.92 -25.92 63.24 233.85 101.83 3 36 52 1940.9 -24.03 55.09  
 90.00 18 53 47 4200.55 .06 172.01 230.02 61.68 20 3 47 3600.5 -3.73 165.38  
 100.00 4 24 7 2251.95 -26.93 41.74 233.60 103.50 5 1 39 1852.0 -24.80 33.58  
 100.00 20 6 52 3964.75 .96 154.17 229.52 60.12 21 12 56 3364.7 -3.02 147.65  
 110.00 5 50 47 1980.79 -29.56 20.30 232.75 108.01 6 23 48 1380.8 -26.81 12.19  
 110.00 20 56 41 3808.67 3.28 140.89 228.07 55.96 22 0 10 3208.7 -1.21 134.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2845 TRA -.5279 TC3 1.6968 BAU .2460 SGT 1559.4 SCR 788.3 SCS 381.3 ST 632.6 SR 449.4 SS 491.7  
 RDE -.2387 RRA -.0688 RC3 .9980 FAU .07106 RRT .8488 RRF -.9093 RTF -.9128 CRT .9137 CRS .9302 CST .9987  
 FDE .5018 FRA .7977 FC3-6.5809 BSP 5997 SGB 1738.4 R23 -.164 R13 -.9332 LSA 904.9 MSA 156.2 SSA 26.5  
 BDE .3791 BRA .5324 BC3 1.9685 FSP -1127 SGI 1697.9 SGT 373.1 THA 23.92 EL1 761.0 EL2 151.9 ALF 34.56

LAUNCH DATE JAN 17 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 304.315

RL 147.18 LAL .00 LOL 116.71 VL 27.310 GAL -.17 AZL 89.51 HCA 133.68 SMA 125.48 ECC .17294 INC .4914 V1 30.271  
 RP 108.57 LAP .36 LOP 250.39 VP 37.245 GAP -8.28 AZP 90.34 TAL 180.82 TAP 314.50 RCA 103.78 APO 147.18 V2 34.906  
 RC 81.981 GL 4.51 GP 22.42 ZAL 93.95 ZAP 33.64 ETS 324.76 ZAE 143.94 ETE 29.78 ZAC 125.79 ETC 144.38 CLP -25.76

PLANETOCENTRIC CONIC

C3 8.872 VHL 2.979 DLA 13.04 RAL 19.32 RAD 6567.3 VEL 11.413 PTH 1.98 VHP 5.141 DPA 35.39 RAP 33.59 ECC 1.1480  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 12 11 2455.68 -24.59 57.35 232.03 104.49 3 53 6 1855.7 -22.36 49.39  
 90.00 18 33 14 4265.58 2.15 175.64 228.77 61.76 19 44 20 3665.6 -1.64 169.01  
 100.00 4 40 17 2171.52 -25.53 36.17 231.75 106.11 5 16 29 1971.5 -23.07 28.23  
 100.00 19 47 49 4024.98 3.00 157.48 228.30 60.24 20 34 54 3425.0 -.98 150.96  
 110.00 6 3 46 1910.30 -27.98 15.43 230.84 110.50 6 35 37 1310.3 -24.93 7.58  
 110.00 20 40 49 3858.96 5.19 143.92 228.94 56.17 21 45 8 3259.0 .71 137.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2677 TRA -.5232 TC3 1.7583 BAU .2544 SGT 1558.8 SCR 889.2 SCS 416.6 ST 601.9 SR 436.7 SS 449.7  
 RDE -.2249 RRA -.0919 RC3 1.2263 FAU .07609 RRT .8685 RRF -.9355 RTF -.9112 CRT .9147 CRS .9136 CST .9989  
 FDE .4482 FRA .8682 FC3-7.4252 BSP 5827 SGB 1784.7 R23 -.1856 R13 -.9383 LSA 854.6 MSA 154.8 SSA 28.6  
 BDE .3497 BRA .5312 BC3 2.1448 FSP -1260 SGI 1742.6 SGT 385.4 THA 27.29 EL1 729.2 EL2 145.7 ALF 35.18

LAUNCH DATE JAN 17 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 310.878

RL 147.18 LAL .00 LOL 116.71 VL 27.373 GAL -.28 AZL 89.75 HCA 136.86 SMA 125.90 ECC .16911 INC .2452 V1 30.271  
 RP 108.60 LAP .17 LOP 253.57 VP 37.281 GAP -5.71 AZP 90.18 TAL 181.36 TAP 318.21 RCA 104.61 APO 147.19 V2 34.894  
 RC 64.032 GL 2.31 GP 24.97 ZAL 95.02 ZAP 37.35 ETS 325.54 ZAE 142.99 ETE 33.95 ZAC 124.32 ETC 142.89 CLP -28.73

PLANETOCENTRIC CONIC

C3 8.476 VHL 2.911 DLA 10.59 RAL 19.18 RAD 6567.3 VEL 11.396 PTH 1.97 VHP 4.922 DPA 37.80 RAP 32.52 ECC 1.1395  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 3 2364.89 -22.81 51.23 230.51 107.11 4 11 28 1764.9 -20.35 43.50  
 90.00 18 12 7 4339.02 4.51 179.75 227.89 62.02 19 24 26 3739.0 .75 173.11  
 100.00 4 58 40 2085.52 -23.78 30.38 230.21 108.67 5 33 26 1485.5 -21.01 22.68  
 100.00 19 28 11 4093.62 5.31 161.27 227.46 60.54 20 36 24 3493.6 1.35 154.72  
 110.00 6 18 53 1834.49 -26.06 10.36 229.25 112.94 6 49 28 1234.5 -22.73 2.79  
 110.00 20 24 27 3917.42 7.40 146.61 226.17 56.53 21 29 44 3317.4 2.95 140.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2330 TRA -.5049 TC3 1.8168 BAU .2679 SGT 1333.4 SCR 996.1 SCS 453.4 ST 550.7 SR 410.7 SS 387.2  
 RDE -.2053 RRA -.1154 RC3 1.5125 FAU .08173 RRT .8841 RRF -.9553 RTF -.9113 CRT .9156 CRS .8775 CST .9916  
 FDE .3597 FRA .9223 FC3-8.3477 BSP 5924 SGB 1828.5 R23 -.1923 R13 -.9486 LSA 772.7 MSA 154.5 SSA 31.1  
 BDE .3105 BRA .5180 BC3 2.3640 FSP -1374 SGI 1784.3 SGT 400.0 THA 31.64 EL1 675.6 EL2 135.0 ALF 36.00

LAUNCH DATE JAN 17 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 317.419

RL 147.18 LAL .00 LOL 116.71 VL 27.430 GAL -.37 AZL 90.03 HCA 140.03 SMA 126.27 ECC .16572 INC .0305 V1 30.271
RP 108.84 LAP -.02 LOP 256.74 VP 37.313 GAP -5.17 AZP 89.98 TAL 181.85 TAP 321.88 RCA 105.34 APO 147.19 V2 34.883
RC 66.131 GL -.30 GP 27.88 ZAL 96.00 ZAP 41.36 ETS 326.28 ZAE 141.85 ETE 38.60 ZAC 122.43 ETC 141.50 CLP -31.88

PLANETOCENTRIC CONIC

C3 8.182 VHL 2.857 DLA 7.81 RAL 19.24 RAD 6567.3 VEL 11.382 PTH 1.97 VHP 4.738 DPA 40.45 RAP 30.95 ECC 1.1343
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 54 35 2267.26 -20.81 44.85 229.37 109.65 4 32 23 1667.3 -17.94 37.34
90.00 17 50 13 4422.50 7.16 184.46 227.46 62.53 19 3 55 3822.5 3.42 177.77
100.00 5 19 41 1992.70 -21.62 24.33 229.04 111.16 5 52 54 1392.8 -18.55 16.88
100.00 19 7 48 4172.21 7.92 165.64 227.05 61.08 20 17 20 3572.2 4.00 159.04
110.00 6 36 31 1752.55 -23.78 5.08 228.04 115.32 7 5 43 1152.4 -20.17 357.79
110.00 20 7 27 3985.41 9.93 150.25 225.85 57.12 21 13 53 3385.4 5.53 143.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1955 TRA -.4906 TC3 1.8299 BAU .2831 SGT 1494.4 SCR 1148.8 SCS 488.3 ST 493.4 SR 369.1 SS 320.9
RDE -.1779 RRA -.1467 RC3 1.8392 FAU .08679 RRT .8932 RRF -.9695 RTF -.9098 CRT .9193 CRS .7884 CST .9589
FDE .2367 FRA .9937 FC3-9.2061 BSP 6068 SGB 1885.0 R23 -.1910 R13 -.9554 LSA 674.8 MSA 161.9 SSA 33.1
BDE .2643 BRA .5121 BC3 2.5944 FSP -1488 SGI 1837.6 S62 420.0 THA 36.71 EL1 604.7 EL2 118.6 ALF 36.12

LAUNCH DATE JAN 17 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 323.937

RL 147.18 LAL .00 LOL 116.71 VL 27.400 GAL -.45 AZL 90.35 HCA 143.20 SMA 126.60 ECC .16275 INC .3477 V1 30.271
RP 108.87 LAP -.21 LOP 259.92 VP 37.339 GAP -4.65 AZP 89.72 TAL 182.29 TAP 325.50 RCA 105.99 APO 147.20 V2 34.873
RC 66.274 GL -.33 GP 31.19 ZAL 96.86 ZAP 43.68 ETS 327.07 ZAE 140.41 ETE 43.69 ZAC 120.08 ETC 140.26 CLP -35.24

PLANETOCENTRIC CONIC

C3 7.938 VHL 2.817 DLA 4.61 RAL 19.80 RAD 6567.3 VEL 11.372 PTH 1.96 VHP 4.595 DPA 43.35 RAP 28.79 ECC 1.1306
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 20 26 2161.10 -18.24 38.12 228.68 112.05 4 56 27 1561.1 -15.09 30.86
90.00 17 27 11 4518.33 10.12 189.93 227.57 63.41 18 42 29 3918.3 6.47 183.16
100.00 5 43 57 1891.75 -19.01 17.97 228.34 113.52 6 15 29 1291.7 -15.66 10.77
100.00 18 46 22 4262.92 10.87 170.76 227.18 61.98 19 57 25 3662.9 7.04 184.07
110.00 6 57 10 1862.60 -21.05 359.54 227.30 117.57 7 24 52 1062.6 -17.19 352.53
110.00 19 49 38 4064.83 12.83 154.57 226.02 58.04 20 57 23 3464.8 8.52 148.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1587 TRA -.4764 TC3 1.7842 BAU .3012 SGT 1435.1 SCR 1331.4 SCS 518.8 ST 435.9 SR 309.4 SS 276.1
RDE -.1403 RRA -.1858 RC3 2.2078 FAU .09099 RRT .8956 RRF -.9794 RTF -.9046 CRT .9387 CRS .5906 CST .8196
FDE .0798 FRA 1.0701 FC3-9.9239 BSP 6272 SGB 1957.6 R23 -.1814 R13 -.9644 LSA 571.1 MSA 186.5 SSA 33.0
BDE .2118 BRA .5114 BC3 2.8386 FSP -1593 SGI 1906.2 S62 446.0 THA 42.60 EL1 527.0 EL2 89.6 ALF 34.77

LAUNCH DATE JAN 17 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 330.432

RL 147.18 LAL .00 LOL 116.71 VL 27.323 GAL -.51 AZL 90.71 HCA 146.37 SMA 126.89 ECC .16016 INC .7145 V1 30.271
RP 108.70 LAP -.40 LOP 263.09 VP 37.362 GAP -4.14 AZP 89.41 TAL 182.68 TAP 329.06 RCA 106.56 APO 147.21 V2 34.862
RC 70.456 GL -.705 GP 34.94 ZAL 97.58 ZAP 50.31 ETS 327.99 ZAE 138.54 ETE 49.16 ZAC 117.25 ETC 139.25 CLP -38.82

PLANETOCENTRIC CONIC

C3 7.820 VHL 2.798 DLA .94 RAL 20.27 RAD 6567.3 VEL 11.367 PTH 1.96 VHP 4.501 DPA 46.50 RAP 25.91 ECC 1.1287
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 50 30 2044.13 -15.10 30.97 228.57 114.24 5 24 34 1444.1 -11.70 23.94
90.00 17 2 29 4629.79 13.44 196.44 228.35 64.84 18 19 39 4029.8 9.94 189.51
100.00 6 12 17 1780.34 -15.84 11.21 228.21 115.68 6 41 57 1180.3 -12.26 4.26
100.00 18 23 24 4368.81 14.18 176.88 227.98 63.41 19 36 12 3768.8 10.49 170.03
110.00 7 21 32 1563.58 -17.82 353.67 227.13 119.66 7 47 35 963.6 -13.74 346.94
110.00 19 30 38 4158.33 16.14 159.80 226.87 59.45 20 39 56 3558.3 11.96 153.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1215 TRA -.4595 TC3 1.6806 BAU .3242 SGT 1353.5 SCR 1545.4 SCS 541.5 ST 377.6 SR 232.9 SS 297.5
RDE -.0866 RRA -.2349 RC3 2.6065 FAU .09374 RRT .8928 RRF -.9861 RTF -.8970 CRT .9802 CRS .3748 CST .4993
FDE -.1173 FRA 1.1469 FC-10.3789 BSP 6562 SGB 2054.3 R23 -.1802 R13 -.9737 LSA 472.5 MSA 247.4 SSA 28.6
BDE .1492 BRA .5161 BC3 3.1013 FSP -1674 SGI 1999.6 S62 471.1 THA 49.23 EL1 441.9 EL2 39.5 ALF 31.44

LAUNCH DATE JAN 17 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 336.902

RL 147.18 LAL .00 LOL 116.71 VL 27.561 GAL -.57 AZL 91.15 HCA 149.54 SMA 127.14 ECC .15792 INC 1.1474 V1 30.271
RP 108.73 LAP -.58 LOP 266.26 VP 37.381 GAP -3.65 AZP 89.01 TAL 183.02 TAP 332.56 RCA 107.06 APO 147.22 V2 34.853
RC 72.672 GL -11.37 GP 39.14 ZAL 98.11 ZAP 55.20 ETS 329.14 ZAE 136.10 ETE 54.85 ZAC 113.95 ETC 138.51 CLP -42.62

PLANETOCENTRIC CONIC

C3 7.840 VHL 2.800 DLA -3.29 RAL 21.32 RAD 6567.3 VEL 11.368 PTH 1.96 VHP 4.466 DPA 49.89 RAP 22.11 ECC 1.1290
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 26 6 1913.28 -11.30 23.24 229.22 116.14 5 57 59 1313.3 -7.70 16.41
90.00 18 35 14 4761.82 17.10 204.39 230.01 67.08 17 54 36 4161.6 13.85 197.22
100.00 6 45 54 1855.84 -12.04 3.93 228.84 117.57 7 13 30 1055.8 -8.25 357.18
100.00 17 58 7 4494.29 17.86 184.38 229.86 65.82 19 13 1 3894.3 14.42 177.28
110.00 7 50 37 1453.25 -13.99 347.41 227.70 121.51 8 14 51 853.2 -9.72 340.92
110.00 19 9 53 4289.85 19.87 168.27 228.61 61.60 20 21 3 3689.6 15.92 159.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0883 TRA -.4431 TC3 1.5042 BAU .3525 SGT 1251.7 SCR 1793.3 SCS 552.7 ST 327.8 SR 192.4 SS 407.4
RDE -.0104 RRA -.8999 RC3 3.0081 FAU .09439 RRT .8825 RRF -.9907 RTF -.8834 CRT .8776 CRS .6544 CST .2335
FDE -.3502 FRA 1.2287 FC-10.4227 BSP 6951 SGB 2187.0 R23 -.1327 R13 -.9819 LSA 456.8 MSA 318.4 SSA 21.8
BDE .0889 BRA .5350 BC3 3.3632 FSP -1718 SGI 2130.1 S62 495.8 THA 56.30 EL1 371.3 EL2 81.4 ALF 28.76

LAUNCH DATE JAN 17 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 23 1969

Heliocentric Conic: RL 147.18 LAL .00 LOL 116.71 VL 27.593 GAL -.61 AZL 91.67 HCA 152.70 SMA 127.36 ECC .15600 INC 1.6697 V1 30.271  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.396 GAP -3.18 AZP 88.52 TAL 183.28 TAP 335.99 RCA 107.49 APO 147.22 V2 34.844  
 RC 74.919 GL -16.45 GP 43.80 ZAL 98.41 ZAP 60.29 ETS 330.63 ZAE 135.01 ETE 60.61 ZAC 110.18 ETC 138.14 CLP -46.64

Distance 343.347

Planetocentric Conic: C3 8.059 VHL 2.839 DLA -8.18 RAL 22.81 RAD 6567.3 VEL 11.378 PTH 1.97 VHP 4.506 DPA 53.47 RAP 17.18 ECC 1.1326  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 9 20 1764.10 -6.71 14.69 230.89 117.58 6 38 44 1164.1 -2.96 8.01  
 90.00 16 3 55 4920.95 21.03 214.42 232.86 70.59 17 25 56 4320.9 18.19 206.90  
 100.00 7 26 43 1514.44 -7.47 355.92 230.47 119.03 7 51 58 914.4 -3.54 349.33  
 100.00 17 29 13 4645.83 21.84 193.87 232.54 69.07 18 46 39 4045.8 18.80 186.39  
 110.00 8 25 56 1329.01 -9.47 340.63 229.25 123.00 8 48 5 729.0 -5.06 334.32  
 110.00 18 46 29 4404.03 24.00 174.51 231.55 64.89 19 59 53 3804.0 20.41 167.20

Differential Corrections: TDE -.0624 TRA -.4224 TC3 1.2359 BAU .3842 MID-COURSE EXECUTION ACCURACY: SGT 1118.0 SCR 2063.7 SCS 545.4 ORBIT DETERMINATION ACCURACY: ST 288.2 SR 312.0 SS 574.6  
 RDE .0978 RRA -.3838 RC3 3.3452 FAU .09174 RRT .8590 RRF -.9936 RTF -.8577 CRT .4115 CRS .9543 CST .1264  
 FDE -.6105 FRA 1.2999 FC3-9.8552 BSP 7409 SGB 2347.1 R23 -.1023 R13 -.9884 LSA 651.5 MSA 295.0 SSA 15.4  
 BDE .1160 BRA .5707 BC3 3.5662 FSP -1701 SGI 2289.7 SGI 515.9 THA 63.60 EL1 357.6 EL2 229.2 ALF 50.46

LAUNCH DATE JAN 17 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 25 1969

Heliocentric Conic: RL 147.18 LAL .00 LOL 116.71 VL 27.620 GAL -.64 AZL 92.32 HCA 155.86 SMA 127.54 ECC .15437 INC 2.3170 V1 30.271  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.408 GAP -2.72 AZP 87.89 TAL 183.48 TAP 339.34 RCA 107.85 APO 147.23 V2 34.835  
 RC 77.194 GL -22.40 GP 48.92 ZAL 98.42 ZAP 65.49 ETS 332.57 ZAE 129.19 ETE 66.28 ZAC 106.01 ETC 138.19 CLP -50.86

Distance 349.768

Planetocentric Conic: C3 8.505 VHL 2.950 DLA -13.80 RAL 24.84 RAD 6567.3 VEL 11.401 PTH 1.97 VHP 4.643 DPA 57.14 RAP 10.78 ECC 1.1413  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 3 51 1589.05 -1.11 4.87 234.01 118.30 7 30 20 989.0 2.88 358.24  
 90.00 15 25 36 5119.69 24.95 227.67 237.34 76.11 16 50 56 4519.7 22.77 219.67  
 100.00 8 17 56 1350.07 -1.96 346.83 233.53 119.83 8 40 26 750.1 2.03 340.31  
 100.00 16 54 13 4833.90 25.87 208.38 237.07 74.47 18 14 47 4233.9 23.49 198.39  
 110.00 9 9 51 1187.45 -4.15 333.13 232.17 123.96 9 29 38 587.5 .34 326.92  
 110.00 18 18 47 4569.28 28.33 185.40 236.18 70.02 19 34 57 3969.3 25.34 177.50

Differential Corrections: TDE -.0502 TRA -.3950 TC3 .9104 BAU .4217 MID-COURSE EXECUTION ACCURACY: SGT 982.7 SCR 2361.8 SCS 519.4 ORBIT DETERMINATION ACCURACY: ST 258.5 SR 575.5 SS 765.2  
 RDE .2498 RRA -.4938 RC3 3.5598 FAU .08591 RRT .8161 RRF -.9956 RTF -.8131 CRT .1832 CRS .9942 CST .0586  
 FDE -.8780 FRA 1.3521 FC3-8.8636 BSP 8066 SGB 2550.5 R23 -.0724 R13 -.9930 LSA 956.5 MSA 281.7 SSA 10.6  
 BDE .2546 BRA .6323 BC3 3.6744 FSP -1634 SGI 2495.6 SGI 526.5 THA 70.71 EL1 577.4 EL2 254.2 ALF 84.79

LAUNCH DATE JAN 17 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 27 1969

Heliocentric Conic: RL 147.18 LAL .00 LOL 116.71 VL 27.643 GAL -.65 AZL 93.15 HCA 159.02 SMA 127.69 ECC .15302 INC 3.1456 V1 30.271  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.417 GAP -2.28 AZP 87.06 TAL 183.61 TAP 342.62 RCA 108.15 APO 147.23 V2 34.827  
 RC 79.493 GL -29.26 GP 54.47 ZAL 98.10 ZAP 70.85 ETS 335.05 ZAE 124.61 ETE 71.74 ZAC 101.50 ETC 138.75 CLP -55.24

Distance 356.162

Planetocentric Conic: C3 9.628 VHL 3.103 DLA -20.16 RAL 27.54 RAD 6567.3 VEL 11.446 PTH 1.99 VHP 4.914 DPA 60.77 RAP 2.48 ECC 1.1585  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 17 46 1370.12 5.93 352.63 239.37 117.74 8 40 36 770.1 9.59 345.87  
 90.00 14 33 11 5382.92 27.90 246.33 243.96 84.98 16 2 54 4782.9 26.92 237.80  
 100.00 9 26 7 1149.55 4.83 335.81 236.77 119.54 9 45 16 549.5 8.73 329.19  
 100.00 16 7 32 5078.72 29.15 223.80 243.81 83.05 17 32 10 4478.7 27.88 215.23  
 110.00 10 6 34 1022.79 2.14 324.53 237.10 124.12 10 23 36 422.8 6.60 318.29  
 110.00 17 43 34 4778.24 32.27 200.38 243.20 78.06 19 3 12 4178.2 30.29 191.72

Differential Corrections: TDE -.0639 TRA -.3584 TC3 .5358 BAU .4597 MID-COURSE EXECUTION ACCURACY: SGT 788.3 SCR 2867.0 SCS 470.7 ORBIT DETERMINATION ACCURACY: ST 242.4 SR 927.5 SS 942.7  
 RDE .4570 RRA -.8428 RC3 3.5310 FAU .07613 RRT .7232 RRF -.9969 RTF -.7183 CRT -.0829 CRS .9989 CST -.1290  
 FDE -1.1184 FRA 1.3815 FC3-8.8454 BSP 8741 SGB 2781.1 R23 -.0470 R13 -.9958 LSA 1322.4 MSA 242.9 SSA 7.4  
 BDE .4614 BRA .7360 BC3 3.5715 FSP -1482 SGI 2729.7 SGI 531.9 THA 77.45 EL1 927.8 EL2 241.5 ALF 91.33

LAUNCH DATE JAN 17 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 29 1969

Heliocentric Conic: RL 147.18 LAL .00 LOL 116.71 VL 27.661 GAL -.65 AZL 94.25 HCA 162.16 SMA 127.81 ECC .15192 INC 4.2514 V1 30.271  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.424 GAP -1.86 AZP 85.95 TAL 183.86 TAP 345.82 RCA 108.40 APO 147.23 V2 34.820  
 RC 81.813 GL -36.97 GP 60.43 ZAL 97.40 ZAP 75.57 ETS 338.19 ZAE 119.31 ETE 78.92 ZAC 96.77 ETC 139.87 CLP -59.68

Distance 362.327

Planetocentric Conic: C3 11.622 VHL 3.409 DLA -27.17 RAL 31.05 RAD 6567.4 VEL 11.533 PTH 2.01 VHP 5.378 DPA 64.14 RAP 351.72 ECC 1.1913  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 10 28 46 1001.54 16.85 331.08 249.12 113.10 10 45 27 401.5 19.83 323.67  
 90.00 12 50 12 5827.82 26.30 278.58 252.22 100.88 14 27 20 5227.8 27.54 270.11  
 100.00 11 14 2 855.27 14.32 319.13 247.91 116.52 11 28 17 255.3 17.77 312.03  
 100.00 14 47 37 5449.32 29.05 251.20 252.72 97.37 16 18 26 4849.3 29.77 242.47  
 110.00 11 25 51 818.16 9.86 313.71 245.31 122.90 11 39 29 218.2 14.12 307.21  
 110.00 16 52 17 5059.20 34.18 222.00 253.14 90.67 18 16 36 4459.2 33.89 212.77

Differential Corrections: TDE -.1157 TRA -.3003 TC3 .1845 BAU .4970 MID-COURSE EXECUTION ACCURACY: SGT 612.8 SCR 2988.8 SCS 402.9 ORBIT DETERMINATION ACCURACY: ST 258.5 SR 1336.8 SS 1078.5  
 RDE .7421 RRA -.8409 RC3 3.1933 FAU .06328 RRT .5124 RRF -.9977 RTF -.9051 CRT -.4665 CRS .9997 CST -.4881  
 FDE -1.2982 FRA 1.3652 FC3-4.7142 BSP 9541 SGB 3032.3 R23 -.0283 R13 -.9974 LSA 1720.7 MSA 227.8 SSA 5.2  
 BDE .7511 BRA .8929 BC3 3.1986 FSP -1277 SGI 2988.8 SGI 525.2 THA 83.77 EL1 1342.4 EL2 227.7 ALF 95.31

LAUNCH DATE JAN 17 1969

FLIGHT TIME 134.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.675 GAL -.85 AZL 95.81 HCA 165.30 SMA 127.91 ECC .15105 INC 5.8112 V1 30.271
RP 108.85 LAP -1.47 LOP 282.08 VP 37.428 GAP -1.45 AZP 84.38 TAL 183.63 TAP 348.93 RCA 108.59 APO 147.23 V2 34.813
RC 84.153 GL -45.29 GP 66.81 ZAL 96.33 ZAP 80.06 ETS 342.07 ZAE 113.29 ETE 81.89 ZAC 91.90 ETC 141.66 CLP -64.00

DISTANCE 368.861

PLANETOCENTRIC CONIC

C3 15.946 VHL 3.943 DLA -34.53 RAL 35.55 RAD 6567.6 VEL 11.702 PTH 2.06 VHP 6.144 DPA 66.96 RAP 337.78 ECC 1.2559
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.36 9 23 56 1321.78 25.35 358.87 262.01 114.27 9 45 58 721.8 28.41 351.00
110.64 14 30 55 5634.09 25.37 263.91 262.01 114.26 16 4 49 5034.1 28.42 256.03
69.36 9 23 56 1321.78 25.35 358.87 262.01 114.27 9 45 58 721.8 28.41 351.00
110.64 14 30 55 5634.09 25.37 263.91 262.01 114.26 16 4 49 5034.1 28.42 256.03
69.36 9 23 56 1321.78 25.35 358.87 262.01 114.27 9 45 58 721.8 28.41 351.00
110.64 14 30 55 5634.09 25.37 263.91 262.01 114.26 16 4 49 5034.1 28.42 256.03

DIFFERENTIAL CORRECTIONS

TDE -.2304 TRA -.2058 TC3 -.0757 BAU .5263
RDE 1.1282 RRA-1.1201 RC3 2.5311 FAU .04829
FDE-1.3852 FRA 1.3084 FC3-2.6890 B8P 10454
BDE 1.1515 BRA 1.1588 BC3 2.5322 F8P -1034

MID-COURSE EXECUTION ACCURACY

SGT 497.5 8GR 3251.9 8G3 321.8
RRT .0308 RRF -.9983 RTF -.0203
SG8 3289.8 R23 -.0110 R13 -.9983
SG1 3252.0 8G2 497.3 THA 89.73

ORBIT DETERMINATION ACCURACY

ST 352.1 SR 1744.3 S8 1130.4
CRT -.7888 CR8 .9999 CST -.7984
LSA 2097.3 M8A 213.7 S8A 3.7
EL1 1766.6 EL2 213.7 ALF 99.18

LAUNCH DATE JAN 17 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.685 GAL -.82 AZL 98.19 HCA 168.42 SMA 127.98 ECC .15040 INC 8.1905 V1 30.271
RP 108.87 LAP -1.84 LOP 285.24 VP 37.430 GAP -1.05 AZP 81.97 TAL 185.51 TAP 351.93 RCA 108.73 APO 147.23 V2 34.807
RC 86.508 GL -53.87 GP 73.72 ZAL 94.95 ZAP 85.89 ETS 346.83 ZAE 106.50 ETE 86.81 ZAC 86.94 ETC 144.30 CLP -67.69

DISTANCE 375.155

PLANETOCENTRIC CONIC

C3 23.989 VHL 4.898 DLA -41.68 RAL 41.15 RAD 6568.0 VEL 12.056 PTH 2.15 VHP 7.439 DPA 68.80 RAP 320.01 ECC 1.3945
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.04 8 49 15 1589.87 26.48 21.55 277.11 123.45 9 15 45 989.9 30.68 14.21
121.96 15 50 18 5570.43 26.49 259.38 277.12 123.44 17 23 8 4970.4 30.69 252.04
58.04 8 49 15 1589.87 26.48 21.55 277.11 123.45 9 15 45 989.9 30.68 14.21
121.96 15 50 18 5570.43 26.49 259.38 277.12 123.44 17 23 8 4970.4 30.69 252.04
58.04 8 49 15 1589.87 26.48 21.55 277.11 123.45 9 15 45 989.9 30.68 14.21
121.96 15 50 18 5570.43 26.49 259.38 277.12 123.44 17 23 8 4970.4 30.69 252.04

DIFFERENTIAL CORRECTIONS

TDE -.4505 TRA -.0343 TC3 -.1948 BAU .5309
RDE 1.6487 RRA-1.5400 RC3 1.6493 FAU .03241
FDE-1.3557 FRA 1.2202 FC3-1.1706 B8P 11146
BDE 1.7101 BRA 1.5404 BC3 1.6568 F8P -758

MID-COURSE EXECUTION ACCURACY

SGT 563.1 8GR 3485.1 8G3 236.4
RRT -.6090 RRF -.9987 RTF .6179
SG8 3530.3 R23 .0004 R13 -.9988
SG1 3502.2 8G2 444.5 THA 95.71

ORBIT DETERMINATION ACCURACY

ST 527.5 SR 2062.5 S8 1084.5
CRT -.9251 CR8 .9999 CST -.9296
LSA 2381.2 M8A 195.1 S8A 2.6
EL1 2120.0 EL2 194.8 ALF 103.43

LAUNCH DATE JAN 17 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.692 GAL -.58 AZL 102.28 HCA 171.50 SMA 128.03 ECC .14993 INC12.2792 V1 30.271
RP 108.89 LAP -1.80 LOP 288.41 VP 37.430 GAP -.68 AZP 77.85 TAL 183.27 TAP 354.78 RCA 108.83 APO 147.22 V2 34.802
RC 88.877 GL -81.19 GP 81.51 ZAL 93.43 ZAP 88.87 ETS 353.21 ZAE 98.63 ETE 92.61 ZAC 81.82 ETC 148.75 CLP -68.29

DISTANCE 381.392

PLANETOCENTRIC CONIC

C3 45.172 VHL 6.721 DLA -47.70 RAL 47.57 RAD 6568.7 VEL 12.905 PTH 2.35 VHP 9.811 DPA 68.98 RAP 298.22 ECC 1.7434
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.86 8 43 27 1831.21 22.59 40.20 295.31 133.20 9 13 58 1231.2 27.93 34.03
130.14 16 47 22 5646.85 22.60 262.96 295.33 133.20 18 21 29 5046.8 27.94 256.78
49.86 8 43 27 1831.21 22.59 40.20 295.31 133.20 9 13 58 1231.2 27.93 34.03
130.14 16 47 22 5646.85 22.60 262.96 295.33 133.20 18 21 29 5046.8 27.94 256.78
49.86 8 43 27 1831.21 22.59 40.20 295.31 133.20 9 13 58 1231.2 27.93 34.03
130.14 16 47 22 5646.85 22.60 262.96 295.33 133.20 18 21 29 5046.8 27.94 256.78

DIFFERENTIAL CORRECTIONS

TDE -.8604 TRA .3683 TC3 -.1700 BAU .4736
RDE 2.3977 RRA-2.2289 RC3 .7855 FAU .01738
FDE-1.2375 FRA 1.1304 FC3 -.3331 B8P 11826
BDE 2.5474 BRA 2.2592 BC3 .7842 F8P -511

MID-COURSE EXECUTION ACCURACY

SGT 899.0 8GR 3634.3 8G3 158.5
RRT -.9343 RRF -.9992 RTF .9368
SG8 3743.8 R23 .0101 R13 -.9991
SG1 3730.8 8G2 312.3 THA 103.11

ORBIT DETERMINATION ACCURACY

ST 746.8 SR 2212.8 S8 965.7
CRT -.9792 CR8 1.0000 CST -.9803
LSA 2523.0 M8A 144.4 S8A 1.8
EL1 2330.9 EL2 143.8 ALF 108.36

LAUNCH DATE JAN 17 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.685 GAL -.50 AZL 110.86 HCA 174.50 SMA 128.05 ECC .14963 INC20.8659 V1 30.271
RP 108.90 LAP -1.96 LOP 291.57 VP 37.428 GAP -.34 AZP 69.22 TAL 182.86 TAP 357.36 RCA 108.89 APO 147.21 V2 34.797
RC 91.256 GL -85.82 GP 87.80 ZAL 91.94 ZAP 88.84 ETS 41.15 ZAE 88.45 ETE 139.46 ZAC 76.00 ETC 195.50 CLP 58.08

DISTANCE 387.509

PLANETOCENTRIC CONIC

C3 116.714 VHL 10.803 DLA -50.98 RAL 53.05 RAD 6570.2 VEL 15.429 PTH 2.78 VHP 14.966 DPA 66.13 RAP 272.81 ECC 2.9208
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.65 8 51 27 2084.48 12.61 54.42 312.60 139.83 9 26 11 1484.5 18.66 49.40
134.35 17 23 4 5833.65 12.62 270.52 312.61 139.83 19 0 17 5233.6 18.67 265.50
45.65 8 51 27 2084.48 12.61 54.42 312.60 139.83 9 26 11 1484.5 18.66 49.40
134.35 17 23 4 5833.65 12.62 270.52 312.61 139.83 19 0 17 5233.6 18.67 265.50
45.65 8 51 27 2084.48 12.61 54.42 312.60 139.83 9 26 11 1484.5 18.66 49.40
134.35 17 23 4 5833.65 12.62 270.52 312.61 139.83 19 0 17 5233.6 18.67 265.50

DIFFERENTIAL CORRECTIONS

TDE-1.8544 TRA 3.7413 TC3 -.0969 BAU .1814
RDE 3.7658 RRA -.7411 RC3 .0642 FAU .00273
FDE-1.1811 FRA 1.1384 FC3 -.0203 B8P 12120
BDE 4.1130 BRA 3.8140 BC3 .1182 F8P -315

MID-COURSE EXECUTION ACCURACY

SGT 3278.4 8GR 2097.0 8G3 98.6
RRT -.5453 RRF -.7668 RTF .9555
SG8 3891.7 R23 .0868 R13 -.9957
SG1 3533.5 8G2 1630.8 THA 155.13

ORBIT DETERMINATION ACCURACY

ST 1290.0 SR 2005.8 S8 879.0
CRT -.7457 CR8 .9414 CST -.9267
LSA 2421.1 M8A 773.5 S8A 1.4
EL1 2259.5 EL2 763.0 ALF 119.28



LAUNCH DATE JAN 17 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.696 GAL -.34 AZL 136.78 HCA 177.11 SMA 128.05 ECC .14946 INC46.7832 V1 30.271
RP 108.92 LAP -2.11 LOP 294.73 VP 37.425 GAP -.13 AZP 43.25 TAL 181.92 TAP 359.03 RCA 108.91 APO 147.19 V2 34.793
RC 93.644 GL -60.74 GP 69.82 ZAL 90.71 ZAP 89.72 ETS 173.92 ZAE 69.95 ETE 271.30 ZAC 67.01 ETC 130.78 CLP 89.18

DISTANCE 393.181

PLANETOCENTRIC CONIC

C3 535.293 VHL 23.136 DLA -45.84 RAL 30.61 RAD 6572.4 VEL 25.624 PTH 3.36 VHP 30.278 DPA 54.44 RAP 243.36 ECC 9.8096
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.31 9 4 20 2237.32 1.54 57.06 319.11 135.82 9 41 37 1637.3 7.26 51.87
127.69 16 50 45 809.06 1.55 306.12 319.12 135.82 17 4 14 209.1 7.27 300.93
52.31 9 4 20 2237.32 1.54 57.06 319.11 135.82 9 41 37 1637.3 7.26 51.87
127.69 16 50 45 809.06 1.55 306.12 319.12 135.82 17 4 14 209.1 7.27 300.93
52.31 9 4 20 2237.32 1.54 57.06 319.11 135.82 9 41 37 1637.3 7.26 51.87
127.69 16 50 45 809.06 1.55 306.12 319.12 135.82 17 4 14 209.1 7.27 300.93

DIFFERENTIAL CORRECTIONS

TDE 4.1157 TRA -.6054 TC3 -.0648 BAU 1.5744
RDE -7.4430 RRA 0.3531 RC3 .2102 FAU -.02752
FDE -1.5931 FRA 1.7239 FC3 .0445 B8P 11300
BOE 8.5052 BRA 0.3750 BC3 .2200 F8P -201

MID-COURSE EXECUTION ACCURACY

8GT 1084.0 8GR 3627.7 8G3 65.4
RRT -.7144 RRF .9999 RTF -.7256
8GB 3786.2 R23 -.0282 R13 .9996
8G1 3712.9 8G2 741.1 THA 102.56

ORBIT DETERMINATION ACCURACY

ST 1021.3 SR 2047.4 SS 1138.7
CRT -.9261 CRS -.9999 CST .9313
LSA 2531.0 MSA 354.1 SSA .3
EL1 2261.2 EL2 348.9 ALF 115.44

LAUNCH DATE JAN 17 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.694 GAL -.76 AZL 27.68 HCA 182.54 SMA 128.04 ECC .15005 INC62.3238 V1 30.271
RP 108.93 LAP -2.25 LOP 297.89 VP 37.420 GAP .89 AZP 152.30 TAL 184.31 TAP 6.05 RCA 108.83 APO 147.25 V2 34.789
RC 96.038 GL 54.62 GP -63.73 ZAL 90.93 ZAP 90.84 ETS 176.86 ZAE 64.02 ETE 81.22 ZAC 88.72 ETC 32.06 CLP 91.90

DISTANCE 401.933

PLANETOCENTRIC CONIC

C3 904.691 VHL 30.078 DLA 57.75 RAL 349.30 RAD 6572.9 VEL 32.031 PTH 3.48 VHP 36.046 DPA -62.44 RAP 160.06 ECC15.8889
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.31 16 11 20 5020.90 .07 238.65 259.36 32.25 17 35 1 4420.9 -6.69 234.78
142.69 1 34 36 3379.40 .08 105.27 259.34 32.25 2 30 55 2779.4 -6.68 101.40
37.31 16 11 20 5020.90 .07 238.65 259.36 32.25 17 35 1 4420.9 -6.69 234.78
142.69 1 34 36 3379.40 .08 105.27 259.34 32.25 2 30 55 2779.4 -6.68 101.40
37.31 16 11 20 5020.90 .07 238.65 259.36 32.25 17 35 1 4420.9 -6.69 234.78
142.69 1 34 36 3379.40 .08 105.27 259.34 32.25 2 30 55 2779.4 -6.68 101.40

DIFFERENTIAL CORRECTIONS

TDE -4.5577 TRA 2.4916 TC3 -.1101 BAU 3.0932
RD -16.2226 RRA 2.2066 RC3 -.2509 FAU -.05002
FDE 3.3650 FRA -.5042 FC3 .0479 B8P 12230
BOE16.8507 BRA 3.3282 BC3 .2557 F8P -215

MID-COURSE EXECUTION ACCURACY

8GT 1408.2 8GR 3478.3 8G3 62.7
RRT .8785 RRF -.9998 RTF -.8881
8GB 3752.6 R23 -.0421 R13 -.9991
8G1 3698.8 8G2 632.8 THA 69.81

ORBIT DETERMINATION ACCURACY

ST 908.5 SR 3099.5 SS 2003.5
CRT .9755 CRS 1.0000 CST .9771
LSA 3796.0 MSA 192.9 SSA .6
EL1 3224.2 EL2 192.3 ALF 73.99

LAUNCH DATE JAN 17 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.689 GAL -.53 AZL 61.17 HCA 184.95 SMA 128.01 ECC .15005 INC28.8335 V1 30.271
RP 108.94 LAP -2.39 LOP 301.05 VP 37.414 GAP 1.04 AZP 118.74 TAL 183.00 TAP 7.95 RCA 108.80 APO 147.21 V2 34.787
RC 98.438 GL 65.71 GP -85.14 ZAL 91.48 ZAP 92.18 ETS 178.15 ZAE 85.92 ETE 84.21 ZAC 99.91 ETC 34.41 CLP 116.74

DISTANCE 407.358

PLANETOCENTRIC CONIC

C3 214.830 VHL 14.850 DLA 64.22 RAL 330.46 RAD 6571.2 VEL 18.329 PTH 3.03 VHP 16.651 DPA -69.08 RAP 106.67 ECC 4.9323
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
29.61 14 37 2 4920.91 -0.14 239.85 236.50 26.06 15 59 3 4320.9 -15.31 236.63
150.39 0 38 33 3210.92 -0.14 97.17 236.49 26.06 1 32 4 2610.9 -15.30 93.95
29.61 14 37 2 4920.91 -0.14 239.85 236.50 26.06 15 59 3 4320.9 -15.31 236.63
150.39 0 38 33 3210.92 -0.14 97.17 236.49 26.06 1 32 4 2610.9 -15.30 93.95
29.61 14 37 2 4920.91 -0.14 239.85 236.50 26.06 15 59 3 4320.9 -15.31 236.63
150.39 0 38 33 3210.92 -0.14 97.17 236.49 26.06 1 32 4 2610.9 -15.30 93.95

DIFFERENTIAL CORRECTIONS

TDE .0378 TRA 1.6186 TC3 -.0385 BAU .2843
RDE -8.4846 RRA 2.3636 RC3 -.0913 FAU -.00398
FDE 2.2320 FRA -.6980 FC3 .0161 B8P 12997
BOE 8.4847 BRA 2.8647 BC3 .0991 F8P -298

MID-COURSE EXECUTION ACCURACY

8GT 1459.8 8GR 3949.6 8G3 93.0
RRT .5332 RRF -.9983 RTF -.5766
8GB 4210.7 R23 -.0127 R13 -.9996
8G1 4033.3 8G2 1209.4 THA 77.73

ORBIT DETERMINATION ACCURACY

ST 436.9 SR 3379.0 SS 1284.7
CRT .1554 CRS .9997 CST .1776
LSA 3615.5 MSA 432.2 SSA 1.2
EL1 3379.7 EL2 431.5 ALF 88.83

LAUNCH DATE JAN 17 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 27.682 GAL -.40 AZL 71.40 HCA 187.91 SMA 127.96 ECC .15037 INC18.5985 V1 30.271
RP 108.94 LAP -2.52 LOP 304.21 VP 37.407 GAP 1.33 AZP 108.43 TAL 182.28 TAP 10.19 RCA 108.72 APO 147.20 V2 34.785
RC 100.837 GL 65.37 GP -82.27 ZAL 91.88 ZAP 94.58 ETS 178.50 ZAE 96.94 ETE 239.19 ZAC 104.42 ETC 189.14 CLP -126.44

DISTANCE 413.357

PLANETOCENTRIC CONIC

C3 94.324 VHL 9.712 DLA 63.72 RAL 330.63 RAD 6569.8 VEL 14.866 PTH 2.66 VHP 10.500 DPA -65.67 RAP 79.22 ECC 2.5523
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.19 14 39 5 4767.11 -17.30 235.26 231.79 27.63 15 58 32 4167.1 -24.35 231.62
149.81 0 37 52 3061.56 -17.29 93.25 231.78 27.63 1 28 53 2461.6 -24.34 89.61
30.19 14 39 5 4767.11 -17.30 235.26 231.79 27.63 15 58 32 4167.1 -24.35 231.62
149.81 0 37 52 3061.56 -17.29 93.25 231.78 27.63 1 28 53 2461.6 -24.34 89.61
30.19 14 39 5 4767.11 -17.30 235.26 231.79 27.63 15 58 32 4167.1 -24.35 231.62
149.81 0 37 52 3061.56 -17.29 93.25 231.78 27.63 1 28 53 2461.6 -24.34 89.61

DIFFERENTIAL CORRECTIONS

TDE 4.8187 TRA -1.4295 TC3 -.1593 BAU .2844
RDE 3.0280 RRA -1.4056 RC3 -.1596 FAU .01344
FDE 2.3579 FRA -.7494 FC3 -.1233 B8P 13531
BOE 5.6911 BRA 2.0048 BC3 .2255 F8P -490

MID-COURSE EXECUTION ACCURACY

8GT 3435.8 8GR 2606.7 8G3 149.4
RRT .9760 RRF .9828 RTF .9983
8GB 4312.7 R23 -.0410 R13 .9982
8G1 4288.7 8G2 454.6 THA 37.00

ORBIT DETERMINATION ACCURACY

ST 2899.6 SR 1872.7 SS 1290.9
CRT .9943 CRS -.9957 CST -.9999
LSA 3681.4 MSA 188.5 SSA 2.0
EL1 3447.7 EL2 187.2 ALF 32.79

LAUNCH DATE JAN 17 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 419.462

RL 147.18 LAL .00 LOL 116.71 VL 27.673 GAL -.29 AZL 76.02 HCA 190.98 SMA 127.89 ECC .15086 INC13.9794 V1 30.271
RP 108.95 LAP -2.64 LOP 307.38 VP 37.399 GAP 1.65 AZP 103.73 TAL 181.64 TAP 12.62 RCA 108.60 APO 147.19 V2 34.784
RC 103.240 GL 62.85 GP -74.24 ZAL 92.01 ZAP 97.79 ETS 336.55 ZAE 104.11 ETE 243.07 ZAC 106.95 ETC 193.28 CLP-119.96

PLANETOCENTRIC CONIC

C3 56.440 VHL 7.513 DLA 62.28 RAL 335.19 RAD 6569.0 VEL 13.334 PTH 2.44 VHP 7.608 DPA -61.14 RAP 63.76 ECC 1.9289
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.89 15 1 20 4640.46 -24.16 229.99 231.57 30.65 16 18 41 4040.5 -30.96 225.67
148.11 0 52 1 2948.44 -24.15 89.96 231.56 30.64 1 41 9 2348.4 -30.95 85.63
31.89 15 1 20 4640.46 -24.16 229.99 231.57 30.65 16 18 41 4040.5 -30.96 225.67
148.11 0 52 1 2948.44 -24.15 89.96 231.56 30.64 1 41 9 2348.4 -30.95 85.63
31.89 15 1 20 4640.46 -24.16 229.99 231.57 30.65 16 18 41 4040.5 -30.96 225.67
148.11 0 52 1 2948.44 -24.15 89.96 231.56 30.64 1 41 9 2348.4 -30.95 85.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.2375 TRA -1.1327 TC3 -.4250 BAU .4680 SGT 3154.4 SGR 3005.0 SCS 223.5 ST 2531.2 SR 2500.6 SS 1468.1
RDE 3.2181 RRA -.9723 RC3 -.4536 FAU .02906 RRT .9974 RRF .9989 RTF .9932 CRT .9996 CRS -.9999 CST -.9991
FDE 2.8081 FRA -.7850 FC3 -.4458 BSP 13684 SGB 4356.6 R23 .0809 R13 .9965 LSA 3848.5 MSA 85.6 S5A .9
BDE 4.5648 BRA 1.4928 BC3 .6203 FSP -743 SGI 4353.8 SGT 156.7 THA 43.61 EL1 3557.7 EL2 52.5 ALF 44.65

LAUNCH DATE JAN 17 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 425.591

RL 147.18 LAL .00 LOL 116.71 VL 27.661 GAL -.18 AZL 78.83 HCA 194.09 SMA 127.82 ECC .15150 INC11.3705 V1 30.271
RP 108.95 LAP -2.75 LOP 310.54 VP 37.390 GAP 1.97 AZP 101.04 TAL 180.98 TAP 15.08 RCA 108.45 APO 147.18 V2 34.783
RC 105.643 GL 59.92 GP -87.14 ZAL 91.89 ZAP 101.60 ETS 334.78 ZAE 110.21 ETE 240.24 ZAC 108.52 ETC 191.24 CLP-121.18

PLANETOCENTRIC CONIC

C3 39.721 VHL 6.302 DLA 60.64 RAL 340.33 RAD 6568.5 VEL 12.692 PTH 2.31 VHP 6.378 DPA -56.40 RAP 53.45 ECC 1.6537
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.84 15 26 37 4544.20 -28.77 224.84 232.36 34.00 16 42 21 3944.2 -35.29 219.79
146.16 1 7 43 2869.03 -28.76 87.13 232.34 34.00 1 55 32 2269.0 -35.28 82.08
33.84 15 26 37 4544.20 -28.77 224.84 232.36 34.00 16 42 21 3944.2 -35.29 219.79
146.16 1 7 43 2869.03 -28.76 87.13 232.34 34.00 1 55 32 2269.0 -35.28 82.08
33.84 15 26 37 4544.20 -28.77 224.84 232.36 34.00 16 42 21 3944.2 -35.29 219.79
146.16 1 7 43 2869.03 -28.76 87.13 232.34 34.00 1 55 32 2269.0 -35.28 82.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.8792 TRA -.9637 TC3 -.7616 BAU .5526 SGT 3311.6 SGR 2872.8 SCS 305.3 ST 2672.0 SR 2469.9 SS 1662.2
RDE 2.8887 RRA -.8578 RC3 -.7091 FAU .04501 RRT .9914 RRF .9990 RTF .9875 CRT .9986 CRS -1.0000 CST -.9982
FDE 3.2844 FRA -.7899 FC3 -.9811 BSP 13774 SGB 4384.0 R23 .0969 R13 .9946 LSA 3998.9 MSA 110.2 S5A 2.0
BDE 3.9381 BRA 1.1668 BC3 1.0406 FSP -1027 SGI 4374.7 SGT 285.1 THA 40.91 EL1 3637.4 EL2 96.7 ALF 42.75

LAUNCH DATE JAN 17 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 431.722

RL 147.18 LAL .00 LOL 116.71 VL 27.648 GAL -.05 AZL 80.31 HCA 197.22 SMA 127.73 ECC .15228 INC 9.6920 V1 30.271
RP 108.95 LAP -2.86 LOP 313.70 VP 37.381 GAP 2.29 AZP 99.27 TAL 180.30 TAP 17.52 RCA 108.28 APO 147.18 V2 34.783
RC 108.045 GL 57.02 GP -60.71 ZAL 91.54 ZAP 105.77 ETS 332.84 ZAE 115.27 ETE 236.39 ZAC 109.50 ETC 188.73 CLP-123.75

PLANETOCENTRIC CONIC

C3 30.791 VHL 5.549 DLA 59.01 RAL 345.20 RAD 6568.2 VEL 12.335 PTH 2.22 VHP 5.539 DPA -51.67 RAP 46.00 ECC 1.5067
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
35.79 15 51 0 4470.80 -31.77 220.07 233.39 37.27 17 5 31 3870.8 -37.99 214.35
144.21 1 22 14 2813.92 -31.76 84.76 233.37 37.26 2 9 8 2213.9 -37.98 79.04
35.79 15 51 0 4470.80 -31.77 220.07 233.39 37.27 17 5 31 3870.8 -37.99 214.35
144.21 1 22 14 2813.92 -31.76 84.76 233.37 37.26 2 9 8 2213.9 -37.98 79.04
35.79 15 51 0 4470.80 -31.77 220.07 233.39 37.27 17 5 31 3870.8 -37.99 214.35
144.21 1 22 14 2813.92 -31.76 84.76 233.37 37.26 2 9 8 2213.9 -37.98 79.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7291 TRA -.8310 TC3 -1.1492 BAU .6019 SGT 3513.5 SGR 2856.4 SCS 384.1 ST 2862.2 SR 2313.7 SS 1820.6
RDE 2.2280 RRA -.4365 RC3 -.9041 FAU .06035 RRT .9874 RRF .9987 RTF .9838 CRT .9981 CRS -1.0000 CST -.9978
FDE 3.6616 FRA -.6915 FC3 -1.6969 BSP 14092 SGB 4404.7 R23 .1154 R13 .9921 LSA 4104.0 MSA 130.3 S5A 2.6
BDE 3.5218 BRA .9367 BC3 1.4622 FSP -1339 SGI 4391.8 SGT 336.1 THA 37.00 EL1 3678.7 EL2 111.2 ALF 38.94

LAUNCH DATE JAN 17 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

DISTANCE 437.846

RL 147.18 LAL .00 LOL 116.71 VL 27.633 GAL .08 AZL 81.48 HCA 200.36 SMA 127.63 ECC .15319 INC 8.5173 V1 30.271
RP 108.94 LAP -2.95 LOP 316.87 VP 37.371 GAP 2.61 AZP 97.99 TAL 179.57 TAP 19.93 RCA 108.08 APO 147.18 V2 34.784
RC 110.446 GL 54.28 GP -54.85 ZAL 90.97 ZAP 110.11 ETS 331.25 ZAE 119.41 ETE 232.15 ZAC 110.11 ETC 186.34 CLP-126.67

PLANETOCENTRIC CONIC

C3 25.414 VHL 5.041 DLA 57.48 RAL 349.70 RAD 6568.0 VEL 12.116 PTH 2.17 VHP 5.025 DPA -47.07 RAP 40.42 ECC 1.4182
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.64 16 13 45 4413.60 -33.70 215.76 234.55 40.25 17 27 19 3813.6 -39.63 209.48
142.36 1 35 18 2775.48 -33.69 82.80 234.53 40.25 2 21 34 2175.5 -39.62 76.52
37.64 16 13 45 4413.60 -33.70 215.76 234.55 40.25 17 27 19 3813.6 -39.63 209.48
142.36 1 35 18 2775.48 -33.69 82.80 234.53 40.25 2 21 34 2175.5 -39.62 76.52
37.64 16 13 45 4413.60 -33.70 215.76 234.55 40.25 17 27 19 3813.6 -39.63 209.48
142.36 1 35 18 2775.48 -33.69 82.80 234.53 40.25 2 21 34 2175.5 -39.62 76.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.8700 TRA -.7045 TC3 -1.5403 BAU .6218 SGT 3719.9 SGR 2415.1 SCS 452.2 ST 3067.6 SR 2135.7 SS 1954.4
RDE 1.8733 RRA -.2621 RC3 -.9883 FAU .07140 RRT .9832 RRF .9980 RTF .9802 CRT .9977 CRS -1.0000 CST -.9974
FDE 3.8492 FRA -.5258 FC3 -2.4322 BSP 13744 SGB 4435.1 R23 .1347 R13 .9889 LSA 4215.4 MSA 147.3 S5A 3.4
BDE 3.2618 BRA .7515 BC3 1.8301 FSP -1528 SGI 4419.6 SGT 370.8 THA 32.81 EL1 3736.0 EL2 119.6 ALF 34.82

LAUNCH DATE JAN 17 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 443.958

RL 147.18 LAL .00 LOL 116.71 VL 27.617 GAL .22 AZL 82.35 HCA 203.51 SMA 127.52 ECC .15423 INC 7.6452 V1 30.271
RP 108.94 LAP -3.04 LOP 320.03 VP 37.360 GAP 2.93 AZP 97.02 TAL 178.79 TAP 22.30 RCA 107.85 APO 147.18 V2 34.786
RC 112.844 GL 51.72 GP -49.55 ZAL 90.21 ZAP 114.44 ETS 330.07 ZAE 122.70 ETE 227.76 ZAC 110.51 ETC 184.25 CLP-129.62

PLANETOCENTRIC CONIC

C3 21.906 VHL 4.680 DLA 58.07 RAL 353.85 RAD 6567.9 VEL 11.970 PTH 2.13 VHP 4.708 DPA -42.69 RAP 36.19 ECC 1.3605
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.35 16 34 58 4367.93 -34.92 211.95 235.86 42.90 17 47 46 3767.9 -40.57 205.20
140.65 1 47 15 2748.55 -34.90 81.23 235.84 42.89 2 33 3 2148.5 -40.56 74.49
39.35 16 34 58 4367.93 -34.92 211.95 235.86 42.90 17 47 46 3767.9 -40.57 205.20
140.65 1 47 15 2748.55 -34.90 81.23 235.84 42.89 2 33 3 2148.5 -40.56 74.49
39.35 16 34 58 4367.93 -34.92 211.95 235.86 42.90 17 47 46 3767.9 -40.57 205.20
140.65 1 47 15 2748.55 -34.90 81.23 235.84 42.89 2 33 3 2148.5 -40.56 74.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6208 TRA -.6022 TC3-1.9692 BAU .6543 SGT 3926.7 SGR 2189.0 SCS 508.6 ST 3233.1 SR 1925.1 SS 2024.4
RDE 1.5701 RRA -.1508 RC3-1.0554 FAU .08235 RRT .9823 RRF .9970 RTF .9790 CRT .9977 CRS-1.0000 CST -.9973
FDE 4.0802 FRA -.3728 FC3-3.2545 BSP 13983 SGB 4497.4 R23 .1454 R13 .9864 LSA 4270.2 MSA 150.6 S8A 4.2
BDE 3.0551 BRA .6228 BC3 2.2342 F8P -1737 SGI 4483.0 S62 359.5 THA 26.90 EL1 3761.1 EL2 113.4 ALF 30.74

LAUNCH DATE JAN 17 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 450.057

RL 147.18 LAL .00 LOL 116.71 VL 27.599 GAL .37 AZL 83.03 HCA 206.65 SMA 127.40 ECC .15541 INC 6.9688 V1 30.271
RP 108.95 LAP -3.12 LOP 323.20 VP 37.349 GAP 3.25 AZP 96.23 TAL 177.97 TAP 24.63 RCA 107.80 APO 147.19 V2 34.789
RC 115.239 GL 49.34 GP -44.79 ZAL 89.26 ZAP 118.64 ETS 329.25 ZAE 125.23 ETE 223.38 ZAC 110.80 ETC 182.47 CLP-132.49

PLANETOCENTRIC CONIC

C3 19.487 VHL 4.414 DLA 54.78 RAL 357.75 RAD 6567.8 VEL 11.869 PTH 2.11 VHP 4.518 DPA -38.59 RAP 32.99 ECC 1.3207
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
40.92 16 54 55 4330.75 -35.66 208.58 237.34 45.21 18 7 6 3730.8 -41.07 201.47
139.08 1 58 26 2729.71 -35.65 79.99 237.33 45.20 2 43 55 2129.7 -41.06 72.89
40.92 16 54 55 4330.75 -35.66 208.58 237.34 45.21 18 7 6 3730.8 -41.07 201.47
139.08 1 58 26 2729.71 -35.65 79.99 237.33 45.20 2 43 55 2129.7 -41.06 72.89
40.92 16 54 55 4330.75 -35.66 208.58 237.34 45.21 18 7 6 3730.8 -41.07 201.47
139.08 1 58 26 2729.71 -35.65 79.99 237.33 45.20 2 43 55 2129.7 -41.06 72.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5875 TRA -.4941 TC3-2.3847 BAU .6790 SGT 4116.8 SGR 1962.7 SCS 546.8 ST 3375.5 SR 1722.0 SS 2054.7
RDE 1.3260 RRA -.0747 RC3-1.0516 FAU .08916 RRT .9804 RRF .9955 RTF .9771 CRT .9976 CRS-1.0000 CST -.9970
FDE 4.0536 FRA -.1712 FC3-3.9609 BSP 14207 SGB 4560.7 R23 .1548 R13 .9834 LSA 4307.8 MSA 155.6 S8A 5.0
BDE 2.9075 BRA .4997 BC3 2.6062 F8P -1880 SGI 4547.3 S62 350.1 THA 25.21 EL1 3787.9 EL2 108.9 ALF 26.99

LAUNCH DATE JAN 17 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 456.141

RL 147.18 LAL .00 LOL 116.71 VL 27.580 GAL .54 AZL 83.57 HCA 209.81 SMA 127.27 ECC .15672 INC 6.4259 V1 30.271
RP 108.92 LAP -3.19 LOP 326.36 VP 37.338 GAP 3.56 AZP 95.58 TAL 177.11 TAP 26.92 RCA 107.32 APO 147.21 V2 34.792
RC 117.630 GL 47.10 GP -40.55 ZAL 88.16 ZAP 122.65 ETS 328.73 ZAE 127.10 ETE 219.15 ZAC 111.09 ETC 181.01 CLP-135.23

PLANETOCENTRIC CONIC

C3 17.754 VHL 4.214 DLA 53.62 RAL 1.48 RAD 6567.7 VEL 11.796 PTH 2.09 VHP 4.416 DPA -34.79 RAP 30.80 ECC 1.2922
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.36 17 13 55 4299.96 -36.08 205.63 239.02 47.22 18 25 35 3700.0 -41.27 198.23
137.64 2 9 8 2716.78 -36.07 79.04 239.01 47.21 2 54 25 2116.8 -41.26 71.65
42.36 17 13 55 4299.96 -36.08 205.63 239.02 47.22 18 25 35 3700.0 -41.27 198.23
137.64 2 9 8 2716.78 -36.07 79.04 239.01 47.21 2 54 25 2116.8 -41.26 71.65
42.36 17 13 55 4299.96 -36.08 205.63 239.02 47.22 18 25 35 3700.0 -41.27 198.23
137.64 2 9 8 2716.78 -36.07 79.04 239.01 47.21 2 54 25 2116.8 -41.26 71.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5635 TRA -.3866 TC3-2.7864 BAU .7034 SGT 4295.3 SGR 1755.9 SCS 570.3 ST 3496.6 SR 1535.9 SS 2052.7
RDE 1.1293 RRA -.0157 RC3-1.0095 FAU .09307 RRT .9788 RRF .9932 RTF .9758 CRT .9976 CRS -.9999 CST -.9968
FDE 3.9554 FRA .0317 FC3-4.5385 BSP 14480 SGB 4640.4 R23 .1574 R13 .9808 LSA 4332.9 MSA 158.0 S8A 5.9
BDE 2.8012 BRA .3869 BC3 2.9637 F8P -1964 SGI 4628.3 S62 333.6 THA 21.93 EL1 3817.8 EL2 97.2 ALF 23.68

LAUNCH DATE JAN 17 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 462.210

RL 147.18 LAL .00 LOL 116.71 VL 27.580 GAL .71 AZL 84.02 HCA 212.96 SMA 127.13 ECC .15817 INC 5.9782 V1 30.271
RP 108.91 LAP -3.25 LOP 329.53 VP 37.327 GAP 3.87 AZP 95.02 TAL 176.21 TAP 29.17 RCA 107.02 APO 147.24 V2 34.796
RC 120.015 GL 44.99 GP -36.79 ZAL 86.90 ZAP 126.41 ETS 328.42 ZAE 128.41 ETE 215.18 ZAC 111.44 ETC 179.83 CLP-137.82

PLANETOCENTRIC CONIC

C3 16.482 VHL 4.080 DLA 52.55 RAL 5.08 RAD 6567.7 VEL 11.742 PTH 2.07 VHP 4.577 DPA -31.30 RAP 28.85 ECC 1.2713
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.89 17 32 12 4274.16 -36.27 203.03 240.89 48.96 18 43 26 3674.2 -41.27 195.42
136.31 2 19 35 2708.29 -36.26 78.33 240.88 48.95 3 4 44 2108.3 -41.26 70.73
43.89 17 32 12 4274.16 -36.27 203.03 240.89 48.96 18 43 26 3674.2 -41.27 195.42
136.31 2 19 35 2708.29 -36.26 78.33 240.88 48.95 3 4 44 2108.3 -41.26 70.73
43.89 17 32 12 4274.16 -36.27 203.03 240.89 48.96 18 43 26 3674.2 -41.27 195.42
136.31 2 19 35 2708.29 -36.26 78.33 240.88 48.95 3 4 44 2108.3 -41.26 70.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5448 TRA -.2752 TC3-3.1713 BAU .7291 SGT 4464.9 SGR 1572.0 SCS 581.4 ST 3597.1 SR 1371.5 SS 2026.6
RDE .9715 RRA .0281 RC3 -.9435 FAU .09464 RRT .9767 RRF .9900 RTF .9745 CRT .9977 CRS -.9998 CST -.9965
FDE 3.7949 FRA .2361 FC3-4.9711 BSP 14790 SGB 4735.5 R23 .1551 R13 .9784 LSA 4347.6 MSA 160.5 S8A 6.8
BDE 2.7238 BRA .2766 BC3 3.3087 F8P -2008 SGI 4722.8 S62 319.1 THA 19.07 EL1 3846.7 EL2 86.7 ALF 20.84

LAUNCH DATE JAN 17 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 466.264  
 RL 147.10 LAL .00 LOL 116.71 VL 27.536 GAL .90 AZL 84.40 HCA 216.12 SMA 126.99 ECC .15976 INC 5.6005 V1 30.271  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.315 GAP 4.19 AZP 94.53 TAL 175.26 TAP 31.58 RCA 106.70 APO 147.27 V2 34.800  
 RC 122.394 GL 42.98 GP -33.48 ZAL 85.51 ZAP 129.91 ETS 326.28 ZAE 129.28 ETE 211.55 ZAC 111.88 ETC 178.88 CLP-140.27

PLANETOCENTRIC CONIC  
 CS 15.538 VHL 3.942 DLA 51.57 RAL 8.60 RAD 6567.6 VEL 11.701 PTH 2.06 VHP 4.383 DPA -20.11 RAP 27.63 ECC 1.2557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.91 17 50 0 4252.22 -36.30 200.75 242.96 50.47 19 0 52 3652.2 -41.12 192.95  
 135.09 2 29 54 2703.35 -36.29 77.84 242.95 50.46 3 14 58 2103.4 -41.11 70.06  
 44.91 17 50 0 4252.22 -36.30 200.75 242.96 50.47 19 0 52 3652.2 -41.12 192.95  
 135.09 2 29 54 2703.35 -36.29 77.84 242.95 50.46 3 14 58 2103.4 -41.11 70.06  
 44.91 17 50 0 4252.22 -36.30 200.75 242.96 50.47 19 0 52 3652.2 -41.12 192.95  
 135.09 2 29 54 2703.35 -36.29 77.84 242.95 50.46 3 14 58 2103.4 -41.11 70.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5262 TRA -.1619 TC3-3.5336 BAU .7557 SGT 4824.6 SCR 1409.8 SCS 582.1 ST 3674.6 SR 1227.4 SS 1979.3  
 RDE .8438 RRA .0579 RC3 -.8647 FAU .09440 RRT .9742 RRF .9858 RTF .9736 CRT .9979 CRS -.9997 CST -.9962  
 FDE 3.5990 FRA .4225 FC3-5.2600 BSP 15165 SGB 4834.7 R23 .1452 R13 .9765 LSA 4347.5 MSA 161.3 SSA 7.7  
 BDE 2.6634 BRA .1719 BC3 3.6379 FSP -2015 SGI 4825.0 SGI 304.8 THA 16.61 EL1 3873.4 EL2 74.8 ALF 18.44

LAUNCH DATE JAN 17 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC DISTANCE 474.301  
 RL 147.18 LAL .00 LOL 116.71 VL 27.518 GAL 1.10 AZL 84.72 HCA 219.28 SMA 126.84 ECC .16148 INC 5.2759 V1 30.271  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.303 GAP 4.50 AZP 94.09 TAL 174.28 TAP 33.56 RCA 106.35 APO 147.32 V2 34.805  
 RC 124.766 GL 41.05 GP -30.56 ZAL 83.98 ZAP 133.15 ETS 328.24 ZAE 129.80 ETE 208.27 ZAC 112.43 ETC 178.12 CLP-142.58

PLANETOCENTRIC CONIC  
 CS 14.857 VHL 3.852 DLA 50.66 RAL 12.08 RAD 6567.6 VEL 11.671 PTH 2.05 VHP 4.424 DPA -25.19 RAP 26.84 ECC 1.2442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.07 18 7 28 4233.58 -36.21 198.68 245.22 51.78 19 18 1 3633.6 -40.87 190.78  
 133.93 2 40 10 2701.32 -36.19 77.53 245.21 51.77 3 25 11 2101.3 -40.86 69.63  
 46.07 18 7 28 4233.58 -36.21 198.68 245.22 51.78 19 18 1 3633.6 -40.87 190.78  
 133.93 2 40 10 2701.32 -36.19 77.53 245.21 51.77 3 25 11 2101.3 -40.86 69.63  
 46.07 18 7 28 4233.58 -36.21 198.68 245.22 51.78 19 18 1 3633.6 -40.87 190.78  
 133.93 2 40 10 2701.32 -36.19 77.53 245.21 51.77 3 25 11 2101.3 -40.86 69.63

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5093 TRA -.0426 TC3-3.8622 BAU .7814 SGT 4774.4 SCR 1268.9 SCS 574.9 ST 3733.7 SR 1103.1 SS 1919.4  
 RDE .7419 RRA .0794 RC3 -.7764 FAU .09249 RRT .9706 RRF .9793 RTF .9728 CRT .9983 CRS -.9994 CST -.9958  
 FDE 3.5630 FRA .5981 FC3-5.3970 BSP 15335 SGB 4940.1 R23 .1305 R13 .9750 LSA 4358.2 MSA 162.0 SSA 8.6  
 BDE 2.6167 BRA .0801 BC3 3.9395 FSP -1989 SGI 4931.2 SGI 295.9 THA 14.52 EL1 3893.3 EL2 62.6 ALF 16.46

LAUNCH DATE JAN 17 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC DISTANCE 480.323  
 RL 147.18 LAL .00 LOL 116.71 VL 27.492 GAL 1.31 AZL 85.01 HCA 222.44 SMA 126.68 ECC .16336 INC 4.9922 V1 30.271  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.292 GAP 4.81 AZP 93.69 TAL 173.27 TAP 35.70 RCA 105.99 APO 147.38 V2 34.811  
 RC 127.128 GL 39.19 GP -28.00 ZAL 82.33 ZAP 136.14 ETS 328.26 ZAE 130.07 ETE 205.37 ZAC 113.12 ETC 177.51 CLP-144.75

PLANETOCENTRIC CONIC  
 CS 14.326 VHL 3.785 DLA 49.79 RAL 15.53 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 4.492 DPA -22.51 RAP 26.43 ECC 1.2358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.16 18 24 44 4217.54 -36.00 196.85 247.65 52.94 19 35 1 3617.5 -40.54 188.86  
 132.84 2 50 25 2701.80 -35.99 77.38 247.64 52.93 3 35 27 2101.8 -40.53 69.40  
 47.16 18 24 44 4217.54 -36.00 196.85 247.65 52.94 19 35 1 3617.5 -40.54 188.86  
 132.84 2 50 25 2701.80 -35.99 77.38 247.64 52.93 3 35 27 2101.8 -40.53 69.40  
 47.16 18 24 44 4217.54 -36.00 196.85 247.65 52.94 19 35 1 3617.5 -40.54 188.86  
 132.84 2 50 25 2701.80 -35.99 77.38 247.64 52.93 3 35 27 2101.8 -40.53 69.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4936 TRA .0849 TC3-4.1483 BAU .8052 SGT 4914.2 SCR 1148.3 SCS 561.8 ST 3776.4 SR 1002.8 SS 1852.1  
 RDE .6609 RRA .0953 RC3 -.6835 FAU .08922 RRT .9651 RRF .9711 RTF .9721 CRT .9987 CRS -.9989 CST -.9954  
 FDE 3.1317 FRA .7573 FC3-5.3914 BSP 15867 SGB 5046.8 R23 .1150 R13 .9737 LSA 4321.0 MSA 162.7 SSA 9.5  
 BDE 2.5797 BRA .1276 BC3 4.2042 FSP -1935 SGI 5038.1 SGI 293.5 THA 12.75 EL1 3907.0 EL2 50.3 ALF 14.86

LAUNCH DATE JAN 17 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC DISTANCE 486.327  
 RL 147.18 LAL .00 LOL 116.71 VL 27.468 GAL 1.53 AZL 85.26 HCA 225.60 SMA 126.52 ECC .16540 INC 4.7408 V1 30.271  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.280 GAP 5.13 AZP 93.32 TAL 172.22 TAP 37.82 RCA 105.59 APO 147.45 V2 34.818  
 RC 129.481 GL 37.38 GP -25.74 ZAL 80.57 ZAP 138.91 ETS 328.30 ZAE 130.15 ETE 202.82 ZAC 113.93 ETC 177.03 CLP-146.80

PLANETOCENTRIC CONIC  
 CS 13.871 VHL 3.738 DLA 48.98 RAL 18.96 RAD 6567.6 VEL 11.634 PTH 2.04 VHP 4.581 DPA -20.05 RAP 26.33 ECC 1.2299  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.23 18 41 55 4203.60 -35.71 195.18 250.23 53.96 19 51 59 3603.6 -40.13 187.14  
 131.77 3 0 37 2704.67 -35.70 77.41 250.22 53.95 3 45 41 2104.7 -40.12 69.36  
 48.23 18 41 55 4203.60 -35.71 195.18 250.23 53.96 19 51 59 3603.6 -40.13 187.14  
 131.77 3 0 37 2704.67 -35.70 77.41 250.22 53.95 3 45 41 2104.7 -40.12 69.36  
 48.23 18 41 55 4203.60 -35.71 195.18 250.23 53.96 19 51 59 3603.6 -40.13 187.14  
 131.77 3 0 37 2704.67 -35.70 77.41 250.22 53.95 3 45 41 2104.7 -40.12 69.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4732 TRA .2162 TC3-4.4033 BAU .8300 SGT 5046.1 SCR 1045.5 SCS 544.8 ST 3795.5 SR 915.9 SS 1774.7  
 RDE .5955 RRA .1056 RC3 -.5968 FAU .08552 RRT .9579 RRF .9608 RTF .9717 CRT .9991 CRS -.9982 CST -.9949  
 FDE 2.8950 FRA .8981 FC3-5.2992 BSP 16256 SGB 5153.3 R23 .0932 R13 .9728 LSA 4265.7 MSA 162.8 SSA 10.3  
 BDE 2.5439 BRA .2406 BC3 4.4436 FSP -1876 SGI 5144.9 SGI 294.3 THA 11.26 EL1 3904.2 EL2 37.8 ALF 13.56

LAUNCH DATE JAN 17 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 492.314

RL 147.18 LAL .00 LOL 116.71 VL 27.443 GAL 1.77 AZL 85.48 HCA 228.76 SMA 126.36 ECC .16759 INC 4.5190 V1 30.271
RP 108.82 LAP -3.39 LOP 345.38 VP 37.268 GAP 5.44 AZP 92.98 TAL 171.14 TAP 39.90 RCA 105.18 APO 147.53 V2 34.825
RC 131.823 GL 35.62 GP -23.76 ZAL 78.72 ZAP 141.47 ETS 328.35 ZAE 130.10 ETE 200.59 ZAC 114.88 ETC 176.65 CLP-148.73

PLANETOCENTRIC CONIC

C3 13.748 VHL 3.708 DLA 48.15 RAL 22.38 RAD 6567.5 VEL 11.625 PTH 2.04 VHP 4.689 DPA -17.77 RAP 26.49 ECC 1.2263
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.27 18 59 6 4191.49 -35.34 193.66 252.97 54.87 20 8 57 3591.5 -39.65 185.58
130.73 3 10 44 2709.73 -35.33 77.58 252.96 54.86 3 55 54 2109.7 -39.64 69.50
49.27 18 59 6 4191.49 -35.34 193.66 252.97 54.87 20 8 57 3591.5 -39.65 185.58
130.73 3 10 44 2709.73 -35.33 77.58 252.96 54.86 3 55 54 2109.7 -39.64 69.50
49.27 18 59 6 4191.49 -35.34 193.66 252.97 54.87 20 8 57 3591.5 -39.65 185.58
130.73 3 10 44 2709.73 -35.33 77.58 252.96 54.86 3 55 54 2109.7 -39.64 69.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4498 TRA .3542 TC3-4.6178 BAU .8540 SGT 5170.1 SGR 959.0 SCS 525.2 ST 3794.9 SR 843.4 SS 1892.2
RDE .5434 RRA .1126 RC3 -.5162 FAU .08144 RRT .9487 RRF .9480 RTF .9716 CRT .9995 CRS -.9960 CST -.9945
FDE 2.6634 FRA 1.0177 FC3-5.1282 B8P 16644 SGB 5258.3 R23 .0733 R13 .9724 LSA 4236.7 MSA 162.6 SSA 11.2
BDE 2.5093 BRA .3717 BC3 4.6466 F8P -1809 SGI 5249.8 SGE 298.7 THA 10.01 EL1 3887.4 EL2 23.8 ALF 12.52

LAUNCH DATE JAN 17 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 498.283

RL 147.18 LAL .00 LOL 116.71 VL 27.418 GAL 2.02 AZL 85.89 HCA 231.93 SMA 126.19 ECC .16995 INC 4.3100 V1 30.271
RP 108.79 LAP -3.39 LOP 348.56 VP 37.257 GAP 5.76 AZP 92.66 TAL 170.03 TAP 41.96 RCA 104.74 APO 147.63 V2 34.833
RC 134.153 GL 33.88 GP -22.01 ZAL 78.78 ZAP 143.84 ETS 328.37 ZAE 129.97 ETE 196.65 ZAC 115.94 ETC 176.33 CLP-150.56

PLANETOCENTRIC CONIC

C3 13.643 VHL 3.694 DLA 47.35 RAL 23.78 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 4.810 DPA -15.86 RAP 26.88 ECC 1.2245
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.32 19 16 18 4180.87 -34.90 192.25 255.83 55.69 20 25 59 3580.9 -39.11 184.15
129.68 3 20 44 2716.99 -34.88 77.91 255.82 55.68 4 6 1 2117.0 -39.10 69.81
50.32 19 16 18 4180.87 -34.90 192.25 255.83 55.69 20 25 59 3580.9 -39.11 184.15
129.68 3 20 44 2716.99 -34.88 77.91 255.82 55.68 4 6 1 2117.0 -39.10 69.81
50.32 19 16 18 4180.87 -34.90 192.25 255.83 55.69 20 25 59 3580.9 -39.11 184.15
129.68 3 20 44 2716.99 -34.88 77.91 255.82 55.68 4 6 1 2117.0 -39.10 69.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4225 TRA .5002 TC3-4.7887 BAU .8771 SGT 5286.5 SGR 886.8 SCS 504.1 ST 3775.0 SR 783.4 SS 1807.0
RDE .5025 RRA .1178 RC3 -.4421 FAU .07708 RRT .9368 RRF .9327 RTF .9715 CRT .9996 CRS -.9951 CST -.9939
FDE 2.4412 FRA 1.1258 FC3-4.8915 B8P 17034 SGB 5360.3 R23 .0596 R13 .9720 LSA 4173.7 MSA 162.8 SSA 12.0
BDE 2.4740 BRA .5139 BC3 4.8091 F8P -1739 SGI 5351.6 SGE 306.4 THA 8.96 EL1 3855.4 EL2 15.2 ALF 11.72

LAUNCH DATE JAN 17 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 504.234

RL 147.18 LAL .00 LOL 116.71 VL 27.392 GAL 2.29 AZL 85.88 HCA 235.09 SMA 126.01 ECC .17250 INC 4.1220 V1 30.271
RP 108.77 LAP -3.38 LOP 351.73 VP 37.245 GAP 6.08 AZP 92.36 TAL 168.90 TAP 43.99 RCA 104.28 APO 147.75 V2 34.841
RC 136.471 GL 32.18 GP -20.47 ZAL 74.76 ZAP 146.04 ETS 328.36 ZAE 129.77 ETE 196.97 ZAC 117.12 ETC 176.07 CLP-152.29

PLANETOCENTRIC CONIC

C3 13.646 VHL 3.694 DLA 46.55 RAL 29.18 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 4.945 DPA -13.70 RAP 27.46 ECC 1.2246
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.38 19 33 35 4171.50 -34.37 190.93 258.80 56.44 20 43 7 3571.5 -38.51 182.82
128.62 3 30 31 2726.47 -34.36 78.39 258.79 56.43 4 15 57 2126.5 -38.50 70.28
51.38 19 33 35 4171.50 -34.37 190.93 258.80 56.44 20 43 7 3571.5 -38.51 182.82
128.62 3 30 31 2726.47 -34.36 78.39 258.79 56.43 4 15 57 2126.5 -38.50 70.28
51.38 19 33 35 4171.50 -34.37 190.93 258.80 56.44 20 43 7 3571.5 -38.51 182.82
128.62 3 30 31 2726.47 -34.36 78.39 258.79 56.43 4 15 57 2126.5 -38.50 70.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3945 TRA .6573 TC3-4.9052 BAU .8975 SGT 5396.6 SGR 827.8 SCS 482.4 ST 3742.0 SR 733.0 SS 1523.9
RDE .4708 RRA .1223 RC3 -.3733 FAU .07238 RRT .9222 RRF .9152 RTF .9714 CRT .9996 CRS -.9924 CST -.9933
FDE 2.2355 FRA 1.2257 FC3-4.5919 B8P 17318 SGB 5459.8 R23 .0419 R13 .9718 LSA 4103.4 MSA 163.7 SSA 12.8
BDE 2.4403 BRA .6685 BC3 4.9194 F8P -1652 SGI 5450.6 SGE 316.9 THA 8.08 EL1 3813.5 EL2 13.6 ALF 11.11

LAUNCH DATE JAN 17 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 510.186

RL 147.18 LAL .00 LOL 116.71 VL 27.365 GAL 2.37 AZL 86.05 HCA 238.26 SMA 125.84 ECC .17524 INC 3.9479 V1 30.271
RP 108.74 LAP -3.36 LOP 354.81 VP 37.234 GAP 6.41 AZP 92.06 TAL 167.74 TAP 46.00 RCA 103.79 APO 147.89 V2 34.850
RC 138.775 GL 30.90 GP -19.10 ZAL 72.67 ZAP 148.09 ETS 328.29 ZAE 129.55 ETE 195.52 ZAC 118.40 ETC 175.85 CLP-153.94

PLANETOCENTRIC CONIC

C3 13.753 VHL 3.708 DLA 45.73 RAL 32.55 RAD 6567.5 VEL 11.625 PTH 2.04 VHP 5.092 DPA -11.86 RAP 28.22 ECC 1.2263
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.46 19 50 58 4163.12 -33.78 189.67 261.86 57.12 21 0 21 3563.1 -37.84 181.58
127.54 3 40 0 2738.24 -33.77 79.02 261.85 57.11 4 25 38 2138.2 -37.83 70.93
52.46 19 50 58 4163.12 -33.78 189.67 261.86 57.12 21 0 21 3563.1 -37.84 181.58
127.54 3 40 0 2738.24 -33.77 79.02 261.85 57.11 4 25 38 2138.2 -37.83 70.93
52.46 19 50 58 4163.12 -33.78 189.67 261.86 57.12 21 0 21 3563.1 -37.84 181.58
127.54 3 40 0 2738.24 -33.77 79.02 261.85 57.11 4 25 38 2138.2 -37.83 70.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3480 TRA .8199 TC3-4.9853 BAU .9184 SGT 5498.8 SGR 778.6 SCS 460.1 ST 3685.2 SR 693.9 SS 1436.6
RDE .4459 RRA .1293 RC3 -.3148 FAU .06793 RRT .9055 RRF .8935 RTF .9715 CRT .9994 CRS -.9887 CST -.9927
FDE 2.0364 FRA 1.3093 FC3-4.2782 B8P 17674 SGB 5593.7 R23 .0297 R13 .9718 LSA 4012.3 MSA 164.7 SSA 13.6
BDE 2.3998 BRA .8294 BC3 4.9953 F8P -1577 SGI 5544.0 SGE 327.7 THA 7.33 EL1 3749.9 EL2 23.4 ALF 10.66

LAUNCH DATE JAN 17 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 516.077

RL 147.18 LAL .00 LOL 116.71 VL 27.337 GAL 2.87 AZL 86.21 HCA 241.43 SMA 125.66 ECC .17818 INC 3.7852 V1 30.271  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.223 GAP 6.75 AZP 91.81 TAL 166.56 TAP 47.99 RCA 103.27 APO 148.05 V2 34.860  
 RC 141.067 GL 28.84 GP -17.88 ZAL 70.54 ZAP 150.01 ETS 328.16 ZAE 129.31 EYE 194.25 ZAC 119.77 ETC 175.66 CLP-155.51

PLANETOCENTRIC CONIC

C3 13.962 VHL 3.737 DLA 44.90 RAL 35.88 RAD 6567.5 VEL 11.634 PTH 2.04 VHP 5.249 DPA -10.13 RAP 29.13 ECC 1.2298  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.58 20 8 26 4155.62 -33.12 188.47 265.01 57.75 21 17 41 3555.6 -37.10 180.40  
 126.42 3 49 7 2752.35 -33.11 79.82 265.00 57.74 4 35 0 2152.4 -37.09 71.76  
 53.58 20 8 26 4155.62 -33.12 188.47 265.01 57.75 21 17 41 3555.6 -37.10 180.40  
 126.42 3 49 7 2752.35 -33.11 79.82 265.00 57.74 4 35 0 2152.4 -37.09 71.76  
 53.58 20 8 26 4155.62 -33.12 188.47 265.01 57.75 21 17 41 3555.6 -37.10 180.40  
 126.42 3 49 7 2752.35 -33.11 79.82 265.00 57.74 4 35 0 2152.4 -37.09 71.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3158 TRA .9909 TC3-5.0213 BAU .9385 86T 5593.9 86R 738.2 863 437.8 ST 3610.7 SR 660.0 SS 1349.5  
 RDE .4269 RRA .1284 RC3 -.2844 FAU .06361 RRT .8889 RRF .8743 RTF .9718 CRT .9984 CRS -.9837 CST -.9919  
 FDE 1.8493 FRA 1.3820 FC3-3.9441 B8P 18023 86B 5642.4 R23 .0199 R13 .9720 LSA 3907.2 MSA 166.5 S3A 14.2  
 BDE 2.3549 BRA .9991 BC3 5.0283 F8P -1505 861 5632.2 862 338.6 THA 6.70 EL1 3670.3 EL2 37.0 ALF 10.34

LAUNCH DATE JAN 17 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 521.967

RL 147.18 LAL .00 LOL 116.71 VL 27.310 GAL 3.18 AZL 86.37 HCA 244.61 SMA 125.48 ECC .18134 INC 3.6320 V1 30.271  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.212 GAP 7.09 AZP 91.56 TAL 165.36 TAP 49.96 RCA 102.73 APO 148.24 V2 34.870  
 RC 143.344 GL 27.21 GP -16.79 ZAL 68.37 ZAP 151.80 ETS 327.95 ZAE 129.06 EYE 193.15 ZAC 121.24 ETC 175.48 CLP-157.01

PLANETOCENTRIC CONIC

C3 14.274 VHL 3.778 DLA 44.04 RAL 39.17 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 5.416 DPA -8.49 RAP 30.17 ECC 1.2349  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.74 20 26 1 4148.71 -32.38 187.29 268.21 58.34 21 35 10 3548.7 -36.30 179.26  
 125.26 3 57 44 2769.01 -32.37 80.80 268.20 58.33 4 43 53 2169.0 -36.29 72.76  
 54.74 20 26 1 4148.71 -32.38 187.29 268.21 58.34 21 35 10 3548.7 -36.30 179.26  
 125.26 3 57 44 2769.01 -32.37 80.80 268.20 58.33 4 43 53 2169.0 -36.29 72.76  
 54.74 20 26 1 4148.71 -32.38 187.29 268.21 58.34 21 35 10 3548.7 -36.30 179.26  
 125.26 3 57 44 2769.01 -32.37 80.80 268.20 58.33 4 43 53 2169.0 -36.29 72.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2696 TRA 1.1725 TC3-5.0100 BAU .9570 86T 5683.1 86R 705.5 863 418.0 ST 3522.9 SR 632.2 SS 1265.2  
 RDE .4132 RRA .1317 RC3 -.2207 FAU .05932 RRT .8889 RRF .8523 RTF .9720 CRT .9985 CRS -.9770 CST -.9911  
 FDE 1.6782 FRA 1.4480 FC3-3.5980 B8P 18343 86B 5726.7 R23 .0130 R13 .9721 LSA 3792.4 MSA 169.5 S3A 14.8  
 BDE 2.3069 BRA 1.1799 BC3 5.0148 F8P -1433 861 5716.0 862 349.7 THA 6.16 EL1 3578.8 EL2 52.1 ALF 10.14

LAUNCH DATE JAN 17 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 527.835

RL 147.18 LAL .00 LOL 116.71 VL 27.282 GAL 3.51 AZL 86.51 HCA 247.78 SMA 125.30 ECC .18473 INC 3.4865 V1 30.271  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.201 GAP 7.44 AZP 91.32 TAL 164.14 TAP 51.92 RCA 102.15 APO 148.45 V2 34.860  
 RC 143.808 GL 25.80 GP -15.83 ZAL 66.17 ZAP 153.49 ETS 327.65 ZAE 128.82 EYE 192.20 ZAC 122.78 ETC 175.32 CLP-158.45

PLANETOCENTRIC CONIC

C3 14.693 VHL 3.833 DLA 43.17 RAL 42.40 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 5.594 DPA -6.94 RAP 31.33 ECC 1.2418  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.94 20 43 42 4142.32 -31.58 186.14 271.47 58.89 21 52 44 3542.3 -35.44 178.15  
 124.06 4 5 49 2788.25 -31.57 81.95 271.46 58.87 4 52 17 2188.3 -35.43 73.96  
 55.94 20 43 42 4142.32 -31.58 186.14 271.47 58.89 21 52 44 3542.3 -35.44 178.15  
 124.06 4 5 49 2788.25 -31.57 81.95 271.46 58.87 4 52 17 2188.3 -35.43 73.96  
 55.94 20 43 42 4142.32 -31.58 186.14 271.47 58.89 21 52 44 3542.3 -35.44 178.15  
 124.06 4 5 49 2788.25 -31.57 81.95 271.46 58.87 4 52 17 2188.3 -35.43 73.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2208 TRA 1.3671 TC3-4.9482 BAU .9727 86T 5767.1 86R 679.6 863 395.1 ST 3426.2 SR 609.7 SS 1185.7  
 RDE .4040 RRA .1358 RC3 -.1827 FAU .05505 RRT .8481 RRF .8303 RTF .9721 CRT .9935 CRS -.9684 CST -.9902  
 FDE 1.5184 FRA 1.5100 FC3-3.2436 B8P 18567 86B 5807.0 R23 .0086 R13 .9722 LSA 3672.3 MSA 173.9 S3A 15.2  
 BDE 2.2573 BRA 1.3758 BC3 4.9516 F8P -1355 861 5795.8 862 360.4 THA 5.72 EL1 3479.3 EL2 68.1 ALF 10.03

LAUNCH DATE JAN 17 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 533.677

RL 147.18 LAL .00 LOL 116.71 VL 27.253 GAL 3.86 AZL 86.85 HCA 250.96 SMA 125.12 ECC .18838 INC 3.3475 V1 30.271  
 RP 108.61 LAP -3.18 LOP 7.64 VP 37.190 GAP 7.80 AZP 91.09 TAL 162.91 TAP 53.86 RCA 101.55 APO 148.69 V2 34.891  
 RC 147.837 GL 24.01 GP -14.96 ZAL 63.96 ZAP 155.08 ETS 327.25 ZAE 128.58 EYE 193.56 ZAC 124.39 ETC 175.15 CLP-159.83

PLANETOCENTRIC CONIC

C3 15.226 VHL 3.902 DLA 42.27 RAL 45.55 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 5.782 DPA -5.46 RAP 32.59 ECC 1.2506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.20 21 1 27 4136.30 -30.71 185.00 274.75 59.40 22 10 23 3536.3 -34.52 177.06  
 122.80 4 13 14 2810.19 -30.70 83.28 274.75 59.39 5 0 4 2210.2 -34.51 75.34  
 57.20 21 1 27 4136.30 -30.71 185.00 274.75 59.40 22 10 23 3536.3 -34.52 177.06  
 122.80 4 13 14 2810.19 -30.70 83.28 274.75 59.39 5 0 4 2210.2 -34.51 75.34  
 57.20 21 1 27 4136.30 -30.71 185.00 274.75 59.40 22 10 23 3536.3 -34.52 177.06  
 122.80 4 13 14 2810.19 -30.70 83.28 274.75 59.39 5 0 4 2210.2 -34.51 75.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1635 TRA 1.5880 TC3-4.8566 BAU .9891 86T 5843.8 86R 657.9 863 374.6 ST 3313.1 SR 590.2 SS 1106.8  
 RDE .3979 RRA .1401 RC3 -.1524 FAU .05114 RRT .8252 RRF .8085 RTF .9723 CRT .9892 CRS -.9575 CST -.9892  
 FDE 1.3688 FRA 1.5684 FC3-2.9077 B8P 18870 86B 5880.7 R23 .0031 R13 .9724 LSA 3538.0 MSA 179.7 S3A 15.5  
 BDE 2.1998 BRA 1.5753 BC3 4.8590 F8P -1290 861 5869.0 862 370.0 THA 5.33 EL1 3364.2 EL2 85.0 ALF 10.00

LAUNCH DATE JAN 17 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 539.493

RL 147.18 LAL .00 LOL 116.71 VL 27.225 GAL 4.23 AZL 86.79 HCA 254.14 SMA 124.93 ECC .19230 INC 3.2135 V1 30.271
RP 108.50 LAP -2.09 LOP 10.82 VP 37.180 GAP 8.17 AZP 90.88 TAL 161.66 TAP 55.80 RCA 100.91 APO 148.96 V2 34.902
RC 150.092 GL 22.45 GP -14.18 ZAL 61.74 ZAP 156.58 ETS 326.74 ZAE 128.35 ETE 190.63 ZAC 126.07 ETC 174.98 CLP-161.16

PLANETOCENTRIC CONIC

C3 15.800 VHL 3.905 DLA 41.34 RAL 48.63 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 5.980 DPA -4.05 RAP 33.95 ECC 1.2613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.52 21 19 19 4130.44 -29.78 183.86 278.07 59.88 22 28 9 3530.4 -33.54 175.98
121.48 4 19 54 2835.05 -29.77 84.82 278.06 59.87 5 7 9 2235.0 -33.53 76.93
58.52 21 19 19 4130.44 -29.78 183.86 278.07 59.88 22 28 9 3530.4 -33.54 175.98
121.48 4 19 54 2835.05 -29.77 84.82 278.06 59.87 5 7 9 2235.0 -33.53 76.93
58.52 21 19 19 4130.44 -29.78 183.86 278.07 59.88 22 28 9 3530.4 -33.54 175.98
121.48 4 19 54 2835.05 -29.77 84.82 278.06 59.87 5 7 9 2235.0 -33.53 76.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1015 TRA 1.7821 TC3-4.7271 BAU 1.0040 SGT 5913.7 SGR 640.1 SCS 354.9 ST 3192.3 SR 573.6 SS 1032.1
RDE .3947 RRA .1453 RC3 -.1274 FAU .04739 RRT .8049 RRF .7876 RTF .9725 CRT .9833 CRS -.9439 CST -.9880
FDE 1.2308 FRA 1.8096 FC3-2.5835 B8P 19144 SGB 5948.2 R23 .0027 R13 .9726 LSA 3598.5 HSA 187.2 SSA 15.7
BDE 2.1382 BRA 1.7880 BC3 4.7289 F8P -1226 SGI 5938.2 S62 378.4 THA 5.00 EL1 3241.8 EL2 102.9 ALF 10.03

LAUNCH DATE JAN 17 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 545.281

RL 147.18 LAL .00 LOL 116.71 VL 27.198 GAL 4.62 AZL 86.92 HCA 257.32 SMA 124.75 ECC .19651 INC 3.0837 V1 30.271
RP 108.54 LAP -3.01 LOP 14.01 VP 37.170 GAP 8.55 AZP 90.88 TAL 160.40 TAP 57.72 RCA 100.23 APO 149.28 V2 34.914
RC 152.312 GL 20.93 GP -13.48 ZAL 59.54 ZAP 158.00 ETS 326.11 ZAE 128.13 ETE 190.00 ZAC 127.81 ETC 174.81 CLP-162.45

PLANETOCENTRIC CONIC

C3 16.887 VHL 4.082 DLA 40.40 RAL 51.81 RAD 6567.7 VEL 11.749 PTH 2.07 VHP 6.189 DPA -2.70 RAP 35.38 ECC 1.2743
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.89 21 37 16 4124.59 -28.80 182.71 281.39 60.34 22 46 1 3524.6 -32.51 174.89
120.11 4 25 44 2862.95 -28.79 86.57 281.38 60.33 5 13 27 2262.9 -32.50 78.74
59.89 21 37 16 4124.59 -28.80 182.71 281.39 60.34 22 46 1 3524.6 -32.51 174.89
120.11 4 25 44 2862.95 -28.79 86.57 281.38 60.33 5 13 27 2262.9 -32.50 78.74
59.89 21 37 16 4124.59 -28.80 182.71 281.39 60.34 22 46 1 3524.6 -32.51 174.89
120.11 4 25 44 2862.95 -28.79 86.57 281.38 60.33 5 13 27 2262.9 -32.50 78.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0348 TRA 2.0073 TC3-4.5653 BAU 1.0175 SGT 5978.0 SGR 625.4 SCS 336.1 ST 3066.0 SR 559.1 SS 962.0
RDE .3939 RRA .1514 RC3 -.1069 FAU .04381 RRT .7855 RRF .7681 RTF .9787 CRT .9753 CRS -.9273 CST -.9868
FDE 1.1035 FRA 1.8532 FC3-2.2736 B8P 19405 SGB 6010.7 R23 .0014 R13 .9727 LSA 3255.8 HSA 196.4 SSA 15.7
BDE 2.0727 BRA 2.0130 BC3 4.5665 F8P -1166 SGI 5998.3 S62 385.7 THA 4.72 EL1 3114.2 EL2 121.5 ALF 10.10

LAUNCH DATE JAN 17 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 551.036

RL 147.18 LAL .00 LOL 116.71 VL 27.167 GAL 5.04 AZL 87.04 HCA 260.50 SMA 124.56 ECC .20104 INC 2.9569 V1 30.271
RP 108.50 LAP -2.92 LOP 17.20 VP 37.160 GAP 8.95 AZP 90.49 TAL 159.14 TAP 59.64 RCA 99.52 APO 149.61 V2 34.926
RC 154.516 GL 19.44 GP -12.85 ZAL 57.36 ZAP 159.35 ETS 325.34 ZAE 127.92 ETE 189.44 ZAC 129.59 ETC 174.62 CLP-163.69

PLANETOCENTRIC CONIC

C3 17.598 VHL 4.195 DLA 39.44 RAL 54.49 RAD 6567.7 VEL 11.789 PTH 2.08 VHP 6.409 DPA -1.40 RAP 36.90 ECC 1.2896
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.31 21 55 19 4118.62 -27.76 181.55 284.73 60.78 23 3 58 3518.6 -31.43 173.78
118.69 4 30 41 2894.02 -27.75 88.53 284.72 60.76 5 18 55 2294.0 -31.41 80.76
61.31 21 55 19 4118.62 -27.76 181.55 284.73 60.78 23 3 58 3518.6 -31.43 173.78
118.69 4 30 41 2894.02 -27.75 88.53 284.72 60.76 5 18 55 2294.0 -31.41 80.76
61.31 21 55 19 4118.62 -27.76 181.55 284.73 60.78 23 3 58 3518.6 -31.43 173.78
118.69 4 30 41 2894.02 -27.75 88.53 284.72 60.76 5 18 55 2294.0 -31.41 80.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9647 TRA 2.2459 TC3-4.3738 BAU 1.0293 SGT 6037.0 SGR 615.2 SCS 318.3 ST 2938.1 SR 546.4 SS 897.7
RDE .3953 RRA .1587 RC3 -.0903 FAU .04038 RRT .7677 RRF .7504 RTF .9728 CRT .9650 CRS -.9073 CST -.9856
FDE .9872 FRA 1.8941 FC3-1.9865 B8P 19633 SGB 6068.0 R23 .0008 R13 .9728 LSA 3113.5 HSA 207.3 SSA 15.6
BDE 2.0041 BRA 2.2516 BC3 4.3747 F8P -1107 SGI 6055.4 S62 391.8 THA 4.48 EL1 2985.2 EL2 141.0 ALF 10.20

LAUNCH DATE JAN 17 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 558.758

RL 147.18 LAL .00 LOL 116.71 VL 27.138 GAL 5.48 AZL 87.17 HCA 263.69 SMA 124.38 ECC .20592 INC 2.8324 V1 30.271
RP 108.47 LAP -2.82 LOP 20.39 VP 37.150 GAP 9.36 AZP 90.31 TAL 157.87 TAP 61.55 RCA 98.77 APO 149.99 V2 34.938
RC 158.704 GL 17.98 GP -12.27 ZAL 55.21 ZAP 160.63 ETS 324.40 ZAE 127.73 ETE 188.95 ZAC 131.42 ETC 174.40 CLP-164.90

PLANETOCENTRIC CONIC

C3 18.692 VHL 4.323 DLA 38.47 RAL 57.27 RAD 6567.8 VEL 11.835 PTH 2.10 VHP 6.642 DPA -.16 RAP 38.48 ECC 1.3076
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.79 22 13 28 4112.44 -26.68 180.35 288.06 61.19 23 22 1 3512.4 -30.30 172.65
117.21 4 34 41 2928.36 -26.67 90.72 288.05 61.18 5 23 29 2328.4 -30.29 83.02
62.79 22 13 28 4112.44 -26.68 180.35 288.06 61.19 23 22 1 3512.4 -30.30 172.65
117.21 4 34 41 2928.36 -26.67 90.72 288.05 61.18 5 23 29 2328.4 -30.29 83.02
62.79 22 13 28 4112.44 -26.68 180.35 288.06 61.19 23 22 1 3512.4 -30.30 172.65
117.21 4 34 41 2928.36 -26.67 90.72 288.05 61.18 5 23 29 2328.4 -30.29 83.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8932 TRA 2.5003 TC3-4.1537 BAU 1.0381 SGT 6091.5 SGR 603.1 SCS 301.6 ST 2814.0 SR 535.1 SS 840.4
RDE .3988 RRA .1674 RC3 -.0763 FAU .03703 RRT .7517 RRF .7351 RTF .9728 CRT .9521 CRS -.8840 CST -.9844
FDE .8824 FRA 1.7340 FC3-1.7151 B8P 18791 SGB 6121.3 R23 .0011 R13 .9728 LSA 2977.1 HSA 219.6 SSA 15.5
BDE 1.9347 BRA 2.5059 BC3 4.1544 F8P -1047 SGI 6108.4 S62 396.6 THA 4.27 EL1 2859.9 EL2 161.0 ALF 10.29

LAUNCH DATE JAN 17 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 562.439

RL 147.10 LAL .00 LOL 116.71 VL 27.108 GAL 5.94 AZL 87.29 HCA 266.87 SMA 124.19 ECC .21118 INC 2.7094 V1 30.271
RP 108.43 LAP -2.71 LOP 23.58 VP 37.140 GAP 9.80 AZP 90.15 TAL 156.59 TAP 63.47 RCA 97.97 APO 150.42 V2 34.951
RC 158.875 GL 16.57 GP -11.76 ZAL 53.10 ZAP 161.86 ETS 325.29 ZAE 127.54 ETE 188.51 ZAC 133.29 ETC 174.16 CLP-166.08

PLANETOCENTRIC CONIC

C3 19.965 VHL 4.468 DLA 37.49 RAL 59.93 RAD 6567.8 VEL 11.889 PTH 2.11 VHP 6.888 DPA 1.03 RAP 40.13 ECC 1.3286
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
64.33 22 31 47 4105.73 -25.56 179.12 291.39 61.58 23 40 13 3505.7 -29.14 171.48
115.67 4 37 38 2966.24 -25.54 93.15 291.38 61.57 5 27 4 2366.2 -29.13 85.51
64.33 22 31 47 4105.73 -25.56 179.12 291.39 61.58 23 40 13 3505.7 -29.14 171.48
115.67 4 37 38 2966.24 -25.54 93.15 291.38 61.57 5 27 4 2366.2 -29.13 85.51
64.33 22 31 47 4105.73 -25.56 179.12 291.39 61.58 23 40 13 3505.7 -29.14 171.48
115.67 4 37 38 2966.24 -25.54 93.15 291.38 61.57 5 27 4 2366.2 -29.13 85.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8151 TRA 2.7656 TC3-3.9219 BAU 1.0470 SGT 6130.2 SGR 593.5 SCS 285.5 ST 2688.1 SR 523.9 SS 787.0
RDE .4031 RRA 1.789 RC3 -.0657 FAU .03396 RRT .7374 RRF .7212 RTF .9729 CRT .9359 CRS -.8565 CST -.9832
FDE .7842 FRA 1.7695 FC3-1.4727 BSP 20007 SGB 6166.9 R23 .0011 R13 .9729 LSA 2839.9 MSA 233.3 SSA 15.2
BDE 1.8593 BRA 2.7712 BC3 3.9223 FSP -996 SGI 6153.9 SGE 399.9 THA 4.10 EL1 2732.7 EL2 181.5 ALF 10.38

LAUNCH DATE JAN 17 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 568.078

RL 147.10 LAL .00 LOL 116.71 VL 27.079 GAL 6.43 AZL 87.41 HCA 270.06 SMA 124.01 ECC .21688 INC 2.5870 V1 30.271
RP 108.39 LAP -2.59 LOP 26.78 VP 37.131 GAP 10.25 AZP 90.00 TAL 155.32 TAP 65.38 RCA 97.12 APO 150.90 V2 34.964
RC 161.027 GL 15.21 GP -11.29 ZAL 51.04 ZAP 163.02 ETS 321.96 ZAE 127.38 ETE 188.13 ZAC 135.20 ETC 173.89 CLP-167.24

PLANETOCENTRIC CONIC

C3 21.443 VHL 4.631 DLA 36.51 RAL 62.48 RAD 6567.9 VEL 11.951 PTH 2.13 VHP 7.148 DPA 2.18 RAP 41.83 ECC 1.3529
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
65.92 22 50 18 4098.27 -24.40 177.83 294.71 61.95 23 58 37 3498.3 -27.95 170.26
114.08 4 39 27 3007.89 -24.39 95.84 294.70 61.94 5 29 35 2407.9 -27.94 88.26
65.92 22 50 18 4098.27 -24.40 177.83 294.71 61.95 23 58 37 3498.3 -27.95 170.26
114.08 4 39 27 3007.89 -24.39 95.84 294.70 61.94 5 29 35 2407.9 -27.94 88.26
65.92 22 50 18 4098.27 -24.40 177.83 294.71 61.95 23 58 37 3498.3 -27.95 170.26
114.08 4 39 27 3007.89 -24.39 95.84 294.70 61.94 5 29 35 2407.9 -27.94 88.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7346 TRA 3.0487 TC3-3.6752 BAU 1.0537 SGT 6179.9 SGR 584.8 SCS 270.5 ST 2568.4 SR 513.1 SS 739.7
RDE .4088 RRA 1.877 RC3 -.0571 FAU .03104 RRT .7250 RRF .7093 RTF .9729 CRT .9163 CRS -.8251 CST -.9821
FDE .6948 FRA 1.8039 FC3-1.2533 BSP 20194 SGB 6207.5 R23 .0012 R13 .9730 LSA 2710.3 MSA 247.8 SSA 14.9
BDE 1.7821 BRA 3.0525 BC3 3.6756 FSP -947 SGI 6194.5 SGE 401.8 THA 3.94 EL1 2611.3 EL2 202.2 ALF 10.44

LAUNCH DATE JAN 17 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 573.666

RL 147.10 LAL .00 LOL 116.71 VL 27.049 GAL 6.96 AZL 87.54 HCA 273.26 SMA 123.82 ECC .22299 INC 2.4645 V1 30.271
RP 108.35 LAP -2.46 LOP 29.97 VP 37.122 GAP 10.73 AZP 89.86 TAL 154.05 TAP 67.31 RCA 96.21 APO 151.44 V2 34.977
RC 163.161 GL 13.88 GP -10.86 ZAL 49.04 ZAP 164.14 ETS 320.39 ZAE 127.19 ETE 187.79 ZAC 137.13 ETC 173.58 CLP-168.37

PLANETOCENTRIC CONIC

C3 23.151 VHL 4.812 DLA 35.53 RAL 64.91 RAD 6567.9 VEL 12.022 PTH 2.15 VHP 7.425 DPA 3.28 RAP 43.59 ECC 1.3810
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
67.58 23 9 4 4089.88 -23.21 176.47 298.02 62.31 24 17 13 3489.9 -26.73 168.96
112.42 4 40 6 3053.44 -23.20 98.80 298.01 62.30 5 31 0 2453.4 -26.72 91.28
67.58 23 9 4 4089.88 -23.21 176.47 298.02 62.31 24 17 13 3489.9 -26.73 168.96
112.42 4 40 6 3053.44 -23.20 98.80 298.01 62.30 5 31 0 2453.4 -26.72 91.28
67.58 23 9 4 4089.88 -23.21 176.47 298.02 62.31 24 17 13 3489.9 -26.73 168.96
112.42 4 40 6 3053.44 -23.20 98.80 298.01 62.30 5 31 0 2453.4 -26.72 91.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6511 TRA 3.3442 TC3-3.4191 BAU 1.0584 SGT 6215.8 SGR 576.5 SCS 256.3 ST 2455.7 SR 502.4 SS 698.3
RDE .4154 RRA 1.996 RC3 -.0500 FAU .02828 RRT .7145 RRF .6893 RTF .9730 CRT .8928 CRS -.7899 CST -.9812
FDE .6133 FRA 1.8375 FC3-1.0568 BSP 20369 SGB 6242.5 R23 .0015 R13 .9731 LSA 2588.7 MSA 262.9 SSA 14.5
BDE 1.7026 BRA 3.3501 BC3 3.4195 FSP -900 SGI 6229.5 SGE 402.5 THA 3.81 EL1 2486.7 EL2 222.6 ALF 10.43

LAUNCH DATE JAN 17 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 579.200

RL 147.10 LAL .00 LOL 116.71 VL 27.020 GAL 7.52 AZL 87.66 HCA 276.45 SMA 123.64 ECC .22963 INC 2.3411 V1 30.271
RP 108.31 LAP -2.33 LOP 33.17 VP 37.113 GAP 11.25 AZP 89.74 TAL 152.79 TAP 69.24 RCA 95.25 APO 152.03 V2 34.990
RC 165.276 GL 12.61 GP -10.47 ZAL 47.11 ZAP 165.20 ETS 319.54 ZAE 127.02 ETE 187.48 ZAC 139.09 ETC 175.23 CLP-169.48

PLANETOCENTRIC CONIC

C3 25.124 VHL 5.012 DLA 34.56 RAL 67.23 RAD 6568.0 VEL 12.104 PTH 2.17 VHP 7.720 DPA 4.34 RAP 45.39 ECC 1.4135
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.31 23 28 13 4080.01 -22.01 175.01 301.32 62.66 24 36 13 3480.0 -25.49 167.56
110.69 4 39 25 3103.42 -21.99 102.06 301.31 62.65 5 31 8 2503.4 -25.48 94.61
69.31 23 28 13 4080.01 -22.01 175.01 301.32 62.66 24 36 13 3480.0 -25.49 167.56
110.69 4 39 25 3103.42 -21.99 102.06 301.31 62.65 5 31 8 2503.4 -25.48 94.61
69.31 23 28 13 4080.01 -22.01 175.01 301.32 62.66 24 36 13 3480.0 -25.49 167.56
110.69 4 39 25 3103.42 -21.99 102.06 301.31 62.65 5 31 8 2503.4 -25.48 94.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5889 TRA 3.6829 TC3-3.1519 BAU 1.0588 SGT 6248.8 SGR 568.7 SCS 243.1 ST 2356.1 SR 491.8 SS 664.1
RDE .4232 RRA 2.131 RC3 -.0436 FAU .02552 RRT .7062 RRF .6917 RTF .9732 CRT .8856 CRS -.7524 CST -.9809
FDE .5411 FRA 1.8728 FC3 -.8793 BSP 20445 SGB 6274.7 R23 .0022 R13 .9732 LSA 2481.3 MSA 277.6 SSA 14.2
BDE 1.6250 BRA 3.6691 BC3 3.1523 FSP -851 SGI 6261.8 SGE 401.8 THA 3.69 EL1 2394.7 EL2 242.4 ALF 10.35



LAUNCH DATE JAN 17 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.991 GAL 8.11 AZL 87.78 HCA 279.65 SMA 123.46 ECC .23684 INC 2.2160 V1 30.271  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.104 GAP 11.77 AZP 89.63 TAL 151.54 TAP 71.19 RCA 94.22 APO 152.70 V2 35.003  
 RC 167.370 GL 11.36 GP -10.11 ZAL 45.24 ZAP 166.21 ETS 316.36 ZAE 126.86 ETE 187.21 ZAC 141.06 ETC 172.82 CLP-170.58

DISTANCE 584.669

PLANETOCENTRIC CONIC

C3 27.401 VHL 5.235 DLA 33.59 RAL 69.42 RAD 6568.1 VEL 12.197 PTH 2.19 VHP 8.034 DPA 5.36 RAP 47.23 ECC 1.4510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.12 23 47 55 4068.13 -20.78 173.41 304.60 62.99 24 55 43 3468.1 -24.23 166.01  
 108.88 4 37 14 3158.26 -20.77 105.66 304.60 62.98 5 29 52 2558.3 -24.22 98.27  
 71.12 23 47 55 4068.13 -20.78 173.41 304.60 62.99 24 55 43 3468.1 -24.23 166.01  
 108.88 4 37 14 3158.26 -20.77 105.66 304.60 62.98 5 29 52 2558.3 -24.22 98.27  
 110.00 5 32 6 2990.38 -25.44 95.01 307.00 66.36 6 21 56 2390.4 -28.41 87.10  
 110.00 3 56 9 3284.01 -16.25 112.82 301.98 59.50 4 50 53 2684.0 -20.18 105.90

DIFFERENTIAL CORRECTIONS

TDE 1.4804 TRA 3.9967 TC3-2.8899 BAU 1.0587  
 RDE .4313 RRA .2275 RC3 -.0387 FAU .02302  
 FDE .4733 FRA 1.9061 FC3 -.7272 B9P 20601  
 BDE 1.5420 BRA 4.0031 BC3 2.8902 F9P -810

MID-COURSE EXECUTION ACCURACY

S6T 8273.8 S6R 980.3 S6S 230.6  
 RRT .6992 RRF .6850 RTF .9734  
 S6B 8298.8 R23 .0024 R13 .9734  
 S6I 8286.1 S62 399.8 THA 3.59

ORBIT DETERMINATION ACCURACY

ST 2261.9 SR 480.6 SS 633.7  
 CRT .8339 CRS -.7111 CST -.9808  
 LSA 2379.8 MSA 292.0 S3A 13.8  
 EL1 2297.6 EL2 261.1 ALF 10.18

LAUNCH DATE JAN 17 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.961 GAL 8.75 AZL 87.91 HCA 282.85 SMA 123.28 ECC .24466 INC 2.0885 V1 30.271  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.095 GAP 12.33 AZP 89.54 TAL 150.30 TAP 73.15 RCA 93.12 APO 153.44 V2 35.016  
 RC 169.445 GL 10.21 GP -9.79 ZAL 43.44 ZAP 167.17 ETS 313.78 ZAE 126.89 ETE 186.97 ZAC 143.05 ETC 172.36 CLP-171.67

DISTANCE 590.063

PLANETOCENTRIC CONIC

C3 30.029 VHL 5.480 DLA 32.65 RAL 71.50 RAD 6568.2 VEL 12.305 PTH 2.22 VHP 8.370 DPA 6.34 RAP 49.11 ECC 1.4942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.03 0 12 16 4053.55 -19.54 171.82 307.87 63.32 1 19 50 3453.5 -22.96 164.28  
 106.97 4 33 23 3218.60 -19.53 109.85 307.87 63.31 5 27 1 2618.6 -22.95 102.30  
 73.03 0 12 16 4053.55 -19.54 171.82 307.87 63.32 1 19 50 3453.5 -22.96 164.28  
 106.97 4 33 23 3218.60 -19.53 109.85 307.87 63.31 5 27 1 2618.6 -22.95 102.30  
 110.00 6 9 46 2921.60 -27.24 90.47 311.62 68.50 6 58 28 2321.8 -29.90 82.30  
 110.00 3 35 3 3398.55 -12.19 119.21 303.56 57.81 4 31 42 2798.6 -16.35 112.58

DIFFERENTIAL CORRECTIONS

TDE 1.3904 TRA 4.3315 TC3-2.6290 BAU 1.0555  
 RDE .4400 RRA .2431 RC3 -.0342 FAU .02063  
 FDE .4118 FRA 1.9403 FC3 -.5947 B9P 20732  
 BDE 1.4584 BRA 4.3583 BC3 2.6293 F9P -770

MID-COURSE EXECUTION ACCURACY

S6T 8293.8 S6R 551.5 S6S 218.8  
 RRT .6938 RRF .6800 RTF .9737  
 S6B 8317.9 R23 .0025 R13 .9738  
 S6I 8305.5 S62 396.5 THA 3.49

ORBIT DETERMINATION ACCURACY

ST 2179.1 SR 468.9 SS 608.6  
 CRT .7984 CRS -.8680 CST -.9812  
 LSA 2290.3 MSA 305.1 S3A 13.4  
 EL1 2211.6 EL2 278.2 ALF 9.91

LAUNCH DATE JAN 17 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.932 GAL 9.43 AZL 88.04 HCA 286.05 SMA 123.10 ECC .25319 INC 1.9576 V1 30.271  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.087 GAP 12.94 AZP 89.46 TAL 149.09 TAP 75.14 RCA 91.93 APO 154.27 V2 35.030  
 RC 171.498 GL 9.08 GP -9.49 ZAL 41.73 ZAP 168.07 ETS 310.74 ZAE 126.52 ETE 186.75 ZAC 145.05 ETC 171.82 CLP-172.75

DISTANCE 595.373

PLANETOCENTRIC CONIC

C3 33.066 VHL 5.750 DLA 31.71 RAL 73.46 RAD 6568.3 VEL 12.427 PTH 2.25 VHP 8.732 DPA 7.27 RAP 51.01 ECC 1.5442  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.09 0 33 49 4034.99 -18.30 169.55 311.13 63.64 1 41 4 3435.0 -21.69 162.25  
 104.91 4 27 28 3285.61 -18.28 114.10 311.12 63.63 5 22 14 2685.6 -21.68 106.80  
 75.09 0 33 49 4034.99 -18.30 169.55 311.13 63.64 1 41 4 3435.0 -21.69 162.25  
 104.91 4 27 28 3285.61 -18.28 114.10 311.12 63.63 5 22 14 2685.6 -21.68 106.80  
 110.00 6 38 2 2880.63 -28.23 87.70 315.76 69.87 7 26 3 2280.6 -30.70 79.38  
 110.00 3 22 23 3487.97 -8.90 124.05 305.61 56.86 4 20 33 2888.0 -13.20 117.59

DIFFERENTIAL CORRECTIONS

TDE 1.2984 TRA 4.7287 TC3-2.3728 BAU 1.0490  
 RDE .4490 RRA .2588 RC3 -.0302 FAU .01835  
 FDE .3559 FRA 1.9757 FC3 -.4804 B9P 20856  
 BDE 1.3738 BRA 4.7359 BC3 2.3730 F9P -733

MID-COURSE EXECUTION ACCURACY

S6T 8308.5 S6R 542.2 S6S 207.8  
 RRT .6897 RRF .6763 RTF .9742  
 S6B 8331.7 R23 .0025 R13 .9742  
 S6I 8319.6 S62 391.9 THA 3.41

ORBIT DETERMINATION ACCURACY

ST 2107.4 SR 456.6 SS 588.2  
 CRT .7592 CRS -.6236 CST -.9820  
 LSA 2212.6 MSA 316.5 S3A 13.0  
 EL1 2136.3 EL2 293.2 ALF 9.52

LAUNCH DATE JAN 17 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

RL 147.18 LAL .00 LOL 116.71 VL 26.903 GAL 10.17 AZL 88.18 HCA 289.26 SMA 122.92 ECC .26249 INC 1.8222 V1 30.271  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.078 GAP 13.59 AZP 89.40 TAL 147.90 TAP 77.15 RCA 90.66 APO 155.19 V2 35.043  
 RC 173.532 GL 8.00 GP -9.22 ZAL 40.09 ZAP 168.92 ETS 307.15 ZAE 126.34 ETE 186.55 ZAC 147.05 ETC 171.19 CLP-173.83

DISTANCE 600.582

PLANETOCENTRIC CONIC

C3 36.583 VHL 6.048 DLA 30.80 RAL 75.31 RAD 6568.4 VEL 12.568 PTH 2.28 VHP 9.121 DPA 8.16 RAP 52.95 ECC 1.6021  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.35 0 57 3 4010.54 -17.05 167.06 314.36 63.96 2 3 53 3410.5 -20.42 159.81  
 102.65 4 18 57 3361.10 -17.04 119.15 314.35 63.95 5 14 59 2761.1 -20.40 111.90  
 77.35 0 57 3 4010.54 -17.05 167.06 314.36 63.96 2 3 53 3410.5 -20.42 159.81  
 102.65 4 18 57 3361.10 -17.04 119.15 314.35 63.95 5 14 59 2761.1 -20.40 111.90  
 110.00 7 1 48 2852.82 -28.86 85.79 319.88 70.84 7 49 21 2252.8 -31.20 77.36  
 110.00 3 13 23 3566.81 -5.94 128.24 307.86 56.28 4 12 50 2968.8 -10.33 121.90

DIFFERENTIAL CORRECTIONS

TDE 1.2092 TRA 5.1337 TC3-2.1185 BAU 1.0362  
 RDE .4587 RRA .2779 RC3 -.0260 FAU .01607  
 FDE .3072 FRA 2.0190 FC3 -.3803 B9P 20851  
 BDE 1.2933 BRA 5.1432 BC3 2.1187 F9P -693

MID-COURSE EXECUTION ACCURACY

S6T 8321.3 S6R 532.6 S6S 197.7  
 RRT .6873 RRF .6745 RTF .9748  
 S6B 8343.7 R23 .0027 R13 .9748  
 S6I 8332.0 S62 388.2 THA 3.33

ORBIT DETERMINATION ACCURACY

ST 2090.7 SR 444.1 SS 573.4  
 CRT .7181 CRS -.5810 CST -.9834  
 LSA 2150.6 MSA 325.3 S3A 12.6  
 EL1 2075.9 EL2 305.3 ALF 9.04

LAUNCH DATE JAN 17 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 605.673

RL 147.18 LAL .00 LOL 116.71 VL 26.875 GAL 10.96 AZL 88.32 HCA 292.46 SMA 122.75 ECC .27266 INC 1.6814 V1 30.271  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.070 GAP 14.30 AZP 89.36 TAL 146.74 TAP 79.21 RCA 89.28 APO 156.21 V2 35.056  
 RC 175.544 GL 6.97 GP -8.97 ZAL 38.55 ZAP 169.69 ETS 302.90 ZAE 126.16 ETE 186.37 ZAC 149.05 ETC 170.46 CLP-174.91

PLANETOCENTRIC CONIC

C3 40.684 VHL 6.377 DLA 29.91 RAL 77.04 RAD 6568.6 VEL 12.729 PTH 2.31 VHP 9.543 DPA 9.01 RAP 54.91 ECC 1.6692  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.94 1 23 13 3976.03 -15.81 163.85 317.57 64.28 2 29 29 3376.0 -19.14 156.64  
 100.06 4 6 36 3449.05 -15.80 125.09 317.56 64.27 5 4 5 2849.0 -19.13 117.88  
 78.94 1 23 13 3976.03 -15.81 163.85 317.57 64.28 2 29 29 3376.0 -19.14 156.64  
 100.06 4 6 36 3449.05 -15.80 125.09 317.56 64.27 5 4 5 2849.0 -19.13 117.88  
 110.00 7 22 36 2833.49 -29.29 84.44 323.47 71.53 8 9 49 2233.5 -31.53 75.95  
 110.00 3 6 23 3639.59 -3.10 132.06 310.23 55.95 4 7 3 3039.6 -7.63 125.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1132 TRA 5.5650 TC3-1.8788 BAU 1.0215 9GT 6325.8 9GR 521.8 9G3 188.0 ST 2000.1 SR 430.6 SS 561.2  
 RDE .4681 RRA .2966 RC3 -.0224 FAU .01398 RRT .6855 RRF .6730 RTF .9756 CRT .6739 CR5 -.5373 CST -.9850  
 FDE .2607 FRA 2.0546 FC3 -.2977 BSP 20963 9GB 6347.3 R23 .0025 R13 .9756 LSA 2095.3 HSA 331.8 SSA 12.2  
 BDE 1.2077 BRA 5.5729 BC3 1.8789 FSP -660 9G1 6336.0 9G2 379.3 THA 3.25 EL1 2021.5 EL2 314.8 ALF 8.46

LAUNCH DATE JAN 17 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 610.625

RL 147.18 LAL .00 LOL 116.71 VL 26.846 GAL 11.82 AZL 88.47 HCA 295.67 SMA 122.57 ECC .28382 INC 1.5338 V1 30.271  
 RP 108.06 LAP -1.58 LOP 52.39 VP 37.062 GAP 15.06 AZP 89.34 TAL 145.63 TAP 81.30 RCA 87.78 APO 157.36 V2 35.069  
 RC 177.535 GL 5.99 GP -8.75 ZAL 37.09 ZAP 170.39 ETS 297.90 ZAE 125.95 ETE 186.21 ZAC 151.03 ETC 169.62 CLP-176.01

PLANETOCENTRIC CONIC

C3 45.417 VHL 6.739 DLA 29.04 RAL 78.65 RAD 6568.7 VEL 12.914 PTH 2.35 VHP 10.001 DPA 9.82 RAP 56.88 ECC 1.7474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 83.26 1 55 38 3920.55 -14.58 159.14 320.75 64.60 3 0 59 3320.5 -17.88 151.96  
 96.74 3 47 3 3560.22 -14.56 132.71 320.74 64.59 4 46 23 2960.2 -17.86 125.53  
 100.00 5 12 29 3286.01 -20.36 115.12 323.43 67.63 6 7 15 2686.0 -23.22 107.49  
 100.00 3 12 55 3670.00 -8.93 137.80 317.80 61.55 4 14 3 3070.0 -12.68 131.10  
 110.00 7 41 10 2820.41 -29.57 83.53 327.16 72.01 8 28 11 2220.4 -31.74 74.99  
 110.00 3 0 42 3708.36 -.55 135.65 312.68 55.82 4 2 30 3108.4 -5.03 189.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0182 TRA 6.0253 TC3-1.6488 BAU 1.0012 9GT 6326.0 9GR 510.1 9G3 179.0 ST 1959.8 SR 416.6 SS 552.7  
 RDE .4778 RRA .3162 RC3 -.0188 FAU .01196 RRT .6845 RRF .6725 RTF .9766 CRT .6286 CR5 -.4955 CST -.9868  
 FDE .2188 FRA 2.0976 FC3 -.2280 BSP 21041 9GB 6346.5 R23 .0024 R13 .9766 LSA 2051.2 HSA 355.4 SSA 11.8  
 BDE 1.1229 BRA 6.0336 BC3 1.6490 FSP -828 9G1 6335.7 9G2 371.3 THA 3.17 EL1 1977.7 EL2 321.0 ALF 7.82

LAUNCH DATE JAN 17 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 615.410

RL 147.18 LAL .00 LOL 116.71 VL 26.818 GAL 12.75 AZL 88.62 HCA 298.88 SMA 122.40 ECC .29611 INC 1.3779 V1 30.271  
 RP 108.02 LAP -1.21 LOP 55.60 VP 37.054 GAP 15.88 AZP 89.33 TAL 144.56 TAP 83.44 RCA 86.16 APO 158.65 V2 35.083  
 RC 179.506 GL 5.05 GP -8.54 ZAL 35.73 ZAP 170.99 ETS 292.05 ZAE 125.73 ETE 186.05 ZAC 153.01 ETC 168.63 CLP-177.11

PLANETOCENTRIC CONIC

C3 50.972 VHL 7.139 DLA 28.20 RAL 80.15 RAD 6568.9 VEL 13.128 PTH 2.40 VHP 10.501 DPA 10.58 RAP 58.86 ECC 1.8389  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 19 51 3696.19 -15.47 143.11 324.89 65.98 4 21 27 3096.2 -18.59 135.82  
 90.00 2 34 49 3842.30 -11.24 151.75 322.86 63.84 3 38 51 3242.3 -14.67 144.75  
 100.00 5 42 57 3234.82 -21.65 111.87 327.60 68.87 6 36 52 2634.8 -24.33 104.10  
 100.00 2 54 24 3778.91 -5.32 143.95 319.70 60.54 3 57 23 3178.9 -9.21 137.32  
 110.00 7 57 57 2812.27 -29.74 82.95 330.76 72.31 8 44 49 2212.3 -31.86 74.39  
 110.00 2 55 54 3774.22 1.97 139.09 315.19 55.87 3 58 48 3174.2 -2.53 132.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9183 TRA 6.5201 TC3-1.4298 BAU .9744 9GT 6321.6 9GR 497.4 9G3 170.5 ST 1928.6 SR 401.9 SS 547.7  
 RDE .4875 RRA .3365 RC3 -.0153 FAU .00998 RRT .6844 RRF .6729 RTF .9777 CRT .5833 CR5 -.4562 CST -.9887  
 FDE .1810 FRA 2.1446 FC3 -.1695 BSP 21099 9GB 6341.2 R23 .0022 R13 .9778 LSA 2016.9 HSA 336.0 SSA 11.4  
 BDE 1.0397 BRA 6.5288 BC3 1.4299 FSP -598 9G1 6330.8 9G2 362.2 THA 3.09 EL1 1943.2 EL2 324.0 ALF 7.13

LAUNCH DATE JAN 17 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC

DISTANCE 619.994

RL 147.18 LAL .00 LOL 116.71 VL 26.791 GAL 13.77 AZL 88.79 HCA 302.10 SMA 122.24 ECC .30966 INC 1.2119 V1 30.271  
 RP 107.98 LAP -1.03 LOP 58.81 VP 37.046 GAP 16.79 AZP 89.36 TAL 143.55 TAP 85.65 RCA 84.39 APO 160.09 V2 35.095  
 RC 181.455 GL 4.16 GP -8.34 ZAL 34.46 ZAP 171.47 ETS 285.29 ZAE 125.48 ETE 185.91 ZAC 154.95 ETC 167.48 CLP-178.24

PLANETOCENTRIC CONIC

C3 57.495 VHL 7.583 DLA 27.38 RAL 81.54 RAD 6569.0 VEL 13.374 PTH 2.44 VHP 11.049 DPA 11.30 RAP 60.85 ECC 1.9462  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 8 35 3591.21 -18.27 136.67 329.73 67.98 5 6 26 2991.2 -21.10 129.14  
 90.00 1 59 8 4006.77 -6.16 161.16 324.01 62.31 3 5 55 3406.8 -9.82 154.40  
 100.00 6 6 41 3204.04 -22.39 109.89 331.44 69.67 7 0 5 2604.0 -24.96 102.03  
 100.00 2 41 43 3869.18 -2.28 148.93 321.87 60.19 3 46 12 3269.2 -6.23 142.37  
 110.00 8 13 11 2808.18 -29.82 82.66 334.27 72.46 8 59 59 2208.2 -31.93 74.09  
 110.00 2 51 42 3837.80 4.39 142.41 317.73 56.07 3 55 40 3237.8 -.10 136.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8236 TRA 7.0578 TC3-1.2198 BAU .9376 9GT 6315.3 9GR 484.0 9G3 182.7 ST 1907.1 SR 388.9 SS 546.3  
 RDE .4978 RRA .3578 RC3 -.0116 FAU .00796 RRT .6851 RRF .6744 RTF .9790 CRT .5401 CR5 -.4218 CST -.9906  
 FDE .1482 FRA 2.1983 FC3 -.1198 BSP 21044 9GB 6335.8 R23 .0021 R13 .9791 LSA 1993.4 HSA 333.6 SSA 11.0  
 BDE .9822 BRA 7.0668 BC3 1.2198 FSP -567 9G1 6324.0 9G2 352.1 THA 3.01 EL1 1918.8 EL2 323.6 ALF 6.44

LAUNCH DATE JAN 18 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 29 1969

MELIOCENTRIC CONIC

DISTANCE 158.604

RL 147.19 LAL .00 LOL 117.73 VL 22.568 GAL 4.42 AZL 86.34 HCA 63.75 SMA 102.56 ECC .44064 INC 3.6558 V1 30.269
RP 107.74 LAP 3.28 LOP 181.43 VP 34.200 GAP -26.00 AZP 88.38 TAL 174.35 TAP 238.10 RCA 57.37 APO 147.75 V2 35.174
RC 44.782 GL 10.20 GP 4.84 ZAL 78.56 ZAP 17.07 ETS 197.78 ZAE 170.92 ETE 221.32 ZAC 110.32 ETC 164.65 CLP 16.39

PLANETOCENTRIC CONIC

C3 65.690 VML 8.105 DLA 24.25 RAL 33.42 RAD 6569.2 VEL 13.676 PTH 2.50 VHP 15.872 DPA 8.74 RAP 15.56 ECC 2.0811
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 59 45 3390.32 -22.88 123.75 285.16 72.84 2 56 15 2790.3 -25.01 115.73
90.00 21 30 18 4272.28 2.37 178.01 274.55 61.77 22 41 30 3672.3 -1.42 169.39
100.00 3 41 33 3062.11 -25.44 100.44 286.00 73.74 4 32 35 2462.1 -27.42 92.20
100.00 22 31 11 4075.72 4.71 160.28 273.25 60.45 23 39 7 3475.7 .74 153.74
110.00 5 29 51 2723.25 -31.41 76.56 287.85 75.75 6 15 15 2123.2 -33.04 67.71
110.00 22 59 22 3987.35 10.00 150.35 270.02 57.14 24 5 49 3387.3 5.60 144.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3910 TRA -.9897 TC3 -.0317 BAU .0393 SGT 817.2 SCR 433.0 SC3 47.9 ST 359.7 SR 417.2 SS 307.0
RDE -.5884 RRA .1401 RC3 -.0317 FAU .01787 RRT .0968 RRF -.1023 RTF -.6698 CRT .7181 CRS .8425 CST .9773
FDE .2793 FRA .4509 FC3 -.2355 B8P 2282 SGB 924.8 R23 -.0127 R13 -.6707 LSA 592.8 MSA 214.8 SSA 14.0
BDE .7065 BRA .9995 BC3 .0448 F8P -106 SGT 818.7 SCR 430.1 THA 4.06 EL1 511.4 EL2 204.9 ALF 50.88

LAUNCH DATE JAN 18 1969

FLIGHT TIME 72.00

ARRIVAL DATE MAR 31 1969

MELIOCENTRIC CONIC

DISTANCE 165.117

RL 147.19 LAL .00 LOL 117.73 VL 23.020 GAL 4.15 AZL 86.90 HCA 66.98 SMA 104.22 ECC .41753 INC 3.5027 V1 30.269
RP 107.77 LAP 3.22 LOP 184.67 VP 34.490 GAP -24.81 AZP 88.63 TAL 174.16 TAP 241.14 RCA 60.71 APO 147.74 V2 35.164
RC 43.971 GL 10.58 GP 5.06 ZAL 78.40 ZAP 15.58 ETS 200.35 ZAE 172.82 ETE 232.89 ZAC 111.78 ETC 164.33 CLP 14.76

PLANETOCENTRIC CONIC

C3 58.373 VML 7.640 DLA 24.67 RAL 33.45 RAD 6569.1 VEL 13.406 PTH 2.45 VHP 15.107 DPA 9.59 RAP 16.94 ECC 1.9607
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 52 54 3385.88 -22.87 123.45 283.13 72.96 2 49 20 2785.9 -25.08 115.42
90.00 21 37 24 4219.53 .87 173.07 273.16 61.89 22 47 43 3619.5 -3.12 168.44
100.00 3 35 57 3053.67 -25.80 99.87 283.99 74.01 4 26 50 2453.7 -27.54 91.61
100.00 22 37 3 4026.88 3.07 157.59 271.83 60.25 23 44 9 3427.0 -1.91 151.07
110.00 5 26 0 2709.37 -31.83 75.54 285.81 76.32 6 11 9 2109.4 -33.19 66.66
110.00 23 3 29 3944.04 8.39 148.03 288.55 56.74 24 9 13 3344.0 3.96 141.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5945 TRA -.9739 TC3 -.0189 BAU .0294 SGT 856.8 SCR 436.4 SC3 52.7 ST 381.6 SR 421.7 SS 323.2
RDE -.5608 RRA .1273 RC3 -.0328 FAU .01880 RRT .1107 RRF -.1163 RTF -.6888 CRT .7258 CRS .8479 CST .9782
FDE .2923 FRA .4627 FC3 -.2759 B8P 2387 SGB 961.6 R23 -.0140 R13 -.6888 LSA 616.7 MSA 217.9 SSA 14.3
BDE .6856 BRA .9822 BC3 .0377 F8P -118 SGT 858.7 SCR 432.8 THA 4.33 EL1 528.8 EL2 209.4 ALF 48.93

LAUNCH DATE JAN 18 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 2 1969

MELIOCENTRIC CONIC

DISTANCE 171.673

RL 147.19 LAL .00 LOL 117.73 VL 23.438 GAL 3.88 AZL 86.64 HCA 70.20 SMA 105.83 ECC .39568 INC 3.3570 V1 30.269
RP 107.80 LAP 3.16 LOP 187.90 VP 34.759 GAP -23.29 AZP 88.86 TAL 174.04 TAP 244.24 RCA 63.96 APO 147.71 V2 35.153
RC 43.319 GL 10.95 GP 5.29 ZAL 78.36 ZAP 14.14 ETS 203.51 ZAE 174.35 ETE 252.25 ZAC 113.23 ETC 163.97 CLP 13.13

PLANETOCENTRIC CONIC

C3 51.932 VML 7.206 DLA 25.04 RAL 33.37 RAD 6568.9 VEL 13.164 PTH 2.40 VHP 14.575 DPA 10.46 RAP 18.32 ECC 1.8547
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 46 3 3379.56 -23.09 123.03 280.96 73.14 2 42 22 2779.6 -25.18 114.99
90.00 21 43 36 4168.20 -.99 170.21 271.64 61.70 22 53 5 3568.2 -4.76 163.56
100.00 3 30 20 3043.32 -25.79 99.16 281.83 74.33 4 21 4 2443.3 -27.69 90.87
100.00 22 42 0 3979.68 1.47 154.99 270.28 60.14 23 48 20 3379.7 -2.52 148.47
110.00 5 22 3 2893.82 -31.88 74.39 283.61 76.95 6 6 57 2093.8 -33.34 65.47
110.00 23 6 47 3901.84 6.82 143.79 286.97 56.42 24 11 49 3301.9 2.36 139.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5968 TRA -.9552 TC3 -.0001 BAU .0231 SGT 895.6 SCR 439.2 SC3 58.0 ST 403.3 SR 425.8 SS 339.9
RDE -.5341 RRA .1152 RC3 -.0333 FAU .01943 RRT .1251 RRF -.1317 RTF -.7078 CRT .7355 CRS .8536 CST .9790
FDE .3058 FRA .4739 FC3 -.3239 B8P 2546 SGB 997.5 R23 -.0160 R13 -.7089 LSA 640.9 MSA 220.1 SSA 14.6
BDE .8653 BRA .9821 BC3 .0333 F8P -133 SGT 897.8 SCR 434.8 THA 4.59 EL1 546.5 EL2 212.9 ALF 47.10

LAUNCH DATE JAN 18 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 4 1969

MELIOCENTRIC CONIC

DISTANCE 178.266

RL 147.19 LAL .00 LOL 117.73 VL 23.824 GAL 3.60 AZL 86.78 HCA 73.43 SMA 107.40 ECC .37505 INC 3.2171 V1 30.269
RP 107.84 LAP 3.08 LOP 191.13 VP 35.009 GAP -22.03 AZP 89.08 TAL 173.96 TAP 247.39 RCA 67.12 APO 147.68 V2 35.141
RC 42.834 GL 11.31 GP 5.56 ZAL 78.43 ZAP 12.76 ETS 207.44 ZAE 174.93 ETE 281.13 ZAC 114.66 ETC 163.57 CLP 11.50

PLANETOCENTRIC CONIC

C3 46.280 VML 6.801 DLA 25.36 RAL 33.18 RAD 6568.7 VEL 12.947 PTH 2.36 VHP 13.873 DPA 11.35 RAP 19.69 ECC 1.7613
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 20 3371.03 -23.26 122.46 278.67 73.38 2 35 31 2771.0 -25.32 114.40
90.00 21 48 46 4118.98 -2.37 167.46 269.99 61.79 22 57 25 3519.0 -6.33 160.79
100.00 3 24 50 3030.87 -26.01 98.30 279.54 74.73 4 15 21 2430.9 -27.86 89.98
100.00 22 45 57 3934.38 -.07 152.51 268.59 60.11 23 51 31 3334.4 -4.05 145.98
110.00 5 18 5 2876.54 -32.14 73.11 281.26 77.67 6 2 42 2076.5 -33.50 64.15
110.00 23 9 11 3861.46 5.29 143.86 285.26 56.18 24 13 33 3261.5 .81 137.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5995 TRA -.9556 TC3 .0239 BAU .0250 SGT 935.5 SCR 441.4 SC3 63.8 ST 426.3 SR 429.4 SS 357.3
RDE -.5085 RRA .1037 RC3 -.0330 FAU .02035 RRT .1415 RRF -.1494 RTF -.7261 CRT .7462 CRS .8599 CST .9798
FDE .3204 FRA .4850 FC3 -.3808 B8P 2702 SGB 1034.4 R23 -.0183 R13 -.7274 LSA 666.7 MSA 221.5 SSA 14.9
BDE .8467 BRA .9414 BC3 .0405 F8P -149 SGT 938.1 SCR 435.7 THA 4.87 EL1 565.4 EL2 215.5 ALF 45.27

LAUNCH DATE JAN 18 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 184.893

RL 147.19 LAL .00 LOL 117.73 VL 24.181 GAL 3.32 AZL 86.92 MCA 76.65 SMA 108.91 ECC .35564 INC 3.0820 V1 30.269
RP 107.87 LAP 3.00 LOP 194.36 VP 35.241 GAP -20.83 AZP 89.29 TAL 173.95 TAP 250.60 RCA 70.18 APO 147.64 V2 35.129
RC 42.524 GL 11.66 GP 5.84 ZAL 78.62 ZAP 11.45 ETS 212.41 ZAE 174.16 ETE 309.89 ZAC 116.07 ETC 163.11 CLP 9.87

PLANETOCENTRIC CONIC

C3 41.266 VHL 6.424 DLA 25.62 RAL 32.87 RAD 6568.6 VEL 12.753 PTH 2.32 VHP 13.000 DPA 12.25 RAP 21.05 ECC 1.6791
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 32 58 3359.80 -23.48 121.71 276.28 73.69 2 28 57 2759.8 -25.49 113.62
90.00 21 52 41 4072.71 -4.06 164.87 268.18 61.95 23 0 34 3472.7 -7.78 158.17
100.00 3 19 36 3016.02 -26.28 97.28 277.14 75.21 4 9 52 2416.0 -28.05 88.92
100.00 22 48 44 3891.72 -1.52 150.17 266.77 60.14 23 53 36 3291.7 -5.48 143.62
110.00 5 14 12 2657.47 -32.41 71.69 278.78 78.47 5 58 29 2057.5 -33.65 62.68
110.00 23 10 38 3823.03 3.83 141.64 263.45 56.01 24 14 21 3223.0 -6.66 135.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4026 TRA -.9152 TC3 .0528 BAU .0339 SGT 976.3 SGR 443.1 SG3 70.3 ST 450.3 SR 432.5 SS 375.2
RDE -.4840 RRA .0928 RC3 -.0314 FAU .02137 RRT .1600 RRF -.1691 RTF -.7434 CRT .7576 CRS .8663 CST .9808
FDE .3356 FRA .4957 FC3 -.4484 BSP 2867 SGB 1072.1 R23 -.0208 R13 -.7449 LSA 693.6 MSA 221.9 SSA 15.2
BOE .6296 BRA .9198 BC3 .0614 FSP -167 SG1 979.5 SG2 436.0 THA 5.18 EL1 585.4 EL2 217.2 ALF 43.48

LAUNCH DATE JAN 18 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 191.547

RL 147.19 LAL .00 LOL 117.73 VL 24.511 GAL 3.04 AZL 87.05 MCA 79.87 SMA 110.36 ECC .33740 INC 2.9505 V1 30.269
RP 107.91 LAP 2.90 LOP 197.59 VP 35.456 GAP -19.68 AZP 89.48 TAL 174.00 TAP 253.87 RCA 73.13 APO 147.60 V2 35.117
RC 42.392 GL 11.98 GP 6.16 ZAL 78.92 ZAP 10.26 ETS 218.74 ZAE 172.38 ETE 329.12 ZAC 117.45 ETC 162.61 CLP 8.23

PLANETOCENTRIC CONIC

C3 36.870 VHL 6.072 DLA 25.82 RAL 32.45 RAD 6568.4 VEL 12.579 PTH 2.28 VHP 12.355 DPA 13.18 RAP 22.40 ECC 1.6068
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 27 11 3345.26 -23.75 120.73 273.79 74.11 2 22 56 2745.3 -25.70 112.61
90.00 21 55 7 4030.33 -5.41 162.49 266.23 62.16 23 2 17 3430.3 -9.10 155.75
100.00 3 14 46 2998.43 -26.58 96.05 274.63 75.79 4 4 44 2398.4 -28.27 87.66
100.00 22 50 13 3852.39 -2.85 148.01 264.82 60.23 23 54 25 3252.4 -6.79 141.44
110.00 5 10 27 2636.47 -32.68 70.11 276.18 79.37 5 54 24 2036.5 -33.80 61.06
110.00 23 11 1 3787.11 2.46 139.76 261.52 55.89 24 14 8 3187.1 -2.03 133.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4063 TRA -.8943 TC3 .0883 BAU .0457 SGT 1018.5 SGR 444.5 SG3 77.5 ST 475.5 SR 435.4 SS 393.8
RDE -.4606 RRA .0824 RC3 -.0284 FAU .02251 RRT .1809 RRF -.1916 RTF -.7598 CRT .7696 CRS .8730 CST .9818
FDE .3520 FRA .5065 FC3 -.5285 BSP 3031 SGB 1111.3 R23 -.0237 R13 -.7614 LSA 722.1 MSA 221.6 SSA 15.5
BOE .6142 BRA .8981 BC3 .0928 FSP -188 SG1 1022.4 SG2 435.5 THA 5.52 EL1 606.8 EL2 217.9 ALF 41.73

LAUNCH DATE JAN 18 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 198.223

RL 147.19 LAL .00 LOL 117.73 VL 24.815 GAL 2.76 AZL 87.18 MCA 83.09 SMA 111.76 ECC .32031 INC 2.8217 V1 30.269
RP 107.95 LAP 2.80 LOP 200.81 VP 35.655 GAP -18.58 AZP 89.66 TAL 174.11 TAP 257.20 RCA 75.96 APO 147.55 V2 35.105
RC 42.442 GL 12.26 GP 6.51 ZAL 79.33 ZAP 9.24 ETS 226.78 ZAE 170.12 ETE 340.70 ZAC 118.79 ETC 162.05 CLP 6.57

PLANETOCENTRIC CONIC

C3 33.000 VHL 5.745 DLA 25.96 RAL 31.92 RAD 6568.3 VEL 12.425 PTH 2.25 VHP 11.738 DPA 14.13 RAP 23.72 ECC 1.5431
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 22 17 3326.70 -24.09 119.48 271.23 74.65 2 17 44 2726.7 -25.97 111.31
90.00 21 55 47 3992.90 -6.60 160.38 264.14 62.40 23 2 20 3392.9 -10.24 153.60
100.00 3 10 32 2977.72 -26.91 94.61 272.04 76.48 4 0 10 2377.7 -28.51 86.17
100.00 22 50 13 3817.11 -4.04 146.06 262.73 60.36 23 53 51 3217.1 -7.95 139.47
110.00 5 6 58 2613.43 -32.96 68.37 273.47 80.36 5 50 31 2013.4 -33.94 59.27
110.00 23 10 17 3754.17 1.20 138.04 259.47 55.84 24 12 51 3154.2 -3.29 131.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4097 TRA -.8722 TC3 .1316 BAU .0590 SGT 1061.1 SGR 445.5 SG3 85.5 ST 501.3 SR 438.0 SS 412.8
RDE -.4385 RRA .0726 RC3 -.0234 FAU .02378 RRT .2045 RRF -.2170 RTF -.7754 CRT .7820 CRS .8799 CST .9828
FDE .3693 FRA .5171 FC3 -.6238 BSP 3207 SGB 1150.8 R23 -.0270 R13 -.7772 LSA 751.5 MSA 220.3 SSA 15.9
BOE .6001 BRA .8752 BC3 .1336 FSP -211 SG1 1065.8 SG2 434.1 THA 5.89 EL1 629.1 EL2 217.5 ALF 40.09

LAUNCH DATE JAN 18 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 204.918

RL 147.19 LAL .00 LOL 117.73 VL 25.096 GAL 2.49 AZL 87.31 MCA 86.31 SMA 113.09 ECC .30434 INC 2.6948 V1 30.269
RP 107.99 LAP 2.69 LOP 204.03 VP 35.839 GAP -17.53 AZP 89.83 TAL 174.29 TAP 260.59 RCA 78.67 APO 147.51 V2 35.092
RC 42.671 GL 12.51 GP 6.90 ZAL 79.86 ZAP 8.45 ETS 236.80 ZAE 167.67 ETE 348.09 ZAC 120.09 ETC 161.43 CLP 4.90

PLANETOCENTRIC CONIC

C3 29.596 VHL 5.440 DLA 26.01 RAL 31.29 RAD 6568.2 VEL 12.287 PTH 2.21 VHP 11.146 DPA 15.10 RAP 25.01 ECC 1.4871
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 18 33 3303.42 -24.50 117.90 268.62 75.34 2 13 36 2703.4 -26.28 109.68
90.00 21 54 28 3961.45 -7.59 158.60 261.89 62.64 23 0 29 3361.4 -11.19 151.78
100.00 3 7 6 2953.48 -27.29 92.90 269.37 77.30 3 56 19 2353.5 -28.76 84.41
100.00 22 48 36 3786.62 -5.06 144.38 260.52 60.50 23 51 43 3186.6 -8.95 137.75
110.00 5 3 51 2588.17 -33.23 66.45 270.66 81.47 5 46 59 1988.2 -34.05 57.31
110.00 23 8 20 3724.69 .07 136.50 257.33 55.82 24 10 25 3124.7 -4.41 130.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4134 TRA -.8498 TC3 .1827 BAU .0725 SGT 1105.0 SGR 446.3 SG3 94.3 ST 528.1 SR 440.3 SS 432.1
RDE -.4175 RRA .0633 RC3 -.0159 FAU .02519 RRT .2315 RRF -.2456 RTF -.7900 CRT .7948 CRS .8868 CST .9839
FDE .3873 FRA .5277 FC3 -.7368 BSP 3366 SGB 1191.7 R23 -.0305 R13 -.7920 LSA 782.1 MSA 218.2 SSA 16.2
BOE .5876 BRA .8522 BC3 .1833 FSP -236 SG1 1110.7 SG2 432.0 THA 6.30 EL1 652.7 EL2 216.2 ALF 38.52

LAUNCH DATE JAN 18 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 211.626

RL 147.19 LAL .00 LOL 117.73 VL 25.355 GAL 2.22 AZL 87.43 MCA 89.52 SMA 114.36 ECC .28944 INC 2.5688 V1 30.269  
 RP 108.03 LAP 2.57 LOP 207.25 VP 36.008 GAP -16.53 AZP 89.98 TAL 174.52 TAP 264.04 RCA 81.26 APO 147.46 V2 35.080  
 RC 43.078 GL 12.72 GP 7.33 ZAL 80.49 ZAP 7.99 ETS 248.70 ZAE 165.17 ETE 353.22 ZAC 121.34 ETC 160.75 CLP 3.20

PLANETOCENTRIC CONIC

C3 26.601 VML 5.158 CLA 25.98 RAL 30.55 RAD 6568.1 VEL 12.165 PTH 2.18 VHP 10.578 DPA 16.09 RAP 26.27 ECC 1.4378  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 13 3274.81 -24.98 115.94 265.96 76.21 2 10 48 2674.8 -26.63 107.66  
 90.00 21 50 57 3936.87 -8.35 157.20 259.51 62.84 22 56 34 3336.9 -11.93 150.34  
 100.00 3 4 37 2925.35 -27.69 90.91 266.64 78.27 3 53 22 2325.3 -29.03 82.36  
 100.00 22 45 14 3761.57 -5.90 142.99 258.18 60.64 23 47 55 3161.6 -9.77 136.34  
 110.00 5 1 13 2560.54 -33.49 64.33 267.77 82.70 5 43 53 1960.5 -34.13 55.15  
 110.00 23 5 8 3699.14 -.91 135.17 255.08 55.83 24 6 47 3039.1 -5.38 128.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4164 TRA -.8261 TC3 .2432 BAU .0865 SGT 1148.5 SGR 447.2 SG3 104.2 ST 554.8 SR 442.6 SS 451.7  
 RDE -.3980 RRA .0545 RC3 -.0051 FAU .02677 RRT .2617 RRF -.2783 RTF -.8037 CRT .8076 CRS .8940 CST .9849  
 FDE .4063 FRA .5378 FC3 -.8713 BSP 3546 SGB 1232.5 R23 -.0350 R13 -.8060 LSA 813.0 MSA 215.4 SSA 16.6  
 BDE .5760 BRA .8279 BC3 .2432 FSP -265 SG1 1155.4 SG2 429.1 THA 6.75 EL1 676.7 EL2 214.0 ALF 37.12

LAUNCH DATE JAN 18 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 218.343

RL 147.19 LAL .00 LOL 117.73 VL 25.593 GAL 1.97 AZL 87.56 MCA 92.73 SMA 115.57 ECC .27558 INC 2.4431 V1 30.269  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.163 GAP -15.57 AZP 90.12 TAL 174.81 TAP 267.55 RCA 83.72 APO 147.42 V2 35.067  
 RC 43.658 GL 12.87 GP 7.81 ZAL 81.23 ZAP 7.95 ETS 261.69 ZAE 162.71 ETE 357.06 ZAC 122.53 ETC 160.00 CLP 1.48

PLANETOCENTRIC CONIC

C3 23.969 VML 4.896 DLA 25.86 RAL 29.73 RAD 6568.0 VEL 12.056 PTH 2.15 VHP 10.036 DPA 17.11 RAP 27.49 ECC 1.3945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 15 29 3240.52 -25.51 113.57 263.26 -77.28 2 9 29 2640.5 -27.01 105.22  
 90.00 21 45 7 3919.78 -8.88 156.22 257.00 63.00 22 50 27 3319.8 -12.43 149.34  
 100.00 3 3 16 2893.04 -28.12 88.60 263.86 79.42 3 51 29 2293.0 -29.29 80.00  
 100.00 22 40 1 3742.49 -6.54 141.93 255.73 60.77 23 42 24 3142.5 -10.38 135.26  
 110.00 4 59 11 2530.36 -33.72 62.01 264.81 84.05 5 41 21 1930.4 -34.18 52.80  
 110.00 23 0 36 3677.93 -1.72 134.06 252.75 55.85 24 1 54 3077.9 -6.18 127.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4191 TRA -.8030 TC3 .3122 BAU .1001 SGT 1193.6 SGR 448.4 SG3 115.1 ST 582.1 SR 444.7 SS 471.1  
 RDE -.3797 RRA .0459 RC3 .0095 FAU .02852 RRT .2959 RRF -.3149 RTF -.8163 CRT .8203 CRS .9008 CST .9860  
 FDE .4259 FRA .5489 FC3-1.0301 BSP 3701 SGB 1275.1 R23 -.0400 R13 -.8190 LSA 844.6 MSA 212.0 SSA 17.0  
 BDE .5655 BRA .8043 BC3 .3123 FSP -297 SG1 1202.0 SG2 425.4 THA 7.26 EL1 701.5 EL2 211.1 ALF 35.81

LAUNCH DATE JAN 18 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 225.065

RL 147.19 LAL .00 LOL 117.73 VL 25.811 GAL 1.72 AZL 87.68 MCA 95.94 SMA 116.71 ECC .26271 INC 2.3168 V1 30.269  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.306 GAP -14.65 AZP 90.24 TAL 175.17 TAP 271.11 RCA 86.05 APO 147.38 V2 35.053  
 RC 44.405 GL 12.95 GP 8.34 ZAL 82.07 ZAP 8.35 ETS 274.43 ZAE 160.33 ETE .14 ZAC 123.65 ETC 159.17 CLP -.28

PLANETOCENTRIC CONIC

C3 21.657 VML 4.654 DLA 25.64 RAL 28.83 RAD 6567.9 VEL 11.960 PTH 2.13 VHP 9.516 DPA 18.17 RAP 28.66 ECC 1.3564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 24 3200.50 -26.08 110.78 260.53 78.57 2 9 45 2600.5 -27.40 102.36  
 90.00 21 37 0 3910.46 -9.17 155.69 254.39 63.09 22 42 10 3310.5 -12.71 148.80  
 100.00 3 3 8 2856.41 -28.55 85.97 261.04 80.74 3 50 45 2256.4 -29.53 77.30  
 100.00 22 32 57 3729.79 -6.96 141.23 253.20 60.86 23 35 7 3129.8 -10.79 134.54  
 110.00 4 57 51 2497.50 -33.93 59.47 261.79 85.55 5 39 29 1897.5 -34.17 50.23  
 110.00 22 54 44 3661.47 -2.34 133.20 250.35 55.89 23 55 45 3061.5 -6.81 126.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4199 TRA -.7770 TC3 .3938 BAU .1143 SGT 1236.0 SGR 450.4 SG3 127.4 ST 607.3 SR 446.9 SS 490.1  
 RDE -.3627 RRA .0377 RC3 .0290 FAU .03050 RRT .3343 RRF -.3562 RTF -.8292 CRT .8328 CRS .9075 CST .9871  
 FDE .4461 FRA .5597 FC3-1.2192 BSP 3888 SGB 1315.5 R23 -.0452 R13 -.8322 LSA 874.7 MSA 207.9 SSA 17.4  
 BDE .5549 BRA .7779 BC3 .3949 FSP -333 SG1 1246.3 SG2 420.9 THA 7.85 EL1 724.9 EL2 207.2 ALF 34.74

LAUNCH DATE JAN 18 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 231.789

RL 147.19 LAL .00 LOL 117.73 VL 26.012 GAL 1.48 AZL 87.81 MCA 99.15 SMA 117.79 ECC .25081 INC 2.1891 V1 30.269  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.436 GAP -13.76 AZP 90.35 TAL 175.57 TAP 274.72 RCA 88.25 APO 147.34 V2 35.040  
 RC 45.309 GL 12.96 GP 8.94 ZAL 83.00 ZAP 9.17 ETS 285.70 ZAE 158.08 ETE 2.75 ZAC 124.69 ETC 158.26 CLP -2.08

PLANETOCENTRIC CONIC

C3 19.628 VML 4.430 DLA 25.31 RAL 27.86 RAD 6567.8 VEL 11.875 PTH 2.11 VHP 9.020 DPA 19.26 RAP 29.77 ECC 1.3230  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 18 59 3155.02 -26.66 107.57 257.78 80.08 2 11 34 2555.0 -27.76 99.08  
 90.00 21 26 42 3908.84 -9.22 155.59 251.71 63.11 22 31 51 3308.8 -12.76 148.70  
 100.00 3 4 19 2815.44 -28.96 82.99 258.18 82.25 3 51 14 2215.4 -29.73 74.27  
 100.00 22 24 4 3723.66 -7.16 140.88 250.60 60.90 23 26 7 3123.7 -10.99 134.19  
 110.00 4 57 20 2461.82 -34.08 56.69 258.74 87.18 5 38 22 1861.8 -34.10 47.44  
 110.00 22 47 32 3650.04 -2.78 132.61 247.90 55.92 23 48 22 3050.0 -7.24 126.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4210 TRA -.7537 TC3 .4829 BAU .1275 SGT 1281.5 SGR 453.5 SG3 141.0 ST 633.5 SR 449.1 SS 508.4  
 RDE -.3471 RRA .0298 RC3 .0545 FAU .03269 RRT .3772 RRF -.4024 RTF -.8396 CRT .8447 CRS .9140 CST .9880  
 FDE .4666 FRA .5711 FC3-1.4418 BSP 4041 SGB 1359.4 R23 -.0522 R13 -.8431 LSA 905.4 MSA 203.5 SSA 17.9  
 BDE .5457 BRA .7543 BC3 .4859 FSP -373 SG1 1294.2 SG2 415.9 THA 8.49 EL1 749.5 EL2 203.2 ALF 33.72

LAUNCH DATE JAN 18 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 238.512

RL 147.19 LAL .00 LOL 117.73 VL 26.197 GAL 1.25 AZL 87.94 HCA 102.35 SMA 118.81 ECC .23983 INC 2.0591 V1 30.269  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.555 GAP -12.91 AZP 90.44 TAL 176.03 TAP 278.38 RCA 90.31 APO 147.30 V2 35.027  
 RC 46.364 GL 12.87 GP 9.61 ZAL 84.02 ZAP 10.37 ETS 294.95 ZAE 155.97 ETE 5.08 ZAC 125.63 ETC 157.28 CLP -3.92

PLANETOCENTRIC CONIC

C3 17.847 VHL 4.225 CLA 24.86 RAL 26.84 RAD 6567.7 VEL 11.800 PTH 2.09 VHP 8.545 DPA 20.40 RAP 30.81 ECC 1.2937  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 23 7 3104.53 -27.20 103.98 255.01 81.80 2 14 52 2504.5 -28.05 95.41  
 90.00 21 14 27 3914.62 -9.04 155.93 248.99 63.05 22 19 41 3314.6 -12.59 149.04  
 100.00 3 6 48 2770.25 -29.33 79.68 255.31 83.96 3 52 58 2170.3 -29.86 70.92  
 100.00 22 13 27 3724.14 -7.14 140.91 247.97 60.90 23 15 31 3124.1 -10.97 134.21  
 110.00 4 57 43 2423.25 -34.17 53.68 255.66 88.96 5 38 6 1823.2 -33.94 44.44  
 110.00 22 39 1 3643.91 -3.01 132.29 245.42 55.93 23 39 45 3043.9 -7.47 126.03

DIFFERENTIAL CORRECTIONS

TOE -.4185 TRA -.7278 TC3 .5853 BAU .1412  
 RDE -.3326 RRA .0220 RC3 .0876 FAU .03517  
 FDE .4858 FRA .5825 FC3-1.7060 BSP 4222  
 BDE .5346 BRA .7282 BC3 .5918 FSP -419

MID-COURSE EXECUTION ACCURACY

SGT 1323.1 SGR 458.4 SG3 156.2  
 RRT .4237 RRF -.4527 RTF -.8502  
 SGB 1400.2 R23 -.0597 R13 -.8543  
 SG1 1338.7 SG2 410.3 THA 9.22

ORBIT DETERMINATION ACCURACY

ST 655.0 SR 451.3 SS 524.2  
 CRT .8557 CRS .9199 CST .9889  
 LSA 931.4 MSA 198.8 SSA 18.4  
 EL1 770.2 EL2 198.6 ALF 32.99

LAUNCH DATE JAN 18 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 245.229

RL 147.19 LAL .00 LOL 117.73 VL 26.366 GAL 1.03 AZL 88.07 HCA 105.55 SMA 119.76 ECC .22972 INC 1.9261 V1 30.269  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.664 GAP -12.10 AZP 90.52 TAL 176.53 TAP 282.09 RCA 92.25 APO 147.27 V2 35.013  
 RC 47.558 GL 12.68 GP 10.36 ZAL 85.12 ZAP 11.86 ETS 302.22 ZAE 154.03 ETE 7.25 ZAC 126.46 ETC 156.21 CLP -5.82

PLANETOCENTRIC CONIC

C3 16.285 VHL 4.036 DLA 24.29 RAL 25.79 RAD 6567.7 VEL 11.733 PTH 2.07 VHP 8.093 DPA 21.59 RAP 31.77 ECC 1.2680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 28 43 3049.60 -27.67 100.03 252.23 83.73 2 19 32 2449.6 -28.25 91.41  
 90.00 21 0 29 3927.35 -8.65 156.65 246.27 62.93 22 5 56 3327.3 -12.21 149.79  
 100.00 3 10 37 2721.06 -29.63 76.06 252.44 85.84 3 55 58 2121.1 -29.89 67.26  
 100.00 22 1 16 3731.13 -6.91 141.30 245.34 60.85 23 3 27 3131.1 -10.75 134.61  
 110.00 4 59 4 2381.73 -34.17 50.44 252.59 90.88 5 38 46 1781.7 -33.67 41.23  
 110.00 22 29 17 3643.22 -3.04 132.25 242.94 55.94 23 30 1 3043.2 -7.49 125.99

DIFFERENTIAL CORRECTIONS

TOE -.4159 TRA -.7036 TC3 .6948 BAU .1539  
 RDE -.3195 RRA .0141 RC3 .1293 FAU .03790  
 FDE .5052 FRA .5955 FC3-2.0149 BSP 4365  
 BDE .5244 BRA .7038 BC3 .7067 FSP -469

MID-COURSE EXECUTION ACCURACY

SGT 1365.4 SGR 466.0 SG3 173.2  
 RRT .4750 RRF -.5080 RTF -.8592  
 SGB 1442.7 R23 -.0688 R13 -.8640  
 SG1 1384.9 SG2 404.3 THA 10.08

ORBIT DETERMINATION ACCURACY

ST 676.0 SR 453.7 SS 539.0  
 CRT .8664 CRS .9255 CST .9898  
 LSA 956.8 MSA 193.9 SSA 19.0  
 EL1 790.8 EL2 193.7 ALF 32.35

LAUNCH DATE JAN 18 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 251.938

RL 147.19 LAL .00 LOL 117.73 VL 26.520 GAL .83 AZL 88.21 HCA 108.75 SMA 120.65 ECC .22045 INC 1.7890 V1 30.269  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.762 GAP -11.31 AZP 90.58 TAL 177.08 TAP 285.83 RCA 94.05 APO 147.24 V2 35.000  
 RC 48.883 GL 12.38 GP 11.20 ZAL 86.28 ZAP 13.61 ETS 307.85 ZAE 152.26 ETE 9.35 ZAC 127.16 ETC 155.05 CLP -7.78

PLANETOCENTRIC CONIC

C3 14.918 VHL 3.862 DLA 23.57 RAL 24.73 RAD 6567.6 VEL 11.675 PTH 2.05 VHP 7.663 DPA 22.84 RAP 32.64 ECC 1.2455  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 35 39 2990.75 -28.03 95.76 249.46 85.84 2 25 30 2390.7 -28.32 87.10  
 90.00 20 45 4 3946.58 -8.05 157.75 243.58 62.76 21 50 51 3346.6 -11.64 150.91  
 100.00 3 15 43 2668.10 -29.83 72.13 249.57 87.90 4 0 11 2068.1 -29.80 63.33  
 100.00 21 47 41 3744.46 -6.47 142.04 242.73 60.75 22 50 5 3144.5 -10.32 135.37  
 110.00 5 1 28 2337.23 -34.07 46.97 249.53 92.93 5 40 26 1737.2 -33.29 37.81  
 110.00 22 18 25 3648.09 -2.86 132.50 240.49 55.92 23 19 13 3048.1 -7.31 126.25

DIFFERENTIAL CORRECTIONS

TOE -.4106 TRA -.6790 TC3 .8129 BAU .1661  
 RDE -.3076 RRA .0062 RC3 .1816 FAU .04093  
 FDE .5232 FRA .6101 FC3-2.3751 BSP 4528  
 BDE .5130 BRA .6790 BC3 .8330 FSP -527

MID-COURSE EXECUTION ACCURACY

SGT 1404.6 SGR 477.4 SG3 192.1  
 RRT .5294 RRF -.5668 RTF -.8677  
 SGB 1483.5 R23 -.0792 R13 -.8733  
 SG1 1429.1 SG2 398.1 THA 11.07

ORBIT DETERMINATION ACCURACY

ST 692.8 SR 456.3 SS 551.3  
 CRT .8762 CRS .9304 CST .9906  
 LSA 977.8 MSA 188.7 SSA 19.6  
 EL1 807.8 EL2 188.6 ALF 31.93

LAUNCH DATE JAN 18 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 258.637

RL 147.19 LAL .00 LOL 117.73 VL 26.661 GAL .63 AZL 88.35 HCA 111.95 SMA 121.47 ECC .21196 INC 1.6466 V1 30.269  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.851 GAP -10.56 AZP 90.62 TAL 177.65 TAP 289.60 RCA 95.73 APO 147.22 V2 34.987  
 RC 50.327 GL 11.94 GP 12.15 ZAL 87.49 ZAP 15.57 ETS 312.18 ZAE 150.67 ETE 11.45 ZAC 127.71 ETC 153.81 CLP -9.81

PLANETOCENTRIC CONIC

C3 13.720 VHL 3.704 DLA 22.71 RAL 23.68 RAD 6567.5 VEL 11.624 PTH 2.04 VHP 7.255 DPA 24.15 RAP 33.39 ECC 1.2258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 51 2928.40 -28.26 91.21 246.71 88.11 2 32 39 2328.4 -28.22 82.55  
 90.00 20 28 28 3971.93 -7.26 159.19 240.97 62.55 21 34 40 3371.9 -10.88 152.38  
 100.00 3 22 6 2611.61 -29.89 67.93 246.73 90.11 4 5 37 2011.6 -29.56 59.15  
 100.00 21 32 54 3763.95 -5.82 143.12 240.19 60.63 22 35 38 3164.0 -9.69 136.48  
 110.00 5 4 59 2289.74 -33.85 43.28 246.52 95.11 5 43 8 1689.7 -32.77 34.21  
 110.00 22 6 31 3658.58 -2.45 133.05 238.10 55.89 23 7 29 3058.6 -6.91 126.80

DIFFERENTIAL CORRECTIONS

TOE -.4005 TRA -.6520 TC3 .9449 BAU .1792  
 RDE -.2963 RRA -.0018 RC3 .2474 FAU .04435  
 FDE .5367 FRA .6241 FC3-2.7987 BSP 4723  
 BDE .4982 BRA .6520 BC3 .9767 FSP -594

MID-COURSE EXECUTION ACCURACY

SGT 1438.4 SGR 493.6 SG3 213.1  
 RRT .5851 RRF -.6272 RTF -.8766  
 SGB 1520.7 R23 -.0900 R13 -.8832  
 SG1 1469.4 SG2 391.9 THA 12.24

ORBIT DETERMINATION ACCURACY

ST 701.2 SR 458.4 SS 557.7  
 CRT .8846 CRS .9345 CST .9914  
 LSA 989.3 MSA 183.5 SSA 20.3  
 EL1 817.4 EL2 183.4 ALF 31.83

LAUNCH DATE JAN 18 1969

FLIGHT TIME 102.00

ARRIVAL DATE APR 30 1969

Heliocentric Conic  
 RL 147.19 LAL .00 LOL 117.73 VL 26.789 GAL .45 AZL 88.50 HCA 115.14 SMA 122.24 ECC .20423 INC 1.4978 V1 30.269  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.932 GAP -9.84 AZP 90.64 TAL 178.25 TAP 293.39 RCA 97.28 APO 147.21 V2 34.974  
 RC 51.881 GL 11.34 GP 13.23 ZAL 88.75 ZAP 17.74 ETS 315.53 ZAE 149.26 ETE 13.63 ZAC 128.10 ETC 152.48 CLP -11.93

Planetocentric Conic  
 C3 12.673 VHL 3.560 DLA 21.69 RAL 22.66 RAD 6567.5 VEL 11.578 PTH 2.02 VHP 6.868 DPA 25.55 RAP 34.01 ECC 1.2086  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 15 2862.91 -28.31 86.42 244.00 90.51 2 40 58 2262.9 -27.94 77.78  
 90.00 20 10 55 4003.07 -6.28 160.95 238.46 62.33 21 17 38 3403.1 -9.93 154.18  
 100.00 3 29 44 2551.81 -29.80 63.49 243.96 92.45 4 12 16 1951.8 -29.14 54.75  
 100.00 21 17 8 3789.40 -4.97 144.53 237.75 60.49 22 20 17 3189.4 -8.86 137.91  
 110.00 5 9 38 2239.26 -33.47 39.38 243.59 97.38 5 46 57 1639.3 -32.09 30.42  
 110.00 21 53 43 3674.71 -1.84 133.89 235.80 55.86 22 54 58 3074.7 -6.31 127.66

Differential Corrections  
 TOE -.3893 TRA -.6287 TC3 1.0779 BAU .1909 SGT 1472.2 SGR 516.7 SG3 236.6 ST 707.0 SR 460.4 SS 560.4  
 RDE -.2860 RRA -.0105 RC3 .3286 FAU .04815 RRT .6412 RRF -.6881 RTF -.8833 CRT .8920 CRS .9376 CST .9922  
 FDE .5471 FRA .6423 FC3-3.2891 BSP 4834 SGB 1560.2 R23 -.1039 R13 -.8914 LSA 996.8 MSA 178.6 SSA 21.2  
 BDE .4831 BRA .6288 BC3 1.1269 FSP -663 SGI 1511.7 SG2 386.1 THA 13.59 EL1 824.6 EL2 178.4 ALF 31.82

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 18 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 2 1969

Heliocentric Conic  
 RL 147.19 LAL .00 LOL 117.73 VL 26.905 GAL .28 AZL 88.66 HCA 118.33 SMA 122.95 ECC .19721 INC 1.3412 V1 30.269  
 RP 108.40 LAP 1.18 LOP 236.07 VP 37.004 GAP -9.14 AZP 90.64 TAL 178.87 TAP 297.20 RCA 98.70 APO 147.20 V2 34.961  
 RC 53.536 GL 10.58 GP 14.45 ZAL 90.02 ZAP 20.11 ETS 318.13 ZAE 148.01 ETE 15.94 ZAC 128.29 ETC 151.08 CLP -14.13

Planetocentric Conic  
 C3 11.758 VHL 3.429 DLA 20.51 RAL 21.70 RAD 6567.4 VEL 11.539 PTH 2.01 VHP 6.504 DPA 27.05 RAP 34.48 ECC 1.1935  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 52 2794.42 -28.17 81.42 241.37 93.01 2 50 27 2194.4 -27.45 72.82  
 90.00 19 52 37 4039.83 -5.11 163.03 236.10 62.11 20 59 57 3439.8 -8.80 156.29  
 100.00 3 38 39 2488.79 -29.53 58.83 241.26 94.89 4 20 8 1888.8 -28.54 50.16  
 100.00 21 0 32 3820.69 -3.92 146.26 235.45 60.34 22 4 12 3220.7 -7.84 139.67  
 110.00 5 15 31 2185.74 -32.93 35.30 240.75 99.74 5 51 57 1585.7 -31.23 26.49  
 110.00 21 40 9 3696.51 -1.01 135.03 233.63 55.83 22 41 46 3096.5 -5.48 128.81

Differential Corrections  
 TOE -.3752 TRA -.6049 TC3 1.2110 BAU .2019 SGT 1499.1 SGR 547.8 SG3 262.0 ST 706.0 SR 461.8 SS 557.0  
 RDE -.2762 RRA -.0197 RC3 .4273 FAU .05221 RRT .6948 RRF -.7462 RTF -.8892 CRT .8987 CRS .9398 CST .9930  
 FDE .5519 FRA .6621 FC3-3.8441 BSP 4978 SGB 1596.1 R23 -.1190 R13 -.8991 LSA 995.6 MSA 173.5 SSA 22.1  
 BDE .4659 BRA .6053 BC3 1.2842 FSP -744 SGI 1549.9 SG2 381.1 THA 15.19 EL1 825.6 EL2 173.2 ALF 32.02

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 18 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 4 1969

Heliocentric Conic  
 RL 147.19 LAL .00 LOL 117.73 VL 27.011 GAL .12 AZL 88.82 HCA 121.52 SMA 123.60 ECC .19085 INC 1.1749 V1 30.269  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.069 GAP -8.47 AZP 90.61 TAL 179.49 TAP 301.02 RCA 100.01 APO 147.19 V2 34.948  
 RC 55.282 GL 9.63 GP 15.84 ZAL 91.31 ZAP 22.68 ETS 320.16 ZAE 146.92 ETE 18.44 ZAC 128.26 ETC 149.62 CLP -16.45

Planetocentric Conic  
 C3 10.961 VHL 3.311 DLA 19.14 RAL 20.81 RAD 6567.4 VEL 11.504 PTH 2.00 VHP 6.162 DPA 28.65 RAP 34.76 ECC 1.1804  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 15 44 2722.97 -27.80 76.22 238.85 95.59 3 1 7 2123.0 -26.74 67.72  
 90.00 19 33 44 4082.17 -3.76 165.40 233.92 61.91 20 41 46 3482.2 -7.49 158.71  
 100.00 3 48 53 2422.58 -29.04 53.96 238.69 97.40 4 29 15 1822.6 -27.72 45.41  
 100.00 20 43 16 3857.80 -2.66 148.30 233.32 60.22 21 47 34 3257.8 -6.61 141.74  
 110.00 5 22 41 2129.08 -32.20 31.04 238.06 102.16 5 58 11 1529.1 -30.19 22.41  
 110.00 21 25 57 3724.06 .05 136.47 231.62 55.82 22 28 1 3124.1 -4.44 130.26

Differential Corrections  
 TOE -.3599 TRA -.5858 TC3 1.3249 BAU .2099 SGT 1519.6 SGR 589.5 SG3 289.4 ST 701.6 SR 463.6 SS 552.9  
 RDE -.2676 RRA -.0311 RC3 .5439 FAU .05633 RRT .7430 RRF -.7997 RTF -.8934 CRT .9047 CRS .9409 CST .9939  
 FDE .5558 FRA .6937 FC3-4.4489 BSP 4995 SGB 1629.9 R23 -.1372 R13 -.9058 LSA 991.9 MSA 168.8 SSA 23.0  
 BDE .4485 BRA .5867 BC3 1.4322 FSP -817 SGI 1585.5 SG2 378.1 THA 17.08 EL1 823.9 EL2 168.2 ALF 32.38

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 18 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 6 1969

Heliocentric Conic  
 RL 147.19 LAL .00 LOL 117.73 VL 27.106 GAL -.03 AZL 89.00 HCA 124.71 SMA 124.20 ECC .18511 INC .9971 V1 30.269  
 RP 108.47 LAP .82 LOP 242.44 VP 37.127 GAP -7.82 AZP 90.57 TAL 180.12 TAP 304.83 RCA 101.21 APO 147.19 V2 34.936  
 RC 57.109 GL 8.47 GP 17.42 ZAL 92.59 ZAP 25.47 ETS 321.77 ZAE 145.95 ETE 21.20 ZAC 127.97 ETC 148.10 CLP -18.88

Planetocentric Conic  
 C3 10.268 VHL 3.204 DLA 17.58 RAL 20.03 RAD 6567.4 VEL 11.474 PTH 1.99 VHP 5.844 DPA 30.39 RAP 34.83 ECC 1.1690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 28 55 2648.33 -27.19 70.85 236.47 98.22 3 13 3 2048.3 -25.77 62.47  
 90.00 19 14 20 4130.29 -2.21 168.09 231.95 61.76 20 23 10 3530.3 -5.97 161.43  
 100.00 4 0 30 2352.96 -28.33 48.91 236.26 99.97 4 39 43 1753.0 -26.66 40.51  
 100.00 20 25 26 3900.89 -1.21 150.67 231.39 60.13 21 30 26 3300.9 -5.17 144.13  
 110.00 5 31 15 2069.05 -31.25 26.62 235.53 104.62 6 5 44 1469.0 -28.93 18.19  
 110.00 21 11 10 3757.57 1.33 138.22 229.81 55.84 22 13 48 3157.6 -3.16 132.01

Differential Corrections  
 TOE -.3005 TRA -.5122 TC3 1.5709 BAU .2366 SGT 1491.8 SGR 639.9 SG3 319.9 ST 610.5 SR 446.9 SS 481.1  
 RDE -.2496 RRA -.0316 RC3 .7093 FAU .06266 RRT .7905 RRF -.8449 RTF -.9139 CRT .8994 CRS .9349 CST .9937  
 FDE .4890 FRA .6487 FC3-5.2831 BSP 5374 SGB 1623.2 R23 -.1223 R13 -.9275 LSA 881.4 MSA 163.1 SSA 24.2  
 BDE .3907 BRA .5132 BC3 1.7237 FSP -920 SGI 1580.5 SG2 369.9 THA 19.86 EL1 739.2 EL2 161.4 ALF 35.29

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 18 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC DISTANCE 291.906  
 RL 147.19 LAL .00 LOL 117.73 VL 27.192 GAL -.16 AZL 89.19 HCA 127.89 SMA 124.74 ECC .17997 INC .8050 V1 30.269  
 RP 108.51 LAP .64 LOP 245.62 VP 37.178 GAP -7.20 AZP 90.49 TAL 180.73 TAP 308.62 RCA 102.29 APO 147.19 V2 34.923  
 RC 59.010 GL 7.06 GP 19.22 ZAL 93.83 ZAP 28.49 ETS 323.04 ZAE 145.07 ETE 24.27 ZAC 127.40 ETC 146.55 CLP -21.44

PLANETOCENTRIC CONIC  
 C3 9.670 VHL 3.110 CLA 15.81 RAL 19.40 RAD 6567.3 VEL 11.448 PTH 1.99 VHP 5.551 DPA 32.28 RAP 34.65 ECC 1.1591  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 43 34 2570.40 -26.31 65.31 234.28 100.86 3 26 25 1970.4 -24.55 57.09  
 90.00 18 54 36 4184.34 -.47 171.11 230.24 61.69 20 4 20 3584.3 -4.25 164.47  
 100.00 4 13 40 2279.87 -27.36 43.70 234.04 102.55 4 51 40 1679.9 -25.35 35.47  
 100.00 20 7 11 3950.10 .46 153.37 229.72 60.11 21 13 1 3350.1 -3.52 146.84  
 110.00 5 41 20 2005.54 -30.07 22.05 233.22 107.09 6 14 46 1405.5 -27.44 13.85  
 110.00 20 56 0 3797.20 2.84 140.29 228.24 55.92 21 59 17 3197.2 -1.65 134.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3035 TRA -.5364 TC3 1.6062 BAU .2367 SGT 1538.2 SGR 714.8 SG3 354.8 ST 639.2 SR 449.7 SS 483.5  
 RDE -.2433 RRA -.0544 RC3 .8792 FAU .06725 RRT .8223 RRF -.8866 RTF -.9036 CRT .9074 CRS .9300 CST .9959  
 FDE .4920 FRA .7423 FC3-6.0205 BSP 5504 SGB 1696.1 R23 -.1673 R13 -.9231 LSA 904.5 MSA 160.9 SSA 26.4  
 BDE .3890 BRA .5392 BC3 1.8311 FSP -1057 SG1 1653.4 SG2 378.4 THA 22.13 EL1 765.5 EL2 157.8 ALF 34.21

LAUNCH DATE JAN 18 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC DISTANCE 298.503  
 RL 147.19 LAL .00 LOL 117.73 VL 27.269 GAL -.28 AZL 89.40 HCA 131.07 SMA 125.23 ECC .17537 INC .5957 V1 30.269  
 RP 108.55 LAP .45 LOP 248.80 VP 37.223 GAP -6.61 AZP 90.39 TAL 181.32 TAP 312.40 RCA 103.27 APO 147.20 V2 34.911  
 RC 60.976 GL 5.38 GP 21.28 ZAL 95.03 ZAP 31.76 ETS 324.08 ZAE 144.22 ETE 27.72 ZAC 126.51 ETC 145.01 CLP -24.16

PLANETOCENTRIC CONIC  
 C3 9.158 VHL 3.026 CLA 13.81 RAL 18.92 RAD 6567.3 VEL 11.426 PTH 1.98 VHP 5.284 DPA 34.35 RAP 34.16 ECC 1.1507  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 59 53 2488.45 -25.13 59.60 232.32 103.49 3 41 22 1888.4 -23.03 51.56  
 90.00 18 34 25 4245.02 1.49 174.49 228.82 61.72 19 45 10 3645.0 -2.30 167.86  
 100.00 4 28 31 2202.63 -26.10 38.31 232.05 105.12 5 5 14 1602.6 -23.77 30.28  
 100.00 19 48 29 4006.07 2.36 156.44 228.34 60.19 20 55 15 3406.1 -1.62 149.92  
 110.00 5 53 6 1937.96 -28.62 17.32 231.16 109.54 6 25 24 1338.0 -25.69 9.37  
 110.00 20 40 23 3843.50 4.61 142.71 226.94 56.09 21 44 27 3243.5 .12 136.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2738 TRA -.5144 TC3 1.7165 BAU .2494 SGT 1534.2 SGR 805.3 SG3 390.6 ST 600.1 SR 437.1 SS 438.9  
 RDE -.2296 RRA -.0698 RC3 1.0972 FAU .07298 RRT .8512 RRF -.9184 RTF -.9073 CRT .9082 CRS .9168 CST .9965  
 FDE .4425 FRA .7773 FC3-6.8990 BSP 5596 SGB 1732.7 R23 -.1792 R13 -.9320 LSA 847.5 MSA 157.5 SSA 28.4  
 BDE .3573 BRA .5191 BC3 2.0372 FSP -1167 SG1 1689.7 SG2 383.7 THA 25.48 EL1 726.9 EL2 151.0 ALF 35.23

LAUNCH DATE JAN 18 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC DISTANCE 305.079  
 RL 147.19 LAL .00 LOL 117.73 VL 27.338 GAL -.39 AZL 89.63 HCA 134.25 SMA 125.68 ECC .17127 INC .3653 V1 30.269  
 RP 108.58 LAP .26 LOP 251.98 VP 37.262 GAP -6.03 AZP 90.26 TAL 181.89 TAP 316.14 RCA 104.15 APO 147.21 V2 34.900  
 RC 63.000 GL 3.38 GP 23.63 ZAL 96.17 ZAP 35.31 ETS 324.97 ZAE 143.35 ETE 31.60 ZAC 125.25 ETC 143.50 CLP -27.04

PLANETOCENTRIC CONIC  
 C3 8.727 VHL 2.954 CLA 11.54 RAL 18.62 RAD 6567.3 VEL 11.407 PTH 1.97 VHP 5.047 DPA 36.61 RAP 33.31 ECC 1.1436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 18 9 2401.80 -23.63 53.70 230.64 106.08 3 58 11 1801.8 -21.20 45.87  
 90.00 18 13 48 4313.15 3.68 178.30 227.75 61.90 19 25 41 3713.2 -.10 171.66  
 100.00 4 45 20 2120.65 -24.52 32.73 230.34 107.65 5 20 40 1520.6 -21.88 24.93  
 100.00 19 29 19 4069.54 4.50 159.94 227.29 60.42 20 37 8 3469.5 .53 153.40  
 110.00 6 6 46 1865.80 -26.88 12.43 229.40 111.96 6 37 52 1265.8 -23.66 4.75  
 110.00 20 24 22 3897.15 6.64 145.54 225.98 56.39 21 29 19 3297.2 2.17 139.30

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2435 TRA -.4997 TC3 1.7856 BAU .2613 SGT 1521.4 SGR 916.7 SG3 427.0 ST 558.6 SR 416.9 SS 386.2  
 RDE -.2128 RRA -.0905 RC3 1.3519 FAU .07856 RRT .8710 RRF -.9425 RTF -.9077 CRT .9086 CRS .8884 CST .9943  
 FDE .3726 FRA .8304 FC3-7.7932 BSP 5727 SGB 1776.2 R23 -.1909 R13 -.9398 LSA 780.8 MSA 156.0 SSA 30.9  
 BDE .3234 BRA .5079 BC3 2.2396 FSP -1287 SG1 1731.6 SG2 395.7 THA 29.38 EL1 682.3 EL2 142.6 ALF 35.95

LAUNCH DATE JAN 18 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC DISTANCE 311.633  
 RL 147.19 LAL .00 LOL 117.73 VL 27.399 GAL -.49 AZL 89.89 HCA 137.43 SMA 126.08 ECC .16764 INC .1086 V1 30.269  
 RP 108.62 LAP .07 LOP 255.16 VP 37.297 GAP -5.47 AZP 90.08 TAL 182.41 TAP 319.84 RCA 104.94 APO 147.22 V2 34.889  
 RC 65.076 GL 1.03 GP 26.31 ZAL 97.23 ZAP 39.14 ETS 325.78 ZAE 142.35 ETE 35.95 ZAC 123.60 ETC 142.07 CLP -30.10

PLANETOCENTRIC CONIC  
 C3 8.375 VHL 2.894 CLA 8.97 RAL 18.54 RAD 6567.3 VEL 11.391 PTH 1.97 VHP 4.842 DPA 39.10 RAP 32.03 ECC 1.1378  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 44 2309.43 -21.75 47.58 229.29 108.59 4 17 13 1709.4 -19.01 39.98  
 90.00 17 52 36 4389.98 6.13 182.62 227.07 62.30 19 5 46 3790.0 2.38 175.95  
 100.00 5 4 27 2032.97 -22.59 26.93 228.97 110.12 5 38 20 1433.0 -19.64 19.37  
 100.00 19 9 34 4141.67 6.91 163.93 226.64 60.85 20 18 36 3541.7 2.97 157.36  
 110.00 6 22 39 1788.24 -24.80 7.36 227.98 114.31 6 52 27 1188.2 -21.31 359.95  
 110.00 20 7 51 3959.17 8.96 148.84 225.39 56.87 21 13 50 3359.2 4.54 142.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2082 TRA -.4845 TC3 1.8218 BAU .2752 SGT 1491.5 SGR 1051.7 SG3 462.7 ST 505.8 SR 382.6 SS 322.3  
 RDE -.1894 RRA -.1159 RC3 1.6493 FAU .08392 RRT .8841 RRF -.9602 RTF -.9073 CRT .9087 CRS .8195 CST .9765  
 FDE .2692 FRA .8908 FC3-8.6750 BSP 5890 SGB 1825.0 R23 -.1938 R13 -.9487 LSA 692.5 MSA 159.4 SSA 33.4  
 BDE .2815 BRA .4981 BC3 2.4575 FSP -1407 SG1 1777.9 SG2 412.3 THA 34.02 EL1 620.7 EL2 130.1 ALF 36.36



LAUNCH DATE JAN 18 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 318.164

RL 147.19 LAL .00 LOL 117.73 VL 27.453 GAL -.57 AZL 90.18 MCA 140.60 SMA 126.43 ECC .16445 INC .1805 V1 30.269  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.326 GAP -4.94 AZP 89.86 TAL 182.90 TAP 323.50 RCA 105.64 APO 147.23 V2 34.878  
 RC 67.198 GL -1.74 GP 29.35 ZAL 98.17 ZAP 43.28 ETS 326.59 ZAE 141.13 ETE 40.76 ZAC 121.52 ETC 140.77 CLP -33.36

PLANETOCENTRIC CONIC

C3 8.107 VHL 2.847 CLA 6.04 RAL 18.71 RAD 6567.3 VEL 11.380 PTH 1.97 VHP 4.673 DPA 41.81 RAP 30.22 ECC 1.1334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 2 8 2209.98 -19.46 41.19 228.35 110.99 4 38 58 1610.0 -16.43 33.82  
 90.00 17 30 34 4477.28 8.86 187.58 226.87 63.00 18 45 11 3877.3 5.17 180.84  
 100.00 5 26 20 1938.37 -20.25 20.88 228.01 112.47 5 58 39 1338.4 -17.02 13.57  
 100.00 18 49 2 4224.12 9.62 168.56 226.47 61.56 19 59 26 3624.1 5.74 161.91  
 110.00 6 41 8 1704.26 -22.34 2.08 226.99 116.57 7 9 33 1104.3 -18.60 354.95  
 110.00 19 50 43 4031.00 11.61 152.72 225.28 57.62 20 57 54 3431.0 7.25 146.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1730 TRA -.4680 TC3 1.8102 BAU .2917 SGT 1442.4 SGR 1214.5 SG3 495.9 ST 450.4 SR 332.0 SS 266.1  
 ROE -.1581 RRA -.1464 RC3 1.9914 FAU .08881 RRT .8907 RRF -.9728 RTF -.9042 CRT .9164 CRS .6557 CST .8893  
 FOE .1353 FRA .9521 FC3-9.4830 BSP 6050 SGB 1885.6 R23 -.1884 R13 -.9580 LSA 593.9 MSA 173.1 SSA 35.0  
 BOE .2343 BRA .4903 BC3 2.6912 FSP -1517 SG1 1835.0 SG2 434.0 THA 39.51 EL1 548.8 EL2 109.1 ALF 35.66

LAUNCH DATE JAN 18 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 324.672

RL 147.19 LAL .00 LOL 117.73 VL 27.500 GAL -.64 AZL 90.51 MCA 143.77 SMA 126.75 ECC .16165 INC .5112 V1 30.269  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.351 GAP -4.42 AZP 89.59 TAL 183.33 TAP 327.10 RCA 106.26 APO 147.24 V2 34.867  
 RC 69.360 GL -5.00 GP 32.80 ZAL 98.97 ZAP 47.71 ETS 327.49 ZAE 139.57 ETE 45.99 ZAC 118.98 ETC 139.65 CLP -36.83

PLANETOCENTRIC CONIC

C3 7.933 VHL 2.816 CLA 2.71 RAL 19.17 RAD 6567.3 VEL 11.372 PTH 1.96 VHP 4.548 DPA 44.78 RAP 27.77 ECC 1.1306  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 29 3 2101.61 -16.68 34.45 227.91 113.22 5 4 5 1501.6 -13.39 27.32  
 90.00 17 7 17 4577.59 11.91 193.37 227.25 64.12 18 23 35 3977.6 8.33 186.52  
 100.00 5 51 39 1835.17 -17.43 14.51 227.56 114.67 6 22 14 1235.2 -13.96 7.44  
 100.00 18 27 22 4319.26 12.65 174.00 226.87 62.69 19 39 21 3719.3 8.89 167.23  
 110.00 7 2 48 1612.50 -19.44 356.54 226.49 118.68 7 29 40 1012.5 -15.47 349.68  
 110.00 19 32 43 4114.70 14.61 157.34 225.74 58.75 20 41 18 3514.7 10.37 150.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1357 TRA -.4525 TC3 1.7446 BAU .3122 SGT 1375.3 SGR 1407.4 SG3 524.1 ST 391.8 SR 259.8 SS 256.7  
 ROE -.1131 RRA -.1861 RC3 2.3713 FAU .09265 RRT .8915 RRF -.9815 RTF -.8986 CRT .9445 CRS .3493 CST .6078  
 FOE -.0398 FRA 1.0236 FC-10.1112 BSP 6291 SGB 1967.8 R23 -.1723 R13 -.9677 LSA 489.4 MSA 215.2 SSA 32.9  
 BOE .1767 BRA .4893 BC3 2.9440 FSP -1614 SG1 1913.7 SG2 458.3 THA 45.74 EL1 464.6 EL2 72.0 ALF 32.95

LAUNCH DATE JAN 18 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 331.156

RL 147.19 LAL .00 LOL 117.73 VL 27.541 GAL -.70 AZL 90.90 HCA 146.94 SMA 127.02 ECC .15922 INC .8960 V1 30.269  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.372 GAP -3.92 AZP 89.25 TAL 183.70 TAP 330.64 RCA 106.80 APO 147.25 V2 34.858  
 RC 71.560 GL -8.83 GP 36.67 ZAL 99.61 ZAP 52.43 ETS 328.55 ZAE 137.53 ETE 51.54 ZAC 115.97 ETC 138.79 CLP -40.52

PLANETOCENTRIC CONIC

C3 7.872 VHL 2.806 CLA -1.11 RAL 19.96 RAD 6567.3 VEL 11.369 PTH 1.96 VHP 4.475 DPA 47.97 RAP 24.54 ECC 1.1296  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 0 30 1981.93 -13.33 27.26 228.10 115.22 5 33 32 1381.9 -9.82 20.34  
 90.00 16 42 9 4694.46 15.28 200.30 228.37 65.87 18 0 24 4094.5 11.89 193.26  
 100.00 6 21 20 1721.20 -14.07 7.72 227.73 116.65 6 50 1 1121.2 -10.38 .87  
 100.00 18 4 1 4430.42 16.02 180.53 228.01 64.42 19 17 51 3830.4 12.45 173.56  
 110.00 7 28 24 1511.27 -16.03 350.67 226.62 120.60 7 53 35 911.3 -11.85 344.06  
 110.00 19 13 26 4213.12 18.01 162.95 226.93 60.44 20 23 39 3613.1 13.93 156.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1011 TRA -.4373 TC3 1.6066 BAU .3368 SGT 1285.7 SGR 1630.4 SG3 542.6 ST 339.4 SR 184.5 SS 334.1  
 ROE -.0505 RRA -.2379 RC3 2.7673 FAU .09466 RRT .8850 RRF -.9875 RTF -.8879 CRT .9838 CRS .3378 CST .2731  
 FOE -.2500 FRA 1.1015 FC-10.4100 BSP 6627 SGB 2076.3 R23 -.1484 R13 -.9767 LSA 414.1 MSA 297.8 SSA 26.8  
 BOE .1131 BRA .4978 BC3 3.1998 FSP -1684 SG1 2019.3 SG2 483.2 THA 52.58 EL1 385.2 EL2 29.1 ALF 28.32

LAUNCH DATE JAN 18 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 337.615

RL 147.19 LAL .00 LOL 117.73 VL 27.577 GAL -.75 AZL 91.35 HCA 150.10 SMA 127.26 ECC .15713 INC 1.3521 V1 30.269  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.390 GAP -3.44 AZP 88.83 TAL 184.01 TAP 334.12 RCA 107.26 APO 147.26 V2 34.848  
 RC 73.792 GL -13.33 GP 40.99 ZAL 100.02 ZAP 57.39 ETS 329.90 ZAE 134.91 ETE 57.26 ZAC 112.51 ETC 138.24 CLP -44.44

PLANETOCENTRIC CONIC

C3 7.965 VHL 2.822 CLA -5.48 RAL 21.15 RAD 6567.3 VEL 11.373 PTH 1.96 VHP 4.464 DPA 51.37 RAP 20.34 ECC 1.1311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 37 59 1847.59 -9.31 19.44 229.12 116.86 6 8 47 1247.6 -5.63 12.69  
 90.00 16 14 7 4833.12 18.94 208.83 230.44 68.55 17 34 41 4233.1 15.86 201.51  
 100.00 6 56 44 1593.54 -10.05 .37 228.72 118.30 7 23 18 993.5 -6.19 353.71  
 100.00 17 38 4 4562.40 19.72 188.58 230.11 67.07 18 54 6 3962.4 16.45 181.32  
 110.00 7 59 3 1398.46 -12.02 344.39 227.55 122.24 8 22 21 798.5 -7.68 337.99  
 110.00 18 52 14 4330.24 21.79 169.92 229.08 62.99 20 4 25 3730.2 17.99 162.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.0719 TRA -.4203 TC3 1.3874 BAU .3658 SGT 1170.2 SGR 1881.2 SG3 547.3 ST 296.6 SR 208.7 SS 480.1  
 ROE .0377 RRA -.3052 RC3 3.1421 FAU .09412 RRT .8683 RRF -.9915 RTF -.8683 CRT .6156 CRS .8481 CST .1178  
 FOE -.4925 FRA 1.1783 FC-10.2303 BSP 7027 SGB 2215.4 R23 -.1193 R13 -.9844 LSA 517.9 MSA 305.7 SSA 19.6  
 BOE .0812 BRA .5194 BC3 3.4348 FSP -1706 SG1 2156.8 SG2 506.4 THA 59.79 EL1 331.5 EL2 147.2 ALF 29.88

LAUNCH DATE JAN 18 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC DISTANCE 344.050  
 RL 147.19 LAL .00 LOL 117.73 VL 27.607 GAL -7.78 AZL 91.90 HCA 153.26 SMA 127.46 ECC .15535 INC 1.9049 V1 30.269  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.404 GAP -2.97 AZP 88.30 TAL 184.25 TAP 337.52 RCA 107.66 APO 147.26 V2 34.839  
 RC 76.053 GL -18.59 GP 45.74 ZAL 100.17 ZAP 62.50 ETS 331.62 ZAE 131.63 ETE 63.00 ZAC 108.62 ETC 138.08 CLP -48.58

PLANETOCENTRIC CONIC  
 C3 8.281 VHL 2.878 DLA -10.51 RAL 22.80 RAD 6567.3 VEL 11.387 PTH 1.97 VHP 4.534 DPA 54.91 RAP 14.92 ECC 1.1363  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 23 56 1693.49 -4.46 10.71 231.26 117.99 6 52 10 1093.5 -0.68 4.07  
 90.00 15 41 21 5001.67 22.76 219.71 233.81 72.69 17 4 43 4401.7 20.18 211.99  
 100.00 7 40 3 1447.93 -5.25 352.22 230.83 119.47 8 4 11 847.9 -1.29 345.68  
 100.00 17 7 56 4722.46 23.62 198.87 233.51 71.13 18 26 38 4122.5 20.83 191.18  
 110.00 8 36 26 1271.38 -7.32 337.55 229.55 123.48 8 57 37 671.4 -2.87 331.30  
 110.00 18 28 2 4471.78 25.88 178.87 232.55 66.85 19 42 34 3871.8 22.53 171.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0539 TRA -.3998 TC3 1.0942 BAU .3995 SGT 1031.2 SGR 2157.3 SG3 534.4 ST 266.2 SR 401.8 SS 658.5  
 RDE .1592 RRA 4.3943 RC3 3.4382 FAU .09046 RRT .8355 RRF -.9941 RTF -.8334 CRT .2364 CRS .9834 CST .0611  
 FDE -.7490 FRA 1.2492 FC3-9.4574 BSP 7533 SGB 2391.1 R23 -.0891 R13 -.9901 LSA 769.5 MSA 271.3 SSA 13.8  
 BDE .1681 BRA .5615 BC3 3.6081 FSP -1670 SGI 2332.9 SG2 524.1 THA 67.00 EL1 409.9 EL2 253.5 ALF 75.42

LAUNCH DATE JAN 18 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC DISTANCE 350.459  
 RL 147.19 LAL .00 LOL 117.73 VL 27.632 GAL -.80 AZL 92.59 HCA 156.42 SMA 127.63 ECC .15386 INC 2.5935 V1 30.269  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.414 GAP -2.52 AZP 87.62 TAL 184.43 TAP 340.85 RCA 107.99 APO 147.27 V2 34.831  
 RC 78.340 GL -24.70 GP 50.91 ZAL 99.99 ZAP 67.65 ETS 333.83 ZAE 127.63 ETE 68.60 ZAC 104.37 ETC 138.37 CLP -52.92

PLANETOCENTRIC CONIC  
 C3 8.950 VHL 2.992 DLA -16.23 RAL 25.02 RAD 6567.3 VEL 11.417 PTH 1.98 VHP 4.708 DPA 58.47 RAP 7.94 ECC 1.1473  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 22 53 1510.16 1.44 .47 235.03 118.28 7 48 3 910.2 5.21 353.82  
 90.00 15 0 6 5214.46 26.31 234.27 238.92 79.14 16 27 1 4614.5 24.55 226.04  
 100.00 8 35 8 1276.99 .52 342.82 234.52 119.89 8 56 25 677.0 4.50 336.29  
 100.00 16 30 32 4922.86 27.34 212.58 238.69 77.42 17 52 35 4322.9 25.33 204.36  
 110.00 9 23 16 1126.22 -1.81 329.92 233.06 124.14 9 42 2 526.2 2.68 323.72  
 110.00 17 58 53 4646.40 30.00 190.78 237.88 72.80 19 16 20 4046.4 27.36 182.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0517 TRA -.3704 TC3 .7460 BAU .4370 SGT 868.8 SGR 2451.9 SG3 501.5 ST 243.1 SR 704.0 SS 847.7  
 RDE .3295 RRA -.5104 RC3 3.5756 FAU .08336 RRT .7720 RRF -.9959 RTF -.7683 CRT .0354 CRS .9975 CST -.0335  
 FDE -1.0069 FRA 1.2976 FC3-8.0633 BSP 8191 SGB 2601.3 R23 -.0605 R13 -.9940 LSA 1101.2 MSA 246.0 SSA 9.6  
 BDE .3335 BRA .6307 BC3 3.6526 FSP -1577 SGI 2546.4 SG2 531.8 THA 73.98 EL1 704.1 EL2 243.0 ALF 89.21

LAUNCH DATE JAN 18 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC DISTANCE 356.841  
 RL 147.19 LAL .00 LOL 117.73 VL 27.652 GAL -.81 AZL 93.48 HCA 159.57 SMA 127.77 ECC .15262 INC 3.4806 V1 30.269  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.422 GAP -2.09 AZP 86.74 TAL 184.52 TAP 344.10 RCA 108.27 APO 147.27 V2 34.824  
 RC 80.651 GL -31.67 GP 56.47 ZAL 99.43 ZAP 72.68 ETS 336.63 ZAE 122.91 ETE 73.98 ZAC 99.84 ETC 139.18 CLP -57.40

PLANETOCENTRIC CONIC  
 C3 10.222 VHL 3.197 DLA -22.63 RAL 27.93 RAD 6567.4 VEL 11.472 PTH 1.99 VHP 5.026 DPA 61.91 RAP 358.99 ECC 1.1682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 46 17 1270.05 9.06 346.94 241.41 116.94 9 7 27 670.1 12.60 340.05  
 90.00 13 59 55 5506.78 28.31 255.36 246.15 89.49 15 31 42 4906.8 27.94 246.72  
 100.00 9 50 52 1061.59 7.76 330.92 240.71 118.96 10 8 34 461.6 11.56 324.20  
 100.00 15 38 1 5190.47 29.79 232.05 246.11 87.35 17 4 32 4590.5 29.10 223.31  
 110.00 10 24 44 955.45 4.71 321.00 238.83 123.90 10 40 39 355.4 9.13 314.70  
 110.00 17 20 39 4869.38 33.34 207.27 245.72 82.00 18 41 49 4269.4 31.88 198.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0798 TRA -.3278 TC3 .3785 BAU .4758 SGT 695.8 SGR 2751.9 SG3 448.1 ST 238.7 SR 1077.4 SS 1011.3  
 RDE .5597 RRA -.6655 RC3 3.4608 FAU .07279 RRT .6343 RRF -.9970 RTF -.6284 CRT -.2684 CRS .9994 CST -.3001  
 FDE -1.2252 FRA 1.3173 FC3-6.1646 BSP 8955 SGB 2838.5 R23 -.0368 R13 -.9964 LSA 1479.0 MSA 230.0 SSA 6.8  
 BDE .5654 BRA .7419 BC3 3.4815 FSP -1420 SGI 2788.4 SG2 530.9 THA 80.54 EL1 1079.4 EL2 229.5 ALF 93.56

LAUNCH DATE JAN 18 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC DISTANCE 363.194  
 RL 147.19 LAL .00 LOL 117.73 VL 27.668 GAL -.81 AZL 94.67 HCA 162.72 SMA 127.88 ECC .15163 INC 4.6745 V1 30.269  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.428 GAP -1.67 AZP 85.54 TAL 184.54 TAP 347.26 RCA 108.49 APO 147.27 V2 34.816  
 RC 82.981 GL -39.40 GP 62.41 ZAL 98.46 ZAP 77.41 ETS 340.10 ZAE 117.51 ETE 79.11 ZAC 95.14 ETC 140.58 CLP -61.92

PLANETOCENTRIC CONIC  
 C3 12.619 VHL 3.552 DLA -29.58 RAL 31.69 RAD 6567.5 VEL 11.576 PTH 2.02 VHP 5.556 DPA 65.01 RAP 347.51 ECC 1.2077  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.07 10 24 54 1024.49 22.95 335.26 253.42 109.19 10 41 58 424.5 25.36 327.32  
 98.93 12 51 21 5839.67 22.96 278.44 253.43 109.18 14 28 40 5239.7 25.37 270.49  
 100.00 12 23 15 641.52 20.37 306.14 252.37 112.36 12 33 56 41.5 23.23 298.51  
 100.00 13 35 40 5697.87 25.59 268.83 254.34 106.00 15 10 38 5097.9 27.54 260.57  
 110.00 11 54 52 730.99 13.04 308.97 248.45 121.88 12 7 3 131.0 17.16 302.28  
 110.00 16 20 33 5181.16 33.68 231.49 256.17 96.25 17 46 54 4581.2 34.17 222.28

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1550 TRA -.2616 TC3 .0505 BAU .5104 SGT 547.0 SGR 3038.7 SG3 377.1 ST 289.3 SR 1484.9 SS 1117.7  
 RDE .8684 RRA -.8783 RC3 3.0249 FAU .05923 RRT .3112 RRF -.9978 RTF -.3025 CRT -.6495 CRS .9998 CST -.6640  
 FDE -1.3710 FRA 1.3018 FC3-4.0635 BSP 9710 SGB 3087.6 R23 -.0183 R13 -.9976 LSA 1868.2 MSA 218.2 SSA 4.9  
 BDE .8822 BRA .9164 BC3 3.0254 FSP -1197 SGI 3043.7 SG2 519.0 THA 86.70 EL1 1497.0 EL2 218.2 ALF 97.37

LAUNCH DATE JAN 18 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 369.514

RL 147.19 LAL .00 LOL 117.73 VL 27.680 GAL -.79 AZL 96.38 HCA 165.85 SMA 127.96 ECC .15086 INC 6.3784 V1 30.269  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.431 GAP -1.26 AZP 83.81 TAL 184.47 TAP 350.32 RCA 108.66 APO 147.27 V2 34.810  
 RC 85.328 GL -47.58 GP 68.76 ZAL 97.10 ZAP 81.62 ETS 344.36 ZAE 111.42 ETE 84.10 ZAC 90.35 ETC 142.69 CLP -66.29

PLANETOCENTRIC CONIC

C3 17.348 VHL 4.165 DLA -36.73 RAL 36.47 RAD 6567.7 VEL 11.778 PTH 2.08 VHP 6.422 DPA 67.47 RAP 332.88 ECC 1.2855  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.56 9 2 30 1410.31 26.10 6.31 265.43 116.82 9 26 1 810.3 29.48 358.53  
 114.44 14 51 53 5595.70 26.11 261.25 265.43 116.81 16 25 9 4995.7 29.48 253.46  
 65.56 9 2 30 1410.31 26.10 6.31 265.43 116.82 9 26 1 810.3 29.48 358.53  
 114.44 14 51 53 5595.70 26.11 261.25 265.43 116.81 16 25 9 4995.7 29.48 253.46  
 65.56 9 2 30 1410.31 26.10 6.31 265.43 116.82 9 26 1 810.3 29.48 358.53  
 114.44 14 51 53 5595.70 26.11 261.25 265.43 116.81 16 25 9 4995.7 29.48 253.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3039 TRA -.1493 TC3 -.1654 BAU .5340 SGT 509.4 SGR 3297.3 SG3 296.1 ST 425.1 SR 1867.5 SS 1140.7  
 RDE 1.2831 RRA-1.1793 RC3 2.2964 FAU .04401 RRT -.2876 RRF -.9983 RTF .2979 CRT -.8710 CRS .9999 CST -.8777  
 FDE-1.4192 FRA 1.2471 FC3-2.1965 BSP 10521 SGB 3336.4 R23 -.0046 R13 -.9983 LSA 2219.8 MSA 204.9 SSA 3.5  
 BOE 1.3186 BRA 1.1887 BC3 2.3023 FSP -946 SG1 3300.6 SG2 487.3 THA 92.60 EL1 1904.3 EL2 204.8 ALF 101.35

LAUNCH DATE JAN 18 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 375.791

RL 147.19 LAL .00 LOL 117.73 VL 27.689 GAL -.76 AZL 99.02 HCA 168.96 SMA 128.02 ECC .15028 INC 9.0224 V1 30.269  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.432 GAP -.88 AZP 81.14 TAL 184.31 TAP 353.27 RCA 108.78 APO 147.26 V2 34.804  
 RC 87.691 GL -55.66 GP 75.67 ZAL 95.45 ZAP 85.12 ETS 349.65 ZAE 104.55 ETE 89.26 ZAC 85.48 ETC 145.84 CLP -69.91

PLANETOCENTRIC CONIC

C3 27.653 VHL 5.259 DLA -43.47 RAL 42.34 RAD 6568.1 VEL 12.208 PTH 2.19 VHP 7.890 DPA 68.85 RAP 314.61 ECC 1.4551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.52 8 39 40 1653.40 26.07 26.85 281.25 126.11 9 7 14 1053.4 30.59 19.76  
 124.48 16 1 31 5577.56 26.08 259.70 281.26 126.10 17 34 28 4977.6 30.60 252.61  
 55.52 8 39 40 1653.40 26.07 26.85 281.25 126.11 9 7 14 1053.4 30.59 19.76  
 124.48 16 1 31 5577.56 26.08 259.70 281.26 126.10 17 34 28 4977.6 30.60 252.61  
 55.52 8 39 40 1653.40 26.07 26.85 281.25 126.11 9 7 14 1053.4 30.59 19.76  
 124.48 16 1 31 5577.56 26.08 259.70 281.26 126.10 17 34 28 4977.6 30.60 252.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5788 TRA .0648 TC3 -.2331 BAU .5291 SGT 683.6 SGR 3501.3 SG3 214.0 ST 631.4 SR 2140.6 SS 1071.5  
 RDE 1.8445 RRA-1.6335 RC3 1.4121 FAU .02859 RRT -.7814 RRF -.9987 RTF .7885 CRT -.9539 CRS .9999 CST -.9571  
 FDE-1.3598 FRA 1.1643 FC3 -.8949 BSP 11264 SGB 3567.4 R23 .0054 R13 -.9988 LSA 2468.9 MSA 182.7 SSA 2.5  
 BOE 1.9332 BRA 1.6348 BC3 1.4312 FSP -687 SG1 3542.4 SG2 421.6 THA 98.80 EL1 2224.3 EL2 182.3 ALF 105.82

LAUNCH DATE JAN 18 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 382.003

RL 147.19 LAL .00 LOL 117.73 VL 27.694 GAL -.71 AZL 103.69 HCA 172.04 SMA 128.06 ECC .14989 INC13.6891 V1 30.269  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.431 GAP -.51 AZP 76.44 TAL 184.03 TAP 356.06 RCA 108.86 APO 147.25 V2 34.799  
 RC 90.065 GL -62.61 GP 83.59 ZAL 93.68 ZAP 87.73 ETS 357.64 ZAE 96.50 ETE 96.45 ZAC 80.38 ETC 151.94 CLP -69.24

PLANETOCENTRIC CONIC

C3 54.482 VHL 7.381 DLA -48.84 RAL 48.84 RAD 6569.0 VEL 13.261 PTH 2.42 VHP 10.628 DPA 68.45 RAP 292.68 ECC 1.8966  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.39 8 39 34 1890.20 20.78 44.08 299.46 135.25 9 11 4 1290.2 26.34 38.23  
 131.61 16 53 30 5681.31 20.79 264.44 299.47 135.25 18 28 11 5081.3 26.35 258.58  
 48.39 8 39 34 1890.20 20.78 44.08 299.46 135.25 9 11 4 1290.2 26.34 38.23  
 131.61 16 53 30 5681.31 20.79 264.44 299.47 135.25 18 28 11 5081.3 26.35 258.58  
 48.39 8 39 34 1890.20 20.78 44.08 299.46 135.25 9 11 4 1290.2 26.34 38.23  
 131.61 16 53 30 5681.31 20.79 264.44 299.47 135.25 18 28 11 5081.3 26.35 258.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.1020 TRA .6362 TC3 -.1715 BAU .4464 SGT 1165.7 SGR 3580.8 SG3 141.7 ST 884.6 SR 2228.8 SS 948.9  
 RDE 2.6603 RRA-2.3686 RC3 .5884 FAU .01424 RRT -.9780 RRF -.9992 RTF .9787 CRT -.9918 CRS 1.0000 CST -.9921  
 FDE-1.2346 FRA 1.0926 FC3 -.2262 BSP 11965 SGB 3765.8 R23 .0129 R13 -.9991 LSA 2576.6 MSA 106.1 SSA 1.7  
 BOE 2.8795 BRA 2.4526 BC3 .6128 FSP -460 SG1 3758.6 SG2 231.5 THA 107.73 EL1 2395.6 EL2 105.2 ALF 111.53

LAUNCH DATE JAN 18 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 388.068

RL 147.19 LAL .00 LOL 117.73 VL 27.696 GAL -.62 AZL 113.96 HCA 174.99 SMA 128.07 ECC .14965 INC23.9605 V1 30.269  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.428 GAP -.19 AZP 66.12 TAL 183.53 TAP 358.52 RCA 108.91 APO 147.24 V2 34.795  
 RC 92.449 GL -66.12 GP 85.42 ZAL 92.01 ZAP 89.32 ETS 143.15 ZAE 85.63 ETE 240.77 ZAC 74.31 ETC 296.54 CLP 81.50

PLANETOCENTRIC CONIC

C3 151.287 VHL 12.300 DLA -50.95 RAL 53.66 RAD 6570.6 VEL 16.511 PTH 2.88 VHP 16.812 DPA 64.58 RAP 267.36 ECC 3.4898  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.69 8 50 4 2133.70 10.02 56.39 315.41 140.23 9 25 37 1533.7 16.12 51.49  
 134.31 17 21 26 5883.42 10.03 272.54 315.42 140.23 18 59 30 5283.4 16.13 267.64  
 45.69 8 50 4 2133.70 10.02 56.39 315.41 140.23 9 25 37 1533.7 16.12 51.49  
 134.31 17 21 26 5883.42 10.03 272.54 315.42 140.23 18 59 30 5283.4 16.13 267.64  
 45.69 8 50 4 2133.70 10.02 56.39 315.41 140.23 9 25 37 1533.7 16.12 51.49  
 134.31 17 21 26 5883.42 10.03 272.54 315.42 140.23 18 59 30 5283.4 16.13 267.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3986 TRA 2.4735 TC3 -.0156 BAU .0497 SGT 1942.0 SGR 3366.1 SG3 88.7 ST 851.8 SR 2260.8 SS 897.3  
 RDE-4.5522 RRA 3.5348 RC3 -.0190 FAU-.00062 RRT .5203 RRF .9944 RTF .6052 CRT -.4940 CRS -.9971 CST .4259  
 FDE-1.2049 FRA 1.1630 FC3 .0035 BSP 12319 SGB 3886.2 R23 .0648 R13 .9976 LSA 2469.8 MSA 736.2 SSA 1.0  
 BOE 4.7622 BRA 4.3143 BC3 .0246 FSP -289 SG1 3554.7 SG2 1570.5 THA 69.01 EL1 2304.1 EL2 726.7 ALF 101.73

LAUNCH DATE JAN 18 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 393.512

RL 147.19 LAL .00 LOL 117.73 VL 27.695 GAL -.41 AZL 146.96 HCA 177.40 SMA 128.07 ECC .14948 INC56.9549 V1 30.269  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.424 GAP -.04 AZP 33.07 TAL 182.31 TAP 359.71 RCA 108.92 APO 147.21 V2 34.791  
 RC 94.840 GL -56.84 GP 63.88 ZAL 90.68 ZAP 89.86 ETS 174.86 ZAE 63.91 ETE 271.76 ZAC 64.01 ETC 332.66 CLP 89.69

PLANETOCENTRIC CONIC

C3 769.063 VHL 27.732 DLA -42.14 RAL 48.68 RAD 6572.8 VEL 29.839 PTH 3.45 VHP 35.925 DPA 49.36 RAP 238.20 ECC13.6568  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.38 9 12 37 2208.75 .33 53.32 318.30 132.14 9 49 25 1608.8 5.68 47.78  
 122.62 16 19 10 886.15 .34 311.92 318.32 132.14 16 33 56 286.2 5.70 306.39  
 57.38 9 12 37 2208.75 .33 53.32 318.30 132.14 9 49 25 1608.8 5.68 47.78  
 122.62 16 19 10 886.15 .34 311.92 318.32 132.14 16 33 56 286.2 5.70 306.39  
 57.38 9 12 37 2208.75 .33 53.32 318.30 132.14 9 49 25 1608.8 5.68 47.78  
 122.62 16 19 10 886.15 .34 311.92 318.32 132.14 16 33 56 286.2 5.70 306.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.8616 TRA -.9420 TC3 -.0765 BAU 2.4375 SGT 1121.5 SGR 3464.6 SG3 62.1 ST 1007.6 SR 1949.0 SS 1270.8  
 RDE -8.5750 RRA 9.7072 RC3 .2244 FAU-.04128 RRT -.7766 RRF .9999 RTF -.7831 CRT -.9389 CRS -1.0000 CST .9421  
 FDE -1.8090 FRA 1.9979 FC3 .0465 BSP 11393 SGB 3641.5 R23 -.0396 R13 .9992 LSA 2515.4 MSA 318.4 SSA .3  
 BOE 9.8573 BRA 9.7528 BC3 .2371 FSP -201 SG1 3576.7 SG2 684.4 THA 104.66 EL1 2171.9 EL2 311.1 ALF 116.48

LAUNCH DATE JAN 18 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 402.327

RL 147.19 LAL .00 LOL 117.73 VL 27.692 GAL -.84 AZL 36.91 HCA 182.90 SMA 128.04 ECC .15024 INC53.0945 V1 30.269  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.419 GAP 1.00 AZP 143.06 TAL 184.75 TAP 7.65 RCA 108.80 APO 147.28 V2 34.788  
 RC 97.236 GL 58.34 GP -69.08 ZAL 91.18 ZAP 91.12 ETS 176.74 ZAE 69.41 ETE 82.08 ZAC 91.15 ETC 33.31 CLP 93.13

PLANETOCENTRIC CONIC

C3 676.585 VHL 26.011 DLA 60.55 RAL 344.49 RAD 6572.7 VEL 28.247 PTH 3.42 VHP 30.941 DPA -66.01 RAP 150.50 ECC12.1349  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.96 15 39 33 5020.78 -.90 240.26 253.99 29.46 17 3 14 4420.8 -7.86 236.71  
 146.04 1 20 5 3346.66 -.89 102.69 253.97 29.46 2 15 51 2746.7 -7.85 99.14  
 33.96 15 39 33 5020.78 -.90 240.26 253.99 29.46 17 3 14 4420.8 -7.86 236.71  
 146.04 1 20 5 3346.66 -.89 102.69 253.97 29.46 2 15 51 2746.7 -7.85 99.14  
 33.96 15 39 33 5020.78 -.90 240.26 253.99 29.46 17 3 14 4420.8 -7.86 236.71  
 146.04 1 20 5 3346.66 -.89 102.69 253.97 29.46 2 15 51 2746.7 -7.85 99.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.5520 TRA 2.3217 TC3 -.1030 BAU 2.2142 SGT 1407.5 SGR 3624.7 SG3 65.3 ST 842.5 SR 3240.9 SS 1791.3  
 RD -14.6216 RRA 2.6703 RC3 -.2221 FAU-.03551 RRT .8591 RRF -.9996 RTF -.8725 CRT .9641 CRS .9999 CST .9668  
 FDE 3.0194 FRA -.6035 FC3 .0454 BSP 12975 SGB 3888.4 R23 -.0346 R13 -.9993 LSA 3791.4 MSA 217.0 SSA .8  
 BOE15.0468 BRA 3.5385 BC3 .2448 FSP -229 SG1 3828.1 SG2 682.0 THA 70.92 EL1 3341.5 EL2 216.8 ALF 75.87

LAUNCH DATE JAN 18 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 407.929

RL 147.19 LAL .00 LOL 117.73 VL 27.686 GAL -.64 AZL 63.39 HCA 185.48 SMA 128.00 ECC .15031 INC26.6090 V1 30.269  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.412 GAP 1.18 AZP 116.50 TAL 183.61 TAP 9.09 RCA 108.76 APO 147.24 V2 34.786  
 RC 99.636 GL 65.95 GP -86.31 ZAL 91.86 ZAP 92.76 ETS 183.55 ZAE 87.87 ETE 90.23 ZAC 100.54 ETC 40.95 CLP 138.34

PLANETOCENTRIC CONIC

C3 184.380 VHL 13.579 DLA 64.37 RAL 330.02 RAD 6571.0 VEL 17.484 PTH 2.97 VHP 15.339 DPA -69.07 RAP 100.89 ECC 4.0344  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.43 14 30 55 4898.02 -9.60 239.36 235.37 26.02 15 52 33 4298.0 -16.76 236.12  
 150.57 0 33 17 3186.68 -9.59 96.48 235.36 26.02 1 26 24 2586.7 -16.76 93.24  
 29.43 14 30 55 4898.02 -9.60 239.36 235.37 26.02 15 52 33 4298.0 -16.76 236.12  
 150.57 0 33 17 3186.68 -9.59 96.48 235.36 26.02 1 26 24 2586.7 -16.76 93.24  
 29.43 14 30 55 4898.02 -9.60 239.36 235.37 26.02 15 52 33 4298.0 -16.76 236.12  
 150.57 0 33 17 3186.68 -9.59 96.48 235.36 26.02 1 26 24 2586.7 -16.76 93.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3346 TRA 1.3939 TC3 -.0196 BAU .1418 SGT 1472.7 SGR 3954.2 SG3 99.1 ST 695.4 SR 3294.1 SS 1245.8  
 RDE -7.6354 RRA 2.3453 RC3 -.0541 FAU-.00078 RRT .2240 RRF -.9992 RTF -.2487 CRT -.6698 CRS .9999 CST -.6612  
 FDE 2.1735 FRA -.7056 FC3 .0037 BSP 12796 SGB 4219.5 R23 -.0090 R13 -.9995 LSA 3553.0 MSA 512.6 SSA 1.3  
 BOE 7.7512 BRA 2.7283 BC3 .0575 FSP -311 SG1 3970.0 SG2 1429.6 THA 84.52 EL1 3327.7 EL2 511.1 ALF 98.24

LAUNCH DATE JAN 18 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 413.946

RL 147.19 LAL .00 LOL 117.73 VL 27.677 GAL -.51 AZL 72.21 HCA 188.47 SMA 127.94 ECC .15068 INC17.7912 V1 30.269  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.405 GAP 1.48 AZP 107.61 TAL 182.89 TAP 11.35 RCA 108.66 APO 147.22 V2 34.784  
 RC 102.038 GL 65.05 GP -80.96 ZAL 92.33 ZAP 95.39 ETS 331.04 ZAE 97.67 ETE 238.18 ZAC 104.63 ETC 188.82 CLP-126.74

PLANETOCENTRIC CONIC

C3 86.988 VHL 9.327 DLA 63.54 RAL 331.22 RAD 6569.7 VEL 14.434 PTH 2.62 VHP 10.055 DPA -65.27 RAP 76.18 ECC 2.4316  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.41 14 38 2 4748.39 -18.35 234.56 231.73 28.00 15 57 10 4148.4 -25.37 230.83  
 149.59 0 35 47 3044.51 -18.34 92.80 231.71 28.00 1 26 32 2444.5 -25.36 89.07  
 30.41 14 38 2 4748.39 -18.35 234.56 231.73 28.00 15 57 10 4148.4 -25.37 230.83  
 149.59 0 35 47 3044.51 -18.34 92.80 231.71 28.00 1 26 32 2444.5 -25.36 89.07  
 30.41 14 38 2 4748.39 -18.35 234.56 231.73 28.00 15 57 10 4148.4 -25.37 230.83  
 149.59 0 35 47 3044.51 -18.34 92.80 231.71 28.00 1 26 32 2444.5 -25.36 89.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.4474 TRA -1.4737 TC3 -.2039 BAU .3267 SGT 3426.0 SGR 2618.3 SG3 156.6 ST 2799.3 SR 1965.1 SS 1287.7  
 RDE 3.0793 RRA -1.2867 RC3 -.1932 FAU .01571 RRT .9933 RRF .9920 RTF .9987 CRT .9985 CRS -.9982 CST -1.0000  
 FDE 2.3577 FRA -.7614 FC3 -.1563 BSP 13578 SGB 4312.0 R23 -.0425 R13 .9978 LSA 3653.4 MSA 92.5 SSA 2.3  
 BOE 5.4093 BRA 1.9564 BC3 .2809 FSP -516 SG1 4305.2 SG2 241.4 THA 37.34 EL1 3419.1 EL2 88.1 ALF 35.06

LAUNCH DATE JAN 18 1969 FLIGHT TIME 150.00 ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC DISTANCE 420.049  
 RL 147.19 LAL .00 LOL 117.73 VL 27.667 GAL -.40 AZL 76.41 HCA 191.54 SMA 127.87 ECC .15122 INC13.5944 VI 30.269  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.396 GAP 1.80 AZP 103.33 TAL 182.22 TAP 13.76 RCA 108.54 APO 147.21 V2 34.783  
 RC 104.441 GL 62.45 GP -73.19 ZAL 92.52 ZAP 98.78 ETS 334.36 ZAE 104.87 ETE 241.15 ZAC 107.00 ETC 192.19 CLP-121.84

PLANETOCENTRIC CONIC  
 C3 53.798 VHL 7.335 CLA 62.03 RAL 335.85 RAD 6568.9 VEL 13.235 PTH 2.42 VHP 7.628 DPA -60.66 RAP 61.82 ECC 1.8854  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.20 15 0 47 4627.35 -24.79 229.30 231.67 31.11 16 17 55 4027.3 -31.56 224.87  
 147.80 0 49 58 2937.91 -24.77 89.62 231.65 31.11 1 38 56 2337.9 -31.54 85.20  
 32.20 15 0 47 4627.35 -24.79 229.30 231.67 31.11 16 17 55 4027.3 -31.56 224.87  
 147.80 0 49 58 2937.91 -24.77 89.62 231.65 31.11 1 38 56 2337.9 -31.54 85.20  
 32.20 15 0 47 4627.35 -24.79 229.30 231.67 31.11 16 17 55 4027.3 -31.56 224.87  
 147.80 0 49 58 2937.91 -24.77 89.62 231.65 31.11 1 38 56 2337.9 -31.54 85.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 3.2157 TRA -1.1652 TC3 -.4821 BAU .4877 SGT 3251.9 SGR 2897.7 SG3 229.4 ST 2578.6 SR 2407.1 SS 1463.5  
 RDE 3.0253 RRA -.9152 RC3 -.4768 FAU .03100 RRT .9963 RRF .9990 RTF .9921 CRT .9993 CRS -.9999 CST -.9988  
 FDE 2.7970 FRA -.7926 FC3 -.4988 BSP 13677 SGB 4355.7 R23 .0848 R13 .9960 LSA 3818.3 MSA 77.1 SSA 1.2  
 BDE 4.4151 BRA 1.4816 BC3 .6780 FSP -763 SG1 4351.7 SG2 186.5 THA 41.69 EL1 3527.0 EL2 64.4 ALF 43.03

LAUNCH DATE JAN 18 1969 FLIGHT TIME 152.00 ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC DISTANCE 426.172  
 RL 147.19 LAL .00 LOL 117.73 VL 27.654 GAL -.28 AZL 78.85 HCA 194.66 SMA 127.79 ECC .15190 INC11.1542 VI 30.269  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.387 GAP 2.12 AZP 100.80 TAL 181.54 TAP 16.19 RCA 108.38 APO 147.20 V2 34.783  
 RC 106.844 GL 59.53 GP -66.25 ZAL 92.44 ZAP 102.69 ETS 332.94 ZAE 110.74 ETE 238.52 ZAC 108.51 ETC 190.46 CLP-123.05

PLANETOCENTRIC CONIC  
 C3 38.528 VHL 6.207 CLA 60.37 RAL 340.90 RAD 6568.5 VEL 12.645 PTH 2.30 VHP 6.307 DPA -55.89 RAP 52.11 ECC 1.6341  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.16 15 25 45 4535.04 -29.11 224.20 232.44 34.46 16 41 20 3935.0 -35.60 219.06  
 145.84 1 5 15 2862.78 -29.11 86.88 232.43 34.46 1 52 58 2262.8 -35.59 81.74  
 34.16 15 25 45 4535.04 -29.11 224.20 232.44 34.46 16 41 20 3935.0 -35.60 219.06  
 145.84 1 5 15 2862.78 -29.11 86.88 232.43 34.46 1 52 58 2262.8 -35.59 81.74  
 34.16 15 25 45 4535.04 -29.11 224.20 232.44 34.46 16 41 20 3935.0 -35.60 219.06  
 145.84 1 5 15 2862.78 -29.11 86.88 232.43 34.46 1 52 58 2262.8 -35.59 81.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.8861 TRA -.9928 TC3 -.8309 BAU .5657 SGT 3405.6 SGR 2767.8 SG3 308.2 ST 2721.7 SR 2368.2 SS 1647.1  
 RDE 2.5368 RRA -.6297 RC3 -.7183 FAU .04645 RRT .9906 RRF .9989 RTF .9870 CRT .9984 CRS -1.0000 CST -.9981  
 FDE 3.2404 FRA -.7751 FC3 -1.0438 BSP 13831 SGB 4388.5 R23 .1014 R13 .9940 LSA 3964.3 MSA 115.1 SSA 2.1  
 BDE 3.8425 BRA 1.1757 BC3 1.0983 FSP -1042 SG1 4378.6 SG2 294.0 THA 39.05 EL1 3606.4 EL2 100.6 ALF 41.02

LAUNCH DATE JAN 18 1969 FLIGHT TIME 154.00 ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC DISTANCE 432.296  
 RL 147.19 LAL .00 LOL 117.73 VL 27.640 GAL -.15 AZL 80.44 HCA 197.79 SMA 127.69 ECC .15272 INC 9.5558 VI 30.269  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.377 GAP 2.44 AZP 99.11 TAL 180.82 TAP 18.60 RCA 108.19 APO 147.19 V2 34.784  
 RC 109.246 GL 56.66 GP -59.93 ZAL 92.12 ZAP 106.92 ETS 331.28 ZAE 115.60 ETE 234.84 ZAC 109.49 ETC 188.20 CLP-125.51

PLANETOCENTRIC CONIC  
 C3 30.166 VHL 5.492 CLA 58.76 RAL 345.68 RAD 6568.2 VEL 12.310 PTH 2.22 VHP 5.522 DPA -51.14 RAP 45.07 ECC 1.4965  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.10 15 49 46 4464.14 -31.95 219.50 233.46 37.68 17 4 10 3864.1 -38.13 213.70  
 143.90 1 19 24 2810.30 -31.94 84.57 233.45 37.68 2 6 14 2210.3 -38.12 78.78  
 36.10 15 49 46 4464.14 -31.95 219.50 233.46 37.68 17 4 10 3864.1 -38.13 213.70  
 143.90 1 19 24 2810.30 -31.94 84.57 233.45 37.68 2 6 14 2210.3 -38.12 78.78  
 36.10 15 49 46 4464.14 -31.95 219.50 233.46 37.68 17 4 10 3864.1 -38.13 213.70  
 143.90 1 19 24 2810.30 -31.94 84.57 233.45 37.68 2 6 14 2210.3 -38.12 78.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.7460 TRA -.8571 TC3 -1.2200 BAU .6089 SGT 3601.9 SGR 2560.3 SG3 383.0 ST 2911.2 SR 2224.6 SS 1801.0  
 RDE 2.1184 RRA -.4210 RC3 -.8895 FAU .06056 RRT .9867 RRF .9985 RTF .9835 CRT .9979 CRS -1.0000 CST -.9977  
 FDE 3.5960 FRA -.6923 FC3 -1.7379 BSP 13930 SGB 4419.1 R23 .1192 R13 .9914 LSA 4080.4 MSA 133.9 SSA 2.8  
 BDE 3.4681 BRA .9549 BC3 1.5099 FSP -1311 SG1 4406.1 SG2 340.0 THA 35.29 EL1 3662.1 EL2 113.4 ALF 37.37

LAUNCH DATE JAN 18 1969 FLIGHT TIME 156.00 ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC DISTANCE 438.410  
 RL 147.19 LAL .00 LOL 117.73 VL 27.624 GAL -.01 AZL 81.58 HCA 200.93 SMA 127.58 ECC .15367 INC 8.4234 VI 30.269  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.366 GAP 2.76 AZP 97.87 TAL 180.06 TAP 20.99 RCA 107.98 APO 147.19 V2 34.785  
 RC 111.645 GL 53.95 GP -54.19 ZAL 91.57 ZAP 111.26 ETS 329.90 ZAE 119.57 ETE 230.74 ZAC 110.13 ETC 186.01 CLP-128.29

PLANETOCENTRIC CONIC  
 C3 25.049 VHL 5.005 CLA 57.24 RAL 350.11 RAD 6568.0 VEL 12.101 PTH 2.17 VHP 5.038 DPA -46.55 RAP 39.81 ECC 1.4122  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.93 16 12 14 4408.50 -33.78 215.26 234.63 40.62 17 25 43 3808.5 -39.67 208.92  
 142.07 1 32 15 2773.46 -33.77 82.67 234.61 40.61 2 18 28 2173.5 -39.66 76.33  
 37.93 16 12 14 4408.50 -33.78 215.26 234.63 40.62 17 25 43 3808.5 -39.67 208.92  
 142.07 1 32 15 2773.46 -33.77 82.67 234.61 40.61 2 18 28 2173.5 -39.66 76.33  
 37.93 16 12 14 4408.50 -33.78 215.26 234.63 40.62 17 25 43 3808.5 -39.67 208.92  
 142.07 1 32 15 2773.46 -33.77 82.67 234.61 40.61 2 18 28 2173.5 -39.66 76.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.6800 TRA -.6997 TC3 -1.6716 BAU .6608 SGT 3795.3 SGR 2341.1 SG3 449.9 ST 3100.4 SR 2050.0 SS 1921.6  
 RDE 1.7868 RRA -.2085 RC3 -1.0487 FAU .07581 RRT .9775 RRF .9980 RTF .9742 CRT .9969 CRS -1.0000 CST -.9967  
 FDE 3.8484 FRA -.4311 FC3 -2.6202 BSP 15220 SGB 4459.3 R23 .1598 R13 .9851 LSA 4180.9 MSA 167.3 SSA 3.5  
 BDE 3.2210 BRA .7301 BC3 1.9733 FSP -1722 SG1 4439.2 SG2 422.2 THA 31.40 EL1 3714.4 EL2 135.3 ALF 33.44

LAUNCH DATE JAN 18 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 444.515

RL 147.19 LAL .00 LOL 117.73 VL 27.607 GAL .14 AZL 82.42 HCA 204.07 SMA 127.47 ECC .15475 INC 7.5752 V1 30.269  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.356 GAP 3.07 AZP 96.92 TAL 179.25 TAP 23.32 RCA 107.74 APO 147.19 V2 34.787  
 RC 114.042 GL 51.42 GP -48.99 ZAL 90.81 ZAP 115.56 ETS 328.90 ZAE 122.73 ETE 226.50 ZAC 110.59 ETC 184.08 CLP-131.11

PLANETOCENTRIC CONIC

C3 21.673 VHL 4.655 DLA 55.86 RAL 354.24 RAD 6567.9 VEL 11.960 PTH 2.13 VHP 4.738 DPA -42.19 RAP 35.83 ECC 1.3567  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.61 16 33 17 4363.89 -34.94 211.51 235.97 43.21 17 46 1 3763.9 -40.57 204.72  
 140.39 1 44 9 2747.42 -34.93 81.14 235.95 43.20 2 29 56 2147.4 -40.56 74.35  
 39.61 16 33 17 4363.89 -34.94 211.51 235.97 43.21 17 46 1 3763.9 -40.57 204.72  
 140.39 1 44 9 2747.42 -34.93 81.14 235.95 43.20 2 29 56 2147.4 -40.56 74.35  
 39.61 16 33 17 4363.89 -34.94 211.51 235.97 43.21 17 46 1 3763.9 -40.57 204.72  
 140.39 1 44 9 2747.42 -34.93 81.14 235.95 43.20 2 29 56 2147.4 -40.56 74.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6222 TRA -.6231 TC3-2.0473 BAU .6640  
 RDE 1.4954 RRA -.1562 RC3-1.0298 FAU .08141  
 FDE 3.9192 FRA -.3745 FC3-3.2522 BSP 13936  
 BDE 3.0186 BRA .6424 BC3 2.2917 FSP -1683

SGT 3989.5 SGR 2103.3 SG3 497.1  
 RRT .9814 RRF .9966 RTF .9784  
 SGB 4510.0 R23 .1489 R13 .9855  
 SG1 4495.7 SG2 357.9 THA 27.55

ST 3253.7 SR 1843.5 SS 1977.6  
 CRT .9975 CRS-1.0000 CST -.9972  
 LSA 4227.6 MSA 152.1 SSA 4.4  
 EL1 3737.9 EL2 113.2 ALF 29.50

LAUNCH DATE JAN 18 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 450.606

RL 147.19 LAL .00 LOL 117.73 VL 27.588 GAL .29 AZL 83.09 HCA 207.22 SMA 127.34 ECC .15596 INC 6.9129 V1 30.269  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.344 GAP 3.38 AZP 96.15 TAL 178.41 TAP 25.62 RCA 107.48 APO 147.20 V2 34.790  
 RC 116.435 GL 49.05 GP -44.32 ZAL 89.87 ZAP 119.72 ETS 328.21 ZAE 125.16 ETE 222.27 ZAC 110.96 ETC 182.44 CLP-133.86

PLANETOCENTRIC CONIC

C3 19.326 VHL 4.396 DLA 54.60 RAL 358.13 RAD 6567.8 VEL 11.862 PTH 2.10 VHP 4.560 DPA -38.11 RAP 32.84 ECC 1.3181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.15 16 53 9 4327.40 -35.66 208.20 237.49 45.48 18 5 17 3727.4 -41.04 201.06  
 138.85 1 55 21 2729.13 -35.65 79.93 237.48 45.47 2 40 51 2129.1 -41.03 72.79  
 41.15 16 53 9 4327.40 -35.66 208.20 237.49 45.48 18 5 17 3727.4 -41.04 201.06  
 138.85 1 55 21 2729.13 -35.65 79.93 237.48 45.47 2 40 51 2129.1 -41.03 72.79  
 41.15 16 53 9 4327.40 -35.66 208.20 237.49 45.48 18 5 17 3727.4 -41.04 201.06  
 138.85 1 55 21 2729.13 -35.65 79.93 237.48 45.47 2 40 51 2129.1 -41.03 72.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5867 TRA -.5152 TC3-2.4667 BAU .6903  
 RDE 1.2669 RRA -.0775 RC3-1.0263 FAU .08788  
 FDE 3.8999 FRA -.1836 FC3-3.9366 BSP 14269  
 BDE 2.8803 BRA .5210 BC3 2.6717 FSP -1829

SGT 4172.8 SGR 1889.8 SG3 532.5  
 RRT .9797 RRF .9949 RTF .9768  
 SGB 4580.8 R23 .1564 R13 .9826  
 SG1 4567.7 SG2 345.8 THA 24.07

ST 3389.8 SR 1652.3 SS 2003.7  
 CRT .9975 CRS-1.0000 CST -.9969  
 LSA 4267.5 MSA 155.7 SSA 5.2  
 EL1 3769.6 EL2 105.6 ALF 25.95

LAUNCH DATE JAN 18 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 456.682

RL 147.19 LAL .00 LOL 117.73 VL 27.568 GAL .46 AZL 83.62 HCA 210.37 SMA 127.20 ECC .15730 INC 6.3784 V1 30.269  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.333 GAP 3.70 AZP 95.51 TAL 177.52 TAP 27.89 RCA 107.20 APO 147.21 V2 34.794  
 RC 118.823 GL 46.83 GP -40.16 ZAL 88.75 ZAP 123.66 ETS 327.79 ZAE 126.95 ETE 218.20 ZAC 111.33 ETC 181.08 CLP-136.49

PLANETOCENTRIC CONIC

C3 17.634 VHL 4.199 DLA 53.45 RAL 1.87 RAD 6567.7 VEL 11.791 PTH 2.08 VHP 4.466 DPA -34.33 RAP 30.62 ECC 1.2902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.57 17 12 8 4297.09 -36.06 205.29 239.21 47.45 18 23 46 3697.1 -41.23 197.87  
 137.43 2 6 11 2716.50 -36.05 78.99 239.20 47.44 2 51 27 2116.5 -41.22 71.58  
 42.57 17 12 8 4297.09 -36.06 205.29 239.21 47.45 18 23 46 3697.1 -41.23 197.87  
 137.43 2 6 11 2716.50 -36.05 78.99 239.20 47.44 2 51 27 2116.5 -41.22 71.58  
 42.57 17 12 8 4297.09 -36.06 205.29 239.21 47.45 18 23 46 3697.1 -41.23 197.87  
 137.43 2 6 11 2716.50 -36.05 78.99 239.20 47.44 2 51 27 2116.5 -41.22 71.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5612 TRA -.4057 TC3-2.8722 BAU .7159  
 RDE 1.0833 RRA -.0196 RC3 -.9857 FAU .09153  
 FDE 3.7998 FRA .0161 FC3-4.4934 BSP 14538  
 BDE 2.7809 BRA .4062 BC3 3.0366 FSP -1905

SGT 4346.8 SGR 1694.7 SG3 554.1  
 RRT .9779 RRF .9925 RTF .9753  
 SGB 4665.5 R23 .1584 R13 .9800  
 SG1 4653.8 SG2 330.9 THA 20.98

ST 3506.5 SR 1478.3 SS 2001.0  
 CRT .9975 CRS -.9999 CST -.9967  
 LSA 4296.5 MSA 158.3 SSA 6.1  
 EL1 3804.1 EL2 96.2 ALF 22.82

LAUNCH DATE JAN 18 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 462.743

RL 147.19 LAL .00 LOL 117.73 VL 27.547 GAL .64 AZL 84.06 HCA 213.53 SMA 127.06 ECC .15878 INC 5.9358 V1 30.269  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.321 GAP 4.01 AZP 94.95 TAL 176.59 TAP 30.11 RCA 106.89 APO 147.24 V2 34.798  
 RC 121.206 GL 44.72 GP -36.48 ZAL 87.48 ZAP 127.35 ETS 327.56 ZAE 128.21 ETE 214.39 ZAC 111.77 ETC 179.97 CLP-138.98

PLANETOCENTRIC CONIC

C3 16.387 VHL 4.048 DLA 52.41 RAL 5.50 RAD 6567.7 VEL 11.738 PTH 2.07 VHP 4.432 DPA -30.87 RAP 29.02 ECC 1.2697  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.87 17 30 29 4271.58 -36.25 202.73 241.14 49.16 18 41 41 3671.6 -41.22 195.10  
 136.13 2 16 46 2708.20 -36.24 78.30 241.13 49.15 3 1 55 2108.2 -41.21 70.67  
 43.87 17 30 29 4271.58 -36.25 202.73 241.14 49.16 18 41 41 3671.6 -41.22 195.10  
 136.13 2 16 46 2708.20 -36.24 78.30 241.13 49.15 3 1 55 2108.2 -41.21 70.67  
 43.87 17 30 29 4271.58 -36.25 202.73 241.14 49.16 18 41 41 3671.6 -41.22 195.10  
 136.13 2 16 46 2708.20 -36.24 78.30 241.13 49.15 3 1 55 2108.2 -41.21 70.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5383 TRA -.2945 TC3-3.2600 BAU .7422  
 RDE .9340 RRA .0220 RC3 -.9220 FAU .09291  
 FDE 3.6360 FRA .2102 FC3-4.9086 BSP 14881  
 BDE 2.7047 BRA .2953 BC3 3.3878 FSP -1944

SGT 4510.0 SGR 1519.0 SG3 563.4  
 RRT .9757 RRF .9889 RTF .9741  
 SGB 4758.9 R23 .1542 R13 .9777  
 SG1 4748.4 SG2 315.8 THA 18.28

ST 3599.4 SR 1322.3 SS 1972.0  
 CRT .9976 CRS -.9998 CST -.9964  
 LSA 4309.0 MSA 159.9 SSA 7.0  
 EL1 3833.6 EL2 85.3 ALF 20.14

LAUNCH DATE JAN 18 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC DISTANCE 468.789  
 RL 147.19 LAL .00 LOL 117.73 VL 27.525 GAL .84 AZL 84.44 HCA 216.68 SMA 126.31 ECC .16040 INC 5.5610 V1 30.269  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.309 GAP 4.32 AZP 94.46 TAL 175.62 TAP 32.30 RCA 106.56 APO 147.27 V2 34.803  
 RC 123.581 GL 42.72 GP -33.23 ZAL 86.06 ZAP 130.78 ETS 327.47 ZAE 129.05 ETE 210.89 ZAC 112.29 ETC 179.08 CLP-141.34

PLANETOCENTRIC CONIC  
 C3 15.457 VHL 3.932 DLA 51.44 RAL 9.06 RAD 6567.6 VEL 11.698 PTH 2.06 VHP 4.442 DPA -27.69 RAP 27.93 ECC 1.2544  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.08 17 48 23 4249.93 -36.28 200.46 243.27 50.64 18 59 13 3649.9 -41.08 192.67  
 134.92 2 27 17 2703.33 -36.27 77.81 243.25 50.63 3 12 21 2103.3 -41.07 70.02  
 45.08 17 48 23 4249.93 -36.28 200.46 243.27 50.64 18 59 13 3649.9 -41.08 192.67  
 134.92 2 27 17 2703.33 -36.27 77.81 243.25 50.63 3 12 21 2103.3 -41.07 70.02  
 45.08 17 48 23 4249.93 -36.28 200.46 243.27 50.64 18 59 13 3649.9 -41.08 192.67  
 134.92 2 27 17 2703.33 -36.27 77.81 243.25 50.63 3 12 21 2103.3 -41.07 70.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5201 TRA -.1774 TC3-3.6185 BAU .7677 SGT 4664.2 SGR 1365.5 SG3 563.4 ST 3675.7 SR 1188.4 SS 1927.8  
 RDE .8149 RRA .0528 RC3 -.8425 FAU .09230 RRT .9727 RRF .9840 RTF .9730 CRT .9979 CRS -.9997 CST -.9960  
 FDE 3.4403 FRA .3975 FC3-5.1700 BSP 15242 SGB 4860.0 R23 .1445 R13 .9757 LSA 4314.3 MSA 161.2 SSA 7.9  
 BOE 2.6486 BRA .1851 BC3 3.7153 FSP -1946 SG1 4850.5 SG2 304.5 THA 15.96 EL1 3862.3 EL2 73.9 ALF 17.89

LAUNCH DATE JAN 18 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC DISTANCE 474.819  
 RL 147.19 LAL .00 LOL 117.73 VL 27.502 GAL 1.04 AZL 84.76 HCA 219.84 SMA 126.76 ECC .16216 INC 5.2379 V1 30.269  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.297 GAP 4.63 AZP 94.03 TAL 174.61 TAP 34.45 RCA 106.20 APO 147.31 V2 34.808  
 RC 125.948 GL 40.79 GP -30.37 ZAL 64.51 ZAP 133.96 ETS 327.47 ZAE 129.57 ETE 207.75 ZAC 112.93 ETC 178.36 CLP-143.57

PLANETOCENTRIC CONIC  
 C3 14.765 VHL 3.843 DLA 50.54 RAL 12.58 RAD 6567.6 VEL 11.668 PTH 2.05 VHP 4.486 DPA -24.79 RAP 27.25 ECC 1.2430  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.21 18 5 59 4231.43 -36.18 198.43 245.58 51.94 19 16 31 3631.4 -40.83 190.52  
 133.79 2 37 46 2701.32 -36.17 77.50 245.57 51.93 3 22 48 2101.3 -40.82 69.60  
 46.21 18 5 59 4231.43 -36.18 198.43 245.58 51.94 19 16 31 3631.4 -40.83 190.52  
 133.79 2 37 46 2701.32 -36.17 77.50 245.57 51.93 3 22 48 2101.3 -40.82 69.60  
 46.21 18 5 59 4231.43 -36.18 198.43 245.58 51.94 19 16 31 3631.4 -40.83 190.52  
 133.79 2 37 46 2701.32 -36.17 77.50 245.57 51.93 3 22 48 2101.3 -40.82 69.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5009 TRA -.0566 TC3-3.9468 BAU .7933 SGT 4808.7 SGR 1231.7 SG3 556.0 ST 3730.4 SR 1073.1 SS 1868.8  
 RDE .7188 RRA .0742 RC3 -.7567 FAU .09031 RRT .9687 RRF .9774 RTF .9721 CRT .9982 CRS -.9994 CST -.9956  
 FDE 3.2216 FRA .5669 FC3-5.2952 BSP 15610 SGB 4964.0 R23 .1293 R13 .9742 LSA 4305.1 MSA 161.8 SSA 8.8  
 BOE 2.6022 BRA .0933 BC3 4.0187 FSP -1919 SG1 4955.1 SG2 296.9 THA 13.99 EL1 3881.2 EL2 61.8 ALF 16.03

LAUNCH DATE JAN 18 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC DISTANCE 480.832  
 RL 147.19 LAL .00 LOL 117.73 VL 27.478 GAL 1.26 AZL 85.05 HCA 223.00 SMA 126.60 ECC .16407 INC 4.9547 V1 30.269  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.286 GAP 4.94 AZP 93.63 TAL 173.57 TAP 36.57 HCA 105.83 APO 147.37 V2 34.815  
 RC 128.306 GL 38.92 GP -27.86 ZAL 82.83 ZAP 136.89 ETS 327.51 ZAE 129.84 ETE 204.97 ZAC 113.70 ETC 177.79 CLP-145.66

PLANETOCENTRIC CONIC  
 C3 14.261 VHL 3.776 DLA 49.69 RAL 16.08 RAD 6567.6 VEL 11.647 PTH 2.04 VHP 4.556 DPA -22.12 RAP 26.94 ECC 1.2347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.30 18 23 26 4215.47 -35.98 196.61 248.07 53.08 19 33 42 3615.5 -40.50 188.62  
 132.70 2 48 14 2701.86 -35.97 77.37 248.06 53.07 3 33 16 2101.9 -40.49 69.37  
 47.30 18 23 26 4215.47 -35.98 196.61 248.07 53.08 19 33 42 3615.5 -40.50 188.62  
 132.70 2 48 14 2701.86 -35.97 77.37 248.06 53.07 3 33 16 2101.9 -40.49 69.37  
 47.30 18 23 26 4215.47 -35.98 196.61 248.07 53.08 19 33 42 3615.5 -40.50 188.62  
 132.70 2 48 14 2701.86 -35.97 77.37 248.06 53.07 3 33 16 2101.9 -40.49 69.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4830 TRA .0731 TC3-4.2317 BAU .8168 SGT 4943.4 SGR 1117.2 SG3 543.1 ST 3768.8 SR 976.7 SS 1802.5  
 RDE .6423 RRA .0905 RC3 -.6665 FAU .08702 RRT .9627 RRF .9687 RTF .9713 CRT .9986 CRS -.9989 CST -.9952  
 FDE 2.9985 FRA .7260 FC3-5.2829 BSP 15943 SGB 5068.0 R23 .1121 R13 .9728 LSA 4287.3 MSA 162.5 SSA 9.7  
 BOE 2.5648 BRA .1164 BC3 4.2839 FSP -1867 SG1 5059.4 SG2 295.5 THA 12.32 EL1 3893.0 EL2 49.7 ALF 14.51

LAUNCH DATE JAN 18 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC DISTANCE 486.829  
 RL 147.19 LAL .00 LOL 117.73 VL 27.453 GAL 1.49 AZL 85.30 HCA 226.16 SMA 126.43 ECC .16613 INC 4.7031 V1 30.269  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.274 GAP 5.25 AZP 93.26 TAL 172.50 TAP 38.67 RCA 105.43 APO 147.44 V2 34.821  
 RC 130.653 GL 37.11 GP -25.65 ZAL 81.04 ZAP 139.60 ETS 327.57 ZAE 129.93 ETE 202.51 ZAC 114.59 ETC 177.33 CLP-147.65

PLANETOCENTRIC CONIC  
 C3 13.911 VHL 3.730 DLA 48.86 RAL 19.57 RAD 6567.5 VEL 11.632 PTH 2.04 VHP 4.647 DPA -19.67 RAP 26.92 ECC 1.2289  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.36 18 40 50 4201.63 -35.69 194.96 250.72 54.09 19 50 51 3601.6 -40.09 186.91  
 131.64 2 58 40 2704.75 -35.68 77.39 250.71 54.08 3 43 45 2104.7 -40.08 69.34  
 48.36 18 40 50 4201.63 -35.69 194.96 250.72 54.09 19 50 51 3601.6 -40.09 186.91  
 131.64 2 58 40 2704.75 -35.68 77.39 250.71 54.08 3 43 45 2104.7 -40.08 69.34  
 48.36 18 40 50 4201.63 -35.69 194.96 250.72 54.09 19 50 51 3601.6 -40.09 186.91  
 131.64 2 58 40 2704.75 -35.68 77.39 250.71 54.08 3 43 45 2104.7 -40.08 69.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4612 TRA .2061 TC3-4.4871 BAU .8415 SGT 5072.5 SGR 1020.5 SG3 527.0 ST 3785.0 SR 895.2 SS 1727.7  
 RDE .5809 RRA .1011 RC3 -.5834 FAU .08345 RRT .9551 RRF .9579 RTF .9709 CRT .9991 CRS -.9980 CST -.9947  
 FDE 2.7727 FRA .8621 FC3-5.1932 BSP 16328 SGB 5174.1 R23 .0922 R13 .9720 LSA 4252.8 MSA 162.5 SSA 10.6  
 BOE 2.5288 BRA .2295 BC3 4.5249 FSP -1810 SG1 5165.6 SG2 296.9 THA 10.91 EL1 3889.2 EL2 37.2 ALF 13.30

LAUNCH DATE JAN 18 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 492.808

RL 147.19 LAL .00 LOL 117.73 VL 27.427 GAL 1.73 AZL 85.52 HCA 229.33 SMA 126.27 ECC .16836 INC 4.4768 V1 30.269
RP 108.80 LAP -3.39 LOP 346.97 VP 37.262 GAP 5.56 AZP 92.92 TAL 171.40 TAP 40.73 RCA 105.01 APO 147.52 V2 34.829
RC 132.989 GL 35.33 GP -23.70 ZAL 79.15 ZAP 142.10 ETS 327.63 ZAE 129.90 ETE 200.37 ZAC 115.60 ETC 176.95 CLP-149.52

PLANETOCENTRIC CONIC

C3 13.692 VHL 3.700 CLA 48.06 RAL 23.04 RAD 6567.5 VEL 11.622 PTH 2.04 VHP 4.755 DPA -17.41 RAP 27.15 ECC 1.2253
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.40 18 58 14 4189.54 -35.32 193.45 253.52 55.00 20 8 3 3589.5 -39.61 185.35
130.60 3 9 1 2709.89 -35.30 77.57 253.50 54.99 3 54 11 2109.9 -39.60 69.48
49.40 18 58 14 4189.54 -35.32 193.45 253.52 55.00 20 8 3 3589.5 -39.61 185.35
130.60 3 9 1 2709.89 -35.30 77.57 253.50 54.99 3 54 11 2109.9 -39.60 69.48
49.40 18 58 14 4189.54 -35.32 193.45 253.52 55.00 20 8 3 3589.5 -39.61 185.35
130.60 3 9 1 2709.89 -35.30 77.57 253.50 54.99 3 54 11 2109.9 -39.60 69.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TCE 2.4353 TRA .3459 TC3-4.6999 BAU .8653 SGT 5192.2 SGR 938.4 SG3 508.1 ST 3780.0 SR 826.7 SS 1646.6
RDE .5316 RRA .1085 RC3 -.5054 FAU .07945 RRT .9453 RRF .9445 RTF .9708 CRT .9995 CRS -.9967 CST -.9942
FOE 2.5498 FRA .9818 FC3-5.0235 BSP 16714 SGB 5276.3 R23 .0726 R13 .9715 LSA 4202.0 MSA 162.2 SSA 11.4
BOE 2.4927 BRA .3625 BC3 4.7269 FSP -1748 SG1 5267.7 SG2 301.6 THA 9.73 EL1 3869.3 EL2 25.1 ALF 12.33

LAUNCH DATE JAN 18 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 498.770

RL 147.19 LAL .00 LOL 117.73 VL 27.401 GAL 1.99 AZL 85.73 HCA 232.49 SMA 126.09 ECC .17076 INC 4.2709 V1 30.269
RP 108.78 LAP -3.39 LOP 350.15 VP 37.250 GAP 5.88 AZP 92.60 TAL 170.27 TAP 42.76 RCA 104.56 APO 147.62 V2 34.837
RC 135.313 GL 33.59 GP -21.98 ZAL 77.17 ZAP 144.43 ETS 327.65 ZAE 129.79 ETE 198.50 ZAC 116.72 ETC 176.64 CLP-151.30

PLANETOCENTRIC CONIC

C3 13.590 VHL 3.686 CLA 47.25 RAL 26.51 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 4.877 DPA -15.31 RAP 27.60 ECC 1.2237
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.45 19 15 42 4178.90 -34.87 192.04 256.44 55.82 20 25 20 3578.9 -39.07 183.93
129.55 3 19 13 2717.27 -34.85 77.91 256.43 55.81 4 4 30 2117.3 -39.06 69.80
50.45 19 15 42 4178.90 -34.87 192.04 256.44 55.82 20 25 20 3578.9 -39.07 183.93
129.55 3 19 13 2717.27 -34.85 77.91 256.43 55.81 4 4 30 2117.3 -39.06 69.80
50.45 19 15 42 4178.90 -34.87 192.04 256.44 55.82 20 25 20 3578.9 -39.07 183.93
129.55 3 19 13 2717.27 -34.85 77.91 256.43 55.81 4 4 30 2117.3 -39.06 69.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4059 TRA .4934 TC3-4.8689 BAU .8881 SGT 5305.2 SGR 870.2 SG3 487.8 ST 3756.1 SR 770.0 SS 1563.2
RDE .4928 RRA .1141 RC3 -.4339 FAU .07522 RRT .9331 RRF .9287 RTF .9707 CRT .9998 CRS -.9948 CST -.9937
FOE 2.3367 FRA 1.0882 FC3-4.7917 BSP 17093 SGB 5376.1 R23 .0551 R13 .9713 LSA 4137.5 MSA 162.3 SSA 12.3
BOE 2.4559 BRA .5064 BC3 4.8882 FSP -1680 SG1 5367.2 SG2 309.4 THA 8.73 EL1 3834.2 EL2 15.0 ALF 11.58

LAUNCH DATE JAN 18 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 504.714

RL 147.19 LAL .00 LOL 117.73 VL 27.374 GAL 2.26 AZL 85.92 HCA 235.66 SMA 125.92 ECC .17334 INC 4.0817 V1 30.269
RP 108.75 LAP -3.37 LOP 353.32 VP 37.238 GAP 6.20 AZP 92.30 TAL 169.12 TAP 44.78 RCA 104.09 APO 147.74 V2 34.846
RC 137.625 GL 31.87 GP -20.46 ZAL 75.11 ZAP 146.58 ETS 327.63 ZAE 129.62 ETE 196.88 ZAC 117.95 ETC 176.38 CLP-152.98

PLANETOCENTRIC CONIC

C3 13.597 VHL 3.687 CLA 46.45 RAL 29.96 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 5.013 DPA -13.35 RAP 28.25 ECC 1.2238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.51 19 33 14 4169.50 -34.34 190.71 259.47 56.56 20 42 44 3569.5 -38.46 182.60
128.49 3 29 12 2726.91 -34.33 78.40 259.46 56.55 4 14 39 2126.9 -38.45 70.29
51.51 19 33 14 4169.50 -34.34 190.71 259.47 56.56 20 42 44 3569.5 -38.46 182.60
128.49 3 29 12 2726.91 -34.33 78.40 259.46 56.55 4 14 39 2126.9 -38.45 70.29
51.51 19 33 14 4169.50 -34.34 190.71 259.47 56.56 20 42 44 3569.5 -38.46 182.60
128.49 3 29 12 2726.91 -34.33 78.40 259.46 56.55 4 14 39 2126.9 -38.45 70.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3753 TRA .6530 TC3-4.9822 BAU .9081 SGT 5412.1 SGR 814.7 SG3 467.1 ST 3718.7 SR 724.2 SS 1481.5
RDE .4631 RRA .1194 RC3 -.3674 FAU .07066 RRT .9181 RRF .9107 RTF .9706 CRT .9998 CRS -.9920 CST -.9930
FOE 2.1387 FRA 1.1885 FC3-4.4987 BSP 17369 SGB 5473.1 R23 .0417 R13 .9710 LSA 4064.7 MSA 163.3 SSA 13.1
BOE 2.4200 BRA .6638 BC3 4.9957 FSP -1597 SG1 5463.7 SG2 319.9 THA 7.90 EL1 3788.6 EL2 14.1 ALF 11.02

LAUNCH DATE JAN 18 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 510.637

RL 147.19 LAL .00 LOL 117.73 VL 27.347 GAL 2.55 AZL 86.09 HCA 238.83 SMA 125.74 ECC .17611 INC 3.9062 V1 30.269
RP 108.72 LAP -3.34 LOP 356.50 VP 37.227 GAP 6.53 AZP 92.02 TAL 167.94 TAP 46.77 RCA 103.59 APO 147.88 V2 34.855
RC 139.923 GL 30.18 GP -19.11 ZAL 72.99 ZAP 148.59 ETS 327.55 ZAE 129.42 ETE 195.47 ZAC 119.28 ETC 176.16 CLP-154.59

PLANETOCENTRIC CONIC

C3 13.709 VHL 3.703 CLA 45.62 RAL 33.39 RAD 6567.5 VEL 11.623 PTH 2.04 VHP 5.160 DPA -11.51 RAP 29.06 ECC 1.2256
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.60 19 50 53 4161.10 -33.74 189.45 262.60 57.25 21 0 14 3561.1 -37.78 181.35
127.40 3 38 53 2738.88 -33.73 79.05 262.59 57.23 4 24 32 2138.9 -37.77 70.95
52.60 19 50 53 4161.10 -33.74 189.45 262.60 57.25 21 0 14 3561.1 -37.78 181.35
127.40 3 38 53 2738.88 -33.73 79.05 262.59 57.23 4 24 32 2138.9 -37.77 70.95
52.60 19 50 53 4161.10 -33.74 189.45 262.60 57.25 21 0 14 3561.1 -37.78 181.35
127.40 3 38 53 2738.88 -33.73 79.05 262.59 57.23 4 24 32 2138.9 -37.77 70.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3365 TRA .8173 TC3-5.0589 BAU .9289 SGT 5511.6 SGR 768.2 SG3 445.8 ST 3657.9 SR 685.4 SS 1396.0
RDE .4397 RRA .1230 RC3 -.3109 FAU .06635 RRT .9011 RRF .8908 RTF .9708 CRT .9994 CRS -.9880 CST -.9923
FOE 1.9477 FRA 1.2712 FC3-4.1902 BSP 17728 SGB 5564.9 R23 .0297 R13 .9711 LSA 3971.4 MSA 164.3 SSA 13.8
BOE 2.3775 BRA .8265 BC3 5.0684 FSP -1528 SG1 5555.0 SG2 330.5 THA 7.18 EL1 3721.5 EL2 24.3 ALF 10.61



LAUNCH DATE JAN 18 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 516.541

RL 147.19 LAL .00 LOL 117.73 VL 27.319 GAL 2.85 AZL 86.26 HCA 242.00 SMA 125.56 ECC .17909 INC 3.7420 V1 30.269  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.216 GAP 6.87 AZP 91.76 TAL 166.74 TAP 48.74 RCA 103.07 APO 148.05 V2 34.865  
 RC 142.207 GL 28.50 GP -17.91 ZAL 70.82 ZAP 150.47 ETS 327.40 ZAE 129.20 ETE 194.24 ZAC 120.70 ETC 175.97 CLP-156.12

PLANETOCENTRIC CONIC

C3 13.923 VHL 3.731 CLA 44.78 RAL 36.77 RAD 6567.5 VEL 11.632 PTH 2.04 VHP 5.318 DPA -9.78 RAP 30.01 ECC 1.2291  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.73 20 8 39 4153.45 -33.06 188.23 265.80 57.88 21 17 52 3553.4 -37.03 180.16  
 126.27 3 48 8 2753.32 -33.05 79.87 265.79 57.87 4 34 1 2153.3 -37.02 71.80  
 53.73 20 8 39 4153.45 -33.06 188.23 265.80 57.88 21 17 52 3553.4 -37.03 180.16  
 126.27 3 48 8 2753.32 -33.05 79.87 265.79 57.87 4 34 1 2153.3 -37.02 71.80  
 53.73 20 8 39 4153.45 -33.06 188.23 265.80 57.88 21 17 52 3553.4 -37.03 180.16  
 126.27 3 48 8 2753.32 -33.05 79.87 265.79 57.87 4 34 1 2153.3 -37.02 71.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2925 TRA .9916 TC3-5.0885 BAU .9484 SGT 5604.8 SGR 730.3 SG3 424.7 ST 3580.2 SR 653.3 SS 1311.3  
 RDE .4221 RRA .1267 RC3 -.2619 FAU .06211 RRT .8823 RRF .8695 RTF .9710 CRT .9982 CRS -.9827 CST -.9915  
 FDE 1.7685 FRA 1.3463 FC3-3.8622 BSP 18059 SGB 5652.2 R23 .0205 R13 .9712 LSA 3864.8 MSA 166.5 SSA 14.5  
 BOE 2.3310 BRA .9997 BC3 5.0952 FSP -1458 SG1 5641.8 SG2 341.5 THA 6.58 EL1 3639.2 EL2 38.0 ALF 10.32

LAUNCH DATE JAN 18 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 522.423

RL 147.19 LAL .00 LOL 117.73 VL 27.291 GAL 3.17 AZL 86.41 HCA 245.18 SMA 125.38 ECC .18229 INC 3.5871 V1 30.269  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.205 GAP 7.21 AZP 91.51 TAL 165.52 TAP 50.70 RCA 102.52 APO 148.23 V2 34.875  
 RC 144.478 GL 26.86 GP -16.84 ZAL 68.61 ZAP 152.23 ETS 327.17 ZAE 128.98 ETE 193.17 ZAC 122.21 ETC 175.78 CLP-157.59

PLANETOCENTRIC CONIC

C3 14.243 VHL 3.774 OLA 43.92 RAL 40.11 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 5.486 DPA -8.15 RAP 31.09 ECC 1.2344  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.91 20 26 30 4146.47 -32.32 187.04 269.06 58.47 21 35 37 3546.5 -36.22 179.01  
 125.09 3 56 54 2770.29 -32.31 80.86 269.05 58.46 4 43 4 2170.3 -36.21 72.83  
 54.91 20 26 30 4146.47 -32.32 187.04 269.06 58.47 21 35 37 3546.5 -36.22 179.01  
 125.09 3 56 54 2770.29 -32.31 80.86 269.05 58.46 4 43 4 2170.3 -36.21 72.83  
 54.91 20 26 30 4146.47 -32.32 187.04 269.06 58.47 21 35 37 3546.5 -36.22 179.01  
 125.09 3 56 54 2770.29 -32.31 80.86 269.05 58.46 4 43 4 2170.3 -36.21 72.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2428 TRA 1.1751 TC3-5.0728 BAU .9668 SGT 5691.1 SGR 699.3 SG3 403.8 ST 3487.1 SR 626.6 SS 1227.9  
 RDE .4091 RRA .1305 RC3 -.2199 FAU .05799 RRT .8623 RRF .8475 RTF .9713 CRT .9963 CRS -.9757 CST -.9906  
 FDE 1.6009 FRA 1.4119 FC3-3.5248 BSP 18371 SGB 5735.9 R23 .0133 R13 .9714 LSA 3745.8 MSA 169.6 SSA 15.0  
 BOE 2.2798 BRA 1.1823 BC3 5.0775 FSP -1389 SG1 5723.0 SG2 352.2 THA 6.07 EL1 3542.5 EL2 53.3 ALF 10.15

LAUNCH DATE JAN 18 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 528.283

RL 147.19 LAL .00 LOL 117.73 VL 27.262 GAL 3.51 AZL 86.56 HCA 248.35 SMA 125.19 ECC .18573 INC 3.4399 V1 30.269  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.194 GAP 7.56 AZP 91.27 TAL 164.28 TAP 52.64 RCA 101.94 APO 148.44 V2 34.885  
 RC 146.734 GL 25.23 GP -15.89 ZAL 66.37 ZAP 153.88 ETS 326.85 ZAE 128.76 ETE 192.24 ZAC 123.79 ETC 175.61 CLP-158.99

PLANETOCENTRIC CONIC

C3 14.671 VHL 3.830 OLA 43.03 RAL 43.38 RAD 6567.6 VEL 11.664 PTH 2.05 VHP 5.664 DPA -6.60 RAP 32.28 ECC 1.2414  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.14 20 44 30 4139.87 -31.50 185.87 272.37 59.02 21 53 29 3539.9 -35.35 177.87  
 123.86 4 5 2 2790.02 -31.49 82.05 272.36 59.01 4 51 32 2190.0 -35.33 74.06  
 56.14 20 44 30 4139.87 -31.50 185.87 272.37 59.02 21 53 29 3539.9 -35.35 177.87  
 123.86 4 5 2 2790.02 -31.49 82.05 272.36 59.01 4 51 32 2190.0 -35.33 74.06  
 56.14 20 44 30 4139.87 -31.50 185.87 272.37 59.02 21 53 29 3539.9 -35.35 177.87  
 123.86 4 5 2 2790.02 -31.49 82.05 272.36 59.01 4 51 32 2190.0 -35.33 74.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1913 TRA 1.3726 TC3-5.0033 BAU .9820 SGT 5772.7 SGR 674.9 SG3 383.7 ST 3386.4 SR 605.2 SS 1150.2  
 RDE .4007 RRA .1353 RC3 -.1827 FAU .05379 RRT .8415 RRF .8257 RTF .9714 CRT .9932 CRS -.9666 CST -.9896  
 FDE 1.4490 FRA 1.4754 FC3-3.1742 BSP 18593 SGB 5812.0 R23 .0094 R13 .9714 LSA 3623.0 MSA 174.4 SSA 15.5  
 BOE 2.2276 BRA 1.3792 BC3 5.0067 FSP -1315 SG1 5800.6 SG2 362.9 THA 5.64 EL1 3439.4 EL2 69.6 ALF 10.07

LAUNCH DATE JAN 18 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 534.117

RL 147.19 LAL .00 LOL 117.73 VL 27.234 GAL 3.86 AZL 86.70 HCA 251.53 SMA 125.01 ECC .18942 INC 3.2989 V1 30.269  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.183 GAP 7.92 AZP 91.05 TAL 163.03 TAP 54.56 RCA 101.33 APO 148.69 V2 34.897  
 RC 148.977 GL 23.63 GP -15.03 ZAL 64.12 ZAP 155.44 ETS 326.42 ZAE 128.54 ETE 191.43 ZAC 125.44 ETC 175.44 CLP-160.34

PLANETOCENTRIC CONIC

C3 15.214 VHL 3.901 OLA 42.11 RAL 46.58 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 5.853 DPA -5.12 RAP 33.58 ECC 1.2504  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.42 21 2 33 4133.63 -30.62 184.71 275.70 59.54 22 11 27 3533.6 -34.41 176.76  
 122.58 4 12 30 2812.51 -30.61 83.42 275.70 59.53 4 59 23 2212.5 -34.40 75.48  
 57.42 21 2 33 4133.63 -30.62 184.71 275.70 59.54 22 11 27 3533.6 -34.41 176.76  
 122.58 4 12 30 2812.51 -30.61 83.42 275.70 59.53 4 59 23 2212.5 -34.40 75.48  
 57.42 21 2 33 4133.63 -30.62 184.71 275.70 59.54 22 11 27 3533.6 -34.41 176.76  
 122.58 4 12 30 2812.51 -30.61 83.42 275.70 59.53 4 59 23 2212.5 -34.40 75.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1307 TRA 1.5768 TC3-4.9056 BAU .9983 SGT 5847.2 SGR 654.3 SG3 364.1 ST 3269.0 SR 586.3 SS 1072.5  
 RDE .3951 RRA .1401 RC3 -.1535 FAU .05002 RRT .8210 RRF .8041 RTF .9716 CRT .9886 CRS -.9550 CST -.9885  
 FDE 1.3041 FRA 1.5284 FC3-2.8462 BSP 18890 SGB 5883.7 R23 .0057 R13 .9717 LSA 3485.3 MSA 180.6 SSA 15.7  
 BOE 2.1670 BRA 1.5830 BC3 4.9080 FSP -1253 SG1 5871.9 SG2 372.0 THA 5.27 EL1 3320.0 EL2 86.9 ALF 10.06

LAUNCH DATE JAN 18 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 539.925

RL 147.19 LAL .00 LOL 117.73 VL 27.204 GAL 4.24 AZL 86.84 HCA 254.71 SMA 124.82 ECC .19339 INC 3.1629 V1 30.269  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.172 GAP 8.29 AZP 90.83 TAL 161.77 TAP 56.48 RCA 100.68 APO 148.96 V2 34.908  
 RC 151.204 GL 22.06 GP -14.26 ZAL 61.87 ZAP 156.91 ETS 325.88 ZAE 128.33 ETE 190.72 ZAC 127.14 ETC 175.26 CLP-161.65

PLANETOCENTRIC CONIC

C3 15.881 VHL 3.985 DLA 41.17 RAL 49.70 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 6.052 DPA -3.71 RAP 34.97 ECC 1.2614  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.76 21 20 44 4127.46 -29.67 183.53 279.06 60.03 22 29 31 3527.5 -33.41 175.65  
 121.24 4 19 10 2838.05 -29.66 85.00 279.06 60.02 5 6 28 2238.0 -33.40 77.12  
 58.76 21 20 44 4127.46 -29.67 183.53 279.06 60.03 22 29 31 3527.5 -33.41 175.65  
 121.24 4 19 10 2838.05 -29.66 85.00 279.06 60.02 5 6 28 2238.0 -33.40 77.12  
 58.76 21 20 44 4127.46 -29.67 183.53 279.06 60.03 22 29 31 3527.5 -33.41 175.65  
 121.24 4 19 10 2838.05 -29.66 85.00 279.06 60.02 5 6 28 2238.0 -33.40 77.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0656 TRA 1.7929 TC3-4.7696 BAU 1.0130 SGT 5915.9 SGR 637.5 SG3 345.3 ST 3144.6 SR 570.2 SS 999.5  
 RDE .3923 RRA .1459 RC3 -.1291 FAU .04637 RRT .8010 RRF .7837 RTF .9718 CRT .9823 CRS -.9406 CST -.9873  
 FDE 1.1708 FRA 1.6221 FC3-2.5280 BSP 19158 SGB 5950.2 R23 .0034 R13 .9719 LSA 3343.2 MSA 188.5 SSA 15.9  
 BDE 2.1025 BRA 1.7988 BC3 4.7713 FSP -1192 SG1 5938.0 SG2 380.2 THA 4.95 EL1 3194.1 EL2 105.1 ALF 10.11

LAUNCH DATE JAN 18 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 545.703

RL 147.19 LAL .00 LOL 117.73 VL 27.175 GAL 4.64 AZL 86.97 HCA 257.89 SMA 124.63 ECC .19766 INC 3.0310 V1 30.269  
 RP 108.52 LAP -2.96 LOP 15.60 VP 37.162 GAP 8.67 AZP 90.64 TAL 160.50 TAP 58.39 RCA 100.00 APO 149.27 V2 34.920  
 RC 153.416 GL 20.53 GP -13.56 ZAL 59.64 ZAP 158.31 ETS 325.21 ZAE 128.13 ETE 190.09 ZAC 128.91 ETC 175.07 CLP-162.91

PLANETOCENTRIC CONIC

C3 16.683 VHL 4.084 DLA 40.22 RAL 52.71 RAD 6567.7 VEL 11.750 PTH 2.07 VHP 6.261 DPA -2.36 RAP 36.43 ECC 1.2746  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.16 21 38 59 4121.31 -28.67 182.35 282.43 60.50 22 47 41 3521.3 -32.36 174.53  
 119.84 4 24 58 2866.67 -28.66 86.80 282.43 60.49 5 12 45 2266.7 -32.35 78.97  
 60.16 21 38 59 4121.31 -28.67 182.35 282.43 60.50 22 47 41 3521.3 -32.36 174.53  
 119.84 4 24 58 2866.67 -28.66 86.80 282.43 60.49 5 12 45 2266.7 -32.35 78.97  
 60.16 21 38 59 4121.31 -28.67 182.35 282.43 60.50 22 47 41 3521.3 -32.36 174.53  
 119.84 4 24 58 2866.67 -28.66 86.80 282.43 60.49 5 12 45 2266.7 -32.35 78.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9958 TRA 2.0212 TC3-4.5991 BAU 1.0260 SGT 5978.2 SGR 623.4 SG3 327.2 ST 3015.2 SR 556.0 SS 930.9  
 RDE .3918 RRA .1526 RC3 -.1091 FAU .04287 RRT .7820 RRF .7645 RTF .9720 CRT .9739 CRS -.9228 CST -.9859  
 FDE 1.0474 FRA 1.6221 FC3-2.2247 BSP 19408 SGB 6010.6 R23 .0019 R13 .9720 LSA 3198.1 MSA 198.3 SSA 15.9  
 BDE 2.0339 BRA 2.0269 BC3 4.6004 FSP -1134 SG1 5998.1 SG2 387.2 THA 4.68 EL1 3063.6 EL2 124.3 ALF 10.20

LAUNCH DATE JAN 18 1969

FLIGHT TIME 194.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 551.450

RL 147.19 LAL .00 LOL 117.73 VL 27.146 GAL 5.06 AZL 87.10 HCA 261.08 SMA 124.45 ECC .20225 INC 2.9021 V1 30.269  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.152 GAP 9.07 AZP 90.45 TAL 159.22 TAP 60.30 RCA 99.28 APO 149.62 V2 34.932  
 RC 155.612 GL 19.03 GP -12.94 ZAL 57.42 ZAP 159.63 ETS 324.39 ZAE 127.94 ETE 189.54 ZAC 130.72 ETC 174.87 CLP-164.14

PLANETOCENTRIC CONIC

C3 17.633 VHL 4.199 DLA 39.24 RAL 55.63 RAD 6567.7 VEL 11.790 PTH 2.08 VHP 6.483 DPA -1.07 RAP 37.98 ECC 1.2902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.62 21 57 21 4114.99 -27.62 181.15 285.81 60.94 23 5 56 3515.0 -31.26 173.38  
 118.38 4 29 50 2898.57 -27.60 88.82 285.80 60.93 5 18 9 2298.6 -31.25 81.06  
 61.62 21 57 21 4114.99 -27.62 181.15 285.81 60.94 23 5 56 3515.0 -31.26 173.38  
 118.38 4 29 50 2898.57 -27.60 88.82 285.80 60.93 5 18 9 2298.6 -31.25 81.06  
 61.62 21 57 21 4114.99 -27.62 181.15 285.81 60.94 23 5 56 3515.0 -31.26 173.38  
 118.38 4 29 50 2898.57 -27.60 88.82 285.80 60.93 5 18 9 2298.6 -31.25 81.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9258 TRA 2.2660 TC3-4.3925 BAU 1.0357 SGT 6037.4 SGR 612.3 SG3 310.3 ST 2889.9 SR 544.0 SS 870.5  
 RDE .3938 RRA .1608 RC3 -.0919 FAU .03940 RRT .7649 RRF .7479 RTF .9721 CRT .9630 CRS -.9018 CST -.9847  
 FDE .9377 FRA 1.6669 BC3-1.9344 BSP 19550 SGB 6068.3 R23 .0019 R13 .9721 LSA 3059.5 MSA 209.7 SSA 15.8  
 BDE 1.9657 BRA 2.2717 BC3 4.3935 FSP -1072 SG1 6055.6 SG2 393.2 THA 4.45 EL1 2937.1 EL2 144.2 ALF 10.30

LAUNCH DATE JAN 18 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 557.160

RL 147.19 LAL .00 LOL 117.73 VL 27.116 GAL 5.50 AZL 87.22 HCA 264.26 SMA 124.26 ECC .20720 INC 2.7753 V1 30.269  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.142 GAP 9.49 AZP 90.28 TAL 157.94 TAP 62.20 RCA 98.51 APO 150.01 V2 34.945  
 RC 157.792 GL 17.57 GP -12.37 ZAL 55.25 ZAP 160.90 ETS 323.40 ZAE 127.76 ETE 189.06 ZAC 132.57 ETC 174.64 CLP-165.33

PLANETOCENTRIC CONIC

C3 18.748 VHL 4.330 DLA 38.25 RAL 58.43 RAD 6567.8 VEL 11.838 PTH 2.10 VHP 6.717 DPA .16 RAP 39.59 ECC 1.3086  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.13 22 15 51 4108.29 -26.52 179.91 289.18 61.36 23 24 19 3508.3 -30.12 172.21  
 116.87 4 33 41 2933.93 -26.50 91.08 289.17 61.35 5 22 35 2333.9 -30.11 83.38  
 63.13 22 15 51 4108.29 -26.52 179.91 289.18 61.36 23 24 19 3508.3 -30.12 172.21  
 116.87 4 33 41 2933.93 -26.50 91.08 289.17 61.35 5 22 35 2333.9 -30.11 83.38  
 63.13 22 15 51 4108.29 -26.52 179.91 289.18 61.36 23 24 19 3508.3 -30.12 172.21  
 116.87 4 33 41 2933.93 -26.50 91.08 289.17 61.35 5 22 35 2333.9 -30.11 83.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8473 TRA 2.5199 TC3-4.1730 BAU 1.0461 SGT 6088.0 SGR 601.8 SG3 293.9 ST 2758.6 SR 532.1 SS 812.6  
 RDE .3969 RRA .1696 RC3 -.0790 FAU .03626 RRT .7491 RRF .7323 RTF .9722 CRT .9491 CRS -.8764 CST -.9833  
 FDE .8332 FRA 1.7053 FC3-1.6743 BSP 19788 SGB 6117.7 R23 .0015 R13 .9722 LSA 2916.0 MSA 222.8 SSA 15.6  
 BDE 1.8895 BRA 2.5256 BC3 4.1738 FSP -1021 SG1 6104.7 SG2 397.6 THA 4.25 EL1 2804.6 EL2 164.9 ALF 10.41

LAUNCH DATE JAN 18 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 562.832

RL 147.19 LAL .00 LOL 117.73 VL 27.086 GAL 5.97 AZL 87.35 HCA 267.45 SMA 124.07 ECC .21253 INC 2.6498 V1 30.269  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.132 GAP 9.92 AZP 90.12 TAL 156.65 TAP 64.10 RCA 97.70 APO 150.44 V2 34.957  
 RC 159.953 GL 16.15 GP -11.86 ZAL 53.12 ZAP 162.10 ETS 322.23 ZAE 127.58 ETE 188.63 ZAC 134.46 ETC 174.38 CLP-166.49

PLANETOCENTRIC CONIC

C3 20.049 VHL 4.478 DLA 37.26 RAL 61.11 RAD 6567.8 VEL 11.892 PTH 2.11 VHP 6.965 DPA 1.35 RAP 41.25 ECC 1.3299  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.71 22 34 30 4101.01 -25.38 178.63 292.54 61.76 23 42 51 3501.0 -28.94 170.99  
 115.29 4 36 27 2972.94 -25.36 93.59 292.53 61.75 5 26 0 2372.9 -28.93 85.95  
 64.71 22 34 30 4101.01 -25.38 178.63 292.54 61.76 23 42 51 3501.0 -28.94 170.99  
 115.29 4 36 27 2972.94 -25.36 93.59 292.53 61.75 5 26 0 2372.9 -28.93 85.95  
 64.71 22 34 30 4101.01 -25.38 178.63 292.54 61.76 23 42 51 3501.0 -28.94 170.99  
 115.29 4 36 27 2972.94 -25.36 93.59 292.53 61.75 5 26 0 2372.9 -28.93 85.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7661 TRA 2.7888 TC3-3.9335 BAU 1.0545 SGT 6133.4 SGR 592.4 SG3 278.5 ST 2632.0 SR 520.9 SS 761.1  
 RDE .4014 RRA .1796 RC3 -.0683 FAU .03325 RRT .7351 RRF .7188 RTF .9722 CRT .9318 CRS -.8470 CST -.9819  
 FDE .7381 FRA 1.7425 FC3-1.4359 BSP 19993 SGB 6161.9 R23 .0015 R13 .9723 LSA 2778.8 MSA 237.1 SSA 15.3  
 BDE 1.8111 BRA 2.7946 BC3 3.9341 FSP -971 SG1 6148.9 SG2 400.6 THA 4.08 EL1 2676.6 EL2 185.9 ALF 10.50

LAUNCH DATE JAN 18 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 568.458

RL 147.19 LAL .00 LOL 117.73 VL 27.057 GAL 6.48 AZL 87.48 HCA 270.64 SMA 123.89 ECC .21828 INC 2.5249 V1 30.269  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.123 GAP 10.38 AZP 89.97 TAL 155.37 TAP 66.01 RCA 96.84 APO 150.93 V2 34.970  
 RC 162.097 GL 14.78 GP -11.39 ZAL 51.04 ZAP 163.24 ETS 320.83 ZAE 127.42 ETE 188.25 ZAC 136.38 ETC 174.09 CLP-167.63

PLANETOCENTRIC CONIC

C3 21.557 VHL 4.643 DLA 36.26 RAL 63.68 RAD 6567.9 VEL 11.956 PTH 2.13 VHP 7.227 DPA 2.49 RAP 42.98 ECC 1.3548  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.34 22 53 23 4092.89 -24.21 177.28 295.90 62.14 24 1 36 3492.9 -27.73 169.71  
 113.66 4 38 2 3015.85 -24.19 96.36 295.89 62.13 5 28 18 2415.9 -27.72 88.79  
 66.34 22 53 23 4092.89 -24.21 177.28 295.90 62.14 24 1 36 3492.9 -27.73 169.71  
 113.66 4 38 2 3015.85 -24.19 96.36 295.89 62.13 5 28 18 2415.9 -27.72 88.79  
 66.34 22 53 23 4092.89 -24.21 177.28 295.90 62.14 24 1 36 3492.9 -27.73 169.71  
 113.66 4 38 2 3015.85 -24.19 96.36 295.89 62.13 5 28 18 2415.9 -27.72 88.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6817 TRA 3.0734 TC3-3.6809 BAU 1.0610 SGT 6173.5 SGR 583.8 SG3 264.0 ST 2511.6 SR 510.0 SS 715.6  
 RDE .4071 RRA .1909 RC3 -.0597 FAU .03040 RRT .7231 RRF .7072 RTF .9724 CRT .9106 CRS -.8133 CST -.9808  
 FDE .6512 FRA 1.7782 FC3-1.2210 BSP 20183 SGB 6201.1 R23 .0016 R13 .9724 LSA 2648.9 MSA 252.3 SSA 14.9  
 BDE 1.7303 BRA 3.0793 BC3 3.6814 FSP -924 SG1 6188.0 SG2 402.3 THA 3.93 EL1 2554.5 EL2 207.2 ALF 10.55

LAUNCH DATE JAN 18 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 574.034

RL 147.19 LAL .00 LOL 117.73 VL 27.027 GAL 7.01 AZL 87.60 HCA 273.84 SMA 123.70 ECC .22451 INC 2.3997 V1 30.269  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.114 GAP 10.86 AZP 89.84 TAL 154.09 TAP 67.93 RCA 95.93 APO 151.47 V2 34.983  
 RC 164.221 GL 13.45 GP -10.97 ZAL 49.02 ZAP 164.33 ETS 319.19 ZAE 127.26 ETE 187.92 ZAC 138.33 ETC 173.76 CLP-168.74

PLANETOCENTRIC CONIC

C3 23.303 VHL 4.827 DLA 35.26 RAL 66.12 RAD 6567.9 VEL 12.028 PTH 2.15 VHP 7.506 DPA 3.59 RAP 44.75 ECC 1.3835  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.04 23 12 35 4083.54 -23.01 175.85 299.24 62.50 24 20 38 3483.5 -26.50 168.34  
 111.96 4 38 20 3062.98 -22.99 99.43 299.23 62.49 5 29 23 2463.0 -26.48 91.92  
 68.04 23 12 35 4083.54 -23.01 175.85 299.24 62.50 24 20 38 3483.5 -26.50 168.34  
 111.96 4 38 20 3062.98 -22.99 99.43 299.23 62.49 5 29 23 2463.0 -26.48 91.92  
 68.04 23 12 35 4083.54 -23.01 175.85 299.24 62.50 24 20 38 3483.5 -26.50 168.34  
 111.96 4 38 20 3062.98 -22.99 99.43 299.23 62.49 5 29 23 2463.0 -26.48 91.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5950 TRA 3.3745 TC3-3.4188 BAU 1.0652 SGT 6208.1 SGR 575.4 SG3 250.3 ST 2399.8 SR 499.1 SS 676.3  
 RDE .4138 RRA .2033 RC3 -.0525 FAU .02768 RRT .7129 RRF .6975 RTF .9725 CRT .8854 CRS -.7757 CST -.9799  
 FDE .5722 FRA 1.8134 FC3-1.0284 BSP 20348 SGB 6234.7 R23 .0018 R13 .9725 LSA 2528.5 MSA 267.9 SSA 14.6  
 BDE 1.6478 BRA 3.3806 BC3 3.4192 FSP -878 SG1 6221.7 SG2 402.6 THA 3.80 EL1 2440.5 EL2 228.1 ALF 10.53

LAUNCH DATE JAN 18 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 579.554

RL 147.19 LAL .00 LOL 117.73 VL 26.997 GAL 7.58 AZL 87.73 HCA 277.03 SMA 123.52 ECC .23125 INC 2.2734 V1 30.269  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.104 GAP 11.37 AZP 89.72 TAL 152.82 TAP 69.85 RCA 94.95 APO 152.08 V2 34.996  
 RC 166.326 GL 12.18 GP -10.58 ZAL 47.07 ZAP 165.38 ETS 317.25 ZAE 127.10 ETE 187.62 ZAC 140.30 ETC 173.38 CLP-169.84

PLANETOCENTRIC CONIC

C3 25.321 VHL 5.032 DLA 34.28 RAL 68.44 RAD 6568.0 VEL 12.112 PTH 2.17 VHP 7.803 DPA 4.64 RAP 46.57 ECC 1.4167  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.82 23 32 10 4072.68 -21.78 174.31 302.57 62.85 24 40 3 3472.7 -25.24 166.86  
 110.18 4 37 17 3114.59 -21.77 102.81 302.56 62.84 5 29 11 2514.6 -25.23 95.36  
 69.82 23 32 10 4072.68 -21.78 174.31 302.57 62.85 24 40 3 3472.7 -25.24 166.86  
 110.18 4 37 17 3114.59 -21.77 102.81 302.56 62.84 5 29 11 2514.6 -25.23 95.36  
 69.82 23 32 10 4072.68 -21.78 174.31 302.57 62.85 24 40 3 3472.7 -25.24 166.86  
 110.18 4 37 17 3114.59 -21.77 102.81 302.56 62.84 5 29 11 2514.6 -25.23 95.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5091 TRA 3.6971 TC3-3.1463 BAU 1.0652 SGT 6239.6 SGR 567.5 SG3 237.7 ST 2301.6 SR 488.3 SS 644.0  
 RDE .4215 RRA .2173 RC3 -.0459 FAU .02499 RRT .7049 RRF .6901 RTF .9726 CRT .8561 CRS -.7356 CST -.9796  
 FDE .5021 FRA 1.8502 FC3 -.8544 BSP 20420 SGB 6265.4 R23 .0023 R13 .9727 LSA 2422.9 MSA 283.1 SSA 14.2  
 BDE 1.5669 BRA 3.7035 BC3 3.1466 FSP -831 SG1 6252.5 SG2 401.7 THA 3.68 EL1 2339.7 EL2 248.3 ALF 10.41

LAUNCH DATE JAN 18 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 585.007

RL 147.19 LAL .00 LOL 117.73 VL 26.968 GAL 8.18 AZL 87.85 MCA 280.23 SMA 123.33 ECC .23856 INC 2.1454 V1 30.269  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.095 GAP 11.91 AZP 89.62 TAL 151.56 TAP 71.79 RCA 93.91 APO 152.75 V2 35.010  
 RC 168.410 GL 10.96 GP -10.23 ZAL 45.19 ZAP 166.36 ETS 314.97 ZAE 126.94 ETE 187.35 ZAC 142.29 ETC 172.95 CLP-170.93

PLANETOCENTRIC CONIC

C3 27.650 VHL 5.258 CLA 33.30 RAL 70.64 RAD 6568.1 VEL 12.208 PTH 2.19 VHP 8.121 DPA 5.65 RAP 48.43 ECC 1.4551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.69 23 52 25 4059.41 -20.55 172.61 305.88 63.20 25 0 4 3459.4 -23.97 165.21  
 108.31 4 34 36 3171.49 -20.53 106.56 305.87 63.18 5 27 27 2571.5 -23.96 99.16  
 71.69 23 52 25 4059.41 -20.55 172.61 305.88 63.20 25 0 4 3459.4 -23.97 165.21  
 108.31 4 34 36 3171.49 -20.53 106.56 305.87 63.18 5 27 27 2571.5 -23.96 99.16  
 110.00 5 43 40 2959.70 -26.26 93.01 308.75 67.29 6 32 59 2359.7 -29.10 84.98  
 110.00 3 46 27 3319.20 -15.02 114.81 302.67 58.93 4 41 46 2719.2 -19.03 107.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4170 TRA 4.0348 TC3-2.8801 BAU 1.0648 SGT 6263.2 SGR 558.9 SG3 225.6 ST 2209.6 SR 476.8 SS 615.6  
 RDE .4295 RRA .2320 RC3 -.0407 FAU .02255 RRT .6980 RRF .6836 RTF .9729 CRT .8220 CRS -.6917 CST -.9796  
 FDE .4361 FRA 1.8849 FC3 -.7059 BSP 20571 SGB 6288.1 R23 .0024 R13 .9729 LSA 2323.7 MSA 297.7 SSA 13.8  
 BOE 1.4806 BRA 4.0414 BC3 2.8804 FSP -791 SG1 6275.4 SG2 399.4 THA 3.58 EL1 2244.6 EL2 267.3 ALF 10.20

LAUNCH DATE JAN 18 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 590.384

RL 147.19 LAL .00 LOL 117.73 VL 26.938 GAL 8.83 AZL 87.99 MCA 283.43 SMA 123.15 ECC .24650 INC 2.0146 V1 30.269  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.087 GAP 12.48 AZP 89.53 TAL 150.32 TAP 73.75 RCA 92.79 APO 153.51 V2 35.023  
 RC 170.474 GL 9.78 GP -9.90 ZAL 43.38 ZAP 167.30 ETS 312.29 ZAE 126.78 ETE 187.11 ZAC 144.29 ETC 172.45 CLP-172.01

PLANETOCENTRIC CONIC

C3 30.341 VHL 5.508 CLA 32.34 RAL 72.72 RAD 6568.2 VEL 12.317 PTH 2.22 VHP 8.461 DPA 6.62 RAP 50.33 ECC 1.4993  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.68 0 17 25 4043.08 -19.30 170.69 309.17 63.53 1 24 48 3443.1 -22.69 163.34  
 106.32 4 30 7 3234.26 -19.28 110.71 309.17 63.52 5 24 1 2634.3 -22.68 103.37  
 73.68 0 17 25 4043.08 -19.30 170.69 309.17 63.53 1 24 48 3443.1 -22.69 163.34  
 106.32 4 30 7 3234.26 -19.28 110.71 309.17 63.52 5 24 1 2634.3 -22.68 103.37  
 110.00 6 17 53 2901.49 -27.73 89.12 313.20 69.16 7 6 14 2301.5 -30.31 80.87  
 110.00 3 28 50 3423.84 -11.27 120.59 304.47 57.51 4 25 53 2823.8 -15.47 114.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3230 TRA 4.3940 TC3-2.6153 BAU 1.0610 SGT 6281.9 SGR 549.9 SG3 214.2 ST 2129.6 SR 464.8 SS 592.4  
 RDE .4381 RRA .2479 RC3 -.0360 FAU .02020 RRT .6927 RRF .6787 RTF .9733 CRT .7838 CRS -.6460 CST -.9801  
 FDE .3762 FRA 1.9205 FC3 -.5762 BSP 20704 SGB 6305.9 R23 .0025 R13 .9733 LSA 2237.3 MSA 310.9 SSA 13.4  
 BOE 1.3937 BRA 4.4010 BC3 2.6156 FSP -753 SG1 6293.5 SG2 395.9 THA 3.48 EL1 2161.1 EL2 284.4 ALF 9.88

LAUNCH DATE JAN 18 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 595.674

RL 147.19 LAL .00 LOL 117.73 VL 26.909 GAL 9.52 AZL 88.12 MCA 286.64 SMA 122.97 ECC .25516 INC 1.8802 V1 30.269  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.078 GAP 13.10 AZP 89.46 TAL 149.10 TAP 75.73 RCA 91.59 APO 154.35 V2 35.036  
 RC 172.518 GL 8.66 GP -9.61 ZAL 41.66 ZAP 168.18 ETS 309.13 ZAE 126.62 ETE 186.89 ZAC 146.30 ETC 171.87 CLP-173.09

PLANETOCENTRIC CONIC

C3 33.453 VHL 5.784 CLA 31.40 RAL 74.68 RAD 6568.3 VEL 12.443 PTH 2.25 VHP 8.826 DPA 7.54 RAP 52.25 ECC 1.5506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.82 0 39 48 4022.12 -18.04 168.44 312.45 63.85 1 46 50 3422.1 -21.41 161.15  
 104.18 4 23 22 3304.35 -18.03 115.39 312.44 63.85 5 18 27 2704.4 -21.40 108.09  
 75.82 0 39 48 4022.12 -18.04 168.44 312.45 63.85 1 46 50 3422.1 -21.41 161.15  
 104.18 4 23 22 3304.35 -18.03 115.39 312.44 63.85 5 18 27 2704.4 -21.40 108.09  
 110.00 6 44 51 2864.60 -28.60 86.60 317.28 70.42 7 32 35 2264.6 -30.99 78.22  
 110.00 3 17 30 3509.87 -8.08 125.22 306.62 56.67 4 15 59 2909.9 -12.41 118.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2278 TRA 4.7763 TC3-2.3559 BAU 1.0537 SGT 6295.8 SGR 540.4 SG3 203.6 ST 2062.0 SR 452.4 SS 574.0  
 RDE .4470 RRA .2649 RC3 -.0317 FAU .01795 RRT .6887 RRF .6751 RTF .9739 CRT .7420 CRS -.5996 CST -.9812  
 FDE .3220 FRA 1.9576 FC3 -.4646 BSP 20809 SGB 6318.9 R23 .0024 R13 .9739 LSA 2163.8 MSA 322.1 SSA 13.0  
 BOE 1.3066 BRA 4.7837 BC3 2.3561 FSP -717 SG1 6306.8 SG2 391.1 THA 3.40 EL1 2089.7 EL2 299.2 ALF 9.44

LAUNCH DATE JAN 18 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 600.861

RL 147.19 LAL .00 LOL 117.73 VL 26.880 GAL 10.27 AZL 88.26 MCA 289.84 SMA 122.79 ECC .26461 INC 1.7411 V1 30.269  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.069 GAP 13.76 AZP 89.41 TAL 147.90 TAP 77.74 RCA 90.30 APO 155.28 V2 35.050  
 RC 174.540 GL 7.59 GP -9.34 ZAL 40.02 ZAP 169.00 ETS 305.41 ZAE 126.45 ETE 186.69 ZAC 148.30 ETC 171.19 CLP-174.16

PLANETOCENTRIC CONIC

C3 37.059 VHL 6.088 CLA 30.48 RAL 76.52 RAD 6568.4 VEL 12.587 PTH 2.28 VHP 9.221 DPA 8.42 RAP 54.20 ECC 1.6099  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.21 1 4 17 3993.83 -16.79 165.68 315.70 64.18 2 10 51 3393.8 -20.13 158.43  
 101.79 4 13 35 3384.35 -16.78 120.76 315.69 64.17 5 9 59 2784.4 -20.12 113.51  
 78.21 1 4 17 3993.83 -16.79 165.68 315.70 64.18 2 10 51 3393.8 -20.13 158.43  
 101.79 4 13 35 3384.35 -16.78 120.76 315.69 64.17 5 9 59 2784.4 -20.12 113.51  
 110.00 7 7 52 2839.17 -29.17 84.84 321.18 71.33 7 55 11 2239.2 -31.43 76.37  
 110.00 3 9 10 3587.01 -5.18 129.30 308.94 56.16 4 8 57 2987.0 -9.59 122.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.1342 TRA 5.1877 TC3-2.0997 BAU 1.0404 SGT 6306.8 SGR 530.5 SG3 193.8 ST 2008.6 SR 439.6 SS 560.8  
 RDE .4565 RRA .2832 RC3 -.0272 FAU .01572 RRT .6862 RRF .6732 RTF .9745 CRT .6982 CRS -.5550 CST -.9828  
 FDE .2744 FRA 1.9983 FC3 -.3671 BSP 20820 SGB 6329.1 R23 .0026 R13 .9745 LSA 2105.5 MSA 330.5 SSA 12.6  
 BOE 1.2227 BRA 5.1955 BC3 2.0998 FSP -679 SG1 6317.3 SG2 385.2 THA 3.32 EL1 2032.5 EL2 311.0 ALF 8.90

LAUNCH DATE JAN 18 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 605.925

RL 147.19 LAL .00 LOL 117.73 VL 26.851 GAL 11.08 AZL 88.40 HCA 293.05 SMA 122.62 ECC .27496 INC 1.5961 V1 30.269
RP 108.08 LAP -1.47 LOP 50.79 VP 37.061 GAP 14.47 AZP 89.37 TAL 146.74 TAP 79.79 RCA 88.90 APO 156.33 V2 35.063
RC 176.542 GL 6.56 GP -9.09 ZAL 38.48 ZAP 169.74 ETS 301.02 ZAE 126.26 ETE 186.51 ZAC 150.31 ETC 170.41 CLP-175.24

PLANETOCENTRIC CONIC

C3 41.249 VHL 6.423 DLA 29.59 RAL 78.25 RAD 6568.6 VEL 12.752 PTH 2.32 VHP 9.648 DPA 9.26 RAP 56.17 ECC 1.6788
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
81.04 1 32 35 3952.60 -15.55 161.98 318.93 64.51 2 38 27 3352.6 -18.85 154.77
98.96 3 59 3 3479.69 -15.53 127.23 318.92 64.50 4 57 2 2879.7 -18.84 120.02
100.00 4 43 0 3339.11 -18.95 118.44 320.56 66.44 5 38 39 2739.1 -21.98 110.95
100.00 3 31 19 3568.41 -12.18 132.10 317.20 62.49 4 30 47 2968.4 -15.77 125.14
110.00 7 28 9 2821.51 -29.54 83.60 324.96 71.97 8 15 10 2221.5 -31.72 75.07
110.00 3 2 39 3658.77 -2.45 133.06 311.36 55.89 4 3 38 3058.8 -6.91 126.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0346 TRA 6.6227 TC3-1.8579 BAU 1.0246 SGT 6310.3 SGR 519.3 SG3 184.4 ST 1962.5 SR 425.9 SS 550.4
RDE .4659 RRA .3021 RC3 -.0233 FAU .01365 RRT .6843 RRF .6716 RTF .9754 CRT .6515 CRS -.5099 CST -.9846
FDE .2293 FRA 2.0395 FC3 -.2866 BSP 20916 SGB 6331.7 R23 .0024 R13 .9754 LSA 2054.9 MSA 336.4 SSA 12.2
BOE 1.1347 BRA 5.6309 BC3 1.8581 FSP -647 SG1 6320.4 SG2 378.1 THA 3.23 EL1 1982.6 EL2 319.9 ALF 8.26

LAUNCH DATE JAN 18 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 610.846

RL 147.19 LAL .00 LOL 117.73 VL 26.822 GAL 11.95 AZL 88.56 HCA 296.26 SMA 122.44 ECC .28631 INC 1.4439 V1 30.269
RP 108.04 LAP -1.29 LOP 54.00 VP 37.053 GAP 15.24 AZP 89.36 TAL 145.63 TAP 81.88 RCA 87.39 APO 157.50 V2 35.076
RC 178.523 GL 5.59 GP -8.86 ZAL 37.02 ZAP 170.41 ETS 295.89 ZAE 126.06 ETE 186.34 ZAC 152.30 ETC 169.50 CLP-176.32

PLANETOCENTRIC CONIC

C3 46.132 VHL 6.792 DLA 28.72 RAL 79.86 RAD 6568.7 VEL 12.942 PTH 2.36 VHP 10.112 DPA 10.05 RAP 58.16 ECC 1.7592
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
85.01 2 10 45 3878.61 -14.31 155.92 322.13 64.84 3 15 23 3278.6 -17.59 148.75
94.99 3 33 42 3610.00 -14.29 136.24 322.12 64.83 4 33 52 3010.0 -17.57 129.06
100.00 5 23 52 3255.73 -21.13 113.21 325.23 68.35 6 18 8 2655.7 -23.89 105.49
100.00 3 3 16 3708.12 -7.67 140.02 318.68 61.02 4 5 4 3108.1 -11.48 133.30
110.00 7 46 20 2809.73 -29.79 82.77 328.64 72.40 8 33 9 2209.7 -31.90 74.20
110.00 2 57 18 3726.88 .16 136.62 313.86 55.82 3 59 25 3126.9 -4.33 130.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9335 TRA 6.0892 TC3-1.6268 BAU 1.0034 SGT 6309.5 SGR 507.3 SG3 175.6 ST 1926.7 SR 411.7 SS 543.6
RDE .4754 RRA .3217 RC3 -.0195 FAU .01165 RRT .6833 RRF .6711 RTF .9764 CRT .6039 CRS -.4670 CST -.9866
FDE .1885 FRA 2.0843 FC3 -.2187 BSP 20995 SGB 6329.8 R23 .0022 R13 .9764 LSA 2015.4 MSA 339.3 SSA 11.8
BOE 1.0476 BRA 6.0977 BC3 1.6269 FSP -616 SG1 6319.0 SG2 369.8 THA 3.16 EL1 1943.1 EL2 325.3 ALF 7.57

LAUNCH DATE JAN 18 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC

DISTANCE 615.594

RL 147.19 LAL .00 LOL 117.73 VL 26.794 GAL 12.90 AZL 88.72 HCA 299.47 SMA 122.27 ECC .29881 INC 1.2830 V1 30.269
RP 108.00 LAP -1.12 LOP 57.21 VP 37.045 GAP 16.08 AZP 89.37 TAL 144.56 TAP 84.03 RCA 85.74 APO 158.81 V2 35.089
RC 180.483 GL 4.66 GP -8.66 ZAL 35.66 ZAP 170.97 ETS 289.92 ZAE 125.84 ETE 186.19 ZAC 154.27 ETC 168.43 CLP-177.43

PLANETOCENTRIC CONIC

C3 51.845 VHL 7.200 DLA 27.87 RAL 81.35 RAD 6568.9 VEL 13.161 PTH 2.40 VHP 10.620 DPA 10.80 RAP 60.15 ECC 1.8532
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 42 13 3630.32 -17.25 139.09 327.19 67.19 4 42 43 3030.3 -20.20 131.65
90.00 2 14 8 3916.62 -8.98 156.04 323.26 63.03 3 19 25 3316.6 -12.53 149.16
100.00 5 51 34 3213.31 -22.17 110.49 329.27 69.42 6 45 7 2613.3 -24.77 102.65
100.00 2 47 28 3808.86 -4.32 145.61 320.73 60.39 3 50 57 3208.9 -8.23 139.00
110.00 8 2 47 2802.66 -29.93 82.27 332.23 72.67 8 49 29 2202.7 -32.01 73.68
110.00 2 52 45 3792.27 2.66 140.03 316.40 55.91 3 55 57 3192.3 -1.84 133.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8310 TRA 6.5908 TC3-1.4070 BAU .9753 SGT 6304.0 SGR 494.2 SG3 167.5 ST 1899.7 SR 396.9 SS 540.1
RDE .4850 RRA .3420 RC3 -.0157 FAU .00969 RRT .6829 RRF .6712 RTF .9776 CRT .5566 CRS -.4269 CST -.9886
FDE .1514 FRA 2.1333 FC3 -.1619 BSP 21046 SGB 6323.4 R23 .0020 R13 .9776 LSA 1985.7 MSA 339.0 SSA 11.4
BOE .9622 BRA 6.5997 BC3 1.4071 FSP -587 SG1 6313.1 SG2 360.5 THA 3.07 EL1 1912.9 EL2 327.4 ALF 6.83

LAUNCH DATE JAN 18 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 26 1969

HELIOCENTRIC CONIC

DISTANCE 620.135

RL 147.19 LAL .00 LOL 117.73 VL 26.767 GAL 13.93 AZL 88.89 HCA 302.69 SMA 122.11 ECC .31262 INC 1.1114 V1 30.269
RP 107.96 LAP -.94 LOP 60.42 VP 37.037 GAP 17.00 AZP 89.40 TAL 143.55 TAP 86.24 RCA 83.93 APO 160.28 V2 35.102
RC 182.422 GL 3.78 GP -8.46 ZAL 34.40 ZAP 171.41 ETS 283.08 ZAE 125.59 ETE 186.04 ZAC 156.22 ETC 167.17 CLP-178.55

PLANETOCENTRIC CONIC

C3 58.562 VHL 7.653 DLA 27.06 RAL 82.72 RAD 6569.1 VEL 13.413 PTH 2.45 VHP 11.177 DPA 11.51 RAP 62.14 ECC 1.9638
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 17 47 3561.36 -19.02 134.80 331.53 68.62 5 17 8 2961.4 -21.76 127.20
90.00 1 49 33 4045.63 -4.93 163.35 324.94 62.08 2 56 58 3445.6 -8.62 156.62
100.00 6 13 58 3186.77 -22.80 108.76 333.05 70.13 7 7 5 2586.8 -25.30 100.86
100.00 2 36 2 3895.45 -1.39 150.37 322.99 60.14 3 40 58 3295.4 -5.35 143.83
110.00 8 17 44 2799.49 -30.00 82.05 335.75 72.78 9 4 24 2199.5 -32.06 73.44
110.00 2 48 46 3855.49 5.06 143.34 318.98 56.15 3 53 1 3255.5 .58 137.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7316 TRA 7.1357 TC3-1.1969 BAU .9371 SGT 6296.4 SGR 480.4 SG3 159.9 ST 1882.0 SR 381.7 SS 540.0
RDE .4950 RRA .3630 RC3 -.0119 FAU .00769 RRT .6833 RRF .6724 RTF .9790 CRT .5119 CRS -.3918 CST -.9907
FDE .1193 FRA 2.1888 FC3 -.1137 BSP 20986 SGB 6314.7 R23 .0019 R13 .9790 LSA 1966.4 MSA 335.6 SSA 11.0
BOE .8833 BRA 7.1449 BC3 1.1969 FSP -556 SG1 6305.0 SG2 350.3 THA 2.99 EL1 1892.5 EL2 326.1 ALF 6.11

LAUNCH DATE JAN 19 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 30 1969

HELIOCENTRIC CONIC

DISTANCE 159.362

RL 147.20 LAL .00 LOL 118.75 VL 22.711 GAL 3.99 AZL 86.39 MCA 64.35 SMA 103.09 ECC .43252 INC 3.6081 V1 30.266
RP 107.75 LAP 3.25 LOP 183.05 VP 34.292 GAP -25.50 AZP 88.44 TAL 174.73 TAP 239.08 RCA 58.50 APO 147.68 V2 35.169
RC 44.357 GL 10.37 GP 5.03 ZAL 79.51 ZAP 16.62 ETS 198.98 ZAE 172.16 ETE 227.40 ZAC 111.30 ETC 164.42 CLP 15.86

PLANETOCENTRIC CONIC

C3 62.710 VHL 7.919 DLA 24.43 RAL 33.41 RAD 6569.2 VEL 13.567 PTH 2.48 VHP 15.604 DPA 9.36 RAP 16.48 ECC 2.0320
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 52 45 3389.61 -22.89 123.70 284.34 72.86 2 49 15 2789.6 -25.02 115.68
90.00 21 29 20 4250.64 1.67 174.81 273.99 61.73 22 40 11 3650.6 -2.12 168.18
100.00 3 35 4 3059.71 -25.48 100.28 285.19 73.82 4 26 4 2459.7 -27.45 92.03
100.00 22 29 42 4055.78 4.04 159.18 272.68 60.36 23 37 17 3455.8 .06 152.65
110.00 5 24 8 2718.51 -31.49 76.21 287.03 75.95 6 9 26 2118.5 -33.09 67.35
110.00 22 57 8 3969.74 9.35 149.40 269.43 56.97 24 3 17 3369.7 4.94 143.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3867 TRA -.9651 TC3 -.0234 BAU .0328 SGT 817.3 SGR 432.6 SG3 48.9 ST 362.2 SR 417.4 SS 305.6
RDE -.5752 RRA .1347 RC3 -.0313 FAU .01814 RRT .1023 RRF -.1076 RTF -.6701 CRT .7212 CRS .8464 CST .9773
FDE .2772 FRA .4403 FC3 -.2504 BSP 2247 SGB 924.7 R23 -.0130 R13 -.6711 LSA 594.3 MSA 213.2 SSA 14.1
BOE .6931 BRA .9745 BC3 .0391 FSP -108 SG1 818.9 SG2 429.5 THA 4.28 EL1 513.7 EL2 203.9 ALF 50.58

LAUNCH DATE JAN 19 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC

DISTANCE 165.889

RL 147.20 LAL .00 LOL 118.75 VL 23.155 GAL 3.74 AZL 86.55 MCA 67.57 SMA 104.74 ECC .40971 INC 3.4536 V1 30.266
RP 107.79 LAP 3.19 LOP 186.29 VP 34.576 GAP -24.13 AZP 88.68 TAL 174.58 TAP 242.16 RCA 61.83 APO 147.66 V2 35.158
RC 43.625 GL 10.75 GP 5.26 ZAL 79.43 ZAP 15.15 ETS 201.78 ZAE 173.87 ETE 243.14 ZAC 112.75 ETC 164.07 CLP 14.22

PLANETOCENTRIC CONIC

C3 55.691 VHL 7.463 DLA 24.82 RAL 33.37 RAD 6569.0 VEL 13.306 PTH 2.43 VHP 14.847 DPA 10.22 RAP 17.86 ECC 1.9165
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 45 59 3383.57 -23.01 123.30 282.22 73.03 2 42 22 2783.6 -25.12 115.26
90.00 21 35 49 4198.76 -.00 171.91 272.51 61.68 22 45 48 3598.8 -3.79 165.28
100.00 3 29 31 3049.74 -25.67 99.60 283.08 74.13 4 20 21 2449.7 -27.60 91.33
100.00 22 34 58 4007.82 2.42 156.54 271.16 60.20 23 41 46 3407.8 -1.56 150.02
110.00 5 20 15 2703.33 -31.73 75.09 284.88 76.56 6 5 18 2103.3 -33.25 66.20
110.00 23 0 44 3927.00 7.76 147.12 267.87 56.60 24 6 11 3327.0 3.31 140.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3886 TRA -.9467 TC3 -.0073 BAU .0245 SGT 854.7 SGR 436.0 SG3 53.8 ST 383.1 SR 421.9 SS 321.7
RDE -.5481 RRA .1224 RC3 -.0322 FAU .01891 RRT .1158 RRF -.1221 RTF -.6901 CRT .7306 CRS .8520 CST .9780
FDE .2901 FRA .4511 FC3 -.2940 BSP 2396 SGB 959.5 R23 -.0149 R13 -.6912 LSA 617.5 MSA 216.1 SSA 14.4
BOE .6719 BRA .9546 BC3 .0330 FSP -121 SG1 856.7 SG2 432.1 THA 4.54 EL1 530.6 EL2 208.0 ALF 48.78

LAUNCH DATE JAN 19 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 172.458

RL 147.20 LAL .00 LOL 118.75 VL 23.564 GAL 3.47 AZL 86.69 MCA 70.80 SMA 106.35 ECC .38816 INC 3.3062 V1 30.266
RP 107.82 LAP 3.12 LOP 189.52 VP 34.841 GAP -22.83 AZP 88.91 TAL 174.49 TAP 245.29 RCA 65.07 APO 147.63 V2 35.147
RC 43.055 GL 11.11 GP 5.51 ZAL 79.45 ZAP 13.72 ETS 205.25 ZAE 174.91 ETE 268.65 ZAC 114.17 ETC 163.69 CLP 12.59

PLANETOCENTRIC CONIC

C3 49.522 VHL 7.037 DLA 25.16 RAL 33.22 RAD 6568.8 VEL 13.072 PTH 2.39 VHP 14.122 DPA 11.09 RAP 19.22 ECC 1.8150
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 39 18 3375.37 -23.17 122.75 279.96 73.26 2 35 33 2775.4 -25.25 114.70
90.00 21 41 18 4148.74 -1.62 169.12 270.88 61.73 22 50 27 3548.7 -5.38 162.47
100.00 3 24 2 3037.69 -25.89 98.77 280.82 74.51 4 14 40 2437.7 -27.76 90.47
100.00 22 39 15 3961.65 .86 154.00 269.51 60.12 23 45 17 3361.7 -3.13 147.48
110.00 5 16 19 2686.39 -31.99 73.84 282.57 77.26 6 1 5 2086.4 -33.41 64.90
110.00 23 3 28 3885.72 6.20 144.93 266.19 56.32 24 8 13 3285.7 1.74 138.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3906 TRA -.9271 TC3 .0140 BAU .0232 SGT 892.8 SGR 438.8 SG3 59.2 ST 404.6 SR 426.0 SS 338.0
RDE -.5219 RRA .1108 RC3 -.0322 FAU .01978 RRT .1305 RRF -.1381 RTF -.7094 CRT .7406 CRS .8578 CST .9788
FDE .3034 FRA .4614 FC3 -.3458 BSP 2560 SGB 994.8 R23 -.0170 R13 -.7106 LSA 641.6 MSA 218.1 SSA 14.7
BOE .6518 BRA .9337 BC3 .0351 FSP -136 SG1 895.2 SG2 433.9 THA 4.80 EL1 548.2 EL2 211.3 ALF 46.99

LAUNCH DATE JAN 19 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 179.063

RL 147.20 LAL .00 LOL 118.75 VL 23.943 GAL 3.21 AZL 86.84 MCA 74.02 SMA 107.91 ECC .36786 INC 3.1645 V1 30.266
RP 107.86 LAP 3.04 LOP 192.75 VP 35.086 GAP -21.56 AZP 89.13 TAL 174.46 TAP 248.48 RCA 68.21 APO 147.60 V2 35.135
RC 42.657 GL 11.46 GP 5.78 ZAL 79.60 ZAP 12.38 ETS 209.58 ZAE 174.68 ETE 299.36 ZAC 115.58 ETC 163.25 CLP 10.95

PLANETOCENTRIC CONIC

C3 44.097 VHL 6.641 DLA 25.44 RAL 32.96 RAD 6568.7 VEL 12.863 PTH 2.34 VHP 13.427 DPA 11.99 RAP 20.58 ECC 1.7257
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 32 53 3364.60 -23.38 122.03 277.58 73.56 2 28 57 2764.6 -25.42 113.95
90.00 21 45 36 4101.35 -3.14 166.47 269.12 61.84 22 53 57 3501.4 -6.88 159.79
100.00 3 18 44 3023.30 -26.15 97.78 278.44 74.97 4 9 7 2423.3 -27.96 89.44
100.00 22 42 25 3917.88 -.63 151.60 267.72 60.11 23 47 43 3317.9 -4.60 145.07
110.00 5 12 25 2667.64 -32.26 72.45 280.12 78.04 5 56 52 2067.6 -33.57 63.46
110.00 23 5 14 3846.31 4.71 142.86 264.40 56.10 24 9 20 3246.3 .23 136.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3939 TRA -.9073 TC3 .0399 BAU .0299 SGT 932.7 SGR 441.1 SG3 65.3 ST 427.9 SR 429.6 SS 355.3
RDE -.4968 RRA .0997 RC3 -.0313 FAU .02074 RRT .1479 RRF -.1566 RTF -.7275 CRT .7519 CRS .8642 CST .9798
FDE .3180 FRA .4717 FC3 -.4071 BSP 2713 SGB 1031.7 R23 -.0193 R13 -.7289 LSA 667.6 MSA 219.1 SSA 15.0
BOE .6340 BRA .9128 BC3 .0507 FSP -153 SG1 935.6 SG2 434.9 THA 5.11 EL1 567.5 EL2 213.6 ALF 45.15

LAUNCH DATE JAN 19 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 7 1969

MELIOCENTRIC CONIC

DISTANCE 185.699

RL 147.20 LAL .00 LOL 118.75 VL 24.293 GAL 2.94 AZL 86.97 HCA 77.24 SMA 109.41 ECC .34877 INC 3.0275 V1 30.266  
 RP 107.89 LAP 2.95 LOP 195.97 VP 35.314 GAP -20.40 AZP 89.33 TAL 174.49 TAP 251.73 RCA 71.25 APO 147.56 V2 35.123  
 RC 42.436 GL 11.79 GP 6.09 ZAL 79.86 ZAP 11.10 ETS 215.05 ZAE 173.23 ETE 322.66 ZAC 116.97 ETC 162.77 CLP 9.30

PLANETOCENTRIC CONIC

C3 39.329 VHL 6.271 CLA 25.67 RAL 32.57 RAD 6568.5 VEL 12.677 PTH 2.30 VHP 12.762 OPA 12.90 RAP 21.92 ECC 1.6472  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 57 3350.70 -23.65 121.10 275.11 73.95 2 22 48 2750.7 -25.62 112.99  
 90.00 21 48 28 4057.52 -4.55 164.02 267.20 62.02 22 56 6 3457.5 -8.25 157.30  
 100.00 3 13 47 3006.26 -26.44 96.60 275.95 75.53 4 3 54 2406.3 -28.17 88.22  
 100.00 22 44 19 3877.18 -2.01 149.37 265.79 60.17 23 48 56 3277.2 -5.96 142.81  
 110.00 5 8 38 2646.97 -32.55 70.90 277.54 78.92 5 52 45 2047.0 -33.73 61.87  
 110.00 23 5 58 3809.24 3.30 140.92 262.49 55.96 24 9 28 3209.2 -1.19 134.71

DIFFERENTIAL CORRECTIONS

TDE -.3969 TRA -.8863 TC3 .0726 BAU .0411  
 RDE -.4728 RRA .0893 RC3 -.0290 FAU .02182  
 FDE .3331 FRA .4814 FC3 -.4803 BSP 2879  
 BOE .6173 BRA .8908 BC3 .0782 FSP -172

MID-COURSE EXECUTION ACCURACY

SGT 973.1 SGR 442.9 SG3 72.0  
 RRT .1670 RRF -.1772 RTF -.7448  
 SGB 1069.1 R23 -.0221 R13 -.7464  
 SG1 976.6 SG2 435.1 THA 5.43

ORBIT DETERMINATION ACCURACY

ST 451.8 SR 432.9 SS 372.9  
 CRT .7635 CRS .8708 CST .9807  
 LSA 694.4 MSA 219.4 SSA 15.3  
 EL1 587.6 EL2 214.9 ALF 43.40

LAUNCH DATE JAN 19 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 9 1969

MELIOCENTRIC CONIC

DISTANCE 192.361

RL 147.20 LAL .00 LOL 118.75 VL 24.616 GAL 2.67 AZL 87.11 HCA 80.46 SMA 110.85 ECC .33086 INC 2.8940 V1 30.266  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.525 GAP -19.26 AZP 89.52 TAL 174.58 TAP 255.04 RCA 74.17 APO 147.53 V2 35.111  
 RC 42.394 GL 12.09 GP 6.42 ZAL 80.23 ZAP 9.97 ETS 222.01 ZAE 171.11 ETE 336.81 ZAC 118.32 ETC 162.23 CLP 7.64

PLANETOCENTRIC CONIC

C3 35.136 VHL 5.928 DLA 25.82 RAL 32.08 RAD 6568.4 VEL 12.510 PTH 2.27 VHP 12.124 OPA 13.83 RAP 23.25 ECC 1.5783  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 21 48 3333.02 -23.98 119.91 272.55 74.46 2 17 21 2733.0 -25.88 111.76  
 90.00 21 49 41 4018.23 -5.80 161.81 265.13 62.23 22 56 39 3418.2 -9.47 155.05  
 100.00 3 9 22 2986.21 -26.78 95.20 273.36 76.19 3 59 8 2386.2 -28.41 86.78  
 100.00 22 44 47 3840.27 -3.26 147.34 263.73 60.27 23 48 48 3240.3 -7.19 140.76  
 110.00 5 5 3 2624.27 -32.83 69.19 274.84 79.89 5 48 47 2024.3 -33.88 60.11  
 110.00 23 5 36 3774.98 1.99 139.13 260.46 55.87 24 8 31 3175.0 -2.50 132.92

DIFFERENTIAL CORRECTIONS

TDE -.4007 TRA -.8650 TC3 .1117 BAU .0538  
 RDE -.4501 RRA .0795 RC3 -.0250 FAU .02300  
 FDE .3494 FRA .4912 FC3 -.5668 BSP 3035  
 BOE .6026 BRA .8686 BC3 .1145 FSP -193

MID-COURSE EXECUTION ACCURACY

SGT 1015.0 SGR 444.3 SG3 79.4  
 RRT .1891 RRF -.2009 RTF -.7612  
 SGB 1108.0 R23 -.0250 R13 -.7630  
 SG1 1019.2 SG2 434.5 THA 5.79

ORBIT DETERMINATION ACCURACY

ST 477.1 SR 435.8 SS 391.3  
 CRT .7760 CRS .8777 CST .9818  
 LSA 722.9 MSA 218.7 SSA 15.7  
 EL1 609.3 EL2 215.3 ALF 41.67

LAUNCH DATE JAN 19 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 11 1969

MELIOCENTRIC CONIC

DISTANCE 199.044

RL 147.20 LAL .00 LOL 118.75 VL 24.914 GAL 2.40 AZL 87.24 HCA 83.68 SMA 112.23 ECC .31411 INC 2.7631 V1 30.266  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.719 GAP -18.18 AZP 89.70 TAL 174.73 TAP 258.42 RCA 76.98 APO 147.49 V2 35.099  
 RC 42.534 GL 12.35 GP 6.79 ZAL 80.72 ZAP 9.03 ETS 230.78 ZAE 168.71 ETE 345.54 ZAC 119.63 ETC 161.64 CLP 5.97

PLANETOCENTRIC CONIC

C3 31.453 VHL 5.608 DLA 25.90 RAL 31.47 RAD 6568.3 VEL 12.362 PTH 2.23 VHP 11.513 OPA 14.79 RAP 24.55 ECC 1.5176  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 17 40 3310.88 -24.37 118.41 269.92 75.12 2 12 51 2710.9 -26.18 110.20  
 90.00 21 48 58 3984.53 -6.86 159.91 262.90 62.46 22 55 23 3384.5 -10.50 153.11  
 100.00 3 5 39 2962.76 -27.15 93.56 270.69 76.98 3 55 2 2362.8 -28.67 85.09  
 100.00 22 43 40 3807.88 -4.35 145.55 261.53 60.40 23 47 8 3207.9 -8.26 138.95  
 110.00 5 1 47 2599.39 -33.11 67.30 272.03 80.98 5 45 7 1999.4 -34.00 58.18  
 110.00 23 4 2 3744.02 .81 137.51 258.32 55.83 24 6 26 3144.0 -3.68 131.30

DIFFERENTIAL CORRECTIONS

TDE -.4042 TRA -.8429 TC3 .1588 BAU .0673  
 RDE -.4286 RRA .0701 RC3 -.0188 FAU .02433  
 FDE .3664 FRA .5008 FC3 -.6698 BSP 3200  
 BOE .5891 BRA .8458 BC3 .1600 FSP -216

MID-COURSE EXECUTION ACCURACY

SGT 1057.7 SGR 445.5 SG3 87.6  
 RRT .2139 RRF -.2275 RTF -.7767  
 SGB 1147.7 R23 -.0285 R13 -.7787  
 SG1 1062.8 SG2 433.1 THA 6.18

ORBIT DETERMINATION ACCURACY

ST 503.1 SR 438.5 SS 409.8  
 CRT .7886 CRS .8846 CST .9829  
 LSA 752.2 MSA 217.2 SSA 16.0  
 EL1 631.9 EL2 214.7 ALF 40.04

LAUNCH DATE JAN 19 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 13 1969

MELIOCENTRIC CONIC

DISTANCE 205.743

RL 147.20 LAL .00 LOL 118.75 VL 25.188 GAL 2.14 AZL 87.37 HCA 86.90 SMA 113.55 ECC .29846 INC 2.6338 V1 30.266  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.899 GAP -17.15 AZP 89.86 TAL 174.95 TAP 261.85 RCA 79.66 APO 147.44 V2 35.086  
 RC 42.853 GL 12.58 GP 7.20 ZAL 81.33 ZAP 8.37 ETS 241.51 ZAE 166.22 ETE 351.40 ZAC 120.90 ETC 160.98 CLP 4.28

PLANETOCENTRIC CONIC

C3 28.217 VHL 5.312 DLA 25.90 RAL 30.76 RAD 6568.1 VEL 12.231 PTH 2.20 VHP 10.928 OPA 15.76 RAP 25.82 ECC 1.4644  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 14 51 3283.66 -24.83 116.55 267.24 75.94 2 9 34 2683.7 -26.53 108.29  
 90.00 21 46 8 3957.35 -7.71 158.36 260.54 62.67 22 52 5 3357.3 -11.32 151.54  
 100.00 3 2 50 2935.55 -27.55 91.64 267.94 77.92 3 51 45 2335.5 -28.94 83.11  
 100.00 22 40 50 3780.70 -5.26 144.05 259.20 60.53 23 43 51 3180.7 -9.15 137.42  
 110.00 4 58 58 2572.18 -33.38 65.23 269.13 82.18 5 41 50 1972.2 -34.10 56.06  
 110.00 23 1 12 3716.83 -.23 136.09 256.08 55.82 24 3 8 3116.8 -4.71 129.88

DIFFERENTIAL CORRECTIONS

TDE -.4071 TRA -.8194 TC3 .2147 BAU .0811  
 RDE -.4083 RRA .0613 RC3 -.0097 FAU .02582  
 FDE .3839 FRA .5098 FC3 -.7922 BSP 3378  
 BOE .5766 BRA .8217 BC3 .2150 FSP -243

MID-COURSE EXECUTION ACCURACY

SGT 1100.1 SGR 446.6 SG3 96.7  
 RRT .2417 RRF -.2575 RTF -.7912  
 SGB 1187.3 R23 -.0325 R13 -.7934  
 SG1 1106.3 SG2 430.9 THA 6.61

ORBIT DETERMINATION ACCURACY

ST 528.9 SR 440.9 SS 428.3  
 CRT .8013 CRS .8915 CST .9840  
 LSA 781.7 MSA 215.0 SSA 16.4  
 EL1 654.8 EL2 213.1 ALF 38.57

LAUNCH DATE JAN 19 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 212.455

RL 147.20 LAL .00 LOL 118.75 VL 25.441 GAL 1.89 AZL 87.49 HCA 90.11 SMA 114.81 ECC .28390 INC 2.5055 V1 30.266  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.064 GAP -16.15 AZP 90.00 TAL 175.23 TAP 265.34 RCA 82.21 APO 147.40 V2 35.073  
 RC 43.347 GL 12.75 GP 7.66 ZAL 82.05 ZAP 8.07 ETS 253.83 ZAE 163.73 ETE 355.65 ZAC 122.11 ETC 160.26 CLP 2.56

PLANETOCENTRIC CONIC

C3 25.375 VHL 5.037 DLA 25.81 RAL 29.96 RAD 6568.0 VEL 12.114 PTH 2.17 VHP 10.368 DPA 16.77 RAP 27.05 ECC 1.4176  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 13 31 3250.94 -25.36 114.29 264.52 76.95 2 7 42 2650.9 -26.90 105.97  
 90.00 21 41 2 3937.39 -8.34 157.23 258.04 62.84 22 46 39 3337.4 -11.91 150.37  
 100.00 3 1 3 2904.27 -27.98 89.41 265.14 79.02 3 49 27 2304.3 -29.21 80.82  
 100.00 22 36 11 3759.29 -5.98 142.87 256.76 60.66 23 38 51 3159.3 -9.84 136.21  
 -110.00 4 56 41 2542.48 -33.63 62.95 266.15 83.51 5 39 3 1942.5 -34.17 53.74  
 110.00 22 57 3 3693.85 -1.11 134.89 253.74 55.83 23 58 37 3093.8 -5.58 128.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4102 TRA -.7962 TC3 .2795 BAU .0948 SGT 1144.0 SGR 447.9 SG3 106.9 ST 555.7 SR 443.3 SS 447.2  
 RDE -.3893 RRA .0529 RC3 .0029 FAU .02748 RRT .2736 RRF -.2917 RTF -.8047 CRT .8141 CRS .8985 CST .9851  
 FDE .4025 FRA .5193 FC3 -.9374 BSP 3543 SGB 1228.6 R23 -.0371 R13 -.8073 LSA 812.4 MSA 212.0 SSA 16.8  
 BOE .5655 BRA .7979 BC3 .2796 FSP -273 SG1 1151.7 SG2 427.9 THA 7.10 EL1 678.9 EL2 210.7 ALF 37.18

LAUNCH DATE JAN 19 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 219.174

RL 147.20 LAL .00 LOL 118.75 VL 25.673 GAL 1.64 AZL 87.62 HCA 93.32 SMA 116.00 ECC .27037 INC 2.3772 V1 30.266  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.216 GAP -15.20 AZP 90.14 TAL 175.57 TAP 268.89 RCA 84.64 APO 147.36 V2 35.060  
 RC 44.011 GL 12.86 GP 8.16 ZAL 82.87 ZAP 8.20 ETS 266.73 ZAE 161.30 ETE 358.97 ZAC 123.26 ETC 159.46 CLP .82

PLANETOCENTRIC CONIC

C3 22.883 VHL 4.784 DLA 25.63 RAL 29.07 RAD 6567.9 VEL 12.011 PTH 2.14 VHP 9.832 DPA 17.81 RAP 28.24 ECC 1.3766  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 13 47 3212.58 -25.92 111.62 261.76 78.18 2 7 20 2612.6 -27.29 103.22  
 90.00 21 33 38 3925.06 -8.72 156.52 255.43 62.95 22 39 3 3325.1 -12.28 149.65  
 100.00 3 0 26 2868.75 -28.41 86.86 262.29 80.29 3 48 15 2268.8 -29.46 78.21  
 100.00 22 29 41 3744.12 -6.48 142.02 254.22 60.76 23 32 5 3144.1 -10.33 135.35  
 110.00 4 55 3 2510.15 -33.86 60.45 263.11 84.97 5 36 53 1910.1 -34.18 51.22  
 110.00 22 51 33 3675.49 -1.81 133.94 251.33 55.86 23 52 48 3075.5 -6.28 127.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4124 TRA -.7723 TC3 .3546 BAU .1087 SGT 1188.2 SGR 449.5 SG3 118.3 ST 582.1 SR 445.5 SS 465.2  
 RDE -.3717 RRA .0449 RC3 .0200 FAU .02935 RRT .3093 RRF -.3299 RTF -.8173 CRT .8267 CRS .9052 CST .9861  
 FDE .4212 FRA .5284 FC3 -1.1098 BSP 3697 SGB 1270.4 R23 -.0422 R13 -.8203 LSA 842.6 MSA 208.4 SSA 17.3  
 BOE .5551 BRA .7736 BC3 .3552 FSP -306 SG1 1197.5 S62 424.2 THA 7.64 EL1 703.0 EL2 207.6 ALF 35.94

LAUNCH DATE JAN 19 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 225.897

RL 147.20 LAL .00 LOL 118.75 VL 25.886 GAL 1.40 AZL 87.75 HCA 96.53 SMA 117.13 ECC .25784 INC 2.2482 V1 30.266  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.355 GAP -14.29 AZP 90.26 TAL 175.96 TAP 272.49 RCA 86.93 APO 147.33 V2 35.047  
 RC 44.838 GL 12.89 GP 8.73 ZAL 83.79 ZAP 8.78 ETS 278.87 ZAE 158.98 ETE 1.73 ZAC 124.33 ETC 158.59 CLP -.96

PLANETOCENTRIC CONIC

C3 20.696 VHL 4.549 DLA 25.33 RAL 28.10 RAD 6567.8 VEL 11.920 PTH 2.12 VHP 9.320 DPA 18.88 RAP 29.38 ECC 1.3406  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 15 41 3168.73 -26.49 108.54 258.97 79.62 2 8 30 2568.7 -27.66 100.07  
 90.00 21 24 2 3920.42 -8.86 156.26 252.73 63.00 22 29 22 3320.4 -12.42 149.38  
 100.00 3 1 4 2828.94 -28.83 83.97 259.40 81.75 3 48 13 2228.9 -29.67 75.27  
 100.00 22 21 19 3735.44 -6.77 141.54 251.61 60.82 23 23 35 3135.4 -10.61 134.86  
 110.00 4 54 11 2475.06 -34.03 57.72 260.02 86.57 5 35 26 1875.1 -34.13 48.48  
 110.00 22 44 42 3662.08 -2.32 133.24 248.86 55.89 23 45 44 3062.1 -6.78 126.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4121 TRA -.7469 TC3 .4409 BAU .1226 SGT 1230.2 SGR 452.1 SG3 131.0 ST 605.8 SR 447.7 SS 482.5  
 RDE -.3553 RRA .0371 RC3 .0425 FAU .03141 RRT .3487 RRF -.3729 RTF -.8297 CRT .8384 CRS .9116 CST .9870  
 FDE .4401 FRA .5377 FC3 -1.3137 BSP 3898 SGB 1310.6 R23 -.0484 R13 -.8330 LSA 870.7 MSA 204.4 SSA 17.7  
 BOE .5441 BRA .7478 BC3 .4430 FSP -345 SG1 1241.5 SG2 419.8 THA 8.25 EL1 725.2 EL2 203.9 ALF 34.95

LAUNCH DATE JAN 19 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 232.620

RL 147.20 LAL .00 LOL 118.75 VL 26.082 GAL 1.17 AZL 87.88 HCA 99.73 SMA 118.19 ECC .24626 INC 2.1177 V1 30.266  
 RP 108.17 LAP 2.09 LOP 218.48 VP 36.482 GAP -13.42 AZP 90.36 TAL 176.41 TAP 276.14 RCA 89.08 APO 147.29 V2 35.033  
 RC 45.818 GL 12.85 GP 9.36 ZAL 84.80 ZAP 9.76 ETS 289.28 ZAE 156.80 ETE 4.13 ZAC 125.31 ETC 157.64 CLP -2.79

PLANETOCENTRIC CONIC

C3 18.781 VHL 4.334 DLA 24.92 RAL 27.07 RAD 6567.8 VEL 11.839 PTH 2.10 VHP 8.831 DPA 19.99 RAP 30.46 ECC 1.3091  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 8 3119.81 -27.05 105.07 256.15 81.28 2 11 8 2519.8 -27.97 96.52  
 90.00 21 12 23 3923.23 -8.78 156.42 249.99 62.97 22 17 47 3323.2 -12.33 149.55  
 100.00 3 3 0 2784.92 -29.22 80.76 256.48 83.40 3 49 25 2184.9 -29.83 72.01  
 100.00 22 11 12 3733.34 -6.84 141.42 248.95 60.83 23 13 26 3133.3 -10.68 134.74  
 110.00 4 54 10 2437.14 -34.15 54.77 256.90 88.32 5 34 47 1837.1 -34.00 45.52  
 110.00 22 36 32 3653.89 -2.63 132.81 246.35 55.91 23 37 26 3053.9 -7.09 126.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4120 TRA -.7228 TC3 .5345 BAU .1354 SGT 1273.5 SGR 456.1 SG3 145.0 ST 629.9 SR 450.0 SS 499.0  
 RDE -.3402 RRA .0295 RC3 .0713 FAU .03367 RRT .3931 RRF -.4206 RTF -.8402 CRT .8500 CRS .9177 CST .9880  
 FDE .4593 FRA .5481 FC3 -1.5521 BSP 4026 SGB 1352.7 R23 -.0555 R13 -.8441 LSA 898.9 MSA 200.0 SSA 18.3  
 BOE .5343 BRA .7234 BC3 .5392 FSP -384 SG1 1287.5 SG2 414.8 THA 8.95 EL1 748.0 EL2 199.6 ALF 34.02



LAUNCH DATE JAN 19 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC DISTANCE 239.341  
 RL 147.20 LAL .00 LOL 118.75 VL 26.262 GAL .95 AZL 88.02 MCA 102.93 SMA 119.19 ECC .23560 INC 1.9846 V1 30.268  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.597 GAP -12.58 AZP 90.44 TAL 176.91 TAP 279.85 RCA 91.11 APO 147.27 V2 35.020  
 RC 46.944 GL 12.70 GP 10.06 ZAL 85.90 ZAP 11.08 ETS 297.68 ZAE 154.77 ETE 6.32 ZAC 126.19 ETC 156.60 CLP -4.66

PLANETOCENTRIC CONIC  
 C3 17.103 VHL 4.136 DLA 24.38 RAL 26.00 RAD 6567.7 VEL 11.768 PTH 2.08 VHP 8.364 DPA 21.15 RAP 31.46 ECC 1.2815  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 24 2 3066.32 -27.54 101.23 253.32 83.14 2 15 9 2466.3 -28.20 92.63  
 90.00 20 58 57 3933.12 -8.47 156.98 247.23 62.88 22 4 31 3333.1 -12.04 150.12  
 100.00 3 6 13 2736.89 -29.54 77.23 253.55 85.23 3 51 50 2136.9 -29.89 68.44  
 100.00 21 59 28 3737.78 -6.69 141.67 246.27 60.80 23 1 46 3137.8 -10.54 134.99  
 110.00 4 55 4 2396.34 -34.18 51.58 253.77 90.21 5 35 0 1796.3 -33.78 42.36  
 110.00 22 27 6 3651.10 -2.74 132.66 243.83 55.91 23 27 57 3051.1 -7.20 126.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4092 TRA -.6973 TC3 .6424 BAU .1490 SGT 1314.8 SGR 462.2 SG3 160.8 ST 650.3 SR 452.2 SS 512.8  
 RDE -.3263 RRA .0221 RC3 .1087 FAU .03629 RRT .4416 RRF -.4728 RTF -.8507 CRT .8607 CRS .9233 CST .9889  
 FDE .4770 FRA .5580 FC3-1.8369 BSP 4216 SGB 1393.7 R23 -.0632 R13 -.8552 LSA 923.0 MSA 195.2 SSA 18.8  
 BDE .5234 BRA .6977 BC3 .6516 FSP -434 SG1 1332.2 SG2 409.3 THA 9.75 EL1 767.7 EL2 195.0 ALF 33.33

LAUNCH DATE JAN 19 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC DISTANCE 246.055  
 RL 147.20 LAL .00 LOL 118.75 VL 26.426 GAL .74 AZL 88.15 MCA 106.13 SMA 120.12 ECC .22580 INC 1.8483 V1 30.266  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.703 GAP -11.77 AZP 90.51 TAL 177.45 TAP 283.59 RCA 93.00 APO 147.24 V2 35.007  
 RC 48.205 GL 12.45 GP 10.86 ZAL 87.07 ZAP 12.68 ETS 304.25 ZAE 152.92 ETE 8.42 ZAC 126.95 ETC 155.48 CLP -6.60

PLANETOCENTRIC CONIC  
 C3 15.636 VHL 3.954 DLA 23.71 RAL 24.91 RAD 6567.6 VEL 11.706 PTH 2.06 VHP 7.919 DPA 22.36 RAP 32.37 ECC 1.2573  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 30 18 3008.83 -27.94 97.07 250.49 85.19 2 20 27 2408.8 -28.31 88.43  
 90.00 20 44 0 3949.63 -7.95 157.92 244.49 62.73 21 49 49 3349.6 -11.55 151.09  
 100.00 3 10 42 2685.10 -29.78 73.39 250.63 87.24 3 55 27 2085.1 -29.84 64.59  
 100.00 21 46 17 3748.60 -6.33 142.27 243.61 60.73 22 48 45 3148.6 -10.19 135.61  
 110.00 4 56 58 2352.63 -34.12 48.17 250.65 92.22 5 36 11 1752.6 -33.43 38.99  
 110.00 22 16 30 3653.82 -2.64 132.80 241.32 55.91 23 17 24 3053.8 -7.09 126.55

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4047 TRA -.6721 TC3 .7595 BAU .1621 SGT 1355.0 SGR 471.4 SG3 178.5 ST 667.8 SR 454.5 SS 524.6  
 RDE -.3136 RRA .0148 RC3 .1558 FAU .03919 RRT .4939 RRF -.5295 RTF -.8601 CRT .8707 CRS .9285 CST .9897  
 FDE .4940 FRA .5684 FC3-2.1698 BSP 4354 SGB 1434.6 R23 -.0727 R13 -.8655 LSA 944.0 MSA 190.3 SSA 19.5  
 BDE .5120 BRA .6722 BC3 .7753 FSP -486 SG1 1376.7 SG2 403.4 THA 10.68 EL1 785.1 EL2 190.1 ALF 32.82

LAUNCH DATE JAN 19 1969 FLIGHT TIME 98.00 ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC DISTANCE 252.760  
 RL 147.20 LAL .00 LOL 118.75 VL 26.576 GAL .54 AZL 88.29 MCA 109.33 SMA 120.99 ECC .21683 INC 1.7075 V1 30.266  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.798 GAP -11.00 AZP 90.57 TAL 178.03 TAP 287.36 RCA 94.76 APO 147.22 V2 34.994  
 RC 49.590 GL 12.07 GP 11.75 ZAL 88.30 ZAP 14.52 ETS 309.34 ZAE 151.25 ETE 10.48 ZAC 127.58 ETC 154.28 CLP -8.60

PLANETOCENTRIC CONIC  
 C3 14.352 VHL 3.788 DLA 22.90 RAL 23.82 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 7.497 DPA 23.64 RAP 33.18 ECC 1.2362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 37 49 2947.80 -28.21 92.63 247.68 87.40 2 26 56 2347.8 -28.27 83.96  
 90.00 20 27 46 3972.35 -7.24 159.22 241.81 62.55 21 33 58 3372.4 -10.87 152.41  
 100.00 3 16 26 2629.80 -29.89 69.29 247.73 89.40 4 0 16 2029.8 -29.65 60.49  
 100.00 21 31 50 3765.58 -5.77 143.22 241.00 60.62 22 34 35 3165.6 -9.64 136.57  
 110.00 4 59 55 2306.03 -33.94 44.54 247.57 94.36 5 38 21 1706.0 -32.96 35.44  
 110.00 22 4 50 3662.12 -2.32 133.24 238.86 55.89 23 5 52 3062.1 -6.78 126.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3964 TRA -.6471 TC3 .8842 BAU .1746 SGT 1391.7 SGR 484.6 SG3 198.0 ST 679.3 SR 456.5 SS 532.3  
 RDE -.3018 RRA .0072 RC3 .2142 FAU .04236 RRT .5484 RRF -.5885 RTF -.8693 CRT .8792 CRS .9326 CST .9905  
 FDE .5078 FRA .5817 FC3-2.5550 BSP 4531 SGB 1473.7 R23 -.0829 R13 -.8756 LSA 958.3 MSA 185.5 SSA 20.2  
 BDE .4983 BRA .6471 BC3 .9097 FSP -545 SG1 1419.1 SG2 397.4 THA 11.75 EL1 797.2 EL2 185.3 ALF 32.55

LAUNCH DATE JAN 19 1969 FLIGHT TIME 100.00 ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC DISTANCE 259.454  
 RL 147.20 LAL .00 LOL 118.75 VL 26.713 GAL .36 AZL 88.44 MCA 112.53 SMA 121.80 ECC .20865 INC 1.5613 V1 30.266  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.884 GAP -10.26 AZP 90.60 TAL 178.64 TAP 291.17 RCA 96.39 APO 147.21 V2 34.980  
 RC 51.091 GL 11.54 GP 12.76 ZAL 89.57 ZAP 16.58 ETS 313.28 ZAE 149.75 ETE 12.59 ZAC 128.04 ETC 152.99 CLP -10.67

PLANETOCENTRIC CONIC  
 C3 13.231 VHL 3.638 DLA 21.94 RAL 22.75 RAD 6567.5 VEL 11.602 PTH 2.03 VHP 7.096 DPA 24.99 RAP 33.87 ECC 1.2178  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 46 31 2883.64 -28.32 87.94 244.90 89.75 2 34 34 2283.6 -28.05 79.28  
 90.00 20 10 32 4000.91 -6.34 160.83 239.22 62.35 21 17 13 3400.9 -10.00 154.06  
 100.00 3 23 24 2571.25 -29.85 64.93 244.88 91.69 4 6 15 1971.3 -29.30 56.17  
 100.00 21 16 20 3788.53 -5.00 144.49 238.48 60.49 22 19 28 3188.5 -8.89 137.86  
 110.00 5 3 59 2256.55 -33.61 40.71 244.56 96.61 5 41 35 1656.6 -32.34 31.71  
 110.00 21 52 14 3675.99 -1.79 133.96 236.49 55.86 22 53 30 3076.0 -6.26 127.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3878 TRA -.6251 TC3 1.0153 BAU .1866 SGT 1430.3 SGR 503.9 SG3 220.0 ST 689.3 SR 458.6 SS 537.3  
 RDE -.2911 RRA -.0009 RC3 .2870 FAU .04593 RRT .6050 RRF -.6499 RTF -.8768 CRT .8871 CRS .9360 CST .9914  
 FDE .5200 FRA .5977 FC3-3.0054 BSP 4662 SGB 1516.5 R23 -.0957 R13 -.8844 LSA 970.1 MSA 180.8 SSA 21.0  
 BDE .4850 BRA .6251 BC3 1.0551 FSP -611 SG1 1465.0 SG2 391.7 THA 12.98 EL1 808.0 EL2 180.6 ALF 32.36

LAUNCH DATE JAN 19 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC DISTANCE 266.135  
 RL 147.20 LAL .00 LOL 118.75 VL 26.837 GAL .18 AZL 88.59 HCA 115.72 SMA 122.55 ECC .20120 INC 1.4083 V1 30.266  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.962 GAP -9.54 AZP 90.61 TAL 179.27 TAP 294.99 RCA 97.89 APO 147.20 V2 34.967  
 RC 52.697 GL 10.86 GP 13.90 ZAL 90.88 ZAP 18.83 ETS 316.34 ZAE 148.43 ETE 14.80 ZAC 128.33 ETC 151.63 CLP -12.83

PLANETOCENTRIC CONIC  
 C3 12.254 VHL 3.501 DLA 20.82 RAL 21.73 RAD 6567.5 VEL 11.560 PTH 2.02 VHP 6.718 DPA 26.43 RAP 34.42 ECC 1.2017  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 23 2816.60 -28.24 83.04 242.19 92.21 2 43 19 2216.6 -27.63 74.42  
 90.00 19 52 30 4035.05 -5.26 162.76 236.77 62.14 20 59 45 3435.1 -8.95 156.02  
 100.00 3 31 35 2509.63 -29.64 60.37 242.10 94.08 4 13 24 1909.6 -28.76 51.67  
 100.00 20 59 59 3817.25 -4.03 146.07 236.09 60.36 22 3 36 3217.2 -7.95 139.47  
 110.00 5 9 12 2204.21 -33.13 36.70 241.64 98.93 5 45 56 1604.2 -31.54 27.84  
 110.00 21 38 51 3695.44 -1.05 134.98 234.23 55.83 22 40 26 3095.4 -5.52 128.75

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3801 TRA -.6064 TC3 1.1197 BAU .1933 SGT 1459.1 SGR 529.5 SG3 242.9 ST 699.3 SR 460.8 SS 539.3  
 RDE -.2815 RRA -.0098 RC3 .3719 FAU .04943 RRT .6588 RRF -.7088 RTF -.8790 CRT .8951 CRS .9387 CST .9924  
 FDE .5300 FRA .6179 FC3-3.4925 BSP 4572 SGB 1552.2 R23 -.1141 R13 -.8884 LSA 980.2 MSA 175.7 SSA 22.0  
 BDE .4730 BRA .6065 BC3 1.1798 FSP -666 SG1 1503.3 SG2 386.6 THA 14.42 EL1 818.9 EL2 175.5 ALF 32.18

LAUNCH DATE JAN 19 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC DISTANCE 272.800  
 RL 147.20 LAL .00 LOL 118.75 VL 26.949 GAL .02 AZL 88.75 HCA 118.91 SMA 123.24 ECC .19446 INC 1.2468 V1 30.266  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.032 GAP -8.85 AZP 90.60 TAL 179.91 TAP 298.81 RCA 99.27 APO 147.20 V2 34.954  
 RC 54.398 GL 10.00 GP 15.19 ZAL 92.20 ZAP 21.29 ETS 318.72 ZAE 147.26 ETE 17.16 ZAC 128.41 ETC 150.19 CLP -15.09

PLANETOCENTRIC CONIC  
 C3 11.403 VHL 3.377 DLA 19.53 RAL 20.77 RAD 6567.4 VEL 11.523 PTH 2.01 VHP 6.362 DPA 27.97 RAP 34.80 ECC 1.1877  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 26 2746.79 -27.95 77.95 239.58 94.74 2 53 12 2146.8 -27.00 69.41  
 90.00 19 33 51 4074.66 -4.00 164.98 234.48 61.94 20 41 46 3474.7 -7.72 158.28  
 100.00 3 41 1 2445.01 -29.23 55.61 239.44 96.56 4 21 46 1845.0 -28.01 47.01  
 100.00 20 42 57 3851.67 -2.87 147.97 233.86 60.23 21 47 9 3251.7 -6.81 141.40  
 110.00 5 15 38 2148.95 -32.47 32.53 238.84 101.32 5 51 27 1549.0 -30.57 23.83  
 110.00 21 24 49 3720.49 -.09 136.28 232.12 55.82 22 26 49 3120.5 -4.57 130.07

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3962 TRA -.5998 TC3 1.2366 BAU .2023 SGT 1521.6 SGR 574.1 SG3 272.4 ST 746.7 SR 471.7 SS 569.8  
 RDE -.2779 RRA -.0208 RC3 .4817 FAU .05387 RRT .7202 RRF -.7738 RTF -.8802 CRT .9109 CRS .9468 CST .9937  
 FDE .5728 FRA .6495 FC3-4.0896 BSP 4536 SGB 1626.3 R23 -.1394 R13 -.8922 LSA 1037.3 MSA 167.7 SSA 23.3  
 BDE .4839 BRA .6001 BC3 1.3271 FSP -739 SG1 1580.4 SG2 383.5 THA 16.18 EL1 867.1 EL2 167.6 ALF 31.22

LAUNCH DATE JAN 19 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC DISTANCE 279.449  
 RL 147.20 LAL .00 LOL 118.75 VL 27.051 GAL -.13 AZL 88.92 HCA 122.10 SMA 123.87 ECC .18836 INC 1.0753 V1 30.266  
 RP 108.45 LAP .91 LOP 240.85 VP 37.094 GAP -8.19 AZP 90.57 TAL 180.55 TAP 302.65 RCA 100.54 APO 147.20 V2 34.942  
 RC 56.186 GL 8.94 GP 16.66 ZAL 93.52 ZAP 23.96 ETS 320.61 ZAE 146.24 ETE 19.75 ZAC 128.26 ETC 148.70 CLP -17.47

PLANETOCENTRIC CONIC  
 C3 10.662 VHL 3.265 DLA 18.05 RAL 19.91 RAD 6567.4 VEL 11.491 PTH 2.00 VHP 6.029 DPA 29.63 RAP 34.98 ECC 1.1755  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 19 43 2674.03 -27.43 72.69 237.10 97.33 3 4 17 2074.0 -26.13 64.26  
 90.00 19 14 40 4119.83 -2.55 167.51 232.39 61.79 20 23 20 3519.8 -6.30 160.84  
 100.00 3 51 45 2377.24 -28.60 50.67 236.91 99.08 4 31 22 1777.2 -27.05 42.21  
 100.00 20 25 19 3891.85 -1.51 150.17 231.82 60.14 21 30 11 3291.8 -5.47 143.63  
 110.00 5 23 22 2090.58 -31.61 28.19 236.20 103.75 5 58 13 1490.6 -29.40 19.69  
 110.00 21 10 11 3751.28 1.09 137.89 230.19 55.83 22 12 42 3151.3 -3.40 131.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3388 TRA -.5523 TC3 1.4163 BAU .2204 SGT 1499.2 SGR 612.4 SG3 299.6 ST 669.0 SR 457.4 SS 506.5  
 RDE -.2604 RRA -.0272 RC3 .6195 FAU .05901 RRT .7592 RRF -.8178 RTF -.8936 CRT .9038 CRS .9384 CST .9939  
 FDE .5123 FRA .6474 FC3-4.7917 BSP 5094 SGB 1619.4 R23 -.1422 R13 -.9078 LSA 940.8 MSA 166.0 SSA 24.5  
 BDE .4273 BRA .5529 BC3 1.5458 FSP -867 SG1 1574.3 SG2 379.6 THA 18.33 EL1 793.4 EL2 165.0 ALF 33.34

LAUNCH DATE JAN 19 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC DISTANCE 286.077  
 RL 147.20 LAL .00 LOL 118.75 VL 27.143 GAL -.27 AZL 89.11 HCA 125.28 SMA 124.45 ECC .18288 INC .8914 V1 30.266  
 RP 108.49 LAP .73 LOP 244.03 VP 37.150 GAP -7.56 AZP 90.52 TAL 181.19 TAP 306.47 RCA 101.69 APO 147.21 V2 34.929  
 RC 58.051 GL 7.67 GP 18.33 ZAL 94.82 ZAP 26.85 ETS 322.11 ZAE 145.33 ETE 22.62 ZAC 127.84 ETC 147.18 CLP -19.97

PLANETOCENTRIC CONIC  
 C3 10.022 VHL 3.166 DLA 16.38 RAL 19.17 RAD 6567.4 VEL 11.463 PTH 1.99 VHP 5.721 DPA 31.42 RAP 34.94 ECC 1.1649  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 33 20 2598.29 -26.65 67.28 234.79 99.93 3 16 38 1998.3 -25.01 59.00  
 90.00 18 55 8 4170.64 -.91 170.34 230.54 61.70 20 4 38 3570.6 -4.69 163.70  
 100.00 4 3 53 2306.29 -27.73 45.57 234.56 101.63 4 42 19 1706.3 -25.85 37.28  
 100.00 20 7 16 3937.88 .05 152.70 230.01 60.11 21 12 54 3337.9 -3.93 146.17  
 110.00 5 32 30 2029.01 -30.52 23.72 233.77 106.19 6 6 19 1429.0 -28.00 15.44  
 110.00 20 55 8 3787.92 2.49 139.80 228.48 55.90 21 58 16 3187.9 -2.00 133.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3114 TRA -.5306 TC3 1.5632 BAU .2344 SGT 1516.3 SGR 674.5 SG3 332.6 ST 639.3 SR 450.6 SS 474.5  
 RDE -.2486 RRA -.0387 RC3 .7854 FAU .06449 RRT .8005 RRF -.8627 RTF -.9004 CRT .9044 CRS .9325 CST .9949  
 FDE .4834 FRA .6737 FC3-5.5707 BSP 5323 SGB 1659.6 R23 -.1558 R13 -.9179 LSA 899.9 MSA 162.7 SSA 26.2  
 BDE .3984 BRA .5320 BC3 1.7494 FSP -980 SG1 1615.6 SG2 379.4 THA 20.80 EL1 765.5 EL2 160.6 ALF 34.23

LAUNCH DATE JAN 19 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 9 1969

Heliocentric Conic: RL 147.20 LAL .00 LOL 118.75 VL 27.226 GAL -0.39 AZL 89.31 HCA 128.46 SMA 124.97 ECC .17797 INC .6927 V1 30.266  
 RP 108.53 LAP .54 LOP 247.21 VP 37.199 GAP -6.94 AZP 90.43 TAL 181.81 TAP 310.27 RCA 102.73 APO 147.22 V2 34.917  
 RC 59.985 GL 6.14 GP 20.24 ZAL 96.09 ZAP 29.98 ETS 323.33 ZAE 144.49 ETE 25.83 ZAC 127.12 ETC 145.64 CLP -22.61

Distance 292.687

Planetocentric Conic: C3 9.473 VHL 3.078 OLA 14.50 RAL 18.57 RAD 6567.3 VEL 11.440 PTH 1.98 VHP 5.438 DPA 33.38 RAP 34.61 ECC 1.1559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 48 28 2519.14 -25.60 61.73 232.69 102.52 3 30 27 1919.1 -23.62 53.62  
 90.00 18 35 15 4227.49 .93 173.51 228.97 61.70 19 45 43 3627.5 -2.86 166.88  
 100.00 4 17 34 2231.78 -26.60 40.33 232.43 104.17 4 54 46 1631.8 -24.39 32.22  
 100.00 19 48 50 3990.09 1.82 155.56 228.47 60.16 20 55 20 3390.1 -2.16 149.04  
 110.00 5 43 10 1963.92 -29.20 19.12 231.57 108.62 6 15 54 1363.9 -26.38 11.07  
 110.00 20 39 43 3830.71 4.12 142.04 227.04 56.04 21 43 34 3230.7 -.37 135.83

Differential Corrections: TOE -.2838 TRA -.5107 TC3 1.6590 BAU .2437 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2357 RRA -.0521 RC3 .9753 FAU .06966 RRT .8314 RRF -.8984 RTF -.9024 CRT .9048 CRS .9217 CST .9358  
 FDE .4425 FRA .7055 FC3-6.3667 BSP 5414 SGB 1688.0 R23 -.1728 R13 -.9250 LSA 850.7 MSA 159.4 SSA 28.1  
 BOE .3689 BRA .5134 BC3 1.9244 FSP -1083 SG1 1643.8 SG2 383.5 THA 23.79 EL1 732.5 EL2 155.0 ALF 35.13

LAUNCH DATE JAN 19 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 11 1969

Heliocentric Conic: RL 147.20 LAL .00 LOL 118.75 VL 27.300 GAL -.51 AZL 89.52 HCA 131.64 SMA 125.45 ECC .17359 INC .4758 V1 30.266  
 RP 108.57 LAP .36 LOP 250.39 VP 37.242 GAP -6.35 AZP 90.32 TAL 182.41 TAP 314.05 RCA 103.67 APO 147.23 V2 34.906  
 RC 61.981 GL 4.33 GP 22.41 ZAL 97.29 ZAP 33.37 ETS 324.34 ZAE 143.66 ETE 29.44 ZAC 126.06 ETC 144.12 CLP -25.40

Distance 299.275

Planetocentric Conic: C3 9.006 VHL 3.001 OLA 12.37 RAL 18.15 RAD 6567.3 VEL 11.419 PTH 1.98 VHP 5.183 DPA 35.51 RAP 33.97 ECC 1.1482  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 5 18 2436.02 -24.25 56.01 230.86 105.08 3 45 54 1836.0 -21.95 48.10  
 90.00 18 15 2 4291.02 2.97 177.06 227.71 61.83 19 26 33 3691.0 -.82 170.43  
 100.00 4 33 0 2153.21 -25.18 34.92 230.57 106.67 5 8 53 1553.2 -22.65 27.04  
 100.00 19 30 2 4049.06 3.81 158.81 227.24 60.33 20 37 31 3449.1 -.17 152.28  
 110.00 5 55 34 1894.86 -27.60 14.38 229.64 111.01 6 27 9 1294.9 -24.49 6.59  
 110.00 20 23 57 3880.17 6.00 144.64 225.89 56.28 21 28 38 3280.2 1.52 138.41

Differential Corrections: TOE -.2545 TRA -.4936 TC3 1.7418 BAU .2550 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2202 RRA -.0687 RC3 1.2045 FAU .07522 RRT .8557 RRF -.9270 RTF -.9038 CRT .9043 CRS .8992 CST .9954  
 FDE .3827 FRA .7460 FC3-7.2304 BSP 5505 SGB 1725.5 R23 -.1865 R13 -.9328 LSA 789.2 MSA 157.2 SSA 30.6  
 BOE .3366 BRA .4984 BC3 2.1177 FSP -1194 SG1 1680.4 SG2 392.1 THA 27.35 EL1 691.3 EL2 148.0 ALF 35.92

LAUNCH DATE JAN 19 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 13 1969

Heliocentric Conic: RL 147.20 LAL .00 LOL 118.75 VL 27.366 GAL -.61 AZL 89.76 HCA 134.82 SMA 125.88 ECC .16971 INC .2363 V1 30.266  
 RP 108.60 LAP .17 LOP 253.57 VP 37.279 GAP -5.78 AZP 90.17 TAL 182.97 TAP 317.79 RCA 104.52 APO 147.24 V2 34.894  
 RC 64.032 GL 2.21 GP 24.88 ZAL 98.42 ZAP 37.04 ETS 325.24 ZAE 142.76 ETE 33.49 ZAC 124.63 ETC 142.66 CLP -28.37

Distance 305.842

Planetocentric Conic: C3 8.620 VHL 2.936 OLA 9.99 RAL 17.93 RAD 6567.3 VEL 11.402 PTH 1.97 VHP 4.958 DPA 37.85 RAP 32.93 ECC 1.1419  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 24 11 2348.08 -22.57 50.12 229.33 107.57 4 3 19 1748.1 -19.95 42.42  
 90.00 17 54 22 4362.19 5.25 181.05 226.82 62.13 19 7 5 3762.2 1.48 174.40  
 100.00 4 50 27 2069.82 -23.43 29.34 229.02 109.11 5 24 57 1469.8 -20.61 21.69  
 100.00 19 10 47 4115.68 6.05 162.49 226.38 60.67 20 19 23 3515.7 2.09 155.93  
 110.00 6 9 55 1821.18 -25.71 9.49 228.04 113.35 6 40 16 1221.2 -22.33 1.97  
 110.00 20 7 49 3937.09 8.14 147.66 225.10 56.68 21 13 26 3337.1 3.70 141.38

Differential Corrections: TOE -.2198 TRA -.4749 TC3 1.8072 BAU .2691 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1994 RRA -.0881 RC3 1.4782 FAU .08099 RRT .8739 RRF -.9488 RTF -.9054 CRT .9016 CRS .8460 CST .9862  
 FDE .2930 FRA .7894 FC3-8.1339 BSP 5696 SGB 1769.4 R23 -.1912 R13 -.9424 LSA 705.4 MSA 158.0 SSA 33.4  
 BOE .2967 BRA .4830 BC3 2.3347 FSP -1321 SG1 1722.6 SG2 404.3 THA 31.65 EL1 632.7 EL2 138.4 ALF 36.62

LAUNCH DATE JAN 19 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 15 1969

Heliocentric Conic: RL 147.20 LAL .00 LOL 118.75 VL 27.424 GAL -.70 AZL 90.03 HCA 138.00 SMA 126.26 ECC .16628 INC .0288 V1 30.266  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.312 GAP -5.24 AZP 89.98 TAL 183.49 TAP 321.48 RCA 105.27 APO 147.26 V2 34.883  
 RC 66.131 GL -.29 GP 27.69 ZAL 99.44 ZAP 41.00 ETS 326.10 ZAE 141.71 ETE 38.02 ZAC 122.79 ETC 141.31 CLP -31.53

Distance 312.386

Planetocentric Conic: C3 8.313 VHL 2.883 OLA 7.29 RAL 17.93 RAD 6567.3 VEL 11.389 PTH 1.97 VHP 4.767 DPA 40.40 RAP 31.43 ECC 1.1368  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 45 29 2254.25 -20.51 44.01 228.16 109.96 4 23 3 1654.2 -17.61 36.54  
 90.00 17 33 7 4442.35 7.78 185.58 226.35 62.69 18 47 9 3842.4 4.06 178.88  
 100.00 5 10 19 1980.62 -21.32 23.56 227.84 111.46 5 43 20 1380.6 -18.22 16.14  
 100.00 18 50 57 4191.21 8.54 166.71 225.94 61.25 20 0 49 3591.2 4.64 160.09  
 110.00 6 26 33 1742.06 -23.48 4.43 226.82 115.59 6 55 35 1142.1 -19.84 357.18  
 110.00 19 51 13 4002.54 10.56 151.17 224.73 57.30 20 57 56 3402.5 6.18 144.82

Differential Corrections: TOE -.1859 TRA -.4595 TC3 1.8173 BAU .2835 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1725 RRA -.1131 RC3 1.7905 FAU .08622 RRT .8838 RRF -.9645 RTF -.9031 CRT .9025 CRS .7175 CST .9350  
 FDE .1779 FRA .8437 FC3-8.9796 BSP 5834 SGB 1821.3 R23 -.1918 R13 -.9514 LSA 614.1 MSA 165.5 SSA 36.0  
 BOE .2536 BRA .4733 BC3 2.5511 FSP -1434 SG1 1771.3 SG2 423.5 THA 36.68 EL1 567.2 EL2 123.2 ALF 36.40

LAUNCH DATE JAN 19 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 318.907

RL 147.20 LAL .00 LOL 118.75 VL 27.475 GAL - .77 AZL 90.33 HCA 141.17 SMA 126.60 ECC .16327 INC .3322 VI 30.266  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.340 GAP -4.71 AZP 89.74 TAL 183.96 TAP 325.13 RCA 105.93 APO 147.27 V2 34.873  
 RC 68.274 GL -3.21 GP 30.86 ZAL 100.33 ZAP 45.25 ETS 326.99 ZAE 140.40 ETE 42.98 ZAC 120.52 ETC 140.11 CLP -34.90

PLANETOCENTRIC CONIC

C3 8.091 VHL 2.844 DLA 4.24 RAL 18.20 RAD 6567.3 VEL 11.379 PTH 1.97 VHP 4.615 DPA 43.18 RAP 29.36 ECC 1.1332  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 9 46 2153.06 -18.03 37.62 227.44 112.21 4 45 39 1553.1 -14.86 30.38  
 90.00 17 10 57 4533.46 10.58 190.81 226.40 63.58 18 26 30 3933.5 6.95 184.01  
 100.00 5 33 6 1884.27 -18.80 17.51 227.10 113.68 6 4 31 1284.3 -15.44 10.33  
 100.00 18 30 18 4277.48 11.33 171.59 226.01 62.15 19 41 35 3677.5 7.52 164.88  
 110.00 6 45 55 1656.40 -20.86 359.16 226.05 117.72 7 13 31 1056.4 -16.98 352.18  
 110.00 19 33 59 4078.11 13.31 155.30 224.85 58.22 20 41 57 3478.1 9.01 148.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1496 TRA -.4448 TC3 1.7775 BAU .3011 SGT 1385.8 SGR 1282.2 SG3 502.6 ST 405.4 SR 287.2 SS 229.6  
 RDE -.1346 RRA -.1450 RC3 2.1419 FAU .09070 RRT .8875 RRF -.9756 RTF -.8985 CRT .9141 CRS .4073 CST .7180  
 FDE .0239 FRA .9069 FC3-9.7044 BSP 6050 SGB 1808.0 R23 -.1020 R13 -.9611 LSA 511.2 MSA 192.4 SSA 36.1  
 BDE .2012 BRA .4678 BC3 2.7834 FSP -1544 SGI 1834.5 SG2 446.4 THA 42.50 EL1 487.3 EL2 96.9 ALF 34.49

LAUNCH DATE JAN 19 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 325.404

RL 147.20 LAL .00 LOL 118.75 VL 27.520 GAL -.84 AZL 90.68 HCA 144.34 SMA 126.90 ECC .16064 INC .6786 VI 30.266  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.363 GAP -4.20 AZP 89.45 TAL 184.37 TAP 328.71 RCA 106.51 APO 147.28 V2 34.862  
 RC 70.456 GL -6.63 GP 34.44 ZAL 101.06 ZAP 49.79 ETS 328.00 ZAE 138.70 ETE 48.34 ZAC 117.80 ETC 139.13 CLP -38.49

PLANETOCENTRIC CONIC

C3 7.967 VHL 2.823 DLA .78 RAL 18.76 RAD 6567.3 VEL 11.374 PTH 1.96 VHP 4.508 DPA 46.19 RAP 26.61 ECC 1.1311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 37 50 2042.58 -15.06 30.88 227.27 114.27 5 11 52 1442.6 -11.66 23.85  
 90.00 16 47 25 4638.24 13.68 196.94 227.08 64.97 18 4 44 4038.2 10.20 190.00  
 100.00 5 59 32 1779.03 -15.81 11.13 226.91 115.71 6 29 11 1179.0 -12.22 4.18  
 100.00 18 8 24 4377.02 14.43 177.36 226.71 63.53 19 21 21 3777.0 10.76 170.50  
 110.00 7 8 37 1562.81 -17.79 353.63 225.82 119.68 7 34 39 962.8 -13.71 346.90  
 110.00 19 15 49 4166.01 16.40 160.24 225.60 59.58 20 25 15 3566.0 12.24 153.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1148 TRA -.4310 TC3 1.6789 BAU .3230 SGT 1310.7 SGR 1484.1 SG3 527.5 ST 352.2 SR 206.8 SS 274.2  
 RDE -.0825 RRA -.1863 RC3 2.5246 FAU .09395 RRT .8846 RRF -.9834 RTF -.8901 CRT .9618 CRS .1327 CST .3381  
 FDE -.1638 FRA .9784 FC-10.2086 BSP 6311 SGB 1980.0 R23 -.1627 R13 -.9708 LSA 418.0 MSA 257.3 SSA 31.8  
 BDE .1414 BRA .4695 BC3 3.0319 FSP -1629 SGI 1923.0 SG2 471.7 THA 49.01 EL1 405.4 EL2 49.2 ALF 29.94

LAUNCH DATE JAN 19 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 331.878

RL 147.20 LAL .00 LOL 118.75 VL 27.559 GAL -.89 AZL 91.08 HCA 147.50 SMA 127.16 ECC .15837 INC 1.0826 VI 30.266  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.383 GAP -3.70 AZP 89.09 TAL 184.73 TAP 332.23 RCA 107.02 APO 147.29 V2 34.853  
 RC 72.672 GL -10.63 GP 38.43 ZAL 101.59 ZAP 54.59 ETS 329.23 ZAE 136.49 ETE 53.95 ZAC 114.63 ETC 138.44 CLP -42.30

PLANETOCENTRIC CONIC

C3 7.968 VHL 2.823 DLA -3.17 RAL 19.68 RAD 6567.3 VEL 11.374 PTH 1.96 VHP 4.456 DPA 49.41 RAP 23.01 ECC 1.1311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 10 46 1920.20 -11.51 23.64 227.78 116.05 5 42 46 1320.2 -7.92 16.81  
 90.00 16 21 48 4760.62 17.08 204.33 228.55 67.06 17 41 8 4160.6 13.82 197.16  
 100.00 6 30 38 1662.57 -12.25 4.31 227.40 117.48 6 58 20 1062.6 -8.47 357.56  
 100.00 17 44 37 4493.49 17.84 184.33 228.20 65.61 18 59 31 3893.5 14.40 177.23  
 110.00 7 35 29 1459.55 -14.22 347.76 226.26 121.42 7 59 49 859.5 -9.96 341.26  
 110.00 18 56 15 4269.28 19.86 166.25 227.14 61.59 20 7 24 3669.3 15.91 159.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0827 TRA -.4155 TC3 1.5093 BAU .3494 SGT 1211.5 SGR 1714.9 SG3 541.6 ST 305.1 SR 155.5 SS 396.3  
 RDE -.0097 RRA -.2397 RC3 2.9122 FAU .09520 RRT .8740 RRF -.9886 RTF -.8759 CRT .8769 CRS .5440 CST .1126  
 FDE -.3869 FRA 1.0529 FC-10.3440 BSP 6671 SGB 2099.7 R23 -.1354 R13 -.9796 LSA 415.3 MSA 318.2 SSA 24.6  
 BDE .0833 BRA .4797 BC3 3.2801 FSP -1683 SGI 2040.6 SG2 494.7 THA 56.04 EL1 335.6 EL2 68.0 ALF 25.20

LAUNCH DATE JAN 19 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 338.326

RL 147.20 LAL .00 LOL 118.75 VL 27.592 GAL -.93 AZL 91.56 HCA 150.67 SMA 127.38 ECC .15643 INC 1.5631 VI 30.266  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.399 GAP -3.23 AZP 88.64 TAL 185.01 TAP 335.68 RCA 107.45 APO 147.31 V2 34.844  
 RC 74.919 GL -15.30 GP 42.84 ZAL 101.87 ZAP 59.59 ETS 330.78 ZAE 133.69 ETE 59.69 ZAC 111.02 ETC 138.09 CLP -46.34

PLANETOCENTRIC CONIC

C3 8.138 VHL 2.853 DLA -7.67 RAL 21.01 RAD 6567.3 VEL 11.381 PTH 1.97 VHP 4.471 DPA 52.80 RAP 18.38 ECC 1.1339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 50 18 1782.24 -7.28 15.72 229.19 117.44 6 20 0 1182.2 -3.54 9.03  
 90.00 15 52 51 4906.41 20.70 213.49 231.06 70.23 17 14 37 4306.4 17.82 206.00  
 100.00 7 7 57 1531.73 -8.04 356.89 228.78 118.89 7 33 29 931.7 -4.12 350.29  
 100.00 17 17 53 4632.15 21.51 192.99 230.74 68.73 18 35 5 4032.2 18.43 185.55  
 110.00 8 7 46 1344.43 -10.04 341.46 227.56 122.85 8 30 11 744.4 -5.65 335.13  
 110.00 18 34 33 4392.21 23.66 173.77 229.73 64.57 19 47 45 3792.2 20.03 166.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0595 TRA -.3985 TC3 1.2574 BAU .3798 SGT 1086.8 SGR 1969.9 SG3 540.3 ST 271.0 SR 267.5 SS 561.3  
 RDE .0903 RRA -.3102 RC3 3.2567 FAU .09359 RRT .8497 RRF -.9922 RTF -.8489 CRT .3483 CRS .9495 CST .0462  
 FDE -.6321 FRA 1.1280 FC3-9.9567 BSP 7125 SGB 2249.8 R23 -.1055 R13 -.9866 LSA 617.8 MSA 279.3 SSA 17.7  
 BDE .1081 BRA .5050 BC3 3.4910 FSP -1690 SGI 2190.0 SG2 515.5 THA 63.29 EL1 312.7 EL2 217.3 ALF 43.94

LAUNCH DATE JAN 19 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 344.750

RL 147.20 LAL .00 LOL 118.75 VL 27.619 GAL -.96 AZL 92.15 HCA 153.83 SMA 127.57 ECC .15479 INC 2.1482 V1 30.266  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.411 GAP -2.77 AZP 88.07 TAL 185.23 TAP 339.05 RCA 107.82 APO 147.31 V2 34.835  
 RC 77.194 GL -20.72 GP 47.66 ZAL 101.85 ZAP 64.69 ETS 332.75 ZAE 130.22 ETE 65.39 ZAC 107.03 ETC 138.14 CLP -50.60

PLANETOCENTRIC CONIC

C3 8.560 VHL 2.926 OLA -12.80 RAL 22.82 RAD 6567.3 VEL 11.400 PTH 1.97 VHP 4.572 DPA 56.26 RAP 12.45 ECC 1.1409  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 39 19 1622.72 -2.19 6.75 231.84 118.24 7 6 21 1022.7 1.60 .12  
 90.00 15 18 20 5084.92 24.34 225.30 234.97 75.06 16 43 5 4484.9 22.05 217.37  
 100.00 7 54 2 1381.63 -3.02 348.56 231.38 119.75 8 17 4 781.6 .96 342.04  
 100.00 16 46 17 4801.24 25.25 204.15 234.68 73.45 18 6 19 4201.2 22.74 196.25  
 110.00 8 47 22 1214.59 -5.18 334.55 230.04 123.84 9 7 37 614.6 -.70 328.33  
 110.00 18 9 27 4541.05 27.66 183.48 233.77 69.06 19 25 8 3941.0 24.56 175.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.0492 TRA -.3772 TC3 .9400 BAU .4148 SGT 941.1 SGR 2248.0 SG3 521.4 ST 247.4 SR 511.8 SS 745.0  
 ROE .2277 RRA -.4040 RC3 3.5009 FAU .08883 RRT .8028 RRF -.9945 RTF -.8001 CRT .1052 CRS .9938 CST -.0021  
 FDE -.8863 FRA 1.1963 FC3-8.9835 BSP 7673 SGB 2437.0 R23 -.0758 R13 -.9916 LSA 902.6 MSA 251.4 SSA 12.5  
 BOE .2330 BRA .5527 BC3 3.6249 FSP -1635 SG1 2378.6 SG2 530.3 THA 70.41 EL1 512.6 EL2 245.6 ALF 86.22

LAUNCH DATE JAN 19 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 351.147

RL 147.20 LAL .00 LOL 118.75 VL 27.642 GAL -.97 AZL 92.88 HCA 156.98 SMA 127.72 ECC .15341 INC 2.8807 V1 30.266  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.421 GAP -2.32 AZP 87.35 TAL 185.37 TAP 342.35 RCA 108.13 APO 147.32 V2 34.827  
 RC 79.493 GL -26.96 GP 52.86 ZAL 101.45 ZAP 69.77 ETS 335.25 ZAE 126.05 ETE 70.92 ZAC 102.73 ETC 138.68 CLP -55.06

PLANETOCENTRIC CONIC

C3 9.388 VHL 3.064 OLA -18.60 RAL 25.23 RAD 6567.3 VEL 11.436 PTH 1.98 VHP 4.784 DPA 59.69 RAP 4.91 ECC 1.1545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 43 34 1429.02 4.05 355.94 236.33 118.05 8 7 23 829.0 7.77 349.23  
 90.00 14 33 18 5314.12 27.39 241.36 240.70 82.54 16 1 52 4714.1 26.08 232.94  
 100.00 8 53 40 1202.78 3.04 338.75 235.77 119.75 9 13 43 602.8 6.97 332.17  
 100.00 16 5 52 5015.59 28.54 219.21 240.51 80.71 17 29 28 4415.6 26.96 210.76  
 110.00 9 37 28 1065.55 .51 326.76 234.19 124.18 9 55 13 465.6 4.99 320.54  
 110.00 17 38 34 4725.58 31.46 196.49 239.81 75.88 18 57 19 4125.6 29.20 188.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0597 TRA -.3448 TC3 .5825 BAU .4530 SGT 776.3 SGR 2538.9 SG3 482.7 ST 232.9 SR 839.9 SS 924.3  
 ROE .4157 RRA -.5258 RC3 3.5623 FAU .08066 RRT .7094 RRF -.9961 RTF -.7048 CRT -.1153 CRS .9988 CST -.1613  
 FDE-1.1271 FRA 1.2404 FC3-7.4382 BSP 8361 SGB 2654.9 R23 -.0490 R13 -.9949 LSA 1248.9 MSA 232.3 SSA 8.8  
 BOE .4199 BRA .6288 BC3 3.6096 FSP -1523 SG1 2600.6 SG2 534.2 THA 77.21 EL1 840.3 EL2 231.2 ALF 91.98

LAUNCH DATE JAN 19 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 357.517

RL 147.20 LAL .00 LOL 118.75 VL 27.661 GAL -.97 AZL 93.83 HCA 160.13 SMA 127.85 ECC .15229 INC 3.8310 V1 30.266  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.428 GAP -1.90 AZP 86.40 TAL 185.43 TAP 345.56 RCA 108.38 APO 147.32 V2 34.820  
 RC 81.813 GL -34.00 GP 58.41 ZAL 100.64 ZAP 74.65 ETS 338.36 ZAE 121.22 ETE 76.23 ZAC 98.21 ETC 139.75 CLP -59.64

PLANETOCENTRIC CONIC

C3 10.920 VHL 3.305 OLA -25.01 RAL 28.37 RAD 6567.4 VEL 11.503 PTH 2.00 VHP 5.153 DPA 62.92 RAP 355.32 ECC 1.1797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 21 9 1153.91 12.56 340.21 243.91 115.59 9 40 23 553.9 15.91 333.13  
 90.00 13 20 42 5649.72 27.96 265.80 248.34 94.70 14 54 52 5049.7 28.31 257.15  
 100.00 10 19 39 965.05 10.89 325.47 243.05 118.01 10 35 44 365.0 14.56 318.60  
 100.00 15 4 54 5313.81 29.82 241.21 248.47 92.16 16 33 27 4713.8 29.80 232.41  
 110.00 10 44 34 886.90 7.30 317.39 240.89 123.49 10 59 21 286.9 11.65 311.00  
 110.00 16 56 28 4964.73 34.01 214.63 248.40 86.31 18 19 13 4364.7 33.12 205.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1057 TRA -.2971 TC3 .2228 BAU .4906 SGT 615.1 SGR 2827.9 SG3 424.7 ST 250.3 SR 1224.9 SS 1068.9  
 ROE .6674 RRA -.6908 RC3 3.3531 FAU .06917 RRT .4977 RRF -.9971 RTF -.4907 CRT -.4698 CRS .9997 CST -.4913  
 FDE-1.3190 FRA 1.2587 FC3-5.4838 BSP 9108 SGB 2894.0 R23 -.0273 R13 -.9967 LSA 1630.1 MSA 220.0 SSA 6.3  
 BOE .6797 BRA .7520 BC3 3.3605 FSP -1346 SG1 2845.0 SG2 530.3 THA 83.60 EL1 1230.7 EL2 219.9 ALF 95.67

LAUNCH DATE JAN 19 1969

FLIGHT TIME 132.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 363.857

RL 147.20 LAL .00 LOL 118.75 VL 27.675 GAL -.96 AZL 95.12 HCA 163.27 SMA 127.95 ECC .15140 INC 5.1214 V1 30.266  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.432 GAP -1.48 AZP 85.09 TAL 185.41 TAP 348.69 RCA 108.58 APO 147.32 V2 34.813  
 RC 84.153 GL -41.70 GP 64.32 ZAL 99.39 ZAP 79.15 ETS 342.19 ZAE 115.73 ETE 81.34 ZAC 93.56 ETC 141.43 CLP -64.25

PLANETOCENTRIC CONIC

C3 13.786 VHL 3.713 OLA -31.86 RAL 32.39 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 5.753 DPA 65.73 RAP 343.18 ECC 1.2269  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.75 9 37 39 1189.67 24.17 348.14 256.13 111.41 9 57 29 589.7 26.86 340.20  
 105.25 13 36 17 5712.76 24.19 269.42 256.13 111.40 15 11 30 5112.8 26.87 261.49  
 74.75 9 37 39 1189.67 24.17 348.14 256.13 111.41 9 57 29 589.7 26.86 340.20  
 105.25 13 36 17 5712.76 24.19 269.42 256.13 111.40 15 11 30 5112.8 26.87 261.49  
 110.00 12 31 41 625.45 16.75 303.04 252.30 120.24 12 42 6 25.4 20.64 296.07  
 110.00 15 41 26 5324.98 32.07 242.39 258.86 102.51 17 10 11 4725.0 33.46 233.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2057 TRA -.2190 TC3 -.0684 BAU .5235 SGT 511.5 SGR 3099.5 SG3 352.0 ST 339.1 SR 1626.9 SS 1150.0  
 ROE 1.0026 RRA -.9155 RC3 2.8396 FAU .05527 RRT .0403 RRF -.9978 RTF -.0304 CRT -.7823 CRS .9999 CST -.7920  
 FDE-1.4330 FRA 1.2394 FC3-3.4707 BSP 9927 SGB 3141.4 R23 -.0109 R13 -.9978 LSA 2010.1 MSA 208.5 SSA 4.5  
 BOE 1.0235 BRA .9414 BC3 2.8404 FSP -1124 SG1 3099.6 SG2 511.1 THA 89.61 EL1 1648.7 EL2 208.4 ALF 99.41

LAUNCH DATE JAN 19 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 2 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.686 GAL -.94 AZL 96.99 HCA 166.40 SMA 128.02 ECC .15072 INC 6.9862 V1 30.266  
 RP 108.87 LAP -1.64 LOP 285.24 VP 37.434 GAP -1.08 AZP 83.21 TAL 185.31 TAP 351.71 RCA 108.72 APO 147.31 V2 34.807  
 RC 86.508 GL -49.73 GP 70.64 ZAL 97.74 ZAP 83.07 ETS 346.85 ZAE 109.58 ETE 86.40 ZAC 88.85 ETC 143.90 CLP -68.67

PLANETOCENTRIC CONIC  
 C3 19.472 VHL 4.413 DLA -38.76 RAL 37.45 RAD 6567.8 VEL 11.868 PTH 2.11 VHP 6.729 DPA 67.82 RAP 327.97 ECC 1.3205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.35 8 46 14 1484.67 26.53 12.65 268.99 119.36 9 10 59 884.7 30.22 5.00  
 117.65 15 8 6 5575.41 26.54 259.84 269.00 119.35 16 41 2 4975.4 30.23 252.19  
 62.35 8 46 14 1484.67 26.53 12.65 268.99 119.36 9 10 59 884.7 30.22 5.00  
 117.65 15 8 6 5575.41 26.54 259.84 269.00 119.35 16 41 2 4975.4 30.23 252.19  
 62.35 8 46 14 1484.67 26.53 12.65 268.99 119.36 9 10 59 884.7 30.22 5.00  
 117.65 15 8 6 5575.41 26.54 259.84 269.00 119.35 16 41 2 4975.4 30.23 252.19

DIFFERENTIAL CORRECTIONS  
 TOE -1.3944 TRA -.0848 TC3 -.2380 BAU .5408 SGT 571.2 SGR 3332.4 SG3 271.8 ORBIT DETERMINATION ACCURACY  
 RDE 1.4459 RRA-1.2399 RC3 2.0639 FAU .04000 RRT -.5529 RRF -.9983 RTF .5624 CRT -.9205 CRS .9999 CST -.9252  
 FDE-1.4443 FRA 1.1884 FC3-1.7784 BSP 10664 SGB 3381.0 R23 .0012 R13 -.9984 LSA 2333.6 MSA 195.5 SSA 3.3  
 BOE 1.4988 BRA 1.2428 BC3 2.0776 FSP -869 SG1 3347.7 SG2 473.8 THA 95.53 EL1 2034.1 EL2 195.2 ALF 103.58

LAUNCH DATE JAN 19 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 4 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.693 GAL -.90 AZL 99.93 HCA 169.51 SMA 128.07 ECC .15023 INC 9.9331 V1 30.266  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.434 GAP -.70 AZP 80.23 TAL 185.10 TAP 354.61 RCA 108.83 APO 147.30 V2 34.802  
 RC 88.877 GL -57.47 GP 77.56 ZAL 95.83 ZAP 86.23 ETS 352.80 ZAE 102.64 ETE 91.96 ZAC 84.06 ETC 147.69 CLP -72.25

PLANETOCENTRIC CONIC  
 C3 32.095 VHL 5.665 DLA -45.06 RAL 43.56 RAD 6568.3 VEL 12.388 PTH 2.24 VHP 8.393 DPA 68.75 RAP 309.34 ECC 1.5282  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.36 8 32 12 1712.91 25.31 31.61 285.38 128.61 9 0 45 1112.9 30.13 24.81  
 126.64 16 10 53 5592.69 25.33 260.43 285.39 128.60 17 44 5 4992.7 30.14 253.63  
 53.36 8 32 12 1712.91 25.31 31.61 285.38 128.61 9 0 45 1112.9 30.13 24.81  
 126.64 16 10 53 5592.69 25.33 260.43 285.39 128.60 17 44 5 4992.7 30.14 253.63  
 53.36 8 32 12 1712.91 25.31 31.61 285.38 128.61 9 0 45 1112.9 30.13 24.81  
 126.64 16 10 53 5592.69 25.33 260.43 285.39 128.60 17 44 5 4992.7 30.14 253.63

DIFFERENTIAL CORRECTIONS  
 TOE -.7358 TRA .1854 TC3 -.2580 BAU .5258 SGT 842.4 SGR 3501.9 SG3 193.6 ORBIT DETERMINATION ACCURACY  
 RDE 2.0488 RRA-1.7288 RC3 1.1980 FAU .02514 RRT -.8799 RRF -.9987 RTF .8853 CRT -.9719 CRS .9999 CST -.9742  
 FDE-1.3601 FRA 1.1128 FC3 -.6780 BSP 11441 SGB 3601.8 R23 .0098 R13 -.9988 LSA 2548.4 MSA 167.8 SSA 2.3  
 BOE 2.1770 BRA 1.7387 BC3 1.2255 FSP -626 SG1 3580.5 SG2 391.5 THA 102.10 EL1 2319.2 EL2 167.2 ALF 108.38

LAUNCH DATE JAN 19 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 6 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.696 GAL -.84 AZL 105.29 HCA 172.56 SMA 128.09 ECC .14990 INC15.2885 V1 30.266  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.432 GAP -.35 AZP 74.83 TAL 184.77 TAP 357.33 RCA 108.89 APO 147.29 V2 34.797  
 RC 91.256 GL -63.79 GP 85.68 ZAL 93.84 ZAP 88.48 ETS 375.23 ZAE 94.34 ETE 101.94 ZAC 78.94 ETC 156.82 CLP -69.36

PLANETOCENTRIC CONIC  
 C3 66.241 VHL 8.139 DLA -49.73 RAL 50.06 RAD 6569.3 VEL 13.697 PTH 2.50 VHP 11.563 DPA 67.76 RAP 287.38 ECC 2.0902  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.25 8 36 45 1946.79 18.72 47.48 303.36 136.96 9 9 11 1346.8 24.46 41.91  
 132.75 16 58 12 5719.81 18.73 266.02 303.38 136.95 18 33 32 5119.8 24.48 260.45  
 47.25 8 36 45 1946.79 18.72 47.48 303.36 136.96 9 9 11 1346.8 24.46 41.91  
 132.75 16 58 12 5719.81 18.73 266.02 303.38 136.95 18 33 32 5119.8 24.48 260.45  
 47.25 8 36 45 1946.79 18.72 47.48 303.36 136.96 9 9 11 1346.8 24.46 41.91  
 132.75 16 58 12 5719.81 18.73 266.02 303.38 136.95 18 33 32 5119.8 24.48 260.45

DIFFERENTIAL CORRECTIONS  
 TOE-1.4327 TRA 1.0398 TC3 -.1693 BAU .4086 SGT 1541.3 SGR 3456.1 SG3 127.0 ORBIT DETERMINATION ACCURACY  
 RDE 2.9135 RRA-2.4724 RC3 .4292 FAU .01127 RRT -.9969 RRF -.9992 RTF .9963 CRT -.9987 CRS 1.0000 CST -.9984  
 FDE-1.2323 FRA 1.0667 FC3 -.1473 BSP 12039 SGB 3784.2 R23 .0104 R13 -.9991 LSA 2619.6 MSA 50.3 SSA 1.7  
 BOE 3.2467 BRA 2.6821 BC3 .4614 FSP -413 SG1 3782.6 SG2 111.0 THA 113.99 EL1 2447.5 EL2 48.2 ALF 115.75

LAUNCH DATE JAN 19 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 8 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.697 GAL -.73 AZL 117.70 HCA 175.46 SMA 128.09 ECC .14971 INC27.6996 V1 30.266  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.429 GAP -.05 AZP 62.37 TAL 184.18 TAP 359.64 RCA 108.92 APO 147.27 V2 34.793  
 RC 93.644 GL -65.87 GP 82.53 ZAL 92.01 ZAP 89.71 ETS 359.26 ZAE 82.57 ETE 256.19 ZAC 72.48 ETC 111.81 CLP 87.75

PLANETOCENTRIC CONIC  
 C3 198.980 VHL 14.106 DLA -50.50 RAL 53.99 RAD 6571.1 VEL 17.897 PTH 3.00 VHP 19.039 DPA 62.68 RAP 262.13 ECC 4.2747  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.27 8 49 16 2175.33 7.56 57.71 317.69 140.08 9 25 32 1575.3 13.66 52.86  
 133.73 17 17 1 645.49 7.58 296.84 317.71 140.08 17 27 46 45.5 13.67 291.98  
 46.27 8 49 16 2175.33 7.56 57.71 317.69 140.08 9 25 32 1575.3 13.66 52.86  
 133.73 17 17 1 645.49 7.58 296.84 317.71 140.08 17 27 46 45.5 13.67 291.98  
 46.27 8 49 16 2175.33 7.56 57.71 317.69 140.08 9 25 32 1575.3 13.66 52.86  
 133.73 17 17 1 645.49 7.58 296.84 317.71 140.08 17 27 46 45.5 13.67 291.98

DIFFERENTIAL CORRECTIONS  
 TOE 1.9554 TRA 1.2953 TC3 -.0115 BAU .1530 SGT 1147.2 SGR 3699.3 SG3 80.6 ORBIT DETERMINATION ACCURACY  
 RDE-5.1685 RRA 4.7638 RC3 .0563 FAU-.00452 RRT .1987 RRF .9997 RTF .2155 CRT -.7565 CRS -.9999 CST .7471  
 FDE-1.2684 FRA 1.2150 FC3 .0197 BSP 12278 SGB 3873.1 R23 .0033 R13 .9998 LSA 2553.1 MSA 528.0 SSA .8  
 BOE 5.5260 BRA 4.9367 BC3 .0575 FSP -262 SG1 3707.1 SG2 1121.9 THA 86.12 EL1 2378.7 EL2 523.7 ALF 106.18

LAUNCH DATE JAN 19 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 393.731

RL 147.20 LAL .00 LOL 118.75 VL 27.694 GAL -.45 AZL 159.18 HCA 177.59 SMA 128.08 ECC .14952 INC69.1802 V1 30.266  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.424 GAP .02 AZP 20.84 TAL 182.58 TAP .18 RCA 108.93 APO 147.23 V2 34.789  
 RC 96.038 GL -51.72 GP 57.04 ZAL 90.62 ZAP 89.95 ETS 175.65 ZAE 56.97 ETE 272.18 ZAC 60.72 ETC 335.27 CLP 89.90

PLANETOCENTRIC CONIC

C31087.259 VHL 32.974 DLA -37.27 RAL 46.45 RAD 6573.0 VEL 34.764 PTH 3.51 VHP 42.350 DPA 43.22 RAP 233.63 ECC18.8935  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.69 9 33 52 2129.21 -.41 46.01 316.98 127.26 10 9 21 1529.2 4.43 40.05  
 115.31 15 32 18 999.92 -.40 320.89 316.99 127.26 15 48 58 399.9 4.44 314.93  
 64.69 9 33 52 2129.21 -.41 46.01 316.98 127.26 10 9 21 1529.2 4.43 40.05  
 115.31 15 32 18 999.92 -.40 320.89 316.99 127.26 15 48 58 399.9 4.44 314.93  
 64.69 9 33 52 2129.21 -.41 46.01 316.98 127.26 10 9 21 1529.2 4.43 40.05  
 115.31 15 32 18 999.92 -.40 320.89 316.99 127.26 15 48 58 399.9 4.44 314.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.5805 TRA-1.2713 TC3 -.0862 BAU 3.4952 SGT 1157.6 SGR 3234.8 SG3 59.7 ST 973.4 SR 1761.4 SS 1389.8  
 RDE-9.2604 RRA10.9182 RC3 .2245 FAU-.05978 RRT -.8180 RRF 1.0000 RTF -.8206 CRT -.9452 CRS-1.0000 CST .9468  
 FDE-2.0013 FRA 2.3281 FC3 .0476 BSP 11283 SGB 3435.7 R23 -.0530 R13 .9986 LSA 2428.3 MSA 292.1 SSA .4  
 BOE10.8119 BRA10.9919 BC3 .2405 FSP -203 SG1 3375.9 SG2 638.1 THA 106.94 EL1 1992.8 EL2 280.9 ALF 118.19

LAUNCH DATE JAN 19 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 402.782

RL 147.20 LAL .00 LOL 118.75 VL 27.689 GAL -.93 AZL 135.98 HCA 183.32 SMA 128.04 ECC .15047 INC46.0193 V1 30.266  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.418 GAP 1.12 AZP 43.97 TAL 185.25 TAP 8.57 RCA 108.78 APO 147.31 V2 34.787  
 RC 98.436 GL 60.97 GP -73.36 ZAL 91.48 ZAP 91.47 ETS 176.93 ZAE 73.77 ETE 83.11 ZAC 93.09 ETC 34.75 CLP 95.13

PLANETOCENTRIC CONIC

C3 519.127 VHL 22.784 DLA 62.36 RAL 340.50 RAD 6572.4 VEL 25.307 PTH 3.35 VHP 26.906 DPA -68.36 RAP 140.82 ECC 9.5435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.80 15 14 26 5011.19 -2.06 241.06 249.44 27.66 16 37 57 4411.2 -9.13 237.72  
 148.20 1 5 33 3318.42 -2.05 100.91 249.42 27.66 2 0 51 2718.4 -9.12 97.58  
 31.80 15 14 26 5011.19 -2.06 241.06 249.44 27.66 16 37 57 4411.2 -9.13 237.72  
 148.20 1 5 33 3318.42 -2.05 100.91 249.42 27.66 2 0 51 2718.4 -9.12 97.58  
 31.80 15 14 26 5011.19 -2.06 241.06 249.44 27.66 16 37 57 4411.2 -9.13 237.72  
 148.20 1 5 33 3318.42 -2.05 100.91 249.42 27.66 2 0 51 2718.4 -9.12 97.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-2.6350 TRA 2.1347 TC3 -.0939 BAU 1.5761 SGT 1400.4 SGR 3725.9 SG3 68.7 ST 748.2 SR 3291.7 SS 1611.8  
 RD-12.9595 RRA 2.8419 RC3 -.2068 FAU-.02534 RRT .8328 RRF -.9994 RTF -.8495 CRT .9422 CRS .9999 CST .9463  
 FDE 2.7247 FRA -2.6519 FC3 .0423 BSP 12913 SGB 3980.4 R23 -.0303 R13 -.9994 LSA 3732.7 MSA 245.2 SSA .9  
 BOE13.2247 BRA 3.5544 BC3 .2271 FSP -234 SG1 3911.3 SG2 738.5 THA 71.95 EL1 3366.7 EL2 245.2 ALF 77.85

LAUNCH DATE JAN 19 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 408.503

RL 147.20 LAL .00 LOL 118.75 VL 27.682 GAL -.75 AZL 65.24 HCA 186.02 SMA 127.99 ECC .15062 INC24.7622 V1 30.266  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.411 GAP 1.33 AZP 114.64 TAL 184.22 TAP 10.23 RCA 108.71 APO 147.27 V2 34.785  
 RC 100.837 GL 66.03 GP -86.52 ZAL 92.26 ZAP 93.39 ETS 195.82 ZAE 89.61 ETE 103.08 ZAC 101.08 ETC 54.37 CLP 166.84

PLANETOCENTRIC CONIC

C3 160.997 VHL 12.688 DLA 64.41 RAL 329.87 RAD 6570.8 VEL 16.802 PTH 2.90 VHP 14.256 DPA -68.91 RAP 95.68 ECC 3.6496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.38 14 26 17 4875.39 -10.99 238.79 234.54 26.10 15 47 33 4275.4 -18.15 235.52  
 150.62 0 28 51 3163.73 -10.98 95.86 234.52 26.10 1 21 35 2563.7 -18.14 92.58  
 29.38 14 26 17 4875.39 -10.99 238.79 234.54 26.10 15 47 33 4275.4 -18.15 235.52  
 150.62 0 28 51 3163.73 -10.98 95.86 234.52 26.10 1 21 35 2563.7 -18.14 92.58  
 29.38 14 26 17 4875.39 -10.99 238.79 234.54 26.10 15 47 33 4275.4 -18.15 235.52  
 150.62 0 28 51 3163.73 -10.98 95.86 234.52 26.10 1 21 35 2563.7 -18.14 92.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.1252 TRA .9668 TC3 -.0061 BAU .0240 SGT 1735.9 SGR 3856.1 SG3 105.4 ST 1443.4 SR 2990.4 SS 1214.9  
 RDE-6.4017 RRA 2.4410 RC3 -.0094 FAU .00227 RRT -.2240 RRF -.9978 RTF .2814 CRT -.8913 CRS .9996 CST -.9038  
 FDE 2.1265 FRA -.7190 FC3 -.0122 BSP 13645 SGB 4228.8 R23 -.0055 R13 -.9995 LSA 3484.1 MSA 602.3 SSA 1.3  
 BOE 7.1238 BRA 2.6254 BC3 .0112 FSP -337 SG1 3880.2 SG2 1681.3 THA 97.10 EL1 3266.0 EL2 599.2 ALF 114.14

LAUNCH DATE JAN 19 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 414.534

RL 147.20 LAL .00 LOL 118.75 VL 27.672 GAL -.62 AZL 72.93 HCA 189.02 SMA 127.93 ECC .15104 INC17.0716 V1 30.266  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.402 GAP 1.63 AZP 106.87 TAL 183.49 TAP 12.51 RCA 108.61 APO 147.25 V2 34.784  
 RC 103.240 GL 64.70 GP -79.69 ZAL 92.80 ZAP 96.24 ETS 329.57 ZAE 98.72 ETE 237.13 ZAC 104.82 ETC 188.48 CLP-127.40

PLANETOCENTRIC CONIC

C3 80.730 VHL 8.985 DLA 63.33 RAL 331.85 RAD 6569.6 VEL 14.215 PTH 2.59 VHP 9.666 DPA -64.82 RAP 73.33 ECC 2.3286  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.65 14 37 11 4730.58 -19.33 233.85 231.72 28.40 15 56 2 4130.6 -26.31 230.03  
 149.35 0 33 48 3028.59 -19.32 92.36 231.70 28.40 1 24 16 2428.6 -26.30 88.55  
 30.65 14 37 11 4730.58 -19.33 233.85 231.72 28.40 15 56 2 4130.6 -26.31 230.03  
 149.35 0 33 48 3028.59 -19.32 92.36 231.70 28.40 1 24 16 2428.6 -26.30 88.55  
 30.65 14 37 11 4730.58 -19.33 233.85 231.72 28.40 15 56 2 4130.6 -26.31 230.03  
 149.35 0 33 48 3028.59 -19.32 92.36 231.70 28.40 1 24 16 2428.6 -26.30 88.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.1858 TRA-1.4978 TC3 -.2498 BAU .3621 SGT 3443.1 SGR 2592.9 SG3 163.5 ST 2744.5 SR 1990.8 SS 1285.2  
 RDE 3.0190 RRA-1.1892 RC3 -.2240 FAU .01785 RRT .9986 RRF .9957 RTF .9978 CRT .9997 CRS -.9991 CST -.9998  
 FDE 2.3575 FRA -.7719 FC3 -.1914 BSP 13464 SGB 4310.2 R23 -.0313 R13 .9973 LSA 3625.6 MSA 49.0 SSA 2.5  
 BOE 5.1609 BRA 1.9125 BC3 .3355 FSP -535 SG1 4308.8 SG2 110.0 THA 36.97 EL1 3390.3 EL2 36.6 ALF 35.95

LAUNCH DATE JAN 19 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC DISTANCE 420.634  
 RL 147.20 LAL .00 LOL 118.75 VL 27.661 GAL -.50 AZL 76.76 HCA 192.10 SMA 127.85 ECC .15162 INC13.2361 V1 30.266  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.393 GAP 1.95 AZP 102.95 TAL 182.79 TAP 14.90 RCA 108.46 APO 147.23 V2 34.783  
 RC 105.643 GL 62.03 GP -72.14 ZAL 93.05 ZAP 99.78 ETS 332.35 ZAE 105.61 ETE 239.38 ZAC 107.06 ETC 191.26 CLP-123.63

PLANETOCENTRIC CONIC  
 C3 51.416 VHL 7.171 DLA 61.75 RAL 336.52 RAD 6568.9 VEL 13.144 PTH 2.40 VHP 7.467 DPA -60.14 RAP 59.98 ECC 1.8462  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.52 15 0 19 4614.76 -25.37 228.59 231.78 31.59 16 17 13 4014.8 -32.10 224.07  
 147.48 0 47 55 2928.05 -25.36 89.30 231.76 31.58 1 36 43 2328.1 -32.09 84.78  
 32.52 15 0 19 4614.76 -25.37 228.59 231.78 31.59 16 17 13 4014.8 -32.10 224.07  
 147.48 0 47 55 2928.05 -25.36 89.30 231.76 31.58 1 36 43 2328.1 -32.09 84.78  
 32.52 15 0 19 4614.76 -25.37 228.59 231.78 31.59 16 17 13 4014.8 -32.10 224.07  
 147.48 0 47 55 2928.05 -25.36 89.30 231.76 31.58 1 36 43 2328.1 -32.09 84.78

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 3.1863 TRA-1.1963 TC3 -.5442 BAU .5075 SGT 3342.3 SGR 2794.7 SG3 234.9 ST 2617.2 SR 2313.6 SS 1456.1  
 RDE 2.8427 RRA -.8662 RC3 -.4990 FAU .03293 RRT .9952 RRF .9990 RTF .9911 CRT .9991 CRS-1.0000 CST -.9986  
 FDE 2.7781 FRA -.8022 FC3 -.5545 BSP 13706 SGB 4356.8 R23 .0888 R13 .9955 LSA 3783.5 MSA 87.1 SSA 1.4  
 BDE 4.2701 BRA 1.4769 BC3 .7384 FSP -784 SG1 4351.7 SGT 210.8 THA 39.88 EL1 3492.4 EL2 74.3 ALF 41.47

LAUNCH DATE JAN 19 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC DISTANCE 426.751  
 RL 147.20 LAL .00 LOL 118.75 VL 27.647 GAL -.37 AZL 79.05 HCA 195.22 SMA 127.76 ECC .15234 INC10.9464 V1 30.266  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.384 GAP 2.26 AZP 100.57 TAL 182.08 TAP 17.30 RCA 108.29 APO 147.22 V2 34.783  
 RC 108.045 GL 59.13 GP -65.35 ZAL 93.00 ZAP 103.79 ETS 331.21 ZAE 111.25 ETE 236.89 ZAC 108.53 ETC 189.78 CLP-124.85

PLANETOCENTRIC CONIC  
 C3 37.413 VHL 6.117 DLA 60.09 RAL 341.48 RAD 6568.5 VEL 12.601 PTH 2.29 VHP 6.244 DPA -55.34 RAP 50.84 ECC 1.6157  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.50 15 24 58 4526.10 -29.44 223.55 232.54 34.93 16 40 24 3926.1 -35.88 218.32  
 145.50 1 2 48 2856.88 -29.43 86.64 232.53 34.92 1 50 25 2256.9 -35.87 81.41  
 34.50 15 24 58 4526.10 -29.44 223.55 232.54 34.93 16 40 24 3926.1 -35.88 218.32  
 145.50 1 2 48 2856.88 -29.43 86.64 232.53 34.92 1 50 25 2256.9 -35.87 81.41  
 34.50 15 24 58 4526.10 -29.44 223.55 232.54 34.93 16 40 24 3926.1 -35.88 218.32  
 145.50 1 2 48 2856.88 -29.43 86.64 232.53 34.92 1 50 25 2256.9 -35.87 81.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.8860 TRA-1.0184 TC3 -.9001 BAU .5776 SGT 3490.2 SGR 2661.3 SG3 310.1 ST 2763.8 SR 2268.9 SS 1630.2  
 RDE 2.3951 RRA -.5989 RC3 -.7234 FAU .04770 RRT .9896 RRF .9988 RTF .9863 CRT .9982 CRS-1.0000 CST -.9979  
 FDE 3.1919 FRA -.7747 FC3-1.1038 BSP 13794 SGB 4389.1 R23 .1065 R13 .9933 LSA 3928.1 MSA 120.7 SSA 2.3  
 BDE 3.7504 BRA 1.1814 BC3 1.1548 FSP -1046 SG1 4378.5 SGT 304.4 THA 37.25 EL1 3574.3 EL2 105.0 ALF 39.37

LAUNCH DATE JAN 19 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC DISTANCE 432.867  
 RL 147.20 LAL .00 LOL 118.75 VL 27.632 GAL -.24 AZL 80.58 HCA 198.35 SMA 127.65 ECC .15319 INC 9.4215 V1 30.266  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.373 GAP 2.58 AZP 98.95 TAL 181.33 TAP 19.68 RCA 108.10 APO 147.21 V2 34.784  
 RC 110.446 GL 56.29 GP -59.15 ZAL 92.70 ZAP 108.06 ETS 329.80 ZAE 115.93 ETE 233.35 ZAC 109.51 ETC 187.74 CLP-127.19

PLANETOCENTRIC CONIC  
 C3 29.567 VHL 5.438 DLA 58.49 RAL 346.18 RAD 6568.2 VEL 12.286 PTH 2.21 VHP 5.509 DPA -50.59 RAP 44.20 ECC 1.4866  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.42 15 48 39 4457.50 -32.12 218.91 233.56 38.10 17 2 57 3857.5 -38.26 213.05  
 143.58 1 16 37 2806.88 -32.11 84.40 233.54 38.10 2 3 24 2206.9 -38.25 78.54  
 36.42 15 48 39 4457.50 -32.12 218.91 233.56 38.10 17 2 57 3857.5 -38.26 213.05  
 143.58 1 16 37 2806.88 -32.11 84.40 233.54 38.10 2 3 24 2206.9 -38.25 78.54  
 36.42 15 48 39 4457.50 -32.12 218.91 233.56 38.10 17 2 57 3857.5 -38.26 213.05  
 143.58 1 16 37 2806.88 -32.11 84.40 233.54 38.10 2 3 24 2206.9 -38.25 78.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.7474 TRA -.8820 TC3-1.2972 BAU .6210 SGT 3678.7 SGR 2462.7 SG3 381.0 ST 2944.0 SR 2127.9 SS 1771.8  
 RDE 2.0057 RRA -.4059 RC3 -.8861 FAU .06137 RRT .9860 RRF .9983 RTF .9830 CRT .9978 CRS-1.0000 CST -.9976  
 FDE 3.5100 FRA -.6923 FC3-1.7968 BSP 13821 SGB 4426.9 R23 .1239 R13 .9907 LSA 4039.2 MSA 136.8 SSA 3.0  
 BDE 3.4016 BRA .9709 BC3 1.5709 FSP -1288 SG1 4413.7 SGT 342.2 THA 33.66 EL1 3630.7 EL2 114.8 ALF 35.84

LAUNCH DATE JAN 19 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC DISTANCE 438.973  
 RL 147.20 LAL .00 LOL 118.75 VL 27.615 GAL -.10 AZL 81.67 HCA 201.49 SMA 127.54 ECC .15418 INC 8.3287 V1 30.266  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.362 GAP 2.90 AZP 97.76 TAL 180.54 TAP 22.03 RCA 107.87 APO 147.20 V2 34.786  
 RC 112.844 GL 53.61 GP -53.51 ZAL 92.17 ZAP 112.40 ETS 328.63 ZAE 119.74 ETE 229.39 ZAC 110.19 ETC 185.74 CLP-129.85

PLANETOCENTRIC CONIC  
 C3 24.692 VHL 4.969 DLA 57.00 RAL 350.55 RAD 6568.0 VEL 12.086 PTH 2.16 VHP 5.052 DPA -46.00 RAP 39.24 ECC 1.4064  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.22 16 10 52 4403.39 -33.86 214.75 234.74 40.99 17 24 15 3803.4 -39.71 208.35  
 141.78 1 29 18 2771.49 -33.85 82.54 234.72 40.98 2 15 29 2171.5 -39.70 76.15  
 38.22 16 10 52 4403.39 -33.86 214.75 234.74 40.99 17 24 15 3803.4 -39.71 208.35  
 141.78 1 29 18 2771.49 -33.85 82.54 234.72 40.98 2 15 29 2171.5 -39.70 76.15  
 38.22 16 10 52 4403.39 -33.86 214.75 234.74 40.99 17 24 15 3803.4 -39.71 208.35  
 141.78 1 29 18 2771.49 -33.85 82.54 234.72 40.98 2 15 29 2171.5 -39.70 76.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.6628 TRA -.7695 TC3-1.7283 BAU .6591 SGT 3876.9 SGR 2252.4 SG3 442.7 ST 3109.4 SR 1945.1 SS 1866.3  
 RDE 1.6801 RRA -.2728 RC3 -.9996 FAU .07382 RRT .9843 RRF .9976 RTF .9811 CRT .9976 CRS-1.0000 CST -.9974  
 FDE 3.6936 FRA -.5781 FC3-2.5882 BSP 14124 SGB 4483.7 R23 .1371 R13 .9881 LSA 4112.7 MSA 143.0 SSA 3.7  
 BDE 3.1485 BRA .8164 BC3 1.9966 FSP -1526 SG1 4470.4 SGT 345.1 THA 29.96 EL1 3665.9 EL2 113.2 ALF 32.00



LAUNCH DATE JAN 19 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 26 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.597 GAL .05 AZL 82.50 MCA 204.63 SMA 127.41 ECC .15529 INC 7.5033 V1 30.266  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.351 GAP 3.21 AZP 96.83 TAL 179.71 TAP 24.34 RCA 107.63 APO 147.20 V2 34.789  
 RC 115.239 GL 51.10 GP -48.41 ZAL 91.41 ZAP 116.67 ETS 327.78 ZAE 122.77 ETE 225.29 ZAC 110.70 ETC 183.96 CLP-132.54

PLANETOCENTRIC CONIC  
 C3 21.441 VML 4.630 DLA 55.64 RAL 354.65 RAD 6567.9 VEL 11.951 PTH 2.13 VHP 4.770 DPA -41.65 RAP 35.51 ECC 1.3529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.88 16 31 45 4359.74 -34.97 211.05 236.10 43.53 17 44 25 3759.7 -40.56 204.22  
 140.12 1 41 7 2746.39 -34.95 81.05 236.08 43.53 2 26 53 2146.4 -40.55 74.22  
 39.88 16 31 45 4359.74 -34.97 211.05 236.10 43.53 17 44 25 3759.7 -40.56 204.22  
 140.12 1 41 7 2746.39 -34.95 81.05 236.08 43.53 2 26 53 2146.4 -40.55 74.22  
 39.88 16 31 45 4359.74 -34.97 211.05 236.10 43.53 17 44 25 3759.7 -40.56 204.22  
 140.12 1 41 7 2746.39 -34.95 81.05 236.08 43.53 2 26 53 2146.4 -40.55 74.22

DIFFERENTIAL CORRECTIONS  
 TOE 2.6268 TRA -.6473 TC3-2.1230 BAU .6725 SGT 4055.0 SGR 2027.4 SG3 487.3 ST 3278.6 SR 1774.5 SS 1941.9  
 RDE 1.4315 RRA -.1562 RC3 -.9987 FAU .08013 RRT .9806 RRF .9962 RTF .9782 CRT .9974 CRS-1.0000 CST -.9971  
 FDE 3.8017 FRA -.3829 FC3-3.2356 BSP 13943 SGB 4533.6 R23 .1505 R13 .9848 LSA 4200.7 MSA 153.4 SSA 4.6  
 BOE 2.9915 BRA .6658 BC3 2.3462 FSP -1635 SG1 4519.6 SG2 356.5 THA 26.29 EL1 3726.3 EL2 112.8 ALF 28.39

LAUNCH DATE JAN 19 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 28 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.577 GAL .22 AZL 83.15 MCA 207.78 SMA 127.28 ECC .15654 INC 6.8545 V1 30.266  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.340 GAP 3.52 AZP 96.07 TAL 178.83 TAP 26.61 RCA 107.36 APO 147.21 V2 34.792  
 RC 117.630 GL 48.75 GP -43.83 ZAL 90.47 ZAP 120.77 ETS 327.21 ZAE 125.10 ETE 221.21 ZAC 111.15 ETC 182.44 CLP-135.18

PLANETOCENTRIC CONIC  
 C3 19.163 VML 4.378 DLA 54.40 RAL 358.54 RAD 6567.8 VEL 11.855 PTH 2.10 VHP 4.603 DPA -37.60 RAP 32.72 ECC 1.3154  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.40 16 51 34 4323.91 -35.65 207.80 237.66 45.76 18 3 38 3723.9 -41.00 200.62  
 138.60 1 52 22 2728.63 -35.64 79.86 237.64 45.75 2 37 51 2128.6 -40.99 72.69  
 41.40 16 51 34 4323.91 -35.65 207.80 237.66 45.76 18 3 38 3723.9 -41.00 200.62  
 138.60 1 52 22 2728.63 -35.64 79.86 237.64 45.75 2 37 51 2128.6 -40.99 72.69  
 41.40 16 51 34 4323.91 -35.65 207.80 237.66 45.76 18 3 38 3723.9 -41.00 200.62  
 138.60 1 52 22 2728.63 -35.64 79.86 237.64 45.75 2 37 51 2128.6 -40.99 72.69

DIFFERENTIAL CORRECTIONS  
 TOE 2.5831 TRA -.5354 TC3-2.5489 BAU .7015 SGT 4226.0 SGR 1819.8 SG3 518.7 ST 3400.7 SR 1586.3 SS 1955.0  
 RDE 1.2111 RRA -.0788 RC3-1.0005 FAU .08657 RRT .9788 RRF .9943 RTF .9762 CRT .9973 CRS-1.0000 CST -.9968  
 FDE 3.7534 FRA -.1917 FC3-3.9109 BSP 14321 SGB 4601.2 R23 .1582 R13 .9818 LSA 4228.4 MSA 156.5 SSA 5.4  
 BOE 2.8529 BRA .5412 BC3 2.7383 FSP -1777 SG1 4588.4 SG2 343.2 THA 22.99 EL1 3751.1 EL2 104.8 ALF 24.97

LAUNCH DATE JAN 19 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUN 30 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.556 GAL .39 AZL 83.67 MCA 210.94 SMA 127.14 ECC .15791 INC 6.3284 V1 30.266  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.328 GAP 3.83 AZP 95.43 TAL 177.91 TAP 28.85 RCA 107.06 APO 147.22 V2 34.796  
 RC 120.015 GL 46.54 GP -39.76 ZAL 89.34 ZAP 124.65 ETS 326.88 ZAE 126.82 ETE 217.29 ZAC 111.61 ETC 181.17 CLP-137.70

PLANETOCENTRIC CONIC  
 C3 17.512 VML 4.185 DLA 53.27 RAL 2.29 RAD 6567.7 VEL 11.785 PTH 2.08 VHP 4.517 DPA -33.85 RAP 30.67 ECC 1.2882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.79 17 10 33 4294.05 -36.04 204.93 239.43 47.69 18 22 7 3694.0 -41.18 197.49  
 137.21 2 3 17 2716.31 -36.03 78.95 239.41 47.68 2 48 33 2116.3 -41.17 71.51  
 42.79 17 10 33 4294.05 -36.04 204.93 239.43 47.69 18 22 7 3694.0 -41.18 197.49  
 137.21 2 3 17 2716.31 -36.03 78.95 239.41 47.68 2 48 33 2116.3 -41.17 71.51  
 42.79 17 10 33 4294.05 -36.04 204.93 239.43 47.69 18 22 7 3694.0 -41.18 197.49  
 137.21 2 3 17 2716.31 -36.03 78.95 239.41 47.68 2 48 33 2116.3 -41.17 71.51

DIFFERENTIAL CORRECTIONS  
 TOE 2.5549 TRA -.4237 TC3-2.9554 BAU .7274 SGT 4392.7 SGR 1633.6 SG3 537.8 ST 3510.9 SR 1422.3 SS 1949.6  
 RDE 1.0386 RRA -.0219 RC3 -.9589 FAU .08978 RRT .9766 RRF .9916 RTF .9746 CRT .9974 CRS -.9999 CST -.9965  
 FDE 3.6480 FRA .0058 FC3-4.4385 BSP 14625 SGB 4686.6 R23 .1600 R13 .9790 LSA 4257.3 MSA 159.3 SSA 6.3  
 BOE 2.7579 BRA .4243 BC3 3.1071 FSP -1849 SG1 4675.0 SG2 330.2 THA 20.07 EL1 3786.8 EL2 95.6 ALF 22.02

LAUNCH DATE JAN 19 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 2 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.534 GAL .58 AZL 84.11 MCA 214.09 SMA 126.99 ECC .15942 INC 5.8907 V1 30.266  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.316 GAP 4.14 AZP 94.88 TAL 176.96 TAP 31.05 RCA 106.75 APO 147.24 V2 34.800  
 RC 122.394 GL 44.44 GP -36.16 ZAL 88.06 ZAP 128.28 ETS 326.72 ZAE 128.03 ETE 213.62 ZAC 112.13 ETC 180.13 CLP-140.10

PLANETOCENTRIC CONIC  
 C3 16.289 VML 4.036 DLA 52.25 RAL 5.95 RAD 6567.7 VEL 11.733 PTH 2.07 VHP 4.488 DPA -30.41 RAP 29.22 ECC 1.2681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.07 17 28 57 4268.86 -36.22 202.40 241.41 49.37 18 40 6 3668.9 -41.17 194.75  
 135.93 2 14 2 2708.19 -36.21 78.26 241.39 49.36 2 59 10 2108.2 -41.16 70.62  
 44.07 17 28 57 4268.86 -36.22 202.40 241.41 49.37 18 40 6 3668.9 -41.17 194.75  
 135.93 2 14 2 2708.19 -36.21 78.26 241.39 49.36 2 59 10 2108.2 -41.16 70.62  
 44.07 17 28 57 4268.86 -36.22 202.40 241.41 49.37 18 40 6 3668.9 -41.17 194.75  
 135.93 2 14 2 2708.19 -36.21 78.26 241.39 49.36 2 59 10 2108.2 -41.16 70.62

DIFFERENTIAL CORRECTIONS  
 TOE 2.5314 TRA -.3105 TC3-3.3420 BAU .7535 SGT 4550.8 SGR 1467.4 SG3 545.9 ST 3601.0 SR 1276.3 SS 1921.0  
 RDE .8989 RRA .0184 RC3 -.8961 FAU .09087 RRT .9743 RRF .9877 RTF .9733 CRT .9975 CRS -.9998 CST -.9962  
 FDE 3.4876 FRA .1944 FC3-4.8297 BSP 14950 SGB 4781.5 R23 .1545 R13 .9768 LSA 4273.3 MSA 160.3 SSA 7.2  
 BOE 2.6862 BRA .3110 BC3 3.4600 FSP -1879 SG1 4771.1 SG2 315.4 THA 17.52 EL1 3819.6 EL2 84.5 ALF 19.48

LAUNCH DATE JAN 19 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 4 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.511 GAL .77 AZL 84.48 HCA 217.25 SMA 126.84 ECC .16107 INC 5.5188 V1 30.266  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.304 GAP 4.45 AZP 94.40 TAL 175.96 TAP 33.21 RCA 106.41 APO 147.27 V2 34.805  
 RC 124.766 GL 42.43 GP -32.97 ZAL 86.62 ZAP 131.64 ETS 326.68 ZAE 128.84 ETE 210.27 ZAC 112.74 ETC 179.29 CLP-142.37

PLANETOCENTRIC CONIC  
 C3 15.374 VHL 3.921 DLA 51.30 RAL 9.54 RAD 6567.6 VEL 11.694 PTH 2.06 VHP 4.501 DPA -27.25 RAP 28.25 ECC 1.2530  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.26 17 46 57 4247.43 -36.25 200.16 243.59 50.83 18 57 45 3647.4 -41.03 192.36  
 134.74 2 24 44 2703.41 -36.23 77.78 243.57 50.82 3 9 47 2103.4 -41.01 69.98  
 45.26 17 46 57 4247.43 -36.25 200.16 243.59 50.83 18 57 45 3647.4 -41.03 192.36  
 134.74 2 24 44 2703.41 -36.23 77.78 243.57 50.82 3 9 47 2103.4 -41.01 69.98  
 45.26 17 46 57 4247.43 -36.25 200.16 243.59 50.83 18 57 45 3647.4 -41.03 192.36  
 134.74 2 24 44 2703.41 -36.23 77.78 243.57 50.82 3 9 47 2103.4 -41.01 69.98

DIFFERENTIAL CORRECTIONS  
 TDE 2.5097 TRA -.1935 TC3-3.7050 BAU .7800 SGT 4700.6 SGR 1321.8 SG3 545.3 ST 3670.9 SR 1149.6 SS 1875.4  
 RDE .7863 RRA .0477 RC3 -.8211 FAU .09030 RRT .9712 RRF .9824 RTF .9723 CRT .9978 CRS -.9997 CST -.9958  
 FDE 3.2941 FRA .3729 FC3-5.0847 BSP 15345 SGB 4882.9 R23 .1433 R13 .9749 LSA 4276.5 MSA 160.9 SSA 8.1  
 BOE 2.6300 BRA .1993 BC3 3.7949 FSP -1885 SG1 4873.4 SG2 304.0 THA 15.34 EL1 3846.0 EL2 72.8 ALF 17.36

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 6 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.487 GAL .98 AZL 84.80 HCA 220.41 SMA 126.68 ECC .16286 INC 5.1973 V1 30.266  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.292 GAP 4.75 AZP 93.96 TAL 174.93 TAP 35.34 RCA 106.05 APO 147.31 V2 34.811  
 RC 127.128 GL 40.50 GP -30.18 ZAL 85.04 ZAP 134.75 ETS 326.72 ZAE 129.35 ETE 207.26 ZAC 113.46 ETC 178.61 CLP-144.52

PLANETOCENTRIC CONIC  
 C3 14.693 VHL 3.833 DLA 50.41 RAL 13.11 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 4.548 DPA -24.37 RAP 27.69 ECC 1.2418  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.38 18 4 42 4229.07 -36.15 198.16 245.96 52.11 19 15 11 3629.1 -40.78 190.24  
 133.62 2 35 25 2701.48 -36.14 77.49 245.95 52.10 3 20 27 2101.5 -40.77 69.57  
 46.38 18 4 42 4229.07 -36.15 198.16 245.96 52.11 19 15 11 3629.1 -40.78 190.24  
 133.62 2 35 25 2701.48 -36.14 77.49 245.95 52.10 3 20 27 2101.5 -40.77 69.57  
 46.38 18 4 42 4229.07 -36.15 198.16 245.96 52.11 19 15 11 3629.1 -40.78 190.24  
 133.62 2 35 25 2701.48 -36.14 77.49 245.95 52.10 3 20 27 2101.5 -40.77 69.57

DIFFERENTIAL CORRECTIONS  
 TDE 2.4886 TRA -.0708 TC3-4.0320 BAU .8051 SGT 4839.4 SGR 1194.7 SG3 537.5 ST 3721.4 SR 1041.3 SS 1817.2  
 RDE .6958 RRA .0692 RC3 -.7371 FAU .08818 RRT .9666 RRF .9753 RTF .9714 CRT .9982 CRS -.9993 CST -.9954  
 FDE 3.0826 FRA .5389 FC3-5.1960 BSP 15707 SGB 4984.7 R23 .1278 R13 .9733 LSA 4267.2 MSA 161.4 SSA 9.0  
 BOE 2.5841 BRA .0990 BC3 4.0988 FSP -1857 SG1 4975.8 SG2 297.7 THA 13.47 EL1 3863.9 EL2 60.9 ALF 15.61

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 8 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.463 GAL 1.21 AZL 85.09 HCA 223.57 SMA 126.52 ECC .16480 INC 4.9147 V1 30.266  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.279 GAP 5.06 AZP 93.57 TAL 173.87 TAP 37.44 RCA 105.67 APO 147.37 V2 34.818  
 RC 129.481 GL 38.63 GP -27.71 ZAL 83.33 ZAP 137.62 ETS 326.78 ZAE 129.62 ETE 204.58 ZAC 114.30 ETC 178.07 CLP-146.55

PLANETOCENTRIC CONIC  
 C3 14.195 VHL 3.768 DLA 49.56 RAL 16.66 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 4.620 DPA -21.72 RAP 27.46 ECC 1.2336  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.46 18 22 19 4213.26 -35.95 196.36 248.51 53.24 19 32 32 3613.3 -40.45 188.35  
 132.54 2 46 7 2702.03 -35.94 77.36 248.50 53.23 3 31 9 2102.0 -40.44 69.35  
 47.46 18 22 19 4213.26 -35.95 196.36 248.51 53.24 19 32 32 3613.3 -40.45 188.35  
 132.54 2 46 7 2702.03 -35.94 77.36 248.50 53.23 3 31 9 2102.0 -40.44 69.35  
 47.46 18 22 19 4213.26 -35.95 196.36 248.51 53.24 19 32 32 3613.3 -40.45 188.35  
 132.54 2 46 7 2702.03 -35.94 77.36 248.50 53.23 3 31 9 2102.0 -40.44 69.35

DIFFERENTIAL CORRECTIONS  
 TDE 2.4702 TRA .0605 TC3-4.3180 BAU .8287 SGT 4971.8 SGR 1087.3 SG3 525.4 ST 3758.0 SR 951.5 SS 1753.9  
 RDE .6243 RRA .0855 RC3 -.6511 FAU .08502 RRT .9603 RRF .9662 RTF .9706 CRT .9986 CRS -.9988 CST -.9950  
 FDE 2.8707 FRA .6940 FC3-5.1852 BSP 16020 SGB 5089.3 R23 .1101 R13 .9721 LSA 4251.8 MSA 161.9 SSA 9.9  
 BOE 2.5479 BRA .1047 BC3 4.3668 FSP -1804 SG1 5080.6 SG2 296.8 THA 11.90 EL1 3876.3 EL2 48.8 ALF 14.19

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 10 1969

MELIOCENTRIC CONIC  
 RL 147.20 LAL .00 LOL 118.75 VL 27.437 GAL 1.44 AZL 85.34 HCA 226.73 SMA 126.35 ECC .16690 INC 4.6631 V1 30.266  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.267 GAP 5.37 AZP 93.20 TAL 172.78 TAP 39.51 RCA 105.26 APO 147.43 V2 34.825  
 RC 131.823 GL 36.81 GP -25.54 ZAL 81.50 ZAP 140.27 ETS 326.86 ZAE 129.73 ETE 202.22 ZAC 115.26 ETC 177.62 CLP-148.47

PLANETOCENTRIC CONIC  
 C3 13.850 VHL 3.722 DLA 48.75 RAL 20.20 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.712 DPA -19.28 RAP 27.52 ECC 1.2279  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.50 18 39 55 4199.46 -35.65 194.72 251.22 54.24 19 49 54 3599.5 -40.04 186.65  
 131.50 2 56 46 2704.98 -35.64 77.39 251.21 54.23 3 41 51 2105.0 -40.03 69.32  
 48.50 18 39 55 4199.46 -35.65 194.72 251.22 54.24 19 49 54 3599.5 -40.04 186.65  
 131.50 2 56 46 2704.98 -35.64 77.39 251.21 54.23 3 41 51 2105.0 -40.03 69.32  
 48.50 18 39 55 4199.46 -35.65 194.72 251.22 54.24 19 49 54 3599.5 -40.04 186.65  
 131.50 2 56 46 2704.98 -35.64 77.39 251.21 54.23 3 41 51 2105.0 -40.03 69.32

DIFFERENTIAL CORRECTIONS  
 TDE 2.4461 TRA .1956 TC3-4.5717 BAU .8531 SGT 5096.0 SGR 995.6 SG3 509.7 ST 3769.8 SR 874.5 SS 1680.1  
 RDE .5662 RRA .0965 RC3 -.5707 FAU .08149 RRT .9522 RRF .9547 RTF .9702 CRT .9991 CRS -.9979 CST -.9945  
 FDE 2.6529 FRA .8285 FC3-5.0938 BSP 16407 SGB 5192.4 R23 .0905 R13 .9712 LSA 4215.7 MSA 161.8 SSA 10.8  
 BOE 2.5108 BRA .2181 BC3 4.6072 FSP -1751 SG1 5183.8 SG2 298.9 THA 10.57 EL1 3869.7 EL2 36.5 ALF 13.05

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 493.300

RL 147.20 LAL .00 LOL 118.75 VL 27.411 GAL 1.69 AZL 85.56 HCA 229.90 SMA 126.18 ECC .16915 INC 4.4363 V1 30.266  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.255 GAP 5.69 AZP 92.86 TAL 171.65 TAP 41.55 RCA 104.83 APO 147.52 V2 34.833  
 RC 134.153 GL 35.03 GP -23.63 ZAL 79.58 ZAP 142.72 ETS 326.92 ZAE 129.72 ETE 200.15 ZAC 116.33 ETC 177.26 CLP-150.29

PLANETOCENTRIC CONIC

C3 13.635 VHL 3.693 DLA 47.94 RAL 23.73 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 4.821 DPA -17.03 RAP 27.83 ECC 1.2244  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.55 18 57 33 4187.40 -35.28 193.21 254.08 55.14 20 7 20 3587.4 -39.56 185.11  
 130.45 3 7 20 2710.21 -35.27 77.57 254.07 55.13 3 52 30 2110.2 -39.55 69.48  
 49.55 18 57 33 4187.40 -35.28 193.21 254.08 55.14 20 7 20 3587.4 -39.56 185.11  
 130.45 3 7 20 2710.21 -35.27 77.57 254.07 55.13 3 52 30 2110.2 -39.55 69.48  
 49.55 18 57 33 4187.40 -35.28 193.21 254.08 55.14 20 7 20 3587.4 -39.56 185.11  
 130.45 3 7 20 2710.21 -35.27 77.57 254.07 55.13 3 52 30 2110.2 -39.55 69.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4184 TRA .3376 TC3-4.7839 BAU .8767 SGT 5213.0 SGR 918.4 SG3 491.7 ST 3761.4 SR 810.1 SS 1601.2  
 RDE .5199 RRA .1046 RC3 -.4954 FAU .07759 RRT .9419 RRF .9408 RTF .9700 CRT .9995 CRS -.9965 CST -.9940  
 FDE 2.4397 FRA .9478 FC3-4.9266 BSP 16779 SGB 5293.3 R23 .0715 R13 .9707 LSA 4164.3 MSA 161.8 SSA 11.7  
 BOE 2.4737 BRA .3535 BC3 4.8095 FSP -1689 SGI 5284.5 SG2 304.3 THA 9.45 EL1 3847.5 EL2 24.6 ALF 12.15

LAUNCH DATE JAN 19 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 499.254

RL 147.20 LAL .00 LOL 118.75 VL 27.384 GAL 1.95 AZL 85.77 HCA 233.06 SMA 126.00 ECC .17159 INC 4.2295 V1 30.266  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.243 GAP 6.00 AZP 92.54 TAL 170.50 TAP 43.56 RCA 104.38 APO 147.62 V2 34.841  
 RC 136.471 GL 33.27 GP -21.94 ZAL 77.56 ZAP 145.00 ETS 326.94 ZAE 129.63 ETE 198.35 ZAC 117.52 ETC 176.95 CLP-152.01

PLANETOCENTRIC CONIC

C3 13.537 VHL 3.679 DLA 47.14 RAL 27.26 RAD 6567.5 VEL 11.616 PTH 2.04 VHP 4.945 DPA -14.93 RAP 28.34 ECC 1.2228  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.59 19 15 15 4176.78 -34.83 191.80 257.06 55.96 20 24 51 3576.8 -39.01 183.68  
 129.41 3 17 45 2717.70 -34.81 77.92 257.05 55.94 4 3 2 2117.7 -39.00 69.80  
 50.59 19 15 15 4176.78 -34.83 191.80 257.06 55.96 20 24 51 3576.8 -39.01 183.68  
 129.41 3 17 45 2717.70 -34.81 77.92 257.05 55.94 4 3 2 2117.7 -39.00 69.80  
 50.59 19 15 15 4176.78 -34.83 191.80 257.06 55.96 20 24 51 3576.8 -39.01 183.68  
 129.41 3 17 45 2717.70 -34.81 77.92 257.05 55.94 4 3 2 2117.7 -39.00 69.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3879 TRA .4880 TC3-4.9481 BAU .8988 SGT 5322.9 SGR 854.3 SG3 472.4 ST 3735.1 SR 757.1 SS 1520.5  
 RDE .4837 RRA .1109 RC3 -.4256 FAU .07340 RRT .9291 RRF .9245 RTF .9699 CRT .9998 CRS -.9944 CST -.9934  
 FDE 2.2367 FRA 1.0548 FC3-4.6940 BSP 17143 SGB 5391.0 R23 .0549 R13 .9704 LSA 4100.0 MSA 162.0 SSA 12.5  
 BOE 2.4363 BRA .5005 BC3 4.9664 FSP -1624 SGI 5381.9 SG2 312.6 THA 8.51 EL1 3811.1 EL2 14.9 ALF 11.46

LAUNCH DATE JAN 19 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 505.190

RL 147.20 LAL .00 LOL 118.75 VL 27.357 GAL 2.23 AZL 85.96 HCA 236.23 SMA 125.82 ECC .17420 INC 4.0392 V1 30.266  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.232 GAP 6.33 AZP 92.25 TAL 169.33 TAP 45.56 RCA 103.90 APO 147.74 V2 34.850  
 RC 138.775 GL 31.54 GP -20.45 ZAL 75.46 ZAP 147.11 ETS 326.91 ZAE 129.48 ETE 196.78 ZAC 118.80 ETC 176.70 CLP-153.66

PLANETOCENTRIC CONIC

C3 13.549 VHL 3.681 DLA 46.33 RAL 30.76 RAD 6567.5 VEL 11.616 PTH 2.04 VHP 5.081 DPA -12.98 RAP 29.04 ECC 1.2230  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.66 19 33 3 4167.35 -34.29 190.47 260.16 56.70 20 42 30 3567.4 -38.39 182.35  
 128.34 3 27 56 2727.50 -34.28 78.42 260.15 56.69 4 13 23 2127.5 -38.39 70.30  
 51.66 19 33 3 4167.35 -34.29 190.47 260.16 56.70 20 42 30 3567.4 -38.39 182.35  
 128.34 3 27 56 2727.50 -34.28 78.42 260.15 56.69 4 13 23 2127.5 -38.39 70.30  
 51.66 19 33 3 4167.35 -34.29 190.47 260.16 56.70 20 42 30 3567.4 -38.39 182.35  
 128.34 3 27 56 2727.50 -34.28 78.42 260.15 56.69 4 13 23 2127.5 -38.39 70.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3544 TRA .6491 TC3-5.0602 BAU .9189 SGT 5426.7 SGR 801.8 SG3 452.5 ST 3692.7 SR 713.6 SS 1439.7  
 RDE .4556 RRA .1165 RC3 -.3618 FAU .06901 RRT .9137 RRF .9061 RTF .9698 CRT .9998 CRS -.9914 CST -.9927  
 FDE 2.0455 FRA 1.1532 FC3-4.4097 BSP 17428 SGB 5485.6 R23 .0415 R13 .9702 LSA 4023.9 MSA 162.9 SSA 13.3  
 BOE 2.3981 BRA .6595 BC3 5.0731 FSP -1547 SGI 5476.1 SG2 322.9 THA 7.72 EL1 3761.0 EL2 14.7 ALF 10.93

LAUNCH DATE JAN 19 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC

DISTANCE 511.106

RL 147.20 LAL .00 LOL 118.75 VL 27.329 GAL 2.52 AZL 86.14 HCA 239.40 SMA 125.64 ECC .17701 INC 3.8624 V1 30.266  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.220 GAP 6.65 AZP 91.97 TAL 168.13 TAP 47.53 RCA 103.40 APO 147.88 V2 34.860  
 RC 141.067 GL 29.83 GP -19.12 ZAL 73.30 ZAP 149.08 ETS 326.82 ZAE 129.31 ETE 195.42 ZAC 120.18 ETC 176.48 CLP-155.22

PLANETOCENTRIC CONIC

C3 13.666 VHL 3.697 DLA 45.50 RAL 34.24 RAD 6567.5 VEL 11.621 PTH 2.04 VHP 5.229 DPA -11.15 RAP 29.90 ECC 1.2249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.76 19 50 58 4158.84 -33.68 189.20 263.34 57.38 21 0 17 3558.8 -37.71 181.10  
 127.24 3 37 46 2739.75 -33.67 79.09 263.34 57.37 4 23 25 2139.7 -37.70 70.99  
 52.76 19 50 58 4158.84 -33.68 189.20 263.34 57.38 21 0 17 3558.8 -37.71 181.10  
 127.24 3 37 46 2739.75 -33.67 79.09 263.34 57.37 4 23 25 2139.7 -37.70 70.99  
 52.76 19 50 58 4158.84 -33.68 189.20 263.34 57.38 21 0 17 3558.8 -37.71 181.10  
 127.24 3 37 46 2739.75 -33.67 79.09 263.34 57.37 4 23 25 2139.7 -37.70 70.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3131 TRA .8158 TC3-5.1327 BAU .9394 SGT 5523.4 SGR 758.0 SG3 432.2 ST 3627.5 SR 676.8 SS 1355.8  
 RDE .4336 RRA .1207 RC3 -.3074 FAU .06484 RRT .8965 RRF .8859 RTF .9700 CRT .9993 CRS -.9873 CST -.9919  
 FDE 1.8617 FRA 1.2363 FC3-4.1078 BSP 17777 SGB 5575.2 R23 .0296 R13 .9703 LSA 3927.0 MSA 164.0 SSA 14.1  
 BOE 2.3534 BRA .8247 BC3 5.1419 FSP -1481 SGI 5565.2 SG2 -333.3 THA 7.04 EL1 3690.0 EL2 25.1 ALF 10.56

LAUNCH DATE JAN 19 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 517.002

RL 147.20 LAL .00 LOL 118.75 VL 27.300 GAL 2.83 AZL 86.30 HCA 242.57 SMA 125.45 ECC .18003 INC 3.6967 V1 30.266  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.209 GAP 6.99 AZP 91.70 TAL 166.91 TAP 49.48 RCA 102.87 APO 148.04 V2 34.870  
 RC 143.344 GL 28.15 GP -17.94 ZAL 71.09 ZAP 150.92 ETS 326.65 ZAE 129.11 ETE 194.23 ZAC 121.65 ETC 176.27 CLP-156.72

PLANETOCENTRIC CONIC

C3 13.886 VHL 3.726 DLA 44.65 RAL 37.68 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 5.387 DPA -9.42 RAP 30.90 ECC 1.2285  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.91 20 9 1 4151.09 -33.00 187.97 266.60 58.02 21 18 12 3551.1 -36.95 179.89  
 126.09 3 47 9 2754.51 -32.99 79.93 266.59 58.01 4 33 4 2154.5 -36.94 71.86  
 53.91 20 9 1 4151.09 -33.00 187.97 266.60 58.02 21 18 12 3551.1 -36.95 179.89  
 126.09 3 47 9 2754.51 -32.99 79.93 266.59 58.01 4 33 4 2154.5 -36.94 71.86  
 53.91 20 9 1 4151.09 -33.00 187.97 266.60 58.02 21 18 12 3551.1 -36.95 179.89  
 126.09 3 47 9 2754.51 -32.99 79.93 266.59 58.01 4 33 4 2154.5 -36.94 71.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2669 TRA .9926 TC3-5.1558 BAU .9584 SGT 5613.8 SGR 722.3 SG3 412.0 ST 3546.2 SR 646.5 SS 1273.0  
 RDE .4171 RRA .1250 RC3 -.2595 FAU .06068 RRT .8775 RRF .8645 RTF .9702 CRT .9981 CRS -.9817 CST -.9911  
 FDE 1.6898 FRA 1.3115 FC3-3.7828 BSP 18091 SGB 5660.1 R23 .0208 R13 .9704 LSA 3819.2 MSA 166.3 SSA 14.7  
 BOE 2.3049 BRA 1.0004 BC3 5.1623 FSP -1412 SG1 5649.6 SG2 344.2 THA 6.47 EL1 3604.5 EL2 39.1 ALF 10.31

LAUNCH DATE JAN 19 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 522.877

RL 147.20 LAL .00 LOL 118.75 VL 27.272 GAL 3.16 AZL 86.46 HCA 245.75 SMA 125.27 ECC .18327 INC 3.5402 V1 30.266  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.197 GAP 7.33 AZP 91.46 TAL 165.67 TAP 51.42 RCA 102.31 APO 148.23 V2 34.880  
 RC 145.608 GL 26.49 GP -16.88 ZAL 68.83 ZAP 152.64 ETS 326.40 ZAE 128.91 ETE 193.19 ZAC 123.19 ETC 176.09 CLP-158.15

PLANETOCENTRIC CONIC

C3 14.213 VHL 3.770 DLA 43.78 RAL 41.07 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 5.556 DPA -7.79 RAP 32.02 ECC 1.2339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.10 20 27 10 4143.95 -32.24 186.76 269.92 58.61 21 36 14 3544.0 -36.13 178.72  
 124.90 3 56 1 2771.88 -32.23 80.95 269.91 58.60 4 42 13 2171.9 -36.12 72.91  
 55.10 20 27 10 4143.95 -32.24 186.76 269.92 58.61 21 36 14 3544.0 -36.13 178.72  
 124.90 3 56 1 2771.88 -32.23 80.95 269.91 58.60 4 42 13 2171.9 -36.12 72.91  
 55.10 20 27 10 4143.95 -32.24 186.76 269.92 58.61 21 36 14 3544.0 -36.13 178.72  
 124.90 3 56 1 2771.88 -32.23 80.95 269.91 58.60 4 42 13 2171.9 -36.12 72.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2145 TRA 1.1787 TC3-5.1346 BAU .9765 SGT 5698.2 SGR 693.2 SG3 392.0 ST 3448.8 SR 621.1 SS 1191.2  
 RDE .4051 RRA .1294 RC3 -.2189 FAU .05667 RRT .8574 RRF .8425 RTF .9705 CRT .9960 CRS -.9742 CST -.9901  
 FDE 1.5283 FRA 1.3785 FC3-3.4520 BSP 18407 SGB 5740.2 R23 .0139 R13 .9706 LSA 3697.3 MSA 169.8 SSA 15.3  
 BOE 2.2512 BRA 1.1857 BC3 5.1393 FSP -1348 SG1 5729.3 SG2 354.8 THA 5.98 EL1 3503.8 EL2 54.6 ALF 10.17

LAUNCH DATE JAN 19 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 528.728

RL 147.20 LAL .00 LOL 118.75 VL 27.243 GAL 3.50 AZL 86.61 HCA 248.92 SMA 125.08 ECC .18675 INC 3.3912 V1 30.266  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.186 GAP 7.68 AZP 91.22 TAL 164.42 TAP 53.35 RCA 101.72 APO 148.44 V2 34.891  
 RC 147.857 GL 24.85 GP -15.94 ZAL 66.56 ZAP 154.26 ETS 326.05 ZAE 128.71 ETE 192.28 ZAC 124.81 ETC 175.91 CLP-159.52

PLANETOCENTRIC CONIC

C3 14.650 VHL 3.828 DLA 42.87 RAL 44.39 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 5.735 DPA -6.24 RAP 33.25 ECC 1.2411  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.36 20 45 28 4137.16 -31.41 185.56 273.28 59.17 21 54 25 3537.2 -35.24 177.57  
 123.64 4 4 14 2792.10 -31.40 82.17 273.27 59.16 4 50 46 2192.1 -35.22 74.17  
 56.36 20 45 28 4137.16 -31.41 185.56 273.28 59.17 21 54 25 3537.2 -35.24 177.57  
 123.64 4 4 14 2792.10 -31.40 82.17 273.27 59.16 4 50 46 2192.1 -35.22 74.17  
 56.36 20 45 28 4137.16 -31.41 185.56 273.28 59.17 21 54 25 3537.2 -35.24 177.57  
 123.64 4 4 14 2792.10 -31.40 82.17 273.27 59.16 4 50 46 2192.1 -35.22 74.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1601 TRA 1.3786 TC3-5.0593 BAU .9916 SGT 5777.9 SGR 670.2 SG3 372.8 ST 3344.0 SR 600.6 SS 1115.0  
 RDE .3974 RRA .1347 RC3 -.1830 FAU .05261 RRT .8369 RRF .8210 RTF .9706 CRT .9927 CRS -.9646 CST -.9890  
 FDE 1.3817 FRA 1.4422 FC3-3.1091 BSP 18618 SGB 5816.6 R23 .0099 R13 .9707 LSA 3571.5 MSA 174.8 SSA 15.7  
 BOE 2.1963 BRA 1.3851 BC3 5.0627 FSP -1277 SG1 5805.2 SG2 365.1 THA 5.57 EL1 3396.8 EL2 71.3 ALF 10.11

LAUNCH DATE JAN 19 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 534.554

RL 147.20 LAL .00 LOL 118.75 VL 27.214 GAL 3.86 AZL 86.75 HCA 252.10 SMA 124.90 ECC .19049 INC 3.2484 V1 30.266  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.176 GAP 8.04 AZP 91.00 TAL 163.16 TAP 55.26 RCA 101.10 APO 148.69 V2 34.902  
 RC 150.092 GL 23.24 GP -15.09 ZAL 64.27 ZAP 155.79 ETS 325.59 ZAE 128.51 ETE 191.49 ZAC 126.49 ETC 175.73 CLP-160.85

PLANETOCENTRIC CONIC

C3 15.204 VHL 3.899 DLA 41.94 RAL 47.63 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 5.924 DPA -4.77 RAP 34.58 ECC 1.2502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.66 21 3 50 4130.65 -30.51 184.37 276.67 59.70 22 12 41 3530.6 -34.28 176.43  
 122.34 4 11 43 2815.20 -30.50 83.58 276.66 59.68 4 58 38 2215.2 -34.27 75.64  
 57.66 21 3 50 4130.65 -30.51 184.37 276.67 59.70 22 12 41 3530.6 -34.28 176.43  
 122.34 4 11 43 2815.20 -30.50 83.58 276.66 59.68 4 58 38 2215.2 -34.27 75.64  
 57.66 21 3 50 4130.65 -30.51 184.37 276.67 59.70 22 12 41 3530.6 -34.28 176.43  
 122.34 4 11 43 2815.20 -30.50 83.58 276.66 59.68 4 58 38 2215.2 -34.27 75.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0967 TRA 1.5858 TC3-4.9536 BAU 1.0074 SGT 5850.6 SGR 650.8 SG3 354.0 ST 3223.1 SR 582.4 SS 1038.9  
 RDE .3923 RRA .1402 RC3 -.1545 FAU .04892 RRT .8166 RRF .7997 RTF .9709 CRT .9879 CRS -.9522 CST -.9878  
 FDE 1.2418 FRA 1.4967 FC3-2.7856 BSP 18904 SGB 5886.6 R23 .0063 R13 .9710 LSA 3431.3 MSA 181.5 SSA 15.9  
 BOE 2.1331 BRA 1.5920 BC3 4.9560 FSP -1217 SG1 5874.7 SG2 374.1 THA 5.21 EL1 3274.1 EL2 88.9 ALF 10.13

LAUNCH DATE JAN 19 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 540.353

RL 147.20 LAL .00 LOL 118.75 VL 27.184 GAL 4.24 AZL 86.89 MCA 255.28 SMA 124.71 ECC .19451 INC 3.1105 V1 30.266  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.165 GAP 8.41 AZP 90.79 TAL 161.88 TAP 57.16 RCA 100.45 APO 148.96 V2 34.914  
 RC 152.312 GL 21.66 GP -14.33 ZAL 61.99 ZAP 157.24 ETS 325.02 ZAE 128.32 ETE 190.79 ZAC 128.22 ETC 175.54 CLP-162.13

PLANETOCENTRIC CONIC

C3 15.885 VHL 3.986 DLA 40.99 RAL 50.78 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 6.124 DPA -3.37 RAP 35.99 ECC 1.2614  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.03 21 22 18 4124.26 -29.55 183.18 280.07 60.19 22 31 2 3524.3 -33.27 175.29  
 120.97 4 18 23 2841.36 -29.54 85.21 280.06 60.18 5 5 44 2241.4 -33.26 77.32  
 59.03 21 22 18 4124.26 -29.55 183.18 280.07 60.19 22 31 2 3524.3 -33.27 175.29  
 120.97 4 18 23 2841.36 -29.54 85.21 280.06 60.18 5 5 44 2241.4 -33.26 77.32  
 59.03 21 22 18 4124.26 -29.55 183.18 280.07 60.19 22 31 2 3524.3 -33.27 175.29  
 120.97 4 18 23 2841.36 -29.54 85.21 280.06 60.18 5 5 44 2241.4 -33.26 77.32

DIFFERENTIAL CORRECTIONS

TDE 2.0281 TRA 1.8045 TC3-4.8094 BAU 1.0217  
 RDE .3898 RRA .1465 RC3 -.1307 FAU .04536  
 FDE 1.1123 FRA 1.5464 FC3-2.4723 BSP 19166  
 BDE 2.0652 BRA 1.8104 BC3 4.8111 FSP -1159

MID-COURSE EXECUTION ACCURACY

SGT 5916.7 SGR 634.6 SG3 335.9  
 RRT .7969 RRF .7795 RTF .9711  
 SGB 5950.6 R23 .0040 R13 .9712  
 SG1 5938.3 SG2 382.0 THA 4.91

ORBIT DETERMINATION ACCURACY

ST 3094.6 SR 566.6 SS 967.1  
 CRT .9812 CRS -.9368 CST -.9864  
 LSA 3285.8 MSA 190.0 SSA 16.0  
 EL1 3144.2 EL2 107.6 ALF 10.20

LAUNCH DATE JAN 19 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 546.123

RL 147.20 LAL .00 LOL 118.75 VL 27.154 GAL 4.65 AZL 87.02 MCA 258.47 SMA 124.52 ECC .19883 INC 2.9765 V1 30.266  
 RP 108.90 LAP -2.92 LOP 17.20 VP 37.154 GAP 8.80 AZP 90.60 TAL 160.59 TAP 59.06 RCA 99.76 APO 149.28 V2 34.926  
 RC 154.516 GL 20.11 GP -13.64 ZAL 59.72 ZAP 158.61 ETS 324.30 ZAE 128.14 ETE 190.18 ZAC 130.01 ETC 175.34 CLP-163.37

PLANETOCENTRIC CONIC

C3 16.703 VHL 4.087 DLA 40.01 RAL 53.83 RAD 6567.7 VEL 11.751 PTH 2.07 VHP 6.334 DPA -2.03 RAP 37.49 ECC 1.2749  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.46 21 40 53 4117.72 -28.53 181.96 283.48 60.67 22 49 31 3517.7 -32.20 174.13  
 119.54 4 24 7 2870.81 -28.52 87.06 283.48 60.65 5 11 58 2270.8 -32.19 79.24  
 60.46 21 40 53 4117.72 -28.53 181.96 283.48 60.67 22 49 31 3517.7 -32.20 174.13  
 119.54 4 24 7 2870.81 -28.52 87.06 283.48 60.65 5 11 58 2270.8 -32.19 79.24  
 60.46 21 40 53 4117.72 -28.53 181.96 283.48 60.67 22 49 31 3517.7 -32.20 174.13  
 119.54 4 24 7 2870.81 -28.52 87.06 283.48 60.65 5 11 58 2270.8 -32.19 79.24

DIFFERENTIAL CORRECTIONS

TDE 1.9549 TRA 2.0355 TC3-4.6325 BAU 1.0347  
 RDE .3896 RRA .1538 RC3 -.1113 FAU .04197  
 FDE .9930 FRA 1.5925 FC3-2.1754 BSP 19414  
 BDE 1.9934 BRA 2.0413 BC3 4.6339 FSP -1103

MID-COURSE EXECUTION ACCURACY

SGT 5977.5 SGR 621.2 SG3 318.6  
 RRT .7784 RRF .7609 RTF .9713  
 SGB 6009.7 R23 .0025 R13 .9713  
 SG1 5997.1 SG2 388.7 THA 4.64

ORBIT DETERMINATION ACCURACY

ST 2962.0 SR 552.7 SS 900.2  
 CRT .9722 CRS -.9178 CST -.9850  
 LSA 3138.3 MSA 200.4 SSA 16.0  
 EL1 3010.5 EL2 127.2 ALF 10.30

LAUNCH DATE JAN 19 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 551.860

RL 147.20 LAL .00 LOL 118.75 VL 27.124 GAL 5.08 AZL 87.15 MCA 261.65 SMA 124.33 ECC .20348 INC 2.8454 V1 30.266  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.144 GAP 9.20 AZP 90.41 TAL 159.30 TAP 60.95 RCA 99.03 APO 149.63 V2 34.938  
 RC 156.704 GL 18.61 GP -13.02 ZAL 57.48 ZAP 159.91 ETS 323.44 ZAE 127.96 ETE 189.65 ZAC 131.85 ETC 175.12 CLP-164.57

PLANETOCENTRIC CONIC

C3 17.672 VHL 4.204 DLA 39.02 RAL 56.77 RAD 6567.7 VEL 11.792 PTH 2.08 VHP 6.557 DPA -.74 RAP 39.06 ECC 1.2908  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.95 21 59 35 4110.96 -27.46 180.71 286.90 61.11 23 8 5 3511.0 -31.08 172.95  
 118.05 4 28 53 2903.63 -27.45 89.14 286.89 61.10 5 17 16 2303.6 -31.07 81.38  
 61.95 21 59 35 4110.96 -27.46 180.71 286.90 61.11 23 8 5 3511.0 -31.08 172.95  
 118.05 4 28 53 2903.63 -27.45 89.14 286.89 61.10 5 17 16 2303.6 -31.07 81.38  
 61.95 21 59 35 4110.96 -27.46 180.71 286.90 61.11 23 8 5 3511.0 -31.08 172.95  
 118.05 4 28 53 2903.63 -27.45 89.14 286.89 61.10 5 17 16 2303.6 -31.07 81.38

DIFFERENTIAL CORRECTIONS

TDE 1.8816 TRA 2.2833 TC3-4.4184 BAU 1.0441  
 RDE .3917 RRA .1625 RC3 -.0944 FAU .03858  
 FDE .8864 FRA 1.6383 FC3-1.8900 BSP 19552  
 BDE 1.9219 BRA 2.2891 BC3 4.4194 FSP -1044

MID-COURSE EXECUTION ACCURACY

SGT 6035.0 SGR 610.4 SG3 302.3  
 RRT .7617 RRF .7446 RTF .9714  
 SGB 6065.8 R23 .0024 R13 .9714  
 SG1 6052.9 SG2 394.4 THA 4.42

ORBIT DETERMINATION ACCURACY

ST 2834.2 SR 540.7 SS 841.3  
 CRT .9606 CRS -.8953 CST -.9835  
 LSA 2997.9 MSA 212.4 SSA 15.9  
 EL1 2881.6 EL2 147.7 ALF 10.41

LAUNCH DATE JAN 19 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 557.561

RL 147.20 LAL .00 LOL 118.75 VL 27.095 GAL 5.53 AZL 87.28 MCA 264.84 SMA 124.14 ECC .20849 INC 2.7163 V1 30.266  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.134 GAP 9.61 AZP 90.24 TAL 158.01 TAP 62.85 RCA 98.26 APO 150.02 V2 34.951  
 RC 158.875 GL 17.14 GP -12.46 ZAL 55.28 ZAP 161.15 ETS 322.40 ZAE 127.79 ETE 189.17 ZAC 133.72 ETC 174.87 CLP-165.75

PLANETOCENTRIC CONIC

C3 18.811 VHL 4.337 DLA 38.01 RAL 59.59 RAD 6567.8 VEL 11.840 PTH 2.10 VHP 6.793 DPA .49 RAP 40.69 ECC 1.3096  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.50 22 18 24 4103.78 -26.34 179.43 290.31 61.54 23 26 47 3503.8 -29.92 171.73  
 116.50 4 32 35 2940.00 -26.33 91.47 290.30 61.53 5 21 35 2340.0 -29.91 83.77  
 63.50 22 18 24 4103.78 -26.34 179.43 290.31 61.54 23 26 47 3503.8 -29.92 171.73  
 116.50 4 32 35 2940.00 -26.33 91.47 290.30 61.53 5 21 35 2340.0 -29.91 83.77  
 63.50 22 18 24 4103.78 -26.34 179.43 290.31 61.54 23 26 47 3503.8 -29.92 171.73  
 116.50 4 32 35 2940.00 -26.33 91.47 290.30 61.53 5 21 35 2340.0 -29.91 83.77

DIFFERENTIAL CORRECTIONS

TDE 1.8000 TRA 2.5406 TC3-4.1910 BAU 1.0542  
 RDE .3950 RRA .1718 RC3 -.0816 FAU .03551  
 FDE .7855 FRA 1.6782 FC3-1.6345 BSP 19781  
 BDE 1.8428 BRA 2.5464 BC3 4.1918 FSP -995

MID-COURSE EXECUTION ACCURACY

SGT 6084.2 SGR 600.3 SG3 286.6  
 RRT .7463 RRF .7295 RTF .9715  
 SGB 6113.8 R23 .0020 R13 .9715  
 SG1 6100.8 SG2 398.5 THA 4.23

ORBIT DETERMINATION ACCURACY

ST 2701.7 SR 529.0 SS 785.5  
 CRT .9457 CRS -.8681 CST -.9820  
 LSA 2853.9 MSA 226.1 SSA 15.6  
 EL1 2747.8 EL2 169.0 ALF 10.53

LAUNCH DATE JAN 19 1969 FLIGHT TIME 198.00 ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC DISTANCE 563.221  
 RL 147.20 LAL .00 LOL 118.75 VL 27.065 GAL 6.01 AZL 87.41 HCA 268.03 SMA 123.95 ECC .21390 INC 2.5885 V1 30.266  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.124 GAP 10.05 AZP 90.09 TAL 156.71 TAP 64.74 RCA 97.44 APO 150.46 V2 34.964  
 RC 161.027 GL 15.72 GP -11.95 ZAL 53.12 ZAP 162.33 ETS 321.16 ZAE 127.63 ETE 188.75 ZAC 135.63 ETC 174.60 CLP-166.89

PLANETOCENTRIC CONIC  
 C3 20.138 VHL 4.488 DLA 37.00 RAL 62.30 RAD 6567.8 VEL 11.896 PTH 2.11 VHP 7.042 DPA 1.68 RAP 42.38 ECC 1.3314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.12 22 37 25 4095.83 -25.19 178.09 293.70 61.95 23 45 41 3495.8 -28.73 170.46  
 114.88 4 35 7 2980.25 -25.17 94.06 293.70 61.93 5 24 47 2380.2 -28.72 86.43  
 65.12 22 37 25 4095.83 -25.19 178.09 293.70 61.95 23 45 41 3495.8 -28.73 170.46  
 114.88 4 35 7 2980.25 -25.17 94.06 293.70 61.93 5 24 47 2380.2 -28.72 86.43  
 65.12 22 37 25 4095.83 -25.19 178.09 293.70 61.95 23 45 41 3495.8 -28.73 170.46  
 114.88 4 35 7 2980.25 -25.17 94.06 293.70 61.93 5 24 47 2380.2 -28.72 86.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7150 TRA 2.8126 TC3-3.9447 BAU 1.0622 SGT 6127.7 SGR 591.1 SG3 271.8 ST 2574.1 SR 517.6 SS 735.7  
 RDE .3996 RRA .1824 RC3 -.0710 FAU .03258 RRT .7327 RRF .7162 RTF .9716 CRT .9271 CRS -.8364 CST -.9806  
 FDE .6930 FRA 1.7164 FC3-1.4006 BSP 19983 SGB 6156.2 R23 .0018 R13 .9717 LSA 2716.0 MSA 241.2 SSA 15.3  
 BOE 1.7610 BRA 2.8185 BC3 3.9454 FSP -947 SG1 6143.1 SG2 401.2 THA 4.06 EL1 2618.7 EL2 190.7 ALF 10.62

LAUNCH DATE JAN 19 1969 FLIGHT TIME 200.00 ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC DISTANCE 568.836  
 RL 147.20 LAL .00 LOL 118.75 VL 27.034 GAL 6.52 AZL 87.54 HCA 271.22 SMA 123.76 ECC .21974 INC 2.4611 V1 30.266  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.115 GAP 10.51 AZP 89.95 TAL 155.41 TAP 66.64 RCA 96.57 APO 150.96 V2 34.977  
 RC 163.161 GL 14.34 GP -11.49 ZAL 51.02 ZAP 163.46 ETS 319.70 ZAE 127.48 ETE 188.38 ZAC 137.57 ETC 174.29 CLP-168.01

PLANETOCENTRIC CONIC  
 C3 21.680 VHL 4.656 DLA 35.99 RAL 64.88 RAD 6567.9 VEL 11.961 PTH 2.13 VHP 7.307 DPA 2.81 RAP 44.13 ECC 1.3568  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.79 22 56 41 4086.98 -24.00 176.69 297.09 62.33 24 4 48 3487.0 -27.50 169.12  
 113.21 4 36 27 3024.48 -23.99 96.94 297.08 62.32 5 26 51 2424.5 -27.49 89.37  
 66.79 22 56 41 4086.98 -24.00 176.69 297.09 62.33 24 4 48 3487.0 -27.50 169.12  
 113.21 4 36 27 3024.48 -23.99 96.94 297.08 62.32 5 26 51 2424.5 -27.49 89.37  
 66.79 22 56 41 4086.98 -24.00 176.69 297.09 62.33 24 4 48 3487.0 -27.50 169.12  
 113.21 4 36 27 3024.48 -23.99 96.94 297.08 62.32 5 26 51 2424.5 -27.49 89.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6273 TRA 3.1005 TC3-3.6856 BAU 1.0684 SGT 6166.4 SGR 582.5 SG3 257.8 ST 2453.9 SR 506.6 SS 692.2  
 RDE .4053 RRA .1941 RC3 -.0623 FAU .02979 RRT .7210 RRF .7050 RTF .9718 CRT .9044 CRS -.8003 CST -.9794  
 FDE .6088 FRA 1.7536 FC3-1.1895 BSP 20172 SGB 6193.8 R23 .0019 R13 .9718 LSA 2586.7 MSA 257.0 SSA 15.0  
 BOE 1.6770 BRA 3.1065 BC3 3.6862 FSP -902 SG1 6180.7 SG2 402.7 THA 3.91 EL1 2496.6 EL2 212.5 ALF 10.65

LAUNCH DATE JAN 19 1969 FLIGHT TIME 202.00 ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC DISTANCE 574.399  
 RL 147.20 LAL .00 LOL 118.75 VL 27.004 GAL 7.06 AZL 87.67 HCA 274.42 SMA 123.58 ECC .22605 INC 2.3332 V1 30.266  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.105 GAP 11.00 AZP 89.82 TAL 154.12 TAP 68.54 RCA 95.64 APO 151.51 V2 34.990  
 RC 165.276 GL 13.02 GP -11.07 ZAL 48.99 ZAP 164.53 ETS 317.98 ZAE 127.32 ETE 188.04 ZAC 139.53 ETC 173.94 CLP-169.12

PLANETOCENTRIC CONIC  
 C3 23.464 VHL 4.844 DLA 34.98 RAL 67.33 RAD 6568.0 VEL 12.035 PTH 2.15 VHP 7.588 DPA 3.90 RAP 45.92 ECC 1.3862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.54 23 16 19 4076.69 -22.78 175.19 300.46 62.70 24 24 15 3476.7 -26.25 167.68  
 111.46 4 36 24 3073.19 -22.77 100.11 300.46 62.69 5 27 37 2473.2 -26.24 92.61  
 68.54 23 16 19 4076.69 -22.78 175.19 300.46 62.70 24 24 15 3476.7 -26.25 167.68  
 111.46 4 36 24 3073.19 -22.77 100.11 300.46 62.69 5 27 37 2473.2 -26.24 92.61  
 68.54 23 16 19 4076.69 -22.78 175.19 300.46 62.70 24 24 15 3476.7 -26.25 167.68  
 111.46 4 36 24 3073.19 -22.77 100.11 300.46 62.69 5 27 37 2473.2 -26.24 92.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.5372 TRA 3.4053 TC3-3.4176 BAU 1.0722 SGT 6199.8 SGR 574.1 SG3 244.6 ST 2343.3 SR 495.5 SS 654.9  
 RDE .4120 RRA .2070 RC3 -.0549 FAU .02712 RRT .7111 RRF .6955 RTF .9719 CRT .8771 CRS -.7600 CST -.9785  
 FDE .5320 FRA 1.7901 FC3-1.0008 BSP 20331 SGB 6226.3 R23 .0020 R13 .9720 LSA 2467.9 MSA 273.1 SSA 14.6  
 BOE 1.5914 BRA 3.4116 BC3 3.4180 FSP -858 SG1 6213.2 SG2 402.7 THA 3.78 EL1 2383.6 EL2 234.0 ALF 10.61

LAUNCH DATE JAN 19 1969 FLIGHT TIME 204.00 ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC DISTANCE 579.904  
 RL 147.20 LAL .00 LOL 118.75 VL 26.974 GAL 7.64 AZL 87.80 HCA 277.61 SMA 123.39 ECC .23289 INC 2.2041 V1 30.266  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.096 GAP 11.51 AZP 89.71 TAL 152.84 TAP 70.46 RCA 94.66 APO 152.13 V2 35.003  
 RC 167.370 GL 11.74 GP -10.68 ZAL 47.02 ZAP 165.54 ETS 315.96 ZAE 127.18 ETE 187.75 ZAC 141.52 ETC 173.53 CLP-170.21

PLANETOCENTRIC CONIC  
 C3 25.528 VHL 5.052 DLA 33.98 RAL 69.66 RAD 6568.0 VEL 12.120 PTH 2.17 VHP 7.888 DPA 4.94 RAP 47.76 ECC 1.4201  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.37 23 36 24 4064.60 -21.55 173.55 303.82 63.06 24 44 9 3464.6 -24.98 166.11  
 109.63 4 34 53 3126.68 -21.54 103.63 303.81 63.05 5 27 0 2526.7 -24.97 96.18  
 70.37 23 36 24 4064.60 -21.55 173.55 303.82 63.06 24 44 9 3464.6 -24.98 166.11  
 109.63 4 34 53 3126.68 -21.54 103.63 303.81 63.05 5 27 0 2526.7 -24.97 96.18  
 110.00 5 5 6 3034.52 -24.20 97.84 305.22 65.09 5 55 41 2434.5 -27.35 90.09  
 110.00 4 9 18 3204.77 -18.93 108.24 302.34 60.99 5 2 43 2604.8 -22.65 101.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.4477 TRA 3.7318 TC3-3.1402 BAU 1.0718 SGT 6229.8 SGR 566.1 SG3 232.4 ST 2246.9 SR 484.5 SS 624.6  
 RDE .4197 RRA .2213 RC3 -.0481 FAU .02449 RRT .7033 RRF .6883 RTF .9721 CRT .8455 CRS -.7172 CST -.9782  
 FDE .4639 FRA 1.8282 FC3 -.8304 BSP 20402 SGB 6255.5 R23 .0025 R13 .9721 LSA 2364.3 MSA 288.7 SSA 14.2  
 BOE 1.5073 BRA 3.7383 BC3 3.1406 FSP -813 SG1 6242.6 SG2 401.6 THA 3.67 EL1 2284.4 EL2 254.4 ALF 10.46

LAUNCH DATE JAN 19 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 13 1969

Heliocentric Conic  
 RL 147.20 LAL .00 LOL 118.75 VL 26.945 GAL 8.25 AZL 87.93 HCA 280.81 SMA 123.21 ECC .24031 INC 2.0730 V1 30.266  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.087 GAP 12.05 AZP 89.61 TAL 151.58 TAP 72.39 RCA 93.60 APO 152.81 V2 35.016  
 RC 169.445 GL 10.52 GP -10.33 ZAL 45.13 ZAP 166.51 ETS 313.58 ZAE 127.03 ETE 187.48 ZAC 143.52 ETC 173.07 CLP-171.28

Distance 585.341

Planetocentric Conic  
 C3 27.912 VHL 5.283 OLA 33.00 RAL 71.86 RAD 6568.1 VEL 12.218 PTH 2.20 VHP 8.208 DPA 5.94 RAP 49.64 ECC 1.4594  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.30 0 1 9 4049.84 -20.30 171.74 307.16 63.41 1 8 39 3449.8 -23.70 164.34  
 107.70 4 31 40 3185.75 -20.29 107.53 307.15 63.40 5 24 46 2585.8 -23.69 100.13  
 72.30 0 1 9 4049.84 -20.30 171.74 307.16 63.41 1 8 39 3449.8 -23.70 164.34  
 107.70 4 31 40 3185.75 -20.29 107.53 307.15 63.40 5 24 46 2585.8 -23.69 100.13  
 110.00 5 53 56 2932.90 -26.95 91.23 310.42 68.13 6 42 49 2332.9 -29.67 83.10  
 110.00 3 38 3 3350.69 -13.91 116.57 303.44 58.46 4 33 53 2750.7 -17.98 109.83

Differential Corrections  
 TDE 1.3524 TRA 4.0737 TC3-2.8692 BAU 1.0708 SGT 6252.3 SGR 557.3 SG3 220.7 ST 2158.0 SR 472.8 SS 598.2  
 RDE .4277 RRA .2364 RC3 -.0427 FAU .02208 RRT .6966 RRF .6820 RTF .9725 CRT .8089 CRS -.6707 CST -.9783  
 FDE .3999 FRA 1.8643 FC3 -.6849 BSP 20546 SGB 6277.0 R23 .0025 R13 .9725 LSA 2268.4 MSA 303.6 SSA 13.8  
 BDE 1.4184 BRA 4.0805 BC3 2.8695 FSP -774 SG1 6264.3 SG2 399.1 THA 3.57 EL1 2192.1 EL2 273.6 ALF 10.21

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 15 1969

Heliocentric Conic  
 RL 147.20 LAL .00 LOL 118.75 VL 26.915 GAL 8.91 AZL 88.06 HCA 284.02 SMA 123.02 ECC .24837 INC 1.9390 V1 30.266  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.078 GAP 12.63 AZP 89.53 TAL 150.33 TAP 74.34 RCA 92.47 APO 153.58 V2 35.030  
 RC 171.498 GL 9.35 GP -10.01 ZAL 43.32 ZAP 167.42 ETS 310.79 ZAE 126.87 ETE 187.24 ZAC 145.53 ETC 172.53 CLP-172.35

Distance 590.701

Planetocentric Conic  
 C3 30.668 VHL 5.538 OLA 32.03 RAL 73.94 RAD 6568.2 VEL 12.330 PTH 2.22 VHP 8.552 DPA 6.90 RAP 51.55 ECC 1.5047  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.37 0 22 58 4031.42 -19.04 169.66 310.48 63.75 1 30 9 3431.4 -22.41 162.32  
 105.63 4 26 27 3251.30 -19.03 111.88 310.47 63.74 5 20 38 2651.3 -22.40 104.54  
 74.37 0 22 58 4031.42 -19.04 169.66 310.48 63.75 1 30 9 3431.4 -22.41 162.32  
 105.63 4 26 27 3251.30 -19.03 111.88 310.47 63.74 5 20 38 2651.3 -22.40 104.54  
 110.00 6 25 41 2882.31 -28.19 87.81 314.75 69.81 7 13 43 2282.3 -30.67 79.50  
 110.00 3 22 54 3448.40 -10.37 121.92 305.41 57.24 4 20 23 2848.4 -14.61 115.39

Differential Corrections  
 TDE 1.2550 TRA 4.4372 TC3-2.6008 BAU 1.0664 SGT 6269.6 SGR 548.1 SG3 209.7 ST 2081.5 SR 460.6 SS 577.1  
 RDE .4361 RRA .2526 RC3 -.0377 FAU .01978 RRT .6914 RRF .6771 RTF .9729 CRT .7679 CRS -.6225 CST -.9791  
 FDE .3417 FRA 1.9014 FC3 -.5583 BSP 20675 SGB 6293.5 R23 .0024 R13 .9729 LSA 2185.7 MSA 316.8 SSA 13.4  
 BDE 1.3286 BRA 4.4444 BC3 2.6010 FSP -737 SG1 6281.1 SG2 395.3 THA 3.47 EL1 2111.9 EL2 290.8 ALF 9.83

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 17 1969

Heliocentric Conic  
 RL 147.20 LAL .00 LOL 118.75 VL 26.885 GAL 9.62 AZL 88.20 HCA 287.22 SMA 122.84 ECC .25717 INC 1.8010 V1 30.266  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.069 GAP 13.25 AZP 89.47 TAL 149.10 TAP 76.32 RCA 91.25 APO 154.43 V2 35.043  
 RC 173.532 GL 8.23 GP -9.72 ZAL 41.59 ZAP 168.28 ETS 307.51 ZAE 126.72 ETE 187.02 ZAC 147.55 ETC 171.90 CLP-173.42

Distance 595.970

Planetocentric Conic  
 C3 33.857 VHL 5.819 OLA 31.08 RAL 75.90 RAD 6568.3 VEL 12.459 PTH 2.25 VHP 8.922 DPA 7.81 RAP 53.49 ECC 1.5572  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.62 0 46 21 4007.47 -17.78 167.20 313.77 64.08 1 53 8 3407.5 -21.12 159.91  
 103.38 4 18 42 3325.06 -17.77 116.81 313.77 64.07 5 14 7 2725.1 -21.11 109.52  
 76.62 0 46 21 4007.47 -17.78 167.20 313.77 64.08 1 53 8 3407.5 -21.12 159.91  
 103.38 4 18 42 3325.06 -17.77 116.81 313.77 64.07 5 14 7 2725.1 -21.11 109.52  
 110.00 6 51 32 2848.91 -28.95 85.52 318.80 70.98 7 39 1 2248.9 -31.27 77.08  
 110.00 3 12 40 3531.62 -7.27 126.38 307.64 56.51 4 11 32 2931.6 -11.62 119.99

Differential Corrections  
 TDE 1.1557 TRA 4.8245 TC3-2.3379 BAU 1.0583 SGT 6282.2 SGR 538.3 SG3 199.5 ST 2017.7 SR 447.9 SS 560.7  
 RDE .4450 RRA .2699 RC3 -.0330 FAU .01756 RRT .6874 RRF .6735 RTF .9735 CRT .7232 CRS -.5739 CST -.9803  
 FDE .2890 FRA 1.9402 FC3 -.4490 BSP 20778 SGB 6305.2 R23 .0024 R13 .9735 LSA 2116.2 MSA 327.7 SSA 13.0  
 BDE 1.2384 BRA 4.8320 BC3 2.3381 FSP -702 SG1 6293.1 SG2 390.3 THA 3.38 EL1 2044.1 EL2 305.3 ALF 9.33

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 19 1969

Heliocentric Conic  
 RL 147.20 LAL .00 LOL 118.75 VL 26.856 GAL 10.38 AZL 88.34 HCA 290.43 SMA 122.66 ECC .26677 INC 1.6581 V1 30.266  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.060 GAP 13.92 AZP 89.42 TAL 147.90 TAP 78.33 RCA 89.94 APO 155.39 V2 35.056  
 RC 175.544 GL 7.17 GP -9.45 ZAL 39.95 ZAP 169.07 ETS 303.66 ZAE 126.55 ETE 186.82 ZAC 149.56 ETC 171.18 CLP-174.49

Distance 601.133

Planetocentric Conic  
 C3 37.557 VHL 6.128 OLA 30.16 RAL 77.74 RAD 6568.5 VEL 12.607 PTH 2.29 VHP 9.321 DPA 8.67 RAP 55.46 ECC 1.6181  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.17 1 12 20 3974.51 -16.53 164.10 317.05 64.41 2 18 35 3374.5 -19.84 156.85  
 100.83 4 7 22 3410.40 -16.51 122.57 317.04 64.40 5 4 12 2810.4 -19.82 115.32  
 79.17 1 12 20 3974.51 -16.53 164.10 317.05 64.41 2 18 35 3374.5 -19.84 156.85  
 100.83 4 7 22 3410.40 -16.51 122.57 317.04 64.40 5 4 12 2810.4 -19.82 115.32  
 110.00 7 13 52 2825.67 -29.46 83.89 322.68 71.82 8 0 58 2225.7 -31.65 75.38  
 110.00 3 5 0 3607.24 -4.41 130.37 310.03 56.07 4 5 8 3007.2 -8.84 124.07

Differential Corrections  
 TDE 1.0581 TRA 5.2409 TC3-2.0799 BAU 1.0444 SGT 6292.1 SGR 528.1 SG3 190.0 ST 1968.4 SR 435.0 SS 549.2  
 RDE .4543 RRA .2884 RC3 -.0283 FAU .01537 RRT .6849 RRF .6716 RTF .9742 CRT .6767 CRS -.5275 CST -.9822  
 FDE .2425 FRA 1.9823 FC3 -.3542 BSP 20784 SGB 6314.2 R23 .0025 R13 .9742 LSA 2062.2 MSA 335.7 SSA 12.6  
 BDE 1.1516 BRA 5.2489 BC3 2.0801 FSP -665 SG1 6302.5 SG2 384.1 THA 3.30 EL1 1990.9 EL2 316.6 ALF 8.73

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 19 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 606.171

RL 147.20 LAL .00 LOL 118.75 VL 26.827 GAL 11.20 AZL 88.49 HCA 293.64 SMA 122.49 ECC .27729 INC 1.5089 V1 30.266  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.052 GAP 14.64 AZP 89.39 TAL 146.74 TAP 80.38 RCA 88.52 APO 156.45 V2 35.069  
 RC 177.535 GL 6.15 GP -9.21 ZAL 38.40 ZAP 169.79 ETS 299.15 ZAE 126.37 ETE 186.64 ZAC 151.57 ETC 170.34 CLP-175.56

PLANETOCENTRIC CONIC

C3 41.858 VHL 6.470 DLA 29.26 RAL 79.46 RAD 6568.6 VEL 12.776 PTH 2.32 VHP 9.754 DPA 9.50 RAP 57.44 ECC 1.6889  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.33 1 43 32 3924.04 -15.28 159.74 320.30 64.74 2 48 56 3324.0 -18.55 152.53  
 97.67 3 49 53 3515.65 -15.26 129.76 320.29 64.74 4 48 29 2915.6 -18.54 122.55  
 100.00 4 59 52 3291.36 -20.22 115.46 322.60 67.51 5 54 43 2691.4 -23.10 107.84  
 100.00 3 16 14 3623.56 -10.43 135.25 317.80 61.83 4 16 38 3023.6 -14.12 128.40  
 110.00 7 33 40 2809.60 -29.79 82.76 326.44 72.41 8 20 30 2209.6 -31.91 74.19  
 110.00 2 58 55 3678.08 -1.71 134.07 312.50 55.85 4 0 13 3078.1 -6.18 127.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9543 TRA 5.6814 TC3-1.8367 BAU 1.0279 SGT 6294.5 SGR 516.6 SG3 180.9 ST 1926.8 SR 421.1 SS 540.5  
 RDE .4636 RRA .3074 RC3 -.0242 FAU .01334 RRT .6829 RRF .6700 RTF .9751 CRT .6273 CRS -.4809 CST -.9842  
 FDE .1984 FRA 2.0252 FC3 -.2759 BSP 20883 SGB 6315.7 R23 .0023 R13 .9752 LSA 2016.3 MSA 340.9 SSA 12.2  
 BDE 1.0610 BRA 5.6897 BC3 1.8369 FSP -634 SG1 6304.4 SG2 376.8 THA 3.22 EL1 1945.3 EL2 324.8 ALF 8.03

LAUNCH DATE JAN 19 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 611.060

RL 147.20 LAL .00 LOL 118.75 VL 26.798 GAL 12.09 AZL 88.65 HCA 296.85 SMA 122.31 ECC .28885 INC 1.3522 V1 30.266  
 RP 108.02 LAP -1.21 LOP 55.60 VP 37.043 GAP 15.42 AZP 89.39 TAL 145.62 TAP 82.47 RCA 86.98 APO 157.64 V2 35.083  
 RC 179.506 GL 5.18 GP -8.98 ZAL 36.95 ZAP 170.42 ETS 293.89 ZAE 126.17 ETE 186.47 ZAC 153.56 ETC 169.34 CLP-176.64

PLANETOCENTRIC CONIC

C3 46.876 VHL 6.847 DLA 28.38 RAL 81.06 RAD 6568.8 VEL 12.971 PTH 2.37 VHP 10.225 DPA 10.28 RAP 59.44 ECC 1.7715  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 88.01 2 36 27 3802.23 -14.04 150.19 323.51 65.08 3 39 50 3202.2 -17.28 143.01  
 91.99 3 9 44 3694.41 -14.02 142.30 323.51 65.07 4 11 18 3094.4 -17.27 135.12  
 100.00 5 34 7 3229.02 -21.79 111.50 326.96 69.02 6 27 56 2629.0 -24.45 103.71  
 100.00 2 54 45 3742.86 -6.52 141.95 319.61 60.76 3 57 8 3142.9 -10.37 135.28  
 110.00 7 51 28 2799.07 -30.01 82.02 330.12 72.80 8 38 7 2199.1 -32.06 73.41  
 110.00 2 53 53 3745.57 .87 137.59 315.04 55.83 3 56 19 3145.6 -3.62 131.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8494 TRA 6.1543 TC3-1.6041 BAU 1.0054 SGT 6292.7 SGR 504.2 SG3 172.4 ST 1895.7 SR 406.7 SS 535.3  
 RDE .4730 RRA .3271 RC3 -.0201 FAU .01136 RRT .6817 RRF .6693 RTF .9762 CRT .5776 CRS -.4372 CST -.9864  
 FDE .1587 FRA 2.0717 FC3 -.2097 BSP 20945 SGB 6312.8 R23 .0020 R13 .9763 LSA 1981.9 MSA 342.8 SSA 11.7  
 BDE .9722 BRA 6.1630 BC3 1.6043 FSP -604 SG1 6302.1 SG2 368.3 THA 3.14 EL1 1910.7 EL2 329.4 ALF 7.28

LAUNCH DATE JAN 19 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC

DISTANCE 615.770

RL 147.20 LAL .00 LOL 118.75 VL 26.770 GAL 13.05 AZL 88.81 HCA 300.06 SMA 122.14 ECC .30157 INC 1.1862 V1 30.266  
 RP 107.98 LAP -1.03 LOP 58.81 VP 37.035 GAP 16.28 AZP 89.41 TAL 144.56 TAP 84.62 RCA 85.31 APO 158.98 V2 35.095  
 RC 181.455 GL 4.26 GP -8.77 ZAL 35.60 ZAP 170.94 ETS 287.82 ZAE 125.95 ETE 186.32 ZAC 155.54 ETC 168.18 CLP-177.74

PLANETOCENTRIC CONIC

C3 52.754 VHL 7.263 DLA 27.53 RAL 82.54 RAD 6568.9 VEL 13.195 PTH 2.41 VHP 10.740 DPA 11.01 RAP 61.44 ECC 1.8682  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 57 24 3587.57 -18.36 136.45 329.16 68.06 4 57 11 2987.6 -21.18 128.91  
 90.00 2 0 37 3967.99 -7.38 158.97 323.99 62.58 3 6 45 3368.0 -11.00 152.16  
 100.00 5 59 45 3193.15 -22.65 109.18 330.92 69.95 6 52 58 2593.2 -25.18 101.29  
 100.00 2 40 57 3837.64 -3.35 147.19 321.79 60.28 3 44 55 3237.6 -7.28 140.61  
 110.00 8 7 36 2793.05 -30.13 81.59 333.71 73.03 8 54 9 2193.1 -32.15 72.96  
 110.00 2 49 35 3810.51 3.35 140.98 317.63 55.96 3 53 6 3210.5 -1.14 134.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7427 TRA 6.6626 TC3-1.3837 BAU .9760 SGT 6286.1 SGR 490.8 SG3 164.5 ST 1873.2 SR 391.7 SS 533.3  
 RDE .4825 RRA .3473 RC3 -.0161 FAU .00941 RRT .6811 RRF .6693 RTF .9775 CRT .5286 CRS -.3965 CST -.9887  
 FDE .1224 FRA 2.1225 FC3 -.1545 BSP 20995 SGB 6305.3 R23 .0018 R13 .9775 LSA 1957.0 MSA 341.6 SSA 11.3  
 BDE .8856 BRA 6.6717 BC3 1.3838 FSP -576 SG1 6295.0 SG2 358.9 THA 3.05 EL1 1884.9 EL2 330.5 ALF 6.51

LAUNCH DATE JAN 19 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC

DISTANCE 620.266

RL 147.20 LAL .00 LOL 118.75 VL 26.742 GAL 14.11 AZL 88.99 HCA 303.28 SMA 121.98 ECC .31564 INC 1.0088 V1 30.266  
 RP 107.94 LAP -.84 LOP 62.03 VP 37.027 GAP 17.21 AZP 89.45 TAL 143.56 TAP 86.83 RCA 83.48 APO 160.48 V2 35.108  
 RC 183.384 GL 3.39 GP -8.58 ZAL 34.35 ZAP 171.34 ETS 280.91 ZAE 125.70 ETE 186.17 ZAC 157.48 ETC 166.80 CLP-178.86

PLANETOCENTRIC CONIC

C3 59.672 VHL 7.725 DLA 26.72 RAL 83.91 RAD 6569.1 VEL 13.455 PTH 2.46 VHP 11.306 DPA 11.70 RAP 63.44 ECC 1.9821  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 27 52 3534.95 -19.67 133.14 333.27 69.21 5 26 47 2935.0 -22.32 125.47  
 90.00 1 41 1 4081.20 -3.79 165.35 325.93 61.92 2 49 2 3481.2 -7.52 158.65  
 100.00 6 21 1 3170.21 -23.18 107.68 334.65 70.58 7 13 51 2570.2 -25.61 99.73  
 100.00 2 30 34 3921.18 -.52 151.78 324.12 60.11 3 35 55 3321.2 -4.49 145.25  
 110.00 8 22 16 2790.79 -30.17 81.43 337.22 73.11 9 8 47 2190.8 -32.18 72.80  
 110.00 2 45 48 3873.36 5.74 144.28 320.24 56.24 3 50 21 3273.4 1.26 138.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6379 TRA 7.2149 TC3-1.1739 BAU .9366 SGT 6277.4 SGR 476.5 SG3 157.2 ST 1859.3 SR 376.5 SS 534.6  
 RDE .4923 RRA .3681 RC3 -.0121 FAU .00743 RRT .6812 RRF .6702 RTF .9790 CRT .4823 CRS -.3611 CST -.9908  
 FDE .0908 FRA 2.1799 FC3 -.1079 BSP 20940 SGB 6295.4 R23 .0017 R13 .9790 LSA 1941.8 MSA 337.2 SSA 10.9  
 BDE .8058 BRA 7.2243 BC3 1.1740 FSP -547 SG1 6285.8 SG2 348.4 THA 2.97 EL1 1868.5 EL2 328.2 ALF 5.76



LAUNCH DATE JAN 20 1969

FLIGHT TIME 70.00

ARRIVAL DATE MAR 31 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 22.854 GAL 3.57 AZL 86.44 MCA 64.94 SMA 103.62 ECC .42443 INC 3.5586 V1 30.264  
 RP 107.77 LAP 3.22 LOP 184.67 VP 34.383 GAP -25.02 AZP 88.49 TAL 175.14 TAP 240.08 RCA 59.64 APO 147.60 V2 35.164  
 RC 43.971 GL 10.54 GP 5.23 ZAL 80.52 ZAP 16.17 ETS 200.27 ZAE 173.30 ETE 235.68 ZAC 112.27 ETC 164.17 CLP 15.33

Distance 160.124

Planetocentric Conic: C3 59.850 VHL 7.736 DLA 24.59 RAL 33.34 RAD 6569.1 VEL 13.461 PTH 2.46 VHP 15.338 DPA 9.98 RAP 17.40 ECC 1.9850  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 51 3387.64 -22.93 123.57 283.46 72.92 2 42 18 2787.6 -25.05 115.54  
 90.00 21 27 50 4229.96 1.01 173.65 273.36 61.70 22 38 20 3630.0 -2.78 167.02  
 100.00 3 28 39 3056.17 -25.55 100.04 284.31 73.93 4 19 36 2456.2 -27.51 91.78  
 100.00 22 27 42 4036.66 3.40 158.12 272.04 60.28 23 34 59 3436.7 -5.59 151.60  
 110.00 5 18 23 2712.86 -31.58 75.80 286.14 76.17 6 3 36 2112.9 -33.15 66.92  
 110.00 22 54 28 3952.74 8.72 148.49 268.76 56.82 24 0 20 3352.7 4.29 142.20

Differential Corrections: TDE -.3812 TRA -.9391 TC3 -.0134 BAU .0269 SGT 815.6 SGR 432.2 SG3 49.9 ST 363.8 SR 417.6 SS 304.1  
 RDE -.5622 RRA .1297 RC3 -.0309 FAU .01842 RRT .1071 RRF -.1130 RTF -.6715 CRT .7259 CRS .8503 CST .9771  
 FDE .2750 FRA .4293 FC3 -.2664 BSP 2248 SGB 923.1 R23 -.0136 R13 -.6727 LSA 595.2 MSA 211.6 SSA 14.2  
 BDE .6793 BRA .9480 BC3 .0337 FSP -110 SG1 817.5 SG2 428.8 THA 4.48 EL1 515.4 EL2 202.8 ALF 50.39

MID-COURSE EXECUTION ACCURACY: SGT 815.6 SGR 432.2 SG3 49.9 ST 363.8 SR 417.6 SS 304.1  
 RRT .1071 RRF -.1130 RTF -.6715 CRT .7259 CRS .8503 CST .9771  
 SGB 923.1 R23 -.0136 R13 -.6727 LSA 595.2 MSA 211.6 SSA 14.2  
 SG1 817.5 SG2 428.8 THA 4.48 EL1 515.4 EL2 202.8 ALF 50.39

ORBIT DETERMINATION ACCURACY: ST 363.8 SR 417.6 SS 304.1  
 CRT .7259 CRS .8503 CST .9771  
 LSA 595.2 MSA 211.6 SSA 14.2  
 EL1 515.4 EL2 202.8 ALF 50.39

LAUNCH DATE JAN 20 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 2 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 23.289 GAL 3.33 AZL 86.60 MCA 68.17 SMA 105.27 ECC .40193 INC 3.4026 V1 30.264  
 RP 107.80 LAP 3.16 LOP 187.90 VP 34.662 GAP -23.66 AZP 88.73 TAL 175.03 TAP 243.20 RCA 62.96 APO 147.59 V2 35.153  
 RC 43.319 GL 10.91 GP 5.47 ZAL 80.51 ZAP 14.71 ETS 203.34 ZAE 174.67 ETE 257.09 ZAC 113.69 ETC 163.80 CLP 13.68

Distance 166.666

Planetocentric Conic: C3 53.124 VHL 7.289 DLA 24.95 RAL 33.24 RAD 6568.9 VEL 13.209 PTH 2.41 VHP 14.588 DPA 10.84 RAP 18.76 ECC 1.8743  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 13 3379.79 -23.09 123.05 281.24 73.13 2 35 32 2779.8 -25.18 115.00  
 90.00 21 33 38 4179.24 -6.63 170.82 271.77 61.69 22 43 17 3579.2 -4.41 164.18  
 100.00 3 23 12 3044.54 -25.77 99.24 282.10 74.30 4 13 56 2444.5 -27.67 90.96  
 100.00 22 32 20 3989.71 1.81 155.54 270.42 60.16 23 38 50 3389.7 -2.18 149.02  
 110.00 5 14 30 2696.30 -31.84 74.58 283.88 76.85 5 59 26 2096.3 -33.32 65.66  
 110.00 22 57 31 3910.72 7.15 146.26 267.11 56.48 24 2 41 3310.7 2.69 140.00

Differential Corrections: TDE -.3830 TRA -.9198 TC3 .0052 BAU .0225 SGT 852.4 SGR 435.6 SG3 55.0 ST 384.6 SR 422.1 SS 319.9  
 RDE -.5356 RRA .1179 RC3 -.0313 FAU .01924 RRT .1209 RRF -.1280 RTF -.6916 CRT .7357 CRS .8561 CST .9779  
 FDE .2878 FRA .4391 FC3 -.3135 BSP 2400 SGB 957.3 R23 -.0157 R13 -.6928 LSA 618.3 MSA 214.1 SSA 14.5  
 BDE .6584 BRA .9273 BC3 .0317 FSP -124 SG1 854.6 SG2 431.3 THA 4.75 EL1 532.4 EL2 206.5 ALF 48.62

MID-COURSE EXECUTION ACCURACY: SGT 852.4 SGR 435.6 SG3 55.0 ST 384.6 SR 422.1 SS 319.9  
 RRT .1209 RRF -.1280 RTF -.6916 CRT .7357 CRS .8561 CST .9779  
 SGB 957.3 R23 -.0157 R13 -.6928 LSA 618.3 MSA 214.1 SSA 14.5  
 SG1 854.6 SG2 431.3 THA 4.75 EL1 532.4 EL2 206.5 ALF 48.62

ORBIT DETERMINATION ACCURACY: ST 384.6 SR 422.1 SS 319.9  
 CRT .7357 CRS .8561 CST .9779  
 LSA 618.3 MSA 214.1 SSA 14.5  
 EL1 532.4 EL2 206.5 ALF 48.62

LAUNCH DATE JAN 20 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 4 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 23.690 GAL 3.07 AZL 86.75 MCA 71.40 SMA 106.87 ECC .38071 INC 3.2535 V1 30.264  
 RP 107.84 LAP 3.08 LOP 191.13 VP 34.922 GAP -22.37 AZP 88.96 TAL 174.98 TAP 246.37 RCA 66.19 APO 147.56 V2 35.141  
 RC 42.834 GL 11.27 GP 5.73 ZAL 80.60 ZAP 13.31 ETS 207.14 ZAE 175.00 ETE 287.35 ZAC 115.10 ETC 163.39 CLP 12.03

Distance 173.248

Planetocentric Conic: C3 47.220 VHL 6.872 DLA 25.25 RAL 33.01 RAD 6568.8 VEL 12.984 PTH 2.37 VHP 13.870 DPA 11.72 RAP 20.11 ECC 1.7771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 47 3369.45 -23.29 122.36 278.89 73.42 2 28 56 2769.4 -25.34 114.29  
 90.00 21 38 17 4130.86 -2.19 168.12 270.04 61.76 22 47 8 3530.9 -5.95 161.46  
 100.00 3 17 52 3030.62 -26.02 98.28 279.75 74.74 4 8 23 2430.6 -27.86 89.97  
 100.00 22 35 52 3944.93 .29 153.09 268.66 60.11 23 41 37 3344.9 -3.69 146.56  
 110.00 5 10 37 2677.90 -32.12 73.21 281.46 77.61 5 55 14 2077.9 -33.49 64.25  
 110.00 22 59 37 3870.41 5.63 144.13 265.34 56.23 24 4 8 3270.4 1.15 137.90

Differential Corrections: TDE -.3856 TRA -.9001 TC3 .0284 BAU .0265 SGT 890.7 SGR 438.5 SG3 60.6 ST 406.6 SR 426.2 SS 336.2  
 RDE -.5099 RRA .1067 RC3 -.0309 FAU .02014 RRT .1367 RRF -.1449 RTF -.7105 CRT .7463 CRS .8622 CST .9788  
 FDE .3012 FRA .4487 FC3 -.3693 BSP 2557 SGB 992.8 R23 -.0179 R13 -.7119 LSA 642.8 MSA 215.9 SSA 14.8  
 BDE .6393 BRA .9064 BC3 .0419 FSP -140 SG1 893.4 SG2 433.1 THA 5.03 EL1 550.5 EL2 209.5 ALF 46.81

MID-COURSE EXECUTION ACCURACY: SGT 890.7 SGR 438.5 SG3 60.6 ST 406.6 SR 426.2 SS 336.2  
 RRT .1367 RRF -.1449 RTF -.7105 CRT .7463 CRS .8622 CST .9788  
 SGB 992.8 R23 -.0179 R13 -.7119 LSA 642.8 MSA 215.9 SSA 14.8  
 SG1 893.4 SG2 433.1 THA 5.03 EL1 550.5 EL2 209.5 ALF 46.81

ORBIT DETERMINATION ACCURACY: ST 406.6 SR 426.2 SS 336.2  
 CRT .7463 CRS .8622 CST .9788  
 LSA 642.8 MSA 215.9 SSA 14.8  
 EL1 550.5 EL2 209.5 ALF 46.81

LAUNCH DATE JAN 20 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 6 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 24.062 GAL 2.82 AZL 86.89 MCA 74.62 SMA 108.42 ECC .36073 INC 3.1102 V1 30.264  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.163 GAP -21.14 AZP 89.17 TAL 174.99 TAP 249.60 RCA 69.31 APO 147.53 V2 35.129  
 RC 42.524 GL 11.60 GP 6.02 ZAL 80.82 ZAP 11.98 ETS 211.90 ZAE 173.97 ETE 314.69 ZAC 116.49 ETC 162.92 CLP 10.38

Distance 179.864

Planetocentric Conic: C3 42.037 VHL 6.484 DLA 25.50 RAL 32.67 RAD 6568.6 VEL 12.783 PTH 2.33 VHP 13.183 DPA 12.62 RAP 21.45 ECC 1.6918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 45 3356.14 -23.54 121.47 276.43 73.80 2 22 41 2756.1 -25.54 113.37  
 90.00 21 41 35 4085.69 -3.64 165.60 268.15 61.90 22 49 41 3485.7 -7.38 158.91  
 100.00 3 12 50 3014.11 -26.31 97.14 277.28 75.27 4 3 4 2414.1 -28.07 88.79  
 100.00 22 38 11 3902.96 -1.14 150.78 266.76 60.13 23 43 14 3303.0 -5.10 144.24  
 110.00 5 6 48 2657.58 -32.40 71.70 278.91 78.47 5 51 5 2057.6 -33.65 62.69  
 110.00 23 0 43 3832.26 4.18 142.12 263.45 56.04 24 4 35 3232.3 -3.31 135.91

Differential Corrections: TDE -.3883 TRA -.8793 TC3 .0579 BAU .0365 SGT 929.8 SGR 440.8 SG3 66.8 ST 429.5 SR 429.9 SS 353.0  
 RDE -.4854 RRA .0962 RC3 -.0293 FAU .02115 RRT .1543 RRF -.1640 RTF -.7290 CRT .7577 CRS .8687 CST .9797  
 FDE .3154 FRA .4579 FC3 -.4356 BSP 2720 SGB 1029.0 R23 -.0204 R13 -.7305 LSA 668.4 MSA 216.7 SSA 15.1  
 BDE .6216 BRA .8846 BC3 .0649 FSP -157 SG1 933.0 SG2 434.0 THA 5.34 EL1 569.7 EL2 211.5 ALF 45.03

MID-COURSE EXECUTION ACCURACY: SGT 929.8 SGR 440.8 SG3 66.8 ST 429.5 SR 429.9 SS 353.0  
 RRT .1543 RRF -.1640 RTF -.7290 CRT .7577 CRS .8687 CST .9797  
 SGB 1029.0 R23 -.0204 R13 -.7305 LSA 668.4 MSA 216.7 SSA 15.1  
 SG1 933.0 SG2 434.0 THA 5.34 EL1 569.7 EL2 211.5 ALF 45.03

ORBIT DETERMINATION ACCURACY: ST 429.5 SR 429.9 SS 353.0  
 CRT .7577 CRS .8687 CST .9797  
 LSA 668.4 MSA 216.7 SSA 15.1  
 EL1 569.7 EL2 211.5 ALF 45.03

LAUNCH DATE JAN 20 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 186.509

RL 147.21 LAL .00 LOL 119.77 VL 24.404 GAL 2.56 AZL 87.03 HCA 77.84 SMA 109.91 ECC .34197 INC 2.9712 V1 30.264  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.387 GAP -19.97 AZP 89.37 TAL 175.06 TAP 252.89 RCA 72.32 APO 147.50 V2 35.117  
 RC 42.392 GL 11.91 GP 6.34 ZAL 81.16 ZAP 10.76 ETS 217.93 ZAE 172.06 ETE 332.08 ZAC 117.85 ETC 162.41 CLP 8.72

PLANETOCENTRIC CONIC

C3 37.487 VHL 6.123 DLA 25.68 RAL 32.21 RAD 6568.5 VEL 12.604 PTH 2.29 VHP 12.524 DPA 13.54 RAP 22.78 ECC 1.6169  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 21 22 3339.28 -23.86 120.33 273.88 74.28 2 17 2 2739.3 -25.79 112.19  
 90.00 21 43 18 4044.70 -4.95 163.30 266.11 62.08 22 50 43 3444.7 -8.65 156.57  
 100.00 3 8 15 2994.69 -26.64 95.79 274.70 75.91 3 58 10 2394.7 -28.31 87.39  
 100.00 22 39 6 3864.52 -2.44 148.67 264.72 60.20 23 43 31 3264.5 -6.39 142.11  
 110.00 5 3 9 2635.23 -32.70 70.02 276.22 79.42 5 47 4 2035.2 -33.81 60.96  
 110.00 23 0 42 3796.74 2.83 140.26 261.44 55.92 24 3 59 3196.7 -1.67 134.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3920 TRA -.8583 TC3 .0933 BAW .0486 SGT 970.5 SGR 442.7 SG3 73.7 ST 453.9 SR 433.2 SS 370.5  
 ROE -.4620 RRA .0863 RC3 -.0262 FAU .02227 RRT .1748 RRF -.1859 RTF -.7460 CRT .7700 CRS .8755 CST .9808  
 FDE .3307 FRA .4668 FC3 -.5142 BSP 2871 SGB 1066.7 R23 -.0232 R13 -.7478 LSA 695.6 MSA 216.6 SSA 15.5  
 BOE .6059 BRA .8626 BC3 .0969 FSP -176 SG1 974.3 SG2 434.2 THA 5.69 EL1 590.4 EL2 212.5 ALF 43.26

LAUNCH DATE JAN 20 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 193.179

RL 147.21 LAL .00 LOL 119.77 VL 24.720 GAL 2.30 AZL 87.16 HCA 81.06 SMA 111.34 ECC .32440 INC 2.8357 V1 30.264  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.593 GAP -18.85 AZP 89.56 TAL 175.19 TAP 256.25 RCA 75.22 APO 147.46 V2 35.105  
 RC 42.442 GL 12.19 GP 6.69 ZAL 81.62 ZAP 9.71 ETS 225.56 ZAE 169.74 ETE 342.56 ZAC 119.17 ETC 161.83 CLP 7.05

PLANETOCENTRIC CONIC

C3 33.494 VHL 5.787 DLA 25.78 RAL 31.64 RAD 6568.3 VEL 12.444 PTH 2.25 VHP 11.894 DPA 14.48 RAP 24.09 ECC 1.5512  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 55 3318.19 -24.24 118.90 271.25 74.90 2 12 13 2718.2 -26.08 110.72  
 90.00 21 43 11 4008.90 -6.09 161.28 263.92 62.29 22 50 0 3408.9 -9.76 154.52  
 100.00 3 4 18 2971.99 -27.00 94.21 272.02 76.67 3 53 50 2372.0 -28.57 85.75  
 100.00 22 38 29 3830.33 -3.59 146.79 262.54 60.30 23 42 19 3230.3 -7.52 140.21  
 110.00 4 59 46 2610.73 -32.99 68.17 273.42 80.48 5 43 17 2010.7 -33.95 59.06  
 110.00 22 59 30 3764.36 1.59 138.57 259.32 55.85 24 2 15 3164.4 -2.90 132.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3951 TRA -.8360 TC3 .1369 BAW .0620 SGT 1011.4 SGR 444.3 SG3 81.3 ST 478.6 SR 436.2 SS 388.2  
 ROE -.4399 RRA .0769 RC3 -.0211 FAU .02352 RRT .1975 RRF -.2104 RTF -.7627 CRT .7824 CRS .8823 CST .9819  
 FDE .3465 FRA .4754 FC3 -.6080 BSP 3041 SGB 1104.7 R23 -.0264 R13 -.7646 LSA 723.3 MSA 215.8 SSA 15.8  
 BOE .5913 BRA .8395 BC3 .1385 FSP -198 SG1 1016.0 SG2 435.5 THA 6.07 EL1 611.7 EL2 212.6 ALF 41.61

LAUNCH DATE JAN 20 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 199.868

RL 147.21 LAL .00 LOL 119.77 VL 25.011 GAL 2.05 AZL 87.30 HCA 84.27 SMA 112.71 ECC .30799 INC 2.7026 V1 30.264  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.784 GAP -17.78 AZP 89.73 TAL 175.39 TAP 259.66 RCA 78.00 APO 147.42 V2 35.092  
 RC 42.671 GL 12.43 GP 7.08 ZAL 82.19 ZAP 8.87 ETS 235.06 ZAE 167.27 ETE 349.34 ZAC 120.45 ETC 161.20 CLP 5.36

PLANETOCENTRIC CONIC

C3 29.991 VHL 5.476 DLA 25.81 RAL 30.96 RAD 6568.2 VEL 12.303 PTH 2.22 VHP 11.290 DPA 15.45 RAP 25.37 ECC 1.4936  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 13 39 3292.27 -24.69 117.14 268.55 75.68 2 8 31 2692.3 -26.42 108.89  
 90.00 21 41 1 3979.24 -7.03 159.61 261.57 62.50 22 47 20 3379.2 -10.66 152.81  
 100.00 3 1 9 2945.66 -27.40 92.35 269.27 77.57 3 50 15 2345.7 -28.84 83.84  
 100.00 22 36 11 3801.09 -4.58 145.18 260.23 60.43 23 39 32 3201.1 -8.48 138.57  
 110.00 4 56 46 2583.93 -33.27 66.13 270.52 81.66 5 39 50 1983.9 -34.06 56.98  
 110.00 22 57 4 3735.58 .49 137.07 257.08 55.82 23 59 19 3135.6 -4.00 130.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4003 TRA -.8151 TC3 .1858 BAW .0747 SGT 1055.5 SGR 445.7 SG3 89.8 ST 506.1 SR 439.0 SS 406.5  
 ROE -.4190 RRA .0680 RC3 -.0135 FAU .02491 RRT .2246 RRF -.2387 RTF -.7766 CRT .7958 CRS .8893 CST .9831  
 FDE .3635 FRA .4840 FC3 -.7191 BSP 3158 SGB 1145.7 R23 -.0299 R13 -.7788 LSA 753.7 MSA 214.0 SSA 16.3  
 BOE .5794 BRA .8179 BC3 .1863 FSP -222 SG1 1061.2 SG2 432.0 THA 6.50 EL1 635.7 EL2 211.6 ALF 39.92

LAUNCH DATE JAN 20 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 206.572

RL 147.21 LAL .00 LOL 119.77 VL 25.279 GAL 1.79 AZL 87.43 HCA 87.48 SMA 114.02 ECC .29268 INC 2.5712 V1 30.264  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.959 GAP -16.76 AZP 89.89 TAL 175.65 TAP 263.14 RCA 80.65 APO 147.39 V2 35.080  
 RC 43.078 GL 12.62 GP 7.51 ZAL 82.88 ZAP 8.35 ETS 246.40 ZAE 164.76 ETE 354.11 ZAC 121.68 ETC 160.50 CLP 3.65

PLANETOCENTRIC CONIC

C3 26.918 VHL 5.188 DLA 25.75 RAL 30.17 RAD 6568.1 VEL 12.178 PTH 2.19 VHP 10.712 DPA 16.44 RAP 26.62 ECC 1.4430  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 46 3261.03 -25.20 114.99 265.80 76.64 2 6 7 2661.0 -26.79 106.68  
 90.00 21 36 37 3956.53 -7.74 158.32 259.09 62.68 22 42 34 3356.5 -11.34 151.49  
 100.00 2 58 59 2915.37 -27.83 90.20 266.45 78.62 3 47 35 2315.4 -29.12 81.63  
 100.00 22 32 5 3777.43 -5.37 143.87 257.80 60.55 23 35 2 3177.4 -9.25 137.24  
 110.00 4 54 16 2554.69 -33.54 63.88 267.52 82.96 5 36 51 1954.7 -34.15 54.70  
 110.00 22 53 18 3710.87 -.46 135.78 254.75 55.82 23 55 9 3110.9 -4.94 129.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4009 TRA -.7896 TC3 .2488 BAW .0896 SGT 1095.4 SGR 447.0 SG3 99.3 ST 529.5 SR 441.5 SS 423.8  
 ROE -.3993 RRA .0597 RC3 -.0026 FAU .02648 RRT .2525 RRF -.2698 RTF -.7925 CRT .8077 CRS .8961 CST .9840  
 FDE .3802 FRA .4915 FC3 -.8515 BSP 3376 SGB 1183.1 R23 -.0344 R13 -.7951 LSA 781.0 MSA 211.6 SSA 16.6  
 BOE .5658 BRA .7918 BC3 .2489 FSP -250 SG1 1102.2 SG2 429.8 THA 6.94 EL1 656.7 EL2 209.9 ALF 38.62

LAUNCH DATE JAN 20 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 16 1969

MELIOCENTRIC CONIC DISTANCE 213.286  
 RL 147.21 LAL .00 LOL 119.77 VL 25.526 GAL 1.55 AZL 87.56 HCA 90.70 SMA 115.26 ECC .27846 INC 2.4405 V1 30.264  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.120 GAP -15.78 AZP 90.03 TAL 175.98 TAP 266.67 RCA 83.16 APO 147.35 V2 35.067  
 RC 43.658 GL 12.75 GP 8.00 ZAL 83.68 ZAP 8.22 ETS 258.97 ZAE 162.30 ETE 357.73 ZAC 122.85 ETC 159.74 CLP 1.91

PLANETOCENTRIC CONIC  
 C3 24.226 VHL 4.922 OLA 25.59 RAL 29.29 RAD 6568.0 VEL 12.067 PTH 2.16 VHP 10.159 DPA 17.45 RAP 27.82 ECC 1.3987  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 25 3224.27 -25.75 112.44 263.01 77.80 2 5 10 2624.3 -27.18 104.06  
 90.00 21 29 57 3941.25 -8.22 157.45 256.48 62.81 22 35 38 3341.3 -11.80 150.60  
 100.00 2 57 55 2880.92 -28.27 87.73 263.57 79.85 3 45 56 2280.9 -29.38 79.11  
 100.00 22 26 8 3759.83 -5.96 142.90 255.26 60.65 23 28 48 3159.8 -9.82 136.24  
 110.00 4 52 22 2522.87 -33.78 61.43 264.46 84.39 5 34 25 1922.9 -34.18 52.21  
 110.00 22 48 11 3690.65 -1.23 134.73 252.33 55.84 23 49 42 3090.7 -5.70 128.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4038 TRA -.7660 TC3 .3179 BAU .1030 SGT 1138.6 SGR 448.7 S63 109.8 ST 555.9 SR 444.0 SS 441.6  
 RDE -.3810 RRA .0518 RC3 .0121 FAU .02821 RRT .2860 RRF -.3056 RTF -.8058 CRT .8206 CRS .9030 CST .9851  
 FDE .3981 FRA .4996 FC3-1.0079 BSP 3525 SGB 1223.8 R23 -.0390 R13 -.8086 LSA 810.8 MSA 208.4 SSA 17.1  
 BDE .5551 BRA .7678 BC3 .3182 FSP -280 SG1 1147.0 S62 426.8 THA 7.47 EL1 680.5 EL2 207.2 ALF 37.28

LAUNCH DATE JAN 20 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 18 1969

MELIOCENTRIC CONIC DISTANCE 220.007  
 RL 147.21 LAL .00 LOL 119.77 VL 25.753 GAL 1.31 AZL 87.69 HCA 93.90 SMA 116.43 ECC .26527 INC 2.3097 V1 30.264  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.268 GAP -14.84 AZP 90.16 TAL 176.36 TAP 270.26 RCA 85.55 APO 147.32 V2 35.053  
 RC 44.405 GL 12.82 GP 8.53 ZAL 84.58 ZAP 8.53 ETS 271.57 ZAE 159.92 ETE .66 ZAC 123.96 ETC 158.90 CLP .14

PLANETOCENTRIC CONIC  
 C3 21.868 VHL 4.676 OLA 25.33 RAL 28.33 RAD 6567.9 VEL 11.969 PTH 2.13 VHP 9.630 DPA 18.51 RAP 28.98 ECC 1.3599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 39 3182.04 -26.33 109.48 260.19 79.18 2 5 41 2582.0 -27.55 101.03  
 90.00 21 21 3 3933.59 -8.45 157.01 253.78 62.87 22 26 36 3333.6 -12.03 150.15  
 100.00 2 58 3 2842.24 -28.70 84.94 260.65 81.26 3 45 25 2242.2 -29.61 76.25  
 100.00 22 18 20 3748.63 -6.33 142.27 252.63 60.73 23 20 48 3148.6 -10.19 135.61  
 110.00 4 51 10 2488.35 -33.97 58.75 261.34 85.97 5 32 38 1888.3 -34.16 49.51  
 110.00 22 41 43 3675.29 -1.82 133.93 249.84 55.86 23 42 58 3075.3 -6.28 127.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4023 TRA -.7344 TC3 .4000 BAU .1173 SGT 1172.2 SGR 450.9 S63 121.6 ST 576.4 SR 446.3 SS 458.5  
 RDE -.3639 RRA .0442 RC3 .0317 FAU .03015 RRT .3241 RRF -.3455 RTF -.8210 CRT .8336 CRS .9094 CST .9864  
 FDE .4160 FRA .5078 FC3-1.1936 BSP 3749 SGB 1255.9 R23 -.0419 R13 -.8242 LSA 836.5 MSA 203.9 SSA 17.4  
 BDE .5425 BRA .7358 BC3 .4012 FSP -315 SG1 1182.6 S62 422.8 THA 8.15 EL1 700.2 EL2 203.0 ALF 36.38

LAUNCH DATE JAN 20 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 20 1969

MELIOCENTRIC CONIC DISTANCE 226.730  
 RL 147.21 LAL .00 LOL 119.77 VL 25.961 GAL 1.08 AZL 87.82 HCA 97.11 SMA 117.54 ECC .25307 INC 2.1780 V1 30.264  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.403 GAP -13.94 AZP 90.27 TAL 176.80 TAP 273.91 RCA 87.80 APO 147.29 V2 35.040  
 RC 45.309 GL 12.81 GP 9.13 ZAL 85.59 ZAP 9.28 ETS 282.98 ZAE 157.67 ETE 3.16 ZAC 124.98 ETC 157.98 CLP -1.67

PLANETOCENTRIC CONIC  
 C3 19.804 VHL 4.450 OLA 24.96 RAL 27.30 RAD 6567.8 VEL 11.882 PTH 2.11 VHP 9.125 DPA 19.59 RAP 30.08 ECC 1.3259  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 15 26 3134.67 -26.89 106.13 257.33 80.77 2 7 41 2534.7 -27.89 97.60  
 90.00 21 10 3 3933.44 -8.46 157.00 251.01 62.88 22 15 36 3333.4 -12.03 150.14  
 100.00 2 59 26 2799.36 -29.10 81.82 257.69 82.86 3 46 6 2199.4 -29.79 73.08  
 100.00 22 8 44 3743.98 -6.49 142.02 249.95 60.76 23 11 8 3144.0 -10.34 135.34  
 110.00 4 50 46 2451.04 -34.11 55.85 258.18 87.68 5 31 37 1851.0 -34.06 46.60  
 110.00 22 33 53 3665.06 -2.21 133.39 247.30 55.88 23 34 58 3065.1 -6.67 127.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4050 TRA -.7170 TC3 .4888 BAU .1303 SGT 1223.9 SGR 454.2 S63 134.7 ST 604.4 SR 448.6 SS 474.1  
 RDE -.3482 RRA .0369 RC3 .0574 FAU .03233 RRT .3644 RRF -.3903 RTF -.8300 CRT .8444 CRS .9157 CST .9871  
 FDE .4338 FRA .5151 FC3-1.4132 BSP 3860 SGB 1305.4 R23 -.0512 R13 -.8338 LSA 866.4 MSA 200.7 SSA 18.1  
 BDE .5341 BRA .7179 BC3 .4922 FSP -354 SG1 1236.5 S62 418.7 THA 8.71 EL1 725.6 EL2 200.1 ALF 35.14

LAUNCH DATE JAN 20 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 22 1969

MELIOCENTRIC CONIC DISTANCE 233.452  
 RL 147.21 LAL .00 LOL 119.77 VL 26.152 GAL .86 AZL 87.96 HCA 100.31 SMA 118.59 ECC .24182 INC 2.0445 V1 30.264  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.527 GAP -13.08 AZP 90.37 TAL 177.29 TAP 277.61 RCA 89.91 APO 147.27 V2 35.027  
 RC 46.364 GL 12.70 GP 9.79 ZAL 86.68 ZAP 10.40 ETS 292.53 ZAE 155.57 ETE 5.40 ZAC 125.90 ETC 156.98 CLP -3.52

PLANETOCENTRIC CONIC  
 C3 17.998 VHL 4.242 OLA 24.46 RAL 26.22 RAD 6567.7 VEL 11.806 PTH 2.09 VHP 8.643 DPA 20.73 RAP 31.12 ECC 1.2962  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 41 3082.63 -27.40 102.41 254.46 82.57 2 11 3 2482.6 -28.15 93.82  
 90.00 20 57 11 3940.46 -8.24 157.40 248.22 62.81 22 2 51 3340.5 -11.82 150.55  
 100.00 3 2 5 2752.46 -29.45 78.37 254.72 84.64 3 47 57 2152.5 -29.88 69.60  
 100.00 21 57 28 3745.87 -6.42 142.12 247.24 60.74 22 59 53 3145.9 -10.28 135.45  
 110.00 4 51 15 2410.91 -34.18 52.72 255.00 89.53 5 31 26 1810.9 -33.87 43.49  
 110.00 22 24 47 3660.19 -2.39 133.14 244.74 55.89 23 25 47 3060.2 -6.85 126.89

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.4021 TRA -.6919 TC3 .5914 BAU .1440 SGT 1265.2 SGR 459.1 S63 149.3 ST 624.5 SR 450.6 SS 487.3  
 RDE -.3335 RRA .0298 RC3 .0905 FAU .03477 RRT .4094 RRF -.4392 RTF -.8414 CRT .8548 CRS .9212 CST .9880  
 FDE .4502 FRA .5236 FC3-1.6726 BSP 4020 SGB 1345.9 R23 -.0586 R13 -.8458 LSA 889.7 MSA 196.5 SSA 18.7  
 BDE .5224 BRA .6926 BC3 .5983 FSP -397 SG1 1280.7 S62 413.8 THA 9.44 EL1 744.7 EL2 196.1 ALF 34.38

LAUNCH DATE JAN 20 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 240.171

RL 147.21 LAL .00 LOL 119.77 VL 26.326 GAL .65 AZL 88.09 HCA 103.52 SMA 119.57 ECC .23148 INC 1.9084 V1 30.264  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.639 GAP -12.25 AZP 90.45 TAL 177.83 TAP 281.35 RCA 91.89 APO 147.24 V2 35.013  
 RC 47.558 GL 12.49 GP 10.54 ZAL 87.86 ZAP 11.84 ETS 300.15 ZAE 153.63 ETE 7.50 ZAC 126.71 ETC 155.90 CLP -5.43

PLANETOCENTRIC CONIC

C3 16.421 VHL 4.052 DLA 23.84 RAL 25.11 RAD 6567.7 VEL 11.739 PTH 2.07 VHP 8.184 DPA 21.91 RAP 32.07 ECC 1.2702  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 25 16 3026.50 -27.83 98.35 251.57 84.55 2 15 43 2426.5 -28.29 89.72  
 90.00 20 42 42 3954.23 -7.81 158.19 245.43 62.70 21 48 36 3354.2 -11.41 151.36  
 100.00 3 5 58 2701.81 -29.72 74.63 251.74 86.59 3 51 0 2101.8 -29.87 65.83  
 100.00 21 44 41 3754.16 -6.15 142.58 244.53 60.69 22 47 15 3154.2 -10.01 135.92  
 110.00 4 52 41 2367.94 -34.15 49.36 251.82 91.52 5 32 9 1767.9 -33.57 40.17  
 110.00 22 14 27 3660.78 -2.37 133.17 242.19 55.89 23 15 28 3060.8 -6.83 126.92

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3995 TRA -.6678 TC3 .6989 BAU .1561 SGT 1306.0 SGR 466.5 SG3 165.5 ST 644.4 SR 452.9 SS 499.4  
 RDE -.3202 RRA .0227 RC3 .1319 FAU .03743 RRT .4596 RRF -.4931 RTF -.8507 CRT .8653 CRS .9264 CST .9889  
 FDE .4668 FRA .5328 FC3-1.9732 BSP 4163 SGB 1386.8 R23 -.0672 R13 -.8558 LSA 912.5 MSA 191.7 SSA 19.3  
 BDE .5120 BRA .6682 BC3 .7112 FSP -446 SG1 1325.3 SG2 408.3 THA 10.31 EL1 764.0 EL2 191.5 ALF 33.70

LAUNCH DATE JAN 20 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 246.882

RL 147.21 LAL .00 LOL 119.77 VL 26.486 GAL .45 AZL 88.23 HCA 106.71 SMA 120.48 ECC .22200 INC 1.7687 V1 30.264  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.742 GAP -11.45 AZP 90.51 TAL 178.41 TAP 285.12 RCA 93.74 APO 147.23 V2 35.000  
 RC 48.883 GL 12.17 GP 11.38 ZAL 89.10 ZAP 13.55 ETS 306.10 ZAE 151.87 ETE 9.54 ZAC 127.40 ETC 154.74 CLP -7.40

PLANETOCENTRIC CONIC

C3 15.043 VHL 3.879 DLA 23.07 RAL 23.98 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 7.747 DPA 23.15 RAP 32.93 ECC 1.2476  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 7 2966.75 -28.14 94.01 248.70 86.71 2 21 34 2366.8 -28.30 85.35  
 90.00 20 26 52 3974.33 -7.18 159.33 242.69 62.54 21 33 6 3374.3 -10.81 152.52  
 100.00 3 11 5 2647.65 -29.87 70.61 248.78 88.70 3 55 13 2047.6 -29.73 61.81  
 100.00 21 30 35 3768.66 -5.66 143.39 241.86 60.60 22 33 24 3166.7 -9.54 136.74  
 110.00 4 55 8 2322.15 -34.01 45.79 248.68 93.63 5 33 50 1722.2 -33.14 36.66  
 110.00 22 3 2 3666.92 -2.14 133.49 239.67 55.88 23 4 9 3066.9 -6.60 127.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3941 TRA -.6434 TC3 .8183 BAU .1687 SGT 1345.0 SGR 477.5 SG3 183.8 ST 659.8 SR 455.0 SS 508.6  
 RDE -.3080 RRA .0157 RC3 .1842 FAU .04045 RRT .5130 RRF -.5510 RTF -.8598 CRT .8747 CRS .9311 CST .9897  
 FDE .4816 FRA .5423 FC3-2.3276 BSP 4304 SGB 1427.3 R23 -.0773 R13 -.8659 LSA 930.5 MSA 186.9 SSA 20.1  
 BDE .5002 BRA .6436 BC3 .8388 FSP -499 SG1 1369.3 SG2 402.6 THA 11.31 EL1 779.5 EL2 186.7 ALF 33.25

LAUNCH DATE JAN 20 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 253.582

RL 147.21 LAL .00 LOL 119.77 VL 26.632 GAL .27 AZL 88.38 HCA 109.91 SMA 121.33 ECC .21333 INC 1.6244 V1 30.264  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.834 GAP -10.69 AZP 90.55 TAL 179.02 TAP 288.93 RCA 95.45 APO 147.22 V2 34.987  
 RC 50.327 GL 11.71 GP 12.32 ZAL 90.39 ZAP 15.48 ETS 310.71 ZAE 150.29 ETE 11.60 ZAC 127.94 ETC 153.49 CLP -9.44

PLANETOCENTRIC CONIC

C3 13.841 VHL 3.720 DLA 22.16 RAL 22.86 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 7.332 DPA 24.45 RAP 33.68 ECC 1.2278  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 40 9 2903.84 -28.30 89.42 245.85 89.01 2 28 33 2303.8 -28.14 80.75  
 90.00 20 9 56 4000.34 -6.36 160.80 240.02 62.35 21 16 37 3400.3 -10.02 154.03  
 100.00 3 17 24 2590.26 -29.88 66.35 245.85 90.95 4 0 34 1990.3 -29.43 57.57  
 100.00 21 15 22 3789.16 -4.98 144.52 239.27 60.49 22 18 31 3189.2 -8.87 137.90  
 110.00 4 58 37 2273.58 -33.74 42.03 245.58 95.84 5 36 31 1673.6 -32.56 32.99  
 110.00 21 50 38 3678.60 -1.69 134.10 237.22 55.85 22 51 57 3078.6 -6.16 127.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3846 TRA -.6178 TC3 .9468 BAU .1812 SGT 1379.4 SGR 493.1 SG3 204.1 ST 668.1 SR 456.7 SS 512.9  
 RDE -.2965 RRA .0087 RC3 .2494 FAU .04383 RRT .5680 RRF -.6111 RTF -.8685 CRT .8826 CRS .9349 CST .9904  
 FDE .4928 FRA .5520 FC3-2.7414 BSP 4444 SGB 1464.9 R23 -.0888 R13 -.8757 LSA 940.4 MSA 182.1 SSA 20.9  
 BDE .4857 BRA .6179 BC3 .9791 FSP -559 SG1 1410.1 SG2 397.0 THA 12.48 EL1 788.6 EL2 181.9 ALF 33.09

LAUNCH DATE JAN 20 1969

FLIGHT TIME 100.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 260.272

RL 147.21 LAL .00 LOL 119.77 VL 26.764 GAL .09 AZL 88.53 HCA 113.10 SMA 122.12 ECC .20544 INC 1.4741 V1 30.264  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.918 GAP -9.95 AZP 90.58 TAL 179.66 TAP 292.76 RCA 97.03 APO 147.21 V2 34.974  
 RC 51.881 GL 11.10 GP 13.39 ZAL 91.72 ZAP 17.62 ETS 314.29 ZAE 148.88 ETE 13.72 ZAC 128.32 ETC 152.16 CLP -11.56

PLANETOCENTRIC CONIC

C3 12.794 VHL 3.577 DLA 21.10 RAL 21.78 RAD 6567.5 VEL 11.584 PTH 2.03 VHP 6.939 DPA 25.84 RAP 34.30 ECC 1.2106  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 18 2838.09 -28.28 84.61 243.06 91.42 2 36 36 2238.1 -27.79 75.98  
 90.00 19 52 10 4031.96 -5.36 162.58 237.48 62.15 20 59 22 3432.0 -9.05 155.84  
 100.00 3 24 55 2529.87 -29.73 61.86 243.00 93.30 4 7 4 1929.9 -28.95 53.14  
 100.00 20 59 15 3813.42 -4.09 145.97 236.79 60.36 22 2 51 3215.4 -8.01 139.37  
 110.00 5 3 13 2222.25 -33.32 38.08 242.57 98.14 5 40 15 1622.3 -31.83 29.17  
 110.00 21 37 25 3695.80 -1.03 135.00 234.88 55.83 22 39 1 3095.8 -5.51 128.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3815 TRA -.6056 TC3 1.0600 BAU .1897 SGT 1424.6 SGR 515.5 SG3 226.2 ST 686.5 SR 459.9 SS 521.9  
 RDE -.2871 RRA -.0006 RC3 .3255 FAU .04713 RRT .6247 RRF -.6723 RTF -.8739 CRT .8909 CRS .9379 CST .9915  
 FDE .5090 FRA .5775 FC3-3.1890 BSP 4401 SGB 1515.0 R23 -.1045 R13 -.8826 LSA 960.8 MSA 177.9 SSA 21.7  
 BDE .4775 BRA .6056 BC3 1.1088 FSP -606 SG1 1463.5 SG2 391.8 THA 13.74 EL1 807.0 EL2 177.7 ALF 32.61

LAUNCH DATE JAN 20 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 266.947

RL 147.21 LAL .00 LOL 119.77 VL 26.884 GAL -.08 AZL 88.68 HCA 116.30 SMA 122.85 ECC .19828 INC 1.3168 V1 30.264  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.993 GAP -9.25 AZP 90.58 TAL 180.32 TAP 296.61 RCA 98.49 APO 147.21 V2 34.961  
 RC 53.536 GL 10.32 GP 14.60 ZAL 93.08 ZAP 19.97 ETS 317.10 ZAE 147.65 ETE 15.97 ZAC 128.50 ETC 150.76 CLP -13.78

PLANETOCENTRIC CONIC

C3 11.883 VHL 3.447 OLA 19.87 RAL 20.76 RAD 6567.5 VEL 11.544 PTH 2.01 VHP 6.569 DPA 27.32 RAP 34.77 ECC 1.1956  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 59 35 2769.67 -28.07 79.61 240.36 93.91 2 45 45 2169.7 -27.23 71.05  
 90.00 19 33 43 4069.01 -4.18 164.66 235.09 61.97 20 41 32 3469.0 -7.90 157.96  
 100.00 3 33 35 2466.60 -29.39 57.19 240.24 95.74 4 14 41 1866.6 -28.28 48.56  
 100.00 20 42 24 3847.31 -3.02 147.73 234.45 60.25 21 46 32 3247.3 -6.96 141.15  
 110.00 5 8 58 2168.16 -32.72 33.97 239.68 100.50 5 45 6 1568.2 -30.92 25.21  
 110.00 21 23 30 3718.51 -.16 136.18 232.67 55.82 22 25 29 3118.5 -4.65 129.96

DIFFERENTIAL CORRECTIONS

TDE -.3578 TRA -.5669 TC3 1.2167 BAU .2049  
 RDE -.2754 RRA -.0060 RC3 .4278 FAU .05169  
 FDE .5004 FRA .5733 FC3-3.7659 BSP 4914  
 BDE .4515 BRA .5669 BC3 1.2897 FSP -722

MID-COURSE EXECUTION ACCURACY

SGT 1435.6 SGR 544.7 SG3 251.3  
 RRT .6780 RRF -.7305 RTF -.8832  
 SGB 1535.5 R23 -.1151 R13 -.8938  
 SG1 1486.0 SG2 386.8 THA 15.50

ORBIT DETERMINATION ACCURACY

ST 666.8 SR 457.9 SS 504.5  
 CRT .8955 CRS .9395 CST .9919  
 LSA 937.3 MSA 172.3 SSA 22.9  
 EL1 790.3 EL2 171.9 ALF 33.37

LAUNCH DATE JAN 20 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 273.604

RL 147.21 LAL .00 LOL 119.77 VL 26.993 GAL -.23 AZL 88.85 HCA 119.48 SMA 123.52 ECC .19181 INC 1.1505 V1 30.264  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.060 GAP -8.57 AZP 90.57 TAL 180.98 TAP 300.46 RCA 99.83 APO 147.22 V2 34.948  
 RC 55.282 GL 9.37 GP 15.97 ZAL 94.44 ZAP 22.52 ETS 319.30 ZAE 146.56 ETE 18.41 ZAC 128.47 ETC 149.30 CLP -16.10

PLANETOCENTRIC CONIC

C3 11.092 VHL 3.330 OLA 18.47 RAL 19.82 RAD 6567.4 VEL 11.510 PTH 2.00 VHP 6.222 DPA 28.90 RAP 35.06 ECC 1.1825  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 11 3 2698.61 -27.63 74.46 237.78 96.46 2 56 1 2098.6 -26.45 65.99  
 90.00 19 14 45 4111.41 -2.82 167.04 232.89 61.81 20 23 17 3511.4 -6.57 160.36  
 100.00 3 43 30 2400.49 -28.84 52.35 237.61 98.23 4 23 30 1800.5 -27.40 43.85  
 100.00 20 24 59 3884.77 -1.75 149.79 232.30 60.15 21 29 44 3284.8 -5.71 143.24  
 110.00 5 15 56 2111.26 -31.93 29.72 236.94 102.90 5 51 8 1511.3 -29.83 21.14  
 110.00 21 9 2 3746.77 .92 137.65 230.63 55.83 22 11 29 3146.8 -3.57 131.45

DIFFERENTIAL CORRECTIONS

TDE -.3368 TRA -.5448 TC3 1.3558 BAU .2169  
 RDE -.2641 RRA -.0145 RC3 .5492 FAU .05638  
 FDE .4865 FRA .5894 FC3-4.4004 BSP 4953  
 BDE .4280 BRA .5450 BC3 1.4628 FSP -803

MID-COURSE EXECUTION ACCURACY

SGT 1458.6 SGR 583.9 SG3 279.1  
 RRT .7275 RRF -.7849 RTF -.8889  
 SGB 1571.2 R23 -.1312 R13 -.9020  
 SG1 1523.6 SG2 383.6 THA 17.37

ORBIT DETERMINATION ACCURACY

ST 651.4 SR 454.6 SS 484.1  
 CRT .8980 CRS .9374 CST .9927  
 LSA 914.5 MSA 168.6 SSA 24.4  
 EL1 776.4 EL2 167.8 ALF 33.87

LAUNCH DATE JAN 20 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 280.245

RL 147.21 LAL .00 LOL 119.77 VL 27.092 GAL -.37 AZL 89.03 HCA 122.67 SMA 124.14 ECC .18598 INC .9736 V1 30.264  
 RP 108.47 LAP .82 LOP 242.44 VP 37.120 GAP -7.92 AZP 90.53 TAL 181.64 TAP 304.31 RCA 101.05 APO 147.23 V2 34.936  
 RC 57.109 GL 8.20 GP 17.52 ZAL 95.79 ZAP 25.29 ETS 321.06 ZAE 145.61 ETE 21.10 ZAC 128.18 ETC 147.80 CLP -18.54

PLANETOCENTRIC CONIC

C3 10.407 VHL 3.226 OLA 16.89 RAL 18.99 RAD 6567.4 VEL 11.480 PTH 2.00 VHP 5.899 DPA 30.61 RAP 35.14 ECC 1.1713  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 23 44 2624.86 -26.95 69.17 235.37 99.03 3 7 29 2024.9 -25.43 60.83  
 90.00 18 55 26 4159.21 -1.28 169.71 230.91 61.71 20 4 45 3559.2 -5.05 163.06  
 100.00 3 54 43 2331.47 -28.07 47.37 235.15 100.74 4 33 34 1731.5 -26.30 39.02  
 100.00 20 7 8 3927.82 -.29 152.15 230.37 60.11 21 12 36 3327.8 -4.27 145.62  
 110.00 5 24 13 2051.44 -30.94 25.34 234.38 105.32 5 58 24 1451.4 -28.53 16.97  
 110.00 20 54 7 3780.62 2.21 139.42 228.80 55.88 21 57 8 3180.6 -2.28 133.22

DIFFERENTIAL CORRECTIONS

TDE -.3151 TRA -.5241 TC3 1.4869 BAU .2283  
 RDE -.2532 RRA -.0242 RC3 .6941 FAU .06131  
 FDE .4680 FRA .6096 FC3-5.1004 BSP 5084  
 BDE .4042 BRA .5247 BC3 1.6409 FSP -898

MID-COURSE EXECUTION ACCURACY

SGT 1476.5 SGR 636.2 SG3 309.1  
 RRT .7718 RRF -.8340 RTF -.8941  
 SGB 1607.7 R23 -.1477 R13 -.9104  
 SG1 1561.5 SG2 382.5 THA 19.62

ORBIT DETERMINATION ACCURACY

ST 631.9 SR 450.1 SS 460.4  
 CRT .9002 CRS .9339 CST .9937  
 LSA 886.5 MSA 164.8 SSA 25.9  
 EL1 758.4 EL2 163.3 ALF 34.49

LAUNCH DATE JAN 20 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 286.866

RL 147.21 LAL .00 LOL 119.77 VL 27.180 GAL -.50 AZL 89.22 HCA 125.85 SMA 124.70 ECC .18075 INC .7837 V1 30.264  
 RP 108.51 LAP .64 LOP 245.62 VP 37.173 GAP -7.29 AZP 90.46 TAL 182.29 TAP 308.14 RCA 102.16 APO 147.24 V2 34.923  
 RC 59.010 GL 6.82 GP 19.28 ZAL 97.11 ZAP 28.29 ETS 322.47 ZAE 144.75 ETE 24.09 ZAC 127.62 ETC 146.27 CLP -21.11

PLANETOCENTRIC CONIC

C3 9.818 VHL 3.133 OLA 15.11 RAL 18.29 RAD 6567.4 VEL 11.455 PTH 1.99 VHP 5.600 DPA 32.47 RAP 34.97 ECC 1.1616  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 37 47 2548.13 -26.02 63.75 233.15 101.59 3 20 15 1948.1 -24.16 55.57  
 90.00 18 35 48 4212.63 .45 172.68 229.20 61.69 19 46 1 3612.6 -3.34 166.05  
 100.00 4 7 21 2259.32 -27.04 42.25 232.90 103.25 4 45 0 1659.3 -24.95 34.08  
 100.00 19 48 56 3976.67 1.37 154.83 228.69 60.14 20 55 13 3376.7 -2.62 148.31  
 110.00 5 33 54 1988.50 -29.72 20.84 232.05 107.72 6 7 2 1388.5 -27.01 12.70  
 110.00 20 38 52 3820.26 3.72 141.49 227.22 56.00 21 42 32 3220.3 -.77 135.28

DIFFERENTIAL CORRECTIONS

TOE -.2905 TRA -.5038 TC3 1.6014 BAU .2391  
 RDE -.2408 RRA -.0352 RC3 .8679 FAU .06659  
 FDE .4341 FRA .6331 FC3-5.8717 BSP 5223  
 BDE .3773 BRA .5050 BC3 1.8214 FSP -1005

MID-COURSE EXECUTION ACCURACY

SGT 1483.1 SGR 703.0 SG3 341.3  
 RRT .8089 RRF -.8753 RTF -.8975  
 SGB 1641.3 R23 -.1644 R13 -.9181  
 SG1 1595.7 SG2 384.1 THA 22.34

ORBIT DETERMINATION ACCURACY

ST 604.1 SR 441.1 SS 425.1  
 CRT .9010 CRS .9253 CST .9948  
 LSA 844.7 MSA 161.1 SSA 27.9  
 EL1 731.1 EL2 158.1 ALF 35.23

LAUNCH DATE JAN 20 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC DISTANCE 293.467  
 RL 147.21 LAL .00 LOL 119.77 VL 27.259 GAL -0.62 AZL 89.42 HCA 129.04 SMA 125.21 ECC .17608 INC .5780 VI 30.264  
 RP 108.55 LAP .45 LOP 248.80 VP 37.220 GAP -6.68 AZP 90.36 TAL 182.91 TAP 311.95 RCA 103.16 APO 147.25 V2 34.911  
 RC 60.976 GL 5.17 GP 21.29 ZAL 98.38 ZAP 31.53 ETS 323.64 ZAE 143.94 ETE 27.45 ZAC 126.75 ETC 144.75 CLP -23.82

PLANETOCENTRIC CONIC  
 C3 9.316 VHL 3.052 DLA 13.12 RAL 17.75 RAD 6567.3 VEL 11.433 PTH 1.98 VHP 5.328 DPA 34.49 RAP 34.50 ECC 1.1533  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 53 23 2467.99 -24.80 58.20 231.17 104.12 3 34 31 1868.0 -22.62 50.21  
 90.00 18 15 53 4272.13 2.37 176.00 227.77 61.77 19 27 6 3672.1 -1.43 169.38  
 100.00 4 21 33 2183.65 -25.75 37.00 230.89 105.72 4 57 56 1583.7 -23.35 29.03  
 100.00 19 30 25 4031.71 3.23 157.85 227.30 60.27 20 37 36 3431.7 -7.75 151.33  
 110.00 5 45 9 1922.07 -28.25 16.23 229.98 110.09 6 17 11 1322.1 -25.26 8.34  
 110.00 20 23 18 3866.05 5.46 143.90 225.91 56.20 21 27 44 3266.1 .98 137.67

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2617 TRA -.4842 TC3 1.7016 BAU .2507 SGT 1480.3 SGR 787.5 SG3 375.6 ST 566.4 SR 426.1 SS 379.2  
 RDE -.2263 RRA -.0484 RC3 1.0755 FAU .07215 RRT .8388 RRF -.9089 RTF -.9007 CRT .8998 CRS .9071 CST .9951  
 FDE .3828 FRA .6628 FC3-6.7051 BSP 5364 SGB 1676.7 R23 -.1775 R13 -.9269 LSA 787.5 MSA 158.5 SSA 30.3  
 BDE .3460 BRA .4866 BC3 2.0130 FSP -1116 SG1 1630.9 SG2 389.2 THA 25.61 EL1 692.2 EL2 152.1 ALF 36.11

LAUNCH DATE JAN 20 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC DISTANCE 300.046  
 RL 147.21 LAL .00 LOL 119.77 VL 27.330 GAL -.73 AZL 89.65 HCA 132.21 SMA 125.67 ECC .17193 INC .3533 VI 30.264  
 RP 108.58 LAP .26 LOP 251.98 VP 37.261 GAP -6.10 ZLP 90.24 TAL 183.51 TAP 315.72 RCA 104.06 APO 147.27 V2 34.900  
 RC 63.000 GL 3.24 GP 23.58 ZAL 99.57 ZAP 35.04 ETS 324.65 ZAE 143.11 ETE 31.23 ZAC 125.52 ETC 143.27 CLP -26.71

PLANETOCENTRIC CONIC  
 C3 8.895 VHL 2.982 DLA 10.89 RAL 17.39 RAD 6567.3 VEL 11.414 PTH 1.98 VHP 5.085 DPA 36.69 RAP 33.68 ECC 1.1464  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 10 46 2383.82 -23.28 52.50 229.47 106.59 3 50 29 1783.8 -20.79 44.71  
 90.00 17 55 40 4338.42 4.49 179.72 226.69 62.01 19 7 58 3738.4 .71 173.07  
 100.00 4 37 33 2103.90 -24.17 31.60 229.17 108.14 5 12 37 1503.9 -21.47 23.85  
 100.00 19 11 34 4093.57 5.31 161.26 226.24 60.54 20 19 47 3493.6 -1.34 154.72  
 110.00 5 58 9 1851.69 -26.52 11.50 228.21 112.41 6 29 1 1251.7 -23.24 3.86  
 110.00 20 7 27 3918.54 7.44 146.67 224.93 56.54 21 12 46 3318.5 2.99 140.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2317 TRA -.4683 TC3 1.7675 BAU .2622 SGT 1465.9 SGR 891.8 SG3 410.8 ST 524.1 SR 402.9 SS 324.4  
 RDE -.2084 RRA -.0650 RC3 1.3189 FAU .07773 RRT .8599 RRF -.9348 RTF -.9013 CRT .8973 CRS .8678 CST .9911  
 FDE .3110 FRA .7022 FC3-7.5659 BSP 5466 SGB 1715.8 R23 -.1892 R13 -.9351 LSA 718.6 MSA 157.6 SSA 33.2  
 BDE .3117 BRA .4727 BC3 2.2053 FSP -1228 SG1 1668.6 SG2 400.0 THA 29.48 EL1 645.1 EL2 144.5 ALF 36.74

LAUNCH DATE JAN 20 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC DISTANCE 306.603  
 RL 147.21 LAL .00 LOL 119.77 VL 27.393 GAL -.82 AZL 89.89 HCA 135.39 SMA 126.08 ECC .16825 INC .1037 VI 30.264  
 RP 108.62 LAP .07 LOP 255.16 VP 37.296 GAP -5.54 AZP 90.07 TAL 184.07 TAP 319.46 RCA 104.86 APO 147.29 V2 34.889  
 RC 65.076 GL .98 GP 26.17 ZAL 100.67 ZAP 38.83 ETS 325.57 ZAE 142.18 ETE 35.46 ZAC 123.91 ETC 141.87 CLP -29.77

PLANETOCENTRIC CONIC  
 C3 8.552 VHL 2.924 DLA 8.39 RAL 17.25 RAD 6567.3 VEL 11.399 PTH 1.97 VHP 4.873 DPA 39.09 RAP 32.45 ECC 1.1407  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 30 15 2294.73 -21.43 46.62 228.12 108.97 4 8 30 1694.7 -18.64 39.06  
 90.00 17 35 0 4412.53 6.84 183.89 226.00 62.46 18 48 33 3812.5 3.10 177.21  
 100.00 4 55 40 2019.26 -22.26 26.04 227.79 110.48 5 29 19 1419.3 -19.28 18.52  
 100.00 18 52 17 4163.23 7.62 165.14 225.58 61.01 20 1 40 3563.2 3.70 158.55  
 110.00 6 13 11 1776.69 -24.48 6.62 226.79 114.64 6 42 47 1176.7 -20.94 359.26  
 110.00 19 51 16 3978.57 9.68 149.88 224.33 57.05 20 57 34 3378.6 5.27 143.56

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1982 TRA -.4527 TC3 1.7994 BAU .2755 SGT 1436.0 SGR 1018.7 SG3 445.9 ST 473.5 SR 366.0 SS 261.8  
 RDE -.1844 RRA -.0852 RC3 1.6027 FAU .08322 RRT .8737 RRF -.9541 RTF -.9002 CRT .8936 CRS .7672 CST .9616  
 FDE .2090 FRA .7474 FC3-8.4246 BSP 5615 SGB 1760.6 R23 -.1940 R13 -.9442 LSA 631.9 MSA 161.6 SSA 36.3  
 BDE .2707 BRA .4607 BC3 2.4096 FSP -1347 SG1 1710.8 SG2 415.9 THA 34.08 EL1 583.4 EL2 133.3 ALF 36.88

LAUNCH DATE JAN 20 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC DISTANCE 313.137  
 RL 147.21 LAL .00 LOL 119.77 VL 27.448 GAL -.90 AZL 90.17 HCA 138.56 SMA 126.44 ECC .16501 INC .1723 VI 30.264  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.327 GAP -5.00 AZP 89.87 TAL 184.58 TAP 323.14 RCA 105.58 APO 147.31 V2 34.878  
 RC 67.198 GL -1.65 GP 29.10 ZAL 101.64 ZAP 42.90 ETS 326.48 ZAE 141.06 ETE 40.15 ZAC 121.89 ETC 140.61 CLP -33.04

PLANETOCENTRIC CONIC  
 C3 8.289 VHL 2.879 DLA 5.58 RAL 17.34 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.697 DPA 41.71 RAP 30.71 ECC 1.1364  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 52 18 2199.54 -19.20 40.53 227.15 111.22 4 28 58 1599.5 -16.15 33.19  
 90.00 17 13 42 4495.97 9.44 188.65 225.76 63.18 18 28 38 3896.0 5.77 181.89  
 100.00 5 16 17 1928.67 -19.99 20.27 226.82 112.70 5 48 26 1328.7 -16.74 12.98  
 100.00 18 32 25 4242.07 10.20 169.58 225.36 61.75 19 43 7 3642.1 6.34 162.91  
 110.00 6 30 34 1696.17 -22.10 1.58 225.78 116.77 6 58 51 1096.2 -18.33 354.48  
 110.00 19 34 37 4047.34 12.20 153.61 224.17 57.82 20 42 4 3447.3 7.86 147.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1637 TRA -.4381 TC3 1.7898 BAU .2915 SGT 1391.3 SGR 1172.1 SG3 479.5 ST 419.8 SR 312.5 SS 214.7  
 RDE -.1525 RRA -.1107 RC3 1.9282 FAU .08831 RRT .8812 RRF -.9682 RTF -.8971 CRT .8949 CRS .5071 CST .8162  
 FDE .0772 FRA .8009 FC3-9.2241 BSP 5797 SGB 1819.2 R23 -.1894 R13 -.9541 LSA 535.8 MSA 177.2 SSA 38.2  
 BDE .2238 BRA .4519 BC3 2.6309 FSP -1461 SG1 1766.1 SG2 436.5 THA 39.47 EL1 510.6 EL2 114.7 ALF 35.75

LAUNCH DATE JAN 20 1969 FLIGHT TIME 118.00 ARRIVAL DATE MAY 18 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.497 GAL -.97 AZL 90.49 HCA 141.73 SMA 126.76 ECC .16219 INC .4876 VI 30.264  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.353 GAP -4.48 AZP 89.62 TAL 185.03 TAP 326.77 RCA 106.20 APO 147.32 V2 34.867  
 RC 69.360 GL -4.71 GP 32.40 ZAL 102.47 ZAP 47.27 ETS 327.47 ZAE 139.64 ETE 45.27 ZAC 119.44 ETC 139.54 CLP -36.52

Distance 319.648

Planetocentric Conic: C3 8.114 VHL 2.848 DLA 2.42 RAL 17.71 RAD 6567.3 VEL 11.380 PTH 1.97 VHP 4.562 DPA 44.55 RAP 28.36 ECC 1.1335  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 17 32 2096.70 -16.54 34.15 226.67 113.31 4 52 28 1496.7 -13.25 27.03  
 90.00 16 51 25 4590.85 12.30 194.15 226.07 64.29 18 7 56 3990.9 8.74 187.28  
 100.00 5 40 0 1830.69 -17.31 14.24 226.31 114.76 6 10 30 1230.7 -13.82 7.18  
 100.00 18 11 38 4332.09 13.05 174.74 225.69 62.87 19 23 50 3732.1 9.31 167.95  
 110.00 6 50 49 1608.86 -19.33 356.33 225.24 118.76 7 17 38 1008.9 -15.34 349.48  
 110.00 19 17 17 4126.55 15.03 158.00 224.56 58.93 20 26 4 3526.5 10.80 151.45

Differential Corrections: TOE -.1275 TRA -.4232 TC3 1.7281 BAU .3111 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1081 RRA -.1429 RC3 2.2889 FAU .09247 RRT .8827 RRF -.9781 RTF -.8916 ST 363.2 SR 237.1 SS 227.6  
 FDE -.0925 FRA .8609 FC3-9.8664 BSP 6048 SGB 1895.0 R23 -.1736 R13 -.9645 CRT .9166 CRS .0806 CST .4299  
 BDE .1671 BRA .4467 BC3 2.8680 FSP -1564 SG1 1838.6 SG2 458.9 THA 45.63 LSA 435.1 MSA 222.1 SSA 36.3  
 EL1 426.2 EL2 80.8 ALF 32.19

LAUNCH DATE JAN 20 1969 FLIGHT TIME 120.00 ARRIVAL DATE MAY 20 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.539 GAL -1.03 AZL 90.85 HCA 144.90 SMA 127.05 ECC .15973 INC .8501 VI 30.264  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.375 GAP -3.97 AZP 89.30 TAL 185.43 TAP 330.33 RCA 106.75 APO 147.34 V2 34.858  
 RC 71.560 GL -8.28 GP 36.10 ZAL 103.11 ZAP 51.90 ETS 328.62 ZAE 137.79 ETE 50.73 ZAC 116.55 ETC 138.71 CLP -40.22

Distance 326.135

Planetocentric Conic: C3 8.043 VHL 2.836 DLA -1.16 RAL 18.39 RAD 6567.3 VEL 11.377 PTH 1.96 VHP 4.475 DPA 47.59 RAP 25.28 ECC 1.1324  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 46 47 1984.16 -13.39 27.39 226.77 115.18 5 19 51 1384.2 -9.89 20.47  
 90.00 16 27 36 4700.14 15.44 200.64 227.06 65.96 17 45 56 4100.1 12.06 193.59  
 100.00 6 7 35 1723.51 -14.14 7.85 226.40 116.61 6 36 18 1123.5 -10.45 1.00  
 100.00 17 49 29 4436.02 16.19 180.86 226.70 64.52 19 3 25 3836.0 12.62 173.88  
 110.00 7 14 35 1513.76 -16.12 350.82 225.28 120.56 7 39 49 913.8 -11.94 344.20  
 110.00 18 58 58 4218.53 18.19 163.26 225.61 60.55 20 9 17 3618.5 14.13 156.50

Differential Corrections: TOE -.0963 TRA -.4111 TC3 1.5924 BAU .3339 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.0486 RRA -.1865 RC3 2.6662 FAU .09495 RRT .8752 RRF -.9850 RTF -.8792 ST 317.4 SR 156.4 SS 322.1  
 FDE -.2899 FRA .9345 FC-10.2198 BSP 6313 SGB 1995.6 R23 -.1518 R13 -.9738 CRT .9770 CRS .1109 CST .1207  
 BDE .1079 BRA .4514 BC3 3.1055 FSP -1633 SG1 1935.8 SG2 485.0 THA 52.38 LSA 362.0 MSA 311.5 SSA 30.0  
 EL1 352.6 EL2 30.0 ALF 25.92

LAUNCH DATE JAN 20 1969 FLIGHT TIME 122.00 ARRIVAL DATE MAY 22 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.576 GAL -1.07 AZL 91.27 HCA 148.07 SMA 127.29 ECC .15762 INC 1.2741 VI 30.264  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.393 GAP -3.49 AZP 88.92 TAL 185.76 TAP 333.82 RCA 107.23 APO 147.35 V2 34.848  
 RC 73.792 GL -12.44 GP 40.19 ZAL 103.52 ZAP 56.77 ETS 330.03 ZAE 135.42 ETE 56.40 ZAC 113.22 ETC 138.20 CLP -44.16

Distance 332.597

Planetocentric Conic: C3 8.107 VHL 2.847 DLA -5.22 RAL 19.43 RAD 6567.3 VEL 11.380 PTH 1.97 VHP 4.445 DPA 50.82 RAP 21.30 ECC 1.1334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 21 19 1859.08 -9.66 20.10 227.62 116.75 5 52 18 1259.1 -5.99 13.34  
 90.00 16 1 25 4828.16 18.82 208.52 228.90 68.44 17 21 53 4228.2 15.73 201.21  
 100.00 6 40 11 1604.62 -10.41 1.00 227.22 118.18 7 6 56 1004.6 -6.56 354.32  
 100.00 17 25 13 4557.85 19.60 188.30 228.56 66.97 18 41 11 3957.8 16.31 181.05  
 110.00 7 42 47 1408.64 -12.39 344.95 226.05 122.12 8 6 16 808.6 -8.06 338.53  
 110.00 18 39 7 4326.60 21.68 169.70 227.52 62.90 19 51 13 3726.6 17.87 162.64

Differential Corrections: TOE -.0693 TRA -.3972 TC3 1.3843 BAU .3612 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .0342 RRA -.2431 RC3 3.0320 FAU .09515 RRT .8572 RRF -.9896 RTF -.8581 ST 279.3 SR 170.7 SS 470.3  
 FDE -.5196 FRA 1.0108 FC-10.1609 BSP 6689 SGB 2124.2 R23 -.1232 R13 -.9821 CRT .5691 CRS .8193 CST -.0172  
 BDE .0773 BRA .4657 BC3 3.3331 FSP -1669 SG1 2062.5 SG2 508.5 THA 59.54 LSA 492.1 MSA 292.6 SSA 22.4  
 EL1 300.1 EL2 130.6 ALF 23.99

LAUNCH DATE JAN 20 1969 FLIGHT TIME 124.00 ARRIVAL DATE MAY 24 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.606 GAL -1.11 AZL 91.78 HCA 151.23 SMA 127.50 ECC .15582 INC 1.7804 VI 30.264  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.407 GAP -3.02 AZP 88.44 TAL 186.02 TAP 337.25 RCA 107.63 APO 147.36 V2 34.839  
 RC 76.053 GL -17.25 GP 44.68 ZAL 103.65 ZAP 61.79 ETS 331.80 ZAE 132.43 ETE 62.13 ZAC 109.50 ETC 138.05 CLP -48.33

Distance 339.034

Planetocentric Conic: C3 8.360 VHL 2.891 DLA -9.84 RAL 20.91 RAD 6567.3 VEL 11.391 PTH 1.97 VHP 4.487 DPA 54.16 RAP 16.22 ECC 1.1376  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 3 6 1717.28 -5.22 12.05 229.44 117.87 6 31 43 1117.3 -1.45 5.40  
 90.00 15 31 23 4981.43 22.35 218.37 231.86 72.14 16 54 24 4381.4 19.70 210.70  
 100.00 7 19 35 1470.50 -6.01 353.47 229.01 119.34 7 44 6 870.5 -2.05 346.92  
 100.00 16 57 35 4703.44 23.20 197.61 231.55 70.60 18 15 58 4103.4 20.34 189.98  
 110.00 8 16 49 1291.33 -8.07 338.61 227.75 123.33 8 38 20 691.3 -3.63 332.34  
 110.00 18 16 51 4455.38 25.44 177.81 230.58 66.36 19 31 6 3855.4 22.03 170.32

Differential Corrections: TOE -.0510 TRA -.3787 TC3 1.1133 BAU .3941 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .1479 RRA -.3163 RC3 3.3456 FAU .09267 RRT .8244 RRF -.9927 RTF -.8230 ST 250.6 SR 354.6 SS 646.0  
 FDE -.7691 FRA 1.0818 FC3-9.5971 BSP 7216 SGB 2288.8 R23 -.0917 R13 -.9885 CRT .1697 CRS .9834 CST -.0043  
 BDE .1565 BRA .4934 BC3 3.5260 FSP -1664 SG1 2228.0 SG2 523.9 THA 66.76 LSA 734.8 MSA 256.3 SSA 16.0  
 EL1 359.4 EL2 243.7 ALF 77.19

LAUNCH DATE JAN 20 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 345.447

RL 147.21 LAL .00 LOL 119.77 VL 27.632 GAL -1.13 AZL 92.40 HCA 154.39 SMA 127.67 ECC .15430 INC 2.3997 V1 30.264
RP 108.80 LAP -1.04 LOP 274.17 VP 37.419 GAP -2.56 AZP 87.84 TAL 186.20 TAP 340.59 RCA 107.97 APO 147.37 V2 34.831
RC 78.340 GL -22.82 GP 49.55 ZAL 103.43 ZAP 66.85 ETS 334.03 ZAE 128.79 ETE 67.78 ZAC 105.43 ETC 138.34 CLP -52.71

PLANETOCENTRIC CONIC

C3 8.899 VHL 2.983 DLA -15.06 RAL 22.89 RAD 6567.3 VEL 11.414 PTH 1.98 VHP 4.620 DPA 57.52 RAP 9.79 ECC 1.1465
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 55 36 1551.49 .11 2.78 232.64 118.32 7 21 28 951.5 3.89 356.14
90.00 14 54 43 5170.94 25.72 231.22 236.31 77.72 16 20 54 4570.9 23.77 223.09
100.00 8 8 47 1315.40 -.78 344.93 232.15 119.88 8 30 42 715.4 3.20 338.40
100.00 16 24 13 4882.27 26.71 209.73 236.06 76.05 17 45 36 4282.3 24.52 201.61
110.00 8 58 48 1158.71 -3.05 331.62 230.73 124.06 9 18 7 558.7 1.44 325.42
110.00 17 50 41 4611.73 29.28 188.34 235.21 71.52 19 7 33 4011.7 26.48 180.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0507 TRA -.3551 TC3 .7776 BAU .4302
RDE .3009 RRA -.4138 RC3 3.5313 FAU .08683
FDE -1.0147 FRA 1.1448 FC3-8.4465 BSP 7793
BDE .3051 BRA .5452 BC3 3.6159 FSP -1589

SGT 850.6 SGR 2334.5 SG3 506.6
RRT .7566 RRF -.9948 RTF -.7532
SGB 2484.7 R23 -.0629 R13 -.9928
SG1 2426.4 SG2 535.1 THA 73.78

ST 233.6 SR 631.6 SS 826.5
CRT -.0208 CRS .9974 CST -.0886
LSA 1039.7 MSA 235.6 SSA 11.3
EL1 631.6 EL2 233.5 ALF 90.51

LAUNCH DATE JAN 20 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 351.832

RL 147.21 LAL .00 LOL 119.77 VL 27.653 GAL -1.14 AZL 93.18 HCA 157.54 SMA 127.81 ECC .15305 INC 3.1793 V1 30.264
RP 108.82 LAP -1.21 LOP 277.34 VP 37.427 GAP -2.13 AZP 87.06 TAL 186.31 TAP 343.85 RCA 108.25 APO 147.37 V2 34.824
RC 80.651 GL -29.16 GP 54.76 ZAL 102.80 ZAP 71.83 ETS 336.82 ZAE 124.48 ETE 73.25 ZAC 101.11 ETC 139.12 CLP -57.28

PLANETOCENTRIC CONIC

C3 9.906 VHL 3.147 DLA -20.90 RAL 25.50 RAD 6567.4 VEL 11.458 PTH 1.99 VHP 4.873 DPA 60.79 RAP 1.68 ECC 1.1630
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 8 6 30 1343.95 6.75 351.15 237.92 117.56 8 28 54 743.9 10.39 344.36
90.00 14 4 36 5420.32 28.10 249.05 242.62 86.33 15 34 56 4820.3 27.29 240.48
100.00 9 13 53 1126.49 5.60 334.54 237.29 119.41 9 32 39 526.5 9.48 327.89
100.00 15 39 54 5113.01 29.40 226.32 242.50 84.36 17 5 7 4513.0 28.31 217.69
110.00 9 52 33 1005.28 2.81 323.61 235.56 124.08 10 9 18 405.3 7.26 317.36
110.00 17 17 43 4806.99 32.65 202.53 241.95 79.28 18 37 50 4207.0 30.83 193.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0748 TRA -.3190 TC3 .4174 BAU .4685
RDE .5080 RRA -.5419 RC3 3.5130 FAU .07766
FDE -1.2378 FRA 1.1855 FC3-6.7873 BSP 8531
BDE .5135 BRA .6288 BC3 3.5377 FSP -1464

SGT 688.4 SGR 2619.2 SG3 462.6
RRT .6163 RRF -.9962 RTF -.6108
SGB 2708.2 R23 -.0380 R13 -.9955
SG1 2654.8 SG2 534.8 THA 80.40

ST 231.1 SR 979.8 SS 994.1
CRT -.2932 CRS .9994 CST -.3239
LSA 1397.5 MSA 220.6 SSA 8.1
EL1 982.3 EL2 220.3 ALF 94.17

LAUNCH DATE JAN 20 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 358.190

RL 147.21 LAL .00 LOL 119.77 VL 27.669 GAL -1.13 AZL 94.20 HCA 160.69 SMA 127.93 ECC .15203 INC 4.1981 V1 30.264
RP 108.84 LAP -1.39 LOP 280.50 VP 37.433 GAP -1.70 AZP 86.04 TAL 186.34 TAP 347.03 RCA 108.48 APO 147.37 V2 34.816
RC 82.981 GL -36.24 GP 60.30 ZAL 101.72 ZAP 76.53 ETS 340.26 ZAE 119.54 ETE 78.51 ZAC 96.62 ETC 140.45 CLP -61.97

PLANETOCENTRIC CONIC

C3 11.734 VHL 3.425 DLA -27.28 RAL 28.86 RAD 6567.4 VEL 11.538 PTH 2.01 VHP 5.295 DPA 63.78 RAP 351.49 ECC 1.1931
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 10 11 51 991.62 17.11 330.47 247.19 112.91 10 28 22 391.6 20.07 323.04
90.00 12 26 4 5841.76 26.12 279.54 250.17 101.34 14 3 26 5241.8 27.42 271.11
100.00 10 55 46 849.72 14.49 318.80 245.94 116.43 11 9 56 249.7 17.92 311.69
100.00 14 24 50 5458.89 28.97 251.90 250.71 97.72 15 55 49 4858.9 29.73 243.18
110.00 11 6 38 815.58 9.95 313.58 243.30 122.87 11 20 14 215.6 14.22 307.07
110.00 16 30 27 5065.80 34.17 222.52 251.17 90.97 17 54 53 4465.8 33.93 213.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1413 TRA -.2642 TC3 .0775 BAU .5051
RDE .7805 RRA -.7160 RC3 3.2188 FAU .06549
FDE -1.4000 FRA 1.2008 FC3-4.8316 BSP 9291
BDE .7932 BRA .7632 BC3 3.2197 FSP -1276

SGT 553.1 SGR 2895.3 SG3 401.1
RRT .2989 RRF -.9972 RTF -.2907
SGB 2947.7 R23 -.0185 R13 -.9970
SG1 2900.2 SG2 527.0 THA 86.62

ST 279.5 SR 1368.2 SS 1116.3
CRT -.6488 CRS .9998 CST -.6630
LSA 1775.3 MSA 210.8 SSA 5.9
EL1 1380.5 EL2 210.8 ALF 97.73

LAUNCH DATE JAN 20 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 364.517

RL 147.21 LAL .00 LOL 119.77 VL 27.682 GAL -1.12 AZL 95.59 HCA 163.82 SMA 128.01 ECC .15124 INC 5.5946 V1 30.264
RP 108.86 LAP -1.56 LOP 283.66 VP 37.436 GAP -1.30 AZP 84.63 TAL 186.28 TAP 350.11 RCA 108.65 APO 147.37 V2 34.810
RC 85.328 GL -43.90 GP 66.16 ZAL 100.18 ZAP 80.79 ETS 344.44 ZAE 113.98 ETE 83.62 ZAC 92.03 ETC 142.43 CLP -66.67

PLANETOCENTRIC CONIC

C3 15.145 VHL 3.892 DLA -34.00 RAL 33.14 RAD 6567.6 VEL 11.685 PTH 2.06 VHP 5.971 DPA 66.29 RAP 338.78 ECC 1.2492
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.35 9 8 28 1297.89 25.15 356.90 259.02 113.67 9 30 6 697.9 28.13 349.01
109.65 14 3 37 5646.20 25.16 264.75 259.02 113.66 15 37 43 5046.2 28.14 256.86
70.35 9 8 28 1297.89 25.15 356.90 259.02 113.67 9 30 6 697.9 28.13 349.01
109.65 14 3 37 5646.20 25.16 264.75 259.02 113.66 15 37 43 5046.2 28.14 256.86
110.00 13 38 45 5722.09 22.93 269.54 257.89 116.08 15 14 7 5122.1 26.24 261.94
110.00 14 32 31 5558.04 27.42 258.92 260.06 111.25 16 5 9 4958.0 30.06 250.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2711 TRA -.1734 TC3 -.1764 BAU .5344
RDE 1.1400 RRA -.9563 RC3 2.6337 FAU .05123
FDE -1.4794 FRA 1.1828 FC3-2.9288 BSP 10061
BDE 1.1718 BRA .9719 BC3 2.6396 FSP -1045

SGT 522.5 SGR 3146.9 SG3 327.3
RRT -.2605 RRF -.9978 RTF .2706
SGB 3190.0 R23 -.0039 R13 -.9974
SG1 3150.0 SG2 504.0 THA 92.54

ST 409.8 SR 1755.1 SS 1170.4
CRT -.8665 CRS .9999 CST -.8731
LSA 2139.5 MSA 200.6 SSA 4.3
EL1 1791.1 EL2 200.4 ALF 101.58



LAUNCH DATE JAN 20 1969 FLIGHT TIME 134.00 ARRIVAL DATE JUN 3 1969

MELIOCENTRIC CONIC DISTANCE 370.807  
 RL 147.21 LAL .00 LOL 119.77 VL 27.691 GAL -1.09 AZL 97.64 HCA 166.95 SMA 128.07 ECC .15064 INC 7.6394 V1 30.264  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.437 GAP -.90 AZP 82.56 TAL 186.14 TAP 353.09 RCA 108.78 APO 147.36 V2 34.804  
 RC 87.691 GL -51.74 GP 72.45 ZAL 98.26 ZAP 84.41 ETS 349.55 ZAE 107.78 ETE 88.82 ZAC 87.41 ETC 145.30 CLP -71.16

PLANETOCENTRIC CONIC  
 C3 21.972 VHL 4.687 DLA -40.62 RAL 38.48 RAD 6567.9 VEL 11.973 PTH 2.13 VHP 7.068 OPA 68.02 RAP 323.11 ECC 1.3616  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.57 8 33 32 1550.09 26.65 18.25 272.66 121.87 8 59 23 950.1 30.65 10.77  
 120.43 15 21 10 5567.84 26.66 259.28 272.67 121.85 16 53 58 4967.8 30.66 251.80  
 59.57 8 33 32 1550.09 26.65 18.25 272.66 121.87 8 59 23 950.1 30.65 10.77  
 120.43 15 21 10 5567.84 26.66 259.28 272.67 121.85 16 53 58 4967.8 30.66 251.80  
 59.57 8 33 32 1550.09 26.65 18.25 272.66 121.87 8 59 23 950.1 30.65 10.77  
 120.43 15 21 10 5567.84 26.66 259.28 272.67 121.85 16 53 58 4967.8 30.66 251.80

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.5051 TRA -.0112 TC3 -.2955 BAU .5458 SGT 677.0 SGR 3354.6 SG3 249.0 ST 617.5 SR 2071.0 SS 1139.8  
 RDE 1.6135 RRA-1.3037 RC3 1.8343 FAU .03617 RRT -.7294 RRF -.9983 RTF .7374 CRT -.9499 CRS .9999 CST -.9533  
 FDE-1.4593 FRA 1.1345 FC3-1.4253 BSP 10799 SGB 3422.3 R23 .0066 R13 -.9984 LSA 2436.1 MSA 186.2 SSA 3.1  
 BOE 1.6907 BRA 1.3037 BC3 1.8579 FSP -798 SGI 3391.5 SG2 458.1 THA 98.53 ELI 2153.1 EL2 185.7 ALF 105.93

LAUNCH DATE JAN 20 1969 FLIGHT TIME 136.00 ARRIVAL DATE JUN 5 1969

MELIOCENTRIC CONIC DISTANCE 377.048  
 RL 147.21 LAL .00 LOL 119.77 VL 27.696 GAL -1.04 AZL 100.93 HCA 170.04 SMA 128.11 ECC .15022 INC10.9344 V1 30.264  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.436 GAP -.53 AZP 79.23 TAL 185.89 TAP 355.93 RCA 108.86 APO 147.35 V2 34.799  
 RC 90.065 GL -59.11 GP 79.43 ZAL 96.10 ZAP 87.23 ETS 356.38 ZAE 100.74 ETE 95.03 ZAC 82.68 ETC 149.97 CLP -74.75

PLANETOCENTRIC CONIC  
 C3 37.469 VHL 6.121 DLA -46.45 RAL 44.81 RAD 6568.5 VEL 12.603 PTH 2.29 VHP 8.955 OPA 68.51 RAP 304.25 ECC 1.6166  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.51 8 26 26 1769.52 24.24 35.91 289.45 130.92 8 55 55 1169.5 29.32 29.40  
 128.49 16 18 46 5614.21 24.25 261.46 289.47 130.91 17 52 20 5014.2 29.33 254.94  
 51.51 8 26 26 1769.52 24.24 35.91 289.45 130.92 8 55 55 1169.5 29.32 29.40  
 128.49 16 18 46 5614.21 24.25 261.46 289.47 130.91 17 52 20 5014.2 29.33 254.94  
 51.51 8 26 26 1769.52 24.24 35.91 289.45 130.92 8 55 55 1169.5 29.32 29.40  
 128.49 16 18 46 5614.21 24.25 261.46 289.47 130.91 17 52 20 5014.2 29.33 254.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.9283 TRA .3377 TC3 -.2711 BAU .5149 SGT 1037.1 SGR 3480.3 SG3 175.0 ST 879.8 SR 2235.7 SS 1036.4  
 RDE 2.2510 RRA-1.8328 RC3 .9915 FAU .02174 RRT -.9353 RRF -.9988 RTF .9390 CRT -.9832 CRS 1.0000 CST -.9847  
 FDE-1.3526 FRA 1.0715 FC3 -.5024 BSP 11462 SGB 3631.5 R23 .0137 R13 -.9988 LSA 2612.3 MSA 150.5 SSA 2.2  
 BOE 2.4349 BRA 1.8636 BC3 1.0279 FSP -562 SGI 3614.3 SG2 353.4 THA 105.73 ELI 2398.0 EL2 149.8 ALF 111.24

LAUNCH DATE JAN 20 1969 FLIGHT TIME 138.00 ARRIVAL DATE JUN 7 1969

MELIOCENTRIC CONIC DISTANCE 383.201  
 RL 147.21 LAL .00 LOL 119.77 VL 27.698 GAL -.97 AZL 107.12 HCA 173.08 SMA 128.12 ECC .14996 INC17.1173 V1 30.264  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.433 GAP -.19 AZP 73.00 TAL 185.49 TAP 358.57 RCA 108.91 APO 147.33 V2 34.795  
 RC 92.449 GL -64.74 GP 87.80 ZAL 93.92 ZAP 89.12 ETS 351.71 ZAE 92.14 ETE 111.23 ZAC 77.50 ETC 165.57 CLP -66.28

PLANETOCENTRIC CONIC  
 C3 81.234 VHL 9.013 DLA -50.37 RAL 51.22 RAD 6569.6 VEL 14.233 PTH 2.59 VHP 12.640 OPA 66.89 RAP 282.31 ECC 2.3369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.43 8 34 49 2000.65 16.49 50.40 307.01 138.30 9 8 9 1400.7 22.38 45.07  
 133.57 17 1 29 5761.35 16.50 267.69 307.03 138.30 18 37 30 5161.4 22.39 262.36  
 46.43 8 34 49 2000.65 16.49 50.40 307.01 138.30 9 8 9 1400.7 22.38 45.07  
 133.57 17 1 29 5761.35 16.50 267.69 307.03 138.30 18 37 30 5161.4 22.39 262.36  
 46.43 8 34 49 2000.65 16.49 50.40 307.01 138.30 9 8 9 1400.7 22.38 45.07  
 133.57 17 1 29 5761.35 16.50 267.69 307.03 138.30 18 37 30 5161.4 22.39 262.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -1.9271 TRA 1.7148 TC3 -.1630 BAU .3515 SGT 2123.1 SGR 3151.4 SG3 114.1 ST 1328.1 SR 2100.2 SS 922.6  
 RDE 3.1025 RRA-2.4140 RC3 .2796 FAU .00827 RRT -.9977 RRF -.9982 RTF .9997 CRT -.9990 CRS .9995 CST -.9999  
 FDE-1.2328 FRA 1.0549 FC3 -.0882 BSP 11908 SGB 3799.8 R23 -.0350 R13 -.9991 LSA 2650.1 MSA 53.6 SSA 1.0  
 BOE 3.6523 BRA 2.9610 BC3 .3237 FSP -366 SGI 3798.0 SG2 119.0 THA 123.95 ELI 2484.3 EL2 51.1 ALF 122.30

LAUNCH DATE JAN 20 1969 FLIGHT TIME 140.00 ARRIVAL DATE JUN 9 1969

MELIOCENTRIC CONIC DISTANCE 389.116  
 RL 147.21 LAL .00 LOL 119.77 VL 27.697 GAL -.84 AZL 122.27 HCA 175.92 SMA 128.11 ECC .14980 INC32.2690 V1 30.264  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.429 GAP .09 AZP 57.80 TAL 184.79 TAP .70 RCA 108.92 APO 147.30 V2 34.791  
 RC 94.840 GL -65.08 GP 79.24 ZAL 91.95 ZAP 90.00 ETS 164.99 ZAE 79.16 ETE 261.23 ZAC 70.46 ETC 316.88 CLP 90.00

PLANETOCENTRIC CONIC  
 C3 265.805 VHL 16.304 DLA -49.54 RAL 53.99 RAD 6571.5 VEL 19.675 PTH 3.12 VHP 21.747 OPA 60.36 RAP 257.10 ECC 5.3745  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.49 8 49 17 2207.24 5.33 58.31 319.42 139.33 9 26 5 1607.2 11.37 53.42  
 132.51 17 9 10 696.00 5.34 299.33 319.43 139.33 17 20 46 96.0 11.38 294.44  
 47.49 8 49 17 2207.24 5.33 58.31 319.42 139.33 9 26 5 1607.2 11.37 53.42  
 132.51 17 9 10 696.00 5.34 299.33 319.43 139.33 17 20 46 96.0 11.38 294.44  
 47.49 8 49 17 2207.24 5.33 58.31 319.42 139.33 9 26 5 1607.2 11.37 53.42  
 132.51 17 9 10 696.00 5.34 299.33 319.43 139.33 17 20 46 96.0 11.38 294.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4491 TRA .7157 TC3 -.0233 BAU .4286 SGT 947.0 SGR 3729.5 SG3 74.0 ST 868.5 SR 2283.5 SS 981.4  
 RDE-5.9478 RRA 5.6586 RC3 .1183 FAU-.00933 RRT -.1814 RRF .9999 RTF -.1795 CRT -.8532 CRS-1.0000 CST .8521  
 FDE-1.3592 FRA 1.3005 FC3 .0304 BSP 12070 SGB 3847.9 R23 -.0141 R13 .9998 LSA 2596.9 MSA 433.8 SSA .6  
 BOE 6.4323 BRA 5.7037 BC3 .1206 FSP -238 SGI 3733.7 SG2 930.2 THA 92.81 ELI 2404.9 EL2 430.1 ALF 108.60

LAUNCH DATE JAN 20 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 393.815

RL 147.21 LAL .00 LOL 119.77 VL 27.693 GAL -.47 AZL 172.79 HCA 177.66 SMA 128.09 ECC .14955 INC82.7896 V1 30.264  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.424 GAP .05 AZP 7.22 TAL 182.70 TAP .36 RCA 108.93 APO 147.24 V2 34.788  
 RC 97.236 GL -45.72 GP 49.64 ZAL 90.56 ZAP 89.98 ETS 176.25 ZAE 49.49 ETE 272.52 ZAC 57.38 ETC 338.61 CLP 89.97

PLANETOCENTRIC CONIC

C31472.500 VHL 38.373 DLA -31.49 RAL 44.24 RAD 6573.2 VEL 39.922 PTH 3.56 VHP 48.946 DPA 36.33 RAP 229.89 ECC25.2336  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.61 10 26 56 1939.71 -.75 30.99 315.46 121.48 10 59 16 1339.7 3.42 24.58  
 104.39 14 13 44 1211.84 -.74 337.19 315.47 121.48 14 33 55 611.8 3.44 330.78  
 75.61 10 26 56 1939.71 -.75 30.99 315.46 121.48 10 59 16 1339.7 3.42 24.58  
 104.39 14 13 44 1211.84 -.74 337.19 315.47 121.48 14 33 55 611.8 3.44 330.78  
 110.00 13 7 52 1417.12 -12.70 345.41 308.04 122.01 13 31 29 817.1 -8.38 338.98  
 110.00 16 31 58 782.42 11.17 311.78 322.92 122.52 16 45 0 182.4 15.38 305.21

DIFFERENTIAL CORRECTIONS

TDE 6.0550 TRA-1.5626 TC3 -.0945 BAU 4.6019  
 RDE-9.0584 RRA11.6469 RC3 .2138 FAU-.08252  
 FDE-2.0860 FRA 2.6775 FC3 .0485 BSP 9759  
 BOE10.8958 BRA11.7513 BC3 .2338 FSP -187

MID-COURSE EXECUTION ACCURACY

SGT 1190.9 SGR 2946.3 SG3 58.3  
 RRT -.8467 RRF 1.0000 RTF -.8460  
 SGB 3177.9 R23 -.0696 R13 .9976  
 SG1 3121.1 SG2 598.2 THA 109.64

ORBIT DETERMINATION ACCURACY

ST 908.1 SR 1485.3 SS 1446.0  
 CRT -.9447 CRS-1.0000 CST .9449  
 LSA 224.4 MSA 274.7 SSA .6  
 EL1 1721.8 EL2 257.0 ALF 120.77

LAUNCH DATE JAN 20 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 403.276

RL 147.21 LAL .00 LOL 119.77 VL 27.687 GAL -1.03 AZL 49.44 HCA 183.77 SMA 128.04 ECC .15075 INC40.5645 V1 30.264  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.417 GAP 1.25 AZP 130.50 TAL 185.79 TAP 9.56 RCA 108.74 APO 147.35 V2 34.786  
 RC 99.636 GL 62.79 GP -76.79 ZAL 91.82 ZAP 91.88 ETS 177.61 ZAE 77.32 ETE 84.54 ZAC 94.65 ETC 36.64 CLP 98.27

PLANETOCENTRIC CONIC

C3 409.751 VHL 20.242 DLA 63.51 RAL 337.40 RAD 6572.1 VEL 23.045 PTH 3.28 VHP 23.739 DPA -69.82 RAP 131.48 ECC 7.7435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.44 14 54 55 4995.96 -3.34 241.34 245.76 26.54 16 18 11 4396.0 -10.48 238.14  
 149.56 0 52 29 3292.36 -3.32 99.62 245.73 26.54 1 47 22 2692.4 -10.47 96.41  
 30.44 14 54 55 4995.96 -3.34 241.34 245.76 26.54 16 18 11 4396.0 -10.48 238.14  
 149.56 0 52 29 3292.36 -3.32 99.62 245.73 26.54 1 47 22 2692.4 -10.47 96.41  
 30.44 14 54 55 4995.96 -3.34 241.34 245.76 26.54 16 18 11 4396.0 -10.48 238.14  
 149.56 0 52 29 3292.36 -3.32 99.62 245.73 26.54 1 47 22 2692.4 -10.47 96.41

DIFFERENTIAL CORRECTIONS

TDE-1.7980 TRA 1.9530 TC3 -.0818 BAU 1.1068  
 RD-11.4515 RRA 2.8859 RC3 -.1848 FAU-.01781  
 FDE 2.4865 FRA -.6796 FC3 .0376 BSP 13093  
 BOE11.5918 BRA 3.4847 BC3 .2020 FSP -246

MID-COURSE EXECUTION ACCURACY

SGT 1380.1 SGR 3797.4 SG3 72.5  
 RRT .7951 RRF -.9993 RTF -.8142  
 SGB 4040.4 R23 -.0289 R13 -.9994  
 SG1 3959.9 SG2 802.6 THA 73.17

ORBIT DETERMINATION ACCURACY

ST 630.4 SR 3287.7 SS 1467.8  
 CRT .8947 CRS .9999 CST .9008  
 LSA 3644.6 MSA 277.5 SSA 1.1  
 EL1 3336.0 EL2 277.5 ALF 80.20

LAUNCH DATE JAN 20 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 409.081

RL 147.21 LAL .00 LOL 119.77 VL 27.678 GAL -.86 AZL 66.80 HCA 186.56 SMA 127.98 ECC .15097 INC23.2028 V1 30.264  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.409 GAP 1.49 AZP 113.07 TAL 184.82 TAP 11.38 RCA 108.66 APO 147.31 V2 34.784  
 RC 102.038 GL 65.98 GP -85.87 ZAL 92.70 ZAP 94.07 ETS 224.64 ZAE 91.19 ETE 132.45 ZAC 101.55 ETC 84.34 CLP-170.33

PLANETOCENTRIC CONIC

C3 142.504 VHL 11.937 DLA 64.37 RAL 329.94 RAD 6570.5 VEL 16.243 PTH 2.85 VHP 13.350 DPA -68.65 RAP 90.96 ECC 3.3453  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.43 14 22 45 4853.31 -12.33 238.18 233.93 26.28 15 43 38 4253.3 -19.47 234.85  
 150.57 0 25 5 3142.02 -12.32 95.30 233.91 26.28 1 17 27 2542.0 -19.46 91.97  
 29.43 14 22 45 4853.31 -12.33 238.18 233.93 26.28 15 43 38 4253.3 -19.47 234.85  
 150.57 0 25 5 3142.02 -12.32 95.30 233.91 26.28 1 17 27 2542.0 -19.46 91.97  
 29.43 14 22 45 4853.31 -12.33 238.18 233.93 26.28 15 43 38 4253.3 -19.47 234.85  
 150.57 0 25 5 3142.02 -12.32 95.30 233.91 26.28 1 17 27 2542.0 -19.46 91.97

DIFFERENTIAL CORRECTIONS

TDE 5.0445 TRA -.3086 TC3 -.0200 BAU .0717  
 RDE-4.2703 RRA 2.5061 RC3 .0319 FAU .00490  
 FDE 2.0957 FRA -.7287 FC3 -.0298 BSP 12969  
 BOE 6.6092 BRA 2.5250 BC3 .0376 FSP -354

MID-COURSE EXECUTION ACCURACY

SGT 2445.7 SGR 3455.2 SG3 111.7  
 RRT -.7003 RRF -.9663 RTF .8591  
 SGB 4233.2 R23 -.0243 R13 -.9992  
 SG1 3947.8 SG2 1528.0 THA 121.64

ORBIT DETERMINATION ACCURACY

ST 2423.3 SR 2212.9 SS 1193.4  
 CRT -.9414 CRS .9888 CST -.9812  
 LSA 3446.5 MSA 561.1 SSA 1.4  
 EL1 3233.6 EL2 559.5 ALF 137.76

LAUNCH DATE JAN 20 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 415.121

RL 147.21 LAL .00 LOL 119.77 VL 27.667 GAL -.73 AZL 73.58 HCA 189.58 SMA 127.91 ECC .15143 INC16.4245 V1 30.264  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.400 GAP 1.78 AZP 106.21 TAL 184.08 TAP 13.66 RCA 108.54 APO 147.28 V2 34.783  
 RC 104.441 GL 64.32 GP -78.45 ZAL 93.30 ZAP 97.12 ETS 328.12 ZAE 99.72 ETE 236.06 ZAC 105.00 ETC 188.15 CLP-128.27

PLANETOCENTRIC CONIC

C3 75.332 VHL 8.679 DLA 63.10 RAL 332.52 RAD 6569.5 VEL 14.024 PTH 2.56 VHP 9.324 DPA -64.34 RAP 70.65 ECC 2.2398  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.93 14 36 34 4713.54 -20.24 233.12 231.75 28.83 15 55 7 4113.5 -27.19 229.21  
 149.07 0 31 51 3013.74 -20.23 91.96 231.73 28.83 1 22 4 2413.7 -27.18 88.05  
 30.93 14 36 34 4713.54 -20.24 233.12 231.75 28.83 15 55 7 4113.5 -27.19 229.21  
 149.07 0 31 51 3013.74 -20.23 91.96 231.73 28.83 1 22 4 2413.7 -27.18 88.05  
 30.93 14 36 34 4713.54 -20.24 233.12 231.75 28.83 15 55 7 4113.5 -27.19 229.21  
 149.07 0 31 51 3013.74 -20.23 91.96 231.73 28.83 1 22 4 2413.7 -27.18 88.05

DIFFERENTIAL CORRECTIONS

TDE 3.9821 TRA-1.5169 TC3 -.2997 BAU .3961  
 RDE 2.9096 RRA-1.1094 RC3 -.2546 FAU .02002  
 FDE 2.3532 FRA -.7838 FC3 -.2301 BSP 13470  
 BOE 4.9319 BRA 1.8793 BC3 .3933 FSP -557

MID-COURSE EXECUTION ACCURACY

SGT 3475.5 SGR 2550.5 SG3 170.2  
 RRT .9997 RRF .9975 RTF .9965  
 SGB 4310.9 R23 .0445 R13 .9969  
 SG1 4310.6 SG2 49.1 THA 36.27

ORBIT DETERMINATION ACCURACY

ST 2711.3 SR 1981.2 SS 1281.6  
 CRT 1.0000 CRS -.9995 CST -.9995  
 LSA 3594.1 MSA 36.1 SSA 1.5  
 EL1 3358.1 EL2 1.6 ALF 36.16

LAUNCH DATE JAN 20 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 421.217

RL 147.21 LAL .00 LOL 119.77 VL 27.654 GAL - .60 AZL 77.10 HCA 192.66 SMA 127.82 ECC .15205 INC12.9007 V1 30.264  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.391 GAP 2.10 AZP 102.60 TAL 183.36 TAP 16.02 RCA 108.39 APO 147.26 V2 34.783  
 RC 106.844 GL 61.60 GP -71.10 ZAL 93.59 ZAP 100.80 ETS 330.49 ZAE 106.32 ETE 237.74 ZAC 107.13 ETC 190.48 CLP-125.36

PLANETOCENTRIC CONIC

C3 49.256 VHL 7.018 DLA 61.47 RAL 337.20 RAD 6568.8 VEL 13.062 PTH 2.38 VHP 7.323 DPA -59.59 RAP 58.21 ECC 1.8106  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.86 14 59 54 4602.64 -25.91 227.88 231.90 32.07 16 16 36 4002.6 -32.61 223.26  
 147.14 0 45 53 2918.78 -25.90 88.99 231.88 32.07 1 34 32 2318.8 -32.60 84.37  
 32.86 14 59 54 4602.64 -25.91 227.88 231.90 32.07 16 16 36 4002.6 -32.61 223.26  
 147.14 0 45 53 2918.78 -25.90 88.99 231.88 32.07 1 34 32 2318.8 -32.60 84.37  
 32.86 14 59 54 4602.64 -25.91 227.88 231.90 32.07 16 16 36 4002.6 -32.61 223.26  
 147.14 0 45 53 2918.78 -25.90 88.99 231.88 32.07 1 34 32 2318.8 -32.60 84.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.1582 TRA-1.2221 TC3 -.6060 BAU .5240 SGT 3425.6 SGR 2692.2 SG3 239.9 ST 2653.5 SR 2224.9 SS 1449.1  
 RDE 2.6765 RRA -.8168 RC3 -.5158 FAU .03463 RRT .9939 RRF .9990 RTF .9902 CRT .9988 CRS-1.0000 CST -.9984  
 FDE 2.7591 FRA -.8073 FC3 -.6087 BSP 13676 SGB 4356.9 R23 .0932 R13 .9950 LSA 3752.5 MSA 96.8 SSA 1.7  
 BDE 4.1397 BRA 1.4699 BC3 .7958 FSP -799 SG1 4350.6 SG2 234.0 THA 38.12 EL1 3461.8 EL2 83.6 ALF 39.97

LAUNCH DATE JAN 20 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 427.327

RL 147.21 LAL .00 LOL 119.77 VL 27.640 GAL - .47 AZL 79.25 HCA 195.78 SMA 127.72 ECC .15281 INC10.7461 V1 30.264  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.380 GAP 2.41 AZP 100.35 TAL 182.62 TAP 18.40 RCA 108.21 APO 147.24 V2 34.784  
 RC 109.246 GL 58.71 GP -64.44 ZAL 93.58 ZAP 104.89 ETS 329.59 ZAE 111.75 ETE 235.35 ZAC 108.56 ETC 189.20 CLP-126.57

PLANETOCENTRIC CONIC

C3 36.368 VHL 6.031 DLA 59.80 RAL 342.07 RAD 6568.4 VEL 12.559 PTH 2.28 VHP 6.188 DPA -54.76 RAP 49.63 ECC 1.5985  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.84 15 24 18 4517.28 -29.75 222.89 232.67 35.40 16 39 35 3917.3 -36.14 217.58  
 145.16 1 0 21 2851.37 -29.73 86.41 232.64 35.39 1 47 52 2251.4 -36.13 81.09  
 34.84 15 24 18 4517.28 -29.75 222.89 232.67 35.40 16 39 35 3917.3 -36.14 217.58  
 145.16 1 0 21 2851.37 -29.73 86.41 232.64 35.39 1 47 52 2251.4 -36.13 81.09  
 34.84 15 24 18 4517.28 -29.75 222.89 232.67 35.40 16 39 35 3917.3 -36.14 217.58  
 145.16 1 0 21 2851.37 -29.73 86.41 232.64 35.39 1 47 52 2251.4 -36.13 81.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.8782 TRA-1.0451 TC3 -.9719 BAU .5907 SGT 3570.7 SGR 2560.9 SG3 311.9 ST 2798.2 SR 2172.1 SS 1611.4  
 RDE 2.2603 RRA -.5734 RC3 -.7290 FAU .04899 RRT .9888 RRF .9987 RTF .9857 CRT .9980 CRS-1.0000 CST -.9978  
 FDE 3.1380 FRA -.7783 FC3 -1.1663 BSP 13770 SGB 4394.0 R23 .1110 R13 .9926 LSA 3889.6 MSA 125.1 SSA 2.4  
 BDE 3.6596 BRA 1.1921 BC3 1.2149 FSP -1049 SG1 4383.0 SG2 311.5 THA 35.55 EL1 3540.6 EL2 108.3 ALF 37.81

LAUNCH DATE JAN 20 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 433.435

RL 147.21 LAL .00 LOL 119.77 VL 27.623 GAL - .33 AZL 80.71 HCA 198.91 SMA 127.61 ECC .15370 INC 9.2888 V1 30.264  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.370 GAP 2.73 AZP 98.80 TAL 181.84 TAP 20.75 RCA 108.00 APO 147.23 V2 34.785  
 RC 111.645 GL 55.90 GP -58.36 ZAL 93.29 ZAP 109.19 ETS 328.41 ZAE 116.25 ETE 231.93 ZAC 109.55 ETC 187.35 CLP-128.81

PLANETOCENTRIC CONIC

C3 28.992 VHL 5.384 DLA 58.21 RAL 346.70 RAD 6568.2 VEL 12.262 PTH 2.21 VHP 5.498 DPA -50.00 RAP 43.37 ECC 1.4771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.75 15 47 40 4450.90 -32.27 218.32 233.67 38.54 17 1 51 3850.9 -38.38 212.38  
 143.25 1 13 53 2803.65 -32.26 84.22 233.65 38.53 2 0 37 2203.6 -38.36 78.29  
 36.75 15 47 40 4450.90 -32.27 218.32 233.67 38.54 17 1 51 3850.9 -38.38 212.38  
 143.25 1 13 53 2803.65 -32.26 84.22 233.65 38.53 2 0 37 2203.6 -38.36 78.29  
 36.75 15 47 40 4450.90 -32.27 218.32 233.67 38.54 17 1 51 3850.9 -38.38 212.38  
 143.25 1 13 53 2803.65 -32.26 84.22 233.65 38.53 2 0 37 2203.6 -38.36 78.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7428 TRA -.9067 TC3-1.3717 BAU .6307 SGT 3749.0 SGR 2365.6 SG3 378.2 ST 2970.3 SR 2034.2 SS 1741.5  
 RDE 1.8984 RRA -.3918 RC3 -.8754 FAU .06177 RRT .9853 RRF .9981 RTF .9825 CRT .9976 CRS-1.0000 CST -.9975  
 FDE 3.4219 FRA -.6929 FC3-1.8445 BSP 13894 SGB 4433.0 R23 .1277 R13 .9899 LSA 3996.8 MSA 139.2 SSA 3.2  
 BDE 3.3357 BRA .9877 BC3 1.6272 FSP -1286 SG1 4419.7 SG2 342.9 THA 32.09 EL1 3598.2 EL2 115.9 ALF 34.38

LAUNCH DATE JAN 20 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 439.534

RL 147.21 LAL .00 LOL 119.77 VL 27.606 GAL - .19 AZL 81.77 HCA 202.05 SMA 127.49 ECC .15472 INC 8.2332 V1 30.264  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.358 GAP 3.04 AZP 97.64 TAL 181.02 TAP 23.07 RCA 107.77 APO 147.22 V2 34.787  
 RC 114.042 GL 53.25 GP -52.83 ZAL 92.77 ZAP 113.53 ETS 327.42 ZAE 119.92 ETE 228.10 ZAC 110.27 ETC 185.52 CLP-131.34

PLANETOCENTRIC CONIC

C3 24.343 VHL 4.934 DLA 56.74 RAL 351.02 RAD 6568.0 VEL 12.071 PTH 2.16 VHP 5.069 DPA -45.42 RAP 38.72 ECC 1.4006  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.53 16 9 40 4398.18 -33.93 214.21 234.87 41.37 17 22 58 3798.2 -39.74 207.76  
 141.47 1 26 24 2769.71 -33.91 82.42 234.85 41.36 2 12 33 2169.7 -39.73 75.97  
 38.53 16 9 40 4398.18 -33.93 214.21 234.87 41.37 17 22 58 3798.2 -39.74 207.76  
 141.47 1 26 24 2769.71 -33.91 82.42 234.85 41.36 2 12 33 2169.7 -39.73 75.97  
 38.53 16 9 40 4398.18 -33.93 214.21 234.87 41.37 17 22 58 3798.2 -39.74 207.76  
 141.47 1 26 24 2769.71 -33.91 82.42 234.85 41.36 2 12 33 2169.7 -39.73 75.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6641 TRA -.7871 TC3-1.7933 BAU .6625 SGT 3934.5 SGR 2158.5 SG3 434.6 ST 3134.4 SR 1865.6 SS 1833.0  
 RDE 1.6000 RRA -.2597 RC3 -.9636 FAU .07256 RRT .9829 RRF .9972 RTF .9803 CRT .9974 CRS-1.0000 CST -.9972  
 FDE 3.5903 FRA -.5653 FC3-2.5806 BSP 14086 SGB 4487.7 R23 .1412 R13 .9871 LSA 4079.6 MSA 146.5 SSA 3.9  
 BDE 3.1077 BRA .8288 BC3 2.0358 FSP -1494 SG1 4474.1 SG2 349.2 THA 28.52 EL1 3645.8 EL2 114.9 ALF 30.73

LAUNCH DATE JAN 20 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 27 1969

Heliocentric Conic

RL 147.21 LAL .00 LOL 119.77 VL 27.586 GAL -03 AZL 82.57 HCA 205.20 SMA 127.36 ECC .15587 INC 7.4294 VI 30.264  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.347 GAP 3.35 AZP 96.73 TAL 180.15 TAP 25.35 RCA 107.51 APO 147.21 V2 34.790  
 RC 116.435 GL 50.76 GP -47.82 ZAL 92.02 ZAP 117.76 ETS 326.71 ZAE 122.82 ETE 224.13 ZAC 110.85 ETC 183.88 CLP-133.93

DISTANCE 445.622

Planetocentric Conic

C3 21.211 VHL 4.606 DLA 55.40 RAL 355.10 RAD 6567.9 VEL 11.941 PTH 2.13 VHP 4.803 DPA -41.09 RAP 35.23 ECC 1.3491  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.16 16 30 24 4355.48 -34.98 210.58 236.25 43.87 17 42 59 3755.5 -40.54 203.71  
 139.84 1 38 10 2745.45 -34.97 80.96 236.24 43.86 2 23 56 2145.5 -40.53 74.09  
 40.16 16 30 24 4355.48 -34.98 210.58 236.25 43.87 17 42 59 3755.5 -40.54 203.71  
 139.84 1 38 10 2745.45 -34.97 80.96 236.24 43.86 2 23 56 2145.5 -40.53 74.09  
 40.16 16 30 24 4355.48 -34.98 210.58 236.25 43.87 17 42 59 3755.5 -40.54 203.71  
 139.84 1 38 10 2745.45 -34.97 80.96 236.24 43.86 2 23 56 2145.5 -40.53 74.09

Differential Corrections

TDE 2.5180 TRA -4.7119 TC3-2.2639 BAU .7067  
 RDE 1.2787 RRA -.1992 RC3-1.0418 FAU .08352  
 FDE 3.4317 FRA -.5040 FC3-3.4087 BSP 14725  
 BOE 2.8241 BRA .7392 BC3 2.4922 FSP -1720

Mid-Course Execution Accuracy

SGT 4073.6 SGR 1908.5 SG3 467.7  
 RRT .9860 RRF .9957 RTF .9815  
 SGB 4498.5 R23 .1383 R13 .9861  
 SG1 4489.2 SG2 288.9 TMA 24.90

Orbit Determination Accuracy

ST 3167.9 SR 1596.5 SS 1777.4  
 CRT .9978 CRS-1.0000 CST -.9975  
 LSA 3965.6 MSA 131.2 SSA 4.7  
 EL1 3546.2 EL2 94.3 ALF 26.72

LAUNCH DATE JAN 20 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 29 1969

Heliocentric Conic

RL 147.21 LAL .00 LOL 119.77 VL 27.566 GAL .14 AZL 83.21 HCA 208.35 SMA 127.22 ECC .15714 INC 6.7938 VI 30.264  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.333 GAP 3.66 AZP 95.99 TAL 179.25 TAP 27.60 RCA 107.23 APO 147.22 V2 34.794  
 RC 118.823 GL 48.43 GP -43.34 ZAL 91.07 ZAP 121.81 ETS 326.26 ZAE 125.05 ETE 220.19 ZAC 111.38 ETC 182.46 CLP-136.45

DISTANCE 451.696

Planetocentric Conic

C3 19.000 VHL 4.359 DLA 54.19 RAL 358.99 RAD 6567.8 VEL 11.848 PTH 2.10 VHP 4.647 DPA -37.06 RAP 32.64 ECC 1.3127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.66 16 50 9 4320.26 -35.64 207.37 237.85 46.05 18 2 9 3720.3 -40.96 200.17  
 138.34 1 49 26 2728.24 -35.62 79.80 237.83 46.04 2 34 55 2128.2 -40.94 72.60  
 41.66 16 50 9 4320.26 -35.64 207.37 237.85 46.05 18 2 9 3720.3 -40.96 200.17  
 138.34 1 49 26 2728.24 -35.62 79.80 237.83 46.04 2 34 55 2128.2 -40.94 72.60  
 41.66 16 50 9 4320.26 -35.64 207.37 237.85 46.05 18 2 9 3720.3 -40.96 200.17  
 138.34 1 49 26 2728.24 -35.62 79.80 237.83 46.04 2 34 55 2128.2 -40.94 72.60

Differential Corrections

TDE 2.5750 TRA -.5572 TC3-2.6387 BAU .7152  
 RDE 1.1575 RRA -.0809 RC3 -.9817 FAU .08572  
 FDE 3.6107 FRA -.2022 FC3-3.9060 BSP 14492  
 BOE 2.8232 BRA .5630 BC3 2.8154 FSP -1749

Mid-Course Execution Accuracy

SGT 4279.6 SGR 1755.1 SG3 506.2  
 RRT .9780 RRF .9937 RTF .9758  
 SGB 4625.5 R23 .1597 R13 .9809  
 SG1 4613.1 SG2 339.6 TMA 21.98

Orbit Determination Accuracy

ST 3406.2 SR 1522.7 SS 1906.8  
 CRT .9972 CRS-1.0000 CST -.9967  
 LSA 4187.2 MSA 156.9 SSA 5.6  
 EL1 3729.6 EL2 103.9 ALF 24.05

LAUNCH DATE JAN 20 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 1 1969

Heliocentric Conic

RL 147.21 LAL .00 LOL 119.77 VL 27.544 GAL .32 AZL 83.72 HCA 211.50 SMA 127.08 ECC .15855 INC 6.2757 VI 30.264  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.323 GAP 3.96 AZP 95.36 TAL 178.30 TAP 29.80 RCA 106.93 APO 147.23 V2 34.798  
 RC 121.206 GL 46.22 GP -39.35 ZAL 89.93 ZAP 125.62 ETS 326.01 ZAE 126.70 ETE 216.42 ZAC 111.92 ETC 181.28 CLP-138.88

DISTANCE 457.757

Planetocentric Conic

C3 17.388 VHL 4.170 DLA 53.08 RAL 2.75 RAD 6567.7 VEL 11.780 PTH 2.08 VHP 4.568 DPA -33.34 RAP 30.76 ECC 1.2862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.02 17 9 9 4290.85 -36.01 204.55 239.67 47.95 18 20 39 3690.8 -41.12 197.08  
 136.98 2 0 28 2716.22 -36.00 78.91 239.65 47.94 2 45 44 2116.2 -41.11 71.44  
 43.02 17 9 9 4290.85 -36.01 204.55 239.67 47.95 18 20 39 3690.8 -41.12 197.08  
 136.98 2 0 28 2716.22 -36.00 78.91 239.65 47.94 2 45 44 2116.2 -41.11 71.44  
 43.02 17 9 9 4290.85 -36.01 204.55 239.67 47.95 18 20 39 3690.8 -41.12 197.08  
 136.98 2 0 28 2716.22 -36.00 78.91 239.65 47.94 2 45 44 2116.2 -41.11 71.44

Differential Corrections

TDE 2.5465 TRA -.4416 TC3-3.0416 BAU .7398  
 RDE .9961 RRA -.0246 RC3 -.9359 FAU .08832  
 FDE 3.5030 FRA -.0054 FC3-4.3971 BSP 14666  
 BOE 2.7344 BRA .4422 BC3 3.1823 FSP -1788

Mid-Course Execution Accuracy

SGT 4438.2 SGR 1576.6 SG3 522.8  
 RRT .9755 RRF .9906 RTF .9739  
 SGB 4709.9 R23 .1607 R13 .9781  
 SG1 4698.5 SG2 327.8 TMA 19.21

Orbit Determination Accuracy

ST 3512.9 SR 1369.0 SS 1900.0  
 CRT .9972 CRS -.9999 CST -.9963  
 LSA 4218.9 MSA 159.6 SSA 6.5  
 EL1 3769.1 EL2 94.6 ALF 21.25

LAUNCH DATE JAN 20 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 3 1969

Heliocentric Conic

RL 147.21 LAL .00 LOL 119.77 VL 27.521 GAL .51 AZL 84.16 HCA 214.66 SMA 126.92 ECC .16008 INC 5.8430 VI 30.264  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.311 GAP 4.27 AZP 94.81 TAL 177.32 TAP 31.98 RCA 106.61 APO 147.24 V2 34.803  
 RC 123.581 GL 44.13 GP -35.82 ZAL 88.62 ZAP 129.18 ETS 325.92 ZAE 127.87 ETE 212.89 ZAC 112.52 ETC 180.31 CLP-141.19

DISTANCE 463.802

Planetocentric Conic

C3 16.189 VHL 4.024 DLA 52.07 RAL 6.43 RAD 6567.6 VEL 11.729 PTH 2.07 VHP 4.544 DPA -29.92 RAP 29.45 ECC 1.2664  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.28 17 27 36 4265.98 -36.19 202.06 241.69 49.60 18 38 42 3666.0 -41.11 194.39  
 135.72 2 11 22 2708.27 -36.17 78.24 241.68 49.59 2 56 30 2108.3 -41.10 70.57  
 44.28 17 27 36 4265.98 -36.19 202.06 241.69 49.60 18 38 42 3666.0 -41.11 194.39  
 135.72 2 11 22 2708.27 -36.17 78.24 241.68 49.59 2 56 30 2108.3 -41.10 70.57  
 44.28 17 27 36 4265.98 -36.19 202.06 241.69 49.60 18 38 42 3666.0 -41.11 194.39  
 135.72 2 11 22 2708.27 -36.17 78.24 241.68 49.59 2 56 30 2108.3 -41.10 70.57

Differential Corrections

TDE 2.5190 TRA -.3283 TC3-3.4296 BAU .7660  
 RDE .8638 RRA .0140 RC3 -.8735 FAU .08911  
 FDE 3.3396 FRA .1755 FC3-4.7652 BSP 15076  
 BOE 2.6630 BRA .3286 BC3 3.5391 FSP -1828

Mid-Course Execution Accuracy

SGT 4589.4 SGR 1417.1 SG3 529.0  
 RRT .9729 RRF .9864 RTF .9727  
 SGB 4803.2 R23 .1538 R13 .9760  
 SG1 4792.9 SG2 313.6 TMA 16.80

Orbit Determination Accuracy

ST 3595.2 SR 1230.3 SS 1868.1  
 CRT .9974 CRS -.9998 CST -.9960  
 LSA 4231.2 MSA 160.1 SSA 7.4  
 EL1 3799.0 EL2 83.4 ALF 18.86

LAUNCH DATE JAN 20 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUL 5 1969

MELIOCENTRIC CONIC DISTANCE 469.832  
 RL 147.21 LAL .00 LOL 119.77 VL 27.497 GAL .71 AZL 84.53 MCA 217.81 SMA 126.77 ECC .16176 INC 5.4741 V1 30.264  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.298 GAP 4.57 AZP 94.33 TAL 176.30 TAP 34.11 RCA 106.26 APO 147.27 V2 34.808  
 RC 125.948 GL 42.13 GP -32.71 ZAL 87.16 ZAP 132.48 ETS 325.92 ZAE 128.66 ETE 209.67 ZAC 113.22 ETC 179.52 CLP-143.38

PLANETOCENTRIC CONIC  
 C3 15.290 VML 3.910 OLA 51.14 RAL 10.06 RAD 6567.6 VEL 11.691 PTH 2.06 VHP 4.561 DPA -26.79 RAP 28.60 ECC 1.2516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.46 17 45 41 4244.81 -36.21 199.84 243.93 51.04 18 56 26 3644.8 -40.96 192.02  
 134.54 2 22 16 2703.57 -36.20 77.76 243.92 51.03 3 7 19 2103.6 -40.95 69.94  
 45.46 17 45 41 4244.81 -36.21 199.84 243.93 51.04 18 56 26 3644.8 -40.96 192.02  
 134.54 2 22 16 2703.57 -36.20 77.76 243.92 51.03 3 7 19 2103.6 -40.95 69.94  
 45.46 17 45 41 4244.81 -36.21 199.84 243.93 51.04 18 56 26 3644.8 -40.96 192.02  
 134.54 2 22 16 2703.57 -36.20 77.76 243.92 51.03 3 7 19 2103.6 -40.95 69.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4985 TRA -.2074 TC3-3.7882 BAU .7913 SGT 4734.4 SGR 1279.9 SG3 527.9 ST 3665.0 SR 1113.3 SS 1826.2  
 RDE .7594 RRA .0440 RC3 -.7979 FAU .08818 RRT .9691 RRF .9807 RTF .9715 CRT .9977 CRS -.9996 CST -.9956  
 FDE 3.1571 FRA .3550 FC3-4.9929 BSP 15405 SGB 4904.3 R23 .1430 R13 .9739 LSA 4240.3 MSA 161.2 SSA 8.3  
 BOE 2.6114 BRA .2120 BC3 3.8713 FSP -1819 SGI 4894.8 SG2 305.1 THA 14.74 EL1 3829.6 EL2 72.2 ALF 16.87

LAUNCH DATE JAN 20 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUL 7 1969

MELIOCENTRIC CONIC DISTANCE 475.846  
 RL 147.21 LAL .00 LOL 119.77 VL 27.473 GAL .93 AZL 84.85 MCA 220.97 SMA 126.60 ECC .16358 INC 5.1541 V1 30.264  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.286 GAP 4.88 AZP 93.90 TAL 175.25 TAP 36.22 RCA 105.89 APO 147.31 V2 34.815  
 RC 128.306 GL 40.20 GP -29.97 ZAL 85.55 ZAP 135.52 ETS 325.99 ZAE 129.15 ETE 206.78 ZAC 114.02 ETC 178.87 CLP-145.45

PLANETOCENTRIC CONIC  
 C3 14.619 VML 3.823 OLA 50.26 RAL 13.67 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 4.610 DPA -23.93 RAP 28.14 ECC 1.2406  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.56 18 3 35 4226.60 -36.11 197.86 246.36 52.30 19 14 2 3626.6 -40.72 189.93  
 133.44 2 33 9 2701.70 -36.10 77.47 246.35 52.29 3 18 11 2101.7 -40.71 69.54  
 46.56 18 3 35 4226.60 -36.11 197.86 246.36 52.30 19 14 2 3626.6 -40.72 189.93  
 133.44 2 33 9 2701.70 -36.10 77.47 246.35 52.29 3 18 11 2101.7 -40.71 69.54  
 46.56 18 3 35 4226.60 -36.11 197.86 246.36 52.30 19 14 2 3626.6 -40.72 189.93  
 133.44 2 33 9 2701.70 -36.10 77.47 246.35 52.29 3 18 11 2101.7 -40.71 69.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4774 TRA -.0816 TC3-4.1134 BAU .8160 SGT 4869.6 SGR 1160.3 SG3 520.3 ST 3714.1 SR 1012.3 SS 1770.4  
 RDE .6747 RRA .0656 RC3 -.7166 FAU .08601 RRT .9642 RRF .9731 RTF .9705 CRT .9981 CRS -.9993 CST -.9952  
 FDE 2.9551 FRA .5190 FC3-5.0939 BSP 15738 SGB 5005.9 R23 .1274 R13 .9724 LSA 4234.1 MSA 161.6 SSA 9.3  
 BOE 2.5676 BRA .1047 BC3 4.1753 FSP -1787 SGI 4996.9 SG2 299.8 THA 12.99 EL1 3849.1 EL2 60.3 ALF 15.22

LAUNCH DATE JAN 20 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUL 9 1969

MELIOCENTRIC CONIC DISTANCE 481.844  
 RL 147.21 LAL .00 LOL 119.77 VL 27.447 GAL 1.16 AZL 85.13 MCA 224.13 SMA 126.43 ECC .16555 INC 4.8723 V1 30.264  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.273 GAP 5.19 AZP 93.50 TAL 174.16 TAP 38.29 RCA 105.50 APO 147.36 V2 34.821  
 RC 130.653 GL 38.32 GP -27.55 ZAL 83.82 ZAP 138.33 ETS 326.07 ZAE 129.43 ETE 204.20 ZAC 114.93 ETC 178.35 CLP-147.41

PLANETOCENTRIC CONIC  
 C3 14.128 VML 3.759 OLA 49.43 RAL 17.27 RAD 6567.6 VEL 11.641 PTH 2.04 VHP 4.683 DPA -21.30 RAP 28.01 ECC 1.2325  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.63 18 21 23 4210.83 -35.90 196.08 248.97 53.41 19 31 34 3610.8 -40.38 188.06  
 132.37 2 44 2 2702.37 -35.89 77.35 248.96 53.40 3 29 5 2102.4 -40.38 69.33  
 47.63 18 21 23 4210.83 -35.90 196.08 248.97 53.41 19 31 34 3610.8 -40.38 188.06  
 132.37 2 44 2 2702.37 -35.89 77.35 248.96 53.40 3 29 5 2102.4 -40.38 69.33  
 47.63 18 21 23 4210.83 -35.90 196.08 248.97 53.41 19 31 34 3610.8 -40.38 188.06  
 132.37 2 44 2 2702.37 -35.89 77.35 248.96 53.40 3 29 5 2102.4 -40.38 69.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4548 TRA .0500 TC3-4.4019 BAU .8400 SGT 4996.7 SGR 1058.0 SG3 508.2 ST 3743.5 SR 926.7 SS 1705.6  
 RDE .6067 RRA .0815 RC3 -.6346 FAU .08297 RRT .9575 RRF .9634 RTF .9697 CRT .9986 CRS -.9987 CST -.9948  
 FDE 2.7469 FRA .6683 FC3-5.0842 BSP 16087 SGB 5107.4 R23 .1093 R13 .9711 LSA 4213.7 MSA 161.8 SSA 10.2  
 BOE 2.5287 BRA .0956 BC3 4.4475 FSP -1742 SGI 5098.7 SG2 299.1 THA 11.50 EL1 3856.2 EL2 48.2 ALF 13.89

LAUNCH DATE JAN 20 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUL 11 1969

MELIOCENTRIC CONIC DISTANCE 487.825  
 RL 147.21 LAL .00 LOL 119.77 VL 27.421 GAL 1.40 AZL 85.38 MCA 227.30 SMA 126.26 ECC .16768 INC 4.6207 V1 30.264  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.261 GAP 5.50 AZP 93.14 TAL 173.04 TAP 40.34 RCA 105.09 APO 147.43 V2 34.829  
 RC 132.989 GL 36.49 GP -25.43 ZAL 81.96 ZAP 140.93 ETS 326.16 ZAE 129.55 ETE 201.93 ZAC 115.96 ETC 177.92 CLP-149.27

PLANETOCENTRIC CONIC  
 C3 13.788 VML 3.713 OLA 48.62 RAL 20.86 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 4.777 DPA -18.87 RAP 28.14 ECC 1.2269  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.67 18 39 11 4197.10 -35.61 194.45 251.74 54.41 19 49 8 3597.1 -39.98 186.37  
 131.33 2 54 54 2705.39 -35.60 77.39 251.73 54.39 3 39 59 2105.4 -39.97 69.32  
 48.67 18 39 11 4197.10 -35.61 194.45 251.74 54.41 19 49 8 3597.1 -39.98 186.37  
 131.33 2 54 54 2705.39 -35.60 77.39 251.73 54.39 3 39 59 2105.4 -39.97 69.32  
 48.67 18 39 11 4197.10 -35.61 194.45 251.74 54.41 19 49 8 3597.1 -39.98 186.37  
 131.33 2 54 54 2705.39 -35.60 77.39 251.73 54.39 3 39 59 2105.4 -39.97 69.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4291 TRA .1864 TC3-4.6571 BAU .8646 SGT 5118.5 SGR 971.6 SG3 493.2 ST 3751.9 SR 854.4 SS 1633.3  
 RDE .5520 RRA .0925 RC3 -.5581 FAU .07959 RRT .9491 RRF .9514 RTF .9694 CRT .9991 CRS -.9977 CST -.9943  
 FDE 2.5378 FRA .7987 FC3-4.9975 BSP 16483 SGB 5209.9 R23 .0891 R13 .9704 LSA 4177.1 MSA 161.3 SSA 11.1  
 BOE 2.4911 BRA .2081 BC3 4.6904 FSP -1695 SGI 5201.2 SG2 301.1 THA 10.25 EL1 3847.8 EL2 35.9 ALF 12.82

LAUNCH DATE JAN 20 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 13 1969

Heliocentric Conic  
 RL 147.21 LAL .00 LOL 119.77 VL 27.394 GAL 1.65 AZL 85.61 MCA 230.46 SMA 126.08 ECC .16997 INC 4.3934 V1 30.264  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.249 GAP 5.81 AZP 92.80 TAL 171.90 TAP 42.36 RCA 104.65 APO 147.51 V2 34.837  
 RC 135.313 GL 34.70 GP -23.55 ZAL 80.00 ZAP 143.33 ETS 326.22 ZAE 129.55 ETE 199.94 ZAC 117.09 ETC 177.57 CLP-151.04

Distance 493.790

Planetocentric Conic  
 C3 13.578 VHL 3.685 DLA 47.82 RAL 24.45 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 4.887 DPA -16.63 RAP 28.52 ECC 1.2235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.71 18 57 2 4185.07 -35.23 192.94 254.66 55.30 20 6 47 3585.1 -39.50 184.83  
 130.29 3 5 41 2710.70 -35.22 77.58 254.65 55.29 3 50 51 2110.7 -39.49 69.48  
 49.71 18 57 2 4185.07 -35.23 192.94 254.66 55.30 20 6 47 3585.1 -39.50 184.83  
 130.29 3 5 41 2710.70 -35.22 77.58 254.65 55.29 3 50 51 2110.7 -39.49 69.48  
 49.71 18 57 2 4185.07 -35.23 192.94 254.66 55.30 20 6 47 3585.1 -39.50 184.83  
 130.29 3 5 41 2710.70 -35.22 77.58 254.65 55.29 3 50 51 2110.7 -39.49 69.48

Differential Corrections  
 TDE 2.4004 TRA .3308 TC3-4.8652 BAU .8875 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5088 RRA .1011 RC3 -.4846 FAU .07570 SGT 5231.9 SGR 899.0 SG3 476.0 ST 3741.0 SR 794.3 SS 1557.2  
 FDE 2.3349 FRA .9174 FC3-4.8266 BSP 16852 RRT .9381 RRF .9369 RTF .9691 CRT .9995 CRS -.9963 CST -.9937  
 BDE 2.4537 BRA .3459 BC3 4.8893 FSP -1636 SGB 5308.6 R23 .0710 R13 .9698 LSA 4126.1 MSA 161.3 SSA 12.0  
 SGI 5299.7 SG2 307.3 THA 9.19 EL1 3824.3 EL2 24.1 ALF 11.98

LAUNCH DATE JAN 20 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 15 1969

Heliocentric Conic  
 RL 147.21 LAL .00 LOL 119.77 VL 27.367 GAL 1.92 AZL 85.81 MCA 233.63 SMA 125.90 ECC .17243 INC 4.1859 V1 30.264  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.237 GAP 6.13 AZP 92.48 TAL 170.73 TAP 44.36 RCA 104.19 APO 147.61 V2 34.846  
 RC 137.625 GL 32.93 GP -21.89 ZAL 77.94 ZAP 145.55 ETS 326.24 ZAE 129.48 ETE 198.21 ZAC 118.33 ETC 177.27 CLP-152.71

Distance 499.736

Planetocentric Conic  
 C3 13.485 VHL 3.672 DLA 47.01 RAL 28.02 RAD 6567.5 VEL 11.613 PTH 2.03 VHP 5.012 DPA -14.54 RAP 29.10 ECC 1.2219  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.76 19 14 58 4174.46 -34.78 191.54 257.71 56.11 20 24 32 3574.5 -38.94 183.41  
 129.24 3 16 18 2718.32 -34.76 77.94 257.70 56.10 4 1 36 2118.3 -38.93 69.81  
 50.76 19 14 58 4174.46 -34.78 191.54 257.71 56.11 20 24 32 3574.5 -38.94 183.41  
 129.24 3 16 18 2718.32 -34.76 77.94 257.70 56.10 4 1 36 2118.3 -38.93 69.81  
 50.76 19 14 58 4174.46 -34.78 191.54 257.71 56.11 20 24 32 3574.5 -38.94 183.41  
 129.24 3 16 18 2718.32 -34.76 77.94 257.70 56.10 4 1 36 2118.3 -38.93 69.81

Differential Corrections  
 TDE 2.3675 TRA .4832 TC3-5.0281 BAU .9096 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4745 RRA .1078 RC3 -.4178 FAU .07167 SGT 5339.0 SGR 838.5 SG3 457.5 ST 3710.5 SR 744.1 SS 1477.6  
 FDE 2.1392 FRA 1.0232 FC3-4.6011 BSP 17189 RRT .9249 RRF .9201 RTF .9690 CRT .9998 CRS -.9940 CST -.9931  
 BDE 2.4146 BRA .4951 BC3 5.0454 FSP -1570 SGB 5404.4 R23 .0544 R13 .9695 LSA 4059.3 MSA 161.6 SSA 12.8  
 SGI 5395.2 SG2 315.5 THA 8.29 EL1 3784.3 EL2 14.7 ALF 11.34

LAUNCH DATE JAN 20 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 17 1969

Heliocentric Conic  
 RL 147.21 LAL .00 LOL 119.77 VL 27.339 GAL 2.20 AZL 86.01 MCA 236.80 SMA 125.72 ECC .17508 INC 3.9945 V1 30.264  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.225 GAP 6.45 AZP 92.19 TAL 169.53 TAP 46.33 RCA 103.71 APO 147.73 V2 34.855  
 RC 139.923 GL 31.19 GP -20.42 ZAL 75.80 ZAP 147.62 ETS 326.20 ZAE 129.36 ETE 196.69 ZAC 119.67 ETC 177.01 CLP-154.31

Distance 505.665

Planetocentric Conic  
 C3 13.501 VHL 3.674 DLA 46.20 RAL 31.59 RAD 6567.5 VEL 11.614 PTH 2.04 VHP 5.149 DPA -12.60 RAP 29.85 ECC 1.2222  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.84 19 33 3 4164.94 -34.24 190.20 260.86 56.85 20 42 28 3564.9 -38.32 182.08  
 128.16 3 26 39 2728.37 -34.22 78.45 260.85 56.84 4 12 7 2128.4 -38.31 70.33  
 51.84 19 33 3 4164.94 -34.24 190.20 260.86 56.85 20 42 28 3564.9 -38.32 182.08  
 128.16 3 26 39 2728.37 -34.22 78.45 260.85 56.84 4 12 7 2128.4 -38.31 70.33  
 51.84 19 33 3 4164.94 -34.24 190.20 260.86 56.85 20 42 28 3564.9 -38.32 182.08  
 128.16 3 26 39 2728.37 -34.22 78.45 260.85 56.84 4 12 7 2128.4 -38.31 70.33

Differential Corrections  
 TDE 2.3329 TRA .6466 TC3-5.1353 BAU .9291 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4484 RRA .1139 RC3 -.3560 FAU .06738 SGT 5440.3 SGR 789.4 SG3 438.6 ST 3665.7 SR 703.5 SS 1399.5  
 FDE 1.9573 FRA 1.1210 FC3-4.3204 BSP 17464 RRT .9092 RRF .9014 RTF .9690 CRT .9998 CRS -.9909 CST -.9924  
 BDE 2.3756 BRA .6566 BC3 5.1476 FSP -1497 SGB 5497.3 R23 .0414 R13 .9694 LSA 3983.0 MSA 162.4 SSA 13.6  
 SGI 5487.6 SG2 325.9 THA 7.54 EL1 3732.6 EL2 15.3 ALF 10.86

LAUNCH DATE JAN 20 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 19 1969

Heliocentric Conic  
 RL 147.21 LAL .00 LOL 119.77 VL 27.310 GAL 2.50 AZL 86.18 MCA 239.97 SMA 125.54 ECC .17793 INC 3.8165 V1 30.264  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.213 GAP 6.77 AZP 91.91 TAL 168.31 TAP 48.29 RCA 103.20 APO 147.87 V2 34.865  
 RC 142.207 GL 29.47 GP -19.12 ZAL 73.60 ZAP 149.55 ETS 326.09 ZAE 129.20 ETE 195.37 ZAC 121.09 ETC 176.79 CLP-155.84

Distance 511.573

Planetocentric Conic  
 C3 13.623 VHL 3.691 DLA 45.36 RAL 35.12 RAD 6567.5 VEL 11.619 PTH 2.04 VHP 5.297 DPA -10.77 RAP 30.75 ECC 1.2242  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.95 19 51 14 4156.39 -33.62 188.92 264.11 57.53 21 0 30 3556.4 -37.62 180.81  
 127.05 3 36 39 2740.83 -33.61 79.14 264.10 57.52 4 22 20 2140.8 -37.61 71.03  
 52.95 19 51 14 4156.39 -33.62 188.92 264.11 57.53 21 0 30 3556.4 -37.62 180.81  
 127.05 3 36 39 2740.83 -33.61 79.14 264.10 57.52 4 22 20 2140.8 -37.61 71.03  
 52.95 19 51 14 4156.39 -33.62 188.92 264.11 57.53 21 0 30 3556.4 -37.62 180.81  
 127.05 3 36 39 2740.83 -33.61 79.14 264.10 57.52 4 22 20 2140.8 -37.61 71.03

Differential Corrections  
 TDE 2.2887 TRA .8155 TC3-5.2046 BAU .9495 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4277 RRA .1187 RC3 -.3034 FAU .06333 SGT 5534.4 SGR 748.1 SG3 419.1 ST 3595.6 SR 668.6 SS 1316.7  
 FDE 1.7797 FRA 1.2039 FC3-4.0243 BSP 17806 RRT .8916 RRF .8809 RTF .9692 CRT .9992 CRS -.9865 CST -.9915  
 BDE 2.3284 BRA .8241 BC3 5.2134 FSP -1433 SGB 5584.7 R23 .0299 R13 .9695 LSA 3883.6 MSA 163.7 SSA 14.3  
 SGI 5574.6 SG2 336.3 THA 6.90 EL1 3657.2 EL2 26.1 ALF 10.53

LAUNCH DATE JAN 20 1969 FLIGHT TIME 182.00 ARRIVAL DATE JUL 21 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.282 GAL 2.81 AZL 86.35 HCA 243.14 SMA 125.35 ECC .18098 INC 3.6493 V1 30.264  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.202 GAP 7.11 AZP 91.65 TAL 167.08 TAP 50.22 RCA 102.66 APO 148.04 V2 34.875  
 RC 144.478 GL 27.78 GP -17.95 ZAL 71.35 ZAP 151.35 ETS 325.91 ZAE 129.03 ETE 194.21 ZAC 122.60 ETC 176.58 CLP-157.30

Distance 517.461

Planetocentric Conic: C3 13.850 VHL 3.722 DLA 44.50 RAL 38.61 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 5.456 OPA -9.05 RAP 31.79 ECC 1.2279  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.11 20 9 34 4148.50 -32.92 187.67 267.42 58.17 21 18 43 3548.5 -36.86 179.59  
 125.89 3 46 9 2755.96 -32.91 80.01 267.41 58.16 4 32 5 2156.0 -36.85 71.93  
 54.11 20 9 34 4148.50 -32.92 187.67 267.42 58.17 21 18 43 3548.5 -36.86 179.59  
 125.89 3 46 9 2755.96 -32.91 80.01 267.41 58.16 4 32 5 2156.0 -36.85 71.93  
 54.11 20 9 34 4148.50 -32.92 187.67 267.42 58.17 21 18 43 3548.5 -36.86 179.59  
 125.89 3 46 9 2755.96 -32.91 80.01 267.41 58.16 4 32 5 2156.0 -36.85 71.93

Differential Corrections: TOE 2.2397 TRA .9945 TC3-5.2236 BAU .9684 SGT 5622.7 SGR 714.6 SG3 399.8 ST 3509.6 SR 639.7 SS 1235.1  
 RDE .4122 RRA .1235 RC3 -.2575 FAU .05931 RRT .8726 RRF .8594 RTF .9694 CRT .9979 CRS -.9805 CST -.9906  
 FDE 1.6136 FRA 1.2795 FC3-3.7073 BSP 18126 SGB 5667.9 R23 .0210 R13 .9696 LSA 3771.5 MSA 166.3 SSA 15.0  
 BOE 2.2773 BRA 1.0021 BC3 5.2299 FSP -1370 SG1 5657.3 SG2 346.9 THA 6.35 EL1 3567.2 EL2 40.3 ALF 10.31

Mid-Course Execution Accuracy: SGT 5622.7 SGR 714.6 SG3 399.8  
 RRT .8726 RRF .8594 RTF .9694  
 SGB 5667.9 R23 .0210 R13 .9696  
 SG1 5657.3 SG2 346.9 THA 6.35

Orbit Determination Accuracy: ST 3509.6 SR 639.7 SS 1235.1  
 CRT .9979 CRS -.9805 CST -.9906  
 LSA 3771.5 MSA 166.3 SSA 15.0  
 EL1 3567.2 EL2 40.3 ALF 10.31

LAUNCH DATE JAN 20 1969 FLIGHT TIME 184.00 ARRIVAL DATE JUL 23 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.252 GAL 3.14 AZL 86.51 HCA 246.32 SMA 125.16 ECC .18427 INC 3.4913 V1 30.264  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.190 GAP 7.45 AZP 91.40 TAL 165.82 TAP 52.14 RCA 102.10 APO 148.23 V2 34.885  
 RC 146.734 GL 26.10 GP -16.91 ZAL 69.05 ZAP 153.05 ETS 325.63 ZAE 128.85 ETE 193.21 ZAC 124.18 ETC 176.39 CLP-158.70

Distance 523.328

Planetocentric Conic: C3 14.185 VHL 3.766 DLA 43.62 RAL 42.05 RAD 6567.6 VEL 11.643 PTH 2.04 VHP 5.625 OPA -7.43 RAP 32.95 ECC 1.2334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.32 20 28 1 4141.17 -32.15 186.45 270.79 58.77 21 37 2 3541.2 -36.02 178.40  
 124.68 3 55 6 2773.79 -32.14 81.06 270.78 58.76 4 41 20 2173.8 -36.01 73.02  
 55.32 20 28 1 4141.17 -32.15 186.45 270.79 58.77 21 37 2 3541.2 -36.02 178.40  
 124.68 3 55 6 2773.79 -32.14 81.06 270.78 58.76 4 41 20 2173.8 -36.01 73.02  
 55.32 20 28 1 4141.17 -32.15 186.45 270.79 58.77 21 37 2 3541.2 -36.02 178.40  
 124.68 3 55 6 2773.79 -32.14 81.06 270.78 58.76 4 41 20 2173.8 -36.01 73.02

Differential Corrections: TOE 2.1851 TRA 1.1833 TC3-5.1954 BAU .9861 SGT 5705.1 SGR 687.2 SG3 380.8 ST 3408.9 SR 615.6 SS 1155.3  
 RDE .4011 RRA .1285 RC3 -.2181 FAU .05541 RRT .8526 RRF .8375 RTF .9697 CRT .9957 CRS -.9726 CST -.9896  
 FDE 1.4585 FRA 1.3468 FC3-3.3818 BSP 18421 SGB 5746.3 R23 .0143 R13 .9699 LSA 3647.6 MSA 169.9 SSA 15.5  
 BOE 2.2217 BRA 1.1902 BC3 5.2000 FSP -1307 SG1 5735.2 SG2 357.2 THA 5.89 EL1 3463.6 EL2 56.1 ALF 10.20

Mid-Course Execution Accuracy: SGT 5705.1 SGR 687.2 SG3 380.8  
 RRT .8526 RRF .8375 RTF .9697  
 SGB 5746.3 R23 .0143 R13 .9699  
 SG1 5735.2 SG2 357.2 THA 5.89

Orbit Determination Accuracy: ST 3408.9 SR 615.6 SS 1155.3  
 CRT .9957 CRS -.9726 CST -.9896  
 LSA 3647.6 MSA 169.9 SSA 15.5  
 EL1 3463.6 EL2 56.1 ALF 10.20

LAUNCH DATE JAN 20 1969 FLIGHT TIME 186.00 ARRIVAL DATE JUL 25 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.223 GAL 3.49 AZL 86.66 HCA 249.50 SMA 124.97 ECC .18779 INC 3.3406 V1 30.264  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.179 GAP 7.80 AZP 91.17 TAL 164.56 TAP 54.05 RCA 101.50 APO 148.44 V2 34.897  
 RC 148.977 GL 24.45 GP -15.98 ZAL 66.74 ZAP 154.64 ETS 325.26 ZAE 128.67 ETE 192.32 ZAC 125.83 ETC 176.20 CLP-160.04

Distance 529.171

Planetocentric Conic: C3 14.631 VHL 3.825 DLA 42.70 RAL 45.41 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 5.805 OPA -5.89 RAP 34.22 ECC 1.2408  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.60 20 46 35 4134.24 -31.30 185.23 274.20 59.33 21 55 29 3534.2 -35.11 177.23  
 123.40 4 3 24 2794.46 -31.29 82.31 274.19 59.32 4 49 58 2194.5 -35.10 74.31  
 56.60 20 46 35 4134.24 -31.30 185.23 274.20 59.33 21 55 29 3534.2 -35.11 177.23  
 123.40 4 3 24 2794.46 -31.29 82.31 274.19 59.32 4 49 58 2194.5 -35.10 74.31  
 56.60 20 46 35 4134.24 -31.30 185.23 274.20 59.33 21 55 29 3534.2 -35.11 177.23  
 123.40 4 3 24 2794.46 -31.29 82.31 274.19 59.32 4 49 58 2194.5 -35.10 74.31

Differential Corrections: TOE 2.1274 TRA 1.3855 TC3-5.1137 BAU 1.0009 SGT 5782.2 SGR 665.5 SG3 362.4 ST 3299.4 SR 595.8 SS 1080.1  
 RDE .3940 RRA .1344 RC3 -.1833 FAU .05146 RRT .8322 RRF .8161 RTF .9699 CRT .9922 CRS -.9623 CST -.9884  
 FDE 1.3164 FRA 1.4114 FC3-3.0448 BSP 18635 SGB 5820.4 R23 .0104 R13 .9700 LSA 3518.1 MSA 175.5 SSA 15.9  
 BOE 2.1636 BRA 1.3920 BC3 5.1170 FSP -1239 SG1 5808.8 SG2 367.3 THA 5.49 EL1 3352.0 EL2 73.0 ALF 10.16

Mid-Course Execution Accuracy: SGT 5782.2 SGR 665.5 SG3 362.4  
 RRT .8322 RRF .8161 RTF .9699  
 SGB 5820.4 R23 .0104 R13 .9700  
 SG1 5808.8 SG2 367.3 THA 5.49

Orbit Determination Accuracy: ST 3299.4 SR 595.8 SS 1080.1  
 CRT .9922 CRS -.9623 CST -.9884  
 LSA 3518.1 MSA 175.5 SSA 15.9  
 EL1 3352.0 EL2 73.0 ALF 10.16

LAUNCH DATE JAN 20 1969 FLIGHT TIME 188.00 ARRIVAL DATE JUL 27 1969

Heliocentric Conic: RL 147.21 LAL .00 LOL 119.77 VL 27.193 GAL 3.86 AZL 86.80 HCA 252.68 SMA 124.78 ECC .19158 INC 3.1960 V1 30.264  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.168 GAP 8.16 AZP 90.95 TAL 163.27 TAP 55.95 RCA 100.88 APO 148.69 V2 34.908  
 RC 151.204 GL 22.83 GP -15.14 ZAL 64.42 ZAP 156.14 ETS 324.77 ZAE 128.49 ETE 191.55 ZAC 127.54 ETC 176.01 CLP-161.34

Distance 534.989

Planetocentric Conic: C3 15.197 VHL 3.898 DLA 41.75 RAL 48.69 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 5.995 OPA -4.42 RAP 35.58 ECC 1.2501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.93 21 5 16 4127.43 -30.39 184.01 277.64 59.87 22 14 4 3527.4 -34.14 176.07  
 122.07 4 10 53 2818.22 -30.38 83.77 277.63 59.85 4 57 51 2218.2 -34.13 75.82  
 57.93 21 5 16 4127.43 -30.39 184.01 277.64 59.87 22 14 4 3527.4 -34.14 176.07  
 122.07 4 10 53 2818.22 -30.38 83.77 277.63 59.85 4 57 51 2218.2 -34.13 75.82  
 57.93 21 5 16 4127.43 -30.39 184.01 277.64 59.87 22 14 4 3527.4 -34.14 176.07  
 122.07 4 10 53 2818.22 -30.38 83.77 277.63 59.85 4 57 51 2218.2 -34.13 75.82

Differential Corrections: TOE 2.0611 TRA 1.5956 TC3-5.0003 BAU 1.0164 SGT 5853.0 SGR 647.1 SG3 344.3 ST 3174.8 SR 578.3 SS 1005.7  
 RDE .3894 RRA .1404 RC3 -.1556 FAU .04786 RRT .8122 RRF .7952 RTF .9702 CRT .9871 CRS -.9492 CST -.9870  
 FDE 1.1813 FRA 1.4667 FC3-2.7263 BSP 18909 SGB 5888.6 R23 .0068 R13 .9702 LSA 3375.2 MSA 182.5 SSA 16.1  
 BOE 2.0976 BRA 1.6018 BC3 5.0027 FSP -1182 SG1 5876.6 SG2 376.0 THA 5.15 EL1 3225.8 EL2 91.1 ALF 10.20

Mid-Course Execution Accuracy: SGT 5853.0 SGR 647.1 SG3 344.3  
 RRT .8122 RRF .7952 RTF .9702  
 SGB 5888.6 R23 .0068 R13 .9702  
 SG1 5876.6 SG2 376.0 THA 5.15

Orbit Determination Accuracy: ST 3174.8 SR 578.3 SS 1005.7  
 CRT .9871 CRS -.9492 CST -.9870  
 LSA 3375.2 MSA 182.5 SSA 16.1  
 EL1 3225.8 EL2 91.1 ALF 10.20

LAUNCH DATE JAN 20 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 540.779

RL 147.21 LAL .00 LOL 119.77 VL 27.163 GAL 4.25 AZL 86.94 HCA 255.86 SMA 124.59 ECC .19565 INC 3.0562 VI 30.264
RP 108.52 LAP -2.96 LOP 15.60 VP 37.157 GAP 8.53 AZP 90.75 TAL 161.98 TAP 57.84 RCA 100.22 APO 148.97 V2 34.920
RC 153.416 GL 21.24 GP -14.39 ZAL 62.10 ZAP 157.56 ETS 324.15 ZAE 128.32 ETE 190.87 ZAC 129.31 ETC 175.81 CLP-162.60

PLANETOCENTRIC CONIC

C3 15.892 VHL 3.986 DLA 40.78 RAL 51.88 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 6.196 DPA -3.02 RAP 37.03 ECC 1.2615
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.33 21 24 4 4120.68 -29.41 182.78 281.09 60.37 22 32 44 3520.7 -33.11 174.89
120.67 4 17 30 2845.13 -29.40 85.44 281.08 60.36 5 4 55 2245.1 -33.10 77.56
59.33 21 24 4 4120.68 -29.41 182.78 281.09 60.37 22 32 44 3520.7 -33.11 174.89
120.67 4 17 30 2845.13 -29.40 85.44 281.08 60.36 5 4 55 2245.1 -33.10 77.56
59.33 21 24 4 4120.68 -29.41 182.78 281.09 60.37 22 32 44 3520.7 -33.11 174.89
120.67 4 17 30 2845.13 -29.40 85.44 281.08 60.36 5 4 55 2245.1 -33.10 77.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9897 TRA 1.8173 TC3-4.8480 BAU 1.0304 SGT 5917.5 SGR 631.9 SG3 326.9 ST 3043.4 SR 563.0 SS 935.6
RDE .3874 RRA .1473 RC3 -.1324 FAU .04438 RRT .7928 RRF .7754 RTF .9704 CRT .9800 CRS -.9327 CST -.9855
FDE 1.0562 FRA 1.5176 FC3-2.4177 BSP 19166 SGB 5951.1 R23 .0046 R13 .9704 LSA 3227.6 MSA 191.6 SSA 16.2
BOE 2.0270 BRA 1.8232 BC3 4.8498 FSP -1126 SG1 5938.8 SG2 383.7 THA 4.86 EL1 3093.1 EL2 110.2 ALF 10.29

LAUNCH DATE JAN 20 1969

FLIGHT TIME 192.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 546.540

RL 147.21 LAL .00 LOL 119.77 VL 27.133 GAL 4.66 AZL 87.08 HCA 259.04 SMA 124.40 ECC .20003 INC 2.9202 VI 30.264
RP 108.48 LAP -2.87 LOP 18.79 VP 37.147 GAP 8.92 AZP 90.56 TAL 160.68 TAP 59.73 RCA 99.52 APO 149.29 V2 34.932
RC 155.612 GL 19.69 GP -13.71 ZAL 59.80 ZAP 158.91 ETS 323.40 ZAE 128.15 ETE 190.27 ZAC 131.12 ETC 175.60 CLP-163.82

PLANETOCENTRIC CONIC

C3 16.726 VHL 4.090 DLA 39.79 RAL 54.96 RAD 6567.7 VEL 11.752 PTH 2.07 VHP 6.408 DPA -1.68 RAP 38.55 ECC 1.2753
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
60.79 21 42 57 4113.78 -28.38 181.53 284.54 60.85 22 51 31 3513.8 -32.03 173.70
119.21 4 23 11 2875.39 -28.36 87.35 284.53 60.83 5 11 6 2275.4 -32.01 79.53
60.79 21 42 57 4113.78 -28.38 181.53 284.54 60.85 22 51 31 3513.8 -32.03 173.70
119.21 4 23 11 2875.39 -28.36 87.35 284.53 60.83 5 11 6 2275.4 -32.01 79.53
60.79 21 42 57 4113.78 -28.38 181.53 284.54 60.85 22 51 31 3513.8 -32.03 173.70
119.21 4 23 11 2875.39 -28.36 87.35 284.53 60.83 5 11 6 2275.4 -32.01 79.53

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9135 TRA 2.0512 TC3-4.6631 BAU 1.0430 SGT 5976.7 SGR 619.0 SG3 310.3 ST 2908.3 SR 549.4 SS 870.5
RDE .3875 RRA .1551 RC3 -.1134 FAU .04107 RRT .7747 RRF .7571 RTF .9706 CRT .9704 CRS -.9124 CST -.9839
FDE .9409 FRA 1.5645 FC3-2.1258 BSP 19412 SGB 6008.6 R23 .0031 R13 .9706 LSA 3078.4 MSA 202.5 SSA 16.2
BOE 1.9524 BRA 2.0570 BC3 4.6644 FSP -1073 SG1 5996.0 SG2 390.2 THA 4.61 EL1 2956.9 EL2 130.4 ALF 10.41

LAUNCH DATE JAN 20 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 552.267

RL 147.21 LAL .00 LOL 119.77 VL 27.103 GAL 5.10 AZL 87.21 HCA 262.23 SMA 124.21 ECC .20474 INC 2.7870 VI 30.264
RP 108.45 LAP -2.76 LOP 21.99 VP 37.136 GAP 9.32 AZP 90.38 TAL 159.38 TAP 61.61 RCA 98.78 APO 149.64 V2 34.945
RC 157.792 GL 18.17 GP -13.10 ZAL 57.53 ZAP 160.19 ETS 322.48 ZAE 127.99 ETE 189.75 ZAC 132.98 ETC 175.36 CLP-165.00

PLANETOCENTRIC CONIC

C3 17.716 VHL 4.209 DLA 38.78 RAL 57.92 RAD 6567.7 VEL 11.794 PTH 2.09 VHP 6.632 DPA -.40 RAP 40.14 ECC 1.2916
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
62.31 22 1 58 4106.59 -27.29 180.24 287.99 61.30 23 10 25 3506.6 -30.89 172.48
117.69 4 27 49 2909.15 -27.28 89.50 287.99 61.29 5 16 19 2309.1 -30.88 81.74
62.31 22 1 58 4106.59 -27.29 180.24 287.99 61.30 23 10 25 3506.6 -30.89 172.48
117.69 4 27 49 2909.15 -27.28 89.50 287.99 61.29 5 16 19 2309.1 -30.88 81.74
62.31 22 1 58 4106.59 -27.29 180.24 287.99 61.30 23 10 25 3506.6 -30.89 172.48
117.69 4 27 49 2909.15 -27.28 89.50 287.99 61.29 5 16 19 2309.1 -30.88 81.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.8367 TRA 2.3019 TC3-4.4414 BAU 1.0522 SGT 6032.2 SGR 608.6 SG3 294.6 ST 2778.1 SR 537.5 SS 813.1
RDE .3898 RRA .1643 RC3 -.0968 FAU .03777 RRT .7584 RRF .7412 RTF .9707 CRT .9580 CRS -.8882 CST -.9824
FDE .8373 FRA 1.6112 FC3-1.8458 BSP 19546 SGB 6062.8 R23 .0029 R13 .9707 LSA 2936.2 MSA 215.3 SSA 16.0
BOE 1.8776 BRA 2.3077 BC3 4.4425 FSP -1016 SG1 6049.9 SG2 395.5 THA 4.39 EL1 2825.6 EL2 151.5 ALF 10.53

LAUNCH DATE JAN 20 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 557.958

RL 147.21 LAL .00 LOL 119.77 VL 27.073 GAL 5.56 AZL 87.34 HCA 265.42 SMA 124.02 ECC .20982 INC 2.6557 VI 30.264
RP 108.41 LAP -2.65 LOP 25.18 VP 37.126 GAP 9.74 AZP 90.21 TAL 158.07 TAP 63.49 RCA 98.00 APO 150.04 V2 34.957
RC 159.953 GL 16.70 GP -12.54 ZAL 55.30 ZAP 161.40 ETS 321.39 ZAE 127.83 ETE 189.28 ZAC 134.88 ETC 175.10 CLP-166.16

PLANETOCENTRIC CONIC

C3 18.878 VHL 4.345 DLA 37.76 RAL 60.77 RAD 6567.8 VEL 11.843 PTH 2.10 VHP 6.869 DPA .82 RAP 41.80 ECC 1.3107
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.90 22 21 10 4098.77 -26.15 178.91 291.44 61.73 23 29 29 3498.8 -29.71 171.21
116.10 4 31 19 2946.70 -26.14 91.91 291.43 61.72 5 20 26 2346.7 -29.70 84.21
63.90 22 21 10 4098.77 -26.15 178.91 291.44 61.73 23 29 29 3498.8 -29.71 171.21
116.10 4 31 19 2946.70 -26.14 91.91 291.43 61.72 5 20 26 2346.7 -29.70 84.21
63.90 22 21 10 4098.77 -26.15 178.91 291.44 61.73 23 29 29 3498.8 -29.71 171.21
116.10 4 31 19 2946.70 -26.14 91.91 291.43 61.72 5 20 26 2346.7 -29.70 84.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.7516 TRA 2.5622 TC3-4.2065 BAU 1.0619 SGT 6079.6 SGR 598.6 SG3 279.5 ST 2644.0 SR 525.6 SS 758.8
RDE .3931 RRA .1741 RC3 -.0841 FAU .03477 RRT .7434 RRF .7264 RTF .9709 CRT .9420 CRS -.8589 CST -.9807
FDE .7390 FRA 1.6522 FC3-1.5947 BSP 19771 SGB 6109.0 R23 .0023 R13 .9709 LSA 2791.1 MSA 229.8 SSA 15.7
BOE 1.7951 BRA 2.5681 BC3 4.2073 FSP -970 SG1 6096.0 SG2 399.3 THA 4.20 EL1 2690.2 EL2 173.3 ALF 10.65



LAUNCH DATE JAN 20 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 563.607

RL 147.21 LAL .00 LOL 119.77 VL 27.042 GAL 6.05 AZL 87.47 MCA 268.61 SMA 123.83 ECC .21529 INC 2.5254 V1 30.264  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.116 GAP 10.18 AZP 90.06 TAL 156.76 TAP 65.37 RCA 97.17 APO 150.49 V2 34.970  
 RC 162.097 GL 15.27 GP -12.04 ZAL 53.12 ZAP 162.56 ETS 320.09 ZAE 127.68 ETE 188.86 ZAC 136.81 ETC 174.81 CLP-167.29

PLANETOCENTRIC CONIC

C3 20.234 VHL 4.498 DLA 36.73 RAL 63.49 RAD 6567.8 VEL 11.900 PTH 2.11 VHP 7.120 DPA 2.00 RAP 43.52 ECC 1.3330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.55 22 40 32 4090.21 -24.98 177.52 294.87 62.14 23 48 43 3490.2 -28.50 169.89  
 114.45 4 33 39 2988.14 -24.97 94.58 294.87 62.14 5 23 27 2388.1 -28.49 86.96  
 65.55 22 40 32 4090.21 -24.98 177.52 294.87 62.14 23 48 43 3490.2 -28.50 169.89  
 114.45 4 33 39 2988.14 -24.97 94.58 294.87 62.14 5 23 27 2388.1 -28.49 86.96  
 65.55 22 40 32 4090.21 -24.98 177.52 294.87 62.14 23 48 43 3490.2 -28.50 169.89  
 114.45 4 33 39 2988.14 -24.97 94.58 294.87 62.14 5 23 27 2388.1 -28.49 86.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6634 TRA 2.8376 TC3-3.9539 BAU 1.0698 SGT 6122.2 SGR 589.6 SG3 265.2 ST 2516.1 SR 514.3 SS 711.2  
 RDE .3978 RRA .1851 RC3 -.0736 FAU .03192 RRT .7302 RRF .7136 RTF .9710 CRT .9220 CRS -.8249 CST -.9791  
 FDE .6495 FRA 1.6919 FC3-1.3655 BSP 19972 SGB 6150.5 R23 .0022 R13 .9710 LSA 2653.4 MSA 245.5 SSA 15.4  
 BOE 1.7103 BRA 2.8436 BC3 3.9546 FSP -.924 SG1 6137.4 SG2 401.8 THA 4.04 EL1 2560.7 EL2 195.7 ALF 10.74

LAUNCH DATE JAN 20 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 569.210

RL 147.21 LAL .00 LOL 119.77 VL 27.012 GAL 6.56 AZL 87.60 MCA 271.80 SMA 123.64 ECC .22121 INC 2.3955 V1 30.264  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.107 GAP 10.64 AZP 89.92 TAL 155.45 TAP 67.26 RCA 96.29 APO 150.99 V2 34.983  
 RC 164.221 GL 13.90 GP -11.58 ZAL 51.01 ZAP 163.66 ETS 318.56 ZAE 127.54 ETE 188.50 ZAC 138.76 ETC 174.48 CLP-168.40

PLANETOCENTRIC CONIC

C3 21.810 VHL 4.670 DLA 35.71 RAL 66.08 RAD 6567.9 VEL 11.966 PTH 2.13 VHP 7.386 DPA 3.13 RAP 45.28 ECC 1.3589  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.28 23 0 13 4080.47 -23.78 176.05 298.29 62.54 24 8 13 3480.5 -27.26 168.48  
 112.72 4 34 39 3033.88 -23.77 97.56 298.28 62.53 5 25 13 2433.9 -27.25 89.99  
 67.28 23 0 13 4080.47 -23.78 176.05 298.29 62.54 24 8 13 3480.5 -27.26 168.48  
 112.72 4 34 39 3033.88 -23.77 97.56 298.28 62.53 5 25 13 2433.9 -27.25 89.99  
 67.28 23 0 13 4080.47 -23.78 176.05 298.29 62.54 24 8 13 3480.5 -27.26 168.48  
 112.72 4 34 39 3033.88 -23.77 97.56 298.28 62.53 5 25 13 2433.9 -27.25 89.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.5726 TRA 3.1291 TC3-3.6874 BAU 1.0753 SGT 6159.2 SGR 581.0 SG3 251.7 ST 2396.8 SR 503.1 SS 669.8  
 RDE .4035 RRA .1973 RC3 -.0647 FAU .02917 RRT .7188 RRF .7026 RTF .9712 CRT .8975 CRS -.7862 CST -.9779  
 FDE .5678 FRA 1.7302 FC3-1.1577 BSP 20144 SGB 6186.6 R23 .0022 R13 .9712 LSA 2525.4 MSA 261.9 SSA 15.0  
 BOE 1.6235 BRA 3.1353 BC3 3.6880 FSP -.880 SG1 6173.4 SG2 403.0 THA 3.90 EL1 2439.3 EL2 218.0 ALF 10.76

LAUNCH DATE JAN 20 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 574.761

RL 147.21 LAL .00 LOL 119.77 VL 26.982 GAL 7.11 AZL 87.74 MCA 275.00 SMA 123.45 ECC .22761 INC 2.2649 V1 30.264  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.097 GAP 11.13 AZP 89.80 TAL 154.15 TAP 69.15 RCA 95.35 APO 151.55 V2 34.996  
 RC 166.326 GL 12.57 GP -11.16 ZAL 48.95 ZAP 164.71 ETS 316.76 ZAE 127.40 ETE 188.17 ZAC 140.74 ETC 174.10 CLP-169.49

PLANETOCENTRIC CONIC

C3 23.634 VHL 4.862 DLA 34.69 RAL 68.54 RAD 6568.0 VEL 12.042 PTH 2.15 VHP 7.670 DPA 4.21 RAP 47.10 ECC 1.3890  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.07 23 20 17 4069.17 -22.55 174.46 301.69 62.92 24 28 6 3469.2 -25.99 166.96  
 110.93 4 34 14 3084.24 -22.54 100.86 301.69 62.91 5 25 38 2484.2 -25.98 93.35  
 69.07 23 20 17 4069.17 -22.55 174.46 301.69 62.92 24 28 6 3469.2 -25.99 166.96  
 110.93 4 34 14 3084.24 -22.54 100.86 301.69 62.91 5 25 38 2484.2 -25.98 93.35  
 69.07 23 20 17 4069.17 -22.55 174.46 301.69 62.92 24 28 6 3469.2 -25.99 166.96  
 110.93 4 34 14 3084.24 -22.54 100.86 301.69 62.91 5 25 38 2484.2 -25.98 93.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.4828 TRA 3.4416 TC3-3.4070 BAU 1.0766 SGT 6193.6 SGR 575.1 SG3 239.2 ST 2292.1 SR 492.2 SS 636.1  
 RDE .4105 RRA .2109 RC3 -.0566 FAU .02644 RRT .7096 RRF .6941 RTF .9713 CRT .8685 CRS -.7442 CST -.9772  
 FDE .4955 FRA 1.7703 FC3 -.9686 BSP 20210 SGB 6220.0 R23 .0027 R13 .9713 LSA 2413.1 MSA 278.4 SSA 14.6  
 BOE 1.5386 BRA 3.4481 BC3 3.4074 FSP -.833 SG1 6207.0 SG2 403.0 THA 3.77 EL1 2332.1 EL2 239.8 ALF 10.68

LAUNCH DATE JAN 20 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 580.251

RL 147.21 LAL .00 LOL 119.77 VL 26.951 GAL 7.70 AZL 87.87 MCA 278.20 SMA 123.27 ECC .23455 INC 2.1330 V1 30.264  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.088 GAP 11.65 AZP 89.70 TAL 152.87 TAP 71.06 RCA 94.35 APO 152.18 V2 35.010  
 RC 168.410 GL 11.30 GP -10.78 ZAL 46.97 ZAP 165.71 ETS 314.65 ZAE 127.26 ETE 187.87 ZAC 142.74 ETC 173.67 CLP-170.56

PLANETOCENTRIC CONIC

C3 25.745 VHL 5.074 DLA 33.68 RAL 70.88 RAD 6568.0 VEL 12.129 PTH 2.17 VHP 7.972 DPA 5.24 RAP 48.96 ECC 1.4237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.96 23 40 57 4055.64 -21.30 172.73 305.08 63.28 24 48 32 3455.6 -24.71 165.28  
 109.04 4 32 12 3139.84 -21.29 104.52 305.07 63.27 5 24 32 2539.8 -24.70 97.07  
 70.96 23 40 57 4055.64 -21.30 172.73 305.08 63.28 24 48 32 3455.6 -24.71 165.28  
 109.04 4 32 12 3139.84 -21.29 104.52 305.07 63.27 5 24 32 2539.8 -24.70 97.07  
 110.00 5 22 39 2985.59 -25.57 94.70 307.25 66.50 6 12 24 2385.6 -28.52 86.77  
 110.00 3 53 36 3257.89 -17.15 111.33 302.70 59.97 4 47 54 2657.9 -21.01 104.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.3859 TRA 3.7678 TC3-3.1315 BAU 1.0780 SGT 6219.9 SGR 564.5 SG3 227.2 ST 2193.3 SR 480.6 SS 606.2  
 RDE .4178 RRA .2253 RC3 -.0502 FAU .02398 RRT .7016 RRF .6863 RTF .9716 CRT .8340 CRS -.6975 CST -.9768  
 FDE .4270 FRA 1.8074 FC3 -.8063 BSP 20372 SGB 6245.4 R23 .0026 R13 .9716 LSA 2307.0 MSA 294.6 SSA 14.2  
 BOE 1.4475 BRA 3.7746 BC3 3.1319 FSP -.794 SG1 6232.5 SG2 401.4 THA 3.66 EL1 2230.2 EL2 260.8 ALF 10.50

LAUNCH DATE JAN 20 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 585.672

RL 147.21 LAL .00 LOL 119.77 VL 26.921 GAL 8.33 AZL 88.00 MCA 281.40 SMA 123.08 ECC .24208 INC 1.9989 V1 30.264
RP 108.20 LAP -1.96 LOP 41.17 VP 37.078 GAP 12.20 AZP 89.60 TAL 151.59 TAP 72.99 RCA 93.28 APO 152.88 V2 35.023
RC 170.474 GL 10.08 GP -10.43 ZAL 45.07 ZAP 166.65 ETS 312.18 ZAE 127.11 ETE 187.61 ZAC 144.75 ETC 173.17 CLP-171.63

PLANETOCENTRIC CONIC

C3 28.186 VHL 5.309 CLA 32.68 RAL 73.08 RAD 6568.1 VEL 12.230 PTH 2.20 VHP 8.296 DPA 6.23 RAP 50.85 ECC 1.4639
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.96 0 6 19 4039.21 -20.04 170.79 308.44 63.63 1 13 38 3439.2 -23.42 163.39
107.04 4 28 23 3201.26 -20.03 108.58 308.43 63.62 5 21 44 2601.3 -23.41 101.19
72.96 0 6 19 4039.21 -20.04 170.79 308.44 63.63 1 13 38 3439.2 -23.42 163.39
107.04 4 28 23 3201.26 -20.03 108.58 308.43 63.62 5 21 44 2601.3 -23.41 101.19
110.00 6 3 24 2908.57 -27.56 89.60 312.04 68.93 6 51 52 2308.6 -30.17 81.38
110.00 3 30 28 3379.90 -12.86 118.19 304.27 58.05 4 26 48 2779.9 -16.99 111.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.2866 TRA 4.1137 TC3-2.8563 BAU 1.0764 SGT 6240.7 SGR 555.5 SG3 216.0 ST 2107.1 SR 468.7 SS 581.8
ROE .4257 RRA .2408 RC3 -.0445 FAU .02162 RRT .6950 RRF .6801 RTF .9720 CRT 7.945 CRS -.6481 CST -.9771
FOE .3646 FRA 1.8448 FC3 -.6640 BSP 20522 SGB 6265.4 R23 .0025 R13 .9720 LSA 2214.1 MSA 309.6 SSA 13.8
BOE 1.3552 BRA 4.1207 BC3 2.8566 FSP -757 SG1 6252.7 SG2 398.6 THA 3.55 EL1 2140.4 EL2 280.2 ALF 10.20

LAUNCH DATE JAN 20 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 591.013

RL 147.21 LAL .00 LOL 119.77 VL 26.891 GAL 8.99 AZL 88.14 MCA 284.60 SMA 122.90 ECC .25028 INC 1.8615 V1 30.264
RP 108.16 LAP -1.80 LOP 44.37 VP 37.069 GAP 12.78 AZP 89.53 TAL 150.33 TAP 74.93 RCA 92.14 APO 153.65 V2 35.036
RC 172.518 GL 8.91 GP -10.12 ZAL 43.25 ZAP 167.54 ETS 309.28 ZAE 126.97 ETE 187.37 ZAC 146.77 ETC 172.59 CLP-172.69

PLANETOCENTRIC CONIC

C3 31.009 VHL 5.569 DLA 31.70 RAL 75.17 RAD 6568.2 VEL 12.344 PTH 2.23 VHP 8.644 DPA 7.17 RAP 52.78 ECC 1.5103
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.11 0 28 57 4018.39 -18.78 168.54 311.78 63.98 1 35 56 3418.4 -22.12 161.20
104.89 4 22 20 3269.89 -18.77 113.16 311.78 63.97 5 16 50 2669.9 -22.11 105.82
75.11 0 28 57 4018.39 -18.78 168.54 311.78 63.98 1 35 56 3418.4 -22.12 161.20
104.89 4 22 20 3269.89 -18.77 113.16 311.78 63.97 5 16 50 2669.9 -22.11 105.82
110.00 6 33 13 2863.87 -28.61 86.55 316.29 70.45 7 20 57 2263.9 -31.01 78.17
110.00 3 17 14 3472.40 -9.48 123.22 306.37 57.00 4 15 7 2872.4 -13.76 116.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.1857 TRA 4.4820 TC3-2.5844 BAU 1.0715 SGT 6257.3 SGR 546.1 SG3 205.4 ST 2034.7 SR 456.3 SS 562.7
ROE .4341 RRA .2573 RC3 -.0392 FAU .01935 RRT .6899 RRF .6753 RTF .9725 CRT .7505 CRS -.5974 CST -.9780
FOE .3081 FRA 1.8835 FC3 -.5404 BSP 20636 SGB 6281.1 R23 .0024 R13 .9725 LSA 2135.6 MSA 322.7 SSA 13.4
BOE 1.2627 BRA 4.4894 BC3 2.5847 FSP -721 SG1 6268.7 SG2 394.6 THA 3.46 EL1 2064.0 EL2 297.2 ALF 9.76

LAUNCH DATE JAN 20 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 596.261

RL 147.21 LAL .00 LOL 119.77 VL 26.862 GAL 9.71 AZL 88.28 MCA 287.81 SMA 122.71 ECC .25921 INC 1.7201 V1 30.264
RP 108.12 LAP -1.64 LOP 47.58 VP 37.060 GAP 13.41 AZP 89.47 TAL 149.10 TAP 76.91 RCA 90.91 APO 154.52 V2 35.050
RC 174.540 GL 7.80 GP -9.83 ZAL 41.52 ZAP 168.37 ETS 305.88 ZAE 126.82 ETE 187.15 ZAC 148.80 ETC 171.92 CLP-173.75

PLANETOCENTRIC CONIC

C3 34.279 VHL 5.855 DLA 30.75 RAL 77.12 RAD 6568.4 VEL 12.476 PTH 2.26 VHP 9.018 DPA 8.07 RAP 54.73 ECC 1.5642
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
77.49 0 53 31 3990.87 -17.51 165.82 315.11 64.32 2 0 2 3390.9 -20.83 158.52
102.51 4 13 23 3347.91 -17.50 118.39 315.10 64.31 5 9 11 2747.9 -20.81 111.10
77.49 0 53 31 3990.87 -17.51 165.82 315.11 64.32 2 0 2 3390.9 -20.83 158.52
102.51 4 13 23 3347.91 -17.50 118.39 315.10 64.31 5 9 11 2747.9 -20.81 111.10
110.00 6 58 7 2833.54 -29.29 84.45 320.30 71.53 7 45 20 2233.5 -31.53 75.95
110.00 3 7 57 3553.24 -6.46 127.52 308.68 56.36 4 7 11 2953.2 -10.83 121.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.0830 TRA 4.8739 TC3-2.3190 BAU 1.0629 SGT 6268.8 SGR 536.1 SG3 195.5 ST 1975.3 SR 443.4 SS 548.3
ROE .4428 RRA .2748 RC3 -.0343 FAU .01718 RRT .6860 RRF .6718 RTF .9731 CRT .7029 CRS -.5468 CST -.9796
FOE .2568 FRA 1.9236 FC3 -.4338 BSP 20738 SGB 6291.6 R23 .0023 R13 .9731 LSA 2070.7 MSA 333.3 SSA 12.9
BOE 1.1700 BRA 4.8817 BC3 2.3193 FSP -687 SG1 6279.6 SG2 389.4 THA 3.37 EL1 2000.4 EL2 311.4 ALF 9.19

LAUNCH DATE JAN 20 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 601.400

RL 147.21 LAL .00 LOL 119.77 VL 26.832 GAL 10.49 AZL 88.43 MCA 291.01 SMA 122.53 ECC .26897 INC 1.5733 V1 30.264
RP 108.08 LAP -1.47 LOP 50.79 VP 37.051 GAP 14.09 AZP 89.44 TAL 147.90 TAP 78.91 RCA 89.58 APO 155.49 V2 35.063
RC 176.542 GL 6.74 GP -9.56 ZAL 39.88 ZAP 169.13 ETS 301.91 ZAE 126.65 ETE 186.96 ZAC 150.82 ETC 171.14 CLP-174.81

PLANETOCENTRIC CONIC

C3 38.075 VHL 6.171 DLA 29.82 RAL 78.96 RAD 6568.5 VEL 12.627 PTH 2.29 VHP 9.422 DPA 8.93 RAP 56.71 ECC 1.6266
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.25 1 21 24 3952.01 -16.25 162.29 318.40 64.65 2 27 16 3352.0 -19.53 155.04
99.75 4 0 8 3439.84 -16.24 124.63 318.39 64.64 4 57 28 2839.8 -19.52 117.38
100.00 4 19 59 3376.43 -17.92 120.73 319.21 65.67 5 16 15 2776.4 -21.05 113.34
100.00 3 44 14 3490.64 -14.58 127.57 317.56 63.61 4 42 24 2690.6 -18.01 120.45
110.00 7 19 49 2812.32 -29.74 82.96 324.16 72.31 8 6 41 2212.3 -31.86 74.39
110.00 3 0 53 3627.52 -3.64 131.43 311.13 55.99 4 1 21 3027.5 -8.08 125.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .9815 TRA 5.2956 TC3-2.0587 BAU 1.0481 SGT 6277.4 SGR 525.5 SG3 186.3 ST 1930.6 SR 430.2 SS 538.6
ROE .4521 RRA .2935 RC3 -.0293 FAU .01501 RRT .6834 RRF .6698 RTF .9739 CRT .6536 CRS -.4989 CST -.9817
FOE .2116 FRA 1.9672 FC3 -.3414 BSP 20744 SGB 6299.3 R23 .0024 R13 .9739 LSA 2021.4 MSA 340.6 SSA 12.5
BOE 1.0806 BRA 5.3037 BC3 2.0589 FSP -652 SG1 6287.7 SG2 383.0 THA 3.29 EL1 1951.5 EL2 322.1 ALF 8.52

LAUNCH DATE JAN 20 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 22 1969

MELIOCENTRIC CONIC DISTANCE 606.410  
 RL 147.21 LAL .00 LOL 119.77 VL 26.803 GAL 11.32 AZL 88.58 HCA 294.22 SMA 122.36 ECC .27967 INC 1.4199 V1 30.264  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.042 GAP 14.82 AZP 89.42 TAL 146.74 TAP 80.96 RCA 88.14 APO 156.58 V2 35.076  
 RC 178.523 GL 5.73 GP -9.31 ZAL 38.33 ZAP 169.82 ETS 297.27 ZAE 126.48 ETE 186.77 ZAC 152.83 ETC 170.23 CLP-175.88

PLANETOCENTRIC CONIC  
 C3 42.493 VHL 6.519 DLA 28.91 RAL 80.67 RAD 6568.6 VEL 12.801 PTH 2.33 VHP 9.861 DPA 9.73 RAP 58.71 ECC 1.6993  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 83.91 1 37 6 3887.04 -15.00 156.88 321.67 64.99 3 1 53 3287.0 -18.25 149.66  
 96.09 3 38 6 3560.24 -14.98 132.91 321.66 64.98 4 37 26 2960.2 -18.23 125.70  
 100.00 5 13 10 3254.88 -21.16 113.15 324.46 68.37 6 7 25 2654.9 -23.90 105.44  
 100.00 3 4 43 3667.62 -9.00 137.74 318.57 61.38 4 5 50 3067.6 -12.76 130.97  
 110.00 7 39 9 2797.76 -30.03 81.93 327.91 72.85 8 25 47 2197.8 -32.08 73.31  
 110.00 2 55 13 3697.51 -.97 135.08 313.65 55.83 3 56 50 3097.5 -5.44 128.86

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .8740 TRA 5.7419 TC3-1.8138 BAU 1.0305 SGT 6278.8 SGR 513.8 SG3 177.5 ST 1893.9 SR 416.2 SS 531.6  
 RDE .4613 RRA .3126 RC3 -.0249 FAU .01301 RRT .6813 RRF .6682 RTF .9749 CRT .6018 CRS -.4512 CST -.9840  
 FDE .1687 FRA 2.0118 FC3 -.2650 BSP 20828 SGB 6299.7 R23 .0022 R13 .9749 LSA 1980.8 MSA 345.0 SSA 12.1  
 BOE .9883 BRA 5.7504 BC3 1.8140 FSP -622 SG1 6288.5 SG2 375.5 THA 3.20 EL1 1910.9 EL2 329.5 ALF 7.77

LAUNCH DATE JAN 20 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 24 1969

MELIOCENTRIC CONIC DISTANCE 611.266  
 RL 147.21 LAL .00 LOL 119.77 VL 26.774 GAL 12.23 AZL 88.74 HCA 297.44 SMA 122.18 ECC .29143 INC 1.2585 V1 30.264  
 RP 108.00 LAP -1.12 LOP 57.21 VP 37.034 GAP 15.61 AZP 89.42 TAL 145.62 TAP 83.05 RCA 86.58 APO 157.79 V2 35.089  
 RC 180.483 GL 4.78 GP -9.09 ZAL 36.88 ZAP 170.42 ETS 291.90 ZAE 126.28 ETE 186.60 ZAC 154.83 ETC 169.15 CLP-176.96

PLANETOCENTRIC CONIC  
 C3 47.651 VHL 6.903 DLA 28.04 RAL 82.26 RAD 6568.8 VEL 13.001 PTH 2.37 VHP 10.339 DPA 10.50 RAP 60.72 ECC 1.7842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 29 0 3638.61 -17.03 139.60 326.39 67.03 4 29 38 3038.6 -20.00 132.18  
 90.00 2 18 54 3866.26 -10.52 153.14 323.31 63.56 3 23 20 3266.3 -13.99 146.18  
 100.00 5 43 34 3204.78 -22.38 109.93 328.65 69.65 6 36 59 2604.8 -24.95 102.08  
 100.00 2 47 1 3775.32 -5.44 143.75 320.59 60.56 3 49 56 3175.3 -9.32 137.12  
 110.00 7 56 35 2788.46 -30.22 81.26 331.58 73.20 8 43 3 2188.5 -32.22 72.62  
 110.00 2 50 29 3764.41 1.59 138.57 316.24 55.85 3 53 13 3164.4 -2.90 132.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .7642 TRA 6.2206 TC3-1.5808 BAU 1.0071 SGT 6275.6 SGR 501.0 SG3 169.3 ST 1867.1 SR 401.6 SS 528.0  
 RDE .4705 RRA .3323 RC3 -.0206 FAU .01106 RRT .6799 RRF .6673 RTF .9761 CRT .5498 CRS -.4063 CST -.9864  
 FDE .1295 FRA 2.0588 FC3 -.2009 BSP 20903 SGB 6295.5 R23 .0019 R13 .9761 LSA 1951.0 MSA 346.0 SSA 11.7  
 BOE .8974 BRA 6.2294 BC3 1.5809 FSP -593 SG1 6284.8 SG2 366.8 THA 3.12 EL1 1880.6 EL2 333.1 ALF 6.96

LAUNCH DATE JAN 20 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 26 1969

MELIOCENTRIC CONIC DISTANCE 615.938  
 RL 147.21 LAL .00 LOL 119.77 VL 26.746 GAL 13.21 AZL 88.91 HCA 300.65 SMA 122.01 ECC .30439 INC 1.0873 V1 30.264  
 RP 107.96 LAP -.94 LOP 60.42 VP 37.025 GAP 16.48 AZP 89.45 TAL 144.55 TAP 85.20 RCA 84.87 APO 159.15 V2 35.102  
 RC 182.422 GL 3.87 GP -8.88 ZAL 35.53 ZAP 170.91 ETS 285.74 ZAE 126.06 ETE 186.45 ZAC 156.80 ETC 167.88 CLP-178.06

PLANETOCENTRIC CONIC  
 C3 53.701 VHL 7.328 DLA 27.19 RAL 83.73 RAD 6568.9 VEL 13.231 PTH 2.42 VHP 10.863 DPA 11.22 RAP 62.73 ECC 1.8838  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 9 56 3553.29 -19.22 134.30 330.99 68.80 5 9 10 2953.3 -21.93 126.67  
 90.00 1 49 42 4011.08 -6.02 161.41 324.86 62.28 2 56 35 3411.1 -9.69 154.64  
 100.00 6 7 34 3174.08 -23.09 107.93 332.54 70.47 7 0 28 2574.1 -25.54 99.99  
 100.00 2 34 45 3865.52 -2.40 148.73 322.87 60.20 3 39 11 3265.5 -6.35 142.17  
 110.00 8 12 24 2783.46 -30.32 80.91 335.17 73.39 8 58 47 2183.5 -32.29 72.25  
 110.00 2 46 25 3828.90 4.05 141.95 318.86 56.03 3 50 14 3228.9 -.44 135.74

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6531 TRA 6.7358 TC3-1.3601 BAU .9765 SGT 6268.1 SGR 487.2 SG3 161.6 ST 1849.1 SR 386.6 SS 527.4  
 RDE .4799 RRA .3524 RC3 -.0164 FAU .00914 RRT .6791 RRF .6671 RTF .9774 CRT .4990 CRS -.3654 CST -.9888  
 FDE .0941 FRA 2.1125 FC3 -.1473 BSP 20949 SGB 6287.0 R23 .0017 R13 .9774 LSA 1930.9 MSA 343.7 SSA 11.3  
 BOE .8105 BRA 6.7451 BC3 1.3602 FSP -566 SG1 6276.8 SG2 357.2 THA 3.03 EL1 1859.5 EL2 333.1 ALF 6.15

LAUNCH DATE JAN 20 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 28 1969

MELIOCENTRIC CONIC DISTANCE 620.387  
 RL 147.21 LAL .00 LOL 119.77 VL 26.718 GAL 14.28 AZL 89.10 HCA 303.87 SMA 121.85 ECC .31872 INC .9040 V1 30.264  
 RP 107.92 LAP -.75 LOP 63.64 VP 37.017 GAP 17.43 AZP 89.50 TAL 143.56 TAP 87.42 RCA 83.01 APO 160.68 V2 35.114  
 RC 184.340 GL 3.00 GP -8.69 ZAL 34.29 ZAP 171.27 ETS 278.79 ZAE 125.81 ETE 186.29 ZAC 158.74 ETC 166.36 CLP-179.18

PLANETOCENTRIC CONIC  
 C3 60.828 VHL 7.799 DLA 26.37 RAL 85.08 RAD 6569.1 VEL 13.498 PTH 2.47 VHP 11.438 DPA 11.89 RAP 64.74 ECC 2.0011  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 37 12 3510.98 -20.24 131.61 334.97 69.76 5 35 43 2911.0 -22.81 123.88  
 90.00 1 33 14 4114.51 -2.72 167.21 326.97 61.80 2 41 48 3514.5 -6.47 160.54  
 100.00 6 27 51 3154.24 -23.54 106.63 336.23 71.02 7 20 26 2554.2 -25.91 98.63  
 100.00 2 25 15 3946.48 .34 153.17 325.27 60.11 3 31 2 3346.5 -3.64 146.64  
 110.00 8 26 48 2782.09 -30.34 80.81 338.68 73.44 9 13 10 2182.1 -32.31 72.15  
 110.00 2 42 48 3891.39 6.42 145.23 321.50 56.35 3 47 40 3291.4 1.95 138.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5440 TRA 7.2960 TC3-1.1500 BAU .9352 SGT 6258.3 SGR 472.5 SG3 154.5 ST 1839.5 SR 371.2 SS 530.0  
 RDE .4896 RRA .3730 RC3 -.0122 FAU .00717 RRT .6789 RRF .6678 RTF .9790 CRT .4517 CRS -.3300 CST -.9910  
 FDE .0631 FRA 2.1719 FC3 -.1020 BSP 20882 SGB 6276.2 R23 .0016 R13 .9790 LSA 1920.4 MSA 338.4 SSA 10.8  
 BOE .7319 BRA 7.3055 BC3 1.1500 FSP -537 SG1 6266.6 SG2 346.5 THA 2.94 EL1 1847.4 EL2 329.8 ALF 5.38

LAUNCH DATE JAN 21 1969 FLIGHT TIME 70.00 ARRIVAL DATE APR 1 1969

HELIOCENTRIC CONIC DISTANCE 160.893  
 RL 147.23 LAL .00 LOL 120.78 VL 22.996 GAL 3.15 AZL 86.49 HCA 65.54 SMA 104.17 ECC .41639 INC 3.5072 V1 30.261  
 RP 107.79 LAP 3.19 LOP 186.29 VP 34.474 GAP -24.53 AZP 88.55 TAL 175.57 TAP 241.11 RCA 60.79 APO 147.54 V2 35.158  
 RC 43.625 GL 10.71 GP 5.43 ZAL 81.59 ZAP 15.72 ETS 201.66 ZAE 174.27 ETE 247.12 ZAC 113.22 ETC 163.91 CLP 14.78

PLANETOCENTRIC CONIC  
 C3 57.110 VHL 7.557 DLA 24.73 RAL 33.22 RAD 6569.0 VEL 13.359 PTH 2.44 VHP 15.072 DPA 10.60 RAP 18.30 ECC 1.9399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 39 5 3384.25 -23.00 123.35 282.51 73.01 2 35 29 2784.3 -25.11 115.31  
 90.00 21 25 44 4210.44 .38 172.56 272.65 61.69 22 35 54 3610.4 -3.41 165.93  
 100.00 3 22 19 3051.40 -25.64 99.71 283.36 74.08 4 13 11 2451.4 -27.57 91.44  
 100.00 22 25 11 4018.53 2.78 157.13 271.31 60.23 23 32 9 3418.5 -1.20 150.60  
 110.00 5 12 38 2706.24 -31.68 75.31 285.17 76.44 5 57 45 2106.2 -33.22 66.42  
 110.00 22 51 21 3936.45 8.11 147.62 268.03 56.68 23 56 57 3336.4 3.67 141.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3754 TRA -.9125 TC3 -.0022 BAU .0231 SGT 813.2 SGR 431.9 SG3 51.0 ST 365.0 SR 417.8 SS 302.1  
 RDE -.5495 RRA .1251 RC3 -.0302 FAU .01872 RRT .1116 RRF -.1183 RTF -.6729 CRT .7307 CRS .8545 CST .9769  
 FDE .2726 FRA .4176 FC3 -.2838 BSP 2263 SGB 920.8 R23 -.0145 R13 -.6742 LSA 595.7 MSA 209.8 SSA 14.3  
 BDE .6655 BRA .9211 BC3 .0303 FSP -113 SG1 815.2 SG2 428.1 THA 4.69 EL1 516.9 EL2 201.4 ALF 50.25

LAUNCH DATE JAN 21 1969 FLIGHT TIME 72.00 ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC DISTANCE 167.448  
 RL 147.23 LAL .00 LOL 120.78 VL 23.422 GAL 2.92 AZL 86.65 HCA 68.77 SMA 105.81 ECC .39420 INC 3.3497 V1 30.261  
 RP 107.82 LAP 3.12 LOP 189.52 VP 34.749 GAP -23.19 AZP 88.79 TAL 175.50 TAP 244.27 RCA 64.10 APO 147.52 V2 35.147  
 RC 43.055 GL 11.07 GP 5.68 ZAL 81.64 ZAP 14.28 ETS 205.02 ZAE 175.08 ETE 274.69 ZAC 114.62 ETC 163.51 CLP 13.12

PLANETOCENTRIC CONIC  
 C3 50.670 VHL 7.118 DLA 25.05 RAL 33.04 RAD 6568.9 VEL 13.116 PTH 2.39 VHP 14.330 DPA 11.47 RAP 19.65 ECC 1.8339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 39 3374.35 -23.19 122.69 280.19 73.28 2 28 53 2774.4 -25.26 114.63  
 90.00 21 30 44 4161.18 -1.21 169.82 270.95 61.71 22 40 6 3561.2 -4.99 163.17  
 100.00 3 17 0 3037.94 -25.89 98.79 281.05 74.51 4 7 38 2437.9 -27.76 90.49  
 100.00 22 29 5 3972.82 1.23 154.62 269.59 60.13 23 35 18 3372.8 -2.75 148.09  
 110.00 5 8 46 2688.23 -31.96 73.98 282.80 77.18 5 53 35 2088.2 -33.40 65.04  
 110.00 22 53 48 3895.30 6.57 145.44 266.29 56.38 23 58 43 3295.3 2.10 139.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3772 TRA -.8925 TC3 .0190 BAU .0241 SGT 849.6 SGR 435.3 SG3 56.2 ST 385.7 SR 422.3 SS 317.6  
 RDE -.5233 RRA .1138 RC3 -.0302 FAU .01959 RRT .1258 RRF -.1339 RTF -.6930 CRT .7408 CRS .8604 CST .9777  
 FDE .2852 FRA .4265 FC3 -.3347 BSP 2425 SGB 954.6 R23 -.0166 R13 -.6944 LSA 618.7 MSA 212.1 SSA 14.6  
 BDE .6451 BRA .8997 BC3 .0356 FSP -128 SG1 851.9 SG2 430.6 THA 4.96 EL1 534.0 EL2 204.9 ALF 48.49

LAUNCH DATE JAN 21 1969 FLIGHT TIME 74.00 ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC DISTANCE 174.042  
 RL 147.23 LAL .00 LOL 120.78 VL 23.816 GAL 2.68 AZL 86.80 HCA 71.99 SMA 107.40 ECC .37330 INC 3.1991 V1 30.261  
 RP 107.86 LAP 3.04 LOP 192.75 VP 35.004 GAP -21.92 AZP 89.01 TAL 175.49 TAP 247.48 RCA 67.31 APO 147.50 V2 35.135  
 RC 42.657 GL 11.41 GP 5.96 ZAL 81.82 ZAP 12.90 ETS 209.19 ZAE 174.57 ETE 304.98 ZAC 116.01 ETC 163.07 CLP 11.46

PLANETOCENTRIC CONIC  
 C3 45.025 VHL 6.710 DLA 25.32 RAL 32.74 RAD 6568.7 VEL 12.899 PTH 2.35 VHP 13.619 DPA 12.35 RAP 20.99 ECC 1.7410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 33 3361.61 -23.44 121.83 277.76 73.64 2 22 35 2761.6 -25.46 113.75  
 90.00 21 34 27 4114.81 -2.71 167.23 269.10 61.80 22 43 2 3514.8 -6.46 160.55  
 100.00 3 11 54 3021.97 -26.17 97.69 278.60 75.02 4 2 16 2422.0 -27.97 89.35  
 100.00 22 31 48 3929.69 -4.23 152.25 267.72 60.11 23 37 17 3329.7 -4.20 145.72  
 110.00 5 4 57 2668.28 -32.26 72.50 280.27 78.02 5 49 25 2068.3 -33.57 63.51  
 110.00 22 55 14 3856.15 5.09 143.38 264.42 56.15 23 59 30 3256.1 .61 137.16

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3801 TRA -.8724 TC3 .0448 BAU .0322 SGT 887.7 SGR 438.2 SG3 62.0 ST 408.0 SR 426.4 SS 334.0  
 RDE -.4982 RRA .1031 RC3 -.0292 FAU .02052 RRT .1425 RRF -.1519 RTF -.7122 CRT .7521 CRS .8668 CST .9787  
 FDE .2988 FRA .4353 FC3 -.3946 BSP 2571 SGB 990.0 R23 -.0190 R13 -.7137 LSA 643.4 MSA 213.5 SSA 14.9  
 BDE .6267 BRA .8785 BC3 .0535 FSP -144 SG1 890.6 SG2 432.3 THA 5.27 EL1 552.5 EL2 207.6 ALF 46.68

LAUNCH DATE JAN 21 1969 FLIGHT TIME 76.00 ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC DISTANCE 180.669  
 RL 147.23 LAL .00 LOL 120.78 VL 24.180 GAL 2.43 AZL 86.95 HCA 75.21 SMA 108.94 ECC .35366 INC 3.0540 V1 30.261  
 RP 107.89 LAP 2.95 LOP 195.98 VP 35.241 GAP -20.70 AZP 89.22 TAL 175.54 TAP 250.75 RCA 70.41 APO 147.47 V2 35.123  
 RC 42.436 GL 11.73 GP 6.26 ZAL 82.11 ZAP 11.61 ETS 214.44 ZAE 172.94 ETE 326.28 ZAC 117.37 ETC 162.57 CLP 9.80

PLANETOCENTRIC CONIC  
 C3 40.078 VHL 6.331 DLA 25.52 RAL 32.32 RAD 6568.5 VEL 12.706 PTH 2.31 VHP 12.939 DPA 13.26 RAP 22.32 ECC 1.6596  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 21 0 3345.49 -23.75 120.75 275.22 74.10 2 16 46 2745.5 -25.70 112.63  
 90.00 21 36 40 4072.25 -4.07 164.85 267.10 61.95 22 44 32 3472.3 -7.80 158.14  
 100.00 3 7 11 3003.17 -26.50 96.38 276.04 75.63 3 57 14 2403.2 -28.21 88.00  
 100.00 22 33 10 3889.81 -1.58 150.06 265.71 60.15 23 38 0 3289.8 -5.54 143.51  
 110.00 5 1 15 2646.30 -32.55 70.85 277.61 78.95 5 45 21 2046.3 -33.74 61.82  
 110.00 22 55 35 3819.45 3.69 141.45 262.43 55.99 23 59 15 3219.4 -1.80 135.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3851 TRA -.8534 TC3 .0755 BAU .0429 SGT 929.1 SGR 440.6 SG3 68.4 ST 432.9 SR 430.2 SS 350.8  
 RDE -.4743 RRA .0931 RC3 -.0269 FAU .02157 RRT .1624 RRF -.1721 RTF -.7290 CRT .7648 CRS .8734 CST .9799  
 FDE .3131 FRA .4439 FC3 -.4660 BSP 2680 SGB 1028.3 R23 -.0211 R13 -.7308 LSA 670.4 MSA 214.1 SSA 15.3  
 BDE .6110 BRA .8585 BC3 .0801 FSP -161 SG1 932.6 SG2 433.1 THA 5.62 EL1 573.3 EL2 209.3 ALF 44.76

LAUNCH DATE JAN 21 1969 FLIGHT TIME 78.00 ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC DISTANCE 187.323  
 RL 147.23 LAL .00 LOL 120.78 VL 24.515 GAL 2.18 AZL 87.09 HCA 78.43 SMA 110.42 ECC .33525 INC 2.9132 V1 30.261  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.459 GAP -19.55 AZP 89.42 TAL 175.66 TAP 254.09 RCA 73.40 APO 147.44 V2 35.111  
 RC 42.394 GL 12.02 GP 6.60 ZAL 82.53 ZAP 10.45 ETS 221.07 ZAE 170.75 ETE 339.02 ZAC 118.71 ETC 162.02 CLP 8.12

PLANETOCENTRIC CONIC  
 C3 35.742 VHL 5.978 DLA 25.65 RAL 31.78 RAD 6568.4 VEL 12.534 PTH 2.27 VHP 12.288 DPA 14.19 RAP 23.63 ECC 1.5882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 16 3325.38 -24.11 119.39 272.59 74.69 2 11 41 2725.4 -25.98 111.22  
 90.00 21 37 6 4034.50 -5.28 162.73 264.93 62.14 22 44 21 3434.5 -8.97 155.99  
 100.00 3 3 2 2981.20 -26.86 94.85 273.37 76.36 3 52 43 2381.2 -28.47 86.42  
 100.00 22 33 2 3853.92 -2.80 148.09 263.56 60.23 23 37 16 3253.9 -6.74 141.52  
 110.00 4 57 46 2622.18 -32.85 69.03 274.82 79.98 5 41 29 2022.2 -33.89 59.95  
 110.00 22 54 47 3785.69 2.40 139.68 260.32 55.89 23 57 52 3185.7 -2.09 133.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3886 TRA -.8319 TC3 .1142 BAU .0556 SGT 969.3 SGR 442.6 SG3 75.5 ST 457.3 SR 433.6 SS 367.9  
 RDE -.4515 RRA .0836 RC3 -.0228 FAU .02274 RRT .1837 RRF -.1951 RTF -.7461 CRT .7771 CRS .8802 CST .9810  
 FDE .3282 FRA .4519 FC3 -.5508 BSP 2832 SGB 1065.6 R23 -.0242 R13 -.7481 LSA 697.5 MSA 213.8 SSA 15.7  
 BOE .5957 BRA .8361 BC3 .1164 FSP -181 SG1 973.5 SG2 433.2 THA 5.98 EL1 594.1 EL2 210.0 ALF 43.04

LAUNCH DATE JAN 21 1969 FLIGHT TIME 80.00 ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC DISTANCE 194.000  
 RL 147.23 LAL .00 LOL 120.78 VL 24.824 GAL 1.94 AZL 87.22 HCA 81.65 SMA 111.84 ECC .31802 INC 2.7757 V1 30.261  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.661 GAP -18.44 AZP 89.60 TAL 175.84 TAP 257.48 RCA 76.27 APO 147.41 V2 35.099  
 RC 42.534 GL 12.27 GP 6.97 ZAL 83.07 ZAP 9.48 ETS 229.40 ZAE 168.32 ETE 346.98 ZAC 120.00 ETC 161.41 CLP 6.43

PLANETOCENTRIC CONIC  
 C3 31.942 VHL 5.652 DLA 25.70 RAL 31.13 RAD 6568.3 VEL 12.382 PTH 2.24 VHP 11.665 DPA 15.13 RAP 24.91 ECC 1.5257  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 36 3300.66 -24.55 117.71 269.88 75.42 2 7 36 2700.7 -26.31 109.49  
 90.00 21 35 34 4002.52 -6.29 160.92 262.61 62.33 22 42 17 3402.5 -9.95 154.15  
 100.00 2 59 36 2955.69 -27.26 93.06 270.62 77.22 3 48 52 2355.7 -28.74 84.57  
 100.00 22 31 15 3822.72 -3.85 146.37 261.27 60.33 23 34 58 3222.7 -7.77 139.78  
 110.00 4 54 38 2595.79 -33.15 67.03 271.92 81.14 5 37 53 1995.8 -34.02 57.90  
 110.00 22 52 43 3755.39 1.25 138.10 258.09 55.84 23 55 18 3155.4 -3.24 131.90

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3916 TRA -.8093 TC3 .1610 BAU .0691 SGT 1009.9 SGR 444.3 SG3 83.4 ST 481.9 SR 436.6 SS 385.0  
 RDE -.4300 RRA .0748 RC3 -.0165 FAU .02405 RRT .2074 RRF -.2208 RTF -.7623 CRT .7896 CRS .8871 CST .9820  
 FDE .3437 FRA .4592 FC3 -.6518 BSP 2994 SGB 1103.3 R23 -.0278 R13 -.7644 LSA 725.0 MSA 212.7 SSA 16.1  
 BOE .5816 BRA .8128 BC3 .1618 FSP -203 SG1 1015.0 SG2 432.5 THA 6.38 EL1 615.6 EL2 209.8 ALF 41.43

LAUNCH DATE JAN 21 1969 FLIGHT TIME 82.00 ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC DISTANCE 200.695  
 RL 147.23 LAL .00 LOL 120.78 VL 25.108 GAL 1.69 AZL 87.36 HCA 84.86 SMA 113.20 ECC .30195 INC 2.6406 V1 30.261  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.848 GAP -17.38 AZP 89.76 TAL 176.08 TAP 260.94 RCA 79.02 APO 147.37 V2 35.086  
 RC 42.853 GL 12.48 GP 7.38 ZAL 83.73 ZAP 8.76 ETS 239.60 ZAE 165.81 ETE 352.40 ZAC 121.25 ETC 160.74 CLP 4.73

PLANETOCENTRIC CONIC  
 C3 28.614 VHL 5.349 DLA 25.67 RAL 30.37 RAD 6568.1 VEL 12.247 PTH 2.20 VHP 11.068 DPA 16.11 RAP 26.17 ECC 1.4709  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 10 13 3270.84 -25.04 115.67 267.12 76.33 2 4 44 2670.8 -26.68 107.38  
 90.00 21 31 53 3977.15 -7.09 159.49 260.14 62.51 22 38 10 3377.2 -10.72 152.69  
 100.00 2 57 4 2926.36 -27.68 90.98 267.78 78.24 3 45 50 2326.4 -29.02 82.44  
 100.00 22 27 43 3796.87 -4.72 144.95 258.84 60.45 23 31 0 3196.9 -8.62 138.33  
 110.00 4 51 55 2567.00 -33.43 64.83 268.92 82.41 5 34 42 1967.0 -34.12 55.66  
 110.00 22 49 21 3728.99 .24 136.73 255.76 55.82 23 51 30 3129.0 -4.25 130.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3948 TRA -.7866 TC3 .2163 BAU .0828 SGT 1051.7 SGR 445.9 SG3 92.1 ST 507.5 SR 439.5 SS 402.1  
 RDE -.4097 RRA .0664 RC3 -.0074 FAU .02550 RRT .2346 RRF -.2500 RTF -.7776 CRT .8024 CRS .8939 CST .9832  
 FDE .3599 FRA .4665 FC3 -.7716 BSP 3155 SGB 1142.4 R23 -.0316 R13 -.7801 LSA 753.5 MSA 210.8 SSA 16.5  
 BOE .5690 BRA .7894 BC3 .2164 FSP -228 SG1 1058.0 SG2 430.9 THA 6.82 EL1 638.1 EL2 208.6 ALF 39.90

LAUNCH DATE JAN 21 1969 FLIGHT TIME 84.00 ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC DISTANCE 207.403  
 RL 147.23 LAL .00 LOL 120.78 VL 25.370 GAL 1.45 AZL 87.49 HCA 88.07 SMA 114.49 ECC .28700 INC 2.5069 V1 30.261  
 RP 108.05 LAP 2.51 LOP 208.86 VP 36.019 GAP -16.37 AZP 89.92 TAL 176.39 TAP 264.46 RCA 81.63 APO 147.34 V2 35.073  
 RC 43.347 GL 12.64 GP 7.84 ZAL 84.50 ZAP 8.39 ETS 251.43 ZAE 163.32 ETE 356.39 ZAC 122.44 ETC 160.01 CLP 3.00

PLANETOCENTRIC CONIC  
 C3 25.701 VHL 5.070 DLA 25.54 RAL 29.51 RAD 6568.0 VEL 12.128 PTH 2.17 VHP 10.497 DPA 17.11 RAP 27.39 ECC 1.4230  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 9 17 3235.62 -25.59 113.23 264.30 77.44 2 3 13 2635.6 -27.06 104.87  
 90.00 21 25 56 3959.01 -7.66 158.46 257.55 62.66 22 31 55 3359.0 -11.27 151.63  
 100.00 2 55 35 2892.95 -28.12 88.60 264.88 79.42 3 43 48 2292.9 -29.29 79.99  
 100.00 22 22 20 3776.91 -5.39 143.84 256.31 60.55 23 25 17 3176.9 -9.27 137.21  
 110.00 4 49 46 2535.67 -33.69 62.42 265.84 83.81 5 32 2 1935.7 -34.17 53.21  
 110.00 22 44 38 3706.96 -.61 135.58 253.34 55.82 23 46 25 3107.0 -5.09 129.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3966 TRA -.7622 TC3 .2815 BAU .0967 SGT 1092.7 SGR 447.6 SG3 101.9 ST 532.0 SR 442.1 SS 418.7  
 RDE -.3907 RRA .0585 RC3 .0053 FAU .02715 RRT .2647 RRF -.2827 RTF -.7921 CRT .8147 CRS .9006 CST .9842  
 FDE .3762 FRA .4731 FC3 -.9145 BSP 3328 SGB 1180.8 R23 -.0361 R13 -.7948 LSA 781.1 MSA 208.1 SSA 16.9  
 BOE .5567 BRA .7645 BC3 .2815 FSP -257 SG1 1100.3 SG2 428.6 THA 7.30 EL1 660.1 EL2 206.6 ALF 38.56

LAUNCH DATE JAN 21 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

DISTANCE 214.120

RL 147.23 LAL .00 LOL 120.78 VL 25.611 GAL 1.22 AZL 87.63 MCA 91.28 SMA 115.71 ECC .27312 INC 2.3738 V1 30.261  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.176 GAP -15.40 AZP 90.05 TAL 176.76 TAP 268.04 RCA 84.11 APO 147.31 V2 35.060  
 RC 44.011 GL 12.73 GP 8.35 ZAL 85.39 ZAP 8.44 ETS 264.03 ZAE 160.89 ETE 359.54 ZAC 123.57 ETC 159.20 CLP 1.24

PLANETOCENTRIC CONIC

C3 23.153 VHL 4.812 DLA 25.32 RAL 28.56 RAD 6567.9 VEL 12.022 PTH 2.15 VHP 9.952 DPA 18.14 RAP 28.57 ECC 1.3810  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 9 54 3194.98 -26.16 110.39 261.44 78.75 2 3 9 2595.0 -27.45 101.96  
 90.00 21 17 45 3948.37 -7.99 157.85 254.84 62.74 22 23 33 3348.4 -11.59 151.01  
 100.00 2 55 14 2855.36 -28.56 85.89 261.93 80.78 3 42 49 2255.4 -29.54 77.22  
 100.00 22 15 5 3763.23 -5.84 143.08 253.68 60.63 23 17 48 3163.2 -9.71 136.43  
 110.00 4 48 17 2501.69 -33.90 59.79 262.69 85.36 5 29 58 1901.7 -34.18 50.56  
 110.00 22 38 32 3689.66 -1.27 134.68 250.84 55.84 23 40 2 3089.7 -5.74 128.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3992 TRA -.7392 TC3 .3550 BAU .1101 SGT 1136.2 SGR 449.7 SG3 112.8 ST 558.1 SR 444.6 SS 435.6  
 RDE -.3730 RRA .0510 RC3 .0223 FAU .02895 RRT .2996 RRF -.3203 RTF -.8051 CRT .8273 CRS .9074 CST .9853  
 FDE .3937 FRA .4800 FC3-1.0826 BSP 3488 SGB 1222.0 R23 -.0416 R13 -.8083 LSA 810.3 MSA 204.9 SSA 17.4  
 BDE .5464 BRA .7410 BC3 .3557 FSP -289 SG1 1145.5 SG2 425.6 THA 7.86 EL1 683.8 EL2 203.9 ALF 37.26

LAUNCH DATE JAN 21 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

DISTANCE 220.842

RL 147.23 LAL .00 LOL 120.78 VL 25.832 GAL .99 AZL 87.76 MCA 94.49 SMA 116.87 ECC .26027 INC 2.2405 V1 30.261  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.320 GAP -14.48 AZP 90.18 TAL 177.19 TAP 271.68 RCA 86.45 APO 147.29 V2 35.047  
 RC 44.838 GL 12.75 GP 8.91 ZAL 86.38 ZAP 8.93 ETS 276.15 ZAE 158.58 ETE 2.16 ZAC 124.62 ETC 158.31 CLP -.56

PLANETOCENTRIC CONIC

C3 20.924 VHL 4.574 DLA 24.98 RAL 27.53 RAD 6567.9 VEL 11.929 PTH 2.12 VHP 9.430 DPA 19.21 RAP 29.70 ECC 1.3444  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 1 3149.14 -26.73 107.16 258.55 80.28 2 4 30 2549.1 -27.80 98.65  
 90.00 21 7 24 3945.26 -8.09 157.68 252.06 62.77 22 13 10 3345.3 -11.68 150.83  
 100.00 2 56 6 2813.59 -28.98 82.86 258.94 82.32 3 42 59 2213.6 -29.74 74.13  
 100.00 22 6 1 3756.04 -6.08 142.69 250.97 60.68 23 8 37 3156.0 -9.95 136.03  
 110.00 4 47 32 2464.96 -34.07 56.94 259.50 87.04 5 28 37 1865.0 -34.11 47.69  
 110.00 22 31 4 3677.43 -1.73 134.04 248.28 55.86 23 32 22 3077.4 -6.20 127.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3963 TRA -.7116 TC3 .4452 BAU .1252 SGT 1174.4 SGR 452.4 SG3 125.0 ST 577.6 SR 446.8 SS 449.8  
 RDE -.3564 RRA .0439 RC3 .0450 FAU .03103 RRT .3363 RRF -.3613 RTF -.8199 CRT .8380 CRS .9134 CST .9860  
 FDE .4094 FRA .4858 FC3-1.2837 BSP 3690 SGB 1258.5 R23 -.0474 R13 -.8235 LSA 833.5 MSA 201.3 SSA 17.9  
 BDE .5330 BRA .7130 BC3 .4474 FSP -325 SG1 1185.7 SG2 422.0 THA 8.46 EL1 702.2 EL2 200.6 ALF 36.40

LAUNCH DATE JAN 21 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 227.565

RL 147.23 LAL .00 LOL 120.78 VL 26.035 GAL .77 AZL 87.89 MCA 97.70 SMA 117.96 ECC .24841 INC 2.1061 V1 30.261  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.452 GAP -13.59 AZP 90.28 TAL 177.67 TAP 275.37 RCA 88.66 APO 147.27 V2 35.033  
 RC 45.818 GL 12.69 GP 9.54 ZAL 87.47 ZAP 9.83 ETS 286.77 ZAE 156.40 ETE 4.48 ZAC 125.59 ETC 157.35 CLP -2.40

PLANETOCENTRIC CONIC

C3 18.978 VHL 4.356 DLA 24.52 RAL 26.44 RAD 6567.8 VEL 11.847 PTH 2.10 VHP 8.932 DPA 20.31 RAP 30.76 ECC 1.3123  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 15 36 3098.57 -27.26 103.55 255.63 82.01 2 7 15 2498.6 -28.08 94.98  
 90.00 20 55 8 3949.39 -7.96 157.91 249.24 62.74 22 0 57 3349.4 -11.56 151.07  
 100.00 2 58 12 2767.81 -29.35 79.50 255.92 84.05 3 44 19 2167.8 -29.86 70.74  
 100.00 21 55 14 3755.38 -6.11 142.65 248.23 60.68 22 57 49 3155.4 -9.97 135.99  
 110.00 4 47 37 2425.47 -34.17 53.85 256.27 88.86 5 28 3 1825.5 -33.95 44.62  
 110.00 22 22 18 3670.49 -2.00 133.67 245.69 55.87 23 23 28 3070.5 -6.47 127.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3958 TRA -.6873 TC3 .5398 BAU .1382 SGT 1216.3 SGR 456.6 SG3 138.5 ST 600.0 SR 449.1 SS 463.4  
 RDE -.3412 RRA .0371 RC3 .0740 FAU .03330 RRT .3794 RRF -.4077 RTF -.8310 CRT .8493 CRS .9193 CST .9870  
 FDE .4256 FRA .4921 FC3-1.5192 BSP 3851 SGB 1299.1 R23 -.0543 R13 -.8352 LSA 858.6 MSA 197.2 SSA 18.5  
 BDE .5226 BRA .6883 BC3 .5448 FSP -365 SG1 1230.2 SG2 417.7 THA 9.17 EL1 723.2 EL2 196.7 ALF 35.46

LAUNCH DATE JAN 21 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 234.286

RL 147.23 LAL .00 LOL 120.78 VL 26.221 GAL .56 AZL 88.03 MCA 100.90 SMA 118.99 ECC .23749 INC 1.9698 V1 30.261  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.572 GAP -12.74 AZP 90.37 TAL 178.21 TAP 279.10 RCA 90.73 APO 147.25 V2 35.020  
 RC 46.944 GL 12.52 GP 10.25 ZAL 88.64 ZAP 11.09 ETS 295.49 ZAE 154.39 ETE 6.60 ZAC 126.45 ETC 156.31 CLP -4.28

PLANETOCENTRIC CONIC

C3 17.280 VHL 4.157 DLA 23.94 RAL 25.31 RAD 6567.7 VEL 11.776 PTH 2.08 VHP 8.458 DPA 21.46 RAP 31.75 ECC 1.2844  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 33 3043.79 -27.71 99.60 252.70 83.94 2 11 17 2443.8 -28.26 90.98  
 90.00 20 41 10 3960.39 -7.62 158.54 246.41 62.65 21 47 10 3360.4 -11.23 151.71  
 100.00 3 1 31 2718.26 -29.64 75.85 252.89 85.95 3 46 49 2118.3 -29.89 67.05  
 100.00 21 42 53 3761.14 -5.91 142.97 245.48 60.65 22 45 34 3161.1 -9.78 136.32  
 110.00 4 48 37 2383.20 -34.17 50.55 253.04 90.81 5 28 20 1783.2 -33.68 41.34  
 110.00 22 12 17 3668.97 -2.06 133.60 243.09 55.87 23 13 26 3069.0 -6.52 127.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3968 TRA -.6656 TC3 .6399 BAU .1500 SGT 1260.8 SGR 463.0 SG3 153.7 ST 624.5 SR 451.6 SS 477.2  
 RDE -.3275 RRA .0302 RC3 .1108 FAU .03580 RRT .4285 RRF -.4597 RTF -.8400 CRT .8608 CRS .9250 CST .9881  
 FDE .4432 FRA .5002 FC3-1.7938 BSP 3934 SGB 1343.1 R23 -.0626 R13 -.8450 LSA 885.6 MSA 192.7 SSA 19.2  
 BDE .5145 BRA .6663 BC3 .6494 FSP -408 SG1 1278.2 SG2 412.6 THA 9.99 EL1 746.3 EL2 192.3 ALF 34.52

LAUNCH DATE JAN 21 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 25 1969

MELIOCENTRIC CONIC

DISTANCE 241.002

RL 147.23 LAL .00 LOL 120.78 VL 26.391 GAL .36 AZL 88.17 HCA 104.10 SMA 119.95 ECC .22747 INC 1.8306 V1 30.261  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.681 GAP -11.92 AZP 90.45 TAL 178.78 TAP 282.88 RCA 92.66 APO 147.24 V2 35.007  
 RC 48.205 GL 12.25 GP 11.04 ZAL 89.89 ZAP 12.65 ETS 302.39 ZAE 152.54 ETE 8.63 ZAC 127.20 ETC 155.18 CLP -6.22

PLANETOCENTRIC CONIC

C3 15.798 VHL 3.975 DLA 23.22 RAL 24.15 RAD 6567.6 VEL 11.712 PTH 2.06 VHP 8.006 DPA 22.67 RAP 32.66 ECC 1.2600  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 45 2985.30 -28.06 95.36 249.77 86.04 2 16 31 2385.3 -28.32 86.71  
 90.00 20 25 45 3977.83 -7.07 159.53 243.61 62.51 21 32 3 3377.8 -10.70 152.73  
 100.00 3 6 2 2665.20 -29.83 71.92 249.87 88.01 3 50 27 2065.2 -29.79 63.11  
 100.00 21 29 10 3773.18 -5.51 143.64 242.76 60.57 22 32 3 3173.2 -9.39 137.00  
 110.00 4 50 34 2338.16 -34.08 47.04 249.83 92.89 5 29 32 1738.2 -33.30 37.88  
 110.00 22 1 7 3672.98 -1.91 133.80 240.52 55.86 23 2 20 3073.0 -6.37 127.57

DIFFERENTIAL CORRECTIONS

TDE -.3914 TRA -.6419 TC3 .7500 BAU .1618  
 RDE -.3145 RRA .0235 RC3 .1567 FAU .03856  
 FDE .4567 FRA .5083 FC3-2.1131 BSP 4064  
 BOE .5021 BRA .6423 BC3 .7662 FSP -456

MID-COURSE EXECUTION ACCURACY

SGT 1299.1 SGR 471.6 SG3 170.4  
 RRT .4782 RRF -.5142 RTF -.8491  
 SGB 1382.0 R23 -.0726 R13 -.8549  
 SG1 1320.6 SG2 407.5 THA 10.90

ORBIT DETERMINATION ACCURACY

ST 640.2 SR 453.5 SS 485.8  
 CRT .8697 CRS .9294 CST .9889  
 LSA 903.1 MSA 188.4 SSA 19.9  
 EL1 761.7 EL2 188.2 ALF 33.99

LAUNCH DATE JAN 21 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 27 1969

MELIOCENTRIC CONIC

DISTANCE 247.709

RL 147.23 LAL .00 LOL 120.78 VL 26.546 GAL .17 AZL 88.31 HCA 107.30 SMA 120.85 ECC .21831 INC 1.6876 V1 30.261  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.780 GAP -11.13 AZP 90.50 TAL 179.40 TAP 286.70 RCA 94.46 APO 147.23 V2 34.994  
 RC 49.590 GL 11.84 GP 11.92 ZAL 91.20 ZAP 14.46 ETS 307.78 ZAE 150.87 ETE 10.64 ZAC 127.81 ETC 153.97 CLP -8.23

PLANETOCENTRIC CONIC

C3 14.507 VHL 3.809 DLA 22.36 RAL 23.00 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 7.577 DPA 23.93 RAP 33.46 ECC 1.2388  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 8 2923.60 -28.27 90.86 246.85 88.28 2 22 51 2323.6 -28.21 82.20  
 90.00 20 9 10 4001.31 -6.33 160.85 240.87 62.34 21 15 51 3401.3 -9.99 154.08  
 100.00 3 11 44 2608.90 -29.89 67.73 246.88 90.22 3 55 12 2008.9 -29.54 58.95  
 100.00 21 14 15 3791.24 -4.91 144.64 240.09 60.48 22 17 26 3191.2 -8.80 138.01  
 110.00 4 53 32 2290.40 -33.85 43.33 246.66 95.08 5 31 42 1690.4 -32.78 34.26  
 110.00 21 48 56 3682.50 -1.54 134.30 238.00 55.85 22 50 19 3082.5 -6.01 128.07

DIFFERENTIAL CORRECTIONS

TDE -.3839 TRA -.6153 TC3 .8752 BAU .1748  
 RDE -.3026 RRA .0171 RC3 .2146 FAU .04171  
 FDE .4688 FRA .5148 FC3-2.4891 BSP 4235  
 BOE .4889 BRA .6156 BC3 .9012 FSP -510

MID-COURSE EXECUTION ACCURACY

SGT 1334.1 SGR 484.5 SG3 189.2  
 RRT .5324 RRF -.5729 RTF -.8592  
 SGB 1419.3 R23 -.0823 R13 -.8660  
 SG1 1361.2 SG2 402.0 THA 12.00

ORBIT DETERMINATION ACCURACY

ST 651.2 SR 455.4 SS 491.4  
 CRT .8785 CRS .9338 CST .9896  
 LSA 915.9 MSA 183.4 SSA 20.7  
 EL1 773.2 EL2 183.2 ALF 33.71

LAUNCH DATE JAN 21 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 29 1969

MELIOCENTRIC CONIC

DISTANCE 254.407

RL 147.23 LAL .00 LOL 120.78 VL 26.687 GAL -.01 AZL 88.46 HCA 110.49 SMA 121.68 ECC .20994 INC 1.5396 V1 30.261  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.870 GAP -10.38 AZP 90.54 TAL 180.05 TAP 290.54 RCA 96.13 APO 147.23 V2 34.980  
 RC 51.091 GL 11.30 GP 12.92 ZAL 92.56 ZAP 16.48 ETS 311.98 ZAE 149.39 ETE 12.70 ZAC 128.26 ETC 152.68 CLP -10.32

PLANETOCENTRIC CONIC

C3 13.382 VHL 3.658 DLA 21.35 RAL 21.86 RAD 6567.5 VEL 11.609 PTH 2.03 VHP 7.169 DPA 25.27 RAP 34.15 ECC 1.2202  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 42 37 2858.96 -28.31 86.13 243.98 90.65 2 30 15 2259.0 -27.92 77.49  
 90.00 19 51 36 4030.50 -5.41 162.50 238.24 62.16 20 58 47 3430.5 -9.09 155.76  
 100.00 3 18 34 2549.57 -29.79 63.33 243.94 92.53 4 1 3 1949.6 -29.13 54.58  
 100.00 20 58 20 3815.13 -4.10 145.95 237.52 60.36 22 1 56 3215.1 -8.02 139.36  
 110.00 4 57 32 2239.92 -33.48 39.43 243.56 97.35 5 34 52 1639.9 -32.10 30.47  
 110.00 21 35 51 3697.54 -.97 135.09 235.57 55.83 22 37 29 3097.5 -5.44 128.86

DIFFERENTIAL CORRECTIONS

TDE -.2555 TRA -.6164 TC3 1.1828 BAU .2188  
 RDE -.2739 RRA .0010 RC3 .3103 FAU .04785  
 FDE .3524 FRA .5906 FC3-3.0957 BSP 5440  
 BOE .3746 BRA .6164 BC3 1.2228 FSP -661

MID-COURSE EXECUTION ACCURACY

SGT 1408.3 SGR 485.4 SG3 218.9  
 RRT .5359 RRF -.6091 RTF -.8996  
 SGB 1489.6 R23 -.0996 R13 -.9066  
 SG1 1434.3 SG2 402.4 THA 11.37

ORBIT DETERMINATION ACCURACY

ST 507.5 SR 429.1 SS 390.8  
 CRT .7886 CRS .8759 CST .9848  
 LSA 739.9 MSA 215.4 SSA 21.0  
 EL1 629.6 EL2 212.7 ALF 38.96

LAUNCH DATE JAN 21 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 1 1969

MELIOCENTRIC CONIC

DISTANCE 261.089

RL 147.23 LAL .00 LOL 120.78 VL 26.815 GAL -.18 AZL 88.61 HCA 113.68 SMA 122.45 ECC .20236 INC 1.3854 V1 30.261  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.951 GAP -9.65 AZP 90.56 TAL 180.72 TAP 294.40 RCA 97.67 APO 147.23 V2 34.967  
 RC 52.697 GL 10.61 GP 14.05 ZAL 93.94 ZAP 18.72 ETS 315.24 ZAE 148.07 ETE 14.85 ZAC 128.54 ETC 151.32 CLP -12.49

PLANETOCENTRIC CONIC

C3 12.408 VHL 3.522 DLA 20.18 RAL 20.78 RAD 6567.5 VEL 11.567 PTH 2.02 VHP 6.785 DPA 26.70 RAP 34.70 ECC 1.2042  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 12 2791.92 -28.16 81.24 241.21 93.11 2 38 43 2191.9 -27.43 72.64  
 90.00 19 33 25 4065.03 -4.31 164.44 235.76 61.99 20 41 10 3465.0 -8.02 157.73  
 100.00 3 26 34 2487.63 -29.52 58.74 241.10 94.93 4 8 1 1887.6 -28.52 50.08  
 100.00 20 41 44 3844.56 -3.11 147.58 235.10 60.26 21 45 49 3244.6 -7.05 141.00  
 110.00 5 2 40 2186.96 -32.94 35.39 240.59 99.69 5 39 7 1587.0 -31.26 26.58  
 110.00 21 22 7 3717.98 -.18 136.15 233.28 55.82 22 24 5 3118.0 -4.67 129.94

DIFFERENTIAL CORRECTIONS

TDE -.3547 TRA -.5585 TC3 1.1630 BAU .2029  
 RDE -.2797 RRA .0049 RC3 .3787 FAU .04960  
 FDE .4717 FRA .5227 FC3-3.4608 BSP 4741  
 BOE .4517 BRA .5585 BC3 1.2231 FSP -669

MID-COURSE EXECUTION ACCURACY

SGT 1393.1 SGR 527.5 SG3 234.3  
 RRT .6434 RRF -.6934 RTF -.8780  
 SGB 1489.7 R23 -.1044 R13 -.8878  
 SG1 1437.3 SG2 391.4 THA 14.81

ORBIT DETERMINATION ACCURACY

ST 646.3 SR 455.0 SS 479.1  
 CRT .8906 CRS .9384 CST .9908  
 LSA 907.5 MSA 173.8 SSA 22.9  
 EL1 771.2 EL2 173.4 ALF 34.04

LAUNCH DATE JAN 21 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 26.931 GAL -0.34 AZL 88.78 HCA 116.87 SMA 123.16 ECC .19549 INC 1.2236 VI 30.261
RP 108.42 LAP 1.09 LOP 237.66 VP 37.023 GAP -8.96 AZP 90.55 TAL 181.40 TAP 298.27 RCA 99.08 APO 147.24 V2 34.954
RC 54.398 GL 9.74 GP 15.33 ZAL 95.34 ZAP 21.15 ETS 317.82 ZAE 146.92 ETE 17.17 ZAC 128.61 ETC 149.89 CLP -14.76

DISTANCE 267.757

PLANETOCENTRIC CONIC

C3 11.561 VHL 3.400 DLA 18.85 RAL 19.77 RAD 6567.4 VEL 11.530 PTH 2.01 VHP 6.424 DPA 28.22 RAP 35.08 ECC 1.1903
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 2 52 2722.36 -27.80 76.18 238.54 95.62 2 48 15 2122.4 -26.73 67.68
90.00 19 14 40 4104.81 -3.03 166.67 233.46 61.83 20 23 5 3504.8 -6.77 159.99
100.00 3 35 43 2422.97 -29.05 53.99 238.38 97.39 4 16 6 1823.0 -27.72 45.44
100.00 20 24 30 3879.44 -1.93 149.49 232.85 60.16 21 29 10 3279.4 -5.89 142.94
110.00 5 8 56 2131.34 -32.23 31.21 237.74 102.07 5 44 27 1531.3 -30.23 22.57
110.00 21 7 47 3743.83 .80 137.50 231.14 55.83 22 10 11 3143.8 -3.68 131.29

DIFFERENTIAL CORRECTIONS

TDE -.3404 TRA -.5404 TC3 1.2789 BAU .2113
RDE -.2693 RRA -.0031 RC3 .4832 FAU .05364
FDE .4682 FRA .5385 FC3-4.0167 BSP 4764
BOE .4340 BRA .5404 BC3 1.3672 FSP -740

MID-COURSE EXECUTION ACCURACY

SGT 1418.2 SGR 560.3 SG3 259.2
RRT .6939 RRF -.7500 RTF -.8814
SGB 1524.8 R23 -.1231 R13 -.8937
SGI 1474.7 SG2 388.0 THA 16.51

ORBIT DETERMINATION ACCURACY

ST 642.6 SR 453.9 SS 468.3
CRT .8948 CRS .9382 CST .9916
LSA 899.3 MSA 170.0 SSA 24.2
EL1 768.3 EL2 169.5 ALF 34.19

LAUNCH DATE JAN 21 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.036 GAL -0.48 AZL 88.95 HCA 120.06 SMA 123.81 ECC .18929 INC 1.0523 VI 30.261
RP 108.45 LAP .91 LOP 240.85 VP 37.088 GAP -8.29 AZP 90.53 TAL 182.08 TAP 302.14 RCA 100.37 APO 147.25 V2 34.942
RC 56.186 GL 8.68 GP 16.77 ZAL 96.73 ZAP 23.80 ETS 319.86 ZAE 145.91 ETE 19.69 ZAC 128.46 ETC 148.41 CLP -17.14

DISTANCE 274.408

PLANETOCENTRIC CONIC

C3 10.828 VHL 3.291 DLA 17.35 RAL 18.85 RAD 6567.4 VEL 11.499 PTH 2.00 VHP 6.086 DPA 29.85 RAP 35.27 ECC 1.1782
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 14 42 2650.33 -27.21 70.99 236.02 98.15 2 58 53 2050.3 -25.80 62.61
90.00 18 55 31 4149.82 -1.58 169.18 231.36 61.72 20 4 41 3549.8 -5.35 162.53
100.00 3 46 5 2355.63 -28.36 49.11 235.81 99.87 4 25 21 1755.6 -26.70 40.70
100.00 20 6 49 3919.75 -.57 151.70 230.80 60.11 21 12 9 3319.7 -4.54 145.17
110.00 5 16 25 2073.03 -31.32 26.91 235.07 104.46 5 50 58 1473.0 -29.01 18.46
110.00 20 52 59 3775.11 2.00 139.13 229.19 55.87 21 55 54 3175.1 -2.49 132.93

DIFFERENTIAL CORRECTIONS

TDE -.3185 TRA -.5197 TC3 1.4144 BAU .2232
RDE -.2579 RRA -.0117 RC3 .6135 FAU .05839
FDE .4504 FRA .5551 FC3-4.6684 BSP 4894
BOE .4098 BRA .5198 BC3 1.5417 FSP -827

MID-COURSE EXECUTION ACCURACY

SGT 1439.7 SGR 604.2 SG3 287.6
RRT .7415 RRF -.8026 RTF -.8878
SGB 1561.4 R23 -.1386 R13 -.9029
SGI 1513.0 SG2 385.8 THA 18.53

ORBIT DETERMINATION ACCURACY

ST 623.9 SR 449.2 SS 444.8
CRT .8962 CRS .9345 CST .9925
LSA 872.0 MSA 166.7 SSA 25.7
EL1 750.7 EL2 165.6 ALF 34.77

LAUNCH DATE JAN 21 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.131 GAL -0.62 AZL 89.13 HCA 123.25 SMA 124.41 ECC .18372 INC .8701 VI 30.261
RP 108.49 LAP .73 LOP 244.03 VP 37.145 GAP -7.64 AZP 90.48 TAL 182.75 TAP 306.00 RCA 101.55 APO 147.26 V2 34.929
RC 58.051 GL 7.41 GP 18.41 ZAL 98.10 ZAP 26.67 ETS 321.50 ZAE 145.02 ETE 22.49 ZAC 128.04 ETC 146.90 CLP -19.65

DISTANCE 281.040

PLANETOCENTRIC CONIC

C3 10.197 VHL 3.193 DLA 15.67 RAL 18.06 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.772 DPA 31.61 RAP 35.23 ECC 1.1678
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 27 47 2575.68 -26.38 65.68 233.68 100.69 3 10 43 1975.7 -24.64 57.45
90.00 18 36 6 4200.14 .04 171.99 229.51 61.68 19 46 6 3600.1 -3.74 165.35
100.00 3 57 46 2285.51 -27.44 44.10 233.44 102.35 4 35 52 1685.5 -25.46 35.86
100.00 19 48 48 3965.55 .99 154.22 228.98 60.12 20 54 54 3365.5 -2.99 147.69
110.00 5 25 13 2011.92 -30.19 22.50 232.62 106.84 5 58 44 1411.9 -27.59 14.28
110.00 20 37 51 3811.90 3.40 141.06 227.48 55.97 21 41 23 3211.9 -1.09 134.85

DIFFERENTIAL CORRECTIONS

TDE -.2953 TRA -.4976 TC3 1.5380 BAU .2345
RDE -.2459 RRA -.0205 RC3 .7706 FAU .06357
FDE .4227 FRA .5702 FC3-5.3973 BSP 5047
BOE .3843 BRA .4980 BC3 1.7203 FSP -929

MID-COURSE EXECUTION ACCURACY

SGT 1451.0 SGR 662.1 SG3 318.5
RRT .7835 RRF -.8490 RTF -.8924
SGB 1594.9 R23 -.1547 R13 -.9114
SGI 1547.6 SG2 385.7 THA 21.04

ORBIT DETERMINATION ACCURACY

ST 599.2 SR 441.6 SS 413.5
CRT .8973 CRS .9280 CST .9935
LSA 835.3 MSA 162.9 SSA 27.7
EL1 726.8 EL2 160.7 ALF 35.47

LAUNCH DATE JAN 21 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.216 GAL -0.74 AZL 89.33 HCA 126.43 SMA 124.95 ECC .17874 INC .6740 VI 30.261
RP 108.53 LAP .54 LOP 247.21 VP 37.196 GAP -7.02 AZP 90.40 TAL 183.41 TAP 309.84 RCA 102.62 APO 147.28 V2 34.917
RC 59.985 GL 5.91 GP 20.27 ZAL 99.43 ZAP 29.78 ETS 322.85 ZAE 144.20 ETE 25.62 ZAC 127.33 ETC 145.38 CLP -22.29

DISTANCE 287.653

PLANETOCENTRIC CONIC

C3 9.656 VHL 3.107 DLA 13.79 RAL 17.41 RAD 6567.3 VEL 11.448 PTH 1.99 VHP 5.484 DPA 33.53 RAP 34.92 ECC 1.1589
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 42 16 2498.11 -25.29 60.27 231.57 103.19 3 23 54 1898.1 -23.22 52.21
90.00 18 16 27 4256.08 1.85 175.11 227.94 61.74 19 27 23 3656.1 -1.94 168.48
100.00 4 10 53 2212.34 -26.27 38.98 231.29 104.80 4 47 45 1612.3 -23.98 30.93
100.00 19 30 31 4017.08 2.73 157.05 227.44 60.22 20 37 28 3417.1 -1.25 150.52
110.00 5 35 26 1947.76 -28.84 18.00 230.41 109.20 6 7 54 1347.8 -25.95 10.01
110.00 20 22 27 3854.42 5.02 143.29 226.02 56.14 21 26 42 3254.4 .54 137.07

DIFFERENTIAL CORRECTIONS

TDE -.2699 TRA -.4786 TC3 1.6396 BAU .2450
RDE -.2325 RRA -.0315 RC3 .9559 FAU .06891
FDE .3815 FRA .5932 FC3-6.1784 BSP 5147
BOE .3562 BRA .4796 BC3 1.8979 FSP -1031

MID-COURSE EXECUTION ACCURACY

SGT 1453.1 SGR 735.0 SG3 351.0
RRT .8174 RRF -.8874 RTF -.8954
SGB 1628.4 R23 -.1708 R13 -.9194
SGI 1581.2 SG2 389.1 THA 24.01

ORBIT DETERMINATION ACCURACY

ST 568.2 SR 429.4 SS 373.7
CRT .8966 CRS .9141 CST .9943
LSA 787.7 MSA 159.8 SSA 30.0
EL1 695.0 EL2 155.5 ALF 36.22



LAUNCH DATE JAN 21 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC DISTANCE 294.245  
 RL 147.23 LAL .00 LOL 120.78 VL 27.292 GAL -.85 AZL 89.54 HCA 129.61 SMA 125.44 ECC .17430 INC .4615 V1 30.261  
 RP 108.57 LAP .36 LOP 250.39 VP 37.240 GAP -6.42 AZP 90.29 TAL 184.04 TAP 313.65 RCA 103.57 APO 147.30 V2 34.906  
 RC 61.981 GL 4.16 GP 22.39 ZAL 100.69 ZAP 33.14 ETS 323.98 ZAE 143.41 ETE 29.14 ZAC 126.29 ETC 143.89 CLP -25.09

PLANETOCENTRIC CONIC  
 C3 9.200 VHL 3.033 DLA 11.69 RAL 16.93 RAD 6567.3 VEL 11.428 PTH 1.98 VHP 5.223 DPA 35.61 RAP 34.30 ECC 1.1514  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 58 19 2417.13 -23.91 54.73 229.72 105.64 3 38 37 1817.1 -21.54 46.87  
 90.00 17 56 33 4318.12 3.84 178.58 226.68 61.92 19 8 31 3718.1 .06 171.94  
 100.00 4 25 36 2135.67 -24.83 33.74 229.42 107.20 5 1 11 1535.7 -22.24 25.90  
 100.00 19 11 58 4074.81 4.68 160.23 226.22 60.44 20 19 53 3474.8 .71 153.69  
 110.00 5 47 14 1880.19 -27.24 13.39 228.48 111.50 6 18 35 1280.2 -24.08 5.66  
 110.00 20 6 49 3903.06 6.86 145.85 224.87 56.43 21 11 52 3303.1 2.40 139.60

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2389 TRA -.4595 TC3 1.7293 BAU .2574 SGT 1445.7 SGR 826.7 SG3 385.8 ST 524.8 SR 408.1 SS 319.0  
 RDE -.2153 RRA -.0442 RC3 1.1781 FAU .07465 RRT .8441 RRF -.9182 RTF -.8982 CRT .8920 CRS .8811 CST .9925  
 FDE .3153 FRA .6194 FC3-7.0250 BSP 5321 SGB 1665.4 R23 -.1822 R13 -.9287 LSA 719.4 MSA 158.4 SSA 32.9  
 BDE .3216 BRA .4617 BC3 2.0925 FSP -1150 SG1 1617.5 SG2 396.2 THA 27.56 EL1 647.7 EL2 149.4 ALF 37.05

LAUNCH DATE JAN 21 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC DISTANCE 300.815  
 RL 147.23 LAL .00 LOL 120.78 VL 27.360 GAL -.95 AZL 89.77 HCA 132.78 SMA 125.88 ECC .17037 INC .2280 V1 30.261  
 RP 108.60 LAP .17 LOP 253.57 VP 37.279 GAP -5.85 AZP 90.16 TAL 184.63 TAP 317.42 RCA 104.43 APO 147.32 V2 34.894  
 RC 64.032 GL 2.11 GP 24.78 ZAL 101.86 ZAP 36.76 ETS 324.99 ZAE 142.57 ETE 33.09 ZAC 124.90 ETC 142.47 CLP -28.07

PLANETOCENTRIC CONIC  
 C3 8.822 VHL 2.970 DLA 9.36 RAL 16.65 RAD 6567.3 VEL 11.411 PTH 1.98 VHP 4.992 DPA 37.88 RAP 33.30 ECC 1.1452  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 16 14 2332.05 -22.24 49.06 228.18 108.00 3 55 6 1732.0 -19.57 41.41  
 90.00 17 36 22 4387.06 6.04 182.45 225.78 62.28 18 49 29 3787.1 2.28 175.79  
 100.00 4 42 10 2054.91 -23.09 28.36 227.87 109.53 5 16 25 1454.9 -20.22 20.75  
 100.00 18 53 8 4139.43 6.84 163.81 225.35 60.83 20 2 7 3539.4 2.90 157.24  
 110.00 6 0 51 1808.68 -25.37 8.68 226.88 113.72 6 31 0 1208.7 -21.94 1.20  
 110.00 19 50 56 3958.42 8.93 148.80 224.07 56.87 20 56 54 3358.4 4.51 142.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2080 TRA -.4453 TC3 1.7762 BAU .2693 SGT 1425.5 SGR 938.5 SG3 420.8 ST 479.8 SR 377.6 SS 260.8  
 RDE -.1944 RRA -.0610 RC3 1.4342 FAU .08020 RRT .8620 RRF -.9416 RTF -.8978 CRT .8866 CRS .8045 CST .9764  
 FDE .2299 FRA .6591 FC3-7.8704 BSP 5434 SGB 1706.7 R23 -.1914 R13 -.9374 LSA 643.4 MSA 160.0 SSA 36.2  
 BDE .2847 BRA .4495 BC3 2.2829 FSP -1263 SG1 1656.9 SG2 409.2 THA 31.74 EL1 594.1 EL2 141.0 ALF 37.37

LAUNCH DATE JAN 21 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC DISTANCE 307.362  
 RL 147.23 LAL .00 LOL 120.78 VL 27.420 GAL -1.04 AZL 90.03 HCA 135.96 SMA 126.27 ECC .16690 INC .0271 V1 30.261  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.313 GAP -5.29 AZP 89.98 TAL 185.18 TAP 321.14 RCA 105.20 APO 147.35 V2 34.883  
 RC 66.131 GL -.28 GP 27.50 ZAL 102.92 ZAP 40.67 ETS 325.95 ZAE 141.60 ETE 37.50 ZAC 123.11 ETC 141.15 CLP -31.24

PLANETOCENTRIC CONIC  
 C3 8.522 VHL 2.919 DLA 6.76 RAL 16.58 RAD 6567.3 VEL 11.398 PTH 1.97 VHP 4.794 DPA 40.34 RAP 31.85 ECC 1.1403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 36 22 2241.92 -20.22 43.22 227.01 110.25 4 13 44 1641.9 -17.28 35.78  
 90.00 17 15 44 4464.04 8.45 186.82 225.30 62.87 18 30 9 3864.0 4.75 180.10  
 100.00 5 0 56 1969.16 -21.04 22.83 226.68 111.74 5 33 45 1369.2 -17.90 15.44  
 100.00 18 33 52 4212.02 9.22 167.88 224.89 61.44 19 44 4 3612.0 5.34 161.24  
 110.00 6 16 33 1732.52 -23.19 3.83 225.65 115.84 6 45 26 1132.5 -19.53 356.61  
 110.00 19 34 44 4021.43 11.26 152.20 223.67 57.51 20 41 46 3421.4 6.89 145.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1745 TRA -.4303 TC3 1.7873 BAU .2835 SGT 1389.0 SGR 1074.1 SG3 455.1 ST 428.2 SR 331.8 SS 205.8  
 RDE -.1666 RRA -.0811 RC3 1.7307 FAU .08559 RRT .8732 RRF -.9590 RTF -.8958 CRT .8811 CRS .5944 CST .8828  
 FDE .1143 FRA .7020 FC3-8.6953 BSP 5591 SGB 1755.8 R23 -.1920 R13 -.9472 LSA 553.0 MSA 169.0 SSA 39.3  
 BDE .2413 BRA .4378 BC3 2.4879 FSP -1379 SG1 1703.2 SG2 426.9 THA 36.71 EL1 526.5 EL2 127.7 ALF 36.85

LAUNCH DATE JAN 21 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC DISTANCE 313.886  
 RL 147.23 LAL .00 LOL 120.78 VL 27.473 GAL -1.11 AZL 90.32 HCA 139.13 SMA 126.62 ECC .16385 INC .3184 V1 30.261  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.342 GAP -4.76 AZP 89.76 TAL 185.68 TAP 324.81 RCA 105.87 APO 147.37 V2 34.873  
 RC 68.274 GL -3.04 GP 30.55 ZAL 103.83 ZAP 44.86 ETS 326.94 ZAE 140.40 ETE 42.35 ZAC 120.92 ETC 140.00 CLP -34.61

PLANETOCENTRIC CONIC  
 C3 8.303 VHL 2.882 DLA 3.85 RAL 16.77 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.634 DPA 43.02 RAP 29.86 ECC 1.1367  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 59 12 2145.48 -17.83 37.15 226.26 112.37 4 34 57 1545.5 -14.65 29.93  
 90.00 16 54 25 4550.69 11.10 191.81 225.30 63.78 18 10 15 3950.7 7.49 184.99  
 100.00 5 22 20 1877.31 -18.61 17.08 225.91 113.82 5 53 38 1277.3 -15.23 9.92  
 100.00 18 13 57 4294.09 11.86 172.55 224.91 62.36 19 25 31 3694.1 8.06 165.81  
 110.00 6 34 43 1650.79 -20.68 358.82 224.85 117.85 7 2 14 1050.8 -16.79 351.86  
 110.00 19 18 4 4093.38 13.86 156.15 223.75 58.43 20 26 18 3493.4 9.58 149.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1416 TRA -.4173 TC3 1.7492 BAU .3003 SGT 1336.8 SGR 1235.7 SG3 486.8 ST 377.3 SR 268.1 SS 193.9  
 RDE -.1297 RRA -.1073 RC3 2.0639 FAU .09034 RRT .8775 RRF -.9715 RTF -.8907 CRT .8864 CRS .1471 CST .5501  
 FDE -.0307 FRA .7560 FC3-9.4189 BSP 5767 SGB 1820.4 R23 -.1838 R13 -.9573 LSA 460.0 MSA 196.5 SSA 39.7  
 BDE .1920 BRA .4309 BC3 2.7054 FSP -1484 SG1 1764.2 SG2 449.1 THA 42.44 EL1 451.1 EL2 103.8 ALF 34.27

LAUNCH DATE JAN 21 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 320.387

RL 147.23 LAL .00 LOL 120.78 VL 27.519 GAL -1.17 AZL 90.65 HCA 142.30 SMA 126.93 ECC .16120 INC .6469 V1 30.261  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.366 GAP -4.25 AZP 89.49 TAL 186.11 TAP 328.42 RCA 106.47 APO 147.39 V2 34.862  
 RC 70.456 GL -6.24 GP 33.98 ZAL 104.58 ZAP 49.33 ETS 328.04 ZAE 138.85 ETE 47.61 ZAC 118.29 ETC 139.06 CLP -38.20

PLANETOCENTRIC CONIC

C3 8.176 VHL 2.859 OLA .58 RAL 17.24 RAD 6567.3 VEL 11.383 PTH 1.97 VHP 4.516 DPA 45.90 RAP 27.22 ECC 1.1346  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 25 24 2041.09 -15.02 30.79 226.03 114.29 4 59 25 1441.1 -11.61 23.76  
 90.00 16 31 59 4649.30 14.00 197.60 225.88 65.13 17 49 29 4049.3 10.53 190.64  
 100.00 5 47 0 1777.84 -15.77 11.06 225.66 115.73 6 16 38 1177.8 -12.18 4.11  
 100.00 17 53 4 4387.78 14.75 178.00 225.51 63.70 19 6 12 3787.8 11.10 171.11  
 110.00 6 55 52 1562.30 -17.78 353.60 224.56 119.69 7 21 54 962.3 -13.69 346.87  
 110.00 19 0 42 4176.09 16.75 160.81 224.40 59.76 20 10 18 3576.1 12.61 154.15

DIFFERENTIAL CORRECTIONS

TDE -.1075 TRA -.4042 TC3 1.6592 BAU .3215  
 RDE -.0784 RRA -.1411 RC3 2.4290 FAU .09406  
 FDE -.2132 FRA .8180 FC3-9.9603 BSP 6042  
 BDE .1330 BRA .4282 BC3 2.9416 FSP -1579

MID-COURSE EXECUTION ACCURACY

SGT 1266.0 SGR 1426.3 SG3 513.4  
 RRT .8755 RRF -.9803 RTF -.8826  
 SGB 1907.1 R23 -.1643 R13 -.9678  
 SGI 1847.7 SG2 472.2 THA 48.88

ORBIT DETERMINATION ACCURACY

ST 326.0 SR 183.3 SS 262.8  
 CRT .9310 CRS -.1481 CST .1473  
 LSA 370.5 MSA 265.4 SSA 35.4  
 EL1 369.3 EL2 59.1 ALF 28.43

LAUNCH DATE JAN 21 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 326.863

RL 147.23 LAL .00 LOL 120.78 VL 27.558 GAL -1.22 AZL 91.03 HCA 145.47 SMA 127.19 ECC .15891 INC 1.0261 V1 30.261  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.387 GAP -3.75 AZP 89.15 TAL 186.49 TAP 331.96 RCA 106.98 APO 147.40 V2 34.853  
 RC 72.672 GL -9.95 GP 37.78 ZAL 105.11 ZAP 54.05 ETS 329.35 ZAE 136.86 ETE 53.16 ZAC 115.23 ETC 138.40 CLP -42.03

PLANETOCENTRIC CONIC

C3 8.160 VHL 2.857 OLA -3.10 RAL 18.04 RAD 6567.3 VEL 11.382 PTH 1.97 VHP 4.449 DPA 48.96 RAP 23.79 ECC 1.1343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 55 55 1926.52 -11.70 24.01 226.42 115.97 5 28 1 1326.5 -8.11 17.17  
 90.00 16 7 51 4763.14 17.14 204.48 227.19 67.11 17 27 14 4163.1 13.90 197.31  
 100.00 6 15 48 1668.80 -12.45 4.67 226.04 117.40 6 43 37 1068.8 -8.68 357.91  
 100.00 17 30 39 4496.10 17.91 184.49 226.84 65.66 18 45 35 3896.1 14.47 177.38  
 110.00 7 20 44 1465.56 -14.43 348.10 224.89 121.33 7 45 9 865.6 -10.18 341.58  
 110.00 18 42 13 4272.09 19.95 166.42 225.77 61.65 19 53 25 3672.1 16.01 159.51

DIFFERENTIAL CORRECTIONS

TDE -.0793 TRA -.3916 TC3 1.4923 BAU .3459  
 RDE -.0099 RRA -.1853 RC3 2.7977 FAU .09578  
 FDE -.4222 FRA .8871 FC-10.1617 BSP 6373  
 BDE .0799 BRA .4332 BC3 3.1708 FSP -1642

MID-COURSE EXECUTION ACCURACY

SGT 1170.9 SGR 1641.2 SG3 529.8  
 RRT .8631 RRF -.9863 RTF -.8659  
 SGB 2016.1 R23 -.1390 R13 -.9769  
 SGI 1953.9 SG2 496.7 THA 55.87

ORBIT DETERMINATION ACCURACY

ST 285.7 SR 123.1 SS 390.7  
 CRT .8734 CRS .4098 CST -.0139  
 LSA 394.4 MSA 305.2 SSA 27.8  
 EL1 306.1 EL2 56.0 ALF 21.37

LAUNCH DATE JAN 21 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 333.314

RL 147.23 LAL .00 LOL 120.78 VL 27.592 GAL -1.26 AZL 91.47 HCA 148.63 SMA 127.42 ECC .15695 INC 1.4712 V1 30.261  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.403 GAP -3.27 AZP 88.74 TAL 186.79 TAP 335.42 RCA 107.42 APO 147.42 V2 34.844  
 RC 74.919 GL -14.24 GP 41.96 ZAL 105.38 ZAP 58.96 ETS 330.95 ZAE 134.31 ETE 58.87 ZAC 111.77 ETC 138.07 CLP -46.10

PLANETOCENTRIC CONIC

C3 8.291 VHL 2.879 OLA -7.27 RAL 19.22 RAD 6567.3 VEL 11.388 PTH 1.97 VHP 4.443 DPA 52.17 RAP 19.41 ECC 1.1365  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 32 10 1798.65 -7.79 16.65 227.62 117.31 6 2 9 1198.7 -4.07 9.95  
 90.00 15 41 0 4896.97 20.48 212.88 229.42 70.01 17 2 37 4297.0 17.57 205.41  
 100.00 6 50 2 1547.47 -8.55 357.77 227.20 118.75 7 15 49 947.5 -4.65 351.15  
 100.00 17 5 49 4623.38 21.29 192.43 229.09 68.51 18 22 53 4023.4 18.18 185.01  
 110.00 7 50 19 1358.70 -10.57 342.23 225.99 122.70 8 12 58 758.7 -6.19 335.88  
 110.00 18 22 1 4384.92 23.44 173.31 228.07 64.38 19 35 6 3784.9 19.80 166.06

DIFFERENTIAL CORRECTIONS

TDE -.0562 TRA -.3769 TC3 1.2628 BAU .3758  
 RDE .0848 RRA -.2436 RC3 3.1464 FAU .09524  
 FDE -.6598 FRA .9606 FC3-9.9443 BSP 6813  
 BDE .1017 BRA .4488 BC3 3.3904 FSP -1666

MID-COURSE EXECUTION ACCURACY

SGT 1055.0 SGR 1884.3 SG3 534.2  
 RRT .8392 RRF -.9905 RTF -.8392  
 SGB 2159.6 R23 -.1081 R13 -.9847  
 SGI 2097.1 SG2 515.5 THA 63.07

ORBIT DETERMINATION ACCURACY

ST 253.9 SR 230.0 SS 554.7  
 CRT .2664 CRS .9496 CST -.0329  
 LSA 596.7 MSA 261.8 SSA 20.3  
 EL1 274.4 EL2 205.2 ALF 34.82

LAUNCH DATE JAN 21 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 339.740

RL 147.23 LAL .00 LOL 120.78 VL 27.621 GAL -1.29 AZL 92.00 HCA 151.79 SMA 127.61 ECC .15528 INC 2.0046 V1 30.261  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.416 GAP -2.81 AZP 88.23 TAL 187.02 TAP 338.81 RCA 107.80 APO 147.43 V2 34.835  
 RC 77.194 GL -19.19 GP 46.52 ZAL 105.33 ZAP 63.98 ETS 332.96 ZAE 131.14 ETE 64.58 ZAC 107.95 ETC 138.14 CLP -50.39

PLANETOCENTRIC CONIC

C3 8.634 VHL 2.938 OLA -11.97 RAL 20.85 RAD 6567.3 VEL 11.403 PTH 1.97 VHP 4.513 DPA 55.44 RAP 13.88 ECC 1.1421  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 16 27 1652.67 -3.16 8.42 229.88 118.16 6 44 0 1052.7 .63 1.79  
 90.00 15 9 40 5058.22 23.86 223.49 232.85 74.28 16 33 59 4458.2 21.47 215.63  
 100.00 7 31 42 1409.90 -3.98 350.12 229.43 119.65 7 55 12 809.9 .00 343.59  
 100.00 16 37 7 4776.22 24.76 202.46 232.55 72.69 17 56 43 4176.2 22.15 194.63  
 110.00 8 26 11 1239.30 -6.11 335.85 228.11 123.70 8 46 50 639.3 -1.64 329.62  
 110.00 17 59 7 4519.59 27.13 182.04 231.62 68.35 19 14 27 3919.6 23.94 174.32

DIFFERENTIAL CORRECTIONS

TDE -.0469 TRA -.3586 TC3 .9622 BAU .4095  
 RDE .2114 RRA -.3206 RC3 3.4146 FAU .09160  
 FDE -.9044 FRA 1.0314 FC3-9.1844 BSP 7344  
 BDE .2166 BRA .4810 BC3 3.5476 FSP -1637

MID-COURSE EXECUTION ACCURACY

SGT 916.0 SGR 2145.9 SG3 521.8  
 RRT .7904 RRF -.9932 RTF -.7882  
 SGB 2333.2 R23 -.0778 R13 -.9902  
 SGI 2272.2 SG2 529.9 THA 70.24

ORBIT DETERMINATION ACCURACY

ST 233.8 SR 458.6 SS 731.2  
 CRT .0410 CRS .9942 CST -.0603  
 LSA 862.1 MSA 236.9 SSA 14.5  
 EL1 458.7 EL2 233.5 ALF 88.39

LAUNCH DATE JAN 21 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 27 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.644 GAL -1.30 AZL 92.66 MCA 154.95 SMA 127.77 ECC .15389 INC 2.6600 VI 30.261  
 RP 108.81 LAP -1.13 LOP 275.75 VP 37.426 GAP -2.36 AZP 87.59 TAL 187.18 TAP 342.12 RCA 108.11 APO 147.44 V2 34.827  
 RC 79.493 GL -24.87 GP 51.41 ZAL 104.90 ZAP 68.98 ETS 335.47 ZAE 127.34 ETE 70.18 ZAC 103.83 ETC 138.66 CLP -54.90

DISTANCE 346.141

PLANETOCENTRIC CONIC

C3 9.302 VHL 3.050 DLA -17.25 RAL 23.00 RAD 6567.3 VEL 11.432 PTH 1.98 VHP 4.679 DPA 58.68 RAP 6.94 ECC 1.1531  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 13 2 1479.34 2.43 358.75 233.67 118.22 7 37 41 879.3 6.19 352.08  
 90.00 14 30 18 5260.20 26.86 237.51 237.84 80.68 15 57 58 4660.2 25.29 229.19  
 100.00 8 24 26 1248.97 1.47 341.28 233.14 119.86 8 45 15 649.0 5.44 334.74  
 100.00 16 1 36 4965.80 27.94 215.63 237.62 78.92 17 24 22 4365.8 26.13 207.30  
 110.00 9 10 47 1103.76 -.96 328.75 231.62 124.17 9 29 10 503.8 3.53 322.55  
 110.00 17 31 44 4683.77 30.73 193.45 236.86 74.22 18 49 48 4083.8 28.26 185.12

DIFFERENTIAL CORRECTIONS

TOE -.0587 TRA -.3338 TC3 .6090 BAU .4452  
 RDE .3789 RRA -.4245 RC3 3.5279 FAU .08445  
 FDE-1.1341 FRA 1.0965 FC3-7.8602 BSP 7935  
 BDE .3835 BRA .5400 BC3 3.5801 FSP -1541

MID-COURSE EXECUTION ACCURACY

SGT 762.4 SGR 2415.6 SG3 490.1  
 RRT .6892 RRF -.9951 RTF -.6850  
 SGB 2533.0 R23 -.0507 R13 -.9938  
 SG1 2475.0 SG2 539.1 THA 77.11

ORBIT DETERMINATION ACCURACY

ST 226.0 SR 757.4 SS 902.1  
 CRT -.1658 CRS .9988 CST -.2097  
 LSA 1178.4 MSA 223.1 SSA 10.4  
 EL1 758.5 EL2 222.5 ALF 93.10

LAUNCH DATE JAN 21 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 29 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.663 GAL -1.30 AZL 93.49 MCA 158.10 SMA 127.90 ECC .15275 INC 3.4904 VI 30.261  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.433 GAP -1.93 AZP 86.76 TAL 187.25 TAP 345.35 RCA 108.36 APO 147.44 V2 34.820  
 RC 81.813 GL -31.29 GP 56.61 ZAL 104.02 ZAP 73.83 ETS 338.56 ZAE 122.91 ETE 75.60 ZAC 99.51 ETC 139.69 CLP -59.59

DISTANCE 352.515

PLANETOCENTRIC CONIC

C3 10.508 VHL 3.242 DLA -23.11 RAL 25.81 RAD 6567.4 VEL 11.485 PTH 2.00 VHP 4.975 DPA 61.76 RAP 358.29 ECC 1.1729  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 32 46 1251.74 9.62 345.89 239.84 116.76 8 53 38 651.7 13.14 338.98  
 90.00 13 32 57 5536.20 28.31 257.52 244.62 90.56 15 5 13 4936.2 28.09 248.86  
 100.00 9 36 24 1046.34 8.26 330.07 239.12 118.83 9 53 50 446.3 12.04 323.33  
 100.00 15 12 0 5216.83 29.85 234.00 244.61 88.37 16 38 57 4616.8 29.31 225.24  
 110.00 10 8 43 945.00 5.10 320.46 237.18 123.85 10 24 28 345.0 9.51 314.14  
 110.00 16 56 10 4890.93 33.54 208.92 244.28 82.96 18 17 41 4290.9 32.20 199.95

DIFFERENTIAL CORRECTIONS

TOE -.1001 TRA -.2942 TC3 .2510 BAU .4828  
 RDE .6033 RRA -.5605 RC3 3.4278 FAU .07433  
 FDE-1.3327 FRA 1.1365 FC3-6.1243 BSP 8637  
 BDE .6115 BRA .6331 BC3 3.4370 FSP -1393

MID-COURSE EXECUTION ACCURACY

SGT 614.4 SGR 2690.0 SG3 441.3  
 RRT .4733 RRF -.9963 RTF -.4667  
 SGB 2759.2 R23 -.0277 R13 -.9960  
 SG1 2706.3 SG2 538.0 THA 83.58

ORBIT DETERMINATION ACCURACY

ST 245.1 SR 1116.2 SS 1052.2  
 CRT -.4877 CRS .9997 CST -.5081  
 LSA 1538.7 MSA 212.7 SSA 7.5  
 EL1 1122.8 EL2 212.7 ALF 96.34

LAUNCH DATE JAN 21 1969

FLIGHT TIME 130.00

ARRIVAL DATE MAY 31 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.678 GAL -1.29 AZL 94.58 MCA 161.24 SMA 128.00 ECC .15184 INC 4.5832 VI 30.261  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.438 GAP -1.51 AZP 85.66 TAL 187.24 TAP 348.49 RCA 108.56 APO 147.44 V2 34.813  
 RC 84.153 GL -38.39 GP 62.11 ZAL 102.67 ZAP 78.34 ETS 342.33 ZAE 117.88 ETE 80.82 ZAC 95.06 ETC 141.29 CLP -64.39

DISTANCE 358.860

PLANETOCENTRIC CONIC

C3 12.674 VHL 3.560 DLA -29.44 RAL 29.40 RAD 6567.5 VEL 11.578 PTH 2.02 VHP 5.453 DPA 64.51 RAP 347.56 ECC 1.2086  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.58 10 7 58 1012.60 22.83 334.34 251.16 109.12 10 24 51 412.6 25.23 326.40  
 98.42 12 26 25 5853.42 22.84 279.41 251.17 109.10 14 3 59 5253.4 25.24 271.47  
 100.00 11 55 1 665.95 19.73 307.67 249.89 112.92 12 6 7 66.0 22.67 300.11  
 100.00 13 22 4 5675.31 26.01 267.28 252.24 105.28 14 56 39 5075.3 27.85 258.97  
 110.00 11 32 0 738.47 12.77 309.38 246.12 121.98 11 44 19 138.5 16.90 302.71  
 110.00 16 1 34 5175.55 33.72 231.05 253.91 96.00 17 27 50 4575.6 34.18- 221.84

DIFFERENTIAL CORRECTIONS

TOE -.1886 TRA -.2303 TC3 -.0607 BAU .5174  
 RDE .8973 RRA -.7447 RC3 3.0530 FAU .06156  
 FDE-1.4666 FRA 1.1495 FC3-4.2050 BSP 9410  
 BDE .9169 BRA .7795 BC3 3.0536 FSP -1197

MID-COURSE EXECUTION ACCURACY

SGT 524.6 SGR 2950.4 SG3 377.1  
 RRT .0346 RRF -.9972 RTF -.0255  
 SGB 2996.7 R23 -.0101 R13 -.9972  
 SG1 2950.5 SG2 524.3 THA 89.64

ORBIT DETERMINATION ACCURACY

ST 329.3 SR 1503.4 SS 1152.7  
 CRT -.7791 CRS .9999 CST -.7884  
 LSA 1912.0 MSA 203.6 SSA 5.5  
 EL1 1525.5 EL2 203.5 ALF 99.86

LAUNCH DATE JAN 21 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 2 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.688 GAL -1.27 AZL 96.10 MCA 164.38 SMA 128.07 ECC .15114 INC 6.0965 VI 30.261  
 RP 108.87 LAP -1.64 LOP 285.24 VP 37.440 GAP -1.11 AZP 84.13 TAL 187.15 TAP 351.53 RCA 108.72 APO 147.43 V2 34.807  
 RC 86.508 GL -45.97 GP 67.94 ZAL 100.85 ZAP 82.33 ETS 346.88 ZAE 112.27 ETE 85.97 ZAC 90.55 ETC 143.58 CLP -69.19

DISTANCE 365.173

PLANETOCENTRIC CONIC

C3 16.721 VHL 4.089 DLA -35.99 RAL 33.95 RAD 6567.7 VEL 11.752 PTH 2.07 VHP 6.211 DPA 66.71 RAP 334.36 ECC 1.2752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.79 8 47 16 1382.21 25.87 3.92 262.06 115.95 9 10 18 782.2 29.13 356.10  
 113.21 14 23 25 5606.82 25.88 262.01 262.07 115.94 15 56 52 5006.8 29.14 254.19  
 66.79 8 47 16 1382.21 25.87 3.92 262.06 115.95 9 10 18 782.2 29.13 356.10  
 113.21 14 23 25 5606.82 25.88 262.01 262.07 115.94 15 56 52 5006.8 29.14 254.19  
 66.79 8 47 16 1382.21 25.87 3.92 262.06 115.95 9 10 18 782.2 29.13 356.10  
 113.21 14 23 25 5606.82 25.88 262.01 262.07 115.94 15 56 52 5006.8 29.14 254.19

DIFFERENTIAL CORRECTIONS

TDE -.3514 TRA -.1228 TC3 -.2690 BAU .5441  
 RDE 1.2834 RRA -.9979 RC3 2.4189 FAU .04729  
 FDE-1.5163 FRA 1.1286 FC3-2.4486 BSP 10229  
 BDE 1.3307 BRA 1.0055 BC3 2.4339 FSP -973

MID-COURSE EXECUTION ACCURACY

SGT 579.7 SGR 3183.4 SG3 303.6  
 RRT -.5164 RRF -.9978 RTF .5257  
 SGB 3235.8 R23 .0026 R13 -.9979  
 SG1 3197.8 SG2 494.2 THA 95.50

ORBIT DETERMINATION ACCURACY

ST 496.5 SR 1872.5 SS 1183.2  
 CRT -.9172 CRS .9999 CST -.9217  
 LSA 2261.8 MSA 192.7 SSA 4.0  
 EL1 1927.6 EL2 192.2 ALF 103.81

LAUNCH DATE JAN 21 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 371.448

RL 147.23 LAL .00 LOL 120.78 VL 27.695 GAL -1.23 AZL 98.34 HCA 167.49 SMA 128.12 ECC .15062 INC 8.3434 V1 30.261
RP 108.89 LAP -1.80 LOP 288.41 VP 37.440 GAP -.73 AZP 81.85 TAL 186.96 TAP 354.46 RCA 108.82 APO 147.42 V2 34.802
RC 88.877 GL -53.60 GP 74.21 ZAL 98.66 ZAP 85.64 ETS 352.49 ZAE 106.01 ETE 91.40 ZAC 86.01 ETC 146.91 CLP -73.79

PLANETOCENTRIC CONIC

C3 24.917 VHL 4.992 DLA -42.30 RAL 39.57 RAD 6568.0 VEL 12.095 PTH 2.16 VHP 7.441 DPA 68.08 RAP 318.34 ECC 1.4101
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
57.15 8 23 29 1609.62 26.46 23.27 276.39 124.29 8 50 19 1009.6 30.76 16.00
122.85 15 32 0 5569.74 26.48 259.31 276.40 124.28 17 4 49 4969.7 30.77 252.04
57.15 8 23 29 1609.62 26.46 23.27 276.39 124.29 8 50 19 1009.6 30.76 16.00
122.85 15 32 0 5569.74 26.48 259.31 276.40 124.28 17 4 49 4969.7 30.77 252.04
57.15 8 23 29 1609.62 26.46 23.27 276.39 124.29 8 50 19 1009.6 30.76 16.00
122.85 15 32 0 5569.74 26.48 259.31 276.40 124.28 17 4 49 4969.7 30.77 252.04

DIFFERENTIAL CORRECTIONS

TDE -.6384 TRA .0749 TC3 -.3384 BAU .5473
ROE 1.7841 RRA-1.3712 RC3 1.6076 FAU .03247
FDE-1.4658 FRA 1.0861 FC3-1.1281 BSP 10882
BOE 1.8949 BRA 1.3733 BC3 1.6429 FSP -727

MID-COURSE EXECUTION ACCURACY

SGT 815.2 SGR 3361.3 SG3 227.6
RRT -.8358 RRF -.9983 RTF .8424
SG8 3458.7 R23 .0116 R13 -.9983
SG1 3430.8 SG2 438.5 THA 101.65

ORBIT DETERMINATION ACCURACY

ST 733.6 SR 2145.6 SS 1129.7
CRT -.9677 CRS .9999 CST -.9703
LSA 2527.2 MSA 176.2 SSA 2.9
EL1 2260.7 EL2 175.5 ALF 108.42

LAUNCH DATE JAN 21 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 377.668

RL 147.23 LAL .00 LOL 120.78 VL 27.699 GAL -1.17 AZL 102.04 HCA 170.58 SMA 128.14 ECC .15027 INC12.0417 V1 30.261
RP 108.90 LAP -1.96 LOP 291.57 VP 37.438 GAP -.36 AZP 78.12 TAL 186.66 TAP 357.24 RCA 108.89 APO 147.40 V2 34.797
RC 91.256 GL -60.57 GP 81.26 ZAL 96.27 ZAP 88.12 ETS .57 ZAE 98.84 ETE 98.65 ZAC 81.33 ETC 152.84 CLP -77.53

PLANETOCENTRIC CONIC

C3 44.000 VHL 6.633 DLA -47.64 RAL 46.08 RAD 6568.7 VEL 12.859 PTH 2.34 VHP 9.585 DPA 68.14 RAP 299.36 ECC 1.7241
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.94 8 22 2 1823.89 22.87 39.78 293.43 133.00 8 52 26 1223.9 28.19 33.56
130.06 16 25 23 5640.94 22.89 262.68 293.45 132.99 17 59 24 5040.9 28.20 256.46
49.94 8 22 2 1823.89 22.87 39.78 293.43 133.00 8 52 26 1223.9 28.19 33.56
130.06 16 25 23 5640.94 22.89 262.68 293.45 132.99 17 59 24 5040.9 28.20 256.46
49.94 8 22 2 1823.89 22.87 39.78 293.43 133.00 8 52 26 1223.9 28.19 33.56
130.06 16 25 23 5640.94 22.89 262.68 293.45 132.99 17 59 24 5040.9 28.20 256.46

DIFFERENTIAL CORRECTIONS

TDE-1.1694 TRA .5311 TC3 -.2766 BAU .4989
ROE 2.4523 RRA-1.9337 RC3 .8018 FAU .01858
FDE-1.3439 FRA 1.0364 FC3 -.3657 BSP 11487
BOE 2.7168 BRA 2.0053 BC3 .8482 FSP -506

MID-COURSE EXECUTION ACCURACY

SGT 1272.1 SGR 3429.7 SG3 158.1
RRT -.9666 RRF -.9988 RTF .9688
SG8 3658.0 R23 .0176 R13 -.9988
SG1 3645.2 SG2 306.7 THA 109.87

ORBIT DETERMINATION ACCURACY

ST 1030.6 SR 2245.2 SS 1016.5
RT -.9905 CRS 1.0000 CST -.9914
LSA 2668.2 MSA 130.1 SSA 2.1
EL1 2467.0 EL2 129.2 ALF 114.52

LAUNCH DATE JAN 21 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 383.785

RL 147.23 LAL .00 LOL 120.78 VL 27.699 GAL -1.09 AZL 109.23 HCA 173.59 SMA 128.15 ECC .15007 INC19.2282 V1 30.261
RP 108.92 LAP -2.11 LOP 294.73 VP 37.435 GAP -.03 AZP 70.88 TAL 186.20 TAP 359.79 RCA 108.92 APO 147.38 V2 34.793
RC 93.644 GL -65.44 GP 89.63 ZAL 93.92 ZAP 89.65 ETS 34.73 ZAE 89.86 ETE 131.57 ZAC 76.02 ETC 185.42 CLP 19.66

PLANETOCENTRIC CONIC

C3 100.559 VHL 10.028 DLA -50.74 RAL 52.28 RAD 6569.9 VEL 14.896 PTH 2.69 VHP 13.890 DPA 65.84 RAP 277.45 ECC 2.6550
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.96 8 33 36 2051.32 14.16 52.86 310.36 139.26 9 7 47 1451.3 20.15 47.72
134.04 17 3 18 5804.95 14.17 269.42 310.38 139.25 18 40 2 5204.9 20.16 264.28
45.96 8 33 36 2051.32 14.16 52.86 310.36 139.26 9 7 47 1451.3 20.15 47.72
134.04 17 3 18 5804.95 14.17 269.42 310.38 139.25 18 40 2 5204.9 20.16 264.28
45.96 8 33 36 2051.32 14.16 52.86 310.36 139.26 9 7 47 1451.3 20.15 47.72
134.04 17 3 18 5804.95 14.17 269.42 310.38 139.25 18 40 2 5204.9 20.16 264.28

DIFFERENTIAL CORRECTIONS

TDE-2.8563 TRA 2.8161 TC3 -.1603 BAU .2831
ROE 2.9796 RRA-1.6742 RC3 .1365 FAU .00554
FDE-1.2467 FRA 1.0509 FC3 -.0477 BSP 12072
BOE 4.1275 BRA 3.2762 BC3 .2106 FSP -334

MID-COURSE EXECUTION ACCURACY

SGT 3038.3 SGR 2293.0 SG3 102.8
RRT -.9631 RRF -.9794 RTF .9970
SG8 3806.5 R23 -.0267 R13 -.9992
SG1 3773.8 SG2 497.1 THA 143.25

ORBIT DETERMINATION ACCURACY

ST 1801.4 SR 1761.8 SS 920.6
CRT -.9844 CRS .9928 CST -.9984
LSA 2673.3 MSA 224.0 SSA 1.3
EL1 2509.9 EL2 222.5 ALF 135.65

LAUNCH DATE JAN 21 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 389.591

RL 147.23 LAL .00 LOL 120.78 VL 27.697 GAL -.94 AZL 127.91 HCA 176.34 SMA 128.13 ECC .14992 INC37.9085 V1 30.261
RP 108.93 LAP -2.25 LOP 297.89 VP 37.430 GAP .22 AZP 52.15 TAL 185.35 TAP 1.69 RCA 108.92 APO 147.34 V2 34.789
RC 96.038 GL -63.63 GP 75.48 ZAL 91.85 ZAP 90.20 ETS 168.35 ZAE 75.29 ETE 263.92 ZAC 68.19 ETC 319.84 CLP 90.82

PLANETOCENTRIC CONIC

C3 360.625 VHL 18.990 DLA -47.97 RAL 53.63 RAD 6572.0 VEL 21.953 PTH 3.23 VHP 25.057 DPA 57.49 RAP 252.26 ECC 6.9350
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.51 8 50 38 2226.59 3.40 58.03 320.54 137.88 9 27 45 1626.6 9.31 53.02
130.49 16 57 1 748.11 3.42 302.30 320.56 137.88 17 9 29 148.1 9.33 297.29
49.51 8 50 38 2226.59 3.40 58.03 320.54 137.88 9 27 45 1626.6 9.31 53.02
130.49 16 57 1 748.11 3.42 302.30 320.56 137.88 17 9 29 148.1 9.33 297.29
49.51 8 50 38 2226.59 3.40 58.03 320.54 137.88 9 27 45 1626.6 9.31 53.02
130.49 16 57 1 748.11 3.42 302.30 320.56 137.88 17 9 29 148.1 9.33 297.29

DIFFERENTIAL CORRECTIONS

TOE 3.0121 TRA .3073 TC3 -.0380 BAU .8167
ROE-6.8564 RRA 6.6321 RC3 .1651 FAU-.01550
FDE-1.4816 FRA 1.4273 FC3 .0372 BSP 11707
BOE 7.4888 BRA 6.6392 BC3 .1694 FSP -217

MID-COURSE EXECUTION ACCURACY

SGT 930.6 SGR 3688.6 SG3 68.8
RRT -.4535 RRF 1.0000 RTF -.4558
SG8 3804.2 R23 -.0241 R13 .9997
SG1 3714.0 SG2 823.7 THA 96.87

ORBIT DETERMINATION ACCURACY

ST 909.8 SR 2254.7 SS 1054.1
CRT -.8984 CRS-1.0000 CST .8991
LSA 2622.8 MSA 379.0 SSA .4
EL1 2402.2 EL2 375.0 ALF 110.45

LAUNCH DATE JAN 21 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 12 1969

MELIOCENTRIC CONIC

DISTANCE 398.999

RL 147.23 LAL .00 LOL 120.78 VL 27.691 GAL -1.49 AZL 6.43 HCA 182.40 SMA 128.09 ECC .15154 INC83.5698 V1 30.261  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.423 GAP 1.41 AZP 173.56 TAL 188.37 TAP 10.78 RCA 108.68 APO 147.51 V2 34.787  
 RC 98.436 GL 45.35 GP -51.84 ZAL 91.30 ZAP 91.07 ETS 177.58 ZAE 52.29 ETE 83.26 ZAC 80.16 ETC 34.86 CLP 91.74

PLANETOCENTRIC CONIC

C31495.151 VHL 38.667 DLA 52.00 RAL 2.69 RAD 6573.2 VEL 40.205 PTH 3.56 VHP 47.012 DPA -55.69 RAP 179.52 ECC25.6064  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.38 17 9 4 4998.47 1.14 234.57 273.60 38.01 18 32 22 4398.5 -5.15 230.05  
 135.62 1 52 15 3442.08 1.16 110.88 273.59 38.01 2 49 37 2842.1 -5.14 106.36  
 44.38 17 9 4 4998.47 1.14 234.57 273.60 38.01 18 32 22 4398.5 -5.15 230.05  
 135.62 1 52 15 3442.08 1.16 110.88 273.59 38.01 2 49 37 2842.1 -5.14 106.36  
 44.38 17 9 4 4998.47 1.14 234.57 273.60 38.01 18 32 22 4398.5 -5.15 230.05  
 135.62 1 52 15 3442.08 1.16 110.88 273.59 38.01 2 49 37 2842.1 -5.14 106.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE-5.8573 TRA 2.5675 TC3 -.1142 BAU 4.8712 SGT 1383.7 SGR 2994.1 SG3 58.5 ST 887.9 SR 2486.1 SS 2286.0  
 RO-16.7730 RRA .5182 RC3 -.2153 FAU-.08384 RRT .8941 RRF -1.0000 RTF -.8977 CRT .9809 CRS 1.0000 CST .9816  
 FOE 3.7968 FRA -.1446 FC3 .0485 BSP 10267 SGB 3298.4 R23 -.0670 R13 -.9977 LSA 3488.2 MSA 165.8 SSA .6  
 BOE17.7663 BRA 2.6193 BC3 .2437 FSP -192 SG1 3248.6 SG2 571.2 THA 66.79 EL1 2634.9 EL2 162.8 ALF 70.62

LAUNCH DATE JAN 21 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 14 1969

MELIOCENTRIC CONIC

DISTANCE 403.796

RL 147.23 LAL .00 LOL 120.78 VL 27.684 GAL -1.13 AZL 53.71 HCA 184.25 SMA 128.04 ECC .15108 INC36.2923 V1 30.261  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.416 GAP 1.39 AZP 126.22 TAL 186.35 TAP 10.60 RCA 108.70 APO 147.39 V2 34.785  
 RC 100.837 GL 64.02 GP -79.55 ZAL 92.21 ZAP 92.37 ETS 179.05 ZAE 80.29 ETE 86.66 ZAC 95.91 ETC 39.26 CLP 103.16

PLANETOCENTRIC CONIC

C3 332.125 VHL 18.224 DLA 64.22 RAL 335.11 RAD 6571.9 VEL 21.294 PTH 3.20 VHP 21.235 DPA -70.66 RAP 122.77 ECC 6.4659  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.61 14 39 51 4977.46 -4.68 241.31 242.85 25.88 16 2 48 4377.5 -11.87 238.17  
 150.39 0 41 22 3267.48 -4.67 98.63 242.83 25.88 1 35 49 2667.5 -11.86 95.49  
 29.61 14 39 51 4977.46 -4.68 241.31 242.85 25.88 16 2 48 4377.5 -11.87 238.17  
 150.39 0 41 22 3267.48 -4.67 98.63 242.83 25.88 1 35 49 2667.5 -11.86 95.49  
 29.61 14 39 51 4977.46 -4.68 241.31 242.85 25.88 16 2 48 4377.5 -11.87 238.17  
 150.39 0 41 22 3267.48 -4.67 98.63 242.83 25.88 1 35 49 2667.5 -11.86 95.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.9922 TRA 1.7702 TC3 -.0667 BAU .7568 SGT 1339.2 SGR 3857.0 SG3 76.9 ST 494.7 SR 3255.5 SS 1355.6  
 RO-10.1619 RRA 2.8830 RC3 -.1569 FAU-.01196 RRT .7360 RRF -.9993 RTF -.7554 CRT .7679 CRS .9999 CST .7765  
 FOE 2.3001 FRA -.6992 FC3 .0312 BSP 13425 SGB 4082.8 R23 -.0298 R13 -.9993 LSA 3547.0 MSA 314.7 SSA 1.2  
 BOE10.2102 BRA 3.3831 BC3 .1704 FSP -264 SG1 3987.6 SG2 876.9 THA 74.92 EL1 3277.8 EL2 314.7 ALF 83.28

LAUNCH DATE JAN 21 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 16 1969

MELIOCENTRIC CONIC

DISTANCE 409.660

RL 147.23 LAL .00 LOL 120.78 VL 27.674 GAL -.96 AZL 68.13 HCA 187.10 SMA 127.97 ECC .15135 INC21.8668 V1 30.261  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.407 GAP 1.64 AZP 111.71 TAL 185.42 TAP 12.52 RCA 108.60 APO 147.34 V2 34.784  
 RC 103.240 GL 65.83 GP -84.78 ZAL 93.16 ZAP 94.80 ETS 267.49 ZAE 92.63 ETE 175.81 ZAC 101.97 ETC 128.34 CLP-157.02

PLANETOCENTRIC CONIC

C3 127.586 VHL 11.295 DLA 64.26 RAL 330.17 RAD 6570.4 VEL 15.777 PTH 2.80 VHP 12.582 DPA -68.30 RAP 86.65 ECC 3.0997  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.56 14 20 2 4831.89 -13.59 237.52 233.49 26.54 15 40 34 4231.9 -20.72 234.13  
 150.44 0 21 49 3121.50 -13.59 94.78 233.47 26.53 1 13 50 2521.5 -20.71 91.39  
 29.56 14 20 2 4831.89 -13.59 237.52 233.49 26.54 15 40 34 4231.9 -20.72 234.13  
 150.44 0 21 49 3121.50 -13.59 94.78 233.47 26.53 1 13 50 2521.5 -20.71 91.39  
 29.56 14 20 2 4831.89 -13.59 237.52 233.49 26.54 15 40 34 4231.9 -20.72 234.13  
 150.44 0 21 49 3121.50 -13.59 94.78 233.47 26.53 1 13 50 2521.5 -20.71 91.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.9318 TRA-2.2852 TC3 -.0847 BAU .1529 SGT 4026.9 SGR 1328.2 SG3 118.1 ST 3113.6 SR 896.4 SS 1175.6  
 RDE-1.6598 RRA .8776 RC3 .0293 FAU .00753 RRT -.9876 RRF -.9810 RTF .9987 CRT -.9959 CRS .9942 CST -.9999  
 FDE 2.0695 FRA -.7424 FC3 -.0511 BSP 13147 SGB 4240.3 R23 -.0497 R13 -.9981 LSA 3445.8 MSA 82.0 SSA 1.5  
 BDE 6.1596 BRA 2.4480 BC3 .0896 FSP -379 SG1 4235.7 SG2 197.9 THA 161.92 EL1 3239.2 EL2 77.5 ALF 163.99

LAUNCH DATE JAN 21 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 18 1969

MELIOCENTRIC CONIC

DISTANCE 415.705

RL 147.23 LAL .00 LOL 120.78 VL 27.662 GAL -.83 AZL 74.16 HCA 190.13 SMA 127.89 ECC .15186 INC15.8375 V1 30.261  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.398 GAP 1.94 AZP 105.60 TAL 184.66 TAP 14.80 RCA 108.47 APO 147.31 V2 34.783  
 RC 105.643 GL 63.92 GP -77.23 ZAL 93.82 ZAP 98.04 ETS 326.72 ZAE 100.68 ETE 235.00 ZAC 105.17 ETC 187.86 CLP-129.26

PLANETOCENTRIC CONIC

C3 70.629 VHL 8.404 DLA 62.84 RAL 333.20 RAD 6569.4 VEL 13.856 PTH 2.53 VHP 9.021 DPA -63.81 RAP 68.13 ECC 2.1624  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.23 14 36 5 4697.24 -21.09 232.38 231.81 29.29 15 54 22 4097.2 -28.00 228.37  
 148.77 0 29 57 2999.83 -21.08 91.57 231.79 29.28 1 19 57 2399.8 -28.00 87.56  
 31.23 14 36 5 4697.24 -21.09 232.38 231.81 29.29 15 54 22 4097.2 -28.00 228.37  
 148.77 0 29 57 2999.83 -21.08 91.57 231.79 29.28 1 19 57 2399.8 -28.00 87.56  
 31.23 14 36 5 4697.24 -21.09 232.38 231.81 29.29 15 54 22 4097.2 -28.00 228.37  
 148.77 0 29 57 2999.83 -21.08 91.57 231.79 29.28 1 19 57 2399.8 -28.00 87.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.8215 TRA-1.5300 TC3 -.3511 BAU .4253 SGT 3515.6 SGR 2494.0 SG3 176.5 ST 2694.1 SR 1952.5 SS 1278.1  
 RDE 2.7816 RRA-1.0369 RC3 -.2821 FAU .02206 RRT .9991 RRF .9984 RTF .9952 CRT .9999 CRS -.9998 CST -.9992  
 FDE 2.3480 FRA -.7934 FC3 -.2704 BSP 13480 SGB 4310.4 R23 .0845 R13 .9964 LSA 3564.0 MSA 47.7 SSA .4  
 BDE 4.7266 BRA 1.8483 BC3 .4504 FSP -579 SG1 4309.6 SG2 84.3 THA 35.34 EL1 3327.1 EL2 27.0 ALF 35.93

LAUNCH DATE JAN 21 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 20 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.648 GAL -1.70 AZL 77.41 HCA 193.23 SMA 127.80 ECC .15252 INC12.5850 V1 30.261  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.388 GAP 2.25 AZP 102.26 TAL 183.91 TAP 17.14 RCA 108.31 APO 147.29 V2 34.783  
 RC 108.045 GL 61.16 GP -70.06 ZAL 94.14 ZAP 101.84 ETS 328.76 ZAE 107.00 ETE 236.21 ZAC 107.22 ETC 189.82 CLP-127.01

Planetocentric Conic: C3 47.286 VHL 6.877 OLA 61.18 RAL 337.89 RAD 6568.8 VEL 12.987 PTH 2.37 VHP 7.193 DPA -59.00 RAP 56.54 ECC 1.7782  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.21 14 59 34 4590.91 -26.42 227.16 232.03 32.57 16 16 5 3990.9 -33.07 222.45  
 146.79 0 43 50 2910.10 -26.41 88.68 232.01 32.57 1 32 20 2310.1 -33.06 83.97  
 33.21 14 59 34 4590.91 -26.42 227.16 232.03 32.57 16 16 5 3990.9 -33.07 222.45  
 146.79 0 43 50 2910.10 -26.41 88.68 232.01 32.57 1 32 20 2310.1 -33.06 83.97  
 33.21 14 59 34 4590.91 -26.42 227.16 232.03 32.57 16 16 5 3990.9 -33.07 222.45  
 146.79 0 43 50 2910.10 -26.41 88.68 232.01 32.57 1 32 20 2310.1 -33.06 83.97

Differential Corrections: TDE 3.1237 TRA-1.2470 TC3 -.6710 BAU .5419 MID-COURSE EXECUTION ACCURACY: SGT 3502.8 SGR 2593.1 SG3 244.3 ORBIT DETERMINATION ACCURACY: ST 2681.9 SR 2136.1 SS 1439.0  
 RDE 2.5180 RRA -.7729 RC3 -.5334 FAU .03641 RRT .9926 RRF .9990 RTF .9892 CRT .9985 CRS-1.0000 CST -.9982  
 FDE 2.7323 FRA -.8131 FC3 -.6666 BSP 13657 SGB 4358.2 R23 .0979 R13 .9944 LSA 3716.9 MSA 105.2 SSA 1.9  
 BDE 4.0122 BRA 1.4671 BC3 .8572 FSP -813 SG1 4350.8 SG2 253.2 THA 36.45 EL1 3427.4 EL2 91.5 ALF 38.53

LAUNCH DATE JAN 21 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 22 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.632 GAL -1.57 AZL 79.45 HCA 196.34 SMA 127.69 ECC .15331 INC10.5523 V1 30.261  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.377 GAP 2.56 AZP 100.13 TAL 183.14 TAP 19.49 RCA 108.11 APO 147.27 V2 34.784  
 RC 110.446 GL 58.28 GP -63.53 ZAL 94.16 ZAP 106.01 ETS 328.07 ZAE 112.23 ETE 233.88 ZAC 108.62 ETC 188.70 CLP-128.22

Planetocentric Conic: C3 35.385 VHL 5.949 OLA 59.51 RAL 342.68 RAD 6568.4 VEL 12.520 PTH 2.27 VHP 6.138 DPA -54.14 RAP 48.48 ECC 1.5823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.20 15 23 43 4508.67 -30.03 222.22 232.80 35.88 16 38 51 3908.7 -36.38 216.82  
 144.80 0 57 57 2846.14 -30.02 86.18 232.78 35.88 1 45 23 2246.1 -36.37 80.78  
 35.20 15 23 43 4508.67 -30.03 222.22 232.80 35.88 16 38 51 3908.7 -36.38 216.82  
 144.80 0 57 57 2846.14 -30.02 86.18 232.78 35.88 1 45 23 2246.1 -36.37 80.78  
 35.20 15 23 43 4508.67 -30.03 222.22 232.80 35.88 16 38 51 3908.7 -36.38 216.82  
 144.80 0 57 57 2846.14 -30.02 86.18 232.78 35.88 1 45 23 2246.1 -36.37 80.78

Differential Corrections: TDE 2.8650 TRA-1.0703 TC3-1.0445 BAU .6035 MID-COURSE EXECUTION ACCURACY: SGT 3645.1 SGR 2462.3 SG3 313.1 ORBIT DETERMINATION ACCURACY: ST 2826.3 SR 2078.4 SS 1591.3  
 RDE 2.1332 RRA -.5479 RC3 -.7326 FAU .05019 RRT .9878 RRF .9986 RTF .9851 CRT .9978 CRS-1.0000 CST -.9976  
 FDE 3.0807 FRA -.7798 FC3-1.2279 BSP 13790 SGB 4398.8 R23 .1157 R13 .9919 LSA 3850.1 MSA 129.5 SSA 2.6  
 BDE 3.5719 BRA 1.2024 BC3 1.2758 FSP -1054 SG1 4387.3 SG2 318.4 THA 33.92 EL1 3506.4 EL2 111.6 ALF 36.31

LAUNCH DATE JAN 21 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 24 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.615 GAL -1.42 AZL 80.84 HCA 199.48 SMA 127.57 ECC .15424 INC 9.1575 V1 30.261  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.366 GAP 2.87 AZP 98.64 TAL 182.33 TAP 21.81 RCA 107.90 APO 147.25 V2 34.786  
 RC 112.844 GL 55.50 GP -52.57 ZAL 93.89 ZAP 110.33 ETS 327.09 ZAE 116.56 ETE 230.57 ZAC 109.63 ETC 187.03 CLP-130.36

Planetocentric Conic: C3 28.438 VHL 5.333 OLA 57.93 RAL 347.24 RAD 6568.1 VEL 12.240 PTH 2.20 VHP 5.491 DPA -49.38 RAP 42.60 ECC 1.4680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.10 15 46 48 4444.33 -32.42 217.71 233.81 38.98 17 0 52 3844.3 -38.48 211.70  
 142.90 1 11 12 2800.59 -32.40 84.05 233.79 38.97 1 57 53 2200.6 -38.46 78.05  
 37.10 15 46 48 4444.33 -32.42 217.71 233.81 38.98 17 0 52 3844.3 -38.48 211.70  
 142.90 1 11 12 2800.59 -32.40 84.05 233.79 38.97 1 57 53 2200.6 -38.46 78.05  
 37.10 15 46 48 4444.33 -32.42 217.71 233.81 38.98 17 0 52 3844.3 -38.48 211.70  
 142.90 1 11 12 2800.59 -32.40 84.05 233.79 38.97 1 57 53 2200.6 -38.46 78.05

Differential Corrections: TDE 2.7340 TRA -.9288 TC3-1.4485 BAU .6418 MID-COURSE EXECUTION ACCURACY: SGT 3814.0 SGR 2271.4 SG3 375.2 ORBIT DETERMINATION ACCURACY: ST 2991.4 SR 1944.5 SS 1711.1  
 RDE 1.7972 RRA -.3752 RC3 -.8667 FAU .06227 RRT .9842 RRF .9979 RTF .9818 CRT .9974 CRS-1.0000 CST -.9973  
 FDE 3.3337 FRA -.6878 FC3-1.8956 BSP 13899 SGB 4439.2 R23 .1326 R13 .9890 LSA 3954.4 MSA 142.5 SSA 3.3  
 BDE 3.2718 BRA 1.0017 BC3 1.6880 FSP -1274 SG1 4425.7 SG2 346.1 THA 30.58 EL1 3565.9 EL2 117.7 ALF 33.00

LAUNCH DATE JAN 21 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 26 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.596 GAL -1.27 AZL 81.86 HCA 202.62 SMA 127.44 ECC .15529 INC 8.1369 V1 30.261  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.354 GAP 3.18 AZP 97.52 TAL 181.48 TAP 24.10 RCA 107.65 APO 147.23 V2 34.789  
 RC 115.239 GL 52.87 GP -52.13 ZAL 93.37 ZAP 114.64 ETS 326.27 ZAE 120.09 ETE 226.86 ZAC 110.39 ETC 185.35 CLP-132.79

Planetocentric Conic: C3 24.001 VHL 4.899 OLA 56.48 RAL 351.52 RAD 6568.0 VEL 12.057 PTH 2.16 VHP 5.087 DPA -44.81 RAP 38.24 ECC 1.3950  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.86 16 8 35 4392.94 -33.98 213.67 235.01 41.76 17 21 48 3792.9 -39.76 207.16  
 141.14 1 23 34 2768.01 -33.97 82.30 234.99 41.75 2 9 42 2168.0 -39.75 75.79  
 38.86 16 8 35 4392.94 -33.98 213.67 235.01 41.76 17 21 48 3792.9 -39.76 207.16  
 141.14 1 23 34 2768.01 -33.97 82.30 234.99 41.75 2 9 42 2168.0 -39.75 75.79  
 38.86 16 8 35 4392.94 -33.98 213.67 235.01 41.76 17 21 48 3792.9 -39.76 207.16  
 141.14 1 23 34 2768.01 -33.97 82.30 234.99 41.75 2 9 42 2168.0 -39.75 75.79

Differential Corrections: TDE 2.6458 TRA -.8135 TC3-1.8876 BAU .6797 MID-COURSE EXECUTION ACCURACY: SGT 3995.4 SGR 2075.5 SG3 428.1 ORBIT DETERMINATION ACCURACY: ST 3137.7 SR 1776.1 SS 1786.0  
 RDE 1.5121 RRA -.2556 RC3 -.9614 FAU .07329 RRT .9824 RRF .9969 RTF .9798 CRT .9973 CRS-1.0000 CST -.9971  
 FDE 3.4601 FRA -.5714 FC3-2.6437 BSP 14267 SGB 4502.4 R23 .1446 R13 .9863 LSA 4021.0 MSA 147.2 SSA 4.1  
 BDE 3.0475 BRA .8527 BC3 2.1183 FSP -1487 SG1 4489.1 SG2 344.7 THA 27.21 EL1 3603.7 EL2 114.2 ALF 29.48

LAUNCH DATE JAN 21 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.576 GAL -.11 AZL 82.65 HCA 205.76 SMA 127.31 ECC .15647 INC 7.3538 V1 30.261  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.342 GAP 3.49 AZP 96.63 TAL 180.59 TAP 26.35 RCA 107.39 APO 147.23 V2 34.792  
 RC 117.630 GL 50.40 GP -47.23 ZAL 92.62 ZAP 118.84 ETS 325.69 ZAE 122.87 ETE 223.02 ZAC 111.04 ETC 183.83 CLP-135.26

DISTANCE 446.172

PLANETOCENTRIC CONIC

C3 20.983 VHL 4.581 DLA 55.16 RAL 355.57 RAD 6567.9 VEL 11.932 PTH 2.12 VHP 4.837 DPA -40.50 RAP 34.99 ECC 1.3453  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.46 16 29 12 4351.14 -34.99 210.09 236.43 44.22 17 41 43 3751.1 -40.51 203.17  
 139.54 1 35 18 2744.59 -34.98 80.87 236.41 44.21 2 21 3 2144.6 -40.50 73.96  
 40.46 16 29 12 4351.14 -34.99 210.09 236.43 44.22 17 41 43 3751.1 -40.51 203.17  
 139.54 1 35 18 2744.59 -34.98 80.87 236.41 44.21 2 21 3 2144.6 -40.50 73.96  
 40.46 16 29 12 4351.14 -34.99 210.09 236.43 44.22 17 41 43 3751.1 -40.51 203.17  
 139.54 1 35 18 2744.59 -34.98 80.87 236.41 44.21 2 21 3 2144.6 -40.50 73.96

DIFFERENTIAL CORRECTIONS

TDE 2.5938 TRA -.6970 TC3-2.3108 BAU .7043  
 RDE 1.2852 RRA -.1595 RC3 -.9815 FAU .08035  
 FDE 3.4989 FRA -.4080 FC3-3.3154 BSP 14385  
 BDE 2.8947 BRA .7150 BC3 2.5106 FSP -1618

MID-COURSE EXECUTION ACCURACY

SGT 4163.7 SGR 1874.8 SG3 466.7  
 RRT .9803 RRF .9952 RTF .9778  
 SGB 4566.3 R23 .1532 R13 .9834  
 SG1 4553.7 SG2 338.8 THA 23.96

ORBIT DETERMINATION ACCURACY

ST 3277.1 SR 1611.2 SS 1832.8  
 CRT .9972 CRS-1.0000 CST -.9969  
 LSA 4083.1 MSA 151.3 SSA 4.9  
 EL1 3650.1 EL2 108.6 ALF 26.14

LAUNCH DATE JAN 21 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.554 GAL .06 AZL 83.27 HCA 208.91 SMA 127.16 ECC .15777 INC 6.7308 V1 30.261  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.330 GAP 3.79 AZP 95.90 TAL 179.66 TAP 28.57 RCA 107.10 APO 147.23 V2 34.796  
 RC 120.015 GL 48.08 GP -42.84 ZAL 91.67 ZAP 122.83 ETS 325.35 ZAE 125.01 ETE 219.22 ZAC 111.64 ETC 182.52 CLP-137.68

DISTANCE 452.238

PLANETOCENTRIC CONIC

C3 18.836 VHL 4.340 DLA 53.96 RAL 359.46 RAD 6567.8 VEL 11.841 PTH 2.10 VHP 4.691 DPA -36.50 RAP 32.59 ECC 1.3100  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.93 16 48 54 4316.51 -35.62 206.93 238.06 46.36 18 0 50 3716.5 -40.90 199.69  
 138.07 1 46 36 2727.91 -35.61 79.74 238.05 46.35 2 32 4 2127.9 -40.89 72.51  
 41.93 16 48 54 4316.51 -35.62 206.93 238.06 46.36 18 0 50 3716.5 -40.90 199.69  
 138.07 1 46 36 2727.91 -35.61 79.74 238.05 46.35 2 32 4 2127.9 -40.89 72.51  
 41.93 16 48 54 4316.51 -35.62 206.93 238.06 46.36 18 0 50 3716.5 -40.90 199.69  
 138.07 1 46 36 2727.91 -35.61 79.74 238.05 46.35 2 32 4 2127.9 -40.89 72.51

DIFFERENTIAL CORRECTIONS

TDE 2.5654 TRA -.5722 TC3-2.7164 BAU .7249  
 RDE 1.1058 RRA -.0778 RC3 -.9524 FAU .08417  
 FDE 3.4713 FRA -.1966 FC3-3.8684 BSP 14451  
 BDE 2.7936 BRA .5775 BC3 2.8785 FSP -1683

MID-COURSE EXECUTION ACCURACY

SGT 4321.9 SGR 1686.8 SG3 492.3  
 RRT .9764 RRF .9929 RTF .9747  
 SGB 4639.4 R23 .1631 R13 .9797  
 SG1 4626.9 SG2 340.4 THA 20.98

ORBIT DETERMINATION ACCURACY

ST 3409.3 SR 1461.0 SS 1858.8  
 CRT .9970 CRS-1.0000 CST -.9964  
 LSA 4145.8 MSA 158.9 SSA 5.8  
 EL1 3707.7 EL2 104.0 ALF 23.15

LAUNCH DATE JAN 21 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.531 GAL .25 AZL 83.78 HCA 212.07 SMA 127.01 ECC .15920 INC 6.2206 V1 30.261  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.318 GAP 4.10 AZP 95.28 TAL 178.68 TAP 30.75 RCA 106.79 APO 147.23 V2 34.800  
 RC 122.394 GL 45.89 GP -38.94 ZAL 90.51 ZAP 126.58 ETS 325.18 ZAE 126.59 ETE 215.59 ZAC 112.26 ETC 181.41 CLP-140.01

DISTANCE 458.290

PLANETOCENTRIC CONIC

C3 17.263 VHL 4.155 DLA 52.88 RAL 3.24 RAD 6567.7 VEL 11.775 PTH 2.08 VHP 4.619 DPA -32.80 RAP 30.88 ECC 1.2841  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.28 17 7 54 4287.51 -35.98 204.15 239.92 48.22 18 19 22 3687.5 -41.06 196.65  
 136.72 1 57 44 2716.22 -35.96 78.87 239.91 48.21 2 43 0 2116.2 -41.04 71.38  
 43.28 17 7 54 4287.51 -35.98 204.15 239.92 48.22 18 19 22 3687.5 -41.06 196.65  
 136.72 1 57 44 2716.22 -35.96 78.87 239.91 48.21 2 43 0 2116.2 -41.04 71.38  
 43.28 17 7 54 4287.51 -35.98 204.15 239.92 48.22 18 19 22 3687.5 -41.06 196.65  
 136.72 1 57 44 2716.22 -35.96 78.87 239.91 48.21 2 43 0 2116.2 -41.04 71.38

DIFFERENTIAL CORRECTIONS

TDE 2.5336 TRA -.4593 TC3-3.1255 BAU .7513  
 RDE .9542 RRA -.0268 RC3 -.9101 FAU .08665  
 FDE 3.3588 FRA -.0151 FC3-4.3456 BSP 14723  
 BDE 2.7073 BRA .4601 BC3 3.2553 FSP -1731

MID-COURSE EXECUTION ACCURACY

SGT 4478.1 SGR 1519.0 SG3 507.4  
 RRT .9741 RRF .9896 RTF .9733  
 SGB 4728.7 R23 .1611 R13 .9772  
 SG1 4717.5 SG2 326.0 THA 18.38

ORBIT DETERMINATION ACCURACY

ST 3508.8 SR 1316.2 SS 1849.0  
 CRT .9971 CRS -.9999 CST -.9962  
 LSA 4175.8 MSA 159.9 SSA 6.7  
 EL1 3746.4 EL2 93.7 ALF 20.52

LAUNCH DATE JAN 21 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.508 GAL .45 AZL 84.21 HCA 215.22 SMA 126.85 ECC .16077 INC 5.7928 V1 30.261  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.305 GAP 4.40 AZP 94.74 TAL 177.67 TAP 32.90 RCA 106.46 APO 147.25 V2 34.805  
 RC 124.766 GL 43.80 GP -35.48 ZAL 89.19 ZAP 130.07 ETS 325.14 ZAE 127.72 ETE 212.20 ZAC 112.95 ETC 180.50 CLP-142.23

DISTANCE 464.327

PLANETOCENTRIC CONIC

C3 16.088 VHL 4.011 DLA 51.89 RAL 6.94 RAD 6567.6 VEL 11.725 PTH 2.07 VHP 4.600 DPA -29.42 RAP 29.70 ECC 1.2648  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.52 17 26 25 4262.96 -36.14 201.69 242.00 49.84 18 37 28 3663.0 -41.04 194.00  
 135.48 2 8 47 2708.44 -36.13 78.21 241.99 49.83 2 53 55 2108.4 -41.02 70.52  
 44.52 17 26 25 4262.96 -36.14 201.69 242.00 49.84 18 37 28 3663.0 -41.04 194.00  
 135.48 2 8 47 2708.44 -36.13 78.21 241.99 49.83 2 53 55 2108.4 -41.02 70.52  
 44.52 17 26 25 4262.96 -36.14 201.69 242.00 49.84 18 37 28 3663.0 -41.04 194.00  
 135.48 2 8 47 2708.44 -36.13 78.21 241.99 49.83 2 53 55 2108.4 -41.02 70.52

DIFFERENTIAL CORRECTIONS

TDE 2.5073 TRA -.3433 TC3-3.5153 BAU .7779  
 RDE .8318 RRA .0114 RC3 -.8501 FAU .08730  
 FDE 3.2041 FRA .1642 FC3-4.6978 BSP 15121  
 BDE 2.6417 BRA .3435 BC3 3.6166 FSP -1763

MID-COURSE EXECUTION ACCURACY

SGT 4627.2 SGR 1370.2 SG3 513.3  
 RRT .9712 RRF .9850 RTF .9719  
 SGB 4825.8 R23 .1540 R13 .9750  
 SG1 4815.6 SG2 313.8 THA 16.12

ORBIT DETERMINATION ACCURACY

ST 3590.5 SR 1188.4 SS 1820.2  
 CRT .9973 CRS -.9998 CST -.9958  
 LSA 4194.1 MSA 160.7 SSA 7.6  
 EL1 3781.1 EL2 82.7 ALF 18.28

LAUNCH DATE JAN 21 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC DISTANCE 470.349  
 RL 147.23 LAL .00 LOL 120.78 VL 27.483 GAL .65 AZL 84.57 HCA 218.38 SMA 126.69 ECC .16248 INC 5.4269 VI 30.261  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.293 GAP 4.70 AZP 94.26 TAL 176.63 TAP 35.01 RCA 106.11 APO 147.28 V2 34.811  
 RC 127.128 GL 41.80 GP -32.44 ZAL 87.70 ZAP 133.30 ETS 325.19 ZAE 128.48 ETE 209.10 ZAC 113.72 ETC 179.75 CLP-144.35

PLANETOCENTRIC CONIC  
 C3 15.205 VHL 3.899 DLA 50.97 RAL 10.61 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 4.621 DPA -26.31 RAP 28.97 ECC 1.2502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.67 17 44 37 4241.96 -36.16 199.50 244.29 51.26 18 55 19 3642.0 -40.89 191.66  
 134.33 2 19 50 2703.89 -36.15 77.75 244.28 51.25 3 4 53 2103.9 -40.88 69.91  
 45.67 17 44 37 4241.96 -36.16 199.50 244.29 51.26 18 55 19 3642.0 -40.89 191.66  
 134.33 2 19 50 2703.89 -36.15 77.75 244.28 51.25 3 4 53 2103.9 -40.88 69.91  
 45.67 17 44 37 4241.96 -36.16 199.50 244.29 51.26 18 55 19 3642.0 -40.89 191.66  
 134.33 2 19 50 2703.89 -36.15 77.75 244.28 51.25 3 4 53 2103.9 -40.88 69.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4826 TRA -.2222 TC3-3.8774 BAU .8039 SGT 4766.5 SGR 1239.1 SG3 511.3 ST 3652.4 SR 1076.7 SS 1774.9  
 RDE .7324 RRA .0400 RC3 -.7784 FAU .08639 RRT .9673 RRF .9788 RTF .9707 CRT .9976 CRS -.9996 CST -.9954  
 FDE 3.0203 FRA .3360 FC3-4.9189 BSP 15511 SGB 4924.9 R23 .1419 R13 .9730 LSA 4198.0 MSA 161.1 SSA 8.6  
 BOE 2.5884 BRA .2257 BC3 3.9548 FSP -1765 SG 4915.5 SG2 304.9 THA 14.17 ELI 3807.1 EL2 71.3 ALF 16.39

LAUNCH DATE JAN 21 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC DISTANCE 476.356  
 RL 147.23 LAL .00 LOL 120.78 VL 27.458 GAL .87 AZL 84.89 HCA 221.54 SMA 126.52 ECC .16433 INC 5.1085 VI 30.261  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.280 GAP 5.01 AZP 93.83 TAL 175.55 TAP 37.09 RCA 105.73 APO 147.31 V2 34.818  
 RC 129.481 GL 39.87 GP -29.75 ZAL 86.07 ZAP 136.28 ETS 325.28 ZAE 128.97 ETE 206.32 ZAC 114.60 ETC 179.14 CLP-146.35

PLANETOCENTRIC CONIC  
 C3 14.543 VHL 3.814 DLA 50.10 RAL 14.26 RAD 6567.6 VEL 11.659 PTH 2.05 VHP 4.672 DPA -23.47 RAP 28.61 ECC 1.2393  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.77 18 2 40 4223.88 -36.06 197.54 246.78 52.50 19 13 4 3623.9 -40.64 189.59  
 133.23 2 30 54 2702.13 -36.04 77.47 246.77 52.49 3 15 56 2102.1 -40.63 69.52  
 46.77 18 2 40 4223.88 -36.06 197.54 246.78 52.50 19 13 4 3623.9 -40.64 189.59  
 133.23 2 30 54 2702.13 -36.04 77.47 246.77 52.49 3 15 56 2102.1 -40.63 69.52  
 46.77 18 2 40 4223.88 -36.06 197.54 246.78 52.50 19 13 4 3623.9 -40.64 189.59  
 133.23 2 30 54 2702.13 -36.04 77.47 246.77 52.49 3 15 56 2102.1 -40.63 69.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4595 TRA -.0950 TC3-4.2027 BAU .8284 SGT 4896.9 SGR 1125.7 SG3 503.5 ST 3697.1 SR 981.9 SS 1719.5  
 RDE .6528 RRA .0613 RC3 -.6995 FAU .08417 RRT .9619 RRF .9707 RTF .9697 CRT .9980 CRS -.9992 CST -.9950  
 FDE 2.8246 FRA .4958 FC3-5.0102 BSP 15834 SGB 5024.6 R23 .1258 R13 .9715 LSA 4190.8 MSA 161.3 SSA 9.5  
 BOE 2.5447 BRA .1131 BC3 4.2605 FSP -1732 SG1 5015.6 SG2 300.5 THA 12.51 ELI 3824.8 EL2 59.5 ALF 14.85

LAUNCH DATE JAN 21 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC DISTANCE 482.346  
 RL 147.23 LAL .00 LOL 120.78 VL 27.432 GAL 1.11 AZL 85.17 HCA 224.70 SMA 126.35 ECC .16632 INC 4.8274 VI 30.261  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.267 GAP 5.31 AZP 93.44 TAL 174.44 TAP 39.14 RCA 105.33 APO 147.36 V2 34.825  
 RC 131.823 GL 37.99 GP -27.39 ZAL 84.30 ZAP 139.03 ETS 325.38 ZAE 129.25 ETE 203.84 ZAC 115.58 ETC 178.64 CLP-148.25

PLANETOCENTRIC CONIC  
 C3 14.060 VHL 3.750 DLA 49.28 RAL 17.90 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 4.748 DPA -20.86 RAP 28.57 ECC 1.2314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.82 18 20 38 4208.25 -35.85 195.77 249.45 53.60 19 30 46 3608.2 -40.31 187.74  
 132.18 2 42 0 2702.83 -35.84 77.35 249.44 53.59 3 27 3 2102.8 -40.30 69.32  
 47.82 18 20 38 4208.25 -35.85 195.77 249.45 53.60 19 30 46 3608.2 -40.31 187.74  
 132.18 2 42 0 2702.83 -35.84 77.35 249.44 53.59 3 27 3 2102.8 -40.30 69.32  
 47.82 18 20 38 4208.25 -35.85 195.77 249.45 53.60 19 30 46 3608.2 -40.31 187.74  
 132.18 2 42 0 2702.83 -35.84 77.35 249.44 53.59 3 27 3 2102.8 -40.30 69.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4375 TRA .0387 TC3-4.4900 BAU .8520 SGT 5021.8 SGR 1030.0 SG3 492.0 ST 3726.0 SR 902.8 SS 1558.5  
 RDE .5897 RRA .0773 RC3 -.6199 FAU .08111 RRT .9547 RRF .9604 RTF .9690 CRT .9985 CRS -.9986 CST -.9945  
 FDE 2.6285 FRA .6423 FC3-4.9941 BSP 16180 SGB 5126.3 R23 .1076 R13 .9703 LSA 4174.0 MSA 161.3 SSA 10.4  
 BOE 2.5078 BRA .0864 BC3 4.5326 FSP -1688 SG1 5117.5 SG2 300.8 THA 11.12 ELI 3833.5 EL2 47.5 ALF 13.60

LAUNCH DATE JAN 21 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC DISTANCE 488.320  
 RL 147.23 LAL .00 LOL 120.78 VL 27.405 GAL 1.35 AZL 85.42 HCA 227.87 SMA 126.17 ECC .16848 INC 4.5759 VI 30.261  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.255 GAP 5.62 AZP 93.07 TAL 173.30 TAP 41.17 RCA 104.91 APO 147.43 V2 34.833  
 RC 134.153 GL 36.16 GP -25.30 ZAL 82.41 ZAP 141.57 ETS 325.47 ZAE 129.38 ETE 201.66 ZAC 116.67 ETC 178.22 CLP-150.05

PLANETOCENTRIC CONIC  
 C3 13.726 VHL 3.705 DLA 48.47 RAL 21.54 RAD 6567.5 VEL 11.624 PTH 2.04 VHP 4.843 DPA -18.45 RAP 28.78 ECC 1.2259  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.86 18 38 37 4194.57 -35.56 194.15 252.28 54.58 19 48 32 3594.6 -39.90 186.07  
 131.14 2 53 4 2705.94 -35.55 77.40 252.27 54.57 3 38 10 2105.9 -39.89 69.31  
 48.86 18 38 37 4194.57 -35.56 194.15 252.28 54.58 19 48 32 3594.6 -39.90 186.07  
 131.14 2 53 4 2705.94 -35.55 77.40 252.27 54.57 3 38 10 2105.9 -39.89 69.31  
 48.86 18 38 37 4194.57 -35.56 194.15 252.28 54.58 19 48 32 3594.6 -39.90 186.07  
 131.14 2 53 4 2705.94 -35.55 77.40 252.27 54.57 3 38 10 2105.9 -39.89 69.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.4110 TRA .1783 TC3-4.7399 BAU .8755 SGT 5139.1 SGR 948.5 SG3 477.4 ST 3732.2 SR 835.4 SS 1588.6  
 RDE .5386 RRA .0890 RC3 -.5446 FAU .07765 RRT .9456 RRF .9478 RTF .9685 CRT .9991 CRS -.9976 CST -.9940  
 FDE 2.4291 FRA .7729 FC3-4.8976 BSP 16524 SGB 5225.9 R23 .0885 R13 .9695 LSA 4138.2 MSA 161.1 SSA 11.3  
 BOE 2.4704 BRA .1993 BC3 4.7710 FSP -1635 SG1 5217.1 SG2 304.0 THA 9.93 ELI 3824.4 EL2 35.3 ALF 12.61



LAUNCH DATE JAN 21 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 14 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.377 GAL 1.61 AZL 85.65 HCA 231.03 SMA 125.99 ECC .17080 INC 4.3483 V1 30.261  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.243 GAP 5.93 AZP 92.74 TAL 172.13 TAP 43.17 RCA 104.47 APO 147.51 V2 34.841  
 RC 136.471 GL 34.35 GP -23.46 ZAL 80.41 ZAP 143.92 ETS 325.53 ZAE 129.40 ETE 199.74 ZAC 117.87 ETC 177.88 CLP-151.77

Distance 494.277

Planeto-centric Conic: C3 13.521 VHL 3.677 DLA 47.67 RAL 25.18 RAD 6567.5 VEL 11.615 PTH 2.04 VHP 4.954 OPA -16.22 RAP 29.22 ECC 1.2225  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.90 18 56 40 4182.60 -35.18 192.65 255.26 55.47 20 6 23 3582.6 -39.42 184.54  
 130.10 3 4 4 2711.34 -35.17 77.60 255.25 55.46 3 49 15 2111.3 -39.41 69.48  
 49.90 18 56 40 4182.60 -35.18 192.65 255.26 55.47 20 6 23 3582.6 -39.42 184.54  
 130.10 3 4 4 2711.34 -35.17 77.60 255.25 55.46 3 49 15 2111.3 -39.41 69.48  
 49.90 18 56 40 4182.60 -35.18 192.65 255.26 55.47 20 6 23 3582.6 -39.42 184.54  
 130.10 3 4 4 2711.34 -35.17 77.60 255.25 55.46 3 49 15 2111.3 -39.41 69.48

Differential Corrections: TOE 2.3811 TRA 3.3248 TC3-4.9467 BAU .8982 RDE .4980 RRA .0978 RC3 -.4742 FAU .07389 FDE 2.2350 FRA .8896 FC3-4.7312 BSP 16880 BOE 2.4327 BRA .3393 BC3 4.9693 FSP -1578

Mid-course Execution Accuracy: SGT 5250.3 SGR 880.4 SG3 461.0 RRT .9342 RRF .9328 RTF .9683 SGB 5323.6 R23 .0703 R13 .9690 SG1 5314.5 S62 310.3 TMA 8.93

Orbit Determination Accuracy: ST 3718.8 SR 779.0 SS 1514.5 CRT .9995 CRS -.9960 CST -.9934 LSA 4087.0 MSA 160.9 SSA 12.2 EL1 3799.4 EL2 23.6 ALF 11.83

LAUNCH DATE JAN 21 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 16 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.349 GAL 1.89 AZL 85.86 HCA 234.20 SMA 125.81 ECC .17330 INC 4.1401 V1 30.261  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.230 GAP 6.25 AZP 92.42 TAL 170.94 TAP 45.14 RCA 104.01 APO 147.61 V2 34.850  
 RC 138.775 GL 32.58 GP -21.84 ZAL 78.31 ZAP 146.10 ETS 325.55 ZAE 129.35 ETE 198.07 ZAC 119.16 ETC 177.58 CLP-153.40

Distance 500.216

Planeto-centric Conic: C3 13.432 VHL 3.665 DLA 46.87 RAL 28.82 RAD 6567.5 VEL 11.611 PTH 2.03 VHP 5.079 OPA -14.14 RAP 29.86 ECC 1.2211  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.95 19 14 52 4171.91 -34.71 191.24 258.37 56.27 20 24 24 3571.9 -38.86 183.11  
 129.05 3 14 51 2719.17 -34.70 77.97 258.36 56.26 4 0 10 2119.2 -38.85 69.84  
 50.95 19 14 52 4171.91 -34.71 191.24 258.37 56.27 20 24 24 3571.9 -38.86 183.11  
 129.05 3 14 51 2719.17 -34.70 77.97 258.36 56.26 4 0 10 2119.2 -38.85 69.84  
 50.95 19 14 52 4171.91 -34.71 191.24 258.37 56.27 20 24 24 3571.9 -38.86 183.11  
 129.05 3 14 51 2719.17 -34.70 77.97 258.36 56.26 4 0 10 2119.2 -38.85 69.84

Differential Corrections: TOE 2.3459 TRA .4793 TC3-5.1075 BAU .9201 RDE .4657 RRA .1050 RC3 -.4098 FAU .06996 FDE 2.0464 FRA .9946 FC3-4.5092 BSP 17233 BOE 2.3917 BRA .4907 BC3 5.1239 FSP -1518

Mid-course Execution Accuracy: SGT 5354.2 SGR 823.4 SG3 443.4 RRT .9205 RRF .9155 RTF .9681 SGB 5417.1 R23 .0543 R13 .9686 SG1 5407.7 S62 318.6 TMA 8.09

Orbit Determination Accuracy: ST 3683.8 SR 731.7 SS 1436.2 CRT .9998 CRS -.9936 CST -.9927 LSA 4017.7 MSA 161.2 SSA 13.1 EL1 3755.8 EL2 14.6 ALF 11.23

LAUNCH DATE JAN 21 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 18 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.321 GAL 2.17 AZL 86.05 HCA 237.37 SMA 125.62 ECC .17598 INC 3.9478 V1 30.261  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.218 GAP 6.57 AZP 92.13 TAL 169.73 TAP 47.10 RCA 103.52 APO 147.73 V2 34.860  
 RC 141.067 GL 30.83 GP -20.39 ZAL 76.13 ZAP 148.12 ETS 325.50 ZAE 129.25 ETE 196.60 ZAC 120.55 ETC 177.33 CLP-154.95

Distance 506.137

Planeto-centric Conic: C3 13.454 VHL 3.668 DLA 46.05 RAL 32.43 RAD 6567.5 VEL 11.612 PTH 2.03 VHP 5.217 OPA -12.21 RAP 30.66 ECC 1.2214  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.03 19 33 12 4162.35 -34.17 189.90 261.58 57.01 20 42 34 3562.3 -38.23 181.77  
 127.97 3 25 22 2729.42 -34.16 78.50 261.57 57.00 4 10 52 2129.4 -38.22 70.37  
 52.03 19 33 12 4162.35 -34.17 189.90 261.58 57.01 20 42 34 3562.3 -38.23 181.77  
 127.97 3 25 22 2729.42 -34.16 78.50 261.57 57.00 4 10 52 2129.4 -38.22 70.37  
 52.03 19 33 12 4162.35 -34.17 189.90 261.58 57.01 20 42 34 3562.3 -38.23 181.77  
 127.97 3 25 22 2729.42 -34.16 78.50 261.57 57.00 4 10 52 2129.4 -38.22 70.37

Differential Corrections: TOE 2.3080 TRA .6439 TC3-5.2130 BAU .9397 RDE .4410 RRA .1113 RC3 -.3507 FAU .06584 FDE 1.8695 FRA 1.0897 FC3-4.2366 BSP 17519 BOE 2.3497 BRA .6534 BC3 5.2248 FSP -1450

Mid-course Execution Accuracy: SGT 5451.9 SGR 776.8 SG3 425.1 RRT .9044 RRF .8963 RTF .9682 SGB 5506.9 R23 .0410 R13 .9685 SG1 5497.1 S62 328.7 TMA 7.37

Orbit Determination Accuracy: ST 3633.2 SR 693.0 SS 1358.0 CRT .9997 CRS -.9903 CST -.9920 LSA 3936.8 MSA 162.0 SSA 13.9 EL1 3698.7 EL2 15.9 ALF 10.80

LAUNCH DATE JAN 21 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 20 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 27.292 GAL 2.48 AZL 86.23 HCA 240.54 SMA 125.43 ECC .17886 INC 3.7685 V1 30.261  
 RP 108.68 LAP -3.28 LOP 361.12 VP 37.206 GAP 6.89 AZP 91.86 TAL 168.49 TAP 49.03 RCA 103.00 APO 147.87 V2 34.870  
 RC 143.344 GL 29.10 GP -19.11 ZAL 73.89 ZAP 150.01 ETS 325.38 ZAE 129.11 ETE 195.32 ZAC 122.02 ETC 177.10 CLP-156.44

Distance 512.038

Planeto-centric Conic: C3 13.581 VHL 3.685 DLA 45.21 RAL 36.02 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 5.366 OPA -10.39 RAP 31.62 ECC 1.2235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.16 19 51 39 4153.71 -33.54 188.61 264.88 57.70 21 0 53 3553.7 -37.53 180.50  
 126.84 3 35 31 2742.18 -33.53 79.20 264.87 57.69 4 21 14 2142.2 -37.52 71.09  
 53.16 19 51 39 4153.71 -33.54 188.61 264.88 57.70 21 0 53 3553.7 -37.53 180.50  
 126.84 3 35 31 2742.18 -33.53 79.20 264.87 57.69 4 21 14 2142.2 -37.52 71.09  
 53.16 19 51 39 4153.71 -33.54 188.61 264.88 57.70 21 0 53 3553.7 -37.53 180.50  
 126.84 3 35 31 2742.18 -33.53 79.20 264.87 57.69 4 21 14 2142.2 -37.52 71.09

Differential Corrections: TOE 2.2625 TRA .8158 TC3-5.2763 BAU .9596 RDE .4218 RRA .1167 RC3 -.2998 FAU .06187 FDE 1.7002 FRA 1.1737 FC3-3.9440 BSP 17844 BOE 2.3015 BRA .8241 BC3 5.2848 FSP -1389

Mid-course Execution Accuracy: SGT 5544.2 SGR 738.4 SG3 406.6 RRT .8867 RRF .8757 RTF .9684 SGB 5593.2 R23 .0300 R13 .9686 SG1 5582.9 S62 339.1 TMA 6.76

Orbit Determination Accuracy: ST 3560.8 SR 660.3 SS 1277.9 CRT .9991 CRS -.9856 CST -.9911 LSA 3836.8 MSA 163.5 SSA 14.6 EL1 3621.4 EL2 27.1 ALF 10.50

LAUNCH DATE JAN 21 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 517.918

RL 147.23 LAL .00 LOL 120.78 VL 27.262 GAL 2.80 AZL 86.40 MCA 243.72 SMA 125.25 ECC .18196 INC 3.6000 V1 30.261  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.195 GAP 7.23 AZP 91.60 TAL 167.24 TAP 50.96 RCA 102.46 APO 148.03 V2 34.880  
 RC 145.608 GL 27.39 GP -17.96 ZAL 71.60 ZAP 151.78 ETS 325.17 ZAE 128.96 ETE 194.20 ZAC 123.57 ETC 176.89 CLP-157.87

PLANETOCENTRIC CONIC

C3 13.815 VHL 3.717 DLA 44.34 RAL 39.56 RAD 6567.5 VEL 11.628 PTH 2.04 VHP 5.525 DPA -8.68 RAP 32.70 ECC 1.2274  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.33 20 10 16 4145.72 -32.83 187.35 268.25 58.34 21 19 22 3545.7 -36.75 179.27  
 125.67 3 45 10 2757.64 -32.82 80.10 268.24 58.33 4 31 7 2157.6 -36.74 72.01  
 54.33 20 10 16 4145.72 -32.83 187.35 268.25 58.34 21 19 22 3545.7 -36.75 179.27  
 125.67 3 45 10 2757.64 -32.82 80.10 268.24 58.33 4 31 7 2157.6 -36.74 72.01  
 54.33 20 10 16 4145.72 -32.83 187.35 268.25 58.34 21 19 22 3545.7 -36.75 179.27  
 125.67 3 45 10 2757.64 -32.82 80.10 268.24 58.33 4 31 7 2157.6 -36.74 72.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2109 TRA .9972 TC3-5.2900 BAU .9782 SGT 5630.1 SGR 706.8 SG3 388.1 ST 3470.6 SR 632.9 SS 1197.7  
 RDE .4074 RRA .1221 RC3 -.2554 FAU .05796 RRT .8675 RRF .8541 RTF .9686 CRT .9978 CRS -.9792 CST -.9901  
 FDE 1.5401 FRA 1.2491 FC3-3.6324 BSP 18157 SGB 5674.3 R23 .0213 R13 .9688 LSA 3721.8 MSA 166.2 SSA 15.3  
 BDE 2.2481 BRA 1.0046 BC3 5.2962 FSP -1328 SG1 5663.6 SG2 349.6 THA 6.24 EL1 3527.6 EL2 41.6 ALF 10.31

LAUNCH DATE JAN 21 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 523.777

RL 147.23 LAL .00 LOL 120.78 VL 27.233 GAL 3.13 AZL 86.56 MCA 246.89 SMA 125.05 ECC .18528 INC 3.4404 V1 30.261  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.183 GAP 7.57 AZP 91.35 TAL 165.97 TAP 52.86 RCA 101.88 APO 148.22 V2 34.891  
 RC 147.857 GL 25.70 GP -16.94 ZAL 69.27 ZAP 153.44 ETS 324.87 ZAE 128.80 ETE 193.22 ZAC 125.19 ETC 176.69 CLP-159.24

PLANETOCENTRIC CONIC

C3 14.158 VHL 3.763 DLA 43.44 RAL 43.04 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 5.695 DPA -7.06 RAP 33.90 ECC 1.2330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.57 20 29 1 4138.21 -32.05 186.11 271.68 58.94 21 37 59 3538.2 -35.90 178.06  
 124.43 3 54 11 2775.93 -32.04 81.18 271.67 58.93 4 40 27 2175.9 -35.89 73.14  
 55.57 20 29 1 4138.21 -32.05 186.11 271.68 58.94 21 37 59 3538.2 -35.90 178.06  
 124.43 3 54 11 2775.93 -32.04 81.18 271.67 58.93 4 40 27 2175.9 -35.89 73.14  
 55.57 20 29 1 4138.21 -32.05 186.11 271.68 58.94 21 37 59 3538.2 -35.90 178.06  
 124.43 3 54 11 2775.93 -32.04 81.18 271.67 58.93 4 40 27 2175.9 -35.89 73.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1539 TRA 1.1888 TC3-5.2540 BAU .9953 SGT 5710.2 SGR 681.2 SG3 369.8 ST 3366.1 SR 610.1 SS 1119.6  
 RDE .3971 RRA .1277 RC3 -.2170 FAU .05413 RRT .8475 RRF .8323 RTF .9689 CRT .9954 CRS -.9708 CST -.9889  
 FDE 1.3907 FRA 1.3176 FC3-3.3101 BSP 18441 SGB 5750.7 R23 .0149 R13 .9690 LSA 3595.4 MSA 170.3 SSA 15.8  
 BDE 2.1902 BRA 1.1957 BC3 5.2584 FSP -1268 SG1 5739.4 SG2 359.8 THA 5.80 EL1 3420.4 EL2 57.6 ALF 10.23

LAUNCH DATE JAN 21 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 529.612

RL 147.23 LAL .00 LOL 120.78 VL 27.203 GAL 3.49 AZL 86.71 MCA 250.07 SMA 124.86 ECC .18885 INC 3.2881 V1 30.261  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.172 GAP 7.92 AZP 91.12 TAL 164.68 TAP 54.75 RCA 101.28 APO 148.44 V2 34.902  
 RC 150.092 GL 24.04 GP -16.02 ZAL 66.91 ZAP 155.01 ETS 324.47 ZAE 128.64 ETE 192.36 ZAC 126.87 ETC 176.49 CLP-160.55

PLANETOCENTRIC CONIC

C3 14.615 VHL 3.823 DLA 42.51 RAL 46.45 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 5.876 DPA -5.52 RAP 35.20 ECC 1.2405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.86 20 47 54 4130.98 -31.19 184.86 275.14 59.51 21 56 45 3531.0 -34.98 176.87  
 123.14 4 2 30 2797.22 -31.18 82.47 275.13 59.50 4 49 7 2197.2 -34.96 74.47  
 56.86 20 47 54 4130.98 -31.19 184.86 275.14 59.51 21 56 45 3531.0 -34.98 176.87  
 123.14 4 2 30 2797.22 -31.18 82.47 275.13 59.50 4 49 7 2197.2 -34.96 74.47  
 56.86 20 47 54 4130.98 -31.19 184.86 275.14 59.51 21 56 45 3531.0 -34.98 176.87  
 123.14 4 2 30 2797.22 -31.18 82.47 275.13 59.50 4 49 7 2197.2 -34.96 74.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0934 TRA 1.3936 TC3-5.1661 BAU 1.0100 SGT 5785.6 SGR 660.8 SG3 352.2 ST 3252.7 SR 591.1 SS 1045.8  
 RDE .3906 RRA .1340 RC3 -.1835 FAU .05032 RRT .8273 RRF .8112 RTF .9691 CRT .9917 CRS -.9599 CST -.9877  
 FDE 1.2533 FRA 1.3822 FC3-2.9808 BSP 18649 SGB 5823.2 R23 .0109 R13 .9692 LSA 3462.9 MSA 176.1 SSA 16.1  
 BDE 2.1296 BRA 1.4000 BC3 5.1694 FSP -1204 SG1 5811.5 SG2 369.5 THA 5.42 EL1 3305.2 EL2 74.9 ALF 10.22

LAUNCH DATE JAN 21 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 535.421

RL 147.23 LAL .00 LOL 120.78 VL 27.173 GAL 3.87 AZL 86.86 MCA 253.25 SMA 124.67 ECC .19268 INC 3.1418 V1 30.261  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.161 GAP 8.28 AZP 90.91 TAL 163.39 TAP 56.64 RCA 100.65 APO 148.69 V2 34.914  
 RC 152.312 GL 22.41 GP -15.19 ZAL 64.56 ZAP 156.48 ETS 323.94 ZAE 128.48 ETE 191.61 ZAC 128.61 ETC 176.29 CLP-161.83

PLANETOCENTRIC CONIC

C3 15.193 VHL 3.898 DLA 41.55 RAL 49.77 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 6.066 DPA -4.06 RAP 36.59 ECC 1.2500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.22 21 6 53 4123.92 -30.26 183.62 278.62 60.05 22 15 37 3523.9 -33.99 175.67  
 121.78 4 9 59 2821.60 -30.25 83.97 278.61 60.03 4 57 1 2221.6 -33.98 76.03  
 58.22 21 6 53 4123.92 -30.26 183.62 278.62 60.05 22 15 37 3523.9 -33.99 175.67  
 121.78 4 9 59 2821.60 -30.25 83.97 278.61 60.03 4 57 1 2221.6 -33.98 76.03  
 58.22 21 6 53 4123.92 -30.26 183.62 278.62 60.05 22 15 37 3523.9 -33.99 175.67  
 121.78 4 9 59 2821.60 -30.25 83.97 278.61 60.03 4 57 1 2221.6 -33.98 76.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0239 TRA 1.6061 TC3-5.0461 BAU 1.0254 SGT 5854.7 SGR 643.4 SG3 334.9 ST 3124.2 SR 574.1 SS 972.7  
 RDE .3865 RRA .1406 RC3 -.1567 FAU .04683 RRT .8076 RRF .7905 RTF .9694 CRT .9862 CRS -.9458 CST -.9862  
 FDE 1.1224 FRA 1.4381 FC3-2.6686 BSP 18928 SGB 5889.9 R23 .0073 R13 .9695 LSA 3317.0 MSA 183.7 SSA 16.3  
 BDE 2.0605 BRA 1.6123 BC3 5.0485 FSP -1150 SG1 5877.8 SG2 377.9 THA 5.09 EL1 3175.1 EL2 93.4 ALF 10.28

LAUNCH DATE JAN 21 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 30 1969

Heliocentric Conic  
 RL 147.23 LAL .00 LOL 120.78 VL 27.142 GAL 4.26 AZL 87.00 HCA 256.43 SMA 124.48 ECC .19681 INC 3.0001 V1 30.261  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.150 GAP 8.65 AZP 90.70 TAL 162.08 TAP 58.51 RCA 99.98 APO 148.98 V2 34.926  
 RC 154.516 GL 20.81 GP -14.45 ZAL 62.20 ZAP 157.87 ETS 323.29 ZAE 128.32 ETE 190.94 ZAC 130.40 ETC 176.08 CLP-163.06

Planetocentric Conic  
 C3 15.902 VHL 3.988 CLA 40.56 RAL 52.99 RAD 6567.6 VEL 11.717 PTH 2.06 VHP 6.268 OPA -2.67 RAP 38.07 ECC 1.2617  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.65 21 25 59 4116.85 -29.26 182.35 282.11 60.55 22 34 35 3516.9 -32.94 174.47  
 120.35 4 16 35 2849.25 -29.25 85.70 282.10 60.54 5 4 4 2249.3 -32.93 77.81  
 59.65 21 25 59 4116.85 -29.26 182.35 282.11 60.55 22 34 35 3516.9 -32.94 174.47  
 120.35 4 16 35 2849.25 -29.25 85.70 282.10 60.54 5 4 4 2249.3 -32.93 77.81  
 59.65 21 25 59 4116.85 -29.26 182.35 282.11 60.55 22 34 35 3516.9 -32.94 174.47  
 120.35 4 16 35 2849.25 -29.25 85.70 282.10 60.54 5 4 4 2249.3 -32.93 77.81

Differential Corrections  
 TDE 1.9494 TRA 1.8305 TC3-4.8863 BAU 1.0392 SGT 5917.6 SGR 628.9 SG3 318.2 ST 2989.5 SR 559.2 SS 904.3  
 RDE .3848 RRA .1480 RC3 -.1342 FAU .04345 RRT .7886 RRF .7711 RTF .9697 CRT .9786 CRS -.9282 CST -.9846  
 FDE 1.0015 FRA 1.4897 FC3-2.3653 BSP 19180 SGB 5950.9 R23 .0051 R13 .9697 LSA 3167.1 MSA 193.3 SSA 16.4  
 BOE 1.9870 BRA 1.8365 BC3 4.8882 FSP -1097 SG1 5938.4 SG2 385.4 THA 4.81 EL1 3039.3 EL2 113.1 ALF 10.39

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 21 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 1 1969

Heliocentric Conic  
 RL 147.23 LAL .00 LOL 120.78 VL 27.112 GAL 4.68 AZL 87.14 HCA 259.62 SMA 124.28 ECC .20124 INC 2.8621 V1 30.261  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.139 GAP 9.04 AZP 90.52 TAL 160.77 TAP 60.39 RCA 99.27 APO 149.30 V2 34.938  
 RC 156.704 GL 19.25 GP -13.78 ZAL 59.87 ZAP 159.20 ETS 322.49 ZAE 128.17 ETE 190.36 ZAC 132.24 ETC 175.85 CLP-164.26

Planetocentric Conic  
 C3 16.754 VHL 4.093 DLA 39.55 RAL 56.10 RAD 6567.7 VEL 11.753 PTH 2.07 VHP 6.481 OPA -1.33 RAP 39.62 ECC 1.2757  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.14 21 45 13 4109.50 -28.21 181.06 285.61 61.04 22 53 42 3509.5 -31.84 173.24  
 118.86 4 22 8 2880.44 -28.20 87.67 285.60 61.03 5 10 9 2280.4 -31.82 79.85  
 61.14 21 45 13 4109.50 -28.21 181.06 285.61 61.04 22 53 42 3509.5 -31.84 173.24  
 118.86 4 22 8 2880.44 -28.20 87.67 285.60 61.03 5 10 9 2280.4 -31.82 79.85  
 61.14 21 45 13 4109.50 -28.21 181.06 285.61 61.04 22 53 42 3509.5 -31.84 173.24  
 118.86 4 22 8 2880.44 -28.20 87.67 285.60 61.03 5 10 9 2280.4 -31.82 79.85

Differential Corrections  
 TDE 1.8700 TRA 2.0674 TC3-4.6930 BAU 1.0515 SGT 5974.8 SGR 616.6 SG3 302.3 ST 2851.8 SR 545.8 SS 840.8  
 RDE .3851 RRA .1564 RC3 -.1155 FAU .04021 RRT .7709 RRF .7532 RTF .9699 CRT .9684 CRS -.9063 CST -.9828  
 FDE .8895 FRA 1.5379 FC3-2.0776 BSP 19416 SGB 6006.6 R23 .0036 R13 .9699 LSA 3015.9 MSA 205.0 SSA 16.3  
 BOE 1.9092 BRA 2.0733 BC3 4.6944 FSP -1046 SG1 5993.8 SG2 391.5 THA 4.57 EL1 2900.5 EL2 133.8 ALF 10.52

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 21 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 3 1969

Heliocentric Conic  
 RL 147.23 LAL .00 LOL 120.78 VL 27.081 GAL 5.12 AZL 87.27 HCA 262.81 SMA 124.09 ECC .20601 INC 2.7268 V1 30.261  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.129 GAP 9.45 AZP 90.34 TAL 159.45 TAP 62.25 RCA 98.53 APO 149.66 V2 34.951  
 RC 158.875 GL 17.73 GP -13.17 ZAL 57.58 ZAP 160.45 ETS 321.53 ZAE 128.02 ETE 189.84 ZAC 134.12 ETC 175.61 CLP-165.43

Planetocentric Conic  
 C3 17.765 VHL 4.215 DLA 38.53 RAL 59.08 RAD 6567.7 VEL 11.796 PTH 2.09 VHP 6.706 OPA -.06 RAP 41.24 ECC 1.2924  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.70 22 4 35 4101.72 -27.11 179.73 289.10 61.50 23 12 57 3501.7 -30.68 171.97  
 117.30 4 26 37 2915.29 -27.09 89.89 289.09 61.49 5 15 12 2315.3 -30.67 82.14  
 62.70 22 4 35 4101.72 -27.11 179.73 289.10 61.50 23 12 57 3501.7 -30.68 171.97  
 117.30 4 26 37 2915.29 -27.09 89.89 289.09 61.49 5 15 12 2315.3 -30.67 82.14  
 62.70 22 4 35 4101.72 -27.11 179.73 289.10 61.50 23 12 57 3501.7 -30.68 171.97  
 117.30 4 26 37 2915.29 -27.09 89.89 289.09 61.49 5 15 12 2315.3 -30.67 82.14

Differential Corrections  
 TDE 1.7900 TRA 2.3213 TC3-4.4635 BAU 1.0603 SGT 6028.9 SGR 606.6 SG3 287.2 ST 2720.0 SR 534.0 SS 785.3  
 RDE .3876 RRA .1661 RC3 -.0991 FAU .03698 RRT .7549 RRF .7377 RTF .9700 CRT .9551 CRS -.8803 CST -.9811  
 FDE .7894 FRA 1.5856 FC3-1.8022 BSP 19544 SGB 6059.3 R23 .0034 R13 .9700 LSA 2872.6 MSA 218.5 SSA 16.1  
 BOE 1.8315 BRA 2.3272 BC3 4.4646 FSP -990 SG1 6046.3 SG2 396.7 THA 4.36 EL1 2767.5 EL2 155.5 ALF 10.65

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 21 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 5 1969

Heliocentric Conic  
 RL 147.23 LAL .00 LOL 120.78 VL 27.051 GAL 5.59 AZL 87.41 HCA 266.00 SMA 123.90 ECC .21116 INC 2.5933 V1 30.261  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.118 GAP 9.87 AZP 90.18 TAL 158.13 TAP 64.12 RCA 97.74 APO 150.06 V2 34.964  
 RC 161.027 GL 16.25 GP -12.62 ZAL 55.32 ZAP 161.64 ETS 320.38 ZAE 127.88 ETE 189.38 ZAC 136.04 ETC 175.33 CLP-166.56

Planetocentric Conic  
 C3 18.952 VHL 4.353 DLA 37.49 RAL 61.95 RAD 6567.8 VEL 11.846 PTH 2.10 VHP 6.945 OPA 1.16 RAP 42.92 ECC 1.3119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.33 22 24 7 4093.35 -25.95 178.35 292.58 61.94 23 32 20 3493.3 -29.49 170.65  
 115.67 4 29 56 2953.95 -25.94 92.38 292.57 61.93 5 19 10 2354.0 -29.48 84.69  
 64.33 22 24 7 4093.35 -25.95 178.35 292.58 61.94 23 32 20 3493.3 -29.49 170.65  
 115.67 4 29 56 2953.95 -25.94 92.38 292.57 61.93 5 19 10 2354.0 -29.48 84.69  
 64.33 22 24 7 4093.35 -25.95 178.35 292.58 61.94 23 32 20 3493.3 -29.49 170.65  
 115.67 4 29 56 2953.95 -25.94 92.38 292.57 61.93 5 19 10 2354.0 -29.48 84.69

Differential Corrections  
 TDE 1.7020 TRA 2.5848 TC3-4.2209 BAU 1.0697 SGT 6075.1 SGR 596.9 SG3 272.7 ST 2585.5 SR 522.2 SS 733.2  
 RDE .3911 RRA .1764 RC3 -.0866 FAU .03405 RRT .7403 RRF .7233 RTF .9702 CRT .9379 CRS -.8489 CST -.9793  
 FDE .6944 FRA 1.6277 FC3-1.5555 BSP 19756 SGB 6104.4 R23 .0028 R13 .9702 LSA 2727.6 MSA 233.6 SSA 15.8  
 BOE 1.7464 BRA 2.5908 BC3 4.2218 FSP -945 SG1 6091.2 SG2 400.2 THA 4.18 EL1 2631.7 EL2 178.0 ALF 10.78

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 21 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 7 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 27.020 GAL 6.08 AZL 87.54 HCA 269.19 SMA 123.71 ECC .21671 INC 2.4607 V1 30.261  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.108 GAP 10.31 AZP 90.03 TAL 156.81 TAP 66.00 RCA 96.90 APO 150.52 V2 34.977  
 RC 163.161 GL 14.82 GP -12.12 ZAL 53.12 ZAP 162.78 ETS 319.02 ZAE 127.74 ETE 188.98 ZAC 137.99 ETC 175.02 CLP-167.68

DISTANCE 563.990

PLANETOCENTRIC CONIC

C3 20.337 VHL 4.510 DLA 36.45 RAL 64.68 RAD 6567.8 VEL 11.905 PTH 2.12 VHP 7.198 DPA 2.33 RAP 44.65 ECC 1.3347  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.02 22 43 53 4084.03 -24.77 176.90 296.05 62.36 23 51 57 3484.0 -28.26 169.27  
 113.98 4 31 59 2996.75 -24.75 95.15 296.04 62.35 5 21 56 2396.7 -28.25 87.53  
 66.02 22 43 53 4084.03 -24.77 176.90 296.05 62.36 23 51 57 3484.0 -28.26 169.27  
 113.98 4 31 59 2996.75 -24.75 95.15 296.04 62.35 5 21 56 2396.7 -28.25 87.53  
 66.02 22 43 53 4084.03 -24.77 176.90 296.05 62.36 23 51 57 3484.0 -28.26 169.27  
 113.98 4 31 59 2996.75 -24.75 95.15 296.04 62.35 5 21 56 2396.7 -28.25 87.53

DIFFERENTIAL CORRECTIONS

TDE 1.6105 TRA 2.8637 TC3-3.9605 BAU 1.0770  
 RDE .3958 RRA .1879 RC3 -.0760 FAU .03125  
 FDE .6072 FRA 1.6684 FC3-1.3303 BSP 19951  
 BOE 1.6584 BRA 2.8698 BC3 3.9612 FSP -901

MID-COURSE EXECUTION ACCURACY

SGT 6116.0 SGR 587.9 SG3 258.9  
 RRT .7275 RRF .7108 RTF .9704  
 SGB 6144.2 R23 .0025 R13 .9704  
 SG1 6131.0 SG2 402.4 THA 4.02

ORBIT DETERMINATION ACCURACY

ST 2457.5 SR 510.7 SS 687.3  
 CRT .9163 CRS -.8122 CST -.9776  
 LSA 2590.3 MSA 250.1 SSA 15.4  
 EL1 2502.0 EL2 201.0 ALF 10.85

LAUNCH DATE JAN 21 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 9 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 26.989 GAL 6.61 AZL 87.67 HCA 272.38 SMA 123.52 ECC .22271 INC 2.3282 V1 30.261  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.098 GAP 10.78 AZP 89.90 TAL 155.49 TAP 67.87 RCA 96.01 APO 151.03 V2 34.990  
 RC 165.276 GL 13.44 GP -11.67 ZAL 50.98 ZAP 163.86 ETS 317.42 ZAE 127.61 ETE 188.61 ZAC 139.96 ETC 174.66 CLP-168.77

DISTANCE 569.581

PLANETOCENTRIC CONIC

C3 21.947 VHL 4.685 DLA 35.41 RAL 67.29 RAD 6567.9 VEL 11.972 PTH 2.13 VHP 7.466 DPA 3.44 RAP 46.44 ECC 1.3612  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.79 23 4 1 4073.28 -23.55 175.35 299.50 62.76 24 11 54 3473.3 -27.00 167.78  
 112.21 4 32 38 3044.11 -23.53 98.24 299.49 62.74 5 23 22 2444.1 -26.99 90.68  
 67.79 23 4 1 4073.28 -23.55 175.35 299.50 62.76 24 11 54 3473.3 -27.00 167.78  
 112.21 4 32 38 3044.11 -23.53 98.24 299.49 62.74 5 23 22 2444.1 -26.99 90.68  
 67.79 23 4 1 4073.28 -23.55 175.35 299.50 62.76 24 11 54 3473.3 -27.00 167.78  
 112.21 4 32 38 3044.11 -23.53 98.24 299.49 62.74 5 23 22 2444.1 -26.99 90.68

DIFFERENTIAL CORRECTIONS

TDE 1.5162 TRA 3.1584 TC3-3.6884 BAU 1.0824  
 RDE .4016 RRA .2005 RC3 -.0671 FAU .02857  
 FDE .5279 FRA 1.7080 FC3-1.1269 BSP 20128  
 BOE 1.5685 BRA 3.1648 BC3 3.6890 FSP -859

MID-COURSE EXECUTION ACCURACY

SGT 6151.8 SGR 579.4 SG3 245.9  
 RRT .7165 RRF .7001 RTF .9706  
 SGB 6179.0 R23 .0024 R13 .9706  
 SG1 6165.8 SG2 403.3 THA 3.88

ORBIT DETERMINATION ACCURACY

ST 2339.0 SR 499.4 SS 648.0  
 CRT .8897 CRS -.7706 CST -.9762  
 LSA 2463.5 MSA 267.2 SSA 15.0  
 EL1 2381.2 EL2 223.9 ALF 10.85

LAUNCH DATE JAN 21 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 11 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 26.959 GAL 7.17 AZL 87.80 HCA 275.58 SMA 123.33 ECC .22921 INC 2.1950 V1 30.261  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.089 GAP 11.27 AZP 89.79 TAL 154.18 TAP 69.76 RCA 95.06 APO 151.60 V2 35.003  
 RC 167.370 GL 12.12 GP -11.25 ZAL 48.91 ZAP 164.89 ETS 315.54 ZAE 127.47 ETE 188.29 ZAC 141.95 ETC 174.26 CLP-169.85

DISTANCE 575.118

PLANETOCENTRIC CONIC

C3 23.814 VHL 4.880 DLA 34.38 RAL 69.76 RAD 6568.0 VEL 12.050 PTH 2.15 VHP 7.753 DPA 4.51 RAP 48.28 ECC 1.3919  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.64 23 24 33 4060.88 -22.31 173.68 302.93 63.14 24 32 14 3460.9 -25.72 166.18  
 110.36 4 31 49 3096.23 -22.29 101.66 302.92 63.13 5 23 25 2496.2 -25.71 94.16  
 69.64 23 24 33 4060.88 -22.31 173.68 302.93 63.14 24 32 14 3460.9 -25.72 166.18  
 110.36 4 31 49 3096.23 -22.29 101.66 302.92 63.13 5 23 25 2496.2 -25.71 94.16  
 69.64 23 24 33 4060.88 -22.31 173.68 302.93 63.14 24 32 14 3460.9 -25.72 166.18  
 110.36 4 31 49 3096.23 -22.29 101.66 302.92 63.13 5 23 25 2496.2 -25.71 94.16

DIFFERENTIAL CORRECTIONS

TDE 1.4230 TRA 3.4746 TC3-3.4018 BAU 1.0832  
 RDE .4086 RRA .2145 RC3 -.0588 FAU .02590  
 FDE .4577 FRA 1.7491 FC3 -.9414 BSP 20186  
 BOE 1.4805 BRA 3.4812 BC3 3.4024 FSP -814

MID-COURSE EXECUTION ACCURACY

SGT 6184.3 SGR 571.4 SG3 233.8  
 RRT .7075 RRF .6917 RTF .9707  
 SGB 6210.7 R23 .0029 R13 .9708  
 SG1 6197.6 SG2 403.0 THA 3.76

ORBIT DETERMINATION ACCURACY

ST 2236.1 SR 488.4 SS 616.4  
 CRT .8584 CRS -.7258 CST -.9756  
 LSA 2353.2 MSA 284.1 SSA 14.6  
 EL1 2275.5 EL2 246.2 ALF 10.75

LAUNCH DATE JAN 21 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 13 1969

MELIOCENTRIC CONIC

RL 147.23 LAL .00 LOL 120.78 VL 26.928 GAL 7.76 AZL 87.94 HCA 278.78 SMA 123.14 ECC .23625 INC 2.0603 V1 30.261  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.079 GAP 11.79 AZP 89.69 TAL 152.88 TAP 71.66 RCA 94.05 APO 152.23 V2 35.016  
 RC 169.445 GL 10.85 GP -10.88 ZAL 46.92 ZAP 165.86 ETS 313.34 ZAE 127.34 ETE 188.00 ZAC 143.97 ETC 173.80 CLP-170.92

DISTANCE 580.594

PLANETOCENTRIC CONIC

C3 25.974 VHL 5.096 DLA 33.35 RAL 72.10 RAD 6568.1 VEL 12.139 PTH 2.18 VHP 8.058 DPA 5.54 RAP 50.15 ECC 1.4275  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.59 23 45 46 4045.88 -21.05 171.83 306.34 63.51 24 53 12 3445.9 -24.43 164.39  
 108.41 4 29 15 3153.97 -21.03 105.47 306.33 63.50 5 21 49 2554.0 -24.42 98.03  
 71.59 23 45 46 4045.88 -21.05 171.83 306.34 63.51 24 53 12 3445.9 -24.43 164.39  
 108.41 4 29 15 3153.97 -21.03 105.47 306.33 63.50 5 21 49 2554.0 -24.42 98.03  
 110.00 5 35 56 2949.55 -26.52 92.34 309.06 67.60 6 25 6 2349.5 -29.32 84.27  
 110.00 3 42 11 3298.31 -15.75 113.63 303.30 59.26 4 37 9 2698.3 -19.71 106.75

DIFFERENTIAL CORRECTIONS

TDE 1.3227 TRA 3.8046 TC3-3.1216 BAU 1.0841  
 RDE .4158 RRA .2293 RC3 -.0522 FAU .02348  
 FDE .3911 FRA 1.7874 FC3 -.7827 BSP 20345  
 BOE 1.3865 BRA 3.8115 BC3 3.1220 FSP -776

MID-COURSE EXECUTION ACCURACY

SGT 6209.4 SGR 562.7 SG3 222.3  
 RRT .6996 RRF .6842 RTF .9711  
 SGB 6234.8 R23 .0027 R13 .9711  
 SG1 6221.9 SG2 401.2 THA 3.64

ORBIT DETERMINATION ACCURACY

ST 2140.1 SR 476.6 SS 588.6  
 CRT .8211 CRS -.6760 CST -.9754  
 LSA 2250.1 MSA 300.7 SSA 14.2  
 EL1 2176.2 EL2 267.5 ALF 10.52

LAUNCH DATE JAN 21 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 15 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 26.898 GAL 8.40 AZL 88.08 HCA 281.98 SMA 122.95 ECC .24389 INC 1.9231 V1 30.261  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.069 GAP 12.35 AZP 89.60 TAL 151.60 TAP 73.58 RCA 92.97 APO 152.94 V2 35.030  
 RC 171.498 GL 9.63 GP -10.53 ZAL 45.01 ZAP 166.79 ETS 310.77 ZAE 127.21 ETE 187.74 ZAC 145.99 ETC 173.26 CLP-171.97

Distance 585.998

Planetocentric Conic: C3 28.473 VML 5.536 DLA 32.35 RAL 74.31 RAD 6568.1 VEL 12.241 PTH 2.20 VHP 8.385 DPA 6.51 RAP 52.07 ECC 1.4686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.66 0 11 52 4027.42 -19.78 169.74 309.73 63.87 1 18 59 3427.4 -23.13 162.35  
 106.34 4 24 42 3218.12 -19.77 109.73 309.72 63.86 5 18 21 2618.1 -23.12 102.34  
 73.66 0 11 52 4027.42 -19.78 169.74 309.73 63.87 1 18 59 3427.4 -23.13 162.35  
 106.34 4 24 42 3218.12 -19.77 109.73 309.72 63.86 5 18 21 2618.1 -23.12 102.34  
 110.00 6 12 16 2885.98 -28.10 88.07 313.63 69.68 7 0 22 2286.0 -30.60 79.76  
 110.00 3 23 28 3407.54 -11.86 119.70 305.13 57.70 4 20 16 2807.5 -16.04 113.09

Differential Corrections: TDE 1.2201 TRA 4.1547 TC3-2.8421 BAU 1.0820 RDE .4237 RRA .2451 RC3 -.0462 FAU .02116 FDE .3305 FRA 1.8261 FC3 -.6435 BSP 20484 BOE 1.2916 BRA 4.1619 BC3 2.8424 FSP -741

Mid-Course Execution Accuracy: SGT 6229.1 SGR 553.5 SG3 211.4 RRT .6932 RRF .6781 RTF .9715 SGB 6253.6 R23 .0026 R13 .9715 SG1 6240.9 SG2 398.2 THA 3.54

Orbit Determination Accuracy: ST 2057.7 SR 464.4 SS 566.4 CRT .7787 CRS -.6239 CST -.9759 LSA 2161.2 MSA 315.8 SSA 13.8 EL1 2089.9 EL2 286.9 ALF 10.16

LAUNCH DATE JAN 21 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 17 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 26.867 GAL 9.08 AZL 88.22 HCA 285.18 SMA 122.77 ECC .25221 INC 1.7825 V1 30.261  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.060 GAP 12.94 AZP 89.53 TAL 150.34 TAP 75.52 RCA 91.80 APO 153.73 V2 35.043  
 RC 173.532 GL 8.47 GP -10.22 ZAL 43.19 ZAP 167.65 ETS 309.76 ZAE 127.07 ETE 187.50 ZAC 148.02 ETC 172.65 CLP-173.03

Distance 591.321

Planetocentric Conic: C3 31.366 VML 5.601 DLA 31.36 RAL 76.39 RAD 6568.2 VEL 12.359 PTH 2.23 VHP 8.736 DPA 7.45 RAP 54.01 ECC 1.5162  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.92 0 35 28 4003.79 -18.51 167.29 313.09 64.22 1 42 12 3403.8 -21.82 159.95  
 104.08 4 17 42 3290.25 -18.49 114.56 313.09 64.21 5 12 32 2690.2 -21.81 107.22  
 75.92 0 35 28 4003.79 -18.51 167.29 313.09 64.22 1 42 12 3403.8 -21.82 159.95  
 104.08 4 17 42 3290.25 -18.49 114.56 313.09 64.21 5 12 32 2690.2 -21.81 107.22  
 110.00 6 40 34 2846.07 -29.01 85.32 317.81 71.08 7 28 0 2246.1 -31.32 76.87  
 110.00 3 11 47 3495.97 -8.60 124.48 307.34 56.79 4 10 3 2896.0 -12.92 118.04

Differential Corrections: TDE 1.1156 TRA 4.5275 TC3-2.5667 BAU 1.0765 RDE .4320 RRA .2619 RC3 -.0406 FAU .01894 FDE .2755 FRA 1.8662 FC3 -.5226 BSP 20597 BOE 1.1963 BRA 4.5351 BC3 2.5670 FSP -706

Mid-Course Execution Accuracy: SGT 6244.4 SGR 543.9 SG3 201.2 RRT .6882 RRF .6734 RTF .9721 SGB 6268.1 R23 .0024 R13 .9721 SG1 6255.7 SG2 393.9 THA 3.44

Orbit Determination Accuracy: ST 1989.5 SR 451.8 SS 549.3 CRT .7316 CRS -.5708 CST -.9771 LSA 2087.1 MSA 328.7 SSA 13.3 EL1 2017.4 EL2 303.8 ALF 9.65

LAUNCH DATE JAN 21 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 19 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 26.837 GAL 9.81 AZL 88.36 HCA 288.39 SMA 122.59 ECC .26129 INC 1.6374 V1 30.261  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.051 GAP 13.57 AZP 89.48 TAL 149.10 TAP 77.49 RCA 90.56 APO 154.62 V2 35.056  
 RC 175.544 GL 7.37 GP -9.93 ZAL 41.45 ZAP 168.45 ETS 304.25 ZAE 126.92 ETE 187.28 ZAC 150.05 ETC 171.93 CLP-174.08

Distance 596.547

Planetocentric Conic: C3 34.720 VML 5.892 DLA 30.40 RAL 78.34 RAD 6568.4 VEL 12.494 PTH 2.26 VHP 9.115 DPA 8.33 RAP 55.98 ECC 1.5714  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.44 1 1 26 3971.91 -17.24 164.26 316.44 64.56 2 7 38 3371.9 -20.52 156.96  
 101.56 4 7 18 3373.33 -17.22 120.16 316.43 64.55 5 3 32 2773.3 -20.51 112.86  
 78.44 1 1 26 3971.91 -17.24 164.26 316.44 64.56 2 7 38 3371.9 -20.52 156.96  
 101.56 4 7 18 3373.33 -17.22 120.16 316.43 64.55 5 3 32 2773.3 -20.51 112.86  
 110.00 7 4 35 2818.46 -29.61 83.39 321.78 72.08 7 51 33 2218.5 -31.77 74.85  
 110.00 3 3 20 3574.77 -5.64 128.66 309.74 56.23 4 2 55 2974.8 -10.04 122.33

Differential Corrections: TDE 1.0091 TRA 4.9243 TC3-2.2987 BAU 1.0671 RDE .4407 RRA .2797 RC3 -.0354 FAU .01680 FDE .2255 FRA 1.9078 FC3 -.4188 BSP 20698 BOE 1.1011 BRA 4.9322 BC3 2.2990 FSP -673

Mid-Course Execution Accuracy: SGT 6254.8 SGR 533.6 SG3 191.6 RRT .6843 RRF .6699 RTF .9728 SGB 6277.5 R23 .0023 R13 .9728 SG1 6265.5 SG2 388.5 THA 3.35

Orbit Determination Accuracy: ST 1934.7 SR 438.8 SS 536.8 CRT .6809 CRS -.5182 CST -.9789 LSA 2027.1 MSA 338.7 SSA 12.9 EL1 1958.3 EL2 317.5 ALF 9.02

LAUNCH DATE JAN 21 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 21 1969

Heliocentric Conic: RL 147.23 LAL .00 LOL 120.78 VL 26.808 GAL 10.60 AZL 88.51 HCA 291.60 SMA 122.41 ECC .27121 INC 1.4867 V1 30.261  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.042 GAP 14.26 AZP 89.45 TAL 147.90 TAP 79.50 RCA 89.21 APO 155.60 V2 35.069  
 RC 177.535 GL 6.32 GP -9.66 ZAL 39.81 ZAP 169.19 ETS 300.16 ZAE 126.76 ETE 187.08 ZAC 152.08 ETC 171.08 CLP-175.13

Distance 601.662

Planetocentric Conic: C3 38.616 VML 6.214 DLA 29.47 RAL 80.17 RAD 6568.5 VEL 12.648 PTH 2.30 VHP 9.525 DPA 9.17 RAP 57.97 ECC 1.6355  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.49 1 31 53 3924.89 -15.97 160.14 319.75 64.90 2 37 18 3324.9 -19.22 152.89  
 98.51 3 51 27 3474.08 -15.96 127.03 319.75 64.90 4 49 21 2874.1 -19.21 119.78  
 100.00 4 45 22 3301.50 -19.96 116.10 321.61 67.27 5 40 23 2701.5 -22.86 108.51  
 100.00 3 20 38 3572.70 -12.05 132.35 317.75 62.44 4 20 11 2972.7 -15.65 125.40  
 110.00 7 25 42 2799.12 -30.01 82.02 325.63 72.80 8 12 21 2199.1 -32.06 73.41  
 110.00 2 56 48 3647.85 -2.86 132.49 312.24 55.92 3 57 36 3047.8 -7.32 126.24

Differential Corrections: TDE .9036 TRA 5.3509 TC3-2.0368 BAU 1.0516 RDE .4498 RRA .2984 RC3 -.0302 FAU .01467 FDE .1812 FRA 1.9527 FC3 -.3289 BSP 20703 BOE 1.0093 BRA 5.3592 BC3 2.0370 FSP -639

Mid-Course Execution Accuracy: SGT 6262.0 SGR 522.8 SG3 182.7 RRT .6816 RRF .6678 RTF .9736 SGB 6283.8 R23 .0023 R13 .9736 SG1 6272.2 SG2 381.9 THA 3.27

Orbit Determination Accuracy: ST 1894.7 SR 425.4 SS 528.8 CRT .6287 CRS -.4687 CST -.9813 LSA 1982.7 MSA 345.4 SSA 12.5 EL1 1914.0 EL2 327.5 ALF 8.28

LAUNCH DATE JAN 21 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 606.643

RL 147.23 LAL .00 LOL 120.78 VL 26.778 GAL 11.45 AZL 88.67 HCA 294.81 SMA 122.23 ECC .28209 INC 1.3291 V1 30.261  
 RP 108.02 LAP -1.21 LOP 55.60 VP 37.033 GAP 15.00 AZP 89.44 TAL 146.73 TAP 81.54 RCA 87.75 APO 156.71 V2 35.083  
 RC 179.506 GL 5.32 GP -9.42 ZAL 38.26 ZAP 169.85 ETS 295.41 ZAE 126.58 ETE 186.90 ZAC 154.10 ETC 170.09 CLP-176.20

PLANETOCENTRIC CONIC

C3 43.154 VHL 6.569 DLA 28.56 RAL 81.87 RAD 6568.6 VEL 12.827 PTH 2.33 VHP 9.970 DPA 9.97 RAP 59.98 ECC 1.7102  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 86.13 2 16 9 3832.19 -14.72 152.71 323.04 65.25 3 20 2 3232.2 -17.94 145.50  
 93.87 3 20 46 3622.87 -14.70 137.38 323.03 65.24 4 21 9 3022.9 -17.92 130.16  
 100.00 5 24 40 3224.04 -21.92 111.18 326.22 69.15 6 18 24 2624.0 -24.56 103.38  
 100.00 2 54 57 3706.25 -7.74 139.91 319.44 61.04 3 56 43 3106.3 -11.54 133.19  
 110.00 7 44 36 2786.01 -30.27 81.09 329.38 73.29 8 31 2 2186.0 -32.25 72.44  
 110.00 2 51 31 3717.05 -.22 136.10 314.81 55.82 3 53 28 3117.0 -4.70 129.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7920 TRA 5.8030 TC3-1.7906 BAU 1.0332  
 RDE .4589 RRA .3176 RC3 -.0255 FAU .01269  
 FDE .1394 FRA 1.9988 FC3 -.2546 BSP 20789  
 BDE .9153 BRA 5.8117 BC3 1.7908 FSP -610

SGT 6262.4 SGR 510.7 SG3 174.2  
 RRT .6794 RRF .6661 RTF .9747  
 SGB 6283.2 R23 .0020 R13 .9747  
 SG1 6272.1 SG2 374.1 THA 3.18

ST 1863.0 SR 411.3 SS 523.6  
 CRT .5744 CRS -.4201 CST -.9839  
 LSA 1947.3 MSA 348.8 SSA 12.1  
 EL1 1878.4 EL2 333.9 ALF 7.46

LAUNCH DATE JAN 21 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC

DISTANCE 611.465

RL 147.23 LAL .00 LOL 120.78 VL 26.749 GAL 12.37 AZL 88.84 HCA 298.02 SMA 122.05 ECC .29405 INC 1.1629 V1 30.261  
 RP 107.98 LAP -1.03 LOP 58.81 VP 37.024 GAP 15.80 AZP 89.45 TAL 145.61 TAP 83.64 RCA 86.16 APO 157.94 V2 35.095  
 RC 181.455 GL 4.37 GP -9.20 ZAL 36.82 ZAP 170.41 ETS 289.93 ZAE 126.39 ETE 186.73 ZAC 156.09 ETC 168.92 CLP-177.27

PLANETOCENTRIC CONIC

C3 48.459 VHL 6.961 DLA 27.68 RAL 83.46 RAD 6568.8 VEL 13.032 PTH 2.38 VHP 10.455 DPA 10.72 RAP 62.00 ECC 1.7975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 27 3585.21 -18.42 136.30 328.48 68.11 4 47 13 2985.2 -21.23 128.75  
 90.00 2 2 7 3928.07 -8.63 156.69 323.90 62.92 3 7 35 3328.1 -12.19 149.83  
 100.00 5 52 25 3182.37 -22.90 108.47 330.30 70.24 6 45 28 2582.4 -25.38 100.56  
 100.00 2 39 50 3806.14 -4.41 145.46 321.61 60.40 3 43 16 3206.1 -8.32 138.85  
 110.00 8 1 40 2777.89 -30.42 80.51 333.05 73.60 8 47 58 2177.9 -32.37 71.83  
 110.00 2 47 5 3783.38 2.32 139.56 317.44 55.89 3 50 8 3183.4 -2.18 133.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6786 TRA 6.2883 TC3-1.5564 BAU 1.0084  
 RDE .4681 RRA .3373 RC3 -.0210 FAU .01076  
 FDE .1013 FRA 2.0487 FC3 -.1922 BSP 20853  
 BDE .8244 BRA 6.2973 BC3 1.5566 FSP -582

SGT 6258.3 SGR 497.6 SG3 166.3  
 RRT .6778 RRF .6651 RTF .9759  
 SGB 6278.1 R23 .0018 R13 .9759  
 SG1 6267.4 SG2 365.3 THA 3.10

ST 1841.3 SR 396.6 SS 521.5  
 CRT .5206 CRS -.3750 CST -.9865  
 LSA 1923.0 MSA 348.8 SSA 11.6  
 EL1 1853.3 EL2 336.4 ALF 6.62

LAUNCH DATE JAN 21 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC

DISTANCE 616.096

RL 147.23 LAL .00 LOL 120.78 VL 26.721 GAL 13.37 AZL 89.01 HCA 301.24 SMA 121.88 ECC .30725 INC .9864 V1 30.261  
 RP 107.94 LAP -.84 LOP 62.03 VP 37.016 GAP 16.68 AZP 89.49 TAL 144.55 TAP 85.79 RCA 84.43 APO 159.33 V2 35.108  
 RC 183.384 GL 3.47 GP -8.99 ZAL 35.47 ZAP 170.86 ETS 283.69 ZAE 126.17 ETE 186.57 ZAC 158.06 ETC 167.52 CLP-178.37

PLANETOCENTRIC CONIC

C3 54.686 VHL 7.395 DLA 26.83 RAL 84.92 RAD 6569.0 VEL 13.268 PTH 2.42 VHP 10.987 DPA 11.42 RAP 64.03 ECC 1.9000  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 20 59 3523.77 -19.94 132.43 332.76 69.46 5 19 42 2923.8 -22.55 124.73  
 90.00 1 40 15 4049.58 -4.80 163.57 325.81 62.06 2 47 45 3449.6 -8.50 156.85  
 100.00 6 15 5 3155.92 -23.50 106.74 334.13 70.97 7 7 41 2555.9 -25.88 98.75  
 100.00 2 28 50 3892.66 -1.48 150.22 323.98 60.14 3 33 43 3292.7 -5.45 143.67  
 110.00 8 17 10 2773.91 -30.50 80.22 336.63 73.76 9 3 24 2173.9 -32.42 71.53  
 110.00 2 43 14 3847.44 4.76 142.92 320.10 56.11 3 47 22 3247.4 .27 136.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5626 TRA 6.8103 TC3-1.3356 BAU .9765  
 RDE .4774 RRA .3573 RC3 -.0166 FAU .00886  
 FDE .0664 FRA 2.1031 FC3 -.1402 BSP 20895  
 BDE .7378 BRA 6.8197 BC3 1.3357 FSP -555

SGT 6249.7 SGR 483.4 SG3 158.9  
 RRT .6767 RRF .6646 RTF .9774  
 SGB 6268.4 R23 .0015 R13 .9774  
 SG1 6258.3 SG2 355.4 THA 3.01

ST 1827.7 SR 381.4 SS 522.4  
 CRT .4682 CRS -.3337 CST -.9890  
 LSA 1907.7 MSA 345.4 SSA 11.2  
 EL1 1836.7 EL2 335.4 ALF 5.77

LAUNCH DATE JAN 21 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC

DISTANCE 620.497

RL 147.23 LAL .00 LOL 120.78 VL 26.693 GAL 14.47 AZL 89.20 HCA 304.46 SMA 121.72 ECC .32185 INC .7972 V1 30.261  
 RP 107.90 LAP -.66 LOP 65.24 VP 37.007 GAP 17.65 AZP 89.55 TAL 143.56 TAP 88.01 RCA 82.54 APO 160.89 V2 35.120  
 RC 185.291 GL 2.62 GP -8.80 ZAL 34.24 ZAP 171.18 ETS 276.71 ZAE 125.92 ETE 186.42 ZAC 160.00 ETC 165.84 CLP-179.49

PLANETOCENTRIC CONIC

C3 62.031 VHL 7.876 DLA 26.02 RAL 86.26 RAD 6569.2 VEL 13.542 PTH 2.48 VHP 11.572 DPA 12.07 RAP 66.05 ECC 2.0209  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 45 56 3488.85 -20.75 130.19 336.63 70.29 5 44 4 2888.8 -23.25 122.41  
 90.00 1 25 59 4146.15 -1.70 168.98 328.04 61.73 2 35 6 3546.1 -5.47 162.32  
 100.00 6 34 30 3138.82 -23.87 105.61 337.80 71.46 7 26 49 2538.8 -26.18 97.57  
 100.00 2 20 6 3971.40 1.19 154.54 326.44 60.13 3 26 18 3371.4 -2.80 148.02  
 110.00 8 31 17 2773.42 -30.51 80.19 340.13 73.78 9 17 30 2173.4 -32.43 71.50  
 110.00 2 39 49 3909.57 7.10 146.20 322.78 56.47 3 44 58 3309.6 2.65 139.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4485 TRA 7.3778 TC3-1.1258 BAU .9337  
 RDE .4870 RRA .3776 RC3 -.0123 FAU .00690  
 FDE .0359 FRA 2.1643 FC3 -.0963 BSP 20822  
 BDE .6621 BRA 7.3875 BC3 1.1259 FSP -527

SGT 6238.6 SGR 468.3 SG3 152.0  
 RRT .6762 RRF .6650 RTF .9789  
 SGB 6256.2 R23 .0014 R13 .9790  
 SG1 6246.7 SG2 344.6 THA 2.91

ST 1822.0 SR 366.0 SS 526.2  
 CRT .4199 CRS -.2983 CST -.9913  
 LSA 1901.4 MSA 339.0 SSA 10.8  
 EL1 1828.6 EL2 330.9 ALF 4.98

LAUNCH DATE JAN 22 1969 FLIGHT TIME 70.00 ARRIVAL DATE APR 2 1969

MELIOCENTRIC CONIC DISTANCE 161.666  
 RL 147.24 LAL .00 LOL 121.80 VL 23.138 GAL 2.73 AZL 86.55 MCA 66.14 SMA 104.72 ECC .40838 INC 3.4539 V1 30.259  
 RP 107.80 LAP 3.16 LOP 187.90 VP 34.566 GAP -24.05 AZP 88.60 TAL 176.04 TAP 242.17 RCA 61.95 APO 147.48 V2 35.153  
 RC 43.319 GL 10.87 GP 5.64 ZAL 82.72 ZAP 15.28 ETS 203.17 ZAE 174.95 ETE 262.48 ZAC 114.15 ETC 163.63 CLP 14.22

PLANETOCENTRIC CONIC  
 C3 54.490 VML 7.382 DLA 24.84 RAL 33.03 RAD 6569.0 VEL 13.261 PTH 2.42 VHP 14.807 DPA 11.22 RAP 19.19 ECC 1.8968  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 29 3379.30 -23.10 123.02 281.49 73.15 2 28 49 2779.3 -25.19 114.97  
 90.00 21 22 58 4192.28 -.21 171.55 271.86 61.68 22 32 51 3592.3 -3.99 164.91  
 100.00 3 16 5 3045.28 -25.75 99.29 282.34 74.27 4 6 51 2445.3 -27.66 91.01  
 100.00 22 22 3 4001.54 2.21 156.19 270.51 60.18 23 28 45 3401.5 -1.78 149.67  
 110.00 5 6 54 2698.61 -31.80 74.75 284.12 76.76 5 51 52 2098.6 -33.30 65.84  
 110.00 22 47 44 3920.97 7.53 146.80 267.22 56.56 23 53 5 3321.0 3.08 140.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3702 TRA -.8863 TC3 .0100 BAW .0225 SGT 810.8 SGR 431.6 SG3 52.1 ST 366.4 SR 417.9 S5 300.0  
 RDE -.5369 RRA .1209 RC3 -.0293 FAU .01904 RRT .1164 RRF -.1239 RTF -.6744 CRT .7359 CRS .8588 CST .9767  
 FDE .2702 FRA .4055 FC3 -.3024 BSP 2271 SGB 918.5 R23 -.0153 R13 -.6758 LSA 596.3 MSA 207.8 SSA 14.4  
 BOE .6522 BRA .8945 BC3 .0309 FSP -116 SGI 813.0 SG2 427.5 TMA 4.90 EL1 518.6 EL2 199.9 ALF 50.08

LAUNCH DATE JAN 22 1969 FLIGHT TIME 72.00 ARRIVAL DATE APR 4 1969

MELIOCENTRIC CONIC DISTANCE 168.236  
 RL 147.24 LAL .00 LOL 121.80 VL 23.556 GAL 2.51 AZL 86.70 MCA 69.36 SMA 106.36 ECC .38653 INC 3.2950 V1 30.259  
 RP 107.84 LAP 3.08 LOP 191.13 VP 34.836 GAP -22.73 AZP 88.84 TAL 176.00 TAP 245.37 RCA 65.25 APO 147.46 V2 35.141  
 RC 42.834 GL 11.22 GP 5.90 ZAL 82.84 ZAP 13.85 ETS 206.85 ZAE 174.99 ETE 293.57 ZAC 115.54 ETC 163.20 CLP 12.55

PLANETOCENTRIC CONIC  
 C3 48.330 VML 6.952 DLA 25.13 RAL 32.78 RAD 6568.8 VEL 13.027 PTH 2.38 VHP 14.072 DPA 12.09 RAP 20.52 ECC 1.7954  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 21 3367.11 -23.33 122.20 279.08 73.49 2 22 28 2767.1 -25.38 114.13  
 90.00 21 27 6 4144.83 -1.74 168.90 270.04 61.73 22 36 10 3544.8 -5.51 162.25  
 100.00 3 10 57 3029.85 -26.03 98.23 279.93 74.76 4 1 27 2429.8 -27.87 89.91  
 100.00 22 25 10 3957.33 .71 153.77 268.68 60.12 23 31 7 3357.3 -3.27 147.24  
 110.00 5 3 5 2679.06 -32.10 73.30 281.64 77.57 5 47 44 2079.1 -33.48 64.34  
 110.00 22 49 32 3880.88 6.02 144.68 265.38 56.29 23 54 13 3280.9 1.55 138.45

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3743 TRA -.8680 TC3 .0317 BAW .0277 SGT 849.3 SGR 435.0 SG3 57.5 ST 389.1 SR 422.5 S5 315.8  
 RDE -.5113 RRA .1101 RC3 -.0288 FAU .01992 RRT .1329 RRF -.1407 RTF -.6930 CRT .7476 CRS .8651 CST .9779  
 FDE .2832 FRA .4140 FC3 -.3569 BSP 2382 SGB 954.3 R23 -.0171 R13 -.6945 LSA 620.8 MSA 209.8 SSA 14.7  
 BOE .6337 BRA .8749 BC3 .0428 FSP -131 SGI 852.0 SG2 429.8 TMA 5.23 EL1 537.2 EL2 203.2 ALF 48.15

LAUNCH DATE JAN 22 1969 FLIGHT TIME 74.00 ARRIVAL DATE APR 6 1969

MELIOCENTRIC CONIC DISTANCE 174.842  
 RL 147.24 LAL .00 LOL 121.80 VL 23.941 GAL 2.28 AZL 86.86 MCA 72.58 SMA 107.94 ECC .36596 INC 3.1428 V1 30.259  
 RP 107.87 LAP 3.00 LOP 194.36 VP 35.086 GAP -21.47 AZP 89.06 TAL 176.04 TAP 248.62 RCA 68.44 APO 147.44 V2 35.129  
 RC 42.524 GL 11.55 GP 6.19 ZAL 83.10 ZAP 12.50 ETS 211.43 ZAE 173.74 ETE 319.09 ZAC 116.90 ETC 162.73 CLP 10.88

PLANETOCENTRIC CONIC  
 C3 42.938 VML 6.553 DLA 25.35 RAL 32.40 RAD 6568.6 VEL 12.818 PTH 2.33 VHP 13.369 DPA 12.98 RAP 21.85 ECC 1.7067  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 40 3351.69 -23.63 121.17 276.56 73.93 2 16 32 2751.7 -25.61 113.06  
 90.00 21 29 46 4100.85 -3.16 166.45 268.07 61.85 22 38 6 3500.8 -6.90 159.76  
 100.00 3 6 9 3011.64 -26.35 96.97 277.39 75.35 3 56 20 2411.6 -28.11 88.61  
 100.00 22 26 58 3916.12 -.69 151.51 266.70 60.11 23 32 14 3316.1 -4.66 144.97  
 110.00 4 59 21 2657.47 -32.41 71.69 279.00 78.47 5 43 38 2057.5 -33.65 62.68  
 110.00 22 50 16 3843.07 4.59 142.69 263.42 56.09 23 54 19 3243.1 .11 136.47

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3770 TRA -.8470 TC3 .0807 BAW .0382 SGT 886.9 SGR 438.0 SG3 63.4 ST 411.2 SR 426.7 S5 331.7  
 RDE -.4868 RRA .0999 RC3 -.0272 FAU .02091 RRT .1500 RRF -.1593 RTF -.7122 CRT .7591 CRS .8715 CST .9788  
 FDE .2964 FRA .4217 FC3 -.4217 BSP 2533 SGB 989.1 R23 -.0196 R13 -.7140 LSA 645.3 MSA 211.0 SSA 15.1  
 BOE .6157 BRA .8529 BC3 .0665 FSP -147 SGI 890.1 SG2 431.5 TMA 5.54 EL1 555.8 EL2 205.5 ALF 46.39

LAUNCH DATE JAN 22 1969 FLIGHT TIME 76.00 ARRIVAL DATE APR 8 1969

MELIOCENTRIC CONIC DISTANCE 181.479  
 RL 147.24 LAL .00 LOL 121.80 VL 24.297 GAL 2.05 AZL 87.00 MCA 75.80 SMA 109.47 ECC .34667 INC 2.9960 V1 30.259  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.318 GAP -20.27 AZP 89.26 TAL 176.13 TAP 251.94 RCA 71.52 APO 147.42 V2 35.117  
 RC 42.392 GL 11.85 GP 6.51 ZAL 83.47 ZAP 11.26 ETS 217.21 ZAE 171.72 ETE 334.75 ZAC 118.24 ETC 162.20 CLP 9.20

PLANETOCENTRIC CONIC  
 C3 38.220 VML 6.182 DLA 25.50 RAL 31.90 RAD 6568.5 VEL 12.633 PTH 2.29 VHP 12.696 DPA 13.90 RAP 23.16 ECC 1.6290  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 15 42 3332.47 -23.99 119.87 273.94 74.48 2 11 14 2732.5 -25.89 111.72  
 90.00 21 30 45 4061.29 -4.43 164.23 265.94 62.00 22 38 26 3461.3 -8.14 157.52  
 100.00 3 1 49 2990.37 -26.71 95.49 274.73 76.05 3 51 39 2390.4 -28.36 87.08  
 100.00 22 27 19 3878.63 -1.96 149.45 264.57 60.17 23 31 58 3278.6 -5.92 142.89  
 110.00 4 55 48 2633.74 -32.71 69.91 276.23 79.49 5 39 41 2033.7 -33.82 60.84  
 110.00 22 49 50 3808.02 3.26 140.85 261.32 55.95 23 53 18 3208.0 -1.24 134.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3803 TRA -.8259 TC3 .0956 BAW .0504 SGT 926.0 SGR 440.4 SG3 70.0 ST 434.7 SR 430.4 S5 348.0  
 RDE -.4635 RRA .0904 RC3 -.0240 FAU .02201 RRT .1697 RRF -.1805 RTF -.7301 CRT .7712 CRS .8782 CST .9799  
 FDE .3105 FRA .4291 FC3 -.4486 BSP 2684 SGB 1025.4 R23 -.0224 R13 -.7320 LSA 671.1 MSA 211.3 SSA 15.4  
 BOE .5995 BRA .8308 BC3 .0986 FSP -165 SGI 929.8 SG2 432.3 TMA 5.89 EL1 575.7 EL2 206.9 ALF 44.63

LAUNCH DATE JAN 22 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 24.625 GAL 1.81 AZL 87.15 HCA 79.02 SMA 110.94 ECC .32860 INC 2.8534 V1 30.259  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.532 GAP -19.12 AZP 89.46 TAL 176.29 TAP 255.31 RCA 74.48 APO 147.39 V2 35.105  
 RC 42.442 GL 12.11 GP 6.87 ZAL 83.98 ZAP 10.17 ETS 224.47 ZAE 169.36 ETE 344.25 ZAC 119.54 ETC 161.62 CLP 7.51

DISTANCE 188.141

PLANETOCENTRIC CONIC

C3 34.091 VHL 5.839 DLA 25.58 RAL 31.28 RAD 6568.3 VEL 12.468 PTH 2.26 VHP 12.053 DPA 14.83 RAP 24.45 ECC 1.5611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 41 3308.88 -24.41 118.27 271.23 75.18 2 6 49 2708.9 -26.21 110.06  
 90.00 21 29 50 4027.12 -5.51 162.31 263.65 62.18 22 36 57 3427.1 -9.20 155.56  
 100.00 2 58 8 2965.67 -27.10 93.76 271.98 76.88 3 47 34 2365.7 -28.64 85.30  
 100.00 22 26 4 3845.57 -3.08 147.63 262.30 60.25 23 30 9 3245.6 -7.01 141.06  
 110.00 4 52 32 2607.76 -33.02 67.94 273.34 80.61 5 35 59 2007.8 -33.96 58.83  
 110.00 22 48 10 3776.24 2.04 139.19 259.11 55.87 -23 51 6 3176.2 -2.45 132.99

DIFFERENTIAL CORRECTIONS

TDE -.3835 TRA -.8037 TC3 .1387 BAU .0638  
 RDE -.4413 RRA .0814 RC3 -.0188 FAU .02325  
 FDE .3253 FRA .4359 FC3 -.5904 BSP 2841  
 BDE .5847 BRA .8078 BC3 .1399 FSP -186

MID-COURSE EXECUTION ACCURACY

SGT 965.6 SGR 442.6 SG3 77.4  
 RRT .1918 RRF -.2045 RTF -.7475  
 SGB 1062.2 R23 -.0256 R13 -.7496  
 SGI 970.3 SG2 432.3 THA 6.27

ORBIT DETERMINATION ACCURACY

ST 458.8 SR 433.9 SS 364.5  
 CRT .7838 CRS .8851 CST .9810  
 LSA 697.8 MSA 210.7 SSA 15.8  
 EL1 596.5 EL2 207.3 ALF 42.96

LAUNCH DATE JAN 22 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 24.927 GAL 1.57 AZL 87.29 HCA 82.24 SMA 112.34 ECC .31173 INC 2.7140 V1 30.259  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.729 GAP -18.03 AZP 89.63 TAL 176.52 TAP 258.76 RCA 77.32 APO 147.36 V2 35.092  
 RC 42.671 GL 12.34 GP 7.26 ZAL 84.60 ZAP 9.29 ETS 233.51 ZAE 166.87 ETE 350.48 ZAC 120.80 ETC 160.97 CLP 5.81

DISTANCE 194.825

PLANETOCENTRIC CONIC

C3 30.480 VHL 5.521 DLA 25.58 RAL 30.55 RAD 6568.2 VEL 12.323 PTH 2.22 VHP 11.437 DPA 15.79 RAP 25.72 ECC 1.5016  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 51 3280.39 -24.89 116.32 268.45 76.04 2 3 31 2680.4 -26.56 108.06  
 90.00 21 26 49 3999.24 -6.40 160.74 261.20 62.36 22 33 29 3399.2 -10.05 153.96  
 100.00 2 55 17 2937.24 -27.53 91.76 269.14 77.86 3 44 14 2537.2 -28.92 83.23  
 100.00 22 23 4 3817.62 -4.02 146.09 259.90 60.35 23 26 42 3217.6 -7.94 139.49  
 110.00 4 49 39 2579.41 -33.31 65.78 270.34 81.86 5 32 38 1979.4 -34.08 56.62  
 110.00 22 45 11 3748.21 .97 137.73 256.79 55.83 23 47 40 3148.2 -3.52 131.52

DIFFERENTIAL CORRECTIONS

TDE -.3861 TRA -.7804 TC3 .1902 BAU .0776  
 RDE -.4203 RRA .0731 RC3 -.0111 FAU .02464  
 FDE .3399 FRA .4418 FC3 -.6999 BSP 3002  
 BDE .5708 BRA .7838 BC3 .1906 FSP -210

MID-COURSE EXECUTION ACCURACY

SGT 1005.4 SGR 444.4 SG3 85.5  
 RRT .2165 RRF -.2310 RTF -.7636  
 SGB 1099.3 R23 -.0290 R13 -.7661  
 SGI 1011.1 SG2 431.5 THA 6.69

ORBIT DETERMINATION ACCURACY

ST 482.9 SR 436.9 SS 380.4  
 CRT .7963 CRS .8918 CST .9821  
 LSA 724.4 MSA 209.3 SSA 16.3  
 EL1 617.6 EL2 206.7 ALF 41.42

LAUNCH DATE JAN 22 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 25.205 GAL 1.34 AZL 87.42 HCA 85.45 SMA 113.68 ECC .29601 INC 2.5769 V1 30.259  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.911 GAP -16.99 AZP 89.80 TAL 176.81 TAP 262.26 RCA 80.03 APO 147.33 V2 35.080  
 RC 43.078 GL 12.52 GP 7.69 ZAL 85.35 ZAP 8.70 ETS 244.35 ZAE 164.36 ETE 354.93 ZAC 122.02 ETC 160.26 CLP 4.08

DISTANCE 201.525

PLANETOCENTRIC CONIC

C3 27.322 VHL 5.227 DLA 25.48 RAL 29.71 RAD 6568.1 VEL 12.194 PTH 2.19 VHP 10.848 DPA 16.77 RAP 26.95 ECC 1.4497  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 7 22 3246.65 -25.42 114.00 265.62 77.09 2 1 29 2646.7 -26.95 105.66  
 90.00 21 21 36 3978.31 -7.06 159.55 258.62 62.51 22 27 54 3378.3 -10.69 152.75  
 100.00 2 53 24 2904.84 -27.97 89.45 266.22 79.00 3 41 49 2304.8 -29.20 80.86  
 100.00 22 18 15 3795.36 -4.77 144.86 257.37 60.46 23 21 31 3195.4 -8.67 138.25  
 110.00 4 47 16 2548.56 -33.59 63.41 267.24 83.23 5 29 45 1948.6 -34.16 54.22  
 110.00 22 40 52 3724.40 .06 136.49 254.37 55.82 23 42 57 3124.4 -4.42 130.27

DIFFERENTIAL CORRECTIONS

TDE -.3892 TRA -.7576 TC3 .2495 BAU .0911  
 RDE -.4007 RRA .0652 RC3 -.0004 FAU .02616  
 FDE .3558 FRA .4480 FC3 -.8290 BSP 3156  
 BDE .5586 BRA .7604 BC3 .2495 FSP -236

MID-COURSE EXECUTION ACCURACY

SGT 1047.0 SGR 448.3 SG3 94.6  
 RRT .2451 RRF -.2618 RTF -.7787  
 SGB 1138.2 R23 -.0333 R13 -.7815  
 SGI 1053.9 SG2 429.9 THA 7.16

ORBIT DETERMINATION ACCURACY

ST 508.2 SR 439.9 SS 397.0  
 CRT .8090 CRS .8986 CST .9832  
 LSA 752.4 MSA 207.3 SSA 16.7  
 EL1 640.0 EL2 205.3 ALF 39.93

LAUNCH DATE JAN 22 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 25.461 GAL 1.11 AZL 87.56 HCA 88.66 SMA 114.96 ECC .28141 INC 2.4410 V1 30.259  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.079 GAP -15.99 AZP 89.94 TAL 177.16 TAP 265.83 RCA 82.61 APO 147.31 V2 35.067  
 RC 43.658 GL 12.64 GP 8.18 ZAL 86.21 ZAP 8.50 ETS 256.51 ZAE 161.90 ETE 358.34 ZAC 123.17 ETC 159.48 CLP 2.33

DISTANCE 208.236

PLANETOCENTRIC CONIC

C3 24.563 VHL 4.956 DLA 25.29 RAL 28.77 RAD 6568.0 VEL 12.081 PTH 2.16 VHP 10.284 DPA 17.78 RAP 28.15 ECC 1.4042  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 7 23 3207.56 -25.99 111.27 262.73 78.34 2 0 50 2607.6 -27.34 102.86  
 90.00 21 14 7 3964.76 -7.48 158.78 255.92 62.61 22 20 12 3364.8 -11.09 151.97  
 100.00 2 52 36 2868.31 -28.42 86.83 263.25 80.31 3 40 24 2268.3 -29.46 78.18  
 100.00 22 11 34 3779.24 -3.31 143.97 254.74 60.54 23 14 34 3179.2 -9.19 137.34  
 110.00 4 45 30 2515.09 -33.83 60.83 264.08 84.75 5 27 25 1915.1 -34.18 51.60  
 110.00 22 35 10 3705.22 -.67 135.49 251.86 55.82 23 36 55 3105.2 -5.15 129.27

DIFFERENTIAL CORRECTIONS

TDE -.3904 TRA -.7326 TC3 .3197 BAU .1051  
 RDE -.3823 RRA .0578 RC3 .0144 FAU .02787  
 FDE .3713 FRA .4528 FC3 -.9824 BSP 3331  
 BDE .5464 BRA .7349 BC3 .3200 FSP -265

MID-COURSE EXECUTION ACCURACY

SGT 1087.0 SGR 448.3 SG3 104.7  
 RRT .2764 RRF -.2961 RTF -.7933  
 SGB 1175.8 R23 -.0381 R13 -.7964  
 SGI 1095.3 SG2 427.6 THA 7.68

ORBIT DETERMINATION ACCURACY

ST 531.7 SR 442.5 SS 412.3  
 CRT .8212 CRS .9053 CST .9842  
 LSA 778.7 MSA 204.5 SSA 17.2  
 EL1 661.3 EL2 203.0 ALF 38.67



LAUNCH DATE JAN 22 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 18 1969

MELIOCENTRIC CONIC DISTANCE 214.956  
 RL 147.24 LAL .00 LOL 121.80 VL 25.696 GAL .88 AZL 87.69 HCA 91.87 SMA 116.17 ECC .26788 INC 2.3056 V1 30.259  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.232 GAP -15.03 AZP 90.08 TAL 177.58 TAP 269.45 RCA 85.05 APO 147.29 V2 35.053  
 RC 44.405 GL 12.69 GP 8.71 ZAL 87.18 ZAP 8.73 ETS 268.94 ZAE 159.53 ETE 1.13 ZAC 124.25 ETC 158.63 CLP .54

PLANETOCENTRIC CONIC  
 C3 22.154 VHL 4.707 DLA 24.98 RAL 27.75 RAD 6567.9 VEL 11.981 PTH 2.14 VHP 9.746 DPA 18.83 RAP 29.30 ECC 1.3646  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 52 3163.27 -26.56 108.16 259.81 79.80 2 1 36 2563.3 -27.70 99.67  
 90.00 21 4 28 3958.67 -7.67 158.44 253.13 62.66 22 10 27 3358.7 -11.28 151.61  
 100.00 2 52 58 2827.65 -28.85 83.88 260.23 81.80 3 40 6 2227.7 -29.68 75.18  
 100.00 22 3 3 3769.51 -5.63 143.43 252.02 60.60 23 5 53 3169.5 -9.51 136.79  
 110.00 4 44 26 2478.94 -34.02 58.02 260.85 86.40 5 25 45 1878.5 -34.14 48.78  
 110.00 22 28 5 3690.99 -1.22 134.74 249.28 55.84 23 29 36 3091.0 -5.69 128.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3930 TRA -.7103 TC3 .3974 BAU .1181 SGT 1130.9 SGR 451.0 SG3 116.0 ST 557.6 SR 445.1 SS 427.7  
 RDE -.3653 RRA .0507 RC3 .0340 FAU .02979 RRT .3133 RRF -.3352 RTF -.8058 CRT .8336 CRS .9116 CST .9853  
 FDE .3877 FRA .4590 FC3-1.1641 BSP 3451 SGB 1217.5 R23 -.0435 R13 -.8093 LSA 807.0 MSA 201.2 SSA 17.8  
 BDE .5366 BRA .7121 BC3 .3989 FSP -298 SG1 1141.1 SG2 424.4 THA 8.27 EL1 684.8 EL2 200.2 ALF 37.38

LAUNCH DATE JAN 22 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 20 1969

MELIOCENTRIC CONIC DISTANCE 221.678  
 RL 147.24 LAL .00 LOL 121.80 VL 25.911 GAL .67 AZL 87.83 HCA 95.08 SMA 117.31 ECC .25538 INC 2.1697 V1 30.259  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.372 GAP -14.12 AZP 90.19 TAL 178.05 TAP 273.13 RCA 87.35 APO 147.27 V2 35.040  
 RC 45.309 GL 12.65 GP 9.31 ZAL 88.26 ZAP 9.39 ETS 290.44 ZAE 157.28 ETE 3.53 ZAC 125.25 ETC 157.71 CLP -1.28

PLANETOCENTRIC CONIC  
 C3 20.052 VHL 4.478 DLA 24.56 RAL 26.66 RAD 6567.8 VEL 11.893 PTH 2.11 VHP 9.232 DPA 19.91 RAP 30.39 ECC 1.3300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 49 3114.14 -27.10 104.66 256.85 81.47 2 3 43 2514.1 -28.01 96.11  
 90.00 20 52 49 3959.90 -7.63 158.51 250.28 62.65 21 58 49 3359.9 -11.24 151.69  
 100.00 2 54 32 2782.96 -29.24 80.62 257.17 83.48 3 40 55 2183.0 -29.83 71.86  
 100.00 21 52 47 3766.31 -5.74 143.26 249.25 60.61 22 55 33 3166.3 -9.61 136.61  
 110.00 4 44 9 2440.04 -34.14 54.99 257.59 88.19 5 24 49 1840.0 -34.02 45.75  
 110.00 22 19 39 3682.00 -1.56 134.28 246.66 55.85 23 21 1 3082.0 -6.03 128.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3898 TRA -.6831 TC3 .4927 BAU .1330 SGT 1169.1 SGR 454.4 SG3 128.6 ST 576.2 SR 447.4 SS 440.5  
 RDE -.3494 RRA .0441 RC3 .0597 FAU .03194 RRT .3517 RRF -.3783 RTF -.8206 CRT .8440 CRS .9176 CST .9860  
 FDE .4027 FRA .4630 FC3-1.3791 BSP 3678 SGB 1254.3 R23 -.0498 R13 -.8246 LSA 828.7 MSA 197.5 SSA 18.3  
 BDE .5234 BRA .6845 BC3 .4963 FSP -336 SG1 1181.6 SG2 420.9 THA 8.93 EL1 702.4 EL2 196.8 ALF 36.57

LAUNCH DATE JAN 22 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 22 1969

MELIOCENTRIC CONIC DISTANCE 228.401  
 RL 147.24 LAL .00 LOL 121.80 VL 26.109 GAL .46 AZL 87.97 HCA 98.28 SMA 118.38 ECC .24386 INC 2.0327 V1 30.259  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.501 GAP -13.24 AZP 90.29 TAL 178.58 TAP 276.86 RCA 89.52 APO 147.25 V2 35.027  
 RC 46.364 GL 12.53 GP 9.97 ZAL 89.43 ZAP 10.45 ETS 290.25 ZAE 155.19 ETE 5.70 ZAC 126.16 ETC 156.70 CLP -3.14

PLANETOCENTRIC CONIC  
 C3 18.220 VHL 4.268 DLA 24.02 RAL 25.51 RAD 6567.7 VEL 11.815 PTH 2.09 VHP 8.741 DPA 21.03 RAP 31.41 ECC 1.2999  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 8 3060.70 -27.59 100.83 253.87 83.34 2 7 9 2460.7 -28.22 92.22  
 90.00 20 39 22 3968.12 -7.38 158.97 247.41 62.58 21 45 31 3368.1 -10.99 152.16  
 100.00 2 57 19 2734.47 -29.56 77.05 254.09 85.33 3 42 53 2134.5 -29.89 68.26  
 100.00 21 40 53 3769.57 -5.63 143.44 246.47 60.59 22 43 42 3169.6 -9.51 136.79  
 110.00 4 44 44 2398.41 -34.18 51.74 254.31 90.11 5 24 42 1798.4 -33.79 42.52  
 110.00 22 9 57 3678.40 -1.70 134.09 244.02 55.85 23 11 16 3078.4 -6.17 127.85

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3884 TRA -.6580 TC3 .5919 BAU .1459 SGT 1209.2 SGR 459.6 SG3 142.7 ST 596.9 SR 449.7 SS 452.5  
 RDE -.3348 RRA .0378 RC3 .0924 FAU .03433 RRT .3968 RRF -.4268 RTF -.8317 CRT .8551 CRS .9233 CST .9870  
 FDE .4180 FRA .4676 FC3-1.6314 BSP 3816 SGB 1293.6 R23 -.0569 R13 -.8364 LSA 851.8 MSA 193.2 SSA 19.0  
 BDE .5128 BRA .6591 BC3 .5991 FSP -376 SG1 1224.7 SG2 416.5 THA 9.71 EL1 722.0 EL2 192.7 ALF 35.72

LAUNCH DATE JAN 22 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 24 1969

MELIOCENTRIC CONIC DISTANCE 235.121  
 RL 147.24 LAL .00 LOL 121.80 VL 26.289 GAL .26 AZL 88.11 HCA 101.48 SMA 119.39 ECC .23328 INC 1.8935 V1 30.259  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.617 GAP -12.40 AZP 90.38 TAL 179.16 TAP 280.64 RCA 91.54 APO 147.24 V2 35.013  
 RC 47.558 GL 12.30 GP 10.72 ZAL 90.68 ZAP 11.84 ETS 298.18 ZAE 153.26 ETE 7.74 ZAC 126.96 ETC 155.61 CLP -5.06

PLANETOCENTRIC CONIC  
 C3 16.624 VHL 4.077 DLA 23.35 RAL 24.34 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 8.274 DPA 22.21 RAP 32.36 ECC 1.2736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 21 42 3003.48 -27.97 96.68 250.88 85.38 2 11 46 2403.5 -28.32 88.04  
 90.00 20 24 25 3982.89 -6.91 159.81 244.57 62.47 21 30 48 3382.9 -10.55 153.02  
 100.00 3 1 16 2682.48 -29.78 73.20 251.01 87.34 3 45 58 2082.5 -29.84 64.39  
 100.00 21 27 33 3779.12 -5.31 143.97 243.69 60.54 22 30 32 3179.1 -9.20 137.33  
 110.00 4 46 14 2354.08 -34.12 48.28 251.04 92.16 5 25 28 1754.1 -33.45 39.10  
 110.00 21 59 4 3680.28 -1.63 134.19 241.40 55.85 23 0 25 3080.3 -6.10 127.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3867 TRA -.6367 TC3 .6918 BAU .1566 SGT 1250.3 SGR 466.9 SG3 158.2 ST 617.3 SR 451.8 SS 462.0  
 RDE -.3213 RRA .0314 RC3 .1333 FAU .03693 RRT .4451 RRF -.4791 RTF -.8390 CRT .8649 CRS .9282 CST .9878  
 FDE .4318 FRA .4736 FC3-1.9231 BSP 3876 SGB 1334.6 R23 -.0671 R13 -.8446 LSA 873.2 MSA 189.1 SSA 19.8  
 BDE .5027 BRA .6375 BC3 .7045 FSP -418 SG1 1269.5 SG2 411.8 THA 10.56 EL1 741.2 EL2 188.8 ALF 34.93

LAUNCH DATE JAN 22 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC DISTANCE 241.833  
 RL 147.24 LAL .00 LOL 121.80 VL 26.454 GAL .06 AZL 88.25 HCA 104.68 SMA 120.33 ECC .22359 INC 1.7511 V1 30.259  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.723 GAP -11.59 AZP 90.44 TAL 179.78 TAP 284.46 RCA 93.43 APO 147.24 V2 35.000  
 RC 48.883 GL 11.95 GP 11.55 ZAL 92.00 ZAP 13.50 ETS 304.43 ZAE 151.50 ETE 9.72 ZAC 127.63 ETC 154.44 CLP -7.05

PLANETOCENTRIC CONIC  
 C3 15.236 VHL 3.903 CLA 22.53 RAL 23.15 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 7.830 DPA 23.44 RAP 33.21 ECC 1.2507  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 28 27 2942.96 -28.22 92.27 247.91 87.58 2 17 30 2343.0 -28.26 83.61  
 90.00 20 8 12 4003.82 -6.25 161.00 241.77 62.33 21 14 56 3403.8 -9.91 154.23  
 100.00 3 6 22 2627.24 -29.89 69.10 247.96 89.50 3 50 9 2027.2 -29.64 60.30  
 100.00 21 12 58 3794.77 -4.79 144.83 240.97 60.46 22 16 13 3194.8 -8.69 138.21  
 110.00 4 48 42 2307.09 -33.94 44.62 247.80 94.32 5 27 9 1707.1 -32.97 35.52  
 110.00 21 47 8 3687.68 -1.34 134.57 238.83 55.84 22 48 35 3087.7 -5.82 128.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3803 TRA -.6149 TC3 .8043 BAU .1680 SGT 1288.7 SGR 476.8 SG3 175.2 ST 630.8 SR 453.2 SS 466.6  
 RDE -.3086 RRA .0251 RC3 .1837 FAU .03974 RRT .4947 RRF -.5340 RTF -.8476 CRT .8726 CRS .9318 CST .9886  
 FDE .4418 FRA .4802 FC3-2.2584 BSP 3945 SGB 1374.1 R23 -.0783 R13 -.8542 LSA 886.7 MSA 185.3 SSA 20.6  
 BDE .4898 BRA .6154 BC3 .8250 FSP -465 SG1 1312.5 SG2 406.9 THA 11.49 EL1 754.3 EL2 185.1 ALF 34.45

LAUNCH DATE JAN 22 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC DISTANCE 248.537  
 RL 147.24 LAL .00 LOL 121.80 VL 26.605 GAL -.12 AZL 88.40 HCA 107.88 SMA 121.21 ECC .21474 INC 1.6048 V1 30.259  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.819 GAP -10.81 AZP 90.49 TAL 180.43 TAP 288.31 RCA 95.18 APO 147.24 V2 34.987  
 RC 50.327 GL 11.47 GP 12.49 ZAL 93.37 ZAP 15.41 ETS 309.32 ZAE 149.93 ETE 11.73 ZAC 128.16 ETC 153.19 CLP -9.10

PLANETOCENTRIC CONIC  
 C3 14.028 VHL 3.745 CLA 21.57 RAL 21.97 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 7.408 DPA 24.73 RAP 33.96 ECC 1.2309  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 36 17 2879.57 -28.32 87.64 244.98 89.90 2 24 17 2279.6 -28.03 78.99  
 90.00 19 50 59 4030.49 -5.41 162.50 239.07 62.16 20 58 9 3430.5 -9.09 155.76  
 100.00 3 12 35 2569.06 -29.84 64.77 244.95 91.77 3 55 24 1969.1 -29.28 56.01  
 100.00 20 57 22 3816.23 -4.07 146.02 238.33 60.36 22 0 58 3216.2 -7.98 139.42  
 110.00 4 52 10 2257.52 -33.62 40.79 244.63 96.56 5 29 47 1657.5 -32.35 31.79  
 110.00 21 34 16 3700.54 -.85 135.24 236.33 55.83 22 35 57 3100.5 -5.33 129.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3633 TRA -.5859 TC3 .9466 BAU .1836 SGT 1319.3 SGR 490.7 SG3 195.2 ST 626.9 SR 452.7 SS 461.3  
 RDE -.2958 RRA .0190 RC3 .2499 FAU .04331 RRT .5469 RRF -.5917 RTF -.8607 CRT .8772 CRS .9333 CST .9891  
 FDE .4425 FRA .4856 FC3-2.6732 BSP 4253 SGB 1407.6 R23 -.0868 R13 -.8685 LSA 881.6 MSA 181.6 SSA 21.5  
 BDE .4685 BRA .5862 BC3 .9790 FSP -535 SG1 1349.1 SG2 401.8 THA 12.64 EL1 751.7 EL2 181.2 ALF 34.65

LAUNCH DATE JAN 22 1969

FLIGHT TIME 98.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC DISTANCE 255.228  
 RL 147.24 LAL .00 LOL 121.80 VL 26.741 GAL -.29 AZL 88.55 HCA 111.07 SMA 122.02 ECC .20670 INC 1.4530 V1 30.259  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.906 GAP -10.07 AZP 90.52 TAL 181.11 TAP 292.18 RCA 96.80 APO 147.25 V2 34.974  
 RC 51.881 GL 10.85 GP 13.54 ZAL 94.78 ZAP 17.53 ETS 313.14 ZAE 148.53 ETE 13.80 ZAC 128.52 ETC 151.86 CLP -11.23

PLANETOCENTRIC CONIC  
 C3 12.980 VHL 3.603 CLA 20.47 RAL 20.83 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 7.010 DPA 26.10 RAP 34.57 ECC 1.2136  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 12 2813.65 -28.23 82.82 242.12 92.31 2 32 5 2213.6 -27.61 74.21  
 90.00 19 32 59 4062.62 -4.38 164.30 236.50 62.00 20 40 41 3462.6 -8.10 157.59  
 100.00 3 19 55 2508.19 -29.63 60.26 242.03 94.14 4 1 43 1908.2 -28.74 51.57  
 100.00 20 40 56 3843.30 -3.15 147.51 235.82 60.26 21 44 59 3243.3 -7.09 140.93  
 110.00 4 56 41 2205.45 -33.15 36.80 241.56 98.88 5 33 27 1605.4 -31.57 27.93  
 110.00 21 20 39 3718.81 -.15 136.20 233.94 55.82 22 22 38 3118.8 -4.64 129.98

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3534 TRA -.5582 TC3 1.0853 BAU .1969 SGT 1351.0 SGR 512.1 SG3 217.2 ST 630.3 SR 453.0 SS 457.2  
 RDE -.2848 RRA .0139 RC3 .3301 FAU .04716 RRT .6046 RRF -.6537 RTF -.8689 CRT .8851 CRS .9369 CST .9897  
 FDE .4466 FRA .4844 FC3-3.1455 BSP 4503 SGB 1444.8 R23 -.0987 R13 -.8782 LSA 883.2 MSA 176.1 SSA 22.7  
 BDE .4539 BRA .5584 BC3 1.1344 FSP -612 SG1 1389.3 SG2 396.7 THA 14.08 EL1 756.0 EL2 175.8 ALF 34.59

LAUNCH DATE JAN 22 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC DISTANCE 261.905  
 RL 147.24 LAL .00 LOL 121.80 VL 26.866 GAL -.45 AZL 88.71 HCA 114.26 SMA 122.77 ECC .19941 INC 1.2948 V1 30.259  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.983 GAP -9.35 AZP 90.53 TAL 181.81 TAP 296.07 RCA 98.29 APO 147.26 V2 34.961  
 RC 53.536 GL 10.06 GP 14.74 ZAL 96.22 ZAP 19.85 ETS 316.13 ZAE 147.31 ETE 16.00 ZAC 128.70 ETC 150.46 CLP -13.45

PLANETOCENTRIC CONIC  
 C3 12.072 VHL 3.474 CLA 19.20 RAL 19.76 RAD 6567.5 VEL 11.552 PTH 2.02 VHP 6.634 DPA 27.56 RAP 35.04 ECC 1.1987  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 55 9 2745.39 -27.94 77.85 239.36 94.79 2 40 55 2145.4 -26.98 69.31  
 90.00 19 14 25 4099.93 -3.19 166.40 234.09 61.85 20 22 45 3499.9 -6.93 159.71  
 100.00 3 28 22 2444.80 -29.23 55.59 239.21 96.56 4 9 7 1844.8 -28.01 47.00  
 100.00 20 23 53 3875.76 -2.06 149.29 233.46 60.17 21 28 29 3275.8 -6.01 142.74  
 110.00 5 2 18 2150.92 -32.50 32.68 238.61 101.24 5 38 9 1550.9 -30.61 23.97  
 110.00 21 6 26 3742.40 .75 137.43 231.71 55.82 22 8 49 3142.4 -3.74 131.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3393 TRA -.5345 TC3 1.2126 BAU .2074 SGT 1376.3 SGR 540.2 SG3 241.0 ST 626.2 SR 451.9 SS 447.3  
 RDE -.2740 RRA .0075 RC3 .4258 FAU .05120 RRT .6588 RRF -.7132 RTF -.8752 CRT .8902 CRS .9379 CST .9904  
 FDE .4444 FRA .4909 FC3-3.6720 BSP 4616 SGB 1478.5 R23 -.1134 R13 -.8866 LSA 875.5 MSA 171.6 SSA 24.0  
 BDE .4361 BRA .5345 BC3 1.2851 FSP -685 SG1 1425.5 SG2 392.4 THA 15.72 EL1 753.0 EL2 171.2 ALF 34.77

LAUNCH DATE JAN 22 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 268.567

RL 147.24 LAL .00 LOL 121.80 VL 26.978 GAL -.60 AZL 88.87 HCA 117.45 SMA 123.47 ECC .19282 INC 1.1285 V1 30.259  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.053 GAP -8.66 AZP 90.52 TAL 182.51 TAP 299.96 RCA 99.66 APO 147.27 V2 34.948  
 RC 55.282 GL 9.10 GP 16.08 ZAL 97.65 ZAP 22.39 ETS 318.51 ZAE 146.24 ETE 18.39 ZAC 128.65 ETC 149.01 CLP -15.78

PLANETOCENTRIC CONIC

C3 11.286 VHL 3.360 CLA 17.77 RAL 18.76 RAD 6567.4 VEL 11.518 PTH 2.01 VHP 6.281 DPA 29.13 RAP 35.33 ECC 1.1857  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 6 12 2674.87 -27.44 72.75 236.73 97.30 2 50 47 2074.9 -26.14 64.32  
 90.00 18 55 27 4142.33 -1.82 168.76 231.88 61.74 20 4 29 3542.3 -5.59 162.11  
 100.00 3 37 58 2378.94 -28.62 50.79 236.54 99.02 4 17 37 1778.9 -27.08 42.33  
 100.00 20 6 22 3913.49 -.78 151.36 231.30 60.12 21 11 55 3313.5 -4.75 144.82  
 110.00 5 9 4 2093.93 -31.66 28.44 235.84 103.61 5 43 58 1493.9 -29.47 19.92  
 110.00 20 51 45 3771.27 1.85 138.93 229.65 55.86 21 54 37 3171.3 -2.64 132.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3219 TRA -.5139 TC3 1.3425 BAU .2185 SGT 1400.8 SGR 577.8 SG3 267.6 ST 615.1 SR 448.7 SS 429.8  
 ROE -.2630 RRA .0002 RC3 .5421 FAU .05569 RRT .7097 RRF -.7692 RTF -.8811 CRT .8932 CRS .9361 CST .9912  
 FDE .4336 FRA .5025 FC3-4.2717 BSP 4732 SGB 1515.3 R23 -.1294 R13 -.8952 LSA 857.7 MSA 167.9 SSA 25.6  
 BDE .4157 BRA .5139 BC3 1.4478 FSP -766 SG1 1464.4 SG2 389.4 THA 17.60 EL1 742.8 EL2 167.1 ALF 35.12

LAUNCH DATE JAN 22 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 275.211

RL 147.24 LAL .00 LOL 121.80 VL 27.079 GAL -.74 AZL 89.05 HCA 120.64 SMA 124.10 ECC .18690 INC .9525 V1 30.259  
 RP 108.47 LAP .82 LOP 242.44 VP 37.115 GAP -8.00 AZP 90.49 TAL 183.21 TAP 303.84 RCA 100.90 APO 147.29 V2 34.936  
 RC 57.109 GL 7.94 GP 17.61 ZAL 99.07 ZAP 25.13 ETS 320.41 ZAE 145.30 ETE 21.01 ZAC 128.37 ETC 147.52 CLP -18.23

PLANETOCENTRIC CONIC

C3 10.609 VHL 3.257 CLA 16.17 RAL 17.88 RAD 6567.4 VEL 11.489 PTH 2.00 VHP 5.952 DPA 30.81 RAP 35.41 ECC 1.1746  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 18 24 2602.03 -26.70 67.55 234.28 99.80 3 1 46 2002.0 -25.07 59.26  
 90.00 18 36 11 4189.81 -.29 171.41 229.90 61.68 19 46 1 3589.8 -4.07 164.78  
 100.00 3 48 47 2310.58 -27.79 45.88 234.05 101.48 4 27 17 1710.6 -25.93 37.57  
 100.00 19 48 30 3956.50 .68 153.72 229.36 60.11 20 54 27 3356.5 -3.30 147.20  
 110.00 5 17 3 2034.40 -30.63 24.11 233.26 105.98 5 50 57 1434.4 -28.13 15.80  
 110.00 20 36 43 3805.44 3.16 140.72 227.81 55.95 21 40 9 3205.4 -1.33 134.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3001 TRA -.4917 TC3 1.4673 BAU .2295 SGT 1415.3 SGR 626.8 SG3 296.5 ST 593.7 SR 442.1 SS 401.8  
 ROE -.2512 RRA -.0074 RC3 .6820 FAU .06057 RRT .7554 RRF -.8195 RTF -.8866 CRT .8943 CRS .9309 CST .9921  
 FDE .4106 FRA .5135 FC3-4.9426 BSP 4889 SGB 1547.9 R23 -.1448 R13 -.9041 LSA 825.6 MSA 164.1 SSA 27.4  
 BDE .3913 BRA .4917 BC3 1.6180 FSP -861 SG1 1498.5 SG2 387.9 THA 19.88 EL1 722.1 EL2 162.6 ALF 35.76

LAUNCH DATE JAN 22 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 281.835

RL 147.24 LAL .00 LOL 121.80 VL 27.170 GAL -.86 AZL 89.24 HCA 123.82 SMA 124.67 ECC .18159 INC .7646 V1 30.259  
 RP 108.51 LAP .64 LOP 245.62 VP 37.170 GAP -7.37 AZP 90.43 TAL 183.89 TAP 307.71 RCA 102.04 APO 147.31 V2 34.923  
 RC 59.010 GL 6.57 GP 19.34 ZAL 100.45 ZAP 28.11 ETS 321.96 ZAE 144.46 ETE 23.93 ZAC 127.82 ETC 146.02 CLP -20.80

PLANETOCENTRIC CONIC

C3 10.029 VHL 3.167 CLA 14.39 RAL 17.13 RAD 6567.4 VEL 11.464 PTH 1.99 VHP 5.649 DPA 32.63 RAP 35.25 ECC 1.1651  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 31 52 2526.66 -25.71 62.25 232.05 102.28 3 13 59 1926.7 -23.77 54.12  
 90.00 18 16 45 4242.54 1.41 174.35 228.18 61.72 19 27 27 3642.5 -2.38 167.73  
 100.00 4 0 54 2239.55 -26.73 40.87 231.78 103.91 4 38 13 1639.5 -24.55 32.75  
 100.00 19 30 24 4004.89 2.32 156.38 227.68 60.19 20 37 9 3404.9 -1.66 149.86  
 110.00 5 26 20 1972.19 -29.38 19.70 230.92 108.32 5 59 13 1372.2 -26.59 11.62  
 110.00 20 21 27 3845.01 4.66 142.79 226.22 56.10 21 25 32 3245.0 .18 136.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2749 TRA -.4715 TC3 1.5822 BAU .2408 SGT 1423.8 SGR 690.1 SG3 327.9 ST 563.9 SR 430.9 SS 363.8  
 ROE -.2380 RRA -.0161 RC3 .8501 FAU .06588 RRT .7941 RRF -.8629 RTF -.8910 CRT .8928 CRS .9191 CST .9930  
 FDE .3734 FRA .5285 FC3-5.6872 BSP 5027 SGB 1582.2 R23 -.1606 R13 -.9129 LSA 780.5 MSA 161.2 SSA 29.7  
 BDE .3636 BRA .4718 BC3 1.7961 FSP -963 SG1 1533.5 SG2 389.4 THA 22.59 EL1 691.9 EL2 158.2 ALF 36.52

LAUNCH DATE JAN 22 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 288.440

RL 147.24 LAL .00 LOL 121.80 VL 27.252 GAL -.98 AZL 89.44 HCA 127.00 SMA 125.20 ECC .17685 INC .5623 V1 30.259  
 RP 108.55 LAP .45 LOP 248.80 VP 37.219 GAP -6.76 AZP 90.34 TAL 184.55 TAP 311.55 RCA 103.06 APO 147.34 V2 34.911  
 RC 60.976 GL 4.97 GP 21.30 ZAL 101.77 ZAP 31.33 ETS 323.25 ZAE 143.68 ETE 27.21 ZAC 126.95 ETC 144.52 CLP -23.53

PLANETOCENTRIC CONIC

C3 9.536 VHL 3.088 CLA 12.41 RAL 16.54 RAD 6567.3 VEL 11.442 PTH 1.98 VHP 5.371 DPA 34.60 RAP 34.80 ECC 1.1569  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 46 45 2448.42 -24.47 56.86 230.06 104.71 3 27 34 1848.4 -22.21 48.91  
 90.00 17 57 8 4300.84 3.29 177.61 226.77 61.86 19 8 49 3700.8 -.50 170.98  
 100.00 4 14 28 2165.54 -25.41 35.76 229.77 106.29 4 50 34 1565.5 -22.94 27.84  
 100.00 19 12 6 4058.95 4.15 159.35 226.29 60.37 20 19 45 3459.0 .17 152.82  
 110.00 5 37 5 1907.03 -27.90 15.21 228.84 110.61 6 8 52 1307.0 -24.84 7.37  
 110.00 20 5 58 3890.23 6.38 145.17 224.91 56.35 21 10 49 3290.2 1.91 138.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2485 TRA -.4548 TC3 1.6699 BAU .2513 SGT 1422.3 SGR 769.4 SG3 361.0 ST 529.8 SR 414.0 SS 317.3  
 ROE -.2227 RRA -.0270 RC3 1.0475 FAU .07136 RRT .8244 RRF -.8984 RTF -.8928 CRT .8896 CRS .8944 CST .9927  
 FDE .3209 FRA .5514 FC3-6.4785 BSP 5110 SGB 1617.0 R23 -.1768 R13 -.9209 LSA 725.6 MSA 159.1 SSA 32.5  
 BDE .3337 BRA .4556 BC3 1.9712 FSP -1066 SG1 1568.0 SG2 395.0 THA 25.79 EL1 654.8 EL2 153.0 ALF 37.18

LAUNCH DATE JAN 22 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 295.022

RL 147.24 LAL .00 LOL 121.80 VL 27.325 GAL -1.08 AZL 89.66 HCA 130.18 SMA 125.67 ECC .17264 INC .3424 V1 30.259  
 RP 108.58 LAP .26 LOP 251.98 VP 37.261 GAP -6.17 A2P 90.22 TAL 185.18 TAP 315.36 RCA 103.97 APO 147.36 V2 34.900  
 RC 63.000 GL 3.10 GP 23.52 ZAL 103.01 ZAP 34.80 ETS 324.37 ZAE 142.90 ETE 30.89 ZAC 125.76 ETC 143.07 CLP -26.42

PLANETOCENTRIC CONIC

C3 9.124 VHL 3.021 DLA 10.22 RAL 16.13 RAD 6567.3 VEL 11.424 PTH 1.98 VHP 5.122 DPA 36.74 RAP 34.01 ECC 1.1502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 3 17 2366.75 -22.95 51.36 228.36 107.06 3 42 44 1766.8 -20.39 43.62  
 90.00 17 37 19 4365.29 5.35 181.23 225.69 62.15 18 50 4 3765.3 1.58 174.57  
 100.00 4 29 42 2088.06 -23.83 30.55 228.05 108.60 5 4 30 1488.1 -21.07 22.84  
 100.00 18 53 36 4119.22 6.17 162.69 225.24 60.69 20 2 15 3519.2 2.21 156.13  
 110.00 5 49 27 1838.50 -26.17 10.63 227.08 112.82 6 20 5 1238.5 -22.85 3.04  
 110.00 19 50 20 3941.55 8.30 147.90 223.93 56.72 20 56 1 3341.5 3.87 141.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2195 TRA -.4391 TC3 1.7317 BAU .2626 SGT 1408.6 SGR 867.5 SG3 395.3 ST 488.7 SR 388.5 SS 262.3  
 RDE -.2041 RRA -.0402 RC3 1.2787 FAU .07696 RRT .8469 RRF -.9263 RTF -.8933 CRT .8839 CRS .8382 CST .9846  
 FDE .2481 FRA .5798 FC3-7.3023 BSP 5220 SGB 1654.3 R23 -.1890 R13 -.9296 LSA 657.4 MSA 158.7 SSA 35.9  
 BDE .2997 BRA .4409 BC3 2.1526 FSP -1176 SG1 1603.9 SG2 405.1 THA 29.62 EL1 606.9 EL2 146.3 ALF 37.66

LAUNCH DATE JAN 22 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 301.583

RL 147.24 LAL .00 LOL 121.80 VL 27.389 GAL -1.17 AZL 89.90 HCA 133.35 SMA 126.09 ECC .16892 INC .1004 V1 30.259  
 RP 108.62 LAP .07 LOP 255.16 VP 37.298 GAP -5.60 A2P 90.07 TAL 185.77 TAP 319.12 RCA 104.79 APO 147.39 V2 34.889  
 RC 65.076 GL .94 GP 26.03 ZAL 104.14 ZAP 38.55 ETS 325.39 ZAE 142.04 ETE 35.02 ZAC 124.19 ETC 141.72 CLP -29.50

PLANETOCENTRIC CONIC

C3 8.789 VHL 2.965 DLA 7.80 RAL 15.92 RAD 6567.3 VEL 11.410 PTH 1.97 VHP 4.904 DPA 39.07 RAP 32.81 ECC 1.1446  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 21 44 2280.89 -21.12 45.73 227.00 109.31 3 59 45 1680.9 -18.29 38.19  
 90.00 17 17 12 4436.78 7.61 185.27 224.98 62.64 18 31 9 3836.8 3.88 178.57  
 100.00 4 46 50 2006.43 -21.96 25.21 226.67 110.81 5 20 17 1406.4 -18.93 17.72  
 100.00 18 34 48 4186.48 8.39 166.44 224.56 61.20 19 44 34 3586.5 4.48 159.83  
 110.00 6 3 39 1766.03 -24.17 5.94 225.65 114.94 6 33 5 1166.0 -20.61 358.61  
 110.00 19 34 28 3999.63 10.46 151.01 223.31 57.27 20 41 8 3399.6 6.07 144.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1850 TRA -.4216 TC3 1.7739 BAU .2769 SGT 1382.2 SGR 988.6 SG3 430.7 ST 435.5 SR 348.1 SS 201.0  
 RDE -.1788 RRA -.0553 RC3 1.5515 FAU .08276 RRT .8635 RRF -.9477 RTF -.8941 CRT .8732 CRS .6736 CST .9274  
 FDE .1433 FRA .6095 FC3-8.1515 BSP 5409 SGB 1699.3 R23 -.1910 R13 -.9403 LSA 568.2 MSA 163.7 SSA 39.7  
 BDE .2573 BRA .4252 BC3 2.3566 FSP -1298 SG1 1647.0 SG2 418.5 THA 34.21 EL1 540.5 EL2 136.7 ALF 37.74

LAUNCH DATE JAN 22 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 308.120

RL 147.24 LAL .00 LOL 121.80 VL 27.446 GAL -1.25 AZL 90.17 HCA 136.53 SMA 126.47 ECC .16565 INC .1665 V1 30.259  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.330 GAP -5.05 A2P 89.88 TAL 186.31 TAP 322.84 RCA 105.52 APO 147.42 V2 34.878  
 RC 67.198 GL -1.56 GP 28.86 ZAL 105.15 ZAP 42.57 ETS 326.41 ZAE 141.02 ETE 39.61 ZAC 122.23 ETC 140.49 CLP -32.77

PLANETOCENTRIC CONIC

C3 8.532 VHL 2.921 DLA 5.10 RAL 15.94 RAD 6567.3 VEL 11.398 PTH 1.97 VHP 4.721 DPA 41.60 RAP 31.13 ECC 1.1404  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 31 2189.85 -18.96 39.92 226.02 111.43 4 19 1 1589.8 -15.88 32.60  
 90.00 16 56 38 4516.52 10.07 189.83 224.72 63.39 18 11 54 3916.5 6.42 183.05  
 100.00 5 6 16 1919.73 -19.76 19.71 225.68 112.90 5 38 16 1319.7 -16.49 12.45  
 100.00 18 15 34 4261.88 10.83 170.70 224.32 61.97 19 26 36 3661.9 7.00 164.01  
 110.00 6 20 1 1688.91 -21.87 1.14 224.63 116.95 6 48 10 1088.9 -18.08 354.05  
 110.00 19 18 18 4065.46 12.85 154.61 223.13 58.05 20 26 4 3465.5 8.54 148.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1533 TRA -.4094 TC3 1.7561 BAU .2914 SGT 1339.0 SGR 1131.9 SG3 463.6 ST 387.1 SR 293.7 SS 170.8  
 RDE -.1470 RRA -.0763 RC3 1.8560 FAU .08787 RRT .8710 RRF -.9632 RTF -.8898 CRT .8673 CRS .2593 CST .6676  
 FDE .0166 FRA .6552 FC3-8.9162 BSP 5559 SGB 1753.3 R23 -.1891 R13 -.9501 LSA 480.7 MSA 180.3 SSA 42.0  
 BDE .2124 BRA .4165 BC3 2.5551 FSP -1408 SG1 1697.6 SG2 438.7 THA 39.52 EL1 470.8 EL2 120.2 ALF 36.06

LAUNCH DATE JAN 22 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 314.634

RL 147.24 LAL .00 LOL 121.80 VL 27.496 GAL -1.31 AZL 90.47 HCA 139.70 SMA 126.80 ECC .16280 INC .4671 V1 30.259  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.357 GAP -4.53 A2P 89.64 TAL 186.79 TAP 326.49 RCA 106.16 APO 147.44 V2 34.867  
 RC 69.360 GL -4.45 GP 32.04 ZAL 105.99 ZAP 46.88 ETS 327.49 ZAE 139.72 ETE 44.63 ZAC 119.86 ETC 139.46 CLP -36.26

PLANETOCENTRIC CONIC

C3 8.357 VHL 2.891 DLA 2.10 RAL 16.23 RAD 6567.3 VEL 11.391 PTH 1.97 VHP 4.576 DPA 44.32 RAP 28.87 ECC 1.1375  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 6 9 2092.26 -16.42 33.88 225.50 113.39 4 41 2 1492.3 -13.12 26.76  
 90.00 16 35 17 4606.32 12.76 195.06 224.97 64.50 17 52 3 4006.3 9.22 188.16  
 100.00 5 28 28 1826.74 -17.19 14.00 225.14 114.84 5 58 55 1226.7 -13.70 6.95  
 100.00 17 55 39 4347.07 13.51 175.61 224.59 63.08 19 8 6 3747.1 9.79 168.80  
 110.00 6 38 58 1606.12 -19.24 356.16 224.05 118.82 7 5 44 1006.1 -15.24 349.32  
 110.00 19 1 39 4140.45 15.52 158.79 223.45 59.15 20 10 39 3540.5 11.31 152.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1198 TRA -.3964 TC3 1.6971 BAU .3102 SGT 1279.5 SGR 1302.9 SG3 493.6 ST 336.0 SR 217.6 SS 212.0  
 RDE -.1036 RRA -.1025 RC3 2.1973 FAU .09235 RRT .8729 RRF -.9743 RTF -.8838 CRT .8792 CRS -.2333 CST .1977  
 FDE -.1455 FRA .7068 FC3-9.5670 BSP 5800 SGB 1826.1 R23 -.1748 R13 -.9610 LSA 390.7 MSA 225.6 SSA 40.2  
 BDE .1584 BRA .4094 BC3 2.7764 FSP -1514 SG1 1767.1 SG2 460.3 THA 45.59 EL1 390.2 EL2 89.2 ALF 31.49

LAUNCH DATE JAN 22 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.540 GAL -1.37 AZL 90.81 HCA 142.87 SMA 127.09 ECC .16032 INC .8099 V1 30.259  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.380 GAP -4.02 AZP 89.35 TAL 187.21 TAP 330.07 RCA 106.71 APO 147.46 V2 34.858  
 RC 71.560 GL -7.77 GP 35.57 ZAL 106.64 ZAP 51.44 ETS 328.72 ZAE 138.04 ETE 50.01 ZAC 117.06 ETC 138.68 CLP -39.97

DISTANCE 321.123

PLANETOCENTRIC CONIC

C3 8.278 VHL 2.877 DLA -1.26 RAL 16.81 RAD 6567.3 VEL 11.387 PTH 1.97 VHP 4.477 DPA 47.23 RAP 25.92 ECC 1.1362  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 33 23 1986.58 -13.46 27.52 225.52 115.15 5 6 29 1386.4 -9.96 20.59  
 90.00 16 12 42 4708.64 15.67 201.16 225.84 66.11 17 31 11 4108.6 12.31 194.09  
 100.00 5 54 8 1725.89 -14.21 7.99 225.15 116.58 6 22 54 1125.9 -10.53 1.14  
 100.00 17 34 38 4444.37 16.43 181.36 225.48 64.67 18 48 42 3844.4 12.89 174.36  
 110.00 7 1 2 1516.48 -16.21 350.97 224.02 120.51 7 26 18 916.5 -12.04 344.35  
 110.00 18 44 14 4226.54 18.46 163.73 224.38 60.70 19 54 40 3626.5 14.41 156.95

DIFFERENTIAL CORRECTIONS

TDE -.0903 TRA -.3857 TC3 1.5683 BAU .3318  
 RDE -.0458 RRA -.1378 RC3 2.5558 FAU .09529  
 FDE -.3358 FRA .7711 FC3-9.9660 BSP 6053  
 BDE .1012 BRA .4095 BC3 2.9986 FSP -1590

MID-COURSE EXECUTION ACCURACY

SGT 1198.7 SGR 1498.8 SG3 516.2  
 RRT .8652 RRF -.9821 RTF -.8706  
 SGB 1919.2 R23 -.1535 R13 -.9709  
 SG1 1856.9 SG2 485.1 THA 52.30

ORBIT DETERMINATION ACCURACY

ST 293.5 SR 130.6 SS 321.1  
 CRT .9542 CRS -.1425 CST -.0383  
 LSA 329.1 MSA 311.2 SSA 33.6  
 EL1 319.2 EL2 35.9 ALF 23.31

LAUNCH DATE JAN 22 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.577 GAL -1.41 AZL 91.21 HCA 146.03 SMA 127.34 ECC .15818 INC 1.2063 V1 30.259  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.398 GAP -3.53 AZP 89.00 TAL 187.55 TAP 333.59 RCA 107.19 APO 147.48 V2 34.848  
 RC 73.792 GL -11.61 GP 39.47 ZAL 107.04 ZAP 56.22 ETS 330.19 ZAE 135.88 ETE 55.63 ZAC 113.86 ETC 138.19 CLP -43.93

DISTANCE 327.589

PLANETOCENTRIC CONIC

C3 8.319 VHL 2.884 DLA -5.04 RAL 17.73 RAD 6567.3 VEL 11.389 PTH 1.97 VHP 4.431 DPA 50.29 RAP 22.13 ECC 1.1369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 5 15 1869.79 -9.99 20.72 226.22 116.63 5 36 24 1269.8 -6.33 13.95  
 90.00 15 48 11 4827.08 18.79 208.45 227.48 68.42 17 8 38 4227.1 15.70 201.14  
 100.00 6 24 13 1615.04 -10.74 1.59 225.82 118.06 6 51 8 1015.0 -6.91 354.90  
 100.00 17 11 54 4557.06 19.58 188.25 227.14 66.95 18 27 51 3957.1 16.29 181.00  
 110.00 7 27 1 1418.40 -12.75 345.48 224.64 121.99 7 50 40 818.4 -8.43 339.05  
 110.00 18 25 35 4326.47 21.67 169.69 226.09 62.90 19 37 42 3726.5 17.87 162.63

DIFFERENTIAL CORRECTIONS

TDE -.0655 TRA -.3740 TC3 1.3739 BAU .3581  
 RDE .0325 RRA -.1842 RC3 2.9120 FAU .09625  
 FDE -.5544 FRA .8420 FC3-10.0172 BSP 6420  
 BDE .0731 BRA .4169 BC3 3.2198 FSP -1640

MID-COURSE EXECUTION ACCURACY

SGT 1096.0 SGR 1720.7 SG3 528.5  
 RRT .8467 RRF -.9875 RTF -.8485  
 SGB 2040.1 R23 -.1253 R13 -.9798  
 SG1 1975.8 SG2 507.8 THA 59.43

ORBIT DETERMINATION ACCURACY

ST 259.9 SR 137.3 SS 468.4  
 CRT .4891 CRS .8058 CST -.0831  
 LSA 481.8 MSA 270.1 SSA 25.4  
 EL1 270.5 EL2 115.1 ALF 17.82

LAUNCH DATE JAN 22 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.608 GAL -1.44 AZL 91.67 HCA 149.19 SMA 127.55 ECC .15636 INC 1.6734 V1 30.259  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.413 GAP -3.05 AZP 88.56 TAL 187.83 TAP 337.02 RCA 107.61 APO 147.49 V2 34.839  
 RC 76.053 GL -16.03 GP 43.73 ZAL 107.16 ZAP 61.16 ETS 332.01 ZAE 133.16 ETE 61.36 ZAC 110.28 ETC 138.07 CLP -48.13

DISTANCE 334.029

PLANETOCENTRIC CONIC

C3 8.522 VHL 2.919 DLA -9.28 RAL 19.05 RAD 6567.3 VEL 11.398 PTH 1.97 VHP 4.450 DPA 53.45 RAP 17.35 ECC 1.1402  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 43 22 1739.00 -5.91 13.27 227.78 117.74 6 12 21 1139.0 -2.15 6.61  
 90.00 15 20 33 4966.95 22.04 217.42 230.11 71.76 16 43 20 4366.9 19.34 209.78  
 100.00 7 0 10 1491.24 -6.70 354.62 227.35 119.20 7 25 1 891.2 -2.76 348.06  
 100.00 16 46 26 4689.94 22.89 196.73 229.79 70.23 18 4 36 4089.9 19.99 189.14  
 110.00 7 58 4 1309.93 -8.76 339.61 226.09 123.17 8 19 54 709.9 -4.34 333.31  
 110.00 18 5 2 4444.01 25.13 177.07 228.81 66.03 19 19 6 3844.0 21.67 169.62

DIFFERENTIAL CORRECTIONS

TDE -.0502 TRA -.3601 TC3 1.1117 BAU .3888  
 RDE .1375 RRA -.2455 RC3 3.2263 FAU .09458  
 FDE -.7902 FRA .9166 FC3-9.6086 BSP 6868  
 BDE .1464 BRA .4359 BC3 3.4125 FSP -1643

MID-COURSE EXECUTION ACCURACY

SGT 971.6 SGR 1964.6 SG3 527.0  
 RRT .8099 RRF -.9911 RTF -.8090  
 SGB 2191.7 R23 -.0945 R13 -.9867  
 SG1 2127.6 SG2 526.3 THA 66.66

ORBIT DETERMINATION ACCURACY

ST 237.2 SR 312.3 SS 635.6  
 CRT .0808 CRS .9846 CST -.0817  
 LSA 706.5 MSA 241.2 SSA 18.4  
 EL1 313.6 EL2 235.4 ALF 81.92

LAUNCH DATE JAN 22 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.635 GAL -1.46 AZL 92.24 HCA 152.35 SMA 127.73 ECC .15483 INC 2.2356 V1 30.259  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.425 GAP -2.60 AZP 88.02 TAL 188.03 TAP 340.38 RCA 107.95 APO 147.50 V2 34.831  
 RC 78.340 GL -21.10 GP 48.32 ZAL 106.92 ZAP 66.15 ETS 334.27 ZAE 129.84 ETE 67.05 ZAC 106.38 ETC 138.36 CLP -52.55

DISTANCE 340.444

PLANETOCENTRIC CONIC

C3 8.962 VHL 2.994 DLA -14.05 RAL 20.83 RAD 6567.3 VEL 11.417 PTH 1.98 VHP 4.548 DPA 56.63 RAP 11.36 ECC 1.1475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 30 27 1588.28 -1.08 4.83 230.51 118.30 6 56 56 988.3 2.71 358.20  
 90.00 14 47 39 5136.85 25.20 228.86 234.01 76.65 16 13 16 4536.9 23.12 220.81  
 100.00 7 44 21 1349.87 -1.95 346.82 230.03 119.83 8 6 51 749.9 2.04 340.30  
 100.00 16 16 27 4850.49 26.17 207.52 233.74 75.01 17 37 17 4250.5 23.85 199.49  
 110.00 8 35 53 1188.43 -4.19 333.18 228.64 123.96 8 55 42 588.4 .30 326.97  
 110.00 17 41 23 4584.70 28.68 186.46 232.86 70.55 18 57 48 3984.7 25.76 178.50

DIFFERENTIAL CORRECTIONS

TDE -.0494 TRA -.3403 TC3 .7957 BAU .4239  
 RDE .2781 RRA -.3261 RC3 3.4472 FAU .08993  
 FDE -1.0295 FRA .9860 FC3-8.6876 BSP 7454  
 BDE .2825 BRA .4713 BC3 3.5379 FSP -1599

MID-COURSE EXECUTION ACCURACY

SGT 828.7 SGR 2226.5 SG3 509.1  
 RRT .7398 RRF -.9936 RTF -.7368  
 SGB 2375.7 R23 -.0646 R13 -.9915  
 SG1 2314.3 SG2 536.4 THA 73.71

ORBIT DETERMINATION ACCURACY

ST 223.0 SR 569.6 SS 809.8  
 CRT -.0831 CRS .9977 CST -.1446  
 LSA 990.0 MSA 223.0 SSA 13.2  
 EL1 569.9 EL2 222.1 ALF 92.20

LAUNCH DATE JAN 22 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 346.833

RL 147.24 LAL .00 LOL 121.80 VL 27.656 GAL -1.47 AZL 92.93 HCA 155.51 SMA 127.87 ECC .15356 INC 2.9298 V1 30.259
RP 108.82 LAP -1.21 LOP 277.34 VP 37.434 GAP -2.16 AZP 87.33 TAL 188.15 TAP 343.66 RCA 108.24 APO 147.51 V2 34.824
RC 80.651 GL -26.87 GP 53.22 ZAL 106.26 ZAP 71.07 ETS 337.05 ZAE 125.89 ETE 72.60 ZAC 102.24 ETC 139.11 CLP -57.19

PLANETOCENTRIC CONIC

C3 9.772 VHL 3.126 OLA -19.38 RAL 23.16 RAD 6567.4 VEL 11.453 PTH 1.99 VHP 4.749 DPA 59.73 RAP 3.93 ECC 1.1608
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 31 55 1405.38 4.81 354.61 234.94 117.94 7 55 21 805.4 8.51 347.89
90.00 14 4 48 5353.50 27.71 244.20 239.52 83.93 15 34 2 4753.5 26.58 235.72
100.00 8 41 11 1181.85 3.74 337.59 234.35 119.68 9 0 53 581.8 7.67 331.00
100.00 15 38 13 5052.26 28.91 221.87 239.35 82.06 17 2 26 4452.3 27.51 213.35
110.00 9 23 22 1049.68 1.11 325.93 232.71 124.17 9 40 52 449.7 5.59 319.71
110.00 17 12 32 4757.19 31.96 198.81 238.70 77.18 18 31 49 4157.2 29.87 190.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.0733 TRA -.3120 TC3 .4420 BAU .4609
RDE .4627 RRA -.4338 RC3 3.5001 FAU .08196
FDE -1.2464 FRA 1.0459 FC3 -7.2610 BSP 8108
BDE .4685 BRA .5343 BC3 3.5279 FSP -1493

SGT 679.6 SGR 2493.6 SG3 472.9
RRT .5911 RRF -.9953 RTF -.5859
SGB 2584.5 R23 -.0389 R13 -.9945
SG1 2527.3 SG2 540.9 THA 80.41

ST 226.2 SR 887.4 SS 971.8
CRT -.3357 CRS .9994 CST -.3637
LSA 1318.3 MSA 212.3 SSA 9.6
EL1 890.8 EL2 212.3 ALF 95.19

LAUNCH DATE JAN 22 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 353.194

RL 147.24 LAL .00 LOL 121.80 VL 27.673 GAL -1.47 AZL 93.81 HCA 158.66 SMA 127.99 ECC .15253 INC 3.8144 V1 30.259
RP 108.84 LAP -1.39 LOP 280.50 VP 37.439 GAP -1.73 AZP 86.45 TAL 188.19 TAP 346.84 RCA 108.47 APO 147.51 V2 34.816
RC 82.981 GL -33.36 GP 58.41 ZAL 105.12 ZAP 75.76 ETS 360.45 ZAE 121.36 ETE 77.97 ZAC 97.93 ETC 140.59 CLP -62.00

PLANETOCENTRIC CONIC

C3 11.202 VHL 3.347 OLA -25.23 RAL 26.17 RAD 6567.4 VEL 11.515 PTH 2.01 VHP 5.089 DPA 62.60 RAP 354.77 ECC 1.1844
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 9 4 42 1145.06 12.82 339.69 242.19 115.47 9 23 47 545.1 16.15 332.59
90.00 12 56 2 5669.04 27.84 267.20 246.59 95.39 14 30 31 5069.0 28.30 258.56
100.00 10 2 22 958.87 11.09 325.12 241.30 117.94 10 18 21 358.9 14.74 318.23
100.00 14 41 3 5330.47 29.77 242.45 246.75 92.81 16 9 54 4730.5 29.84 233.64
110.00 10 26 13 884.04 7.40 317.23 239.08 123.47 10 40 57 284.0 11.75 310.84
110.00 16 33 41 4978.07 34.06 215.67 246.74 86.92 17 56 39 4378.1 33.26 206.52

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1330 TRA -.2674 TC3 .0952 BAU .4973
RDE .7054 RRA -.5776 RC3 3.3192 FAU .07095
FDE -1.4204 FRA 1.0856 FC3 -5.4831 BSP 8816
BDE .7178 BRA .6364 BC3 3.3205 FSP -1330

SGT 558.5 SGR 2754.9 SG3 419.8
RRT .2728 RRF -.9964 RTF -.2652
SGB 2810.9 R23 -.0179 R13 -.9963
SG1 2759.2 SG2 536.5 THA 86.71

ST 273.7 SR 1253.1 SS 1104.1
CRT -.6563 CRS .9998 CST -.6693
LSA 1679.9 MSA 204.4 SSA 7.0
EL1 1266.2 EL2 204.3 ALF 98.38

LAUNCH DATE JAN 22 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 359.527

RL 147.24 LAL .00 LOL 121.80 VL 27.685 GAL -1.45 AZL 94.99 HCA 161.80 SMA 128.07 ECC .15172 INC 4.9878 V1 30.259
RP 108.86 LAP -1.56 LOP 283.66 VP 37.443 GAP -1.32 AZP 85.26 TAL 188.14 TAP 349.94 RCA 108.64 APO 147.50 V2 34.810
RC 85.328 GL -40.45 GP 63.86 ZAL 103.49 ZAP 80.05 ETS 344.55 ZAE 116.25 ETE 83.18 ZAC 93.54 ETC 142.26 CLP -66.90

PLANETOCENTRIC CONIC

C3 13.756 VHL 3.709 OLA -31.48 RAL 30.00 RAD 6567.5 VEL 11.625 PTH 2.04 VHP 5.628 DPA 65.09 RAP 343.56 ECC 1.2264
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.63 9 22 22 1170.31 23.91 346.56 253.59 111.11 9 41 52 570.3 26.57 338.63
104.37 13 8 57 5731.17 23.93 270.71 253.60 111.10 14 44 28 5131.2 26.58 262.78
75.63 9 22 22 1170.31 23.91 346.56 253.59 111.11 9 41 52 570.3 26.57 338.63
104.37 13 8 57 5731.17 23.93 270.71 253.60 111.10 14 44 28 5131.2 26.58 262.78
110.00 12 3 4 648.47 15.96 304.35 249.49 120.64 12 13 53 48.5 19.90 297.45
110.00 15 27 25 5301.01 32.41 240.61 256.41 101.51 16 55 46 4701.0 33.66 231.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2475 TRA -.1935 TC3 -.1834 BAU .5300
RDE 1.0204 RRA -.7725 RC3 2.8763 FAU .05778
FDE -1.5242 FRA 1.0981 FC3 -3.6365 BSP 9574
BDE 1.0500 BRA .7963 BC3 2.8822 FSP -1126

SGT 536.2 SGR 2999.2 SG3 353.9
RRT -.2503 RRF -.9972 RTF .2595
SGB 3046.7 R23 -.0023 R13 -.9973
SG1 3002.3 SG2 518.6 THA 92.64

ST 396.5 SR 1632.5 SS 1181.8
CRT -.8632 CRS .9999 CST -.8693
LSA 2044.6 MSA 196.3 SSA 5.1
EL1 1668.5 EL2 195.9 ALF 102.01

LAUNCH DATE JAN 22 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 365.826

RL 147.24 LAL .00 LOL 121.80 VL 27.694 GAL -1.42 AZL 96.63 HCA 164.93 SMA 128.13 ECC .15110 INC 6.6302 V1 30.259
RP 108.88 LAP -1.72 LOP 286.83 VP 37.444 GAP -.93 AZP 83.60 TAL 188.01 TAP 352.94 RCA 108.77 APO 147.49 V2 34.804
RC 87.691 GL -47.92 GP 69.65 ZAL 101.39 ZAP 83.77 ETS 349.49 ZAE 110.59 ETE 88.41 ZAC 89.13 ETC 144.88 CLP -71.82

PLANETOCENTRIC CONIC

C3 18.546 VHL 4.307 OLA -37.84 RAL 34.82 RAD 6567.8 VEL 11.829 PTH 2.10 VHP 6.474 DPA 67.00 RAP 329.97 ECC 1.3052
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.77 8 30 56 1452.94 26.33 9.91 265.24 118.23 8 55 9 852.9 29.88 2.20
116.23 14 38 48 5584.19 26.34 260.44 265.24 118.22 16 11 52 4984.2 29.89 252.73
63.77 8 30 56 1452.94 26.33 9.91 265.24 118.23 8 55 9 852.9 29.88 2.20
116.23 14 38 48 5584.19 26.34 260.44 265.24 118.22 16 11 52 4984.2 29.89 252.73
63.77 8 30 56 1452.94 26.33 9.91 265.24 118.23 8 55 9 852.9 29.88 2.20
116.23 14 38 48 5584.19 26.34 260.44 265.24 118.22 16 11 52 4984.2 29.89 252.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4502 TRA -.0676 TC3 -.3486 BAU .5515
RDE 1.4274 RRA -1.0433 RC3 2.1966 FAU .04339
FDE -1.5395 FRA 1.0803 FC3 -2.0256 BSP 10307
BDE 1.4967 BRA 1.0455 BC3 2.2241 FSP -896

SGT 679.6 SGR 3205.5 SG3 280.7
RRT -.6909 RRF -.9978 RTF .6990
SGB 3276.8 R23 .0091 R13 -.9978
SG1 3240.5 SG2 486.0 THA 98.53

ST 599.9 SR 1971.7 SS 1186.1
CRT -.9467 CRS .9999 CST -.9500
LSA 2370.6 MSA 186.4 SSA 3.8
EL1 2052.5 EL2 185.7 ALF 106.21

LAUNCH DATE JAN 22 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 372.085

RL 147.24 LAL .00 LOL 121.80 VL 27.699 GAL -1.37 AZL 99.11 HCA 168.04 SMA 128.17 ECC .15066 INC 9.1052 V1 30.259  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.443 GAP -.55 AZP 81.09 TAL 187.78 TAP 355.82 RCA 108.86 APO 147.48 V2 34.799  
 RC 90.065 GL -55.33 GP 75.91 ZAL 98.95 ZAP 86.76 ETS 355.71 ZAE 104.27 ETE 94.19 ZAC 84.67 ETC 148.79 CLP -76.59

PLANETOCENTRIC CONIC

C3 28.391 VHL 5.328 DLA -43.82 RAL 40.70 RAD 6568.1 VEL 12.238 PTH 2.20 VHP 7.853 DPA 68.02 RAP 313.71 ECC 1.4672  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.04 8 15 30 1665.00 25.98 27.82 280.16 126.62 8 43 15 1065.0 30.56 20.78  
 124.96 15 41 8 5579.09 26.00 259.76 280.17 126.61 17 14 7 4979.1 30.57 252.73  
 55.04 8 15 30 1665.00 25.98 27.82 280.16 126.62 8 43 15 1065.0 30.56 20.78  
 124.96 15 41 8 5579.09 26.00 259.76 280.17 126.61 17 14 7 4979.1 30.57 252.73  
 55.04 8 15 30 1665.00 25.98 27.82 280.16 126.62 8 43 15 1065.0 30.56 20.78  
 124.96 15 41 8 5579.09 26.00 259.76 280.17 126.61 17 14 7 4979.1 30.57 252.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7995 TRA .1749 TC3 -.3691 BAU .5476 SGT 980.7 SGR 3352.1 SG3 207.8 ST 863.3 SR 2201.2 SS 1115.8  
 RDE 1.9573 RRA-1.4388 RC3 1.3947 FAU .02907 RRT -.8983 RRF -.9983 RTF .9037 CRT -.9789 CRS .9999 CST -.9808  
 FDE -1.4665 FRA 1.0409 FC3 -.8863 BSP 11024 SGB 3492.6 R23 .0163 R13 -.9983 LSA 2609.2 MSA 165.7 SSA 2.8  
 BDE 2.1143 BRA 1.4494 BC3 1.4427 FSP -667 SG1 3467.7 SG2 416.6 THA 104.94 EL1 2358.7 EL2 164.8 ALF 111.11

LAUNCH DATE JAN 22 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 378.282

RL 147.24 LAL .00 LOL 121.80 VL 27.701 GAL -1.31 AZL 103.27 HCA 171.11 SMA 128.18 ECC .15038 INC13.2729 V1 30.259  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.440 GAP -.19 AZP 76.88 TAL 187.43 TAP 358.54 RCA 108.91 APO 147.46 V2 34.795  
 RC 92.449 GL -61.87 GP 83.08 ZAL 96.35 ZAP 88.90 ETS 5.69 ZAE 96.95 ETE 103.16 ZAC 80.00 ETC 156.64 CLP -80.82

PLANETOCENTRIC CONIC

C3 51.981 VHL 7.210 DLA -48.63 RAL 47.35 RAD 6568.9 VEL 13.166 PTH 2.40 VHP 10.294 DPA 67.64 RAP 294.66 ECC 1.8555  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.66 8 18 48 1876.35 21.27 43.24 297.29 134.83 8 50 5 1276.4 26.78 37.31  
 131.34 16 30 55 5671.88 21.28 264.03 297.30 134.82 18 5 27 5071.9 26.79 258.10  
 48.66 8 18 48 1876.35 21.27 43.24 297.29 134.83 8 50 5 1276.4 26.78 37.31  
 131.34 16 30 55 5671.88 21.28 264.03 297.30 134.82 18 5 27 5071.9 26.79 258.10  
 48.66 8 18 48 1876.35 21.27 43.24 297.29 134.83 8 50 5 1276.4 26.78 37.31  
 131.34 16 30 55 5671.88 21.28 264.03 297.30 134.82 18 5 27 5071.9 26.79 258.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.4734 TRA .7873 TC3 -.2735 BAU .4786 SGT 1556.5 SGR 5334.5 SG3 142.9 ST 1204.9 SR 2223.7 SS 998.3  
 RDE 2.6441 RRA-2.0155 RC3 .6320 FAU .01573 RRT -.9853 RRF -.9989 RTF .9860 CRT -.9955 CRS 1.0000 CST -.9958  
 FDE 1.3365 FRA 1.0062 FC3 -.2621 BSP 11618 SGB 3679.9 R23 .0199 R13 -.9988 LSA 2717.1 MSA 102.1 SSA 1.9  
 BDE 3.0269 BRA 2.1638 BC3 .6887 FSP -460 SG1 3672.0 SG2 241.4 THA 114.81 EL1 2527.1 EL2 100.8 ALF 118.39

LAUNCH DATE JAN 22 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 384.355

RL 147.24 LAL .00 LOL 121.80 VL 27.700 GAL -1.21 AZL 111.69 HCA 174.09 SMA 128.17 ECC .15021 INC21.6874 V1 30.259  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.436 GAP .13 AZP 68.42 TAL 186.89 TAP .99 RCA 108.92 APO 147.43 V2 34.791  
 RC 94.840 GL -65.86 GP 87.60 ZAL 93.84 ZAP 90.09 ETS 84.74 ZAE 87.46 ETE 180.87 ZAC 74.48 ETC 234.31 CLP 92.11

PLANETOCENTRIC CONIC

C3 125.774 VHL 11.215 DLA -50.83 RAL 53.21 RAD 6570.3 VEL 15.720 PTH 2.79 VHP 15.351 DPA 64.59 RAP 272.78 ECC 3.0699  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.84 8 33 3 2097.92 11.81 54.85 313.40 139.82 9 8 1 1497.9 17.86 49.85  
 134.16 17 3 27 5849.90 11.82 271.24 313.41 139.81 18 40 57 5249.9 17.87 266.24  
 45.84 8 33 3 2097.92 11.81 54.85 313.40 139.82 9 8 1 1497.9 17.86 49.85  
 134.16 17 3 27 5849.90 11.82 271.24 313.41 139.81 18 40 57 5249.9 17.87 266.24  
 45.84 8 33 3 2097.92 11.81 54.85 313.40 139.82 9 8 1 1497.9 17.86 49.85  
 134.16 17 3 27 5849.90 11.82 271.24 313.41 139.81 18 40 57 5249.9 17.87 266.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -4.6565 TRA 3.5911 TC3 -.1096 BAU 1.859 SGT 3762.7 SGR 600.4 SG3 93.2 ST 2533.6 SR 221.1 SS 925.8  
 RDE -.2640 RRA .7221 RC3 -.0148 FAU .00261 RRT .8967 RRF .9138 RTF .9988 CRT .8453 CRS -.8600 CST -.9996  
 FDE -1.2692 FRA 1.0648 FC3 -.0180 BSP 12041 SGB 3810.3 R23 .0311 R13 .9991 LSA 2703.8 MSA 119.7 SSA 1.1  
 BDE 4.6640 BRA 3.6630 BC3 .1106 FSP -302 SG1 3801.2 SG2 263.0 THA 8.18 EL1 2540.5 EL2 117.8 ALF 4.23

LAUNCH DATE JAN 22 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 390.016

RL 147.24 LAL .00 LOL 121.80 VL 27.696 GAL -1.03 AZL 134.90 HCA 176.71 SMA 128.15 ECC .15005 INC44.9014 V1 30.259  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.430 GAP .34 AZP 45.14 TAL 185.86 TAP 2.57 RCA 108.92 APO 147.37 V2 34.788  
 RC 97.236 GL -61.38 GP 71.10 ZAL 91.71 ZAP 90.34 ETS 170.72 ZAE 70.82 ETE 265.64 ZAC 65.59 ETC 322.19 CLP 91.04

PLANETOCENTRIC CONIC

C3 495.829 VHL 22.267 DLA -45.66 RAL 52.86 RAD 6572.4 VEL 24.842 PTH 3.34 VHP 29.091 DPA 53.93 RAP 247.63 ECC 9.1601  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.55 8 54 29 2229.01 1.83 56.59 321.06 135.64 9 31 38 1629.0 7.53 51.37  
 127.45 16 35 12 805.13 1.84 306.06 321.07 135.64 16 52 37 205.1 7.55 300.84  
 52.55 8 54 29 2229.01 1.83 56.59 321.06 135.64 9 31 38 1629.0 7.53 51.37  
 127.45 16 39 12 805.13 1.84 306.06 321.07 135.64 16 52 37 205.1 7.55 300.84  
 52.55 8 54 29 2229.01 1.83 56.59 321.06 135.64 9 31 38 1629.0 7.53 51.37  
 127.45 16 39 12 805.13 1.84 306.06 321.07 135.64 16 52 37 205.1 7.55 300.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.6548 TRA -.0567 TC3 -.0530 BAU 1.3653 SGT 969.8 SGR 3610.2 SG3 64.8 ST 940.5 SR 2192.1 SS 1146.7  
 RDE -7.8391 RRA 7.7675 RC3 .1990 FAU-.02396 RRT -.6186 RRF 1.0000 RTF -.6212 CRT -.9228 CRS -1.0000 CST .9237  
 FDE -1.6331 FRA 1.6077 FC3 .0418 BSP 10790 SGB 3738.1 R23 -.0323 R13 .9995 LSA 2624.6 MSA 341.1 SSA .3  
 BDE 8.6492 BRA 7.7677 BC3 .2060 FSP -193 SG1 3661.9 SG2 751.2 THA 99.85 EL1 2361.5 EL2 336.4 ALF 112.07

LAUNCH DATE JAN 22 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 399.206

RL 147.24 LAL .00 LOL 121.80 VL 27.689 GAL -1.53 AZL 18.73 MCA 182.59 SMA 128.10 ECC .15172 INC71.2682 V1 30.259
RP 108.94 LAP -2.45 LOP 302.63 VP 37.423 GAP 1.47 AZP 161.25 TAL 188.61 TAP 11.20 RCA 108.67 APO 147.54 V2 34.786
RC 99.636 GL 50.79 GP -58.56 ZAL 91.53 ZAP 91.30 ETS 177.52 ZAE 59.05 ETE 84.33 ZAC 83.46 ETC 36.82 CLP 92.48

PLANETOCENTRIC CONIC

C31144.603 VHL 33.832 DLA 56.54 RAL 357.53 RAD 6573.0 VEL 35.579 PTH 3.52 VHP 40.910 DPA -61.35 RAP 172.11 ECC19.8373
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
38.78 16 28 26 5023.58 .67 238.05 267.99 33.47 17 52 10 4423.6 -6.00 234.04
141.22 1 43 50 3397.84 .68 106.58 267.97 33.47 2 40 27 2797.8 -5.99 102.57
38.78 16 28 26 5023.58 .67 238.05 267.99 33.47 17 52 10 4423.6 -6.00 234.04
141.22 1 43 50 3397.84 .68 106.58 267.97 33.47 2 40 27 2797.8 -5.99 102.57
38.78 16 28 26 5023.58 .67 238.05 267.99 33.47 17 52 10 4423.6 -6.00 234.04
141.22 1 43 50 3397.84 .68 106.58 267.97 33.47 2 40 27 2797.8 -5.99 102.57

DIFFERENTIAL CORRECTIONS

TDE -5.0545 TRA 2.4996 TC3 -.1107 BAU 3.8394
RDE -16.7474 RRA 1.6288 RC3 -.2251 FAU -.06277
FDE 3.5497 FRA -.3765 FC3 .0475 BSP 10767
BDE 17.4935 BRA 2.9834 BC3 .2509 FSP -192

MID-COURSE EXECUTION ACCURACY

SGT 1372.4 SGR 3258.1 SG3 59.7
RRT .8841 RRF -.9999 RTF -.8896
SGB 3535.4 R23 -.0543 R13 -.9985
SG1 3484.1 SG2 599.7 THA 68.92

ORBIT DETERMINATION ACCURACY

ST 886.7 SR 2840.6 SS 2128.7
CRT .9780 CRS 1.0000 CST .9790
LSA 3654.4 MSA 178.4 SSA .7
EL1 2970.5 EL2 176.9 ALF 72.96

LAUNCH DATE JAN 22 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 404.333

RL 147.24 LAL .00 LOL 121.80 VL 27.680 GAL -1.23 AZL 57.12 MCA 184.75 SMA 128.04 ECC .15145 INC32.8823 V1 30.259
RP 108.94 LAP -2.58 LOP 305.80 VP 37.415 GAP 1.53 AZP 122.79 TAL 186.92 TAP 11.68 RCA 108.65 APO 147.43 V2 34.784
RC 102.038 GL 64.83 GP -81.74 ZAL 92.62 ZAP 92.91 ETS 181.67 ZAE 82.81 ETE 89.92 ZAC 96.96 ETC 43.05 CLP 110.69

PLANETOCENTRIC CONIC

C3 275.567 VHL 16.600 DLA 64.63 RAL 333.47 RAD 6571.6 VEL 19.922 PTH 3.13 VHP 19.229 DPA -71.07 RAP 114.81 ECC 5.5351
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
29.13 14 28 18 4957.02 -6.06 241.05 240.60 25.53 15 50 55 4357.0 -13.27 237.94
150.87 0 32 2 3243.51 -6.05 97.83 240.58 25.53 1 26 5 2643.5 -13.26 94.71
29.13 14 28 18 4957.02 -6.06 241.05 240.60 25.53 15 50 55 4357.0 -13.27 237.94
150.87 0 32 2 3243.51 -6.05 97.83 240.58 25.53 1 26 5 2643.5 -13.26 94.71
29.13 14 28 18 4957.02 -6.06 241.05 240.60 25.53 15 50 55 4357.0 -13.27 237.94
150.87 0 32 2 3243.51 -6.05 97.83 240.58 25.53 1 26 5 2643.5 -13.26 94.71

DIFFERENTIAL CORRECTIONS

TDE -.1506 TRA 1.5594 TC3 -.0499 BAU .4978
RDE -9.0791 RRA 2.8626 RC3 -.1256 FAU -.00734
FDE 2.1586 FRA -.7124 FC3 .0230 BSP 13578
BDE 9.0804 BRA 3.2598 BC3 .1351 FSP -281

MID-COURSE EXECUTION ACCURACY

SGT 1268.0 SGR 3912.7 SG3 81.5
RRT .6305 RRF -.9994 RTF -.6454
SGB 4113.1 R23 -.0326 R13 -.9991
SG1 3998.7 SG2 963.0 THA 77.73

ORBIT DETERMINATION ACCURACY

ST 380.4 SR 3209.1 SS 1270.5
CRT .3470 CRS 1.0000 CST .3562
LSA 3454.0 MSA 356.5 SSA 1.3
EL1 3211.9 EL2 356.5 ALF 87.62

LAUNCH DATE JAN 22 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 410.239

RL 147.24 LAL .00 LOL 121.80 VL 27.669 GAL -1.07 AZL 69.29 MCA 187.64 SMA 127.96 ECC .15178 INC20.7068 V1 30.259
RP 108.95 LAP -2.70 LOP 308.96 VP 37.406 GAP 1.79 AZP 110.54 TAL 186.02 TAP 13.66 RCA 108.54 APO 147.38 V2 34.783
RC 104.441 GL 65.62 GP -83.53 ZAL 93.65 ZAP 95.58 ETS 292.75 ZAE 93.96 ETE 201.54 ZAC 102.35 ETC 154.74 CLP-149.69

PLANETOCENTRIC CONIC

C3 115.343 VHL 10.740 DLA 64.11 RAL 330.54 RAD 6570.2 VEL 15.384 PTH 2.75 VHP 11.924 DPA -67.88 RAP 82.68 ECC 2.8983
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
29.74 14 18 0 4811.18 -14.79 236.83 233.19 26.85 15 38 11 4211.2 -21.89 233.36
150.26 0 18 55 3102.17 -14.78 94.30 233.17 26.85 1 10 37 2502.2 -21.89 90.83
29.74 14 18 0 4811.18 -14.79 236.83 233.19 26.85 15 38 11 4211.2 -21.89 233.36
150.26 0 18 55 3102.17 -14.78 94.30 233.17 26.85 1 10 37 2502.2 -21.89 90.83
29.74 14 18 0 4811.18 -14.79 236.83 233.19 26.85 15 38 11 4211.2 -21.89 233.36
150.26 0 18 55 3102.17 -14.78 94.30 233.17 26.85 1 10 37 2502.2 -21.89 90.83

DIFFERENTIAL CORRECTIONS

TDE 5.7883 TRA-2.3430 TC3 -.1362 BAU .2115
RDE .1869 RRA -.2987 RC3 -.0161 FAU .00973
FDE 2.0552 FRA -.7430 FC3 -.0730 BSP 12894
BDE 5.7913 BRA 2.3619 BC3 .1371 FSP -392

MID-COURSE EXECUTION ACCURACY

SGT 4220.7 SGR 379.9 SG3 124.1
RRT .8498 RRF .8221 RTF .9979
SGB 4237.7 R23 -.0528 R13 .9977
SG1 4233.0 SG2 199.6 THA 4.38

ORBIT DETERMINATION ACCURACY

ST 3205.2 SR 148.1 SS 1164.4
CRT .8469 CRS -.8328 CST -.9997
LSA 3412.3 MSA 84.0 SSA 1.8
EL1 3207.6 EL2 78.7 ALF 2.24

LAUNCH DATE JAN 22 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 416.288

RL 147.24 LAL .00 LOL 121.80 VL 27.656 GAL -.94 AZL 74.70 MCA 190.69 SMA 127.87 ECC .15232 INC15.3012 V1 30.259
RP 108.95 LAP -2.81 LOP 312.12 VP 37.396 GAP 2.09 AZP 105.05 TAL 185.24 TAP 15.93 RCA 108.39 APO 147.35 V2 34.783
RC 106.844 GL 63.49 GP -76.04 ZAL 94.35 ZAP 98.98 ETS 325.37 ZAE 101.59 ETE 233.96 ZAC 105.35 ETC 187.60 CLP-130.33

PLANETOCENTRIC CONIC

C3 66.494 VHL 8.154 DLA 62.57 RAL 333.92 RAD 6569.3 VEL 13.706 PTH 2.50 VHP 8.752 DPA -63.24 RAP 65.75 ECC 2.0943
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.55 14 35 47 4681.60 -21.88 231.63 231.90 29.76 15 53 48 4081.6 -28.76 227.52
148.45 0 28 5 2986.82 -21.87 91.19 231.88 29.76 1 17 52 2386.8 -28.75 87.09
31.55 14 35 47 4681.60 -21.88 231.63 231.90 29.76 15 53 48 4081.6 -28.76 227.52
148.45 0 28 5 2986.82 -21.87 91.19 231.88 29.76 1 17 52 2386.8 -28.75 87.09
31.55 14 35 47 4681.60 -21.88 231.63 231.90 29.76 15 53 48 4081.6 -28.76 227.52
148.45 0 28 5 2986.82 -21.87 91.19 231.88 29.76 1 17 52 2386.8 -28.75 87.09

DIFFERENTIAL CORRECTIONS

TDE 3.6856 TRA-1.5415 TC3 -.4054 BAU .4527
RDE 2.6464 RRA -.9716 RC3 -.3082 FAU .02406
FDE 2.3397 FRA -.8020 FC3 -.3133 BSP 13456
BDE 4.5373 BRA 1.8222 BC3 .5092 FSP -598

MID-COURSE EXECUTION ACCURACY

SGT 3559.8 SGR 2430.3 SG3 182.5
RRT .9978 RRF .9988 RTF .9938
SGB 4310.2 R23 .0873 R13 .9959
SG1 4308.2 SG2 133.7 THA 34.30

ORBIT DETERMINATION ACCURACY

ST 2684.1 SR 1911.9 SS 1273.7
CRT .9995 CRS -.9999 CST -.9999
LSA 3532.4 MSA 64.6 SSA .9
EL1 3295.1 EL2 48.7 ALF 35.46



LAUNCH DATE JAN 22 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 422.376

RL 147.24 LAL .00 LOL 121.80 VL 27.641 GAL -.80 AZL 77.71 HCA 193.79 SMA 127.77 ECC .15302 INC12.2865 V1 30.259  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.385 GAP 2.40 AZP 101.94 TAL 184.46 TAP 18.25 RCA 108.22 APO 147.32 V2 34.784  
 RC 109.246 GL 60.70 GP -69.03 ZAL 94.71 ZAP 102.90 ETS 327.16 ZAE 107.66 ETE 234.76 ZAC 107.32 ETC 189.26 CLP-128.59

PLANETOCENTRIC CONIC

C3 45.481 VHL 6.744 DLA 60.87 RAL 338.59 RAD 6568.7 VEL 12.917 PTH 2.35 VHP 7.076 DPA -58.37 RAP 54.95 ECC 1.7485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.57 14 59 20 4579.53 -26.90 226.43 232.18 33.08 16 15 40 3979.5 -33.50 221.62  
 146.43 0 41 47 2901.96 -26.89 88.39 232.16 33.08 1 30 9 2302.0 -33.49 83.59  
 33.57 14 59 20 4579.53 -26.90 226.43 232.18 33.08 16 15 40 3979.5 -33.50 221.62  
 146.43 0 41 47 2901.96 -26.89 88.39 232.16 33.08 1 30 9 2302.0 -33.49 83.59  
 33.57 14 59 20 4579.53 -26.90 226.43 232.18 33.08 16 15 40 3979.5 -33.50 221.62  
 146.43 0 41 47 2901.96 -26.89 88.39 232.16 33.08 1 30 9 2302.0 -33.49 83.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.0865 TRA-1.2693 TC3 -.7368 BAU .5583 SGT 3573.6 SGR 2495.2 SG3 248.2 ST 2705.3 SR 2049.3 SS 1427.4  
 RDE 2.3695 RRA -.7310 RC3 -.5479 FAU .03805 RRT .9913 RRF .9989 RTF .9883 CRT .9982 CRS-1.0000 CST -.9980  
 FDE 2.7013 FRA -.8170 FC3 -.7243 BSP 13656 SGB 4358.5 R23 .1028 R13 .9937 LSA 3680.1 MSA 112.9 SSA 2.0  
 BDE 3.8912 BRA 1.4648 BC3 .9182 FSP -827 SG1 4350.2 SG2 270.2 THA 34.84 EL1 3392.4 EL2 98.5 ALF 37.13

LAUNCH DATE JAN 22 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 428.472

RL 147.24 LAL .00 LOL 121.80 VL 27.624 GAL -.66 AZL 79.64 HCA 196.91 SMA 127.65 ECC .15385 INC10.3642 V1 30.259  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.374 GAP 2.70 AZP 99.93 TAL 183.66 TAP 20.56 RCA 108.01 APO 147.29 V2 34.785  
 RC 111.645 GL 57.84 GP -62.62 ZAL 94.75 ZAP 107.12 ETS 326.64 ZAE 112.70 ETE 232.49 ZAC 108.70 ETC 188.27 CLP-129.80

PLANETOCENTRIC CONIC

C3 34.459 VHL 5.870 DLA 59.20 RAL 343.31 RAD 6568.4 VEL 12.483 PTH 2.26 VHP 6.094 DPA -53.49 RAP 47.39 ECC 1.5671  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.57 15 23 14 4500.20 -30.29 221.54 232.95 36.37 16 38 14 3900.2 -36.60 216.05  
 144.43 0 55 34 2841.22 -30.28 85.96 232.93 36.37 1 42 56 2241.2 -36.59 80.47  
 35.57 15 23 14 4500.20 -30.29 221.54 232.95 36.37 16 38 14 3900.2 -36.60 216.05  
 144.43 0 55 34 2841.22 -30.28 85.96 232.93 36.37 1 42 56 2241.2 -36.59 80.47  
 35.57 15 23 14 4500.20 -30.29 221.54 232.95 36.37 16 38 14 3900.2 -36.60 216.05  
 144.43 0 55 34 2841.22 -30.28 85.96 232.93 36.37 1 42 56 2241.2 -36.59 80.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.8461 TRA-1.0940 TC3-1.1185 BAU .6166 SGT 3713.4 SGR 2365.9 SG3 313.7 ST 2847.8 SR 1986.8 SS 1569.1  
 RDE 2.0121 RRA -.5234 RC3 -.7352 FAU .05134 RRT .9868 RRF .9984 RTF .9844 CRT .9975 CRS-1.0000 CST -.9975  
 FDE 3.0186 FRA -.7800 FC3-1.2899 BSP 13836 SGB 4403.0 R23 .1204 R13 .9911 LSA 3808.1 MSA 133.6 SSA 2.7  
 BDE 3.4855 BRA 1.2127 BC3 1.3385 FSP -1060 SG1 4391.1 SG2 324.0 THA 32.36 EL1 3470.5 EL2 114.4 ALF 34.88

LAUNCH DATE JAN 22 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 434.564

RL 147.24 LAL .00 LOL 121.80 VL 27.605 GAL -.52 AZL 80.97 HCA 200.04 SMA 127.53 ECC .15480 INC 9.0273 V1 30.259  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.363 GAP 3.01 AZP 98.49 TAL 182.82 TAP 22.86 RCA 107.79 APO 147.27 V2 34.787  
 RC 114.042 GL 55.08 GP -56.76 ZAL 94.49 ZAP 111.45 ETS 325.84 ZAE 116.87 ETE 229.27 ZAC 109.73 ETC 186.76 CLP-131.85

PLANETOCENTRIC CONIC

C3 27.906 VHL 5.283 DLA 57.63 RAL 347.80 RAD 6568.1 VEL 12.218 PTH 2.20 VHP 5.487 DPA -48.72 RAP 41.89 ECC 1.4593  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.45 15 46 3 4437.78 -32.55 217.09 233.96 39.43 17 0 1 3837.8 -38.56 211.01  
 142.55 1 8 36 2797.71 -32.54 83.89 233.94 39.42 1 55 13 2197.7 -38.55 77.82  
 37.45 15 46 3 4437.78 -32.55 217.09 233.96 39.43 17 0 1 3837.8 -38.56 211.01  
 142.55 1 8 36 2797.71 -32.54 83.89 233.94 39.42 1 55 13 2197.7 -38.55 77.82  
 37.45 15 46 3 4437.78 -32.55 217.09 233.96 39.43 17 0 1 3837.8 -38.56 211.01  
 142.55 1 8 36 2797.71 -32.54 83.89 233.94 39.42 1 55 13 2197.7 -38.55 77.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7177 TRA -.9543 TC3-1.5328 BAU .6566 SGT 3879.3 SGR 2185.3 SG3 372.6 ST 3004.6 SR 1856.4 SS 1678.3  
 RDE 1.6992 RRA -.3640 RC3 -.8651 FAU .06316 RRT .9836 RRF .9976 RTF .9814 CRT .9972 CRS-1.0000 CST -.9972  
 FDE 3.2402 FRA -.6906 FC3-1.9594 BSP 13969 SGB 4452.5 R23 .1364 R13 .9882 LSA 3907.6 MSA 144.3 SSA 3.5  
 BDE 3.2051 BRA 1.0213 BC3 1.7600 FSP -1268 SG1 4439.1 SG2 344.8 THA 29.18 EL1 3529.8 EL2 118.1 ALF 31.68

LAUNCH DATE JAN 22 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 440.647

RL 147.24 LAL .00 LOL 121.80 VL 27.586 GAL -.36 AZL 81.96 HCA 203.18 SMA 127.40 ECC .15589 INC 8.0396 V1 30.259  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.350 GAP 3.32 AZP 97.40 TAL 181.94 TAP 25.12 RCA 107.54 APO 147.25 V2 34.790  
 RC 116.435 GL 52.47 GP -51.43 ZAL 93.98 ZAP 115.75 ETS 325.18 ZAE 120.26 ETE 225.67 ZAC 110.55 ETC 185.22 CLP-134.17

PLANETOCENTRIC CONIC

C3 23.666 VHL 4.865 DLA 56.20 RAL 352.04 RAD 6568.0 VEL 12.043 PTH 2.15 VHP 5.107 DPA -44.17 RAP 37.81 ECC 1.3895  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.19 16 7 39 4387.65 -34.03 213.11 235.18 42.16 17 20 46 3787.7 -39.77 206.54  
 140.81 1 20 50 2766.42 -34.02 82.18 235.17 42.16 2 6 56 2166.4 -39.76 75.62  
 39.19 16 7 39 4387.65 -34.03 213.11 235.18 42.16 17 20 46 3787.7 -39.77 206.54  
 140.81 1 20 50 2766.42 -34.02 82.18 235.17 42.16 2 6 56 2166.4 -39.76 75.62  
 39.19 16 7 39 4387.65 -34.03 213.11 235.18 42.16 17 20 46 3787.7 -39.77 206.54  
 140.81 1 20 50 2766.42 -34.02 82.18 235.17 42.16 2 6 56 2166.4 -39.76 75.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6413 TRA -.8287 TC3-1.9561 BAU .6854 SGT 4047.0 SGR 1990.9 SG3 420.5 ST 3155.6 SR 1704.9 SS 1754.7  
 RDE 1.4415 RRA -.2417 RC3 -.9304 FAU .07228 RRT .9808 RRF .9964 RTF .9788 CRT .9970 CRS-1.0000 CST -.9969  
 FDE 3.3628 FRA -.5549 FC3-2.6439 BSP 14149 SGB 4510.2 R23 .1493 R13 .9852 LSA 3990.1 MSA 151.1 SSA 4.3  
 BDE 3.0091 BRA .8632 BC3 2.1661 FSP -1442 SG1 4496.6 SG2 349.7 THA 25.93 EL1 3584.8 EL2 116.1 ALF 28.34

LAUNCH DATE JAN 22 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 446.718

RL 147.24 LAL .00 LOL 121.80 VL 27.564 GAL -.19 AZL 82.72 HCA 206.33 SMA 127.25 ECC .15709 INC 7.2762 VI 30.259
RP 108.91 LAP -3.22 LOP 327.95 VP 37.338 GAP 3.62 AZP 96.53 TAL 181.02 TAP 27.34 RCA 107.26 APO 147.24 V2 34.794
RC 118.823 GL 50.02 GP -46.63 ZAL 93.23 ZAP 119.90 ETS 324.73 ZAE 122.93 ETE 221.96 ZAC 111.26 ETC 183.81 CLP-136.54

PLANETOCENTRIC CONIC

C3 20.756 VHL 4.556 DLA 54.90 RAL 356.08 RAD 6567.8 VEL 11.922 PTH 2.12 VHP 4.872 DPA -39.89 RAP 34.79 ECC 1.3416
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
40.78 16 28 10 4346.66 -34.99 209.58 236.63 44.57 17 40 37 3746.7 -40.47 202.62
139.22 1 32 30 2743.87 -34.98 80.79 236.61 44.57 2 18 14 2143.9 -40.46 73.83
40.78 16 28 10 4346.66 -34.99 209.58 236.63 44.57 17 40 37 3746.7 -40.47 202.62
139.22 1 32 30 2743.87 -34.98 80.79 236.61 44.57 2 18 14 2143.9 -40.46 73.83
40.78 16 28 10 4346.66 -34.99 209.58 236.63 44.57 17 40 37 3746.7 -40.47 202.62
139.22 1 32 30 2743.87 -34.98 80.79 236.61 44.57 2 18 14 2143.9 -40.46 73.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.5829 TRA -.7164 TC3-2.3941 BAU .7156 SGT 4214.9 SGR 1803.6 SG3 456.8 ST 3282.8 SR 1544.7 SS 1791.3
RDE 1.2254 RRA -.1550 RC3 -.9588 FAU .07955 RRT .9790 RRF .9946 RTF .9771 CRT .9970 CRS-1.0000 CST -.9967
FDE 3.3765 FRA -.4041 FC3-3.3180 BSP 14467 SGB 4584.6 R23 .1562 R13 .9824 LSA 4043.3 MSA 153.2 SSA 5.1
BOE 2.8588 BRA .7329 BC3 2.5790 FSP -1587 SG1 4572.1 SG2 338.6 THA 22.86 EL1 3626.4 EL2 108.8 ALF 25.16

LAUNCH DATE JAN 22 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 452.772

RL 147.24 LAL .00 LOL 121.80 VL 27.542 GAL -.01 AZL 83.33 HCA 209.48 SMA 127.10 ECC .15843 INC 6.6655 VI 30.259
RP 108.90 LAP -3.27 LOP 331.11 VP 37.325 GAP 3.93 AZP 95.81 TAL 180.06 TAP 29.54 RCA 106.97 APO 147.24 V2 34.798
RC 121.206 GL 47.72 GP -42.33 ZAL 92.27 ZAP 123.84 ETS 324.47 ZAE 124.98 ETE 218.28 ZAC 111.93 ETC 182.59 CLP-138.87

PLANETOCENTRIC CONIC

C3 18.673 VHL 4.321 DLA 53.72 RAL 359.96 RAD 6567.8 VEL 11.834 PTH 2.10 VHP 4.737 DPA -35.91 RAP 32.58 ECC 1.3073
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.23 16 47 48 4312.62 -35.59 206.46 238.29 46.68 17 59 40 3712.6 -40.84 199.19
137.77 1 43 48 2727.70 -35.58 79.69 238.27 46.68 2 29 16 2127.7 -40.83 72.42
42.23 16 47 48 4312.62 -35.59 206.46 238.29 46.68 17 59 40 3712.6 -40.84 199.19
137.77 1 43 48 2727.70 -35.58 79.69 238.27 46.68 2 29 16 2127.7 -40.83 72.42
42.23 16 47 48 4312.62 -35.59 206.46 238.29 46.68 17 59 40 3712.6 -40.84 199.19
137.77 1 43 48 2727.70 -35.58 79.69 238.27 46.68 2 29 16 2127.7 -40.83 72.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4959 TRA -.5527 TC3-2.9809 BAU .7906 SGT 4373.0 SGR 1645.7 SG3 489.5 ST 3331.1 SR 1359.3 SS 1753.1
RDE 1.0248 RRA -.0401 RC3-1.0693 FAU .09246 RRT .9711 RRF .9930 RTF .9664 CRT .9958 CRS-1.0000 CST -.9951
FDE 3.2295 FRA -.0815 FC3-4.2866 BSP 17469 SGB 4672.4 R23 .2004 R13 .9726 LSA 3998.2 MSA 178.0 SSA 5.9
BOE 2.6981 BRA .5541 BC3 3.1668 FSP -2144 SG1 4657.8 SG2 368.8 THA 20.21 EL1 3595.9 EL2 115.7 ALF 22.14

LAUNCH DATE JAN 22 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 458.820

RL 147.24 LAL .00 LOL 121.80 VL 27.519 GAL .18 AZL 83.84 HCA 212.63 SMA 126.95 ECC .15989 INC 6.1630 VI 30.259
RP 108.89 LAP -3.32 LOP 334.28 VP 37.313 GAP 4.23 AZP 95.20 TAL 179.06 TAP 31.69 RCA 106.65 APO 147.24 V2 34.803
RC 123.581 GL 45.53 GP -38.51 ZAL 91.10 ZAP 127.52 ETS 324.38 ZAE 126.50 ETE 214.79 ZAC 112.64 ETC 181.56 CLP-141.11

PLANETOCENTRIC CONIC

C3 17.137 VHL 4.140 DLA 52.66 RAL 373.75 RAD 6567.7 VEL 11.769 PTH 2.08 VHP 4.671 DPA -32.25 RAP 31.02 ECC 1.2820
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.55 17 6 50 4284.04 -35.93 203.72 240.20 48.51 18 18 14 3684.0 -40.98 196.21
136.45 1 55 4 2716.30 -35.92 78.83 240.19 48.50 2 40 20 2116.3 -40.97 71.31
43.55 17 6 50 4284.04 -35.93 203.72 240.20 48.51 18 18 14 3684.0 -40.98 196.21
136.45 1 55 4 2716.30 -35.92 78.83 240.19 48.50 2 40 20 2116.3 -40.97 71.31
43.55 17 6 50 4284.04 -35.93 203.72 240.20 48.51 18 18 14 3684.0 -40.98 196.21
136.45 1 55 4 2716.30 -35.92 78.83 240.19 48.50 2 40 20 2116.3 -40.97 71.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5147 TRA -.4816 TC3-3.2178 BAU .7649 SGT 4518.8 SGR 1464.4 SG3 493.0 ST 3496.9 SR 1263.8 SS 1796.0
RDE .9128 RRA -.0319 RC3 -.8901 FAU .08541 RRT .9733 RRF .9884 RTF .9730 CRT .9970 CRS -.9999 CST -.9960
FDE 3.2144 FRA -.0351 FC3-4.3145 BSP 14935 SGB 4750.1 R23 .1591 R13 .9767 LSA 4126.3 MSA 158.6 SSA 6.9
BOE 2.6752 BRA .4826 BC3 3.3387 FSP -1705 SG1 4739.3 SG2 320.6 THA 17.59 EL1 3717.2 EL2 91.8 ALF 19.83

LAUNCH DATE JAN 22 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 464.850

RL 147.24 LAL .00 LOL 121.80 VL 27.494 GAL .38 AZL 84.26 HCA 215.79 SMA 126.78 ECC .16148 INC 5.7401 VI 30.259
RP 108.87 LAP -3.35 LOP 337.45 VP 37.300 GAP 4.53 AZP 94.66 TAL 178.02 TAP 33.81 RCA 106.31 APO 147.26 V2 34.808
RC 125.948 GL 43.45 GP -35.14 ZAL 89.75 ZAP 130.94 ETS 324.39 ZAE 127.59 ETE 211.53 ZAC 113.40 ETC 180.71 CLP-143.25

PLANETOCENTRIC CONIC

C3 15.986 VHL 3.998 DLA 51.69 RAL 7.48 RAD 6567.6 VEL 11.721 PTH 2.07 VHP 4.657 DPA -28.89 RAP 29.98 ECC 1.2631
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.77 17 25 25 4259.79 -36.09 201.30 242.33 50.10 18 36 24 3659.8 -40.95 193.59
135.23 2 6 15 2708.72 -36.08 78.19 242.32 50.09 2 51 24 2108.7 -40.95 70.48
44.77 17 25 25 4259.79 -36.09 201.30 242.33 50.10 18 36 24 3659.8 -40.95 193.59
135.23 2 6 15 2708.72 -36.08 78.19 242.32 50.09 2 51 24 2108.7 -40.95 70.48
44.77 17 25 25 4259.79 -36.09 201.30 242.33 50.10 18 36 24 3659.8 -40.95 193.59
135.23 2 6 15 2708.72 -36.08 78.19 242.32 50.09 2 51 24 2108.7 -40.95 70.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4899 TRA -.3584 TC3-3.6057 BAU .7908 SGT 4661.6 SGR 1324.0 SG3 498.0 ST 3577.7 SR 1145.4 SS 1768.5
RDE .7991 RRA .0086 RC3 -.8305 FAU .08579 RRT .9696 RRF .9834 RTF .9711 CRT .9972 CRS -.9998 CST -.9956
FDE 3.0654 FRA .1523 FC3-4.6460 BSP 15209 SGB 4846.0 R23 .1535 R13 .9740 LSA 4148.9 MSA 160.7 SSA 7.9
BOE 2.6150 BRA .3585 BC3 3.7001 FSP -1712 SG1 4835.9 SG2 312.1 THA 15.46 EL1 3755.7 EL2 81.8 ALF 17.71

LAUNCH DATE JAN 22 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.469 GAL .59 AZL 84.62 HCA 218.95 SMA 126.61 ECC .16322 INC 5.3772 V1 30.259  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.287 GAP 4.83 AZP 94.19 TAL 176.95 TAP 35.90 RCA 105.95 APO 147.28 V2 34.815  
 RC 128.306 GL 41.45 GP -32.16 ZAL 88.24 ZAP 134.10 ETS 324.47 ZAE 128.33 ETE 208.55 ZAC 114.25 ETC 180.00 CLP-145.29

DISTANCE 470.865

PLANETOCENTRIC CONIC

C3 15.118 VHL 3.888 DLA 50.78 RAL 11.19 RAD 6567.6 VEL 11.683 PTH 2.05 VHP 4.681 DPA -25.82 RAP 29.37 ECC 1.2488  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.91 17 43 44 4238.98 -36.10 199.14 244.68 51.49 18 54 23 3639.0 -40.81 191.28  
 134.09 2 17 28 2704.32 -36.09 77.74 244.67 51.48 3 2 32 2104.3 -40.80 69.89  
 45.91 17 43 44 4238.98 -36.10 199.14 244.68 51.49 18 54 23 3639.0 -40.81 191.28  
 134.09 2 17 28 2704.32 -36.09 77.74 244.67 51.48 3 2 32 2104.3 -40.80 69.89  
 45.91 17 43 44 4238.98 -36.10 199.14 244.68 51.49 18 54 23 3639.0 -40.81 191.28  
 134.09 2 17 28 2704.32 -36.09 77.74 244.67 51.48 3 2 32 2104.3 -40.80 69.89

DIFFERENTIAL CORRECTIONS

TDE 2.4679 TRA -.2339 TC3-3.9541 BAU .8135  
 RDE .7076 RRA .0371 RC3 -.7529 FAU .08415  
 FDE 2.8943 FRA .3223 FC3-4.8189 BSP 15497  
 BDE 2.5673 BRA .2368 BC3 4.0252 FSP -1694

MID-COURSE EXECUTION ACCURACY

SGT 4793.5 SGR 1199.0 SG3 494.8  
 RRT .9648 RRF .9767 RTF .9698  
 SGB 4941.2 R23 .1412 R13 .9721  
 SG1 4931.7 SG2 306.4 THA 13.62

ORBIT DETERMINATION ACCURACY

ST 3641.5 SR 1043.2 SS 1727.9  
 CRT .9975 CRS -.9996 CST -.9952  
 LSA 4160.3 MSA 161.1 SSA 8.8  
 EL1 3787.4 EL2 70.5 ALF 15.95

LAUNCH DATE JAN 22 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.443 GAL .82 AZL 84.94 HCA 222.11 SMA 126.44 ECC .16509 INC 5.0606 V1 30.259  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.274 GAP 5.13 AZP 93.76 TAL 175.85 TAP 37.95 RCA 105.57 APO 147.32 V2 34.821  
 RC 130.653 GL 39.52 GP -29.53 ZAL 66.58 ZAP 137.02 ETS 324.59 ZAE 128.81 ETE 205.88 ZAC 115.20 ETC 179.41 CLP-147.22

DISTANCE 476.864

PLANETOCENTRIC CONIC

C3 14.467 VHL 3.804 DLA 49.93 RAL 14.87 RAD 6567.6 VEL 11.656 PTH 2.05 VHP 4.735 DPA -23.00 RAP 29.11 ECC 1.2381  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.99 18 1 54 4221.04 -36.00 197.20 247.22 52.72 19 12 15 3621.0 -40.56 189.23  
 133.01 2 28 43 2702.65 -35.99 77.47 247.21 52.71 3 13 46 2102.6 -40.55 69.50  
 46.99 18 1 54 4221.04 -36.00 197.20 247.22 52.72 19 12 15 3621.0 -40.56 189.23  
 133.01 2 28 43 2702.65 -35.99 77.47 247.21 52.71 3 13 46 2102.6 -40.55 69.50  
 46.99 18 1 54 4221.04 -36.00 197.20 247.22 52.72 19 12 15 3621.0 -40.56 189.23  
 133.01 2 28 43 2702.65 -35.99 77.47 247.21 52.71 3 13 46 2102.6 -40.55 69.50

DIFFERENTIAL CORRECTIONS

TDE 2.4438 TRA -.1058 TC3-4.2865 BAU .8395  
 RDE .6333 RRA .0579 RC3 -.6803 FAU .08217  
 FDE 2.7072 FRA .4774 FC3-4.9173 BSP 15882  
 BDE 2.5245 BRA .1206 BC3 4.3402 FSP -1672

MID-COURSE EXECUTION ACCURACY

SGT 4924.0 SGR 1093.7 SG3 487.8  
 RRT .9592 RRF .9681 RTF .9689  
 SGB 5044.0 R23 .1246 R13 .9706  
 SG1 5034.9 SG2 302.4 THA 12.07

ORBIT DETERMINATION ACCURACY

ST 3683.3 SR 954.9 SS 1674.4  
 CRT .9980 CRS -.9992 CST -.9948  
 LSA 4154.0 MSA 161.2 SSA 9.7  
 EL1 3804.6 EL2 58.8 ALF 14.51

LAUNCH DATE JAN 22 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.416 GAL 1.06 AZL 85.22 HCA 225.27 SMA 126.26 ECC .16712 INC 4.7803 V1 30.259  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.262 GAP 5.44 AZP 93.37 TAL 174.71 TAP 39.98 RCA 105.16 APO 147.36 V2 34.829  
 RC 132.989 GL 37.64 GP -27.22 ZAL 84.77 ZAP 139.71 ETS 324.70 ZAE 129.09 ETE 203.50 ZAC 116.26 ETC 178.93 CLP-149.06

DISTANCE 482.846

PLANETOCENTRIC CONIC

C3 13.992 VHL 3.741 DLA 49.11 RAL 18.56 RAD 6567.6 VEL 11.635 PTH 2.04 VHP 4.812 DPA -20.40 RAP 29.15 ECC 1.2303  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.03 18 20 3 4205.47 -35.79 195.44 249.95 53.80 19 30 8 3605.5 -40.23 187.40  
 131.97 2 40 1 2703.45 -35.78 77.36 249.93 53.79 3 25 4 2103.5 -40.22 69.32  
 48.03 18 20 3 4205.47 -35.79 195.44 249.95 53.80 19 30 8 3605.5 -40.23 187.40  
 131.97 2 40 1 2703.45 -35.78 77.36 249.93 53.79 3 25 4 2103.5 -40.22 69.32  
 48.03 18 20 3 4205.47 -35.79 195.44 249.95 53.80 19 30 8 3605.5 -40.23 187.40  
 131.97 2 40 1 2703.45 -35.78 77.36 249.93 53.79 3 25 4 2103.5 -40.22 69.32

DIFFERENTIAL CORRECTIONS

TDE 2.4193 TRA .0292 TC3-4.5744 BAU .8631  
 RDE .5736 RRA .0737 RC3 -.6042 FAU .07920  
 FDE 2.5161 FRA .6201 FC3-4.9002 BSP 16236  
 BDE 2.4863 BRA .0793 BC3 4.6141 FSP -1631

MID-COURSE EXECUTION ACCURACY

SGT 5044.6 SGR 1003.0 SG3 476.4  
 RRT .9515 RRF .9572 RTF .9681  
 SGB 5143.3 R23 .1064 R13 .9694  
 SG1 5134.4 SG2 303.1 THA 10.75

ORBIT DETERMINATION ACCURACY

ST 3707.2 SR 880.2 SS 1613.1  
 CRT .9985 CRS -.9985 CST -.9943  
 LSA 4134.5 MSA 161.0 SSA 10.7  
 EL1 3809.9 EL2 46.8 ALF 13.34

LAUNCH DATE JAN 22 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

RL 147.24 LAL .00 LOL 121.80 VL 27.388 GAL 1.31 AZL 85.47 HCA 228.43 SMA 126.08 ECC .16930 INC 4.5290 V1 30.259  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.249 GAP 5.74 AZP 93.01 TAL 173.55 TAP 41.99 RCA 104.74 APO 147.43 V2 34.837  
 RC 135.313 GL 35.80 GP -25.17 ZAL 82.85 ZAP 142.20 ETS 324.80 ZAE 129.23 ETE 201.40 ZAC 117.41 ETC 178.53 CLP-150.81

DISTANCE 488.813

PLANETOCENTRIC CONIC

C3 13.663 VHL 3.696 DLA 48.31 RAL 22.26 RAD 6567.5 VEL 11.621 PTH 2.04 VHP 4.908 DPA -18.01 RAP 29.44 ECC 1.2249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.07 18 38 13 4191.88 -35.50 193.83 252.84 54.78 19 48 5 3591.9 -39.82 185.74  
 130.93 2 51 17 2706.64 -35.49 77.41 252.83 54.76 3 36 24 2106.6 -39.81 69.32  
 49.07 18 38 13 4191.88 -35.50 193.83 252.84 54.78 19 48 5 3591.9 -39.82 185.74  
 130.93 2 51 17 2706.64 -35.49 77.41 252.83 54.76 3 36 24 2106.6 -39.81 69.32  
 49.07 18 38 13 4191.88 -35.50 193.83 252.84 54.78 19 48 5 3591.9 -39.82 185.74  
 130.93 2 51 17 2706.64 -35.49 77.41 252.83 54.76 3 36 24 2106.6 -39.81 69.32

DIFFERENTIAL CORRECTIONS

TDE 2.3911 TRA .1704 TC3-4.8240 BAU .8865  
 RDE .5256 RRA .0855 RC3 -.5318 FAU .07581  
 FDE 2.3245 FRA .7479 FC3-4.8033 BSP 16590  
 BDE 2.4482 BRA .1906 BC3 4.8532 FSP -1581

MID-COURSE EXECUTION ACCURACY

SGT 5158.7 SGR 926.2 SG3 462.3  
 RRT .9419 RRF .9440 RTF .9677  
 SGB 5241.2 R23 .0874 R13 .9686  
 SG1 5232.2 SG2 306.8 THA 9.63

ORBIT DETERMINATION ACCURACY

ST 3709.8 SR 816.9 SS 1544.6  
 CRT .9991 CRS -.9974 CST -.9937  
 LSA 4097.5 MSA 160.6 SSA 11.6  
 EL1 3798.5 EL2 34.7 ALF 12.41

LAUNCH DATE JAN 22 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 494.762

RL 147.24 LAL .00 LOL 121.80 VL 27.360 GAL 1.57 AZL 85.70 HCA 231.60 SMA 125.90 ECC .17165 INC 4.3010 V1 30.259
RP 108.75 LAP -3.37 LOP 353.32 VP 37.236 GAP 6.05 AZP 92.67 TAL 172.37 TAP 43.97 RCA 104.29 APO 147.51 V2 34.846
RC 137.625 GL 33.99 GP -23.37 ZAL 80.81 ZAP 144.50 ETS 324.86 ZAE 129.27 ETE 199.55 ZAC 118.66 ETC 178.19 CLP-152.48

PLANETOCENTRIC CONIC

C3 13.463 VHL 3.669 DLA 47.52 RAL 25.95 RAD 6567.5 VEL 11.612 PTH 2.03 VHP 5.020 DPA -15.79 RAP 29.94 ECC 1.2216
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.10 18 56 31 4179.85 -35.11 192.33 255.88 55.65 20 6 11 3579.8 -39.33 184.21
129.90 3 2 27 2712.24 -35.10 77.63 255.87 55.64 3 47 39 2112.2 -39.32 69.51
50.10 18 56 31 4179.85 -35.11 192.33 255.88 55.65 20 6 11 3579.8 -39.33 184.21
129.90 3 2 27 2712.24 -35.10 77.63 255.87 55.64 3 47 39 2112.2 -39.32 69.51
50.10 18 56 31 4179.85 -35.11 192.33 255.88 55.65 20 6 11 3579.8 -39.33 184.21
129.90 3 2 27 2712.24 -35.10 77.63 255.87 55.64 3 47 39 2112.2 -39.32 69.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3589 TRA .3192 TC3-5.0301 BAU .9092 SGT 5266.8 SGR 862.0 SG3 446.6 ST 3691.8 SR 763.7 SS 1471.1
ROE .4872 RRA .0948 RC3 -.4645 FAU .07217 RRT .9301 RRF .9285 RTF .9674 CRT .9995 CRS -.9957 CST -.9931
FDE 2.1368 FRA .8636 FC3-4.6411 BSP 16942 SGB 5336.8 R23 .0696 R13 .9680 LSA 4043.7 MSA 160.6 SSA 12.5
BDE 2.4087 BRA .3330 BC3 5.0515 FSP -1528 SGI 5327.7 SG2 313.1 THA 8.69 EL1 3769.9 EL2 23.2 ALF 11.68

LAUNCH DATE JAN 22 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 500.694

RL 147.24 LAL .00 LOL 121.80 VL 27.331 GAL 1.85 AZL 85.91 HCA 234.77 SMA 125.71 ECC .17418 INC 4.0922 V1 30.259
RP 108.72 LAP -3.34 LOP 356.50 VP 37.224 GAP 6.37 AZP 92.36 TAL 171.15 TAP 45.92 RCA 103.81 APO 147.61 V2 34.855
RC 139.923 GL 32.20 GP -21.77 ZAL 78.67 ZAP 146.63 ETS 324.86 ZAE 129.23 ETE 197.93 ZAC 120.01 ETC 177.90 CLP-154.06

PLANETOCENTRIC CONIC

C3 13.380 VHL 3.658 DLA 46.71 RAL 29.63 RAD 6567.5 VEL 11.609 PTH 2.03 VHP 5.146 DPA -13.73 RAP 30.63 ECC 1.2202
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.16 19 14 56 4169.20 -34.64 190.93 259.04 56.45 20 24 25 3569.2 -38.77 182.79
128.84 3 13 26 2720.18 -34.63 78.01 259.03 56.44 3 58 47 2120.2 -38.76 69.87
51.16 19 14 56 4169.20 -34.64 190.93 259.04 56.45 20 24 25 3569.2 -38.77 182.79
128.84 3 13 26 2720.18 -34.63 78.01 259.03 56.44 3 58 47 2120.2 -38.76 69.87
51.16 19 14 56 4169.20 -34.64 190.93 259.04 56.45 20 24 25 3569.2 -38.77 182.79
128.84 3 13 26 2720.18 -34.63 78.01 259.03 56.44 3 58 47 2120.2 -38.76 69.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3253 TRA .4785 TC3-5.1796 BAU .9293 SGT 5368.4 SGR 809.3 SG3 429.9 ST 3658.8 SR 720.4 SS 1397.6
ROE .4577 RRA .1028 RC3 -.4005 FAU .06816 RRT .9157 RRF .9108 RTF .9672 CRT .9998 CRS -.9932 CST -.9924
FDE 1.9602 FRA .9707 FC3-4.4102 BSP 17215 SGB 5429.1 R23 .0547 R13 .9677 LSA 3979.1 MSA 161.1 SSA 13.4
BDE 2.3699 BRA .4895 BC3 5.1951 FSP -1462 SGI 5419.5 SG2 322.2 THA 7.89 EL1 3729.0 EL2 14.5 ALF 11.14

LAUNCH DATE JAN 22 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 506.607

RL 147.24 LAL .00 LOL 121.80 VL 27.302 GAL 2.15 AZL 86.10 HCA 237.94 SMA 125.52 ECC .17690 INC 3.8990 V1 30.259
RP 108.69 LAP -3.30 LOP 359.68 VP 37.212 GAP 6.69 AZP 92.07 TAL 169.92 TAP 47.86 RCA 103.32 APO 147.73 V2 34.865
RC 142.207 GL 30.44 GP -20.35 ZAL 76.46 ZAP 148.62 ETS 324.80 ZAE 129.15 ETE 196.51 ZAC 121.44 ETC 177.64 CLP-155.58

PLANETOCENTRIC CONIC

C3 13.407 VHL 3.662 DLA 45.89 RAL 33.30 RAD 6567.5 VEL 11.610 PTH 2.03 VHP 5.285 DPA -11.80 RAP 31.49 ECC 1.2206
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.25 19 33 31 4159.57 -34.09 189.58 262.31 57.19 20 42 51 3559.6 -38.13 181.45
127.75 3 24 7 2730.68 -34.08 78.56 262.30 57.18 4 9 38 2130.7 -38.12 70.42
52.25 19 33 31 4159.57 -34.09 189.58 262.31 57.19 20 42 51 3559.6 -38.13 181.45
127.75 3 24 7 2730.68 -34.08 78.56 262.30 57.18 4 9 38 2130.7 -38.12 70.42
52.25 19 33 31 4159.57 -34.09 189.58 262.31 57.19 20 42 51 3559.6 -38.13 181.45
127.75 3 24 7 2730.68 -34.08 78.56 262.30 57.18 4 9 38 2130.7 -38.12 70.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2826 TRA .6430 TC3-5.2890 BAU .9500 SGT 5463.4 SGR 765.0 SG3 412.3 ST 3599.9 SR 683.1 SS 1318.6
ROE .4340 RRA .1091 RC3 -.3452 FAU .06431 RRT .8994 RRF .8912 RTF .9673 CRT .9997 CRS -.9896 CST -.9916
FDE 1.7868 FRA 1.0624 FC3-4.1526 BSP 17558 SGB 5516.7 R23 .0411 R13 .9676 LSA 3890.8 MSA 161.7 SSA 14.2
BDE 2.3235 BRA .6522 BC3 5.3003 FSP -1405 SGI 5506.7 SG2 331.7 THA 7.20 EL1 3664.1 EL2 16.6 ALF 10.74

LAUNCH DATE JAN 22 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 512.500

RL 147.24 LAL .00 LOL 121.80 VL 27.273 GAL 2.46 AZL 86.28 HCA 241.11 SMA 125.33 ECC .17982 INC 3.7186 V1 30.259
RP 108.66 LAP -3.26 LOP 2.86 VP 37.200 GAP 7.01 AZP 91.80 TAL 168.67 TAP 49.78 RCA 102.80 APO 147.87 V2 34.875
RC 144.478 GL 28.70 GP -19.09 ZAL 74.17 ZAP 150.47 ETS 324.67 ZAE 129.03 ETE 195.27 ZAC 122.96 ETC 177.41 CLP-157.03

PLANETOCENTRIC CONIC

C3 13.541 VHL 3.680 DLA 45.04 RAL 36.94 RAD 6567.5 VEL 11.616 PTH 2.04 VHP 5.434 DPA -10.00 RAP 32.49 ECC 1.2228
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.39 19 52 15 4150.81 -33.45 188.28 265.67 57.88 21 1 26 3550.8 -37.42 180.16
126.61 3 34 24 2743.77 -33.44 79.28 265.66 57.87 4 20 7 2143.8 -37.41 71.17
53.39 19 52 15 4150.81 -33.45 188.28 265.67 57.88 21 1 26 3550.8 -37.42 180.16
126.61 3 34 24 2743.77 -33.44 79.28 265.66 57.87 4 20 7 2143.8 -37.41 71.17
53.39 19 52 15 4150.81 -33.45 188.28 265.67 57.88 21 1 26 3550.8 -37.42 180.16
126.61 3 34 24 2743.77 -33.44 79.28 265.66 57.87 4 20 7 2143.8 -37.41 71.17

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2350 TRA .8172 TC3-5.3471 BAU .9695 SGT 5553.3 SGR 728.9 SG3 394.6 ST 3523.6 SR 652.3 SS 1239.8
ROE .4161 RRA .1150 RC3 -.2961 FAU .06045 RRT .8815 RRF .8703 RTF .9675 CRT .9990 CRS -.9846 CST -.9906
FDE 1.6237 FRA 1.1458 FC3-3.8647 BSP 17878 SGB 5600.9 R23 .0302 R13 .9678 LSA 3788.4 MSA 163.4 SSA 14.9
BDE 2.2734 BRA .8252 BC3 5.3553 FSP -1347 SGI 5590.5 SG2 342.0 THA 6.62 EL1 3583.4 EL2 28.2 ALF 10.48

LAUNCH DATE JAN 22 1969 FLIGHT TIME 182.00 ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC DISTANCE 518.373  
 RL 147.24 LAL .00 LOL 121.80 VL 27.243 GAL 2.78 AZL 86.45 HCA 244.29 SMA 125.14 ECC .18295 INC 3.5488 V1 30.259  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.188 GAP 7.35 AZP 91.54 TAL 167.39 TAP 51.68 RCA 102.25 APO 148.03 V2 34.885  
 RC 146.734 GL 26.98 GP -17.96 ZAL 71.84 ZAP 152.20 ETS 324.44 ZAE 128.90 ETE 194.19 ZAC 124.55 ETC 177.20 CLP-158.42

PLANETOCENTRIC CONIC  
 C3 13.782 VHL 3.712 DLA 44.16 RAL 40.53 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 5.595 DPA -8.29 RAP 33.61 ECC 1.2268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.58 20 11 10 4142.63 -32.73 187.00 269.10 58.52 21 20 12 3542.6 -36.63 178.91  
 125.42 3 44 7 2759.67 -32.72 80.20 269.09 58.51 4 30 7 2159.7 -36.62 72.12  
 54.58 20 11 10 4142.63 -32.73 187.00 269.10 58.52 21 20 12 3542.6 -36.63 178.91  
 125.42 3 44 7 2759.67 -32.72 80.20 269.09 58.51 4 30 7 2159.7 -36.62 72.12  
 54.58 20 11 10 4142.63 -32.73 187.00 269.10 58.52 21 20 12 3542.6 -36.63 178.91  
 125.42 3 44 7 2759.67 -32.72 80.20 269.09 58.51 4 30 7 2159.7 -36.62 72.12

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1807 TRA 1.0008 TC3-5.3554 BAU .9878 SGT 5636.8 SGR 699.3 SG3 376.9 ST 3429.1 SR 626.3 SS 1161.0  
 RDE .4026 RRA .1209 RC3 -.2533 FAU .05666 RRT .8622 RRF .8487 RTF .9678 CRT .9976 CRS -.9778 CST -.9895  
 FDE 1.4691 FRA 1.2213 FC3-3.5589 BSP 18183 SGB 5680.0 R23 .0217 R13 .9679 LSA 3670.2 MSA 166.3 SSA 15.5  
 BOE 2.2175 BRA 1.0081 BC3 5.3613 FSP -1288 SG1 5669.1 SG2 352.2 THA 6.13 EL1 3485.5 EL2 42.9 ALF 10.33

LAUNCH DATE JAN 22 1969 FLIGHT TIME 184.00 ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC DISTANCE 524.223  
 RL 147.24 LAL .00 LOL 121.80 VL 27.213 GAL 3.13 AZL 86.61 HCA 247.46 SMA 124.95 ECC .18631 INC 3.3877 V1 30.259  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.176 GAP 7.69 AZP 91.30 TAL 166.11 TAP 53.57 RCA 101.67 APO 148.23 V2 34.897  
 RC 148.977 GL 25.28 GP -16.95 ZAL 69.47 ZAP 153.83 ETS 324.11 ZAE 128.76 ETE 193.23 ZAC 126.20 ETC 176.99 CLP-159.76

PLANETOCENTRIC CONIC  
 C3 14.134 VHL 3.759 DLA 43.25 RAL 44.05 RAD 6567.6 VEL 11.641 PTH 2.04 VHP 5.765 DPA -6.68 RAP 34.85 ECC 1.2326  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.83 20 30 12 4134.93 -31.93 185.73 272.57 59.13 21 39 7 3534.9 -35.76 177.69  
 124.17 3 53 13 2778.44 -31.92 81.32 272.56 59.11 4 39 31 2178.4 -35.75 73.28  
 55.83 20 30 12 4134.93 -31.93 185.73 272.57 59.13 21 39 7 3534.9 -35.76 177.69  
 124.17 3 53 13 2778.44 -31.92 81.32 272.56 59.11 4 39 31 2178.4 -35.75 73.28  
 55.83 20 30 12 4134.93 -31.93 185.73 272.57 59.13 21 39 7 3534.9 -35.76 177.69  
 124.17 3 53 13 2778.44 -31.92 81.32 272.56 59.11 4 39 31 2178.4 -35.75 73.28

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1210 TRA 1.1949 TC3-5.3142 BAU 1.0050 SGT 5715.3 SGR 675.3 SG3 359.4 ST 3320.5 SR 604.4 SS 1084.2  
 RDE .3931 RRA .1269 RC3 -.2165 FAU .05296 RRT .8424 RRF .8270 RTF .9681 CRT .9950 CRS -.9688 CST -.9883  
 FDE 1.3248 FRA 1.2896 FC3-3.2440 BSP 18463 SGB 5755.1 R23 .0153 R13 .9682 LSA 3540.8 MSA 170.6 SSA 16.0  
 BOE 2.1571 BRA 1.2016 BC3 5.3186 FSP -1231 SG1 5743.7 SG2 362.1 THA 5.71 EL1 3374.5 EL2 59.3 ALF 10.27

LAUNCH DATE JAN 22 1969 FLIGHT TIME 186.00 ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC DISTANCE 530.050  
 RL 147.24 LAL .00 LOL 121.80 VL 27.182 GAL 3.49 AZL 86.77 HCA 250.64 SMA 124.75 ECC .18993 INC 3.2339 V1 30.259  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.165 GAP 8.04 AZP 91.07 TAL 164.81 TAP 55.45 RCA 101.06 APO 148.45 V2 34.908  
 RC 151.204 GL 23.61 GP -16.05 ZAL 67.08 ZAP 155.36 ETS 323.68 ZAE 128.62 ETE 192.40 ZAC 127.92 ETC 176.78 CLP-161.06

PLANETOCENTRIC CONIC  
 C3 14.601 VHL 3.821 DLA 42.30 RAL 47.50 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 5.946 DPA -5.15 RAP 36.18 ECC 1.2403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.15 20 49 22 4127.52 -31.06 184.47 276.08 59.70 21 58 9 3527.5 -34.82 176.47  
 122.85 4 1 34 2800.25 -31.05 82.65 276.07 59.69 4 48 14 2200.3 -34.81 74.65  
 57.15 20 49 22 4127.52 -31.06 184.47 276.08 59.70 21 58 9 3527.5 -34.82 176.47  
 122.85 4 1 34 2800.25 -31.05 82.65 276.07 59.69 4 48 14 2200.3 -34.81 74.65  
 57.15 20 49 22 4127.52 -31.06 184.47 276.08 59.70 21 58 9 3527.5 -34.82 176.47  
 122.85 4 1 34 2800.25 -31.05 82.65 276.07 59.69 4 48 14 2200.3 -34.81 74.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.0577 TRA 1.4024 TC3-5.2194 BAU 1.0195 SGT 5789.1 SGR 656.1 SG3 342.6 ST 3203.4 SR 586.3 SS 1011.8  
 RDE .3872 RRA .1338 RC3 -.1840 FAU .04924 RRT .8224 RRF .8061 RTF .9683 CRT .9911 CRS -.9571 CST -.9869  
 FDE 1.1921 FRA 1.3549 FC3-2.9198 BSP 18667 SGB 5826.2 R23 .0113 R13 .9684 LSA 3405.5 MSA 177.0 SSA 16.4  
 BOE 2.0938 BRA 1.4088 BC3 5.2226 FSP -1170 SG1 5814.3 SG2 371.6 THA 5.35 EL1 3255.7 EL2 77.0 ALF 10.29

LAUNCH DATE JAN 22 1969 FLIGHT TIME 188.00 ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC DISTANCE 535.851  
 RL 147.24 LAL .00 LOL 121.80 VL 27.152 GAL 3.87 AZL 86.91 HCA 253.83 SMA 124.56 ECC .19381 INC 3.0858 V1 30.259  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.153 GAP 8.40 AZP 90.86 TAL 163.49 TAP 57.32 RCA 100.42 APO 148.70 V2 34.920  
 RC 153.416 GL 21.97 GP -15.23 ZAL 64.68 ZAP 156.81 ETS 323.12 ZAE 128.47 ETE 191.66 ZAC 129.69 ETC 176.57 CLP-162.31

PLANETOCENTRIC CONIC  
 C3 15.192 VHL 3.898 DLA 41.33 RAL 50.86 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 6.138 DPA -3.69 RAP 37.61 ECC 1.2500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.54 21 8 40 4120.11 -30.11 183.19 279.61 60.24 22 17 20 3520.1 -33.82 175.25  
 121.46 4 9 2 2825.37 -30.10 84.20 279.60 60.23 4 56 7 2225.4 -33.81 76.26  
 58.54 21 8 40 4120.11 -30.11 183.19 279.61 60.24 22 17 20 3520.1 -33.82 175.25  
 121.46 4 9 2 2825.37 -30.10 84.20 279.60 60.23 4 56 7 2225.4 -33.81 76.26  
 58.54 21 8 40 4120.11 -30.11 183.19 279.61 60.24 22 17 20 3520.1 -33.82 175.25  
 121.46 4 9 2 2825.37 -30.10 84.20 279.60 60.23 4 56 7 2225.4 -33.81 76.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 1.9850 TRA 1.6171 TC3-5.0907 BAU 1.0344 SGT 5855.2 SGR 639.5 SG3 325.8 ST 3071.0 SR 569.8 SS 940.0  
 RDE .3835 RRA .1408 RC3 -.1579 FAU .04583 RRT .8028 RRF .7856 RTF .9687 CRT .9852 CRS -.9421 CST -.9853  
 FDE 1.0652 FRA 1.4106 FC3-2.6115 BSP 18941 SGB 5890.0 R23 .0078 R13 .9687 LSA 3256.5 MSA 185.0 SSA 16.5  
 BOE 2.0217 BRA 1.6232 BC3 5.0931 FSP -1118 SG1 5877.8 SG2 379.8 THA 5.03 EL1 3121.9 EL2 95.9 ALF 10.37

LAUNCH DATE JAN 22 1969

FLIGHT TIME 190.00

ARRIVAL DATE JUL 31 1969

MELIOCENTRIC CONIC

DISTANCE 541.624

RL 147.24 LAL .00 LOL 121.80 VL 27.121 GAL 4.27 AZL 87.06 HCA 257.01 SMA 124.36 ECC .19798 INC 2.9423 V1 30.259  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.142 GAP 8.78 AZP 90.66 TAL 162.17 TAP 59.18 RCA 99.74 APO 148.98 V2 34.932  
 RC 155.612 GL 20.36 GP -14.50 ZAL 62.30 ZAP 158.18 ETS 322.43 ZAE 128.33 ETE 191.01 ZAC 131.51 ETC 176.35 CLP-163.52

PLANETOCENTRIC CONIC

C3 15.916 VHL 3.989 OLA 40.32 RAL 54.11 RAD 6567.6 VEL 11.718 PTH 2.06 VHP 6.341 DPA -2.31 RAP 39.11 ECC 1.2619  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.00 21 28 6 4112.63 -29.10 181.89 283.15 60.75 22 36 38 3512.6 -32.75 174.01  
 120.00 4 15 32 2853.87 -29.09 85.99 283.14 60.74 5 3 6 2253.9 -32.74 78.10  
 60.00 21 28 6 4112.63 -29.10 181.89 283.15 60.75 22 36 38 3512.6 -32.75 174.01  
 120.00 4 15 32 2853.87 -29.09 85.99 283.14 60.74 5 3 6 2253.9 -32.74 78.10  
 60.00 21 28 6 4112.63 -29.10 181.89 283.15 60.75 22 36 38 3512.6 -32.75 174.01  
 120.00 4 15 32 2853.87 -29.09 85.99 283.14 60.74 5 3 6 2253.9 -32.74 78.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9078 TRA 1.8446 TC3-4.9226 BAU 1.0478 SGT 5916.8 SGR 625.8 SG3 309.8 ST 2933.9 SR 555.3 SS 873.4  
 RDE .3822 RRA .1488 RC3 -.1358 FAU .04252 RRT .7842 RRF .7666 RTF .9689 CRT .9771 CRS -.9231 CST -.9835  
 FDE .9483 FRA 1.4634 FC3-2.3129 BSP 19184 SGB 5949.8 R23 .0056 R13 .9690 LSA 3105.0 MSA 195.2 SSA 16.6  
 BDE 1.9457 BRA 1.8506 BC3 4.9245 FSP -1067 SG1 5937.3 SG2 387.0 THA 4.76 EL1 2983.8 EL2 116.1 ALF 10.49

LAUNCH DATE JAN 22 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 2 1969

MELIOCENTRIC CONIC

DISTANCE 547.366

RL 147.24 LAL .00 LOL 121.80 VL 27.090 GAL 4.70 AZL 87.20 HCA 260.20 SMA 124.17 ECC .20248 INC 2.8023 V1 30.259  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.131 GAP 9.17 AZP 90.48 TAL 160.85 TAP 61.04 RCA 99.03 APO 149.31 V2 34.945  
 RC 157.792 GL 18.80 GP -13.84 ZAL 59.94 ZAP 159.48 ETS 321.58 ZAE 128.19 ETE 190.44 ZAC 133.37 ETC 176.11 CLP-164.69

PLANETOCENTRIC CONIC

C3 16.786 VHL 4.097 OLA 39.30 RAL 57.24 RAD 6567.7 VEL 11.755 PTH 2.07 VHP 6.555 DPA -.98 RAP 40.69 ECC 1.2763  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.53 21 47 39 4104.84 -28.03 180.56 286.68 61.24 22 56 4 3504.8 -31.63 172.74  
 118.47 4 21 0 2885.97 -28.02 88.02 286.68 61.23 5 9 6 2286.0 -31.62 80.20  
 61.53 21 47 39 4104.84 -28.03 180.56 286.68 61.24 22 56 4 3504.8 -31.63 172.74  
 118.47 4 21 0 2885.97 -28.02 88.02 286.68 61.23 5 9 6 2286.0 -31.62 80.20  
 61.53 21 47 39 4104.84 -28.03 180.56 286.68 61.24 22 56 4 3504.8 -31.63 172.74  
 118.47 4 21 0 2885.97 -28.02 88.02 286.68 61.23 5 9 6 2286.0 -31.62 80.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8255 TRA 2.0845 TC3-4.7212 BAU 1.0598 SGT 5972.7 SGR 614.0 SG3 294.5 ST 2794.2 SR 542.1 SS 811.8  
 RDE .3828 RRA .1577 RC3 -.1176 FAU .03937 RRT .7669 RRF .7491 RTF .9692 CRT .9662 CRS -.8996 CST -.9815  
 FDE .8400 FRA 1.5123 FC3-2.0303 BSP 19416 SGB 6004.2 R23 .0041 R13 .9692 LSA 2952.5 MSA 207.6 SSA 16.4  
 BDE 1.8652 BRA 2.0904 BC3 4.7227 FSP -1018 SG1 5991.3 SG2 392.8 THA 4.53 EL1 2843.0 EL2 137.4 ALF 10.64

LAUNCH DATE JAN 22 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 4 1969

MELIOCENTRIC CONIC

DISTANCE 553.074

RL 147.24 LAL .00 LOL 121.80 VL 27.059 GAL 5.14 AZL 87.34 HCA 263.38 SMA 123.97 ECC .20731 INC 2.6649 V1 30.259  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.121 GAP 9.57 AZP 90.31 TAL 159.52 TAP 62.90 RCA 98.27 APO 149.67 V2 34.957  
 RC 159.953 GL 17.27 GP -13.24 ZAL 57.61 ZAP 160.71 ETS 320.57 ZAE 128.06 ETE 189.94 ZAC 135.27 ETC 175.84 CLP-165.84

PLANETOCENTRIC CONIC

C3 17.818 VHL 4.221 OLA 38.26 RAL 60.25 RAD 6567.7 VEL 11.798 PTH 2.09 VHP 6.781 DPA .28 RAP 42.33 ECC 1.2932  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.12 22 7 22 4096.54 -26.91 179.18 290.21 61.71 23 15 38 3496.5 -30.46 171.42  
 116.88 4 25 19 2921.88 -26.90 90.32 290.20 61.70 5 14 0 2321.9 -30.45 82.56  
 63.12 22 7 22 4096.54 -26.91 179.18 290.21 61.71 23 15 38 3496.5 -30.46 171.42  
 116.88 4 25 19 2921.88 -26.90 90.32 290.20 61.70 5 14 0 2321.9 -30.45 82.56  
 63.12 22 7 22 4096.54 -26.91 179.18 290.21 61.71 23 15 38 3496.5 -30.46 171.42  
 116.88 4 25 19 2921.88 -26.90 90.32 290.20 61.70 5 14 0 2321.9 -30.45 82.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7423 TRA 2.3413 TC3-4.4835 BAU 1.0683 SGT 6024.8 SGR 604.4 SG3 280.0 ST 2660.7 SR 530.4 SS 758.0  
 RDE .3855 RRA .1679 RC3 -.1014 FAU .03620 RRT .7513 RRF .7340 RTF .9693 CRT .9518 CRS -.8716 CST -.9796  
 FDE .7428 FRA 1.5609 FC3-1.7590 BSP 19536 SGB 6055.1 R23 .0039 R13 .9693 LSA 2808.2 MSA 221.8 SSA 16.2  
 BDE 1.7844 BRA 2.3473 BC3 4.4846 FSP -965 SG1 6042.0 SG2 397.7 THA 4.33 EL1 2708.4 EL2 159.8 ALF 10.78

LAUNCH DATE JAN 22 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 6 1969

MELIOCENTRIC CONIC

DISTANCE 558.744

RL 147.24 LAL .00 LOL 121.80 VL 27.028 GAL 5.62 AZL 87.47 HCA 266.57 SMA 123.78 ECC .21253 INC 2.5292 V1 30.259  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.110 GAP 10.00 AZP 90.15 TAL 158.18 TAP 64.76 RCA 97.47 APO 150.09 V2 34.970  
 RC 162.097 GL 15.79 GP -12.69 ZAL 55.33 ZAP 161.88 ETS 319.36 ZAE 127.93 ETE 189.49 ZAC 137.21 ETC 175.55 CLP-166.96

PLANETOCENTRIC CONIC

C3 19.031 VHL 4.362 OLA 37.21 RAL 63.14 RAD 6567.8 VEL 11.850 PTH 2.10 VHP 7.022 DPA 1.49 RAP 44.04 ECC 1.3132  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.79 22 27 17 4087.45 -25.74 177.74 293.73 62.16 23 35 24 3487.4 -29.25 170.05  
 115.21 4 28 23 2961.83 -25.73 92.90 293.72 62.14 5 17 45 2361.8 -29.24 85.21  
 64.79 22 27 17 4087.45 -25.74 177.74 293.73 62.16 23 35 24 3487.4 -29.25 170.05  
 115.21 4 28 23 2961.83 -25.73 92.90 293.72 62.14 5 17 45 2361.8 -29.24 85.21  
 64.79 22 27 17 4087.45 -25.74 177.74 293.73 62.16 23 35 24 3487.4 -29.25 170.05  
 115.21 4 28 23 2961.83 -25.73 92.90 293.72 62.14 5 17 45 2361.8 -29.24 85.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6506 TRA 2.6079 TC3-4.2342 BAU 1.0775 SGT 6069.8 SGR 594.9 SG3 266.0 ST 2525.1 SR 518.5 SS 707.7  
 RDE .3890 RRA .1787 RC3 -.0890 FAU .03336 RRT .7371 RRF .7199 RTF .9695 CRT .9332 CRS -.8376 CST -.9777  
 FDE .6504 FRA 1.6040 FC3-1.5176 BSP 19751 SGB 6098.8 R23 .0031 R13 .9696 LSA 2662.6 MSA 237.8 SSA 15.9  
 BDE 1.6958 BRA 2.6141 BC3 4.2351 FSP -922 SG1 6085.7 SG2 401.0 THA 4.15 EL1 2571.3 EL2 183.0 ALF 10.90

LAUNCH DATE JAN 22 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 564.371

RL 147.24 LAL .00 LOL 121.80 VL 26.997 GAL 6.12 AZL 87.61 MCA 269.77 SMA 123.59 ECC .21816 INC 2.3943 V1 30.259  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.100 GAP 10.44 AZP 90.01 TAL 156.85 TAP 66.62 RCA 96.62 APO 150.55 V2 34.983  
 RC 164.221 GL 14.36 GP -12.20 ZAL 53.11 ZAP 162.99 ETS 317.94 ZAE 127.80 ETE 189.08 ZAC 139.17 ETC 175.22 CLP-168.06

PLANETOCENTRIC CONIC

C3 20.447 VHL 4.522 DLA 36.15 RAL 65.88 RAD 6567.8 VEL 11.909 PTH 2.12 VHP 7.276 DPA 2.65 RAP 45.80 ECC 1.3365  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.52 22 47 28 4077.25 -24.54 176.22 297.23 62.58 23 55 25 3477.3 -28.01 168.60  
 113.48 4 30 8 3006.10 -24.53 95.77 297.22 62.57 5 20 14 2406.1 -27.99 88.15  
 66.52 22 47 28 4077.25 -24.54 176.22 297.23 62.58 23 55 25 3477.3 -28.01 168.60  
 113.48 4 30 8 3006.10 -24.53 95.77 297.22 62.57 5 20 14 2406.1 -27.99 88.15  
 66.52 22 47 28 4077.25 -24.54 176.22 297.23 62.58 23 55 25 3477.3 -28.01 168.60  
 113.48 4 30 8 3006.10 -24.53 95.77 297.22 62.57 5 20 14 2406.1 -27.99 88.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5562 TRA 2.8902 TC3-3.9663 BAU 1.0844 SGT 6109.3 SGR 586.1 SG3 252.8 ST 2398.1 SR 507.0 SS 664.2  
 RDE .3938 RRA .1906 RC3 -.0784 FAU .03060 RRT .7247 RRF .7078 RTF .9697 CRT .9099 CRS -.7982 CST -.9759  
 FDE .5661 FRA 1.6460 FC3-1.2957 BSP 19939 SGB 6137.4 R23 .0029 R13 .9697 LSA 2526.6 MSA 255.0 SSA 15.5  
 BOE 1.6052 BRA 2.8965 BC3 3.9671 FSP -879 SG1 6124.1 SG2 402.9 THA 3.99 EL1 2442.4 EL2 206.6 ALF 10.97

LAUNCH DATE JAN 22 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 569.949

RL 147.24 LAL .00 LOL 121.80 VL 26.966 GAL 6.66 AZL 87.74 MCA 272.96 SMA 123.39 ECC .22424 INC 2.2593 V1 30.259  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.090 GAP 10.91 AZP 89.88 TAL 155.53 TAP 68.49 RCA 95.72 APO 151.06 V2 34.996  
 RC 166.326 GL 12.98 GP -11.75 ZAL 50.96 ZAP 164.05 ETS 316.27 ZAE 127.67 ETE 188.73 ZAC 141.16 ETC 174.84 CLP-169.15

PLANETOCENTRIC CONIC

C3 22.094 VHL 4.700 DLA 35.10 RAL 68.50 RAD 6567.9 VEL 11.978 PTH 2.13 VHP 7.547 DPA 3.76 RAP 47.61 ECC 1.3636  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.34 23 8 1 4065.54 -23.31 174.60 300.71 62.98 24 15 47 3465.5 -26.73 167.03  
 111.66 4 30 25 3055.07 -23.29 98.98 300.70 62.97 5 21 20 2455.1 -26.72 91.42  
 68.34 23 8 1 4065.54 -23.31 174.60 300.71 62.98 24 15 47 3465.5 -26.73 167.03  
 111.66 4 30 25 3055.07 -23.29 98.98 300.70 62.97 5 21 20 2455.1 -26.72 91.42  
 68.34 23 8 1 4065.54 -23.31 174.60 300.71 62.98 24 15 47 3465.5 -26.73 167.03  
 111.66 4 30 25 3055.07 -23.29 98.98 300.70 62.97 5 21 20 2455.1 -26.72 91.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4585 TRA 3.1888 TC3-3.6870 BAU 1.0892 SGT 6143.6 SGR 577.6 SG3 240.2 ST 2281.0 SR 495.6 SS 627.0  
 RDE .3996 RRA .2037 RC3 -.0693 FAU .02798 RRT .7139 RRF .6973 RTF .9700 CRT .8811 CRS -.7535 CST -.9745  
 FDE .4890 FRA 1.6867 FC3-1.0962 BSP 20106 SGB 6170.7 R23 .0027 R13 .9700 LSA 2401.5 MSA 272.8 SSA 15.1  
 BOE 1.5123 BRA 3.1953 BC3 3.6876 FSP -839 SG1 6157.5 SG2 403.5 THA 3.86 EL1 2322.8 EL2 230.1 ALF 10.95

LAUNCH DATE JAN 22 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 575.473

RL 147.24 LAL .00 LOL 121.80 VL 26.935 GAL 7.23 AZL 87.88 MCA 276.16 SMA 123.20 ECC .23083 INC 2.1235 V1 30.259  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.080 GAP 11.41 AZP 89.77 TAL 154.21 TAP 70.37 RCA 94.76 APO 151.64 V2 35.010  
 RC 168.410 GL 11.66 GP -11.34 ZAL 48.87 ZAP 165.06 ETS 314.31 ZAE 127.55 ETE 188.41 ZAC 143.17 ETC 174.41 CLP-170.21

PLANETOCENTRIC CONIC

C3 24.003 VHL 4.899 DLA 34.05 RAL 70.98 RAD 6568.0 VEL 12.057 PTH 2.16 VHP 7.836 DPA 4.82 RAP 49.46 ECC 1.3950  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.25 23 29 6 4051.76 -22.05 172.83 304.17 63.37 24 36 38 3451.8 -25.44 165.33  
 109.75 4 29 6 3109.24 -22.04 102.54 304.16 63.36 5 20 55 2509.2 -25.43 95.04  
 70.25 23 29 6 4051.76 -22.05 172.83 304.17 63.37 24 36 38 3451.8 -25.44 165.33  
 109.75 4 29 6 3109.24 -22.04 102.54 304.16 63.36 5 20 55 2509.2 -25.43 95.04  
 110.00 4 53 21 3035.27 -24.18 97.89 305.28 65.07 5 43 57 2435.3 -27.33 90.14  
 110.00 4 7 57 3173.72 -19.94 106.40 302.99 61.65 5 0 51 2573.7 -23.57 99.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3618 TRA 3.5081 TC3-3.3960 BAU 1.0900 SGT 6174.8 SGR 569.5 SG3 228.6 ST 2180.2 SR 484.3 SS 597.3  
 RDE .4066 RRA .2181 RC3 -.0609 FAU .02537 RRT .7052 RRF .6892 RTF .9702 CRT .8472 CRS -.7056 CST -.9739  
 FDE .4206 FRA 1.7287 FC3 -.9152 BSP 20171 SGB 6201.0 R23 .0029 R13 .9702 LSA 2293.5 MSA 290.2 SSA 14.6  
 BOE 1.4212 BRA 3.5149 BC3 3.3965 FSP -796 SG1 6187.9 SG2 403.0 THA 3.74 EL1 2218.9 EL2 252.8 ALF 10.80

LAUNCH DATE JAN 22 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 580.933

RL 147.24 LAL .00 LOL 121.80 VL 26.904 GAL 7.83 AZL 88.01 MCA 279.36 SMA 123.01 ECC .23797 INC 1.9859 V1 30.259  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.070 GAP 11.93 AZP 89.68 TAL 152.90 TAP 72.26 RCA 93.74 APO 152.29 V2 35.023  
 RC 170.474 GL 10.39 GP -10.97 ZAL 46.87 ZAP 166.01 ETS 312.03 ZAE 127.43 ETE 188.12 ZAC 145.19 ETC 173.92 CLP-171.27

PLANETOCENTRIC CONIC

C3 26.215 VHL 5.120 DLA 33.02 RAL 73.32 RAD 6568.1 VEL 12.149 PTH 2.18 VHP 8.144 DPA 5.83 RAP 51.36 ECC 1.4314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.26 23 50 58 4035.06 -20.79 170.86 307.60 63.75 24 58 13 3435.1 -24.14 163.41  
 107.74 4 25 56 3169.36 -20.77 106.52 307.60 63.73 5 18 45 2569.4 -24.13 99.08  
 72.26 23 50 58 4035.06 -20.79 170.86 307.60 63.75 24 58 13 3435.1 -24.14 163.41  
 107.74 4 25 56 3169.36 -20.77 106.52 307.60 63.73 5 18 45 2569.4 -24.13 99.08  
 110.00 5 47 21 2919.19 -27.30 90.31 310.75 68.58 6 36 0 2319.2 -29.95 82.13  
 110.00 3 32 39 3333.23 -14.53 115.60 304.00 58.71 4 28 12 2733.2 -18.57 108.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2583 TRA 3.8421 TC3-3.1105 BAU 1.0903 SGT 6198.5 SGR 560.6 SG3 217.4 ST 2087.7 SR 472.4 SS 571.9  
 RDE .4138 RRA .2332 RC3 -.0540 FAU .02300 RRT .6975 RRF .6818 RTF .9706 CRT .8070 CRS -.6529 CST -.9739  
 FDE .3561 FRA 1.7682 FC3 -.7595 BSP 20325 SGB 6223.8 R23 .0028 R13 .9706 LSA 2194.1 MSA 307.0 SSA 14.2  
 BOE 1.3246 BRA 3.8491 BC3 3.1110 FSP -760 SG1 6210.9 SG2 400.9 THA 3.63 EL1 2122.8 EL2 274.4 ALF 10.53

LAUNCH DATE JAN 22 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 586.320

RL 147.24 LAL .00 LOL 121.80 VL 26.874 GAL 8.48 AZL 88.15 HCA 282.57 SMA 122.83 ECC .24573 INC 1.8456 V1 30.259  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.061 GAP 12.49 AZP 89.60 TAL 151.61 TAP 74.18 RCA 92.64 APO 153.01 V2 35.036  
 RC 172.518 GL 9.18 GP -10.62 ZAL 44.95 ZAP 166.91 ETS 309.36 ZAE 127.30 ETE 187.86 ZAC 147.23 ETC 173.35 CLP-172.32

PLANETOCENTRIC CONIC

C3 28.775 VHL 5.364 DLA 32.01 RAL 75.53 RAD 6568.2 VEL 12.254 PTH 2.20 VHP 8.474 DPA 6.80 RAP 53.29 ECC 1.4736  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.42 0 17 51 4014.31 -19.51 168.60 311.02 64.11 1 24 45 3414.3 -22.83 161.21  
 105.58 4 20 36 3236.48 -19.49 110.99 311.01 64.10 5 14 32 2636.5 -22.81 103.60  
 74.42 0 17 51 4014.31 -19.51 168.60 311.02 64.11 1 24 45 3414.3 -22.83 161.21  
 105.58 4 20 36 3236.48 -19.49 110.99 311.01 64.10 5 14 32 2636.5 -22.81 103.60  
 110.00 6 20 42 2864.72 -28.60 86.61 315.18 70.42 7 8 27 2264.7 -30.99 78.23  
 110.00 3 16 55 3434.07 -10.89 121.15 306.03 57.40 4 14 9 2834.1 -15.12 114.59

DIFFERENTIAL CORRECTIONS

TDE 1.1524 TRA 4.1968 TC3-2.8266 BAU 1.0875  
 RDE .4216 RRA .2493 RC3 -.0477 FAU .02071  
 FDE .2973 FRA 1.8084 FC3 -.6232 BSP 20453  
 BDE 1.2271 BRA 4.2042 BC3 2.8270 FSP -725

MID-COURSE EXECUTION ACCURACY

SGT 6217.3 SGR 551.4 SG3 206.9  
 RRT .6912 RRF .6759 RTF .9710  
 SGB 6241.7 R23 .0026 R13 .9710  
 SG1 6229.0 SG2 397.7 THA 3.52

ORBIT DETERMINATION ACCURACY

ST 2009.5 SR 460.1 SS 551.9  
 CRT .7613 CRS -.5980 CST -.9746  
 LSA 2109.7 MSA 322.0 SSA 13.8  
 EL1 2040.5 EL2 293.8 ALF 10.10

LAUNCH DATE JAN 22 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 591.623

RL 147.24 LAL .00 LOL 121.80 VL 26.843 GAL 9.17 AZL 88.30 HCA 285.77 SMA 122.64 ECC .25418 INC 1.7017 V1 30.259  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.051 GAP 13.09 AZP 89.54 TAL 150.34 TAP 76.11 RCA 91.47 APO 153.81 V2 35.050  
 RC 174.540 GL 8.03 GP -10.31 ZAL 43.12 ZAP 167.75 ETS 306.24 ZAE 127.16 ETE 187.62 ZAC 149.27 ETC 172.68 CLP-173.36

PLANETOCENTRIC CONIC

C3 31.740 VHL 5.634 DLA 31.01 RAL 77.60 RAD 6568.3 VEL 12.374 PTH 2.23 VHP 8.830 DPA 7.72 RAP 55.25 ECC 1.5224  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.79 0 42 34 3987.31 -18.23 165.91 314.41 64.47 1 49 1 3387.3 -21.51 158.57  
 103.21 4 12 27 3312.68 -18.21 116.11 314.40 64.46 5 7 40 2712.7 -21.50 108.77  
 76.79 0 42 34 3987.31 -18.23 165.91 314.41 64.47 1 49 1 3387.3 -21.51 158.57  
 103.21 4 12 27 3312.68 -18.21 116.11 314.40 64.46 5 7 40 2712.7 -21.50 108.77  
 110.00 6 47 42 2828.80 -29.39 84.11 319.31 71.70 7 34 51 2228.8 -31.60 75.61  
 110.00 3 6 30 3519.19 -7.74 125.72 308.34 56.60 4 5 9 2919.2 -12.08 119.31

DIFFERENTIAL CORRECTIONS

TDE 1.0442 TRA 4.5738 TC3-2.5482 BAU 1.0814  
 RDE .4298 RRA .2664 RC3 -.0419 FAU .01853  
 FDE .2437 FRA 1.8496 FC3 -.5054 BSP 20569  
 BDE 1.1292 BRA 4.5816 BC3 2.5485 FSP -691

MID-COURSE EXECUTION ACCURACY

SGT 6231.2 SGR 541.5 SG3 197.1  
 RRT .6862 RRF .6712 RTF .9716  
 SGB 6254.7 R23 .0024 R13 .9717  
 SG1 6242.4 SG2 393.2 THA 3.43

ORBIT DETERMINATION ACCURACY

ST 1945.8 SR 447.3 SS 536.9  
 CRT .7109 CRS -.5426 CST -.9762  
 LSA 2040.2 MSA 334.6 SSA 13.3  
 EL1 1972.3 EL2 310.4 ALF 9.52

LAUNCH DATE JAN 22 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 596.828

RL 147.24 LAL .00 LOL 121.80 VL 26.813 GAL 9.91 AZL 88.45 HCA 288.98 SMA 122.46 ECC .26340 INC 1.5531 V1 30.259  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.042 GAP 13.74 AZP 89.49 TAL 149.10 TAP 78.08 RCA 90.20 APO 154.71 V2 35.063  
 RC 176.542 GL 6.93 GP -10.03 ZAL 41.38 ZAP 168.53 ETS 302.62 ZAE 127.02 ETE 187.41 ZAC 151.31 ETC 171.90 CLP-174.40

PLANETOCENTRIC CONIC

C3 35.180 VHL 5.931 DLA 30.05 RAL 79.55 RAD 6568.4 VEL 12.512 PTH 2.27 VHP 9.213 DPA 8.59 RAP 57.23 ECC 1.5790  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.51 1 10 19 3949.91 -16.95 162.48 317.77 64.82 2 16 9 3349.9 -20.21 155.18  
 100.49 4 0 15 3401.98 -16.94 122.15 317.77 64.80 4 56 57 2802.0 -20.19 114.86  
 79.51 1 10 19 3949.91 -16.95 162.48 317.77 64.82 2 16 9 3349.9 -20.21 155.18  
 100.49 4 0 15 3401.98 -16.94 122.15 317.77 64.80 4 56 57 2802.0 -20.19 114.86  
 110.00 7 10 57 2803.65 -29.91 82.34 323.26 72.63 7 57 41 2203.7 -32.00 73.75  
 110.00 2 58 48 3596.23 -4.83 129.79 310.80 56.12 3 58 44 2996.2 -9.25 123.48

DIFFERENTIAL CORRECTIONS

TDE .9339 TRA 4.9756 TC3-2.2776 BAU 1.0714  
 RDE .4384 RRA .2844 RC3 -.0364 FAU .01642  
 FDE .1949 FRA 1.8926 FC3 -.4041 BSP 20659  
 BDE 1.0317 BRA 4.9837 BC3 2.2779 FSP -659

MID-COURSE EXECUTION ACCURACY

SGT 6240.5 SGR 530.9 SG3 187.8  
 RRT .6823 RRF .6677 RTF .9724  
 SGB 6263.0 R23 .0022 R13 .9724  
 SG1 6251.0 SG2 387.5 THA 3.34

ORBIT DETERMINATION ACCURACY

ST 1896.1 SR 434.1 SS 526.3  
 CRT .6570 CRS -.4881 CST -.9783  
 LSA 1985.4 MSA 344.1 SSA 12.9  
 EL1 1918.0 EL2 323.5 ALF 8.81

LAUNCH DATE JAN 22 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 601.917

RL 147.24 LAL .00 LOL 121.80 VL 26.783 GAL 10.71 AZL 88.60 HCA 292.19 SMA 122.28 ECC .27349 INC 1.3984 V1 30.259  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.033 GAP 14.43 AZP 89.47 TAL 147.89 TAP 80.08 RCA 88.83 APO 155.72 V2 35.076  
 RC 178.523 GL 5.89 GP -9.76 ZAL 39.74 ZAP 169.24 ETS 298.41 ZAE 126.87 ETE 187.21 ZAC 153.34 ETC 170.99 CLP-175.45

PLANETOCENTRIC CONIC

C3 39.180 VHL 6.259 DLA 29.11 RAL 81.38 RAD 6568.5 VEL 12.671 PTH 2.30 VHP 9.628 DPA 9.41 RAP 59.24 ECC 1.6448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.97 1 44 29 3890.94 -15.68 157.49 321.11 65.16 2 49 20 3290.9 -18.90 150.24  
 97.03 3 40 38 3515.37 -15.67 129.94 321.10 65.15 4 39 13 2915.4 -18.89 122.69  
 100.00 5 1 25 3256.18 -21.12 113.24 323.57 68.34 5 55 41 2656.2 -23.88 105.52  
 100.00 3 6 23 3625.36 -10.37 135.35 318.39 61.81 4 6 48 3025.4 -14.06 128.51  
 110.00 7 31 32 2786.08 -30.26 81.10 327.09 73.29 8 17 58 2186.1 -32.25 72.44  
 110.00 2 52 46 3668.22 -2.09 133.56 313.36 55.87 3 53 54 3068.2 -6.55 127.31

DIFFERENTIAL CORRECTIONS

TDE .8247 TRA 5.4074 TC3-2.0139 BAU 1.0550  
 RDE .4475 RRA .3032 RC3 -.0310 FAU .01433  
 FDE .1518 FRA 1.9389 FC3 -.3166 BSP 20659  
 BDE .9383 BRA 5.4159 BC3 2.0142 FSP -626

MID-COURSE EXECUTION ACCURACY

SGT 6246.6 SGR 519.8 SG3 179.2  
 RRT .6796 RRF .6656 RTF .9733  
 SGB 6268.2 R23 .0022 R13 .9734  
 SG1 6256.6 SG2 380.7 THA 3.25

ORBIT DETERMINATION ACCURACY

ST 1861.2 SR 420.5 SS 520.1  
 CRT .6021 CRS -.4375 CST -.9811  
 LSA 1946.5 MSA 349.9 SSA 12.5  
 EL1 1878.9 EL2 332.6 ALF 8.00



LAUNCH DATE JAN 22 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 24 1969

Heliocentric Conic  
 RL 147.24 LAL .00 LOL 121.80 VL 26.754 GAL 11.58 AZL 88.76 HCA 295.40 SMA 122.10 ECC .28456 INC 1.2364 V1 30.259  
 RP 108.00 LAP -1.12 LOP 57.21 VP 37.023 GAP 15.18 AZP 89.47 TAL 146.72 TAP 82.12 RCA 87.35 APO 156.84 V2 35.089  
 RC 180.483 GL 4.90 GP -9.52 ZAL 38.19 ZAP 169.86 ETS 293.55 ZAE 126.69 ETE 187.03 ZAC 155.36 ETC 169.91 CLP-176.51

Planeto-centric Conic  
 C3 43.843 VHL 6.621 DLA 28.20 RAL 83.07 RAD 6568.7 VEL 12.853 PTH 2.34 VHP 10.079 DPA 10.19 RAP 61.26 ECC 1.7215  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 12 17 3657.04 -16.54 140.73 325.38 66.68 4 13 14 3057.0 -19.56 133.35  
 90.00 2 26 22 3806.00 -12.32 149.63 323.40 64.30 3 29 48 3206.0 -15.68 142.57  
 100.00 5 35 3 3196.72 -22.57 109.41 327.93 69.86 6 28 20 2596.7 -25.11 101.53  
 100.00 2 46 17 3741.55 -6.57 141.88 320.37 60.77 3 48 38 3141.6 -10.41 135.21  
 110.00 7 50 0 2774.35 -30.49 80.26 330.84 73.74 8 36 14 2174.4 -32.41 71.57  
 110.00 2 47 50 3736.68 .53 137.13 315.98 55.82 3 50 7 3136.7 -3.96 130.92

Differential Corrections  
 TOE .7090 TRA 5.8651 TC3-1.7666 BAU 1.0356 SGT 6245.8 SGR 507.4 SG3 171.0 ST 1834.6 SR 406.2 SS 516.4  
 ROE .4564 RRA .3225 RC3 -.0260 FAU .01238 RRT .6773 RRF .6637 RTF .9745 CRT .5454 CRS -.3879 CST -.9838  
 FOE .1108 FRA 1.9866 FC3 -.2444 BSP 20742 SGB 6266.4 R23 .0018 R13 .9745 LSA 1916.6 MSA 352.3 SSA 12.0  
 BOE .8432 BRA 5.8740 BC3 1.7668 FSP -598 SG1 6255.3 SG2 372.7 THA 3.16 EL1 1848.4 EL2 337.9 ALF 7.13

LAUNCH DATE JAN 22 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 26 1969

Heliocentric Conic  
 RL 147.24 LAL .00 LOL 121.80 VL 26.725 GAL 12.52 AZL 88.93 HCA 298.61 SMA 121.92 ECC .29673 INC 1.0654 V1 30.259  
 RP 107.96 LAP -.94 LOP 60.42 VP 37.014 GAP 16.00 AZP 89.49 TAL 145.60 TAP 84.22 RCA 85.74 APO 158.10 V2 35.102  
 RC 182.422 GL 3.96 GP -9.30 ZAL 36.75 ZAP 170.39 ETS 287.97 ZAE 126.50 ETE 186.86 ZAC 157.36 ETC 168.63 CLP-177.59

Planeto-centric Conic  
 C3 49.300 VHL 7.021 DLA 27.32 RAL 84.65 RAD 6568.8 VEL 13.064 PTH 2.38 VHP 10.572 DPA 10.93 RAP 63.29 ECC 1.8113  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 1 36 3545.64 -19.41 133.81 330.36 68.97 5 0 42 2945.6 -22.10 126.17  
 90.00 1 49 36 3976.22 -7.12 159.43 324.69 62.52 2 55 52 3376.2 -10.75 152.63  
 100.00 6 0 48 3161.39 -23.38 107.10 331.92 70.82 6 53 30 2561.4 -25.78 99.12  
 100.00 2 33 5 3835.71 -3.41 147.09 322.66 60.28 3 37 1 3235.7 -7.34 140.51  
 110.00 8 6 43 2767.38 -30.62 79.76 334.50 74.01 8 52 50 2167.4 -32.51 71.05  
 110.00 2 43 40 3802.48 3.04 140.56 318.65 55.94 3 47 3 3202.5 -1.45 134.36

Differential Corrections  
 TOE .5912 TRA 6.3567 TC3-1.5319 BAU 1.0098 SGT 6240.7 SGR 493.9 SG3 163.3 ST 1817.9 SR 391.4 SS 515.9  
 ROE .4656 RRA .3421 RC3 -.0213 FAU .01047 RRT .6755 RRF .6625 RTF .9758 CRT .4897 CRS -.3425 CST -.9866  
 FOE .0735 FRA 2.0381 FC3 -.1839 BSP 20804 SGB 6260.2 R23 .0016 R13 .9758 LSA 1897.5 MSA 351.1 SSA 11.6  
 BOE .7525 BRA 6.3659 BC3 1.5321 FSP -571 SG1 6249.6 SG2 363.7 THA 3.07 EL1 1828.3 EL2 339.3 ALF 6.23

LAUNCH DATE JAN 22 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 28 1969

Heliocentric Conic  
 RL 147.24 LAL .00 LOL 121.80 VL 26.696 GAL 13.54 AZL 89.12 HCA 301.83 SMA 121.75 ECC .31017 INC .8835 V1 30.259  
 RP 107.92 LAP -7.75 LOP 63.64 VP 37.006 GAP 16.89 AZP 89.53 TAL 144.54 TAP 86.38 RCA 83.99 APO 159.52 V2 35.114  
 RC 184.340 GL 3.07 GP -9.10 ZAL 35.42 ZAP 170.81 ETS 281.66 ZAE 126.28 ETE 186.69 ZAC 159.32 ETC 167.08 CLP-178.68

Planeto-centric Conic  
 C3 55.712 VHL 7.464 DLA 26.47 RAL 86.10 RAD 6569.0 VEL 13.307 PTH 2.43 VHP 11.112 DPA 11.61 RAP 65.33 ECC 1.9169  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 31 1 3497.40 -20.56 130.74 334.46 70.09 5 29 18 2897.4 -23.08 122.98  
 90.00 1 31 46 4085.11 -3.66 165.57 326.81 61.90 2 39 51 3485.1 -7.39 158.87  
 100.00 6 22 20 3138.54 -23.88 105.59 335.71 71.46 7 14 39 2538.5 -26.19 97.55  
 100.00 2 23 8 3919.20 -.58 151.67 325.10 60.11 3 28 27 3319.2 -4.56 145.14  
 110.00 8 21 55 2764.39 -30.68 79.54 338.08 74.13 9 7 59 2164.4 -32.55 70.82  
 110.00 2 40 3 3866.11 5.46 143.90 321.34 56.20 3 44 29 3266.1 .99 137.68

Differential Corrections  
 TOE .4710 TRA 6.8859 TC3-1.3109 BAU .9764 SGT 6231.1 SGR 479.4 SG3 156.1 ST 1808.9 SR 376.2 SS 518.1  
 ROE .4748 RRA .3620 RC3 -.0167 FAU .00858 RRT .6741 RRF .6619 RTF .9773 CRT .4361 CRS -.3013 CST -.9892  
 FOE .0393 FRA 2.0943 FC3 -.1333 BSP 20842 SGB 6249.5 R23 .0014 R13 .9773 LSA 1887.3 MSA 346.6 SSA 11.2  
 BOE .6688 BRA 6.8954 BC3 1.3110 FSP -546 SG1 6239.5 SG2 353.6 THA 2.98 EL1 1816.6 EL2 337.1 ALF 5.37

LAUNCH DATE JAN 22 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 30 1969

Heliocentric Conic  
 RL 147.24 LAL .00 LOL 121.80 VL 26.668 GAL 14.65 AZL 89.31 HCA 305.05 SMA 121.58 ECC .32505 INC .6882 V1 30.259  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.997 GAP 17.87 AZP 89.60 TAL 143.56 TAP 88.60 RCA 82.06 APO 161.11 V2 35.126  
 RC 186.236 GL 2.23 GP -8.91 ZAL 34.19 ZAP 171.09 ETS 274.67 ZAE 126.02 ETE 186.54 ZAC 161.25 ETC 165.22 CLP-179.80

Planeto-centric Conic  
 C3 63.284 VHL 7.955 DLA 25.66 RAL 87.42 RAD 6569.2 VEL 13.588 PTH 2.48 VHP 11.708 DPA 12.25 RAP 67.35 ECC 2.0415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 54 11 3468.16 -21.22 128.86 338.26 70.80 5 51 59 2868.2 -23.65 121.02  
 90.00 1 19 11 4176.50 -.72 170.67 329.14 61.69 2 28 48 3576.5 -4.50 164.03  
 100.00 6 40 58 3123.89 -24.19 104.61 339.35 71.89 7 33 2 2523.9 -26.44 96.53  
 100.00 2 15 5 3996.00 2.02 155.89 327.62 60.17 3 21 41 3396.0 -1.96 149.37  
 110.00 8 35 45 2764.78 -30.67 79.57 341.58 74.11 9 21 50 2164.8 -32.54 70.85  
 110.00 2 36 48 3927.87 7.79 147.17 324.05 56.61 3 42 16 3327.9 3.34 140.90

Differential Corrections  
 TOE .3514 TRA 7.4614 TC3-1.1018 BAU .9322 SGT 6219.3 SGR 463.9 SG3 149.5 ST 1807.1 SR 360.7 SS 523.2  
 ROE .4843 RRA .3819 RC3 -.0123 FAU .00664 RRT .6731 RRF .6619 RTF .9789 CRT .3868 CRS -.2660 CST -.9916  
 FOE .0090 FRA 2.1574 FC3 -.0909 BSP 20776 SGB 6236.5 R23 .0013 R13 .9789 LSA 1885.3 MSA 339.2 SSA 10.7  
 BOE .5984 BRA 7.4712 BC3 1.1018 FSP -519 SG1 6227.1 SG2 342.6 THA 2.88 EL1 1812.7 EL2 331.6 ALF 4.57

LAUNCH DATE JAN 23 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 3 1969

HELIOCENTRIC CONIC

DISTANCE 162.446

RL 147.25 LAL .00 LOL 122.82 VL 23.279 GAL 2.31 AZL 86.60 HCA 66.74 SMA 105.28 ECC .40043 INC 3.3988 V1 30.256
RP 107.82 LAP 3.12 LOP 189.52 VP 34.658 GAP -23.57 AZP 88.66 TAL 176.53 TAP 243.26 RCA 63.12 APO 147.43 V2 35.147
RC 43.055 GL 11.03 GP 5.85 ZAL 83.90 ZAP 14.83 ETS 204.81 ZAE 175.20 ETE 281.02 ZAC 115.07 ETC 163.33 CLP 13.65

PLANETOCENTRIC CONIC

C3 51.991 VHL 7.210 OLA 24.92 RAL 32.78 RAD 6568.9 VEL 13.166 PTH 2.40 VHP 14.543 DPA 11.84 RAP 20.07 ECC 1.8556
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 26 8 3372.63 -23.23 122.57 280.41 73.33 2 22 20 2772.6 -25.29 114.51
90.00 21 19 29 4175.70 -7.75 170.63 270.98 61.69 22 29 5 3575.7 -4.52 163.98
100.00 3 10 0 3037.72 -25.89 98.77 281.25 74.51 4 0 38 2437.7 -27.76 90.47
100.00 22 18 18 3985.85 1.68 155.33 269.63 60.15 23 24 44 3385.9 -2.31 148.81
110.00 5 1 11 2689.90 -31.94 74.10 283.00 77.12 5 46 1 2089.9 -33.38 65.17
110.00 22 43 37 3906.43 6.99 146.03 266.34 56.45 23 48 43 3306.4 2.53 139.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3670 TRA -.8620 TC3 .0218 BAU .0247 SGT 810.3 SGR 431.3 SG3 53.3 ST 369.3 SR 418.1 SS 298.1
RDE -.5247 RRA .1171 RC3 -.0282 FAU .01935 RRT .1226 RRF -.1301 RTF -.6747 CRT .7424 CRS .8634 CST .9768
FDE .2682 FRA .3934 FC3 -.3223 BSP 2239 SGB 917.9 R23 -.0158 R13 -.6762 LSA 598.0 MSA 205.7 SSA 14.5
BDE .6403 BRA .8699 BC3 .0356 FSP -119 SG1 812.7 S62 426.8 THA 5.16 EL1 521.4 EL2 198.4 ALF 49.75

LAUNCH DATE JAN 23 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 169.028

RL 147.25 LAL .00 LOL 122.82 VL 23.689 GAL 2.11 AZL 86.76 HCA 69.96 SMA 106.91 ECC .37891 INC 3.2385 V1 30.256
RP 107.86 LAP 3.04 LOP 192.75 VP 34.922 GAP -22.26 AZP 88.89 TAL 176.54 TAP 246.50 RCA 66.40 APO 147.42 V2 35.135
RC 42.657 GL 11.36 GP 6.13 ZAL 84.11 ZAP 13.43 ETS 208.84 ZAE 174.42 ETE 310.25 ZAC 116.43 ETC 162.87 CLP 11.97

PLANETOCENTRIC CONIC

C3 46.103 VHL 6.790 OLA 25.17 RAL 32.45 RAD 6568.7 VEL 12.941 PTH 2.36 VHP 13.816 DPA 12.71 RAP 21.39 ECC 1.7587
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 20 21 3357.87 -23.51 121.58 277.91 73.75 2 16 19 2757.9 -25.52 113.49
90.00 21 22 36 4130.43 -2.21 168.10 269.04 61.76 22 31 27 3530.4 -5.96 161.44
100.00 3 5 7 3020.12 -26.20 97.56 278.74 75.08 3 55 27 2420.1 -28.00 89.22
100.00 22 20 32 3943.42 .24 153.00 267.68 60.11 23 26 15 3343.4 -3.74 146.48
110.00 4 57 26 2668.72 -32.25 72.53 280.40 78.00 5 41 55 2068.7 -33.57 63.54
110.00 22 44 42 3867.58 5.52 143.98 264.40 56.21 23 49 10 3267.6 -1.04 137.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3697 TRA -.8417 TC3 .0475 BAU .0337 SGT 847.0 SGR 434.8 SG3 58.8 ST 390.8 SR 422.7 SS 313.3
RDE -.4996 RRA .1068 RC3 -.0271 FAU .02029 RRT .1386 RRF -.1473 RTF -.6945 CRT .7536 CRS .8697 CST .9777
FDE .2806 FRA .4007 FC3 -.3811 BSP 2377 SGB 952.0 R23 -.0180 R13 -.6961 LSA 621.5 MSA 207.5 SSA 14.8
BDE .6215 BRA .8485 BC3 .0547 FSP -134 SG1 849.8 S62 429.1 THA 5.47 EL1 539.3 EL2 201.3 ALF 47.97

LAUNCH DATE JAN 23 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 175.646

RL 147.25 LAL .00 LOL 122.82 VL 24.066 GAL 1.89 AZL 86.92 HCA 73.18 SMA 108.48 ECC .35869 INC 3.0848 V1 30.256
RP 107.89 LAP 2.95 LOP 195.98 VP 35.168 GAP -21.02 AZP 89.11 TAL 176.62 TAP 249.79 RCA 69.57 APO 147.40 V2 35.123
RC 42.436 GL 11.67 GP 6.44 ZAL 84.44 ZAP 12.11 ETS 213.88 ZAE 172.64 ETE 329.53 ZAC 117.77 ETC 162.37 CLP 10.29

PLANETOCENTRIC CONIC

C3 40.958 VHL 6.400 OLA 25.35 RAL 31.99 RAD 6568.6 VEL 12.741 PTH 2.32 VHP 13.120 DPA 13.61 RAP 22.70 ECC 1.6741
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 15 11 3339.51 -23.86 120.35 275.30 74.28 2 10 51 2739.5 -25.79 112.21
90.00 21 24 7 4089.21 -3.53 165.80 266.94 61.89 22 32 16 3489.2 -7.26 159.10
100.00 3 1 0 2999.52 -26.56 96.13 276.10 75.75 3 50 38 2399.5 -28.25 87.74
100.00 22 21 21 3904.43 -1.09 150.86 265.59 60.13 23 26 25 3304.4 -5.05 144.32
110.00 4 53 49 2645.40 -32.57 70.78 277.65 78.99 5 37 55 2045.4 -33.74 61.75
110.00 22 44 39 3831.31 4.14 142.07 262.33 56.04 23 48 31 3231.3 -1.34 135.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3724 TRA -.8206 TC3 .0791 BAU .0454 SGT 884.4 SGR 437.7 SG3 65.0 ST 413.1 SR 426.8 SS 328.7
RDE -.4757 RRA .0971 RC3 -.0247 FAU .02133 RRT .1565 RRF -.1667 RTF -.7133 CRT .7653 CRS .8762 CST .9788
FDE .2937 FRA .4075 FC3 -.4509 BSP 2533 SGB 986.8 R23 -.0207 R13 -.7151 LSA 645.9 MSA 208.4 SSA 15.2
BDE .6041 BRA .8263 BC3 .0829 FSP -151 SG1 887.9 S62 430.7 THA 5.80 EL1 558.1 EL2 203.3 ALF 46.23

LAUNCH DATE JAN 23 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 182.292

RL 147.25 LAL .00 LOL 122.82 VL 24.414 GAL 1.67 AZL 87.06 HCA 76.40 SMA 110.00 ECC .33975 INC 2.9364 V1 30.256
RP 107.93 LAP 2.85 LOP 199.20 VP 35.395 GAP -19.83 AZP 89.31 TAL 176.76 TAP 253.15 RCA 72.63 APO 147.37 V2 35.111
RC 42.394 GL 11.95 GP 6.77 ZAL 84.91 ZAP 10.93 ETS 220.22 ZAE 170.38 ETE 341.02 ZAC 119.08 ETC 161.81 CLP 8.59

PLANETOCENTRIC CONIC

C3 36.462 VHL 6.038 OLA 25.45 RAL 31.41 RAD 6568.4 VEL 12.563 PTH 2.28 VHP 12.455 DPA 14.53 RAP 23.99 ECC 1.6001
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 10 52 3316.97 -24.26 118.82 272.60 74.94 2 6 9 2717.0 -26.10 110.63
90.00 21 23 48 4053.00 -4.69 163.77 264.68 62.04 22 31 21 3453.0 -8.40 157.05
100.00 2 56 45 2975.60 -26.95 94.46 273.35 76.55 3 46 21 2375.6 -28.53 86.01
100.00 22 20 36 3869.60 -2.27 148.95 263.34 60.19 23 25 6 3269.6 -6.22 142.39
110.00 4 50 27 2619.85 -32.88 68.86 274.77 80.09 5 34 7 2019.8 -33.90 59.77
110.00 22 43 23 3798.12 2.88 140.33 260.14 55.92 23 46 41 3198.1 -1.61 134.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3756 TRA -.7987 TC3 .1177 BAU .0582 SGT 922.8 SGR 440.3 SG3 71.8 ST 436.3 SR 430.7 SS 344.5
RDE -.4529 RRA .0881 RC3 -.0206 FAU .02248 RRT .1770 RRF -.1888 RTF -.7313 CRT .7778 CRS .8830 CST .9799
FDE .3074 FRA .4137 FC3 -.5338 BSP 2680 SGB 1022.5 R23 -.0235 R13 -.7334 LSA 671.4 MSA 208.4 SSA 15.6
BDE .5884 BRA .8035 BC3 .1195 FSP -170 SG1 927.0 S62 431.4 THA 6.17 EL1 578.0 EL2 204.3 ALF 44.52

LAUNCH DATE JAN 23 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 11 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 24.735 GAL 1.44 AZL 87.21 HCA 79.61 SMA 111.46 ECC .32204 INC 2.7920 VI 30.256  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.604 GAP -18.70 AZP 89.50 TAL 176.96 TAP 256.58 RCA 75.56 APO 147.35 V2 35.099  
 RC 42.534 GL 12.19 GP 7.15 ZAL 85.50 ZAP 9.91 ETS 228.16 ZAE 167.93 ETE 348.30 ZAC 120.36 ETC 161.19 CLP 6.89

Distance 188.963

Planetocentric Conic: C3 32.536 VHL 5.704 DLA 25.47 RAL 30.71 RAD 6568.3 VEL 12.406 PTH 2.24 VHP 11.819 DPA 15.47 RAP 25.27 ECC 1.5355  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 7 37 3289.73 -24.73 116.96 269.81 75.75 2 2 27 2689.7 -26.45 108.72  
 90.00 21 21 27 4022.73 -5.65 162.06 262.26 62.21 22 28 30 3422.7 -9.33 155.31  
 100.00 2 53 36 2948.05 -27.37 92.52 270.51 77.49 3 42 44 2348.0 -28.82 84.02  
 100.00 22 18 9 3839.64 -3.28 147.30 260.96 60.27 23 22 9 3239.6 -7.21 140.73  
 110.00 4 47 26 2591.93 -33.19 66.74 271.77 81.31 5 30 38 1991.9 -34.03 57.60  
 110.00 22 40 49 3768.52 1.75 138.79 257.82 55.86 23 43 38 3168.5 -2.74 132.58

Differential Corrections: TDE -.3783 TRA -.763 TC3 .1648 BAU .0720 RDE -.4314 RRA .0796 RC3 -.0143 FAU .02379 FDE .3215 FRA .4193 FC3 -.6329 BSP 2836 BOE .5738 BRA .7802 BC3 .1654 FSP -191

Mid-Course Execution Accuracy: SGT 962.0 SGR 442.6 SG3 79.3 RRT .1999 RRF -.2137 RTF -.7486 SGB 1058.9 R23 -.0270 R13 -.7510 SG1 967.1 S62 431.4 THA 6.57

Orbit Determination Accuracy: ST 460.0 SR 434.1 SS 360.1 CRT .7902 CRS .8897 CST .9809 LSA 697.4 MSA 207.6 SSA 16.0 EL1 598.5 EL2 204.5 ALF 42.90

LAUNCH DATE JAN 23 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 13 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 25.030 GAL 1.21 AZL 87.35 HCA 82.83 SMA 112.85 ECC .30553 INC 2.6507 VI 30.256  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.797 GAP -17.62 AZP 89.67 TAL 177.24 TAP 260.07 RCA 78.37 APO 147.33 V2 35.086  
 RC 42.853 GL 12.39 GP 7.56 ZAL 86.21 ZAP 9.14 ETS 237.90 ZAE 165.42 ETE 353.32 ZAC 121.58 ETC 160.51 CLP 5.16

Distance 195.653

Planetocentric Conic: C3 29.107 VHL 5.395 DLA 25.41 RAL 29.89 RAD 6568.2 VEL 12.267 PTH 2.21 VHP 11.210 DPA 16.44 RAP 26.51 ECC 1.4790  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 39 3257.40 -25.26 114.74 266.96 76.75 1 59 57 2657.4 -26.83 106.43  
 90.00 21 16 55 3999.13 -6.40 160.73 259.70 62.36 22 23 35 3399.1 -10.05 153.96  
 100.00 2 51 22 2916.61 -27.81 90.29 267.59 78.58 3 39 58 2316.6 -29.11 81.72  
 100.00 22 13 54 3815.15 -4.10 145.96 258.44 60.36 23 17 29 3215.1 -8.02 139.36  
 110.00 4 44 51 2561.54 -33.48 64.41 268.68 62.65 5 27 32 1961.5 -34.13 55.23  
 110.00 22 36 54 3742.98 .77 137.46 255.40 55.82 23 39 17 3143.0 -3.72 131.25

Differential Corrections: TDE -.3804 TRA -.7520 TC3 .2210 BAU .0860 RDE -.4110 RRA .0718 RC3 -.0051 FAU .02524 FDE .3357 FRA .4238 FC3 -.7508 BSP 3014 BOE .5600 BRA .7554 BC3 .2211 FSP -216

Mid-Course Execution Accuracy: SGT 1000.8 SGR 444.6 SG3 87.8 RRT .2256 RRF -.2417 RTF -.7651 SGB 1095.2 R23 -.0306 R13 -.7678 SG1 1007.0 S62 430.5 THA 7.01

Orbit Determination Accuracy: ST 483.3 SR 437.2 SS 375.2 CRT .8026 CRS .8965 CST .9820 LSA 723.1 MSA 206.0 SSA 16.5 EL1 619.1 EL2 203.6 ALF 41.44

LAUNCH DATE JAN 23 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 15 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 25.302 GAL .99 AZL 87.49 HCA 86.04 SMA 114.18 ECC .29017 INC 2.5115 VI 30.256  
 RP 108.05 LAP 2.51 LOP 208.86 VP 35.975 GAP -16.59 AZP 89.83 TAL 177.58 TAP 263.62 RCA 81.05 APO 147.31 V2 35.073  
 RC 43.347 GL 12.53 GP 8.02 ZAL 87.04 ZAP 8.71 ETS 249.27 ZAE 162.92 ETE 357.07 ZAC 122.76 ETC 159.76 CLP 3.42

Distance 202.358

Planetocentric Conic: C3 26.115 VHL 5.110 DLA 25.24 RAL 28.98 RAD 6568.1 VEL 12.145 PTH 2.18 VHP 10.628 DPA 17.43 RAP 27.72 ECC 1.4298  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 6 3219.82 -25.82 112.13 264.05 77.94 1 58 45 2619.8 -27.22 103.74  
 90.00 21 10 10 3982.71 -6.92 159.80 257.01 62.47 22 16 33 3382.7 -10.55 153.01  
 100.00 2 50 9 2881.13 -28.27 87.75 264.59 79.84 3 38 10 2281.1 -29.38 79.12  
 100.00 22 7 48 3796.63 -4.73 144.93 255.81 60.45 23 11 5 3196.6 -8.63 138.32  
 110.00 4 42 50 2528.59 -33.74 61.87 265.49 64.13 5 24 58 1928.6 -34.18 52.66  
 110.00 22 31 37 3721.94 -.03 136.36 252.89 55.82 23 33 38 3121.9 -4.52 130.14

Differential Corrections: TDE -.3829 TRA -.7288 TC3 .2852 BAU .0996 RDE -.3921 RRA .0644 RC3 .0076 FAU .02685 FDE .3511 FRA .4286 FC3 -.8903 BSP 3174 BOE .5480 BRA .7316 BC3 .2853 FSP -243

Mid-Course Execution Accuracy: SGT 1041.8 SGR 446.8 SG3 97.2 RRT .2554 RRF -.2740 RTF -.7801 SGB 1133.6 R23 -.0352 R13 -.7832 SG1 1049.3 S62 428.9 THA 7.51

Orbit Determination Accuracy: ST 507.8 SR 440.2 SS 390.8 CRT .8152 CRS .9033 CST .9831 LSA 750.0 MSA 203.8 SSA 17.0 EL1 641.0 EL2 202.0 ALF 40.02

LAUNCH DATE JAN 23 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 17 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 25.551 GAL .77 AZL 87.63 HCA 89.25 SMA 115.44 ECC .27593 INC 2.3734 VI 30.256  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.138 GAP -15.61 AZP 89.97 TAL 177.98 TAP 267.23 RCA 83.58 APO 147.29 V2 35.060  
 RC 44.011 GL 12.61 GP 8.52 ZAL 88.00 ZAP 8.68 ETS 261.57 ZAE 160.50 ETE .05 ZAC 123.86 ETC 158.94 CLP 1.64

Distance 209.073

Planetocentric Conic: C3 23.505 VHL 4.848 DLA 24.97 RAL 27.97 RAD 6568.0 VEL 12.037 PTH 2.15 VHP 10.072 DPA 18.46 RAP 28.89 ECC 1.3868  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 59 3177.05 -26.39 109.13 261.10 79.34 1 58 56 2577.0 -27.59 100.67  
 90.00 21 1 13 3973.68 -7.20 159.29 254.22 62.54 22 7 27 3373.7 -10.83 152.49  
 100.00 2 50 3 2841.55 -28.71 84.89 261.54 81.29 3 37 24 2241.5 -29.61 76.20  
 100.00 21 59 50 3784.42 -5.14 144.26 253.09 60.51 23 2 55 3184.4 -9.03 137.63  
 110.00 4 41 27 2492.98 -33.95 59.11 262.24 65.75 5 23 0 1893.0 -34.17 49.88  
 110.00 22 24 55 3705.75 -.65 135.51 250.30 55.82 23 26 41 3105.8 -5.13 129.29

Differential Corrections: TDE -.3851 TRA -.7053 TC3 .3578 BAU .1127 RDE -.3744 RRA .0574 RC3 .0245 FAU .02862 FDE .3666 FRA .4329 FC3 -1.0542 BSP 3297 BOE .5371 BRA .7077 BC3 .3586 FSP -272

Mid-Course Execution Accuracy: SGT 1083.1 SGR 449.4 SG3 107.6 RRT .2893 RRF -.3105 RTF -.7938 SGB 1172.6 R23 -.0403 R13 -.7973 SG1 1092.3 S62 426.5 THA 8.09

Orbit Determination Accuracy: ST 532.3 SR 443.0 SS 405.7 CRT .8277 CRS .9099 CST .9842 LSA 776.9 MSA 200.8 SSA 17.5 EL1 663.2 EL2 199.6 ALF 38.71

LAUNCH DATE JAN 23 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC DISTANCE 215.794  
 RL 147.25 LAL .00 LOL 122.82 VL 25.780 GAL .55 AZL 87.76 HCA 92.46 SMA 116.63 ECC .26275 INC 2.2357 V1 30.256  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.288 GAP -14.66 AZP 90.10 TAL 178.44 TAP 270.90 RCA 85.98 APO 147.27 V2 35.047  
 RC 44.838 GL 12.61 GP 9.09 ZAL 89.06 ZAP 9.09 ETS 273.63 ZAE 158.20 ETE 2.57 ZAC 124.90 ETC 158.05 CLP -.17

PLANETOCENTRIC CONIC  
 C3 21.231 VHL 4.608 CLA 24.59 RAL 26.88 RAD 6567.9 VEL 11.942 PTH 2.13 VHP 9.541 CPA 19.52 RAP 30.00 ECC 1.3494  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 19 3129.38 -26.95 105.75 258.10 80.95 2 0 28 2529.4 -27.92 97.22  
 90.00 20 50 12 3972.01 -7.25 159.20 251.35 62.55 21 56 24 3372.0 -10.88 152.39  
 100.00 2 51 7 2797.94 -29.12 81.71 258.45 82.91 3 37 45 2197.9 -29.79 72.97  
 100.00 21 50 5 3778.68 -5.33 143.94 250.30 60.54 22 53 4 3178.7 -9.21 137.31  
 110.00 4 40 50 2454.66 -34.10 56.13 258.94 87.51 5 21 45 1854.7 -34.07 46.89  
 110.00 22 16 51 3694.72 -1.07 134.94 247.66 55.83 23 18 26 3094.7 -5.55 128.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3834 TRA -.6792 TC3 .4463 BAU .1274 SGT 1122.1 SGR 452.4 SG3 119.3 ST 552.3 SR 445.4 SS 417.7  
 RDE -.3578 RRA .0510 RC3 .0470 FAU .03065 RRT .3252 RRF -.3502 RTF -.8087 CRT .8385 CRS .9158 CST .9850  
 FDE .3802 FRA .4358 FC3-1.2500 BSP 3502 SGB 1209.9 R23 -.0459 R13 -.8126 LSA 799.1 MSA 197.5 SSA 18.1  
 BDE .5244 BRA .6812 BC3 .4488 FSP -309 SGI 1133.3 SG2 423.6 THA 8.69 EL1 681.7 EL2 196.6 ALF 37.75

LAUNCH DATE JAN 23 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC DISTANCE 222.518  
 RL 147.25 LAL .00 LOL 122.82 VL 25.990 GAL .35 AZL 87.90 HCA 95.66 SMA 117.75 ECC .25060 INC 2.0974 V1 30.256  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.424 GAP -13.76 AZP 90.21 TAL 178.96 TAP 274.63 RCA 88.24 APO 147.26 V2 35.033  
 RC 45.818 GL 12.52 GP 9.72 ZAL 90.22 ZAP 9.92 ETS 284.43 ZAE 156.03 ETE 4.80 ZAC 125.85 ETC 157.08 CLP -2.02

PLANETOCENTRIC CONIC  
 C3 19.251 VHL 4.388 CLA 24.09 RAL 25.73 RAD 6567.8 VEL 11.859 PTH 2.10 VHP 9.035 CPA 20.62 RAP 31.05 ECC 1.3168  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 0 3077.31 -27.45 102.02 255.08 82.75 2 3 17 2477.3 -28.17 93.43  
 90.00 20 37 21 3977.39 -7.09 159.50 248.46 62.51 21 43 38 3377.4 -10.71 152.70  
 100.00 2 53 21 2750.52 -29.46 78.23 255.33 84.71 3 39 11 2150.5 -29.88 69.45  
 100.00 21 38 40 3773.40 -5.30 143.98 247.48 60.54 22 41 40 3179.4 -9.19 137.35  
 110.00 4 41 1 2413.66 -34.18 52.93 255.62 89.41 5 21 15 1813.7 -33.88 43.70  
 110.00 22 7 29 3689.04 -1.29 134.64 244.99 55.84 23 8 58 3089.0 -5.76 128.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3860 TRA -.6587 TC3 .5325 BAU .1384 SGT 1166.3 SGR 457.0 SG3 132.3 ST 578.1 SR 448.1 SS 432.2  
 RDE -.3429 RRA .0444 RC3 .0752 FAU .03279 RRT .3691 RRF -.3967 RTF -.8190 CRT .8505 CRS .9217 CST .9862  
 FDE .3972 FRA .4423 FC3-1.4746 BSP 3545 SGB 1252.6 R23 -.0530 R13 -.8235 LSA 827.0 MSA 193.7 SSA 18.8  
 BDE .5163 BRA .6602 BC3 .5378 FSP -340 SGI 1180.2 SG2 419.7 THA 9.43 EL1 705.5 EL2 193.1 ALF 36.58

LAUNCH DATE JAN 23 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC DISTANCE 229.240  
 RL 147.25 LAL .00 LOL 122.82 VL 26.182 GAL .15 AZL 88.04 HCA 98.86 SMA 118.81 ECC .23943 INC 1.9576 V1 30.256  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.549 GAP -12.89 AZP 90.30 TAL 179.54 TAP 278.40 RCA 90.36 APO 147.25 V2 35.020  
 RC 46.944 GL 12.34 GP 10.42 ZAL 91.46 ZAP 11.12 ETS 293.43 ZAE 154.02 ETE 6.86 ZAC 126.69 ETC 156.02 CLP -3.92

PLANETOCENTRIC CONIC  
 C3 17.529 VHL 4.187 CLA 23.46 RAL 24.53 RAD 6567.7 VEL 11.786 PTH 2.08 VHP 8.552 CPA 21.76 RAP 32.04 ECC 1.2885  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 57 3021.34 -27.86 97.98 252.05 84.74 2 7 18 2421.3 -28.30 89.34  
 90.00 20 22 52 3989.46 -6.71 160.18 245.56 62.42 21 29 22 3389.5 -10.35 153.40  
 100.00 2 56 45 2699.55 -29.72 74.47 252.21 86.68 3 41 45 2099.6 -29.87 65.66  
 100.00 21 25 45 3786.48 -5.07 144.37 244.67 60.50 22 28 52 3186.5 -8.96 137.75  
 110.00 4 42 6 2369.98 -34.16 49.52 252.29 91.42 5 21 36 1770.0 -33.58 40.32  
 110.00 21 56 54 3688.81 -1.30 134.63 242.32 55.84 22 58 23 3088.8 -5.77 128.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3857 TRA -.6347 TC3 .6189 BAU .1473 SGT 1201.5 SGR 463.1 SG3 146.0 ST 599.6 SR 450.6 SS 443.0  
 RDE -.3290 RRA .0385 RC3 .1098 FAU .03500 RRT .4150 RRF -.4459 RTF -.8259 CRT .8617 CRS .9274 CST .9871  
 FDE .4120 FRA .4451 FC3-1.7286 BSP 3628 SGB 1287.7 R23 -.0621 R13 -.8313 LSA 850.0 MSA 189.3 SSA 19.5  
 BDE .5069 BRA .6359 BC3 .6286 FSP -378 SGI 1218.9 SG2 415.3 THA 10.30 EL1 725.9 EL2 188.9 ALF 35.71

LAUNCH DATE JAN 23 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC DISTANCE 235.957  
 RL 147.25 LAL .00 LOL 122.82 VL 26.358 GAL -.05 AZL 88.18 HCA 102.06 SMA 119.80 ECC .22918 INC 1.8155 V1 30.256  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.662 GAP -12.06 AZP 90.38 TAL 180.16 TAP 282.22 RCA 92.34 APO 147.25 V2 35.007  
 RC 48.205 GL 12.04 GP 11.20 ZAL 92.79 ZAP 12.63 ETS 300.64 ZAE 152.18 ETE 8.83 ZAC 127.42 ETC 154.89 CLP -5.88

PLANETOCENTRIC CONIC  
 C3 16.031 VHL 4.004 CLA 22.69 RAL 23.31 RAD 6567.6 VEL 11.722 PTH 2.07 VHP 8.092 CPA 22.96 RAP 32.93 ECC 1.2638  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 23 5 2961.90 -28.16 93.66 249.01 86.89 2 12 27 2361.9 -28.29 84.99  
 90.00 20 7 1 4007.87 -6.12 161.22 242.70 62.30 21 13 49 3407.9 -9.79 154.46  
 100.00 3 1-17 2645.26 -29.87 70.44 249.09 88.79 3 45 22 2045.3 -29.72 61.63  
 100.00 21 11 30 3799.74 -4.62 145.11 241.88 60.43 22 14 49 3199.7 -8.53 138.49  
 110.00 4 44 5 2323.64 -34.02 45.91 248.99 93.56 5 22 49 1723.6 -33.15 36.78  
 110.00 21 45 11 3694.13 -1.10 134.91 239.69 55.83 22 46 45 3094.1 -5.57 128.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3619 TRA -.5974 TC3 .7925 BAU .1734 SGT 1236.7 SGR 470.8 SG3 164.6 ST 588.1 SR 450.1 SS 438.8  
 RDE -.3143 RRA .0325 RC3 .1619 FAU .03864 RRT .4613 RRF -.4979 RTF -.8547 CRT .8645 CRS .9281 CST .9876  
 FDE .4118 FRA .4506 FC3-2.0865 BSP 4543 SGB 1323.3 R23 -.0617 R13 -.8604 LSA 840.2 MSA 186.1 SSA 20.0  
 BDE .4793 BRA .5982 BC3 .8089 FSP -481 SGI 1257.9 SG2 410.7 THA 11.16 EL1 716.9 EL2 185.5 ALF 36.31

LAUNCH DATE JAN 23 1969 FLIGHT TIME 94.00 ARRIVAL DATE APR 27 1969

MELIOCENTRIC CONIC DISTANCE 242.666  
 RL 147.25 LAL .00 LOL 122.82 VL 26.518 GAL -.23 AZL 88.33 MCA 105.26 SMA 120.72 ECC .21983 INC 1.6701 V1 30.256  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.765 GAP -11.26 AZP 90.44 TAL 180.81 TAP 286.07 RCA 94.18 APO 147.26 V2 34.994  
 RC 49.590 GL 11.62 GP 12.09 ZAL 94.18 ZAP 14.40 ETS 306.30 ZAE 150.52 ETE 10.79 ZAC 128.02 ETC 153.68 CLP -7.90

PLANETOCENTRIC CONIC  
 C3 14.732 VHL 3.838 DLA 21.78 RAL 22.10 RAD 6567.6 VEL 11.667 PTH 2.05 VHP 7.656 DPA 24.21 RAP 33.73 ECC 1.2425  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 30 18 2899.68 -28.31 89.11 246.02 89.16 2 18 38 2299.7 -28.12 80.45  
 90.00 19 50 8 4032.06 -5.36 162.59 239.93 62.15 20 57 20 3432.1 -9.04 155.85  
 100.00 3 6 55 2588.15 -29.88 66.19 246.02 91.03 3 50 3 1988.1 -29.41 57.42  
 100.00 20 56 12 3818.82 -3.98 146.16 239.18 60.35 21 59 51 3218.8 -7.90 139.56  
 110.00 4 47 3 2274.88 -33.75 42.13 245.74 95.78 5 24 58 1674.9 -32.58 33.09  
 110.00 21 32 33 3704.86 -.69 135.47 237.12 55.82 22 34 18 3104.9 -5.17 129.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3618 TRA -.5792 TC3 .8919 BAU .1809 SGT 1275.7 SGR 483.3 SG3 182.0 ST 608.4 SR 451.2 SS 440.1  
 RDE -.3021 RRA .0280 RC3 .2186 FAU .04167 RRT .5135 RRF -.5559 RTF -.8528 CRT .8739 CRS .9335 CST .9879  
 FDE .4201 FRA .4453 FC3-2.4488 BSP 4150 SGB 1364.1 R23 -.0797 R13 -.8601 LSA 856.6 MSA 181.8 SSA 21.5  
 BDE .4713 BRA .5799 BC3 .9183 FSP -497 SG1 1302.2 SG2 406.2 THA 12.21 EL1 735.4 EL2 181.4 ALF 35.43

LAUNCH DATE JAN 23 1969 FLIGHT TIME 96.00 ARRIVAL DATE APR 29 1969

MELIOCENTRIC CONIC DISTANCE 249.365  
 RL 147.25 LAL .00 LOL 122.82 VL 26.663 GAL -.40 AZL 88.48 MCA 108.46 SMA 121.58 ECC .21131 INC 1.5203 V1 30.256  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.857 GAP -10.50 AZP 90.48 TAL 181.50 TAP 289.96 RCA 95.89 APO 147.27 V2 34.980  
 RC 51.091 GL 11.06 GP 13.08 ZAL 95.61 ZAP 16.40 ETS 310.74 ZAE 149.04 ETE 12.80 ZAC 128.46 ETC 152.39 CLP -9.99

PLANETOCENTRIC CONIC  
 C3 13.605 VHL 3.689 DLA 20.72 RAL 20.91 RAD 6567.5 VEL 11.619 PTH 2.04 VHP 7.243 DPA 25.54 RAP 34.41 ECC 1.2239  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 38 34 2834.89 -28.28 84.37 243.08 91.54 2 25 49 2234.9 -27.77 75.74  
 90.00 19 32 23 4061.76 -4.41 164.26 237.28 62.00 20 40 5 3461.8 -8.12 157.54  
 100.00 3 13 38 2528.35 -29.72 61.75 243.01 93.36 3 55 47 1928.3 -28.94 53.03  
 100.00 20 40 0 3843.54 -3.15 147.52 236.58 60.26 21 44 4 3243.5 -7.08 140.94  
 110.00 4 51 1 2223.67 -33.33 38.19 242.59 98.08 5 28 5 1623.7 -31.85 29.27  
 110.00 21 19 6 3720.98 -.07 136.31 234.66 55.82 22 21 7 3121.0 -4.55 130.09

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3532 TRA -.5547 TC3 1.0135 BAU .1917 SGT 1307.2 SGR 500.4 SG3 201.9 ST 614.8 SR 451.6 SS 437.9  
 RDE -.2906 RRA .0227 RC3 .2883 FAU .04505 RRT .5687 RRF -.6157 RTF -.8601 CRT .8814 CRS .9367 CST .9886  
 FDE .4251 FRA .4467 FC3-2.8666 BSP 4287 SGB 1399.7 R23 -.0917 R13 -.8690 LSA 861.3 MSA 177.0 SSA 22.6  
 BDE .4574 BRA .5551 BC3 1.0537 FSP -561 SG1 1341.0 SG2 401.3 THA 13.52 EL1 742.1 EL2 176.7 ALF 35.22

LAUNCH DATE JAN 23 1969 FLIGHT TIME 98.00 ARRIVAL DATE MAY 1 1969

MELIOCENTRIC CONIC DISTANCE 256.051  
 RL 147.25 LAL .00 LOL 122.82 VL 26.796 GAL -.56 AZL 88.64 MCA 111.65 SMA 122.37 ECC .20357 INC 1.3649 V1 30.256  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.941 GAP -9.76 AZP 90.50 TAL 182.21 TAP 293.86 RCA 97.46 APO 147.28 V2 34.967  
 RC 52.697 GL 10.35 GP 14.19 ZAL 97.07 ZAP 18.62 ETS 314.22 ZAE 147.74 ETE 14.91 ZAC 128.72 ETC 151.03 CLP -12.17

PLANETOCENTRIC CONIC  
 C3 12.629 VHL 3.554 DLA 19.51 RAL 19.78 RAD 6567.5 VEL 11.577 PTH 2.02 VHP 6.852 DPA 26.94 RAP 34.95 ECC 1.2078  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 47 51 2767.82 -28.06 79.48 240.23 93.98 2 33 59 2167.8 -27.21 70.92  
 90.00 19 14 1 4096.68 -3.29 166.21 234.78 61.86 20 22 17 3496.7 -7.03 159.53  
 100.00 3 21 25 2466.10 -29.38 57.16 240.11 95.75 4 2 31 1866.1 -28.28 48.53  
 100.00 20 23 7 3873.64 -2.13 149.17 234.13 60.18 21 27 41 3273.6 -6.08 142.62  
 110.00 4 56 1 2170.12 -32.74 34.12 239.55 100.42 5 32 12 1570.1 -30.96 25.35  
 110.00 21 5 1 3742.38 .75 137.42 232.33 55.82 22 7 23 3142.4 -3.74 131.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3384 TRA -.5302 TC3 1.1438 BAU .2032 SGT 1334.5 SGR 523.5 SG3 224.0 ST 610.1 SR 450.3 SS 427.7  
 RDE -.2792 RRA .0170 RC3 .3738 FAU .04885 RRT .6228 RRF -.6752 RTF -.8684 CRT .8859 CRS .9375 CST .9892  
 FDE .4223 FRA .4502 FC3-3.3489 BSP 4474 SGB 1433.5 R23 -.1043 R13 -.8791 LSA 852.9 MSA 173.0 SSA 23.8  
 BDE .4387 BRA .5304 BC3 1.2033 FSP -634 SG1 1377.5 SG2 396.8 THA 15.00 EL1 738.3 EL2 172.6 ALF 35.40

LAUNCH DATE JAN 23 1969 FLIGHT TIME 100.00 ARRIVAL DATE MAY 3 1969

MELIOCENTRIC CONIC DISTANCE 262.722  
 RL 147.25 LAL .00 LOL 122.82 VL 26.916 GAL -.72 AZL 88.80 MCA 114.84 SMA 123.10 ECC .19658 INC 1.2026 V1 30.256  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.016 GAP -9.05 AZP 90.51 TAL 182.93 TAP 297.77 RCA 98.90 APO 147.30 V2 34.954  
 RC 54.398 GL 9.47 GP 15.45 ZAL 98.55 ZAP 21.04 ETS 316.98 ZAE 146.60 ETE 17.17 ZAC 128.79 ETC 149.61 CLP -14.45

PLANETOCENTRIC CONIC  
 C3 11.786 VHL 3.433 DLA 18.15 RAL 18.71 RAD 6567.4 VEL 11.540 PTH 2.01 VHP 6.485 DPA 28.44 RAP 35.33 ECC 1.1940  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 58 10 2698.66 -27.63 74.46 237.52 96.46 2 43 9 2098.7 -26.45 66.00  
 90.00 18 55 12 4136.60 -2.01 168.44 232.46 61.75 20 4 9 3536.6 -5.77 161.78  
 100.00 3 30 18 2401.55 -28.85 52.43 237.34 98.19 4 10 19 1801.6 -27.42 43.92  
 100.00 20 5 46 3908.93 -.93 151.11 231.86 60.12 21 10 54 3308.9 -4.90 144.57  
 110.00 5 2 7 2114.28 -31.98 29.94 236.67 102.78 5 37 21 1514.3 -29.89 21.35  
 110.00 20 50 26 3768.97 1.77 138.81 230.18 55.86 21 53 15 3169.0 -2.73 132.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3231 TRA -.5089 TC3 1.2716 BAU .2141 SGT 1360.9 SGR 555.2 SG3 248.8 ST 602.8 SR 447.6 SS 412.4  
 RDE -.2681 RRA .0109 RC3 .4779 FAU .05311 RRT .6759 RRF -.7335 RTF -.8746 CRT .8895 CRS .9367 CST .9899  
 FDE .4141 FRA .4564 FC3-3.9008 BSP 4576 SGB 1469.8 R23 -.1197 R13 -.8876 LSA 839.4 MSA 169.1 SSA 25.3  
 BDE .4198 BRA .5090 BC3 1.3585 FSP -709 SG1 1416.2 SG2 393.2 THA 16.74 EL1 731.6 EL2 168.5 ALF 35.62

LAUNCH DATE JAN 23 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 269.377

RL 147.25 LAL .00 LOL 122.82 VL 27.024 GAL -.86 AZL 88.97 HCA 118.03 SMA 123.77 ECC .19028 INC 1.0318 V1 30.256  
 RP 108.45 LAP .91 LOP 240.85 VP 37.083 GAP -8.38 AZP 90.48 TAL 183.65 TAP 301.68 RCA 100.22 APO 147.32 V2 34.942  
 RC 56.186 GL 8.41 GP 16.87 ZAL 100.01 ZAP 23.67 ETS 319.18 ZAE 145.61 ETE 19.64 ZAC 128.63 ETC 148.14 CLP -16.84

PLANETOCENTRIC CONIC

C3 11.060 VHL 3.326 DLA 16.63 RAL 17.75 RAD 6567.4 VEL 11.509 PTH 2.00 VHP 6.141 DPA 30.05 RAP 35.52 ECC 1.1820  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 9 33 2627.39 -26.98 69.35 234.96 98.94 2 53 21 2027.4 -25.47 61.01  
 90.00 18 36 7 4181.44 -.56 170.95 230.36 61.69 19 45 48 3581.4 -4.34 164.31  
 100.00 3 40 19 2334.73 -28.11 47.61 234.74 100.62 4 19 13 1734.7 -26.35 39.24  
 100.00 19 48 3 3949.34 .44 153.33 229.81 60.11 20 53 52 3349.3 -3.54 146.80  
 110.00 5 9 21 2056.14 -31.02 25.68 233.98 105.13 5 43 37 1456.1 -28.64 17.29  
 110.00 20 35 30 3800.69 2.98 140.47 228.22 55.93 21 38 50 3200.7 -1.52 134.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3044 TRA -.4880 TC3 1.3951 BAU .2247 SGT 1380.5 SGR 597.1 SG3 276.0 ST 587.4 SR 442.4 SS 389.4  
 RDE -.2567 RRA .0043 RC3 .6031 FAU .05776 RRT .7246 RRF -.7875 RTF -.8799 CRT .8913 CRS .9331 CST .9906  
 FDE .3969 FRA .4640 FC3-4.5212 BSP 4687 SGB 1504.1 R23 -.1362 R13 -.8961 LSA 815.0 MSA 165.4 SSA 27.2  
 BOE .3981 BRA .4880 BC3 1.5199 FSP -793 SG1 1452.3 SG2 391.2 THA 18.82 EL1 716.7 EL2 164.4 ALF 36.07

LAUNCH DATE JAN 23 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 276.013

RL 147.25 LAL .00 LOL 122.82 VL 27.122 GAL -.99 AZL 89.15 HCA 121.21 SMA 124.39 ECC .18462 INC .8508 V1 30.256  
 RP 108.49 LAP .73 LOP 244.03 VP 37.142 GAP -7.72 AZP 90.44 TAL 184.36 TAP 305.57 RCA 101.42 APO 147.35 V2 34.929  
 RC 58.051 GL 7.16 GP 18.48 ZAL 101.44 ZAP 26.52 ETS 320.95 ZAE 144.74 ETE 22.38 ZAC 128.21 ETC 146.65 CLP -19.36

PLANETOCENTRIC CONIC

C3 10.436 VHL 3.231 DLA 14.93 RAL 16.90 RAD 6567.4 VEL 11.482 PTH 2.00 VHP 5.822 DPA 31.78 RAP 35.49 ECC 1.1718  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 22 7 2553.93 -26.10 64.16 232.61 101.40 3 4 40 1953.9 -24.26 55.97  
 90.00 18 16 50 4231.26 1.05 173.72 228.52 61.70 19 27 21 3631.3 -2.74 167.09  
 100.00 3 51 32 2265.55 -27.14 42.69 232.35 103.04 4 29 17 1665.5 -25.07 34.50  
 100.00 19 30 6 3994.87 1.98 155.83 228.00 60.17 20 36 41 3394.9 -2.00 149.31  
 110.00 5 17 48 1995.60 -29.87 21.35 231.51 107.46 5 51 4 1395.6 -27.19 13.18  
 110.00 20 20 18 3837.59 4.38 142.40 226.50 56.06 21 24 16 3237.6 -1.10 136.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2795 TRA -.4654 TC3 1.5159 BAU .2362 SGT 1391.0 SGR 651.2 SG3 305.8 ST 558.9 SR 432.3 SS 353.6  
 RDE -.2436 RRA -.0026 RC3 .7540 FAU .06289 RRT .7677 RRF -.8352 RTF -.8857 CRT .8898 CRS .9236 CST .9914  
 FDE .3638 FRA .4715 FC3-5.2167 BSP 4850 SGB 1535.9 R23 -.1506 R13 -.9058 LSA 772.7 MSA 162.2 SSA 29.4  
 BOE .3708 BRA .4654 BC3 1.6931 FSP -889 SG1 1485.4 SG2 390.8 THA 21.31 EL1 688.2 EL2 160.2 ALF 36.86

LAUNCH DATE JAN 23 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 282.629

RL 147.25 LAL .00 LOL 122.82 VL 27.209 GAL -1.10 AZL 89.34 HCA 124.39 SMA 124.94 ECC .17957 INC .6572 V1 30.256  
 RP 108.53 LAP .54 LOP 247.21 VP 37.195 GAP -7.09 AZP 90.37 TAL 185.06 TAP 309.45 RCA 102.51 APO 147.38 V2 34.917  
 RC 59.985 GL 5.69 GP 20.30 ZAL 102.82 ZAP 29.60 ETS 322.42 ZAE 143.95 ETE 25.43 ZAC 127.51 ETC 145.15 CLP -22.01

PLANETOCENTRIC CONIC

C3 9.905 VHL 3.147 DLA 13.06 RAL 16.21 RAD 6567.4 VEL 11.458 PTH 1.99 VHP 5.529 DPA 33.66 RAP 35.20 ECC 1.1630  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 57 2478.02 -24.97 58.88 230.49 103.81 3 17 15 1878.0 -22.82 50.87  
 90.00 17 57 26 4286.23 2.82 176.79 226.95 61.81 19 8 52 3686.2 -.97 170.16  
 100.00 4 4 4 2193.81 -25.94 37.70 230.20 105.40 4 40 38 1593.8 -23.57 29.70  
 100.00 19 11 59 4045.68 3.70 158.62 226.46 60.32 20 19 25 3445.7 -.28 152.09  
 110.00 5 27 35 1932.49 -28.50 16.94 229.29 109.73 5 59 48 1332.5 -25.54 9.01  
 110.00 20 4 58 3879.77 5.98 144.62 225.05 56.28 21 9 38 3279.8 1.51 138.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2544 TRA -.4473 TC3 1.6131 BAU .2467 SGT 1394.4 SGR 719.8 SG3 337.4 ST 527.6 SR 417.6 SS 310.7  
 RDE -.2292 RRA -.0111 RC3 .9314 FAU .06824 RRT .8028 RRF -.8756 RTF -.8885 CRT .8865 CRS .9041 CST .9916  
 FDE .3185 FRA .4855 FC3-5.9641 BSP 4965 SGB 1569.3 R23 -.1672 R13 -.9141 LSA 723.0 MSA 159.8 SSA 32.1  
 BOE .3424 BRA .4475 BC3 1.8627 FSP -992 SG1 1519.0 SG2 394.0 THA 24.25 EL1 654.6 EL2 155.7 ALF 37.55

LAUNCH DATE JAN 23 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 289.225

RL 147.25 LAL .00 LOL 122.82 VL 27.287 GAL -1.21 AZL 89.55 HCA 127.57 SMA 125.45 ECC .17508 INC .4483 V1 30.256  
 RP 108.57 LAP .36 LOP 250.39 VP 37.241 GAP -6.49 AZP 90.27 TAL 185.72 TAP 313.29 RCA 103.48 APO 147.41 V2 34.906  
 RC 61.981 GL 3.98 GP 22.37 ZAL 104.12 ZAP 32.93 ETS 323.68 ZAE 143.19 ETE 28.87 ZAC 126.50 ETC 143.69 CLP -24.83

PLANETOCENTRIC CONIC

C3 9.458 VHL 3.075 DLA 11.00 RAL 15.68 RAD 6567.3 VEL 11.439 PTH 1.98 VHP 5.263 DPA 35.69 RAP 34.59 ECC 1.1557  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 15 2399.26 -23.58 53.53 228.64 106.15 3 31 14 1799.3 -21.14 45.71  
 90.00 17 37 55 4346.77 4.76 180.18 225.70 62.05 18 50 21 3746.8 .98 173.54  
 100.00 4 18 6 2119.14 -24.49 32.62 228.33 107.70 4 53 25 1519.1 -21.84 24.83  
 100.00 18 53 44 4102.12 5.59 161.74 225.24 60.59 20 2 7 3502.1 1.63 155.19  
 110.00 5 38 50 1866.50 -26.90 12.48 227.37 111.94 6 9 57 1266.5 -23.68 4.79  
 110.00 19 49 30 3927.52 7.78 147.15 223.90 56.61 20 54 57 3327.5 3.33 140.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2271 TRA -.4309 TC3 1.6886 BAU .2577 SGT 1388.0 SGR 806.2 SG3 371.0 ST 490.0 SR 395.7 SS 259.2  
 RDE -.2120 RRA -.0213 RC3 1.1407 FAU .07386 RRT .8302 RRF -.9084 RTF -.8900 CRT .8804 CRS .8607 CST .9875  
 FDE .2555 FRA .5051 FC3-6.7610 BSP 5073 SGB 1605.1 R23 -.1815 R13 -.9228 LSA 661.4 MSA 158.5 SSA 35.5  
 BOE .3107 BRA .4314 BC3 2.0378 FSP -1100 SG1 1554.1 SG2 401.4 THA 27.75 EL1 611.7 EL2 150.3 ALF 38.12

LAUNCH DATE JAN 23 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 13 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 27.357 GAL -1.31 AZL 89.78 HCA 130.75 SMA 125.90 ECC .17110 INC .2210 V1 30.256  
 RP 108.60 LAP .17 LOP 253.57 VP 37.282 GAP -5.91 AZP 90.14 TAL 186.35 TAP 317.10 RCA 104.36 APO 147.44 V2 34.894  
 RC 64.032 GL 2.01 GP 24.69 ZAL 105.33 ZAP 36.52 ETS 324.79 ZAE 142.41 ETE 32.73 ZAC 125.14 ETC 142.30 CLP -27.81

Distance 295.798

Planetocentric Conic: C3 9.089 VHL 3.015 DLA 8.72 RAL 15.34 RAD 6567.3 VEL 11.423 PTH 1.98 VHP 5.026 DPA 37.89 RAP 33.62 ECC 1.1496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 8 15 2317.04 -21.92 48.08 227.10 108.39 3 46 52 1717.0 -19.20 40.46  
 90.00 17 18 13 4413.51 6.87 183.95 224.81 62.46 18 31 46 3813.5 3.13 177.27  
 100.00 4 33 50 2041.01 -22.77 27.45 226.78 109.90 5 7 51 1441.0 -19.86 19.87  
 100.00 18 35 19 4164.77 7.68 165.22 224.37 61.02 19 44 44 3564.8 3.75 158.63  
 110.00 5 51 44 1797.20 -25.05 7.94 225.78 114.06 6 21 42 1197.2 -21.59 .50  
 110.00 19 33 54 3981.34 9.78 150.03 223.09 57.08 20 40 15 3381.3 5.38 143.71

Differential Corrections: TDE -.1966 TRA -.4159 TC3 1.7353 BAU .2697 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1901 RRA -.0340 RC3 1.3843 FAU .07955 SGT 1368.8 SGR 911.8 SG3 405.4 ST 445.1 SR 362.7 SS 201.1  
 FDE .1679 FRA .5311 FC3-7.5778 BSP 5200 RRT .8497 RRF -.9338 RTF -.8899 CRT .8701 CRS .7427 CST .9558  
 BOE .2734 BRA .4172 BC3 2.2198 FSP -1213 SGB 1644.7 R23 -.1905 R13 -.9323 LSA 585.4 MSA 160.5 SSA 39.5  
 SG1 1591.9 SG2 413.4 THA 31.92 EL1 556.0 EL2 143.1 ALF 38.33

LAUNCH DATE JAN 23 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 15 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 27.419 GAL -1.39 AZL 90.03 HCA 133.92 SMA 126.30 ECC .16759 INC .0242 V1 30.256  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.317 GAP -5.35 AZP 89.98 TAL 186.92 TAP 320.85 RCA 105.14 APO 147.47 V2 34.883  
 RC 66.131 GL -.26 GP 27.32 ZAL 106.42 ZAP 40.39 ETS 325.85 ZAE 141.52 ETE 37.04 ZAC 123.40 ETC 141.03 CLP -30.99

Distance 302.349

Planetocentric Conic: C3 8.795 VHL 2.966 DLA 6.21 RAL 15.22 RAD 6567.3 VEL 11.410 PTH 1.97 VHP 4.821 DPA 40.27 RAP 32.21 ECC 1.1448  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 27 16 2230.55 -19.95 42.49 225.93 110.52 4 4 26 1630.5 -16.98 35.08  
 90.00 16 58 13 4487.40 9.18 188.16 224.91 63.09 18 13 0 3887.4 5.50 181.41  
 100.00 4 51 33 1958.67 -20.77 22.16 225.59 112.00 5 24 12 1358.7 -17.60 14.80  
 100.00 18 16 37 4234.51 9.95 169.15 223.90 61.67 19 27 11 3634.5 6.09 162.49  
 110.00 6 6 32 1723.98 -22.94 3.30 224.54 116.07 6 35 16 1124.0 -19.25 356.11  
 110.00 19 18 7 4041.97 12.00 153.32 222.68 57.75 20 25 29 3442.0 7.66 146.91

Differential Corrections: TDE -.1639 TRA -.4015 TC3 1.7489 BAU .2839 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1617 RRA -.0498 RC3 1.6648 FAU .08512 SGT 1336.1 SGR 1040.2 SG3 439.8 ST 395.0 SR 315.1 SS 156.4  
 FDE .0535 FRA .5640 FC3-8.3785 BSP 5369 RRT .8626 RRF -.9530 RTF -.8886 CRT .8567 CRS .3910 CST .7709  
 BOE .2302 BRA .4046 BC3 2.4145 FSP -1329 SGB 1693.3 R23 -.1906 R13 -.9429 LSA 499.0 MSA 170.2 SSA 43.1  
 SG1 1637.9 SG2 429.3 THA 36.83 EL1 487.9 EL2 131.6 ALF 37.56

LAUNCH DATE JAN 23 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 17 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 27.473 GAL -1.46 AZL 90.31 HCA 137.10 SMA 126.66 ECC .16452 INC .3059 V1 30.256  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.346 GAP -4.81 AZP 89.78 TAL 187.45 TAP 324.54 RCA 105.82 APO 147.50 V2 34.873  
 RC 68.274 GL -2.87 GP 30.26 ZAL 107.35 ZAP 44.53 ETS 326.93 ZAE 140.42 ETE 41.81 ZAC 121.26 ETC 139.92 CLP -34.37

Distance 308.876

Planetocentric Conic: C3 8.580 VHL 2.929 DLA 3.43 RAL 15.33 RAD 6567.3 VEL 11.400 PTH 1.97 VHP 4.653 DPA 42.85 RAP 30.28 ECC 1.1412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 48 43 2138.70 -17.66 36.73 225.16 112.50 4 24 21 1538.7 -14.46 29.52  
 90.00 16 37 42 4569.81 11.68 192.92 224.28 64.02 17 53 52 3969.8 8.09 186.08  
 100.00 5 11 39 1871.16 -18.44 16.70 224.80 113.95 5 42 51 1271.2 -15.05 9.55  
 100.00 17 57 27 4312.59 12.44 173.61 223.88 62.60 19 9 19 3712.6 8.67 166.85  
 110.00 6 23 35 1646.05 -20.53 358.54 223.73 117.95 6 51 1 1046.1 -16.63 351.58  
 110.00 19 2 1 4110.46 14.46 157.10 222.71 58.68 20 10 31 3510.5 10.21 150.58

Differential Corrections: TDE -.1322 TRA -.3901 TC3 1.7111 BAU .3001 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.1247 RRA -.0708 RC3 1.9787 FAU .09010 SGT 1286.9 SGR 1192.7 SG3 471.8 ST 347.0 SR 249.9 SS 172.1  
 FDE -.0886 FRA .6082 FC3-9.0910 BSP 5537 RRT .8673 RRF -.9669 RTF -.8831 CRT .8498 CRS -.2039 CST .2826  
 BOE .1818 BRA .3964 BC3 2.6160 FSP -1435 SGB 1754.6 R23 -.1835 R13 -.9535 LSA 413.7 MSA 198.4 SSA 44.0  
 SG1 1695.7 SG2 450.6 THA 42.49 EL1 413.0 EL2 110.6 ALF 34.26

LAUNCH DATE JAN 23 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 19 1969

Heliocentric Conic: RL 147.25 LAL .00 LOL 122.82 VL 27.520 GAL -1.52 AZL 90.62 HCA 140.27 SMA 126.97 ECC .16184 INC .6193 V1 30.256  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.372 GAP -4.29 AZP 89.52 TAL 187.91 TAP 328.18 RCA 106.42 APO 147.52 V2 34.862  
 RC 70.456 GL -.58 GP 33.55 ZAL 108.11 ZAP 48.93 ETS 328.12 ZAE 139.02 ETE 46.98 ZAC 118.72 ETC 139.02 CLP -37.98

Distance 315.379

Planetocentric Conic: C3 8.450 VHL 2.907 DLA .35 RAL 15.72 RAD 6567.3 VEL 11.395 PTH 1.97 VHP 4.525 DPA 45.61 RAP 27.74 ECC 1.1391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 13 11 2040.07 -14.99 30.72 224.87 114.31 4 47 11 1440.1 -11.58 23.70  
 90.00 16 16 20 4662.67 14.38 198.40 224.78 65.34 17 34 3 4062.7 10.94 191.41  
 100.00 5 34 41 1777.17 -15.75 11.02 224.50 115.74 6 4 18 1177.2 -12.16 4.07  
 100.00 17 37 31 4400.80 15.14 178.77 224.41 63.92 18 50 52 3800.8 11.52 171.85  
 110.00 6 43 18 1562.40 -17.78 353.61 223.39 119.69 7 9 20 962.4 -13.70 346.87  
 110.00 18 45 24 4188.33 17.17 161.52 223.29 59.98 19 55 12 3588.3 13.05 154.83

Differential Corrections: TDE -.1025 TRA -.3796 TC3 1.6145 BAU .3191 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.0757 RRA -.0982 RC3 2.3179 FAU .09396 SGT 1217.3 SGR 1369.5 SG3 498.5 ST 303.3 SR 165.1 SS 260.4  
 FDE -.2596 FRA .6623 FC3-9.6267 BSP 5765 RRT .8636 RRF -.9768 RTF -.8723 CRT .8847 CRS -.4260 CST -.0532  
 BOE .1274 BRA .3921 BC3 2.8248 FSP -1528 SGB 1832.3 R23 -.1671 R13 -.9640 LSA 342.8 MSA 260.7 SSA 39.4  
 SG1 1769.7 SG2 474.9 THA 48.89 EL1 338.4 EL2 69.0 ALF 26.93

LAUNCH DATE JAN 23 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 321.858

RL 147.25 LAL .00 LOL 122.82 VL 27.560 GAL -1.57 AZL 90.98 HCA 143.43 SMA 127.25 ECC .15953 INC .9764 V1 30.256
RP 108.73 LAP -.58 LOP 266.26 VP 37.393 GAP -3.79 AZP 89.22 TAL 188.30 TAP 331.74 RCA 106.95 APO 147.55 V2 34.853
RC 72.672 GL -9.31 GP 37.18 ZAL 108.64 ZAP 53.58 ETS 329.50 ZAE 137.20 ETE 52.46 ZAC 115.77 ETC 138.40 CLP -41.83

PLANETOCENTRIC CONIC

C3 8.421 VHL 2.902 DLA -3.09 RAL 16.42 RAD 6567.3 VEL 11.393 PTH 1.97 VHP 4.445 OPA 48.53 RAP 24.46 ECC 1.1386
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 41 29 1932.73 -11.88 24.37 225.16 115.89 5 13 42 1332.7 -8.31 17.52
90.00 15 53 35 4768.70 17.29 204.82 225.95 67.22 17 13 4 4168.7 14.06 197.64
100.00 6 1 23 1674.99 -12.64 5.03 224.78 117.31 6 29 18 1075.0 -8.88 358.26
100.00 17 16 22 4501.67 18.07 184.83 225.59 65.77 18 31 24 3901.7 14.64 177.71
110.00 7 6 19 1471.72 -14.65 348.44 223.62 121.24 7 30 50 871.7 -10.40 341.91
110.00 18 27 55 4277.71 20.13 166.75 224.52 61.77 19 39 13 3677.7 16.20 159.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0748 TRA -.3682 TC3 1.4647 BAU .3431 SGT 1129.0 SGR 1573.8 S63 518.1 ST 264.9 SR 93.8 SS 393.4
ROE -.0092 RRA -.1338 RC3 2.6730 FAU .09638 RRT .8521 RRF -.9837 RTF -.8561 CRT .8540 CRS .2646 CST -.1355
FDE -.4628 FRA .7238 FC3-9.9090 BSP 6102 SGB 1936.9 R23 -.1407 R13 -.9742 LSA 396.6 MSA 274.6 SSA 31.2
BOE .0754 BRA .3918 BC3 3.0480 FSP -1603 S61 1872.1 S62 496.7 THA 55.83 EL1 277.1 EL2 46.7 ALF 17.33

LAUNCH DATE JAN 23 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 328.312

RL 147.25 LAL .00 LOL 122.82 VL 27.595 GAL -1.60 AZL 91.39 HCA 146.60 SMA 127.48 ECC .15755 INC 1.3910 V1 30.256
RP 108.76 LAP -.77 LOP 269.42 VP 37.410 GAP -3.31 AZP 88.84 TAL 188.62 TAP 335.22 RCA 107.40 APO 147.56 V2 34.844
RC 74.919 GL -13.26 GP 41.17 ZAL 108.90 ZAP 58.41 ETS 331.16 ZAE 134.88 ETE 58.14 ZAC 112.44 ETC 138.10 CLP -45.91

PLANETOCENTRIC CONIC

C3 8.521 VHL 2.919 DLA -6.94 RAL 17.46 RAD 6567.3 VEL 11.398 PTH 1.97 VHP 4.421 OPA 51.57 RAP 20.30 ECC 1.1402
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 14 48 1814.07 -8.27 17.53 226.17 117.18 5 45 2 1214.1 -4.56 10.81
90.00 15 28 37 4891.84 20.36 212.55 227.93 69.89 16 50 9 4291.8 17.44 205.10
100.00 6 32 49 1562.36 -9.04 358.61 225.76 118.61 6 58 51 962.4 -5.15 351.98
100.00 16 53 16 4618.78 21.18 192.14 227.60 68.39 18 10 15 4018.8 18.05 184.73
110.00 7 33 29 1372.43 -11.07 342.97 224.54 122.55 7 56 21 772.4 -6.70 336.61
110.00 18 9 6 4381.47 23.34 173.09 226.58 64.29 19 22 8 3781.5 19.69 165.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0554 TRA -.3573 TC3 1.2409 BAU .3707 SGT 1017.8 SGR 1799.2 S63 525.4 ST 239.2 SR 195.6 SS 548.6
ROE .0786 RRA -.1822 RC3 3.0079 FAU .09640 RRT .8245 RRF -.9885 RTF -.8253 CRT .1553 CRS .9528 CST -.1239
FDE -.6856 FRA .7959 FC3-9.7944 BSP 6481 SGB 2067.2 R23 -.1110 R13 -.9824 LSA 580.3 MSA 243.4 SSA 23.1
BOE .0962 BRA .4011 BC3 3.2538 FSP -1633 S61 2001.3 S62 517.8 THA 63.05 EL1 244.3 EL2 189.2 ALF 18.72

LAUNCH DATE JAN 23 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 334.741

RL 147.25 LAL .00 LOL 122.82 VL 27.624 GAL -1.63 AZL 91.88 HCA 149.76 SMA 127.68 ECC .15587 INC 1.8812 V1 30.256
RP 108.78 LAP -.95 LOP 272.59 VP 37.423 GAP -2.84 AZP 88.37 TAL 188.87 TAP 338.63 RCA 107.78 APO 147.58 V2 34.835
RC 77.194 GL -17.79 GP 45.48 ZAL 108.84 ZAP 63.36 ETS 333.21 ZAE 131.99 ETE 63.88 ZAC 108.77 ETC 138.19 CLP -50.24

PLANETOCENTRIC CONIC

C3 8.801 VHL 2.967 DLA -11.26 RAL 18.92 RAD 6567.3 VEL 11.410 PTH 1.97 VHP 4.465 OPA 54.67 RAP 15.10 ECC 1.1448
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 54 58 1680.11 -4.04 9.96 228.12 118.05 6 22 58 1080.1 -.25 3.32
90.00 15 0 2 5038.07 23.48 222.13 230.96 73.70 16 24 0 4438.1 21.02 214.32
100.00 7 10 38 1435.96 -4.85 351.56 227.67 119.53 7 34 34 836.0 -.88 345.02
100.00 16 27 3 4757.45 24.37 201.19 230.66 72.13 17 46 20 4157.5 21.70 193.42
110.00 8 6 3 1262.42 -6.99 337.08 226.35 123.55 8 27 6 662.4 -2.53 330.83
110.00 17 48 7 4503.75 26.72 180.98 229.71 67.85 19 3 11 3903.8 23.48 173.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0478 TRA -.3431 TC3 .9576 BAU .4030 SGT 887.6 SGR 2045.3 S63 518.6 ST 223.4 SR 408.2 SS 715.5
ROE .1951 RRA -.2461 RC3 3.2882 FAU .09376 RRT .7718 RRF -.9917 RTF -.7701 CRT -.0474 CRS .9948 CST -.1371
FDE -.9189 FRA .8702 FC3-9.2233 BSP 6967 SGB 2229.6 R23 -.0801 R13 -.9885 LSA 823.4 MSA 224.1 SSA 16.7
BOE .2009 BRA .4222 BC3 3.4248 FSP -1620 S61 2164.9 S62 533.2 THA 70.23 EL1 408.4 EL2 223.0 ALF 92.12

LAUNCH DATE JAN 23 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 341.145

RL 147.25 LAL .00 LOL 122.82 VL 27.648 GAL -1.64 AZL 92.47 HCA 152.91 SMA 127.84 ECC .15446 INC 2.4738 V1 30.256
RP 108.81 LAP -1.13 LOP 275.75 VP 37.434 GAP -2.39 AZP 87.80 TAL 189.04 TAP 341.95 RCA 108.09 APO 147.59 V2 34.827
RC 79.493 GL -22.97 GP 50.10 ZAL 108.40 ZAP 68.30 ETS 335.72 ZAE 128.51 ETE 69.54 ZAC 104.81 ETC 138.70 CLP -54.80

PLANETOCENTRIC CONIC

C3 9.346 VHL 3.057 DLA -16.08 RAL 20.85 RAD 6567.3 VEL 11.434 PTH 1.98 VHP 4.593 OPA 57.73 RAP 8.66 ECC 1.1538
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 45 14 1523.83 1.00 1.23 231.34 118.30 7 10 38 923.8 4.78 354.59
90.00 14 25 12 5217.56 26.35 234.49 235.33 79.24 15 52 10 4617.6 24.60 226.26
100.00 7 57 37 1290.28 .07 343.55 230.83 119.89 8 19 7 690.3 4.05 337.02
100.00 15 55 30 4926.34 27.39 212.83 235.09 77.54 17 17 37 4326.3 25.40 204.59
110.00 8 45 59 1138.76 -2.29 330.58 229.35 124.12 9 4 58 538.8 2.20 324.38
110.00 17 23 37 4650.63 30.09 191.08 234.28 72.95 18 41 8 4050.6 27.46 182.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0572 TRA -.3221 TC3 .6271 BAU .4387 SGT 743.9 SGR 2304.0 S63 495.2 ST 217.2 SR 687.1 SS 884.4
ROE .3502 RRA -.3307 RC3 3.4546 FAU .08802 RRT .6680 RRF -.9940 RTF -.6642 CRT -.2222 CRS .9990 CST -.2596
FDE -1.1497 FRA .9397 FC3-8.1533 BSP 7573 SGB 2421.1 R23 -.0515 R13 -.9926 LSA 1121.1 MSA 211.3 SSA 12.1
BOE .3548 BRA .4617 BC3 3.5111 FSP -1556 S61 2360.0 S62 540.4 THA 77.14 EL1 689.0 EL2 211.2 ALF 94.43



LAUNCH DATE JAN 23 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 29 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.667 GAL -1.64 AZL 93.21 HCA 156.07 SMA 127.97 ECC .15331 INC 3.2091 V1 30.256  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.441 GAP -1.96 AZP 87.07 TAL 189.12 TAP 345.19 RCA 108.35 APO 147.59 V2 34.820  
 RC 81.813 GL -28.82 GP 54.99 ZAL 107.50 ZAP 73.10 ETS 338.80 ZAE 124.44 ETE 75.04 ZAC 100.66 ETC 139.70 CLP -59.57

DISTANCE 347.522

Planetocentric Conic

C3 10.314 VHL 3.211 DLA -21.43 RAL 23.36 RAD 6567.4 VEL 11.476 PTH 1.99 VHP 4.831 DPA 60.66 RAP .77 ECC 1.1697  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 52 46 1328.14 7.25 350.25 236.47 117.45 8 14 54 728.1 10.87 343.44  
 90.00 13 37 44 5452.27 28.21 251.38 241.31 87.49 15 8 36 4852.3 27.57 242.77  
 100.00 8 59 22 1113.17 6.05 333.80 235.81 119.33 9 17 55 513.2 9.91 327.14  
 100.00 15 13 48 5142.47 29.58 228.49 241.21 85.49 16 39 31 4542.5 28.64 219.81  
 110.00 9 36 40 996.28 3.15 323.14 234.02 124.06 9 53 16 396.3 7.60 316.88  
 110.00 16 53 0 4832.12 32.96 204.43 240.72 80.36 18 13 32 4232.1 31.28 195.61

Differential Corrections

TDE -.0959 TRA -.2906 TC3 .2751 BAU .4758  
 RDE .5506 RRA -.4441 RC3 3.4396 FAU .07912  
 FDE -1.3479 FRA .9992 FC3-6.6411 BSP 8241  
 BDE .5589 BRA .5307 BC3 3.4506 FSP -1434

Mid-Course Execution Accuracy

SGT 608.8 SGR 2563.3 SG3 454.3  
 RRT .4462 RRF -.9955 RTF -.4401  
 SGB 2634.6 R23 -.0277 R13 -.9951  
 SG1 2578.3 SG2 541.7 TMA 83.67

Orbit Determination Accuracy

ST 239.2 SR 1017.2 SS 1033.3  
 CRT -.5139 CRS .9997 CST -.5314  
 LSA 1455.3 MSA 203.7 SSA 8.9  
 EL1 1024.9 EL2 203.6 ALF 97.17

LAUNCH DATE JAN 23 1969

FLIGHT TIME 128.00

ARRIVAL DATE MAY 31 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.682 GAL -1.63 AZL 94.15 HCA 159.21 SMA 128.07 ECC .15238 INC 4.1523 V1 30.256  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.445 GAP -1.54 AZP 86.12 TAL 189.12 TAP 348.33 RCA 108.56 APO 147.59 V2 34.813  
 RC 84.153 GL -35.34 GP 60.13 ZAL 106.10 ZAP 77.62 ETS 342.51 ZAE 119.81 ETE 80.37 ZAC 96.39 ETC 141.22 CLP -64.49

DISTANCE 353.871

Planetocentric Conic

C3 11.997 VHL 3.464 DLA -27.26 RAL 26.58 RAD 6567.5 VEL 11.549 PTH 2.02 VHP 5.217 DPA 63.31 RAP 351.15 ECC 1.1974  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 50 11 998.85 16.92 330.91 245.19 113.05 10 6 50 398.8 19.90 323.50  
 90.00 12 5 58 5843.84 26.09 279.68 248.24 101.41 13 43 22 5243.8 27.40 271.26  
 100.00 10 34 24 855.98 14.30 319.17 243.93 116.53 10 48 40 256.0 17.75 312.07  
 100.00 14 4 26 5461.94 28.94 252.13 248.79 97.84 15 35 28 4861.9 29.72 243.41  
 110.00 10 45 29 821.21 9.75 313.88 241.28 122.93 10 59 10 221.2 14.02 307.38  
 110.00 16 9 51 5069.48 34.17 222.81 249.27 91.14 17 34 21 4469.5 33.95 213.57

Differential Corrections

TDE -.1754 TRA -.2388 TC3 -.0473 BAU .5126  
 RDE .8129 RRA -.5934 RC3 3.1955 FAU .06765  
 FDE -1.4986 FRA 1.0343 FC3-4.8821 BSP 9016  
 BDE .8317 BRA .6396 BC3 3.1958 FSP -1269

Mid-Course Execution Accuracy

SGT 531.7 SGR 2815.6 SG3 398.6  
 RRT .0186 RRF -.9965 RTF -.0102  
 SGB 2865.4 R23 -.0090 R13 -.9965  
 SG1 2815.6 SG2 531.6 TMA 89.79

Orbit Determination Accuracy

ST 319.3 SR 1386.6 SS 1148.2  
 CRT -.7818 CRS .9999 CST -.7898  
 LSA 1817.8 MSA 196.2 SSA 6.5  
 EL1 1409.3 EL2 195.9 ALF 100.41

LAUNCH DATE JAN 23 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 2 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.693 GAL -1.60 AZL 95.41 HCA 162.35 SMA 128.15 ECC .15166 INC 5.4137 V1 30.256  
 RP 108.87 LAP -1.64 LOP 285.24 VP 37.448 GAP -1.13 AZP 84.84 TAL 189.03 TAP 351.39 RCA 108.71 APO 147.58 V2 34.802  
 RC 86.508 GL -42.41 GP 65.54 ZAL 104.19 ZAP 81.67 ETS 346.94 ZAE 114.65 ETE 85.59 ZAC 92.08 ETC 143.57 CLP -69.52

DISTANCE 360.190

Planetocentric Conic

C3 14.995 VHL 3.872 DLA -33.41 RAL 30.66 RAD 6567.6 VEL 11.678 PTH 2.05 VHP 5.819 DPA 65.55 RAP 339.55 ECC 1.2468  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.49 8 53 47 1274.15 24.79 354.89 256.18 113.14 9 15 1 674.2 27.70 347.00  
 108.51 13 34 53 5665.49 24.81 266.08 256.18 113.12 15 9 19 5065.5 27.72 258.18  
 71.49 8 53 47 1274.15 24.79 354.89 256.18 113.14 9 15 1 674.2 27.70 347.00  
 108.51 13 34 53 5665.49 24.81 266.08 256.18 113.12 15 9 19 5065.5 27.72 258.18  
 110.00 12 48 47 5806.82 20.30 274.70 253.84 118.11 14 25 34 5206.8 23.89 267.41  
 110.00 14 39 3 5468.86 29.47 252.79 258.16 108.15 16 10 12 4868.9 31.67 244.27

Differential Corrections

TDE -.3204 TRA -.1541 TC3 -.2932 BAU .5418  
 RDE 1.1465 RRA -.8001 RC3 2.6868 FAU .05404  
 FDE -1.5698 FRA 1.0484 FC3-3.1199 BSP 9728  
 BDE 1.1904 BRA .8148 BC3 2.7028 FSP -1056

Mid-Course Execution Accuracy

SGT 592.3 SGR 3036.3 SG3 331.1  
 RRT -.4946 RRF -.9972 RTF .5032  
 SGB 3093.5 R23 .0051 R13 -.9973  
 SG1 3050.8 SG2 512.3 TMA 95.67

Orbit Determination Accuracy

ST 481.1 SR 1750.0 SS 1201.6  
 CRT -.9142 CRS .9999 CST -.9184  
 LSA 2168.4 MSA 189.7 SSA 4.9  
 EL1 1805.1 EL2 189.0 ALF 104.27

LAUNCH DATE JAN 23 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 4 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.700 GAL -1.57 AZL 97.20 HCA 165.48 SMA 128.19 ECC .15112 INC 7.1986 V1 30.256  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.448 GAP -.74 AZP 83.03 TAL 188.86 TAP 354.34 RCA 108.82 APO 147.57 V2 34.802  
 RC 88.877 GL -49.76 GP 71.29 ZAL 101.82 ZAP 85.10 ETS 352.30 ZAE 108.94 ETE 90.95 ZAC 87.75 ETC 146.36 CLP -74.58

DISTANCE 366.475

Planetocentric Conic

C3 20.658 VHL 4.545 DLA -39.55 RAL 35.74 RAD 6567.8 VEL 11.918 PTH 2.12 VHP 6.763 DPA 67.16 RAP 325.65 ECC 1.3400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.14 8 17 58 1515.03 26.54 15.20 268.52 120.48 8 43 13 915.0 30.37 7.63  
 118.86 14 51 15 5573.23 26.55 259.67 268.53 120.47 16 24 8 4973.2 30.38 252.09  
 61.14 8 17 58 1515.03 26.54 15.20 268.52 120.48 8 43 13 915.0 30.37 7.63  
 118.86 14 51 15 5573.23 26.55 259.67 268.53 120.47 16 24 8 4973.2 30.38 252.09  
 61.14 8 17 58 1515.03 26.54 15.20 268.52 120.48 8 43 13 915.0 30.37 7.63  
 118.86 14 51 15 5573.23 26.55 259.67 268.53 120.47 16 24 8 4973.2 30.38 252.09

Differential Corrections

TDE -.5655 TRA -.0037 TC3 -.4084 BAU .5588  
 RDE 1.5777 RRA -1.0874 RC3 1.9818 FAU .03979  
 FDE -1.5578 FRA 1.0329 FC3-1.6677 BSP 10472  
 BDE 1.6760 BRA 1.0874 BC3 2.0234 FSP -831

Mid-Course Execution Accuracy

SGT 803.7 SGR 3218.9 SG3 259.3  
 RRT -.8023 RRF -.9978 RTF .8094  
 SGB 3317.7 R23 .0144 R13 -.9978  
 SG1 3284.3 SG2 470.2 TMA 101.57

Orbit Determination Accuracy

ST 712.9 SR 2059.8 SS 1185.3  
 CRT -.9652 CRS .9999 CST -.9676  
 LSA 2474.7 MSA 177.8 SSA 3.6  
 EL1 2172.5 EL2 176.9 ALF 108.60

LAUNCH DATE JAN 23 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 372.717

RL 147.25 LAL .00 LOL 122.82 VL 27.703 GAL -1.51 AZL 99.93 HCA 168.58 SMA 128.22 ECC .15076 INC 9.9321 V1 30.256
RP 108.90 LAP -1.96 LOP 291.57 VP 37.446 GAP -.37 AZP 80.26 TAL 188.58 TAP 357.16 RCA 108.89 APO 147.55 V2 34.797
RC 91.256 GL -56.92 GP 77.57 ZAL 99.14 ZAP 87.78 ETS 359.27 ZAE 102.55 ETE 97.25 ZAC 83.36 ETC 150.99 CLP -79.62

PLANETOCENTRIC CONIC

C3 32.498 VHL 5.701 DLA -45.17 RAL 41.87 RAD 6568.3 VEL 12.404 PTH 2.24 VHP 8.308 DPA 67.85 RAP 309.23 ECC 1.5348
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.20 8 9 9 1717.54 25.23 31.97 283.92 128.80 8 37 47 1117.5 30.07 25.19
126.80 15 48 58 5594.34 25.25 260.51 283.93 128.79 17 22 13 4994.3 30.08 253.73
53.20 8 9 9 1717.54 25.23 31.97 283.92 128.80 8 37 47 1117.5 30.07 25.19
126.80 15 48 58 5594.34 25.25 260.51 283.93 128.79 17 22 13 4994.3 30.08 253.73
53.20 8 9 9 1717.54 25.23 31.97 283.92 128.80 8 37 47 1117.5 30.07 25.19
126.80 15 48 58 5594.34 25.25 260.51 283.93 128.79 17 22 13 4994.3 30.08 253.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.9916 TRA .2950 TC3 -.3868 BAU .5442 SGT 1168.2 SGR 3323.6 SG3 189.5 ST 1004.7 SR 2235.2 SS 1098.8
RDE 2.1290 RRA-1.5080 RC3 1.1914 FAU .02583 RRT -.9365 RRF -.9983 RTF .9407 CRT -.9861 CRS 1.0000 CST -.9876
FDE-1.4620 FRA 1.0014 FC3 -.6881 BSP 11114 SGB 3522.9 R23 .0204 R13 -.9983 LSA 2681.3 MSA 153.6 SSA 2.6
BOE 2.3486 BRA 1.5366 BC3 1.2526 FSP -608 SG1 3501.4 SG2 388.9 THA 108.46 EL1 2445.9 EL2 152.5 ALF 114.00

LAUNCH DATE JAN 23 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 378.889

RL 147.25 LAL .00 LOL 122.82 VL 27.703 GAL -1.44 AZL 104.65 HCA 171.64 SMA 128.22 ECC .15053 INC14.6504 V1 30.256
RP 108.92 LAP -2.11 LOP 294.73 VP 37.442 GAP -.02 AZP 75.50 TAL 188.18 TAP 359.82 RCA 108.92 APO 147.52 V2 34.793
RC 93.644 GL -63.00 GP 84.90 ZAL 96.36 ZAP 89.57 ETS 12.32 ZAE 95.03 ETE 109.15 ZAC 78.67 ETC 161.97 CLP -85.21

PLANETOCENTRIC CONIC

C3 61.801 VHL 7.861 DLA -49.42 RAL 48.62 RAD 6569.2 VEL 13.534 PTH 2.47 VHP 11.093 DPA 67.02 RAP 290.15 ECC 2.0171
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.64 8 16 31 1927.07 19.46 46.32 300.99 136.38 8 48 38 1327.1 25.14 40.65
132.36 16 35 27 5706.13 19.47 265.47 301.01 136.38 18 10 33 5106.1 25.16 259.80
47.64 8 16 31 1927.07 19.46 46.32 300.99 136.38 8 48 38 1327.1 25.14 40.65
132.36 16 35 27 5706.13 19.47 265.47 301.01 136.38 18 10 33 5106.1 25.16 259.80
47.64 8 16 31 1927.07 19.46 46.32 300.99 136.38 8 48 38 1327.1 25.14 40.65
132.36 16 35 27 5706.13 19.47 265.47 301.01 136.38 18 10 33 5106.1 25.16 259.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.8732 TRA 1.1386 TC3 -.2650 BAU .4480 SGT 1914.5 SGR 3164.3 SG3 129.3 ST 1417.9 SR 2150.7 SS 981.1
RDE 2.7940 RRA-2.0571 RC3 .4730 FAU .01295 RRT -.9955 RRF -.9990 RTF .9949 CRT -.9985 CRS 1.0000 CST -.9984
FDE-1.3289 FRA .9854 FC3 -.1815 BSP 11609 SGB 3698.4 R23 .0207 R13 -.9988 LSA 2755.8 MSA 66.2 SSA 1.9
BOE 3.3639 BRA 2.3512 BC3 .5422 FSP -414 SG1 3695.1 SG2 155.2 THA 121.12 EL1 2575.2 EL2 64.0 ALF 123.38

LAUNCH DATE JAN 23 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 384.911

RL 147.25 LAL .00 LOL 122.82 VL 27.700 GAL -1.33 AZL 114.58 HCA 174.58 SMA 128.20 ECC .15040 INC24.5824 V1 30.256
RP 108.93 LAP -2.25 LOP 297.89 VP 37.437 GAP .28 AZP 65.51 TAL 187.56 TAP 2.14 RCA 108.92 APO 147.48 V2 34.789
RC 96.038 GL -65.96 GP 85.14 ZAL 93.72 ZAP 90.43 ETS 130.60 ZAE 84.90 ETE 226.02 ZAC 72.84 ETC 279.12 CLP 95.12

PLANETOCENTRIC CONIC

C3 159.116 VHL 12.614 DLA -50.61 RAL 53.99 RAD 6570.7 VEL 16.746 PTH 2.90 VHP 17.074 DPA 63.10 RAP 268.28 ECC 3.6186
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.12 8 33 5 2139.49 9.50 56.36 316.08 139.96 9 8 45 1539.5 15.58 51.45
133.88 17 1 45 607.49 9.52 295.27 316.10 139.95 17 11 53 7.5 15.59 290.35
46.12 8 33 5 2139.49 9.50 56.36 316.08 139.96 9 8 45 1539.5 15.58 51.45
133.88 17 1 45 607.49 9.52 295.27 316.10 139.95 17 11 53 7.5 15.59 290.35
46.12 8 33 5 2139.49 9.50 56.36 316.08 139.96 9 8 45 1539.5 15.58 51.45
133.88 17 1 45 607.49 9.52 295.27 316.10 139.95 17 11 53 7.5 15.59 290.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.9228 TRA 2.7825 TC3 -.0263 BAU .0622 SGT 2036.4 SGR 3216.6 SG3 85.0 ST 729.9 SR 2451.8 SS 941.8
RDE-5.2018 RRA 3.0488 RC3 -.0127 FAU-.00054 RRT .8151 RRF .9842 RTF .9039 CRT -.7720 CRS -.9943 CST -.8356
FDE-1.3066 FRA 1.0960 FC3 .0029 BSP 11945 SGB 3807.0 R23 -.0152 R13 .9996 LSA 2687.7 MSA 455.3 SSA 1.0
BOE 5.2830 BRA 4.1277 BC3 .0292 FSP -273 SG1 3663.4 SG2 1035.9 THA 60.07 EL1 2517.9 EL2 451.7 ALF 76.62

LAUNCH DATE JAN 23 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 390.374

RL 147.25 LAL .00 LOL 122.82 VL 27.695 GAL -1.11 AZL 143.52 HCA 177.03 SMA 128.16 ECC .15019 INC53.5231 V1 30.256
RP 108.94 LAP -2.39 LOP 301.05 VP 37.431 GAP .43 AZP 36.51 TAL 186.29 TAP 3.32 RCA 108.91 APO 147.41 V2 34.787
RC 98.436 GL -58.19 GP 65.99 ZAL 91.55 ZAP 90.41 ETS 172.52 ZAE 65.62 ETE 266.81 ZAC 62.60 ETC 324.52 CLP 91.00

PLANETOCENTRIC CONIC

C3 686.514 VHL 26.201 DLA -42.47 RAL 51.71 RAD 6572.7 VEL 28.422 PTH 3.42 VHP 33.930 DPA 49.54 RAP 243.30 ECC12.2983
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.92 9 3 6 2207.20 .64 53.47 320.99 132.46 9 39 53 1607.2 6.03 47.96
123.08 16 13 32 874.05 .66 311.15 321.01 132.46 16 28 6 274.1 6.05 305.64
56.92 9 3 6 2207.20 .64 53.47 320.99 132.46 9 39 53 1607.2 6.03 47.96
123.08 16 13 32 874.05 .66 311.15 321.01 132.46 16 28 6 274.1 6.05 305.64
56.92 9 3 6 2207.20 .64 53.47 320.99 132.46 9 39 53 1607.2 6.03 47.96
123.08 16 13 32 874.05 .66 311.15 321.01 132.46 16 28 6 274.1 6.05 305.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.3881 TRA -.4040 TC3 -.0656 BAU 2.0636 SGT 1026.2 SGR 3473.6 SG3 61.5 ST 960.3 SR 2093.5 SS 1261.3
RDE-8.8525 RRA 8.9559 RC3 .2151 FAU-.03485 RRT -.7189 RRF 1.0000 RTF -.7203 CRT -.9384 CRS-1.0000 CST .9390
FDE-1.8206 FRA 1.8327 FC3 .0440 BSP 11240 SGB 3622.0 R23 -.0413 R13 .9991 LSA 2607.5 MSA 310.7 SSA .3
BOE 9.8804 BRA 8.9650 BC3 .2248 FSP -197 SG1 3554.3 SG2 697.1 THA 102.48 EL1 2283.1 EL2 304.4 ALF 113.74

LAUNCH DATE JAN 23 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 14 1969

MELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.687 GAL -1.59 AZL 28.99 HCA 182.88 SMA 128.11 ECC .15198 INC61.0056 VI 30.256  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.423 GAP 1.55 AZP 150.98 TAL 188.96 TAP 11.84 RCA 108.64 APO 147.57 V2 34.785  
 RC 100.837 GL 55.13 GP -64.31 ZAL 91.83 ZAP 91.59 ETS 177.63 ZAE 64.87 ETE 85.34 ZAC 86.40 ETC 38.63 CLP 93.68

PLANETOCENTRIC CONIC  
 C3 870.483 VHL 29.504 DLA 59.90 RAL 352.29 RAD 6572.9 VEL 31.492 PTH 3.47 VHP 35.471 DPA -65.75 RAP 163.26 ECC15.3260  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.73 15 52 58 5031.69 -.04 240.21 262.28 30.10 17 16 50 4431.7 -6.96 236.59  
 145.27 1 29 36 3364.71 -.03 103.58 262.26 30.10 2 25 41 2764.7 -6.94 99.97  
 34.73 15 52 58 5031.69 -.04 240.21 262.28 30.10 17 16 50 4431.7 -6.96 236.59  
 145.27 1 29 36 3364.71 -.03 103.58 262.26 30.10 2 25 41 2764.7 -6.94 99.97  
 34.73 15 52 58 5031.69 -.04 240.21 262.28 30.10 17 16 50 4431.7 -6.96 236.59  
 145.27 1 29 36 3364.71 -.03 103.58 262.26 30.10 2 25 41 2764.7 -6.94 99.97

DIFFERENTIAL CORRECTIONS  
 TOE -4.0454 TRA 2.3603 TC3 -.1053 BAU 2.8977 SGT 1355.9 SGR 3449.4 SG3 61.5 ORBIT DETERMINATION ACCURACY  
 ROE -15.6942 RRA 2.3621 RC3 -.2256 FAU -.04608 RRT .8675 RRF -.9998 RTF -.8753 ST 832.3 SR 3060.4 SS 1928.6  
 FOE 3.2252 FRA -.5204 FC3 .0458 BSP 11152 SGB 3706.3 R23 -.0457 R13 -.9989 CRT .9699 CRS 1.0000 CST .9714  
 BOE16.2072 BRA 3.3393 BC3 .2490 FSP -195 SG1 3651.1 SG2 637.1 THA 70.55 LSA 3706.6 MSA 196.7 SSA .8  
 EL1 3165.4 EL2 196.1 ALF 75.17

LAUNCH DATE JAN 23 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 16 1969

MELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.677 GAL -1.34 AZL 59.89 HCA 185.26 SMA 128.03 ECC .15187 INC30.1087 VI 30.256  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.414 GAP 1.67 AZP 120.00 TAL 187.50 TAP 12.76 RCA 108.59 APO 147.48 V2 34.784  
 RC 103.240 GL 65.34 GP -83.37 ZAL 93.08 ZAP 93.51 ETS 186.20 ZAE 85.01 ETE 95.05 ZAC 97.84 ETC 48.76 CLP 122.03

PLANETOCENTRIC CONIC  
 C3 233.261 VHL 15.273 DLA 64.83 RAL 332.38 RAD 6571.4 VEL 18.830 PTH 3.07 VHP 17.598 DPA -71.17 RAP 107.61 ECC 4.8389  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.89 14 19 25 4935.61 -7.45 240.65 238.87 25.40 15 41 41 4335.6 -14.65 237.53  
 151.11 0 24 17 3220.32 -7.44 97.15 238.85 25.40 1 17 58 2620.3 -14.65 94.03  
 28.89 14 19 25 4935.61 -7.45 240.65 238.87 25.40 15 41 41 4335.6 -14.65 237.53  
 151.11 0 24 17 3220.32 -7.44 97.15 238.85 25.40 1 17 58 2620.3 -14.65 94.03  
 28.89 14 19 25 4935.61 -7.45 240.65 238.87 25.40 15 41 41 4335.6 -14.65 237.53  
 151.11 0 24 17 3220.32 -7.44 97.15 238.85 25.40 1 17 58 2620.3 -14.65 94.03

DIFFERENTIAL CORRECTIONS  
 TOE -.8117 TRA 1.2881 TC3 -.0330 BAU .3027 SGT 1180.6 SGR 3962.2 SG3 86.4 ORBIT DETERMINATION ACCURACY  
 ROE -8.1197 RRA 2.8551 RC3 -.0913 FAU -.00354 RRT .4195 RRF -.9995 RTF -.4182 ST 457.1 SR 3138.4 SS 1206.0  
 FOE 2.0520 FRA -.7225 FC3 .0131 BSP 13573 SGB 4134.4 R23 -.0370 R13 -.9989 CRT -.4670 CRS 1.0000 CST -.4668  
 BOE 8.1602 BRA 3.1322 BC3 .0971 FSP -296 SG1 3995.4 SG2 1062.8 THA 82.33 LSA 3369.0 MSA 403.4 SSA 1.3  
 EL1 3145.8 EL2 403.2 ALF 93.96

LAUNCH DATE JAN 23 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 18 1969

MELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.664 GAL -1.18 AZL 70.31 HCA 188.19 SMA 127.95 ECC .15224 INC19.6886 VI 30.256  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.404 GAP 1.94 AZP 109.50 TAL 186.60 TAP 14.80 RCA 108.47 APO 147.43 V2 34.783  
 RC 105.643 GL 65.33 GP -82.24 ZAL 94.16 ZAP 96.40 ETS 303.58 ZAE 95.21 ETE 212.80 ZAC 102.70 ETC 166.70 CLP-145.58

PLANETOCENTRIC CONIC  
 C3 105.143 VHL 10.254 DLA 63.91 RAL 331.01 RAD 6570.0 VEL 15.049 PTH 2.71 VHP 11.354 DPA -67.40 RAP 79.03 ECC 2.7304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.97 14 16 30 4791.19 -15.93 236.11 232.99 27.22 15 36 21 4191.2 -23.00 232.56  
 150.03 0 16 19 3083.95 -15.92 93.84 232.97 27.22 1 7 43 2483.9 -22.99 90.30  
 29.97 14 16 30 4791.19 -15.93 236.11 232.99 27.22 15 36 21 4191.2 -23.00 232.56  
 150.03 0 16 19 3083.95 -15.92 93.84 232.97 27.22 1 7 43 2483.9 -22.99 90.30  
 29.97 14 16 30 4791.19 -15.93 236.11 232.99 27.22 15 36 21 4191.2 -23.00 232.56  
 150.03 0 16 19 3083.95 -15.92 93.84 232.97 27.22 1 7 43 2483.9 -22.99 90.30

DIFFERENTIAL CORRECTIONS  
 TOE 5.3289 TRA -2.2082 TC3 -.1819 BAU .2682 SGT 4108.0 SGR 1052.0 SG3 130.3 ORBIT DETERMINATION ACCURACY  
 ROE 1.1701 RRA -.6420 RC3 -.0576 FAU .01203 RRT .9902 RRF .9816 RTF .9977 ST 3094.3 SR 698.1 SS 1153.6  
 FOE 2.0397 FRA -.7602 FC3 -.0990 BSP 12958 SGB 4240.6 R23 -.0528 R13 .9972 CRT .9966 CRS -.9940 CST -.9996  
 BOE 5.4559 BRA 2.2996 BC3 .1908 FSP -413 SG1 4238.2 SG2 142.7 THA 14.25 LSA 3374.7 MSA 65.2 SSA 1.9  
 EL1 3171.6 EL2 56.2 ALF 12.68

LAUNCH DATE JAN 23 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 20 1969

MELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.650 GAL -1.04 AZL 75.19 HCA 191.25 SMA 127.85 ECC .15283 INC14.8079 VI 30.256  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.394 GAP 2.24 AZP 104.54 TAL 185.80 TAP 17.05 RCA 108.31 APO 147.39 V2 34.783  
 RC 108.045 GL 63.05 GP -74.85 ZAL 94.90 ZAP 99.96 ETS 324.08 ZAE 102.46 ETE 232.94 ZAC 105.53 ETC 187.39 CLP-131.43

PLANETOCENTRIC CONIC  
 C3 62.829 VHL 7.926 DLA 62.28 RAL 334.65 RAD 6569.2 VEL 13.571 PTH 2.48 VHP 8.512 DPA -62.63 RAP 63.50 ECC 2.0340  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.90 14 35 37 4666.55 -22.62 230.86 232.01 30.26 15 53 23 4066.6 -29.46 226.66  
 148.10 0 26 15 2974.62 -22.61 90.84 232.00 30.26 1 15 49 2374.6 -29.45 86.63  
 31.90 14 35 37 4666.55 -22.62 230.86 232.01 30.26 15 53 23 4066.6 -29.46 226.66  
 148.10 0 26 15 2974.62 -22.61 90.84 232.00 30.26 1 15 49 2374.6 -29.45 86.63  
 31.90 14 35 37 4666.55 -22.62 230.86 232.01 30.26 15 53 23 4066.6 -29.46 226.66  
 148.10 0 26 15 2974.62 -22.61 90.84 232.00 30.26 1 15 49 2374.6 -29.45 86.63

DIFFERENTIAL CORRECTIONS  
 TOE 3.5651 TRA -1.5539 TC3 -.4630 BAU .4792 SGT 3606.9 SGR 2364.1 SG3 188.2 ORBIT DETERMINATION ACCURACY  
 ROE 2.5091 RRA -.9147 RC3 -.3334 FAU .02606 RRT .9961 RRF .9990 RTF .9926 ST 2676.9 SR 1863.2 SS 1267.8  
 FOE 2.3267 FRA -.8115 FC3 -.3591 BSP 13519 SGB 4312.6 R23 .0906 R13 .9953 CRT .9991 CRS -1.0000 CST -.9986  
 BOE 4.3595 BRA 1.8031 BC3 .5705 FSP -620 SG1 4309.0 SG2 175.0 THA 33.20 LSA 3498.3 MSA 80.2 SSA 1.4  
 EL1 3260.9 EL2 65.9 ALF 34.83

LAUNCH DATE JAN 23 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.633 GAL -.90 AZL 78.00 HCA 194.35 SMA 127.74 ECC .15356 INC12.0031 V1 30.256  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.383 GAP 2.54 AZP 101.64 TAL 185.00 TAP 19.34 RCA 108.12 APO 147.35 V2 34.784  
 RC 110.446 GL 60.23 GP -67.99 ZAL 95.29 ZAP 103.97 ETS 325.67 ZAE 108.31 ETE 233.40 ZAC 107.43 ETC 188.80 CLP-130.11

PLANETOCENTRIC CONIC  
 C3 43.819 VHL 6.620 DLA 60.55 RAL 339.30 RAD 6568.7 VEL 12.852 PTH 2.34 VHP 6.971 DPA -57.71 RAP 53.45 ECC 1.7211  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.95 14 59 12 4568.46 -27.34 225.69 232.34 33.61 16 15 20 3968.5 -33.90 220.78  
 146.05 0 39 45 2894.30 -27.33 88.11 232.33 33.60 1 27 59 2294.3 -33.89 83.21  
 33.95 14 59 12 4568.46 -27.34 225.69 232.34 33.61 16 15 20 3968.5 -33.90 220.78  
 146.05 0 39 45 2894.30 -27.33 88.11 232.33 33.60 1 27 59 2294.3 -33.89 83.21  
 33.95 14 59 12 4568.46 -27.34 225.69 232.34 33.61 16 15 20 3968.5 -33.90 220.78  
 146.05 0 39 45 2894.30 -27.33 88.11 232.33 33.60 1 27 59 2294.3 -33.89 83.21

DIFFERENTIAL CORRECTIONS  
 TOE 3.0466 TRA-1.2915 TC3 -.8050 BAU .5750 SGT 3641.2 SGR 2402.1 SG3 251.8 ORBIT DETERMINATION ACCURACY  
 RDE 2.2305 RRA -.6934 RC3 -.5616 FAU .03968 RRT .9899 RRF .9988 RTF .9875 ST 2723.9 SR 1965.1 SS 1414.6  
 FDE 2.6665 FRA -.8215 FC3 -.7839 BSP 13702 SGB 4362.1 R23 .1076 R13 .9930 CRT .9978 CRS-1.0000 CST -.9977  
 BDE 3.7758 BRA 1.4659 BC3 .9815 FSP -.842 SG1 4352.9 SG2 284.2 THA 33.31 LSA 3642.6 MSA 119.8 SSA 2.2  
 EL1 3357.2 EL2 104.6 ALF 35.79

LAUNCH DATE JAN 23 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.615 GAL -.76 AZL 79.82 HCA 197.47 SMA 127.62 ECC .15442 INC10.1811 V1 30.256  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.371 GAP 2.85 AZP 99.72 TAL 184.16 TAP 21.63 RCA 107.91 APO 147.32 V2 34.786  
 RC 112.844 GL 57.38 GP -61.71 ZAL 95.34 ZAP 108.24 ETS 325.29 ZAE 113.16 ETE 231.16 ZAC 108.82 ETC 187.92 CLP-131.32

PLANETOCENTRIC CONIC  
 C3 33.583 VHL 5.795 DLA 58.88 RAL 343.96 RAD 6568.3 VEL 12.448 PTH 2.25 VHP 6.056 DPA -52.81 RAP 46.38 ECC 1.5527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.95 15 22 51 4491.86 -30.53 220.85 233.11 36.87 16 37 43 3891.9 -36.80 215.28  
 144.05 0 53 15 2836.57 -30.52 85.74 233.09 36.87 1 40 31 2236.6 -36.79 80.17  
 35.95 15 22 51 4491.86 -30.53 220.85 233.11 36.87 16 37 43 3891.9 -36.80 215.28  
 144.05 0 53 15 2836.57 -30.52 85.74 233.09 36.87 1 40 31 2236.6 -36.79 80.17  
 35.95 15 22 51 4491.86 -30.53 220.85 233.11 36.87 16 37 43 3891.9 -36.80 215.28  
 144.05 0 53 15 2836.57 -30.52 85.74 233.09 36.87 1 40 31 2236.6 -36.79 80.17

DIFFERENTIAL CORRECTIONS  
 TOE 2.8247 TRA-1.1161 TC3-1.1932 BAU .6294 SGT 3777.6 SGR 2272.9 SG3 314.0 ORBIT DETERMINATION ACCURACY  
 RDE 1.8997 RRA -.4989 RC3 -.7360 FAU .05239 RRT .9856 RRF .9982 RTF .9837 ST 2865.6 SR 1900.1 SS 1547.3  
 FDE 2.9565 FRA -.7778 FC3-1.3506 BSP 13830 SGB 4408.7 R23 .1253 R13 .9903 CRT .9973 CRS-1.0000 CST -.9973  
 BDE 3.4041 BRA 1.2225 BC3 1.4019 FSP -1059 SG1 4396.3 SG2 330.1 THA 30.86 LSA 3767.9 MSA 137.9 SSA 2.9  
 EL1 3436.3 EL2 117.4 ALF 33.52

LAUNCH DATE JAN 23 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.596 GAL -.61 AZL 81.10 HCA 200.60 SMA 127.49 ECC .15540 INC 8.8980 V1 30.256  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.359 GAP 3.16 AZP 98.34 TAL 183.29 TAP 23.90 RCA 107.67 APO 147.30 V2 34.789  
 RC 115.239 GL 54.64 GP -55.95 ZAL 95.10 ZAP 112.57 ETS 324.66 ZAE 117.18 ETE 228.03 ZAC 109.87 ETC 186.55 CLP-133.29

PLANETOCENTRIC CONIC  
 C3 27.392 VHL 5.234 DLA 57.33 RAL 348.39 RAD 6568.1 VEL 12.197 PTH 2.19 VHP 5.486 DPA -48.04 RAP 41.23 ECC 1.4508  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.82 15 45 27 4431.19 -32.67 216.45 234.13 39.88 16 59 18 3831.2 -38.64 210.31  
 142.18 1 6 1 2795.05 -32.65 83.73 234.11 39.88 1 52 36 2195.0 -38.63 77.59  
 37.82 15 45 27 4431.19 -32.67 216.45 234.13 39.88 16 59 18 3831.2 -38.64 210.31  
 142.18 1 6 1 2795.05 -32.65 83.73 234.11 39.88 1 52 36 2195.0 -38.63 77.59  
 37.82 15 45 27 4431.19 -32.67 216.45 234.13 39.88 16 59 18 3831.2 -38.64 210.31  
 142.18 1 6 1 2795.05 -32.65 83.73 234.11 39.88 1 52 36 2195.0 -38.63 77.59

DIFFERENTIAL CORRECTIONS  
 TOE 2.7016 TRA -.9759 TC3-1.6100 BAU .6672 SGT 3937.4 SGR 2098.3 SG3 369.1 ORBIT DETERMINATION ACCURACY  
 RDE 1.6094 RRA -.3493 RC3 -.8529 FAU .06344 RRT .9825 RRF .9973 RTF .9807 ST 3016.9 SR 1774.8 SS 1648.0  
 FDE 3.1525 FRA -.6861 FC3-2.0049 BSP 14000 SGB 4461.6 R23 .1404 R13 .9873 CRT .9970 CRS-1.0000 CST -.9970  
 BDE 3.1446 BRA 1.0365 BC3 1.8220 FSP -1257 SG1 4448.2 SG2 346.3 THA 27.82 LSA 3866.0 MSA 147.1 SSA 3.7  
 EL1 3498.2 EL2 119.4 ALF 30.43

LAUNCH DATE JAN 23 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC  
 RL 147.25 LAL .00 LOL 122.82 VL 27.575 GAL -.44 AZL 82.06 HCA 203.75 SMA 127.35 ECC .15652 INC 7.9414 V1 30.256  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.347 GAP 3.46 AZP 97.28 TAL 182.38 TAP 26.13 RCA 107.41 APO 147.28 V2 34.792  
 RC 117.630 GL 52.05 GP -50.73 ZAL 94.59 ZAP 116.84 ETS 324.14 ZAE 120.43 ETE 224.54 ZAC 110.74 ETC 185.13 CLP-135.51

PLANETOCENTRIC CONIC  
 C3 23.339 VHL 4.831 DLA 55.92 RAL 352.59 RAD 6567.9 VEL 12.030 PTH 2.15 VHP 5.128 DPA -43.50 RAP 37.42 ECC 1.3841  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.54 16 6 53 4382.26 -34.07 212.53 235.37 42.58 17 19 55 3782.3 -39.77 205.91  
 140.46 1 18 8 2765.01 -34.06 82.06 235.36 42.57 2 4 13 2165.0 -39.76 75.45  
 39.54 16 6 53 4382.26 -34.07 212.53 235.37 42.58 17 19 55 3782.3 -39.77 205.91  
 140.46 1 18 8 2765.01 -34.06 82.06 235.36 42.57 2 4 13 2165.0 -39.76 75.45  
 39.54 16 6 53 4382.26 -34.07 212.53 235.37 42.58 17 19 55 3782.3 -39.77 205.91  
 140.46 1 18 8 2765.01 -34.06 82.06 235.36 42.57 2 4 13 2165.0 -39.76 75.45

DIFFERENTIAL CORRECTIONS  
 TOE 2.6243 TRA -.8483 TC3-2.0405 BAU .6979 SGT 4098.4 SGR 1912.5 SG3 413.6 ORBIT DETERMINATION ACCURACY  
 RDE 1.3678 RRA -.2328 RC3 -.9161 FAU .07224 RRT .9796 RRF .9959 RTF .9780 ST 3159.2 SR 1629.1 SS 1715.3  
 FDE 3.2503 FRA -.5484 FC3-2.6796 BSP 14139 SGB 4522.6 R23 .1533 R13 .9841 CRT .9968 CRS-1.0000 CST -.9967  
 BDE 2.9593 BRA .8796 BC3 2.2367 FSP -1410 SG1 4509.1 SG2 349.2 THA 24.73 LSA 3943.7 MSA 153.1 SSA 4.5  
 EL1 3552.6 EL2 116.5 ALF 27.24

LAUNCH DATE JAN 23 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 447.263

RL 147.25 LAL .00 LOL 122.82 VL 27.553 GAL -.27 AZL 82.80 MCA 206.89 SMA 127.20 ECC .15775 INC 7.1970 V1 30.256
RP 108.91 LAP -3.25 LOP 329.53 VP 37.334 GAP 3.76 AZP 96.43 TAL 181.43 TAP 28.33 RCA 107.13 APO 147.26 V2 34.736
RC 120.015 GL 49.62 GP -46.02 ZAL 93.83 ZAP 120.94 ETS 323.80 ZAE 123.00 ETE 220.94 ZAC 111.51 ETC 183.83 CLP-137.78

PLANETOCENTRIC CONIC

C3 20.532 VML 4.531 DLA 54.64 RAL 356.61 RAD 6567.8 VEL 11.913 PTH 2.12 VHP 4.908 CPA -39.25 RAP 34.63 ECC 1.3379
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.10 16 27 18 4342.07 -34.99 209.05 236.85 44.94 17 39 40 3742.1 -40.43 202.05
138.90 1 29 46 2743.24 -34.97 80.71 236.83 44.94 2 15 29 2143.2 -40.42 73.71
41.10 16 27 18 4342.07 -34.99 209.05 236.85 44.94 17 39 40 3742.1 -40.43 202.05
138.90 1 29 46 2743.24 -34.97 80.71 236.83 44.94 2 15 29 2143.2 -40.42 73.71
41.10 16 27 18 4342.07 -34.99 209.05 236.85 44.94 17 39 40 3742.1 -40.43 202.05
138.90 1 29 46 2743.24 -34.97 80.71 236.83 44.94 2 15 29 2143.2 -40.42 73.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.5698 TRA -.7311 TC3-2.4738 BAU .7258 SGT 4258.7 SGR 1733.2 SG3 446.6 ST 3285.3 SR 1481.5 SS 1750.9
RDE 1.1690 RRA -.1472 RC3 -.9335 FAU .07856 RRT .9773 RRF .9939 RTF .9759 CRT .9967 CRS-1.0000 CST -.9964
FDE 3.2585 FRA -.3908 FC3-3.3126 BSP 14389 SGB 4597.9 R23 .1606 R13 .9811 LSA 4003.7 MSA 156.1 SSA 5.3
BOE 2.8232 BRA .7458 BC3 2.6440 FSP -1530 SG1 4585.2 SG2 341.2 THA 21.82 EL1 3602.2 EL2 109.7 ALF 24.23

LAUNCH DATE JAN 23 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 453.314

RL 147.25 LAL .00 LOL 122.82 VL 27.530 GAL -.08 AZL 83.40 MCA 210.04 SMA 127.04 ECC .15911 INC 6.5980 V1 30.256
RP 108.89 LAP -3.30 LOP 332.70 VP 37.321 GAP 4.06 AZP 95.72 TAL 180.45 TAP 30.49 RCA 106.83 APO 147.25 V2 34.800
RC 122.394 GL 47.33 GP -41.82 ZAL 92.85 ZAP 124.82 ETS 323.64 ZAE 124.96 ETE 217.40 ZAC 112.26 ETC 182.69 CLP-140.01

PLANETOCENTRIC CONIC

C3 18.508 VML 4.302 DLA 53.48 RAL .50 RAD 6567.7 VEL 11.828 PTH 2.09 VHP 4.782 CPA -35.31 RAP 32.61 ECC 1.3046
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.53 16 46 54 4308.64 -35.56 205.99 238.56 47.01 17 58 43 3708.6 -40.77 198.68
137.47 1 41 11 2727.53 -35.55 79.63 238.55 47.00 2 26 38 2127.5 -40.76 72.33
42.53 16 46 54 4308.64 -35.56 205.99 238.56 47.01 17 58 43 3708.6 -40.77 198.68
137.47 1 41 11 2727.53 -35.55 79.63 238.55 47.00 2 26 38 2127.5 -40.76 72.33
42.53 16 46 54 4308.64 -35.56 205.99 238.56 47.01 17 58 43 3708.6 -40.77 198.68
137.47 1 41 11 2727.53 -35.55 79.63 238.55 47.00 2 26 38 2127.5 -40.76 72.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.5261 TRA -.6201 TC3-2.9052 BAU .7542 SGT 4415.0 SGR 1567.1 SG3 468.7 ST 3390.7 SR 1339.1 SS 1755.9
RDE 1.0044 RRA -.0868 RC3 -.9217 FAU .08289 RRT .9759 RRF .9912 RTF .9748 CRT .9968 CRS-1.0000 CST -.9963
FDE 3.1881 FRA -.2326 FC3-3.8774 BSP 14675 SGB 4684.9 R23 .1593 R13 .9789 LSA 4043.4 MSA 155.3 SSA 6.2
BOE 2.7184 BRA .6261 BC3 3.0479 FSP -1612 SG1 4673.8 SG2 323.1 THA 19.20 EL1 3644.2 EL2 99.2 ALF 21.51

LAUNCH DATE JAN 23 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 459.350

RL 147.25 LAL .00 LOL 122.82 VL 27.505 GAL .11 AZL 83.90 MCA 213.20 SMA 126.88 ECC .16060 INC 6.1031 V1 30.256
RP 108.88 LAP -3.34 LOP 335.87 VP 37.308 GAP 4.36 AZP 95.11 TAL 179.42 TAP 32.62 RCA 106.50 APO 147.25 V2 34.805
RC 124.766 GL 45.16 GP -38.09 ZAL 91.67 ZAP 128.43 ETS 323.61 ZAE 126.42 ETE 214.02 ZAC 113.04 ETC 181.73 CLP-142.16

PLANETOCENTRIC CONIC

C3 17.010 VML 4.124 DLA 52.44 RAL 4.30 RAD 6567.7 VEL 11.764 PTH 2.08 VHP 4.723 CPA -31.68 RAP 31.20 ECC 1.2799
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.83 17 5 57 4280.41 -35.89 203.28 240.51 48.81 18 17 18 3680.4 -40.90 195.73
136.17 1 52 28 2716.52 -35.87 78.80 240.49 48.80 2 37 44 2116.5 -40.89 71.25
43.83 17 5 57 4280.41 -35.89 203.28 240.51 48.81 18 17 18 3680.4 -40.90 195.73
136.17 1 52 28 2716.52 -35.87 78.80 240.49 48.80 2 37 44 2116.5 -40.89 71.25
43.83 17 5 57 4280.41 -35.89 203.28 240.51 48.81 18 17 18 3680.4 -40.90 195.73
136.17 1 52 28 2716.52 -35.87 78.80 240.49 48.80 2 37 44 2116.5 -40.89 71.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.4998 TRA -.4941 TC3-3.2977 BAU .7752 SGT 4552.7 SGR 1411.9 SG3 479.0 ST 3490.1 SR 1217.7 SS 1750.7
RDE .8763 RRA -.0308 RC3 -.8629 FAU .08365 RRT .9712 RRF .9970 RTF .9719 CRT .9968 CRS -.9999 CST -.9958
FDE 3.0872 FRA -.0323 FC3-4.2573 BSP 14810 SGB 4766.6 R23 .1611 R13 .9754 LSA 4086.9 MSA 160.2 SSA 7.2
BOE 2.6489 BRA .4951 BC3 3.4087 FSP -1621 SG1 4755.7 SG2 322.2 THA 16.84 EL1 3695.3 EL2 91.8 ALF 19.19

LAUNCH DATE JAN 23 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 463.371

RL 147.25 LAL .00 LOL 122.82 VL 27.480 GAL .32 AZL 84.31 MCA 216.35 SMA 126.71 ECC .16222 INC 5.6850 V1 30.256
RP 108.86 LAP -3.37 LOP 339.04 VP 37.295 GAP 4.66 AZP 94.58 TAL 178.36 TAP 34.71 RCA 106.15 APO 147.26 V2 34.811
RC 127.128 GL 43.08 GP -34.78 ZAL 90.31 ZAP 131.79 ETS 323.67 ZAE 127.47 ETE 210.89 ZAC 113.89 ETC 180.92 CLP-144.23

PLANETOCENTRIC CONIC

C3 15.883 VML 3.985 DLA 51.48 RAL 8.06 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 4.714 CPA -28.35 RAP 30.29 ECC 1.2614
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.03 17 24 36 4256.44 -36.03 200.88 242.69 50.37 18 35 32 3656.4 -40.87 193.15
134.97 2 3 47 2709.15 -36.02 78.17 242.67 50.36 2 48 56 2109.1 -40.86 70.44
45.03 17 24 36 4256.44 -36.03 200.88 242.69 50.37 18 35 32 3656.4 -40.87 193.15
134.97 2 3 47 2709.15 -36.02 78.17 242.67 50.36 2 48 56 2109.1 -40.86 70.44
45.03 17 24 36 4256.44 -36.03 200.88 242.69 50.37 18 35 32 3656.4 -40.87 193.15
134.97 2 3 47 2709.15 -36.02 78.17 242.67 50.36 2 48 56 2109.1 -40.86 70.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4746 TRA -.3724 TC3-3.6837 BAU .8005 SGT 4692.2 SGR 1278.9 SG3 482.7 ST 3568.0 SR 1107.7 SS 1724.0
RDE .7704 RRA .0066 RC3 -.8022 FAU .08365 RRT .9672 RRF .9816 RTF .9703 CRT .9971 CRS -.9998 CST -.9954
FDE 2.9427 FRA .1438 FC3-4.5594 BSP 15280 SGB 4863.4 R23 .1534 R13 .9730 LSA 4111.4 MSA 161.2 SSA 8.1
BOE 2.5917 BRA .3725 BC3 3.7701 FSP -1659 SG1 4853.3 SG2 313.9 THA 14.83 EL1 3735.1 EL2 81.2 ALF 17.21

LAUNCH DATE JAN 23 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

RL 147.25 LAL .00 LOL 122.82 VL 27.454 GAL .54 AZL 84.67 MCA 219.51 SMA 126.54 ECC .16398 INC 5.3251 VI 30.256
RP 108.84 LAP -3.39 LOP 342.21 VP 37.282 GAP 4.96 AZP 94.11 TAL 177.26 TAP 36.78 RCA 105.79 APO 147.29 V2 34.818
RC 129.481 GL 41.08 GP -31.87 ZAL 88.77 ZAP 134.89 ETS 323.78 ZAE 128.19 ETE 208.03 ZAC 114.81 ETC 180.25 CLP-146.20

DISTANCE 471.378

PLANETOCENTRIC CONIC

C3 15.030 VHL 3.877 DLA 50.59 RAL 11.79 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 4.741 OPA -25.30 RAP 29.79 ECC 1.2474
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.16 17 43 1 4235.81 -36.04 198.75 245.08 51.74 18 53 37 3635.8 -40.72 190.88
133.84 2 15 9 2704.88 -36.03 77.73 245.07 51.73 3 0 14 2104.9 -40.71 69.86
46.16 17 43 1 4235.81 -36.04 198.75 245.08 51.74 18 53 37 3635.8 -40.72 190.88
133.84 2 15 9 2704.88 -36.03 77.73 245.07 51.73 3 0 14 2104.9 -40.71 69.86
46.16 17 43 1 4235.81 -36.04 198.75 245.08 51.74 18 53 37 3635.8 -40.72 190.88
133.84 2 15 9 2704.88 -36.03 77.73 245.07 51.73 3 0 14 2104.9 -40.71 69.86

DIFFERENTIAL CORRECTIONS

TOE 2.4492 TRA -2466 TC3-4.0454 BAU .8262
RDE .6836 RRA .0344 RC3 -.7348 FAU .08250
FOE 2.7719 FRA .3096 FC3-4.7521 BSP 15567
BOE 2.5428 BRA .2490 BC3 4.1116 FSP -1639

MID-COURSE EXECUTION ACCURACY

SGT 4823.9 SGR 1162.6 SG3 480.1
RRT .9625 RRF .9745 RTF .9689
SG8 4962.0 R23 .1406 R13 .9710
SG1 4952.5 SG2 307.3 THA 13.11

ORBIT DETERMINATION ACCURACY

ST 3624.9 SR 1010.7 SS 1681.0
CRT .9974 CRS -.9995 CST -.9950
LSA 4118.4 MSA 161.5 SSA 9.1
EL1 3762.5 EL2 69.9 ALF 15.55

LAUNCH DATE JAN 23 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

RL 147.25 LAL .00 LOL 122.82 VL 27.427 GAL .77 AZL 84.99 MCA 222.67 SMA 126.36 ECC .16588 INC 5.0102 VI 30.256
RP 108.82 LAP -3.39 LOP 345.38 VP 37.269 GAP 5.26 AZP 93.69 TAL 176.14 TAP 38.81 RCA 105.40 APO 147.32 V2 34.825
RC 131.823 GL 39.15 GP -29.30 ZAL 87.08 ZAP 137.74 ETS 323.91 ZAE 128.66 ETE 205.46 ZAC 115.84 ETC 179.69 CLP-148.07

DISTANCE 477.369

PLANETOCENTRIC CONIC

C3 14.391 VHL 3.793 DLA 49.74 RAL 15.52 RAD 6567.6 VEL 11.652 PTH 2.05 VHP 4.797 OPA -22.51 RAP 29.62 ECC 1.2368
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.23 18 1 19 4218.02 -35.93 196.83 247.68 52.95 19 11 37 3618.0 -40.47 188.85
132.77 2 26 35 2703.31 -35.92 77.47 247.67 52.94 3 11 38 2103.3 -40.46 69.50
47.23 18 1 19 4218.02 -35.93 196.83 247.68 52.95 19 11 37 3618.0 -40.47 188.85
132.77 2 26 35 2703.31 -35.92 77.47 247.67 52.94 3 11 38 2103.3 -40.46 69.50
47.23 18 1 19 4218.02 -35.93 196.83 247.68 52.95 19 11 37 3618.0 -40.47 188.85
132.77 2 26 35 2703.31 -35.92 77.47 247.67 52.94 3 11 38 2103.3 -40.46 69.50

DIFFERENTIAL CORRECTIONS

TOE 2.4208 TRA -1196 TC3-4.3795 BAU .8522
RDE .6126 RRA .0537 RC3 -.6651 FAU .08053
FOE 2.5848 FRA .4552 FC3-4.8447 BSP 16000
BOE 2.4971 BRA .1311 BC3 4.4297 FSP -1625

MID-COURSE EXECUTION ACCURACY

SGT 4948.4 SGR 1061.3 SG3 472.3
RRT .9567 RRF .9653 RTF .9682
SG8 5061.0 R23 .1221 R13 .9697
SG1 5051.9 SG2 302.6 THA 11.64

ORBIT DETERMINATION ACCURACY

ST 3658.6 SR 926.1 SS 1624.1
CRT .9979 CRS -.9991 CST -.9945
LSA 4105.5 MSA 160.5 SSA 10.0
EL1 3773.5 EL2 57.9 ALF 14.18

LAUNCH DATE JAN 23 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

RL 147.25 LAL .00 LOL 122.82 VL 27.400 GAL 1.01 AZL 85.27 MCA 225.84 SMA 126.18 ECC .16794 INC 4.7308 VI 30.256
RP 108.79 LAP -3.39 LOP 348.56 VP 37.256 GAP 5.56 AZP 93.30 TAL 174.98 TAP 40.82 RCA 104.99 APO 147.37 V2 34.833
RC 134.153 GL 37.27 GP -27.04 ZAL 85.24 ZAP 140.38 ETS 324.04 ZAE 128.95 ETE 203.17 ZAC 116.95 ETC 179.23 CLP-149.85

DISTANCE 483.344

PLANETOCENTRIC CONIC

C3 13.923 VHL 3.731 DLA 48.93 RAL 19.25 RAD 6567.5 VEL 11.632 PTH 2.04 VHP 4.876 OPA -19.93 RAP 29.74 ECC 1.2291
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.27 18 19 38 4202.54 -35.73 195.09 250.46 54.02 19 29 40 3602.5 -40.14 187.03
131.73 2 38 4 2704.22 -35.71 77.37 250.45 54.01 3 23 8 2104.2 -40.13 69.32
48.27 18 19 38 4202.54 -35.73 195.09 250.46 54.02 19 29 40 3602.5 -40.14 187.03
131.73 2 38 4 2704.22 -35.71 77.37 250.45 54.01 3 23 8 2104.2 -40.13 69.32
48.27 18 19 38 4202.54 -35.73 195.09 250.46 54.02 19 29 40 3602.5 -40.14 187.03
131.73 2 38 4 2704.22 -35.71 77.37 250.45 54.01 3 23 8 2104.2 -40.13 69.32

DIFFERENTIAL CORRECTIONS

TOE 2.3971 TRA .0193 TC3-4.6636 BAU .8750
RDE .5572 RRA .0700 RC3 -.5906 FAU .07749
FOE 2.4041 FRA .5978 FC3-4.8182 BSP 16311
BOE 2.4611 BRA .0726 BC3 4.7008 FSP -1581

MID-COURSE EXECUTION ACCURACY

SGT 5065.9 SGR 976.3 SG3 461.3
RRT .9484 RRF .9538 RTF .9673
SG8 5159.1 R23 .1042 R13 .9685
SG1 5150.1 SG2 304.4 THA 10.40

ORBIT DETERMINATION ACCURACY

ST 3682.4 SR 857.2 SS 1565.9
CRT .9985 CRS -.9984 CST -.9940
LSA 4089.1 MSA 160.4 SSA 10.9
EL1 3780.6 EL2 46.0 ALF 13.09

LAUNCH DATE JAN 23 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

RL 147.25 LAL .00 LOL 122.82 VL 27.371 GAL 1.27 AZL 85.52 MCA 229.00 SMA 125.99 ECC .17015 INC 4.4797 VI 30.256
RP 108.77 LAP -3.38 LOP 351.73 VP 37.243 GAP 5.87 AZP 92.94 TAL 173.80 TAP 42.80 RCA 104.55 APO 147.43 V2 34.841
RC 136.471 GL 35.42 GP -25.03 ZAL 83.28 ZAP 142.81 ETS 324.14 ZAE 129.09 ETE 201.14 ZAC 118.17 ETC 178.83 CLP-151.55

DISTANCE 489.303

PLANETOCENTRIC CONIC

C3 13.601 VHL 3.688 DLA 48.14 RAL 22.99 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 4.974 OPA -17.56 RAP 30.10 ECC 1.2238
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.29 18 38 0 4188.99 -35.43 193.49 253.41 54.98 19 47 49 3589.0 -39.72 185.38
130.71 2 49 32 2707.52 -35.41 77.44 253.40 54.97 3 34 39 2107.5 -39.71 69.33
49.29 18 38 0 4188.99 -35.43 193.49 253.41 54.98 19 47 49 3589.0 -39.72 185.38
130.71 2 49 32 2707.52 -35.41 77.44 253.40 54.97 3 34 39 2107.5 -39.71 69.33
49.29 18 38 0 4188.99 -35.43 193.49 253.41 54.98 19 47 49 3589.0 -39.72 185.38
130.71 2 49 32 2707.52 -35.41 77.44 253.40 54.97 3 34 39 2107.5 -39.71 69.33

DIFFERENTIAL CORRECTIONS

TOE 2.3683 TRA .1636 TC3-4.9098 BAU .8977
RDE .5125 RRA .0824 RC3 -.5200 FAU .07409
FOE 2.2215 FRA .7259 FC3-4.7159 BSP 16642
BOE 2.4231 BRA .1832 BC3 4.9373 FSP -1530

MID-COURSE EXECUTION ACCURACY

SGT 5176.7 SGR 904.4 SG3 447.8
RRT .9381 RRF .9400 RTF .9667
SG8 5255.1 R23 .0863 R13 .9676
SG1 5246.0 SG2 309.2 THA 9.34

ORBIT DETERMINATION ACCURACY

ST 3682.8 SR 798.4 SS 1499.7
CRT .9990 CRS -.9972 CST -.9934
LSA 4052.6 MSA 160.4 SSA 11.9
EL1 3768.2 EL2 34.2 ALF 12.22

LAUNCH DATE JAN 23 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 16 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.343 GAL 1.54 AZL 85.75 MCA 232.17 SMA 125.80 ECC .17253 INC 4.2516 V1 30.256  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.230 GAP 6.18 A2P 92.61 TAL 172.59 TAP 44.76 RCA 104.10 APO 147.51 V2 34.850  
 RC 138.775 GL 33.60 GP -23.27 ZAL 81.20 ZAP 145.06 ETS 324.20 ZAE 129.14 ETE 199.36 ZAC 119.48 ETC 178.50 CLP-153.17

DISTANCE 495.245

Planetocentric Conic

C3 13.406 VHL 3.661 DLA 47.34 RAL 26.74 RAD 6567.5 VEL 11.610 PTH 2.03 VHP 5.087 DPA -15.36 RAP 30.67 ECC 1.2206  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.33 18 56 30 4177.01 -35.04 192.00 256.51 55.85 20 6 7 3577.0 -39.23 183.86  
 129.67 3 0 53 2713.23 -35.03 77.66 256.50 55.84 3 46 7 2113.2 -39.22 69.53  
 50.33 18 56 30 4177.01 -35.04 192.00 256.51 55.85 20 6 7 3577.0 -39.23 183.86  
 129.67 3 0 53 2713.23 -35.03 77.66 256.50 55.84 3 46 7 2113.2 -39.22 69.53  
 50.33 18 56 30 4177.01 -35.04 192.00 256.51 55.85 20 6 7 3577.0 -39.23 183.86  
 129.67 3 0 53 2713.23 -35.03 77.66 256.50 55.84 3 46 7 2113.2 -39.22 69.53

Differential Corrections

TDE 2.3348 TRA .3140 TC3-5.1136 BAU .9201  
 RDE .4767 RRA .0918 RC3 -.4550 FAU .07052  
 FDE 2.0417 FRA .8368 FC3-4.5539 BSP 17000  
 BOE 2.3830 BRA .3271 BC3 5.1338 FSP -1480

Mid-Course Execution Accuracy

SGT 5201.7 SGR 844.0 SG3 432.7  
 RRT .9257 RRF .9238 RTF .9665  
 SGB 5348.7 R23 .0685 R13 .9671  
 SG1 5339.4 SG2 315.8 TMA 8.44

Orbit Determination Accuracy

ST 3661.8 SR 748.7 SS 1428.0  
 CRT .9995 CRS -.9954 CST -.9928  
 LSA 3997.8 MSA 160.1 SSA 12.8  
 EL1 3737.5 EL2 22.6 ALF 11.55

LAUNCH DATE JAN 23 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 18 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.313 GAL 1.82 AZL 85.96 MCA 235.34 SMA 125.61 ECC .17509 INC 4.0422 V1 30.256  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.217 GAP 6.49 A2P 92.30 TAL 171.36 TAP 46.70 RCA 103.62 APO 147.61 V2 34.860  
 RC 141.067 GL 31.81 GP -21.70 ZAL 79.03 ZAP 147.15 ETS 324.19 ZAE 129.13 ETE 197.80 ZAC 120.87 ETC 178.21 CLP-154.71

DISTANCE 501.169

Planetocentric Conic

C3 13.328 VHL 3.651 DLA 46.54 RAL 30.47 RAD 6567.5 VEL 11.607 PTH 2.03 VHP 5.214 DPA -13.31 RAP 31.42 ECC 1.2194  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.39 19 15 10 4166.30 -34.56 190.59 259.73 56.65 20 24 36 3566.3 -38.67 182.44  
 128.61 3 12 2 2721.41 -34.55 78.06 259.72 56.64 3 57 23 2121.4 -38.66 69.92  
 51.39 19 15 10 4166.30 -34.56 190.59 259.73 56.65 20 24 36 3566.3 -38.67 182.44  
 128.61 3 12 2 2721.41 -34.55 78.06 259.72 56.64 3 57 23 2121.4 -38.66 69.92  
 51.39 19 15 10 4166.30 -34.56 190.59 259.73 56.65 20 24 36 3566.3 -38.67 182.44  
 128.61 3 12 2 2721.41 -34.55 78.06 259.72 56.64 3 57 23 2121.4 -38.66 69.92

Differential Corrections

TDE 2.3002 TRA .4763 TC3-5.2582 BAU .9396  
 RDE .4492 RRA .1004 RC3 -.3930 FAU .06656  
 FDE 1.8732 FRA .9458 FC3-4.3235 BSP 17253  
 BOE 2.3436 BRA .4868 BC3 5.2729 FSP -1416

Mid-Course Execution Accuracy

SGT 5380.8 SGR 794.9 SG3 416.7  
 RRT .9108 RRF .9058 RTF .9663  
 SGB 5439.2 R23 .0544 R13 .9667  
 SG1 5429.5 SG2 325.2 TMA 7.69

Orbit Determination Accuracy

ST 3626.5 SR 708.4 SS 1356.7  
 CRT .9998 CRS -.9927 CST -.9920  
 LSA 3932.9 MSA 160.7 SSA 13.7  
 EL1 3695.0 EL2 14.5 ALF 11.05

LAUNCH DATE JAN 23 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 20 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.284 GAL 2.12 AZL 86.15 MCA 238.51 SMA 125.42 ECC .17784 INC 3.8481 V1 30.256  
 RP 108.68 LAP -3.28 LOP 358.09 VP 37.205 GAP 6.81 A2P 92.01 TAL 170.11 TAP 48.62 RCA 103.12 APO 147.73 V2 34.870  
 RC 143.344 GL 30.04 GP -20.30 ZAL 76.77 ZAP 149.10 ETS 324.12 ZAE 129.06 ETE 196.43 ZAC 122.35 ETC 177.96 CLP-156.19

DISTANCE 507.074

Planetocentric Conic

C3 13.361 VHL 3.655 DLA 45.71 RAL 34.19 RAD 6567.5 VEL 11.608 PTH 2.03 VHP 5.353 DPA -11.39 RAP 32.32 ECC 1.2199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.49 19 34 1 4156.57 -34.00 189.23 263.06 57.38 20 43 18 3556.6 -38.02 181.09  
 127.51 3 22 51 2732.20 -33.99 78.63 263.05 57.37 4 8 24 2132.2 -38.01 70.49  
 52.49 19 34 1 4156.57 -34.00 189.23 263.06 57.38 20 43 18 3556.6 -38.02 181.09  
 127.51 3 22 51 2732.20 -33.99 78.63 263.05 57.37 4 8 24 2132.2 -38.01 70.49  
 52.49 19 34 1 4156.57 -34.00 189.23 263.06 57.38 20 43 18 3556.6 -38.02 181.09  
 127.51 3 22 51 2732.20 -33.99 78.63 263.05 57.37 4 8 24 2132.2 -38.01 70.49

Differential Corrections

TDE 2.2558 TRA .6429 TC3-5.3639 BAU .9600  
 RDE .4271 RRA .1071 RC3 -.3397 FAU .06281  
 FDE 1.7069 FRA 1.0368 FC3-4.0696 BSP 17582  
 BOE 2.2959 BRA .6518 BC3 5.3746 FSP -1360

Mid-Course Execution Accuracy

SGT 5473.7 SGR 753.5 SG3 399.9  
 RRT .8942 RRF .8858 RTF .9664  
 SGB 5525.3 R23 .0412 R13 .9667  
 SG1 5515.2 SG2 334.7 TMA 7.04

Orbit Determination Accuracy

ST 3564.2 SR 673.5 SS 1279.5  
 CRT .9997 CRS -.9889 CST -.9911  
 LSA 3842.9 MSA 161.5 SSA 14.5  
 EL1 3627.3 EL2 17.4 ALF 10.70

LAUNCH DATE JAN 23 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 22 1969

Heliocentric Conic

RL 147.25 LAL .00 LOL 122.82 VL 27.254 GAL 2.44 AZL 86.33 MCA 241.68 SMA 125.23 ECC .18079 INC 3.6666 V1 30.256  
 RP 108.65 LAP -3.23 LOP 358.09 VP 37.193 GAP 7.13 A2P 91.74 TAL 168.83 TAP 50.52 RCA 102.59 APO 147.87 V2 34.880  
 RC 145.608 GL 28.29 GP -19.06 ZAL 74.45 ZAP 150.91 ETS 323.96 ZAE 128.97 ETE 195.23 ZAC 123.91 ETC 177.72 CLP-157.61

DISTANCE 512.960

Planetocentric Conic

C3 13.501 VHL 3.674 DLA 44.85 RAL 37.88 RAD 6567.5 VEL 11.614 PTH 2.04 VHP 5.503 DPA -9.59 RAP 33.37 ECC 1.2222  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.64 19 53 2 4147.66 -33.35 187.91 266.47 58.07 21 2 10 3547.7 -37.30 179.79  
 126.36 3 33 14 2745.66 -33.34 79.38 266.46 58.06 4 19 0 2145.7 -37.28 71.26  
 53.64 19 53 2 4147.66 -33.35 187.91 266.47 58.07 21 2 10 3547.7 -37.30 179.79  
 126.36 3 33 14 2745.66 -33.34 79.38 266.46 58.06 4 19 0 2145.7 -37.28 71.26  
 53.64 19 53 2 4147.66 -33.35 187.91 266.47 58.07 21 2 10 3547.7 -37.30 179.79  
 126.36 3 33 14 2745.66 -33.34 79.38 266.46 58.06 4 19 0 2145.7 -37.28 71.26

Differential Corrections

TDE 2.2055 TRA .8191 TC3-5.4182 BAU .9794  
 RDE .4103 RRA .1134 RC3 -.2928 FAU .05910  
 FDE 1.5490 FRA 1.1192 FC3-3.7893 BSP 17908  
 BOE 2.2434 BRA .8270 BC3 5.4261 FSP -1306

Mid-Course Execution Accuracy

SGT 5561.3 SGR 719.6 SG3 383.0  
 RRT .8762 RRF .8648 RTF .9667  
 SGB 5607.7 R23 .0301 R13 .9669  
 SG1 5597.1 SG2 344.6 TMA 6.49

Orbit Determination Accuracy

ST 3483.4 SR 644.2 SS 1201.6  
 CRT .9989 CRS -.9835 CST -.9901  
 LSA 3737.1 MSA 163.2 SSA 15.2  
 EL1 3542.3 EL2 29.4 ALF 10.47

LAUNCH DATE JAN 23 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC DISTANCE 518.825  
 RL 147.25 LAL .00 LOL 122.82 VL 27.223 GAL 2.77 AZL 86.50 MCA 244.86 SMA 125.03 ECC .18396 INC 3.4956 VI 30.256  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.181 GAP 7.47 AZP 91.49 TAL 167.54 TAP 52.40 RCA 102.03 APO 148.03 V2 34.891  
 RC 147.857 GL 26.56 GP -17.95 ZAL 72.07 ZAP 152.61 ETS 323.71 ZAE 128.85 ETE 194.17 ZAC 125.53 ETC 177.50 CLP-158.97

PLANETOCENTRIC CONIC  
 C3 13.751 VHL 3.708 DLA 43.96 RAL 41.51 RAD 6567.5 VEL 11.625 PTH 2.04 VHP 5.664 DPA -7.90 RAP 34.53 ECC 1.2263  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.85 20 12 13 4139.35 -32.62 186.62 269.95 58.71 21 21 12 3539.3 -36.49 178.53  
 125.15 3 43 4 2761.95 -32.61 80.33 269.94 58.70 4 29 6 2162.0 -36.48 72.24  
 54.85 20 12 13 4139.35 -32.62 186.62 269.95 58.71 21 21 12 3539.3 -36.49 178.53  
 125.15 3 43 4 2761.95 -32.61 80.33 269.94 58.70 4 29 6 2162.0 -36.48 72.24  
 54.85 20 12 13 4139.35 -32.62 186.62 269.95 58.71 21 21 12 3539.3 -36.49 178.53  
 125.15 3 43 4 2761.95 -32.61 80.33 269.94 58.70 4 29 6 2162.0 -36.48 72.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.1492 TRA 1.0053 TC3-5.4207 BAU .9976 SGT 5643.3 SGR 692.0 SG3 366.1 ST 3385.5 SR 619.7 SS 1124.7  
 RDE .3979 RRA .1197 RC3 -.2514 FAU .05539 RRT .8568 RRF .8431 RTF .9669 CRT .9974 CRS -.9763 CST -.9889  
 FDE 1.4006 FRA 1.1948 FC3-3.4875 BSP 18206 SGB 5685.6 R23 .0220 R13 .9671 LSA 3617.0 MSA 166.4 SSA 15.8  
 BOE 2.1857 BRA 1.0124 BC3 5.4265 FSP -1250 SGI 5674.5 SG2 354.8 THA 6.02 EL1 3441.4 EL2 44.3 ALF 10.35

LAUNCH DATE JAN 23 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC DISTANCE 524.667  
 RL 147.25 LAL .00 LOL 122.82 VL 27.193 GAL 3.12 AZL 86.67 MCA 248.04 SMA 124.84 ECC .18737 INC 3.3332 VI 30.256  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.169 GAP 7.81 AZP 91.25 TAL 166.24 TAP 54.28 RCA 101.45 APO 148.23 V2 34.902  
 RC 150.092 GL 24.85 GP -16.96 ZAL 69.66 ZAP 154.21 ETS 323.36 ZAE 128.73 ETE 193.25 ZAC 127.22 ETC 177.29 CLP-160.28

PLANETOCENTRIC CONIC  
 C3 14.111 VHL 3.757 DLA 43.04 RAL 45.08 RAD 6567.6 VEL 11.640 PTH 2.04 VHP 5.835 DPA -6.29 RAP 35.80 ECC 1.2322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.12 20 31 32 4131.46 -31.81 185.34 273.48 59.32 21 40 23 3531.5 -35.61 177.29  
 123.88 3 52 13 2781.22 -31.80 81.48 273.47 59.31 4 38 35 2181.2 -35.60 73.43  
 56.12 20 31 32 4131.46 -31.81 185.34 273.48 59.32 21 40 23 3531.5 -35.61 177.29  
 123.88 3 52 13 2781.22 -31.80 81.48 273.47 59.31 4 38 35 2181.2 -35.60 73.43  
 56.12 20 31 32 4131.46 -31.81 185.34 273.48 59.32 21 40 23 3531.5 -35.61 177.29  
 123.88 3 52 13 2781.22 -31.80 81.48 273.47 59.31 4 38 35 2181.2 -35.60 73.43

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.0867 TRA 1.2021 TC3-5.3721 BAU 1.0143 SGT 5719.4 SGR 669.3 SG3 349.4 ST 3272.7 SR 598.8 SS 1049.1  
 RDE .3891 RRA .1263 RC3 -.2157 FAU .05178 RRT .8370 RRF .8215 RTF .9673 CRT .9946 CRS -.9666 CST -.9875  
 FDE 1.2610 FRA 1.2637 FC3-3.1769 BSP 18482 SGB 5758.5 R23 .0157 R13 .9674 LSA 3484.3 MSA 171.2 SSA 16.3  
 BOE 2.1227 BRA 1.2087 BC3 5.3764 FSP -1196 SGI 5746.9 SG2 364.5 THA 5.62 EL1 3326.5 EL2 61.0 ALF 10.32

LAUNCH DATE JAN 23 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC DISTANCE 530.486  
 RL 147.25 LAL .00 LOL 122.82 VL 27.162 GAL 3.49 AZL 86.82 MCA 251.22 SMA 124.64 ECC .19102 INC 3.1777 VI 30.256  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.157 GAP 8.16 AZP 91.02 TAL 164.92 TAP 56.14 RCA 100.83 APO 148.45 V2 34.914  
 RC 152.312 GL 23.17 GP -16.07 ZAL 67.24 ZAP 155.72 ETS 322.89 ZAE 128.60 ETE 192.43 ZAC 128.97 ETC 177.07 CLP-161.55

PLANETOCENTRIC CONIC  
 C3 14.590 VHL 3.820 DLA 42.08 RAL 48.57 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 6.017 DPA -4.77 RAP 37.17 ECC 1.2401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.47 20 51 1 4123.70 -30.92 184.04 277.04 59.90 21 59 45 3523.7 -34.66 176.04  
 122.53 4 0 33 2803.72 -30.90 82.85 277.03 59.88 4 47 17 2203.7 -34.65 74.86  
 57.47 20 51 1 4123.70 -30.92 184.04 277.04 59.90 21 59 45 3523.7 -34.66 176.04  
 122.53 4 0 33 2803.72 -30.90 82.85 277.03 59.88 4 47 17 2203.7 -34.65 74.86  
 57.47 20 51 1 4123.70 -30.92 184.04 277.04 59.90 21 59 45 3523.7 -34.66 176.04  
 122.53 4 0 33 2803.72 -30.90 82.85 277.03 59.88 4 47 17 2203.7 -34.65 74.86

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.0206 TRA 1.4118 TC3-5.2700 BAU 1.0286 SGT 5791.0 SGR 651.3 SG3 333.1 ST 3151.8 SR 581.3 SS 978.1  
 RDE .3838 RRA .1337 RC3 -.1844 FAU .04818 RRT .8173 RRF .8008 RTF .9675 CRT .9904 CRS -.9541 CST -.9860  
 FDE 1.1327 FRA 1.3285 FC3-2.8588 BSP 18681 SGB 5827.6 R23 .0117 R13 .9676 LSA 3346.2 MSA 177.8 SSA 16.6  
 BOE 2.0567 BRA 1.4181 BC3 5.2732 FSP -1137 SGI 5815.6 SG2 373.7 THA 5.27 EL1 3204.0 EL2 79.2 ALF 10.36

LAUNCH DATE JAN 23 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC DISTANCE 536.279  
 RL 147.25 LAL .00 LOL 122.82 VL 27.131 GAL 3.87 AZL 86.97 MCA 254.40 SMA 124.44 ECC .19496 INC 3.0280 VI 30.256  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.146 GAP 8.52 AZP 90.81 TAL 163.60 TAP 58.00 RCA 100.18 APO 148.70 V2 34.926  
 RC 154.516 GL 21.52 GP -15.27 ZAL 64.81 ZAP 157.14 ETS 322.30 ZAE 128.47 ETE 191.72 ZAC 130.77 ETC 176.85 CLP-162.77

PLANETOCENTRIC CONIC  
 C3 15.194 VHL 3.898 DLA 41.09 RAL 51.96 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 6.210 DPA -3.32 RAP 38.63 ECC 1.2500  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.88 21 10 38 4115.99 -29.96 182.73 280.61 60.45 22 19 14 3516.0 -33.64 174.79  
 121.12 4 8 0 2829.55 -29.94 84.46 280.60 60.43 4 55 9 2229.5 -33.63 76.52  
 58.88 21 10 38 4115.99 -29.96 182.73 280.61 60.45 22 19 14 3516.0 -33.64 174.79  
 121.12 4 8 0 2829.55 -29.94 84.46 280.60 60.43 4 55 9 2229.5 -33.63 76.52  
 58.88 21 10 38 4115.99 -29.96 182.73 280.61 60.45 22 19 14 3516.0 -33.64 174.79  
 121.12 4 8 0 2829.55 -29.94 84.46 280.60 60.43 4 55 9 2229.5 -33.63 76.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.9456 TRA 1.6298 TC3-5.1328 BAU 1.0431 SGT 5856.1 SGR 635.8 SG3 317.2 ST 3017.0 SR 565.5 SS 908.5  
 RDE .3806 RRA .1413 RC3 -.1589 FAU .04483 RRT .7980 RRF .7808 RTF .9679 CRT .9842 CRS -.9380 CST -.9842  
 FDE 1.0105 FRA 1.3857 FC3-2.5543 BSP 18943 SGB 5890.5 R23 .0084 R13 .9679 LSA 3195.7 MSA 186.5 SSA 16.8  
 BOE 1.9825 BRA 1.6399 BC3 5.1353 FSP -1087 SGI 5878.1 SG2 381.7 THA 4.97 EL1 3068.0 EL2 98.6 ALF 10.46



LAUNCH DATE JAN 23 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 1 1969

MELIOCENTRIC CONIC

DISTANCE 542.043

RL 147.25 LAL .00 LOL 122.82 VL 27.100 GAL 4.28 AZL 87.12 HCA 257.59 SMA 124.25 ECC .19918 INC 2.8827 V1 30.256  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.135 GAP 8.90 AZP 90.62 TAL 162.26 TAP 59.85 RCA 99.50 APO 148.99 V2 34.938  
 RC 156.704 GL 19.91 GP -14.55 ZAL 62.39 ZAP 158.48 ETS 321.56 ZAE 128.34 ETE 191.08 ZAC 132.61 ETC 176.61 CLP-163.96

PLANETOCENTRIC CONIC

C3 15.934 VHL 3.992 DLA 40.07 RAL 55.24 RAD 6567.6 VEL 11.718 PTH 2.06 VMP 6.413 DPA -1.94 RAP 40.16 ECC 1.2622  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.37 21 30 22 4108.13 -28.93 181.40 284.19 60.96 22 38 50 3508.1 -32.55 173.51  
 119.63 4 14 26 2858.88 -28.91 86.30 284.18 60.95 5 2 5 2258.9 -32.54 78.42  
 60.37 21 30 22 4108.13 -28.93 181.40 284.19 60.96 22 38 50 3508.1 -32.55 173.51  
 119.63 4 14 26 2858.88 -28.91 86.30 284.18 60.95 5 2 5 2258.9 -32.54 78.42  
 60.37 21 30 22 4108.13 -28.93 181.40 284.19 60.96 22 38 50 3508.1 -32.55 173.51  
 119.63 4 14 26 2858.88 -28.91 86.30 284.18 60.95 5 2 5 2258.9 -32.54 78.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8650 TRA 1.8599 TC3-4.9567 BAU 1.0563 SGT 5915.7 SGR 622.7 SG3 301.7 ST 2876.7 SR 551.3 SS 843.2  
 RDE .3796 RRA .1497 RC3 -.1375 FAU .04161 RRT .7798 RRF .7620 RTF .9682 CRT .9755 CRS -.9175 CST -.9823  
 FDE .8968 FRA 1.4386 FC3-2.2610 BSP 19185 SGB 5948.4 R23 .0061 R13 .9682 LSA 3041.6 MSA 197.4 SSA 16.7  
 BOE 1.9032 BRA 1.8659 BC3 4.9586 FSP -1039 SG1 5935.7 SG2 388.5 THA 4.71 EL1 2926.6 EL2 119.3 ALF 10.61

LAUNCH DATE JAN 23 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 3 1969

MELIOCENTRIC CONIC

DISTANCE 547.776

RL 147.25 LAL .00 LOL 122.82 VL 27.068 GAL 4.71 AZL 87.26 HCA 260.77 SMA 124.05 ECC .20373 INC 2.7408 V1 30.256  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.124 GAP 9.29 AZP 90.44 TAL 160.92 TAP 61.70 RCA 98.78 APO 149.32 V2 34.951  
 RC 158.875 GL 18.33 GP -13.89 ZAL 60.00 ZAP 159.75 ETS 320.67 ZAE 128.22 ETE 190.52 ZAC 134.50 ETC 176.36 CLP-165.12

PLANETOCENTRIC CONIC

C3 16.823 VHL 4.102 DLA 39.03 RAL 58.40 RAD 6567.7 VEL 11.756 PTH 2.08 VMP 6.629 DPA -.63 RAP 41.77 ECC 1.2769  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.94 21 50 16 4099.84 -27.84 180.02 287.76 61.46 22 58 35 3499.8 -31.41 172.20  
 118.06 4 19 45 2891.98 -27.83 88.41 287.76 61.45 5 7 57 2292.0 -31.40 80.59  
 61.94 21 50 16 4099.84 -27.84 180.02 287.76 61.46 22 58 35 3499.8 -31.41 172.20  
 118.06 4 19 45 2891.98 -27.83 88.41 287.76 61.45 5 7 57 2292.0 -31.40 80.59  
 61.94 21 50 16 4099.84 -27.84 180.02 287.76 61.46 22 58 35 3499.8 -31.41 172.20  
 118.06 4 19 45 2891.98 -27.83 88.41 287.76 61.45 5 7 57 2292.0 -31.40 80.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7799 TRA 2.1028 TC3-4.7464 BAU 1.0678 SGT 5969.9 SGR 611.5 SG3 287.0 ST 2735.4 SR 538.4 SS 783.5  
 RDE .3805 RRA .1591 RC3 -.1195 FAU .03852 RRT .7628 RRF .7450 RTF .9684 CRT .9636 CRS -.8922 CST -.9801  
 FDE .7921 FRA 1.4884 FC3-1.9823 BSP 19403 SGB 6001.2 R23 .0046 R13 .9685 LSA 2888.2 MSA 210.5 SSA 16.6  
 BOE 1.8201 BRA 2.1088 BC3 4.7479 FSP -991 SG1 5988.2 SG2 394.2 THA 4.49 EL1 2784.3 EL2 141.3 ALF 10.77

LAUNCH DATE JAN 23 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 5 1969

MELIOCENTRIC CONIC

DISTANCE 553.474

RL 147.25 LAL .00 LOL 122.82 VL 27.037 GAL 5.17 AZL 87.40 HCA 263.96 SMA 123.85 ECC .20863 INC 2.6014 V1 30.256  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.113 GAP 9.70 AZP 90.27 TAL 159.58 TAP 63.54 RCA 98.01 APO 149.69 V2 34.964  
 RC 161.027 GL 16.80 GP -13.30 ZAL 57.64 ZAP 160.96 ETS 319.61 ZAE 128.10 ETE 190.03 ZAC 136.42 ETC 176.08 CLP-166.25

PLANETOCENTRIC CONIC

C3 17.878 VHL 4.228 DLA 37.97 RAL 61.43 RAD 6567.7 VEL 11.801 PTH 2.09 VMP 6.857 DPA .63 RAP 43.44 ECC 1.2942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.57 22 10 21 4090.88 -26.70 178.59 291.33 61.93 23 18 32 3490.9 -30.23 170.83  
 116.43 4 23 51 2929.08 -26.69 90.79 291.32 61.92 5 12 40 2329.1 -30.22 83.04  
 63.57 22 10 21 4090.88 -26.70 178.59 291.33 61.93 23 18 32 3490.9 -30.23 170.83  
 116.43 4 23 51 2929.08 -26.69 90.79 291.32 61.92 5 12 40 2329.1 -30.22 83.04  
 63.57 22 10 21 4090.88 -26.70 178.59 291.33 61.93 23 18 32 3490.9 -30.23 170.83  
 116.43 4 23 51 2929.08 -26.69 90.79 291.32 61.92 5 12 40 2329.1 -30.22 83.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6934 TRA 2.3623 TC3-4.5016 BAU 1.0762 SGT 6020.5 SGR 602.1 SG3 273.0 ST 2600.5 SR 526.7 SS 731.5  
 RDE .3832 RRA .1697 RC3 -.1037 FAU .03546 RRT .7477 RRF .7302 RTF .9686 CRT .9482 CRS -.8620 CST -.9781  
 FDE .6978 FRA 1.5375 FC3-1.7169 BSP 19530 SGB 6050.5 R23 .0043 R13 .9686 LSA 2743.0 MSA 225.4 SSA 16.3  
 BOE 1.7362 BRA 2.3684 BC3 4.5028 FSP -941 SG1 6037.4 SG2 398.7 THA 4.29 EL1 2648.2 EL2 164.3 ALF 10.91

LAUNCH DATE JAN 23 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 7 1969

MELIOCENTRIC CONIC

DISTANCE 559.133

RL 147.25 LAL .00 LOL 122.82 VL 27.006 GAL 5.65 AZL 87.54 HCA 267.15 SMA 123.66 ECC .21392 INC 2.4635 V1 30.256  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.102 GAP 10.12 AZP 90.12 TAL 158.23 TAP 65.39 RCA 97.21 APO 150.11 V2 34.977  
 RC 163.161 GL 15.32 GP -12.76 ZAL 55.34 ZAP 162.11 ETS 318.35 ZAE 127.98 ETE 189.58 ZAC 138.38 ETC 175.77 CLP-167.36

PLANETOCENTRIC CONIC

C3 19.117 VHL 4.372 DLA 36.91 RAL 64.33 RAD 6567.8 VEL 11.853 PTH 2.10 VMP 7.098 DPA 1.83 RAP 45.16 ECC 1.3146  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.27 22 30 39 4081.01 -25.52 177.09 294.88 62.38 23 38 40 3481.0 -29.00 169.40  
 114.73 4 26 40 2970.39 -25.50 93.46 294.87 62.37 5 16 10 2370.4 -28.99 85.77  
 65.27 22 30 39 4081.01 -25.52 177.09 294.88 62.38 23 38 40 3481.0 -29.00 169.40  
 114.73 4 26 40 2970.39 -25.50 93.46 294.87 62.37 5 16 10 2370.4 -28.99 85.77  
 65.27 22 30 39 4081.01 -25.52 177.09 294.88 62.38 23 38 40 3481.0 -29.00 169.40  
 114.73 4 26 40 2970.39 -25.50 93.46 294.87 62.37 5 16 10 2370.4 -28.99 85.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5987 TRA 2.6324 TC3-4.2441 BAU 1.0849 SGT 6064.0 SGR 592.8 SG3 259.6 ST 2465.0 SR 514.8 SS 683.4  
 RDE .3869 RRA .1810 RC3 -.0913 FAU .03266 RRT .7338 RRF .7165 RTF .9688 CRT .9281 CRS -.8254 CST -.9759  
 FDE .6082 FRA 1.5818 FC3-1.4789 BSP 19738 SGB 6092.9 R23 .0036 R13 .9689 LSA 2598.0 MSA 242.2 SSA 15.9  
 BOE 1.6449 BRA 2.6386 BC3 4.2450 FSP -899 SG1 6079.6 SG2 401.7 THA 4.12 EL1 2511.2 EL2 188.2 ALF 11.03

LAUNCH DATE JAN 23 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC DISTANCE 564.748  
 RL 147.25 LAL .00 LOL 122.82 VL 26.974 GAL 6.16 AZL 87.67 HCA 270.35 SMA 123.46 ECC .21962 INC 2.3262 V1 30.256  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.092 GAP 10.57 AZP 89.99 TAL 156.89 TAP 67.24 RCA 96.35 APO 150.58 V2 34.990  
 RC 165.276 GL 13.89 GP -12.27 ZAL 53.10 ZAP 163.20 ETS 316.86 ZAE 127.86 ETE 189.19 ZAC 140.36 ETC 175.41 CLP-168.45

PLANETOCENTRIC CONIC  
 C3 20.565 VHL 4.535 DLA 35.84 RAL 67.09 RAD 6567.8 VEL 11.914 PTH 2.12 VHP 7.355 DPA 2.98 RAP 46.95 ECC 1.3384  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.06 22 51 15 4069.96 -24.30 175.50 298.41 62.81 23 59 5 3470.0 -27.74 167.88  
 112.94 4 28 6 3016.14 -24.29 96.44 298.40 62.80 5 18 22 2416.1 -27.73 88.82  
 67.06 22 51 15 4069.96 -24.30 175.50 298.41 62.81 23 59 5 3470.0 -27.74 167.88  
 112.94 4 28 6 3016.14 -24.29 96.44 298.40 62.80 5 18 22 2416.1 -27.73 88.82  
 67.06 22 51 15 4069.96 -24.30 175.50 298.41 62.81 23 59 5 3470.0 -27.74 167.88  
 112.94 4 28 6 3016.14 -24.29 96.44 298.40 62.80 5 18 22 2416.1 -27.73 88.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.5011 TRA 2.9178 TC3-3.9693 BAU 1.0915 SGT 6102.1 SGR 584.1 SG3 246.8 ST 2338.8 SR 503.2 SS 641.9  
 RDE .3918 RRA .1934 RC3 -.0806 FAU .02997 RRT .7217 RRF .7046 RTF .9691 CRT .9027 CRS -.7829 CST -.9741  
 FDE .5264 FRA 1.6245 FC3-1.2616 BSP 19918 SGB 6130.0 R23 .0032 R13 .9691 LSA 2463.2 MSA 260.1 SSA 15.5  
 BOE 1.5514 BRA 2.9242 BC3 3.9701 FSP -.858 SG1 6116.7 SG2 403.4 THA 3.97 EL1 2382.8 EL2 212.5 ALF 11.08

LAUNCH DATE JAN 23 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC DISTANCE 570.314  
 RL 147.25 LAL .00 LOL 122.82 VL 26.943 GAL 6.71 AZL 87.81 HCA 273.55 SMA 123.27 ECC .22579 INC 2.1888 V1 30.256  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.082 GAP 11.05 AZP 89.86 TAL 155.56 TAP 69.10 RCA 95.44 APO 151.10 V2 35.003  
 RC 167.370 GL 12.51 GP -11.83 ZAL 50.92 ZAP 164.24 ETS 315.11 ZAE 127.75 ETE 188.84 ZAC 142.37 ETC 175.01 CLP-169.51

PLANETOCENTRIC CONIC  
 C3 22.249 VHL 4.717 DLA 34.77 RAL 69.71 RAD 6567.9 VEL 11.985 PTH 2.14 VHP 7.628 DPA 4.08 RAP 48.78 ECC 1.3662  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.93 23 12 17 4057.09 -23.05 173.79 301.92 63.22 24 19 54 3457.1 -26.45 166.23  
 111.07 4 27 58 3066.91 -23.04 99.77 301.91 63.21 5 19 5 2466.9 -26.44 92.21  
 68.93 23 12 17 4057.09 -23.05 173.79 301.92 63.22 24 19 54 3457.1 -26.45 166.23  
 111.07 4 27 58 3066.91 -23.04 99.77 301.91 63.21 5 19 5 2466.9 -26.44 92.21  
 68.93 23 12 17 4057.09 -23.05 173.79 301.92 63.22 24 19 54 3457.1 -26.45 166.23  
 111.07 4 27 58 3066.91 -23.04 99.77 301.91 63.21 5 19 5 2466.9 -26.44 92.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.4001 TRA 3.2197 TC3-3.6842 BAU 1.0961 SGT 6135.1 SGR 575.6 SG3 234.8 ST 2223.3 SR 491.6 SS 606.9  
 RDE .3976 RRA .2068 RC3 -.0715 FAU .02740 RRT .7112 RRF .6944 RTF .9693 CRT .8716 CRS -.7349 CST -.9727  
 FDE .4514 FRA 1.6662 FC3-1.0662 BSP 20085 SGB 6162.0 R23 .0029 R13 .9694 LSA 2339.9 MSA 278.6 SSA 15.1  
 BOE 1.4555 BRA 3.2263 BC3 3.6849 FSP -.819 SG1 6148.8 SG2 403.7 THA 3.83 EL1 2264.7 EL2 236.6 ALF 11.03

LAUNCH DATE JAN 23 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC DISTANCE 575.823  
 RL 147.25 LAL .00 LOL 122.82 VL 26.912 GAL 7.29 AZL 87.95 HCA 276.74 SMA 123.08 ECC .23247 INC 2.0503 V1 30.256  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.072 GAP 11.55 AZP 89.76 TAL 154.23 TAP 70.97 RCA 94.47 APO 151.69 V2 35.016  
 RC 169.445 GL 11.19 GP -11.42 ZAL 48.83 ZAP 165.23 ETS 313.08 ZAE 127.63 ETE 188.52 ZAC 144.39 ETC 174.55 CLP-170.57

PLANETOCENTRIC CONIC  
 C3 24.203 VHL 4.920 DLA 33.71 RAL 72.19 RAD 6568.0 VEL 12.066 PTH 2.16 VHP 7.919 DPA 5.13 RAP 50.65 ECC 1.3983  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.89 23 33 58 4041.79 -21.79 171.91 305.41 63.61 24 41 19 3441.8 -25.15 164.41  
 109.11 4 26 6 3123.27 -21.77 103.49 305.40 63.60 5 18 10 2523.3 -25.14 95.99  
 70.89 23 33 58 4041.79 -21.79 171.91 305.41 63.61 24 41 19 3441.8 -25.15 164.41  
 109.11 4 26 6 3123.27 -21.77 103.49 305.40 63.60 5 18 10 2523.3 -25.14 95.99  
 110.00 5 14 28 2975.41 -25.84 94.04 307.46 66.80 6 4 4 2375.4 -28.75 86.06  
 110.00 3 48 42 3237.65 -17.83 110.16 303.17 60.34 4 42 40 2637.7 -21.64 103.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.3003 TRA 3.5432 TC3-3.3870 BAU 1.0961 SGT 6165.2 SGR 567.5 SG3 223.5 ST 2125.6 SR 480.3 SS 579.6  
 RDE .4045 RRA .2216 RC3 -.0628 FAU .02484 RRT .7027 RRF .6865 RTF .9696 CRT .8348 CRS -.6840 CST -.9723  
 FDE .3852 FRA 1.7095 FC3 -.8884 BSP 20141 SGB 6191.2 R23 .0032 R13 .9696 LSA 2235.4 MSA 296.4 SSA 14.6  
 BOE 1.3618 BRA 3.5502 BC3 3.3876 FSP -.777 SG1 6178.1 SG2 402.9 THA 3.72 EL1 2163.7 EL2 259.7 ALF 10.84

LAUNCH DATE JAN 23 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC DISTANCE 581.268  
 RL 147.25 LAL .00 LOL 122.82 VL 26.881 GAL 7.90 AZL 88.09 HCA 279.95 SMA 122.89 ECC .23972 INC 1.9099 V1 30.256  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.062 GAP 12.08 AZP 89.67 TAL 152.91 TAP 72.86 RCA 93.43 APO 152.34 V2 35.030  
 RC 171.498 GL 9.93 GP -11.05 ZAL 46.81 ZAP 166.16 ETS 310.70 ZAE 127.51 ETE 188.24 ZAC 146.42 ETC 174.03 CLP-171.61

PLANETOCENTRIC CONIC  
 C3 26.467 VHL 5.145 DLA 32.67 RAL 74.54 RAD 6568.1 VEL 12.159 PTH 2.18 VHP 8.231 DPA 6.13 RAP 52.56 ECC 1.4356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.98 0 0 26 4023.22 -20.51 169.80 308.87 63.99 1 7 29 3423.2 -23.83 162.36  
 107.02 4 22 17 3185.96 -20.50 107.65 308.87 63.98 5 15 22 2586.0 -23.82 100.21  
 72.98 0 0 26 4023.22 -20.51 169.80 308.87 63.99 1 7 29 3423.2 -23.83 162.36  
 107.02 4 22 17 3185.96 -20.50 107.65 308.87 63.98 5 15 22 2586.0 -23.82 100.21  
 110.00 5 57 38 2892.20 -27.95 88.49 312.38 69.47 6 45 50 2292.2 -30.48 80.21  
 110.00 3 24 15 3364.97 -13.40 117.36 304.78 58.25 4 20 20 2765.0 -17.50 110.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1932 TRA 3.8810 TC3-3.0971 BAU 1.0961 SGT 6187.5 SGR 558.5 SG3 212.8 ST 2036.6 SR 468.1 SS 556.3  
 RDE .4117 RRA .2371 RC3 -.0557 FAU .02251 RRT .6952 RRF .6793 RTF .9700 CRT .7914 CRS -.6281 CST -.9724  
 FDE .3223 FRA 1.7501 FC3 -.7362 BSP 20293 SGB 6212.7 R23 .0029 R13 .9700 LSA 2139.6 MSA 313.4 SSA 14.2  
 BOE 1.2622 BRA 3.8882 BC3 3.0976 FSP -.743 SG1 6199.7 SG2 400.7 THA 3.61 EL1 2070.7 EL2 281.5 ALF 10.50

LAUNCH DATE JAN 23 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 586.638

RL 147.25 LAL .00 LOL 122.82 VL 26.850 GAL 8.56 AZL 88.23 HCA 283.15 SMA 122.70 ECC .24760 INC 1.7665 V1 30.256
RP 108.14 LAP -1.72 LOP 45.98 VP 37.052 GAP 12.64 AZP 89.60 TAL 151.62 TAP 74.77 RCA 92.32 APO 153.08 V2 35.043
RC 173.532 GL 8.73 GP -10.71 ZAL 44.88 ZAP 167.03 ETS 307.94 ZAE 127.39 ETE 187.98 ZAC 148.47 ETC 173.41 CLP-172.65

PLANETOCENTRIC CONIC

C3 29.090 VHL 5.394 DLA 31.65 RAL 76.75 RAD 6568.2 VEL 12.266 PTH 2.21 VHP 8.565 DPA 7.08 RAP 54.51 ECC 1.4788
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.24 0 24 21 3999.65 -19.23 167.35 312.31 64.36 1 31 0 3399.6 -22.52 159.96
104.76 4 15 59 3256.60 -19.21 112.38 312.31 64.35 5 10 15 2656.6 -22.50 104.99
75.24 0 24 21 3999.65 -19.23 167.35 312.31 64.36 1 31 0 3399.6 -22.52 159.96
104.76 4 15 59 3256.60 -19.21 112.38 312.31 64.35 5 10 15 2656.6 -22.50 104.99
110.00 6 28 47 2844.50 -29.05 85.21 316.71 71.13 7 16 12 2244.5 -31.34 76.76
110.00 3 10 43 3459.75 -9.95 122.54 306.95 57.13 4 8 22 2859.7 -14.21 116.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0838 TRA 4.2396 TC3-2.8096 BAU 1.0928 SGT 6205.0 SGR 549.0 SG3 202.6 ST 1962.9 SR 455.6 SS 538.4
RDE .4195 RRA .2535 RC3 -.0492 FAU .02027 RRT .6891 RRF .6734 RTF .9706 CRT .7423 CRS -.5705 CST -.9735
FDE .2650 FRA 1.7913 FC3 -.6034 BSP 20419 SGB 6229.2 R23 .0026 R13 .9706 LSA 2059.7 MSA 328.3 SSA 13.7
BOE 1.1622 BRA 4.2472 BC3 2.8100 FSP -709 SG1 6216.6 SG2 397.1 THA 3.50 EL1 1992.5 EL2 300.8 ALF 10.00

LAUNCH DATE JAN 23 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 591.922

RL 147.25 LAL .00 LOL 122.82 VL 26.819 GAL 9.26 AZL 88.38 HCA 286.36 SMA 122.51 ECC .25618 INC 1.6193 V1 30.256
RP 108.10 LAP -1.55 LOP 49.18 VP 37.042 GAP 13.25 AZP 89.54 TAL 150.34 TAP 76.70 RCA 91.13 APO 153.90 V2 35.056
RC 175.544 GL 7.58 GP -10.40 ZAL 43.05 ZAP 167.85 ETS 304.72 ZAE 127.26 ETE 187.74 ZAC 150.52 ETC 172.70 CLP-173.69

PLANETOCENTRIC CONIC

C3 32.131 VHL 5.668 DLA 30.65 RAL 78.82 RAD 6568.3 VEL 12.390 PTH 2.24 VHP 8.924 DPA 7.98 RAP 56.49 ECC 1.5288
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
77.75 0 50 24 3968.58 -17.94 164.36 315.73 64.72 1 56 32 3368.6 -21.20 157.02
102.25 4 6 29 3337.57 -17.93 117.83 315.72 64.71 5 2 6 2737.6 -21.18 110.49
77.75 0 50 24 3968.58 -17.94 164.36 315.73 64.72 1 56 32 3368.6 -21.20 157.02
102.25 4 6 29 3337.57 -17.93 117.83 315.72 64.71 5 2 6 2737.6 -21.18 110.49
110.00 6 54 41 2812.01 -29.74 82.93 320.79 72.32 7 41 33 2212.0 -31.87 74.37
110.00 3 1 22 3542.13 -6.87 126.93 309.35 56.43 4 0 24 2942.1 -11.24 120.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9725 TRA 4.6215 TC3-2.5275 BAU 1.0859 SGT 6217.9 SGR 539.0 SG3 193.1 ST 1904.6 SR 442.7 SS 525.5
RDE .4276 RRA .2708 RC3 -.0431 FAU .01812 RRT .6841 RRF .6688 RTF .9712 CRT .6886 CRS -.5129 CST -.9754
FDE .2129 FRA 1.8339 FC3 -.4882 BSP 20524 SGB 6241.2 R23 .0023 R13 .9713 LSA 1995.8 MSA 340.4 SSA 13.3
BOE 1.0624 BRA 4.6294 BC3 2.5279 FSP -677 SG1 6228.8 SG2 392.4 THA 3.41 EL1 1929.5 EL2 316.9 ALF 9.35

LAUNCH DATE JAN 23 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 597.104

RL 147.25 LAL .00 LOL 122.82 VL 26.789 GAL 10.02 AZL 88.53 HCA 289.57 SMA 122.33 ECC .26555 INC 1.4670 V1 30.256
RP 108.06 LAP -1.38 LOP 52.39 VP 37.033 GAP 13.90 AZP 89.51 TAL 149.10 TAP 78.66 RCA 89.84 APO 154.81 V2 35.069
RC 177.535 GL 6.49 GP -10.12 ZAL 41.31 ZAP 168.60 ETS 300.98 ZAE 127.12 ETE 187.53 ZAC 152.56 ETC 171.86 CLP-174.72

PLANETOCENTRIC CONIC

C3 35.661 VHL 5.972 DLA 29.68 RAL 80.77 RAD 6568.4 VEL 12.531 PTH 2.27 VHP 9.312 DPA 8.84 RAP 58.49 ECC 1.5869
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.72 1 20 26 3923.93 -16.66 160.40 319.11 65.08 2 25 49 3323.9 -19.88 153.11
99.28 3 51 57 3434.81 -16.65 124.45 319.11 65.07 4 49 12 2834.8 -19.87 117.16
100.00 4 27 32 3321.10 -19.44 117.32 320.42 66.83 5 22 53 -2721.1 -22.41 109.78
100.00 3 27 33 3512.87 -13.91 128.87 317.73 63.27 4 26 5 2912.9 -17.38 121.81
110.00 7 17 14 2789.11 -30.20 81.31 324.72 73.18 8 3 43 2189.1 -32.21 72.67
110.00 2 54 20 3617.63 -4.02 130.91 311.88 56.03 3 54 37 3017.6 -8.45 124.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8626 TRA 5.0320 TC3-2.2503 BAU 1.0730 SGT 6228.1 SGR 528.5 SG3 184.3 ST 1863.0 SR 429.6 SS 517.5
RDE .4364 RRA .2892 RC3 -.0370 FAU .01596 RRT .6806 RRF .6659 RTF .9720 CRT .6328 CRS -.4590 CST -.9781
FDE .1671 FRA 1.8799 FC3 -.3876 BSP 20514 SGB 6250.5 R23 .0024 R13 .9721 LSA 1949.7 MSA 348.9 SSA 12.9
BOE .9667 BRA 5.0403 BC3 2.2506 FSP -642 SG1 6238.5 SG2 386.6 THA 3.32 EL1 1883.3 EL2 329.0 ALF 8.56

LAUNCH DATE JAN 23 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 602.166

RL 147.25 LAL .00 LOL 122.82 VL 26.758 GAL 10.83 AZL 88.69 HCA 292.78 SMA 122.15 ECC .27581 INC 1.3084 V1 30.256
RP 108.02 LAP -1.21 LOP 55.60 VP 37.023 GAP 14.60 AZP 89.49 TAL 147.89 TAP 80.66 RCA 88.46 APO 155.83 V2 35.083
RC 179.506 GL 5.46 GP -9.86 ZAL 39.67 ZAP 169.28 ETS 296.66 ZAE 126.97 ETE 187.33 ZAC 154.60 ETC 170.87 CLP-175.77

PLANETOCENTRIC CONIC

C3 39.768 VHL 6.306 DLA 28.74 RAL 82.58 RAD 6568.5 VEL 12.694 PTH 2.31 VHP 9.733 DPA 9.65 RAP 60.51 ECC 1.6545
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
84.89 2 0 57 3844.45 -15.39 153.93 322.47 65.43 3 5 2 3244.4 -18.58 146.67
95.11 3 25 55 3569.38 -15.38 133.77 322.46 65.42 4 25 24 2969.4 -18.56 126.52
100.00 5 14 30 3220.23 -22.01 110.93 325.38 69.24 6 8 10 2620.2 -24.63 103.12
100.00 2 55 3 3668.83 -8.96 137.81 319.18 61.36 3 56 12 3068.8 -12.72 131.04
110.00 7 37 17 2773.20 -30.51 80.17 328.55 73.78 8 23 30 2173.2 -32.43 71.48
110.00 2 48 45 3688.63 -1.31 134.62 314.49 55.84 3 50 14 3088.6 -5.78 128.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7451 TRA 5.4652 TC3-1.9899 BAU 1.0581 SGT 6231.0 SGR 516.7 SG3 175.8 ST 1830.3 SR 415.6 SS 512.2
RDE .4451 RRA .3079 RC3 -.0316 FAU .01399 RRT .6774 RRF .6631 RTF .9731 CRT .5738 CRS -.4050 CST -.9809
FDE .1231 FRA 1.9259 FC3 -.3046 BSP 20617 SGB 6252.4 R23 .0020 R13 .9731 LSA 1913.0 MSA 354.0 SSA 12.4
BOE .8679 BRA 5.4738 BC3 1.9902 FSP -614 SG1 6240.9 SG2 379.5 THA 3.23 EL1 1846.3 EL2 337.4 ALF 7.68

LAUNCH DATE JAN 23 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC DISTANCE 607.087  
 RL 147.25 LAL .00 LOL 122.82 VL 26.729 GAL 11.71 AZL 88.86 HCA 295.99 SMA 121.97 ECC .28707 INC 1.1420 V1 30.256  
 RP 107.98 LAP -1.03 LOP 58.81 VP 37.014 GAP 15.36 AZP 89.50 TAL 146.72 TAP 82.70 RCA 86.95 APO 156.98 V2 35.095  
 RC 181.455 GL 4.48 GP -9.62 ZAL 38.12 ZAP 169.87 ETS 291.70 ZAE 126.80 ETE 187.15 ZAC 156.62 ETC 169.69 CLP-176.83

PLANETOCENTRIC CONIC  
 C3 44.561 VML 6.675 DLA 27.82 RAL 84.27 RAD 6568.7 VEL 12.881 PTH 2.35 VHP 10.190 DPA 10.41 RAP 62.54 ECC 1.7334  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 36 31 3584.89 -18.43 136.28 327.69 68.11 4 36 16 2984.9 -21.24 128.73  
 90.00 2 3 49 3886.32 -9.91 154.30 323.73 63.34 3 8 35 3286.3 -13.41 147.37  
 100.00 5 44 39 3171.86 -23.14 107.79 329.59 70.53 6 37 30 2571.9 -25.58 99.84  
 100.00 2 38 23 3774.58 -5.47 143.71 321.34 60.57 3 41 18 3174.6 -9.35 137.08  
 110.00 7 55 21 2762.80 -30.71 79.43 332.29 74.19 8 41 24 2162.8 -32.57 70.70  
 110.00 2 44 10 3756.41 1.29 138.16 317.16 55.84 3 46 46 3156.4 -3.21 131.95

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .6253 TRA 5.9287 TC3-1.7415 BAU 1.0376 SGT 6229.1 SGR 503.9 SG3 167.9 ST 1809.1 SR 401.2 SS 510.2  
 ROE .4540 RRA .3272 RC3 -.0265 FAU .01206 RRT .6749 RRF .6611 RTF .9743 CRT .5149 CRS -.3551 CST -.9839  
 FDE .0830 FRA 1.9751 FC3 -.2343 BSP 20694 SGB 6249.5 R23 .0017 R13 .9743 LSA 1888.8 MSA 355.3 SSA 12.0  
 BOE .7728 BRA 5.9378 BC3 1.7417 FSP -587 SG1 6238.4 SG2 371.3 THA 3.14 EL1 1821.2 EL2 341.6 ALF 6.75

LAUNCH DATE JAN 23 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC DISTANCE 611.838  
 RL 147.25 LAL .00 LOL 122.82 VL 26.699 GAL 12.67 AZL 89.03 HCA 299.20 SMA 121.79 ECC .29946 INC .9662 V1 30.256  
 RP 107.94 LAP -.84 LOP 62.03 VP 37.005 GAP 16.19 AZP 89.53 TAL 145.60 TAP 84.80 RCA 85.32 APO 158.26 V2 35.108  
 RC 183.384 GL 3.56 GP -9.40 ZAL 36.69 ZAP 170.37 ETS 286.03 ZAE 126.61 ETE 186.98 ZAC 158.62 ETC 168.28 CLP-177.90

PLANETOCENTRIC CONIC  
 C3 50.175 VML 7.083 DLA 26.95 RAL 85.83 RAD 6568.8 VEL 13.097 PTH 2.39 VHP 10.691 DPA 11.13 RAP 64.58 ECC 1.8258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 13 41 3512.67 -20.20 131.72 332.15 69.72 5 12 14 2912.7 -22.78 124.00  
 90.00 1 39 8 4017.98 -5.80 161.79 325.59 62.24 2 46 6 3418.0 -9.48 155.04  
 100.00 6 8 48 3141.57 -23.81 105.79 333.52 71.38 7 1 10 2541.6 -26.14 97.76  
 100.00 2 26 42 3864.31 -2.44 148.66 323.74 60.20 3 31 6 3264.3 -6.39 142.10  
 110.00 8 11 43 2756.95 -30.82 79.01 335.95 74.42 8 57 40 2157.0 -32.64 70.26  
 110.00 2 40 16 3821.69 3.78 141.57 319.87 56.00 3 43 58 3221.7 -.71 135.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5032 TRA 6.4266 TC3-1.5065 BAU 1.0107 SGT 6223.0 SGR 490.1 SG3 160.5 ST 1797.3 SR 386.3 SS 511.2  
 ROE .4631 RRA .3467 RC3 -.0215 FAU .01017 RRT .6728 RRF .6598 RTF .9757 CRT .4575 CRS -.3096 CST -.9869  
 FDE .0464 FRA 2.0283 FC3 -.1755 BSP 20751 SGB 6242.3 R23 .0015 R13 .9757 LSA 1875.1 MSA 352.9 SSA 11.5  
 BOE .6839 BRA 6.4360 BC3 1.5067 FSP -561 SG1 6231.7 SG2 362.1 THA 3.04 EL1 1806.3 EL2 341.8 ALF 5.83

LAUNCH DATE JAN 23 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC DISTANCE 616.384  
 RL 147.25 LAL .00 LOL 122.82 VL 26.671 GAL 13.71 AZL 89.22 HCA 302.42 SMA 121.62 ECC .31315 INC .7786 V1 30.256  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.996 GAP 17.10 AZP 89.58 TAL 144.54 TAP 86.96 RCA 83.54 APO 159.71 V2 35.120  
 RC 185.291 GL 2.68 GP -9.20 ZAL 35.36 ZAP 170.75 ETS 279.67 ZAE 126.39 ETE 186.81 ZAC 160.58 ETC 166.57 CLP-178.99

PLANETOCENTRIC CONIC  
 C3 56.780 VML 7.535 DLA 26.10 RAL 87.27 RAD 6569.0 VEL 13.347 PTH 2.44 VHP 11.240 DPA 11.80 RAP 66.63 ECC 1.9345  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 40 20 3473.32 -21.11 129.19 336.13 70.67 5 38 13 2873.3 -23.55 121.37  
 90.00 1 23 58 4118.53 -2.59 167.44 327.85 61.79 2 32 37 3518.5 -6.34 160.76  
 100.00 6 29 21 3121.84 -24.24 104.47 337.28 71.95 7 21 23 2521.8 -26.48 96.39  
 100.00 2 17 38 3945.24 .30 153.10 326.24 60.11 3 23 23 3345.2 -3.68 146.58  
 110.00 8 26 37 2754.94 -30.85 78.86 339.52 74.49 9 12 32 2154.9 -32.67 70.11  
 110.00 2 36 51 3884.91 6.17 144.89 322.60 56.31 3 41 36 3284.9 1.71 138.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .3787 TRA 6.9632 TC3-1.2853 BAU .9758 SGT 6212.5 SGR 475.2 SG3 153.5 ST 1793.0 SR 371.0 SS 514.8  
 ROE .4723 RRA .3664 RC3 -.0168 FAU .00830 RRT .6711 RRF .6589 RTF .9772 CRT .4030 CRS -.2686 CST -.9896  
 FDE .0128 FRA 2.0863 FC3 -.1265 BSP 20780 SGB 6230.7 R23 .0012 R13 .9772 LSA 1869.9 MSA 347.2 SSA 11.1  
 BOE .6054 BRA 6.9729 BC3 1.2854 FSP -536 SG1 6220.7 SG2 351.8 THA 2.95 EL1 1799.4 EL2 338.3 ALF 4.94

LAUNCH DATE JAN 23 1969

FLIGHT TIME 220.00

ARRIVAL DATE AUG 31 1969

HELIOCENTRIC CONIC DISTANCE 620.683  
 RL 147.25 LAL .00 LOL 122.82 VL 26.643 GAL 14.84 AZL 89.42 HCA 305.64 SMA 121.45 ECC .32831 INC .5773 V1 30.256  
 RP 107.87 LAP -.47 LOP 68.46 VP 36.987 GAP 18.10 AZP 89.66 TAL 143.56 TAP 89.20 RCA 81.58 APO 161.33 V2 35.132  
 RC 187.175 GL 1.85 GP -9.01 ZAL 34.14 ZAP 170.99 ETS 272.67 ZAE 126.13 ETE 186.65 ZAC 162.50 ETC 164.48 CLP 179.89

PLANETOCENTRIC CONIC  
 C3 64.589 VML 8.037 DLA 25.29 RAL 88.59 RAD 6569.2 VEL 13.636 PTH 2.49 VHP 11.846 DPA 12.42 RAP 68.66 ECC 2.0630  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 2 3 3448.66 -21.65 127.59 339.87 71.29 5 59 32 2848.7 -24.01 119.71  
 90.00 1 12 44 4205.83 .23 172.31 330.26 61.68 2 22 49 3605.8 -3.56 165.67  
 100.00 6 47 17 3109.41 -24.50 103.64 340.89 72.31 7 39 6 2509.4 -26.68 95.53  
 100.00 2 10 11 4020.31 2.84 157.22 328.81 60.23 3 17 11 3420.3 -1.14 150.70  
 110.00 8 40 10 2756.19 -30.83 78.95 343.02 74.45 9 26 7 2156.2 -32.65 70.20  
 110.00 2 33 47 3946.30 8.48 148.15 325.34 56.76 3 39 33 3346.3 4.05 141.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .2546 TRA 7.5460 TC3-1.0770 BAU .9301 SGT 6199.2 SGR 459.3 SG3 147.0 ST 1794.9 SR 355.4 SS 520.9  
 ROE .4818 RRA .3860 RC3 -.0122 FAU .00638 RRT .6698 RRF .6585 RTF .9790 CRT .3532 CRS -.2336 CST -.9919  
 FDE -.0172 FRA 2.1511 FC3 -.0856 BSP 20739 SGB 6216.2 R23 .0011 R13 .9790 LSA 1872.0 MSA 338.8 SSA 10.7  
 BOE .5449 BRA 7.5559 BC3 1.0771 FSP -510 SG1 6206.9 SG2 340.6 THA 2.85 EL1 1799.5 EL2 331.6 ALF 4.14

LAUNCH DATE JAN 24 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 4 1969

HELIOCENTRIC CONIC

DISTANCE 163.230

RL 147.27 LAL .00 LOL 123.84 VL 23.421 GAL 1.90 AZL 86.66 HCA 67.33 SMA 105.85 ECC .39252 INC 3.3418 V1 30.253
RP 107.84 LAP 3.08 LOP 191.13 VP 34.749 GAP -23.09 AZP 88.71 TAL 177.05 TAP 244.38 RCA 64.30 APO 147.39 V2 35.141
RC 42.834 GL 11.17 GP 6.07 ZAL 85.15 ZAP 14.39 ETS 206.58 ZAE 174.94 ETE 299.62 ZAC 115.97 ETC 163.02 CLP 13.07

PLANETOCENTRIC CONIC

C3 49.611 VHL 7.044 CLA 24.97 RAL 32.47 RAD 6568.8 VEL 13.076 PTH 2.39 VHP 14.280 DPA 12.45 RAP 20.93 ECC 1.8165
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 20 3 3364.06 -23.39 122.00 279.26 73.57 2 16 7 2764.1 -25.42 113.92
90.00 21 15 12 4160.95 -1.22 169.80 270.00 61.71 22 24 33 3560.9 -5.00 163.15
100.00 3 4 6 3028.58 -26.06 98.14 280.09 74.80 3 54 35 2428.6 -27.89 89.82
100.00 22 13 50 3971.66 1.20 154.55 268.66 60.13 23 20 2 3371.7 -2.79 148.03
110.00 4 55 30 2680.04 -32.09 73.37 281.79 77.52 5 40 10 2080.0 -33.47 64.41
110.00 22 38 55 3892.96 6.48 145.32 265.38 56.36 23 43 48 3293.0 2.01 139.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3623 TRA -.8360 TC3 .0359 BAU .0297 SGT 807.6 SGR 431.0 SG3 54.5 ST 370.8 SR 418.2 SS 295.5
ROE -.5127 RRA .1137 RC3 -.0268 FAU .01970 RRT .1278 RRF -.1361 RTF -.6760 CRT .7482 CRS .8680 CST .9766
FOE .2656 FRA .3805 FC3 -.3437 BSP 2245 SGB 915.4 R23 -.0165 R13 -.6777 LSA 598.4 MSA 203.4 SSA 14.6
BOE .6278 BRA .8437 BC3 .0448 FSP -122 SG1 810.2 SG2 426.1 THA 5.40 EL1 523.2 EL2 196.7 ALF 49.57

LAUNCH DATE JAN 24 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC

DISTANCE 169.826

RL 147.27 LAL .00 LOL 123.84 VL 23.821 GAL 1.71 AZL 86.82 HCA 70.55 SMA 107.47 ECC .37135 INC 3.1803 V1 30.253
RP 107.87 LAP 3.00 LOP 194.36 VP 35.009 GAP -21.80 AZP 88.94 TAL 177.11 TAP 247.66 RCA 67.56 APO 147.38 V2 35.129
RC 42.524 GL 11.49 GP 6.36 ZAL 85.44 ZAP 13.01 ETS 211.01 ZAE 173.48 ETE 323.09 ZAC 117.31 ETC 162.53 CLP 11.37

PLANETOCENTRIC CONIC

C3 43.988 VHL 6.632 DLA 25.17 RAL 32.05 RAD 6568.7 VEL 12.859 PTH 2.34 VHP 13.560 DPA 13.34 RAP 22.24 ECC 1.7239
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 14 43 3346.49 -23.73 120.82 276.67 74.07 2 10 30 2746.5 -25.68 112.69
90.00 21 17 13 4118.21 -2.60 167.42 267.94 61.79 22 25 51 3518.2 -6.35 160.75
100.00 2 59 31 3008.65 -26.40 96.77 277.48 75.45 3 49 39 2408.7 -28.14 88.40
100.00 22 15 7 3931.28 -.17 152.34 266.60 60.11 23 20 38 3331.3 -4.15 145.81
110.00 4 51 51 2657.16 -32.41 71.67 279.07 78.49 5 36 9 2057.2 -33.66 62.65
110.00 22 39 16 3855.54 5.06 143.34 263.34 56.15 23 43 31 3255.5 .58 137.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3647 TRA -.8152 TC3 .0644 BAU .0406 SGT 843.8 SGR 434.5 SG3 60.2 ST 392.1 SR 422.8 SS 310.3
ROE -.4882 RRA .1039 RC3 -.0251 FAU .02068 RRT .1441 RRF -.1542 RTF -.6957 CRT .7595 CRS .8745 CST .9775
FOE .2778 FRA .3867 FC3 -.4069 BSP 2392 SGB 949.1 R23 -.0192 R13 -.6976 LSA 621.7 MSA 205.0 SSA 15.0
BOE .6094 BRA .8218 BC3 .0691 FSP -138 SG1 846.9 SG2 428.4 THA 5.71 EL1 541.1 EL2 199.3 ALF 47.84

LAUNCH DATE JAN 24 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC

DISTANCE 176.455

RL 147.27 LAL .00 LOL 123.84 VL 24.191 GAL 1.50 AZL 86.97 HCA 73.77 SMA 109.04 ECC .35149 INC 3.0251 V1 30.253
RP 107.91 LAP 2.90 LOP 197.59 VP 35.249 GAP -20.57 AZP 89.15 TAL 177.23 TAP 251.00 RCA 70.71 APO 147.36 V2 35.117
RC 42.392 GL 11.78 GP 6.69 ZAL 85.86 ZAP 11.74 ETS 216.55 ZAE 171.38 ETE 337.16 ZAC 118.62 ETC 161.99 CLP 9.68

PLANETOCENTRIC CONIC

C3 39.083 VHL 6.252 DLA 25.30 RAL 31.51 RAD 6568.5 VEL 12.667 PTH 2.30 VHP 12.872 DPA 14.24 RAP 23.54 ECC 1.6432
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 10 9 3324.94 -24.12 119.36 273.98 74.70 2 5 34 2724.9 -25.99 111.19
90.00 21 17 28 4080.12 -3.82 165.29 265.72 61.92 22 25 28 3480.1 -7.55 158.59
100.00 2 55 26 2985.49 -26.79 95.15 274.74 76.22 3 45 11 2385.5 -28.42 86.73
100.00 22 14 52 3894.79 -1.41 150.34 264.38 60.14 23 19 47 3294.8 -5.38 143.79
110.00 4 48 24 2632.03 -32.74 69.78 276.21 79.56 5 32 16 2032.0 -33.83 60.71
110.00 22 38 23 3821.02 3.75 141.53 261.16 56.00 23 42 4 3221.0 -7.74 135.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3671 TRA -.7933 TC3 .1001 BAU .0535 SGT 880.7 SGR 437.5 SG3 66.5 ST 414.1 SR 427.0 SS 325.0
ROE -.4648 RRA .0947 RC3 -.0218 FAU .02178 RRT .1627 RRF -.1741 RTF -.7151 CRT .7715 CRS .8809 CST .9786
FOE .2903 FRA .3928 FC3 -.4825 BSP 2550 SGB 983.4 R23 -.0217 R13 -.7172 LSA 645.6 MSA 205.6 SSA 15.4
BOE .5923 BRA .7990 BC3 .1024 FSP -156 SG1 884.5 SG2 429.9 THA 6.06 EL1 559.8 EL2 200.9 ALF 46.14

LAUNCH DATE JAN 24 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 183.111

RL 147.27 LAL .00 LOL 123.84 VL 24.531 GAL 1.29 AZL 87.12 HCA 76.99 SMA 110.54 ECC .33291 INC 2.8751 V1 30.253
RP 107.95 LAP 2.80 LOP 200.81 VP 35.472 GAP -19.40 AZP 89.35 TAL 177.42 TAP 254.41 RCA 73.74 APO 147.34 V2 35.105
RC 42.442 GL 12.04 GP 7.04 ZAL 86.41 ZAP 10.62 ETS 223.50 ZAE 168.98 ETE 345.77 ZAC 119.90 ETC 161.40 CLP 7.97

PLANETOCENTRIC CONIC

C3 34.805 VHL 5.900 DLA 25.35 RAL 30.84 RAD 6568.4 VEL 12.497 PTH 2.26 VHP 12.215 DPA 15.17 RAP 24.81 ECC 1.5728
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 6 32 3298.89 -24.58 117.59 271.19 75.48 2 1 31 2698.9 -26.34 109.36
90.00 21 15 46 4047.58 -4.86 163.46 263.33 62.07 22 23 14 3447.6 -8.56 156.74
100.00 2 52 2 2958.80 -27.21 93.28 271.91 77.12 3 41 20 2358.8 -28.71 84.80
100.00 22 12 58 3862.90 -2.49 148.58 262.02 60.20 23 17 21 3262.9 -6.44 142.02
110.00 4 45 15 2604.56 -33.06 67.70 273.23 80.75 5 28 39 2004.6 -33.98 58.58
110.00 22 36 14 3789.90 2.56 139.90 258.87 55.90 23 39 24 3189.9 -1.93 133.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3706 TRA -.7712 TC3 .1424 BAU .0667 SGT 919.1 SGR 440.3 SG3 73.6 ST 437.5 SR 430.9 SS 340.5
ROE -.4427 RRA .0862 RC3 -.0167 FAU .02299 RRT .1844 RRF -.1978 RTF -.7332 CRT .7843 CRS .8880 CST .9797
FOE .3042 FRA .3975 FC3 -.5718 BSP 2692 SGB 1019.1 R23 -.0249 R13 -.7355 LSA 671.3 MSA 205.3 SSA 15.8
BOE .5774 BRA .7760 BC3 .1434 FSP -175 SG1 923.7 SG2 430.6 THA 6.46 EL1 580.0 EL2 201.6 ALF 44.44

LAUNCH DATE JAN 24 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 12 1969

Heliocentric Conic Data: RL 147.27 LAL .00 LOL 123.84 VL 24.845 GAL 1.07 AZL 87.27 HCA 80.21 SMA 111.98 ECC .31557 INC 2.7290 VI 30.253  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.677 GAP -18.28 AZP 89.54 TAL 177.67 TAP 257.88 RCA 76.65 APO 147.32 V2 35.092  
 RC 42.671 GL 12.25 GP 7.43 ZAL 87.09 ZAP 9.70 ETS 232.13 ZAE 166.48 ETE 351.52 ZAC 121.14 ETC 160.74 CLP 6.24

Distance 189.789

Planetary Data: C3 31.074 VHL 5.574 DLA 25.32 RAL 30.06 RAD 6568.2 VEL 12.347 PTH 2.23 VHP 11.586 DPA 16.12 RAP 26.06 ECC 1.5114  
 LNCX AZMTH LNCX TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 7 3267.92 -25.09 115.46 268.33 76.42 1 58 35 2667.9 -26.71 107.17  
 90.00 21 11 56 4021.42 -5.70 161.99 260.79 62.22 22 18 58 3421.4 -9.37 155.24  
 100.00 2 49 27 2928.31 -27.65 91.12 268.98 78.17 3 38 16 2328.3 -29.00 82.58  
 100.00 22 9 17 3836.26 -3.39 147.12 259.52 60.28 23 13 13 3236.3 -7.32 140.54  
 110.00 4 42 30 2574.65 -33.36 65.42 270.13 82.07 5 25 24 1974.6 -34.10 56.25  
 110.00 22 32 44 3762.68 1.53 138.48 256.45 55.85 23 35 27 3162.7 -2.97 132.28

Differential Corrections: TDE -.3730 TRA -.7483 TC3 .1931 BAU .0803 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.4218 RRA .0783 RC3 -.0090 FAU .02435 SGT 957.7 SGR 442.7 SG3 81.4 ST 460.7 SR 434.3 SS 355.1  
 FDE .3176 FRA .4020 FC3 -.6785 BSP 2845 RRT .2083 RRF -.2236 RTF -.7501 CRT .7967 CRS .8945 CST .9809  
 BDE .5631 BRA .7524 BC3 .1933 FSP -197 SGB 1055.1 R23 -.0283 R13 -.7528 LSA 696.4 MSA 204.4 SSA 16.3  
 SG1 963.3 SG2 430.5 THA 6.88 EL1 600.2 EL2 201.5 ALF 42.89

LAUNCH DATE JAN 24 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 14 1969

Heliocentric Conic Data: RL 147.27 LAL .00 LOL 123.84 VL 25.133 GAL .86 AZL 87.41 HCA 83.42 SMA 113.36 ECC .29942 INC 2.5858 VI 30.253  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.865 GAP -17.22 AZP 89.70 TAL 178.00 TAP 261.41 RCA 79.42 APO 147.31 V2 35.080  
 RC 43.078 GL 12.41 GP 7.87 ZAL 87.90 ZAP 9.06 ETS 242.52 ZAE 163.97 ETE 355.68 ZAC 122.33 ETC 160.02 CLP 4.50

Distance 196.485

Planetary Data: C3 27.823 VHL 5.275 DLA 25.18 RAL 29.17 RAD 6568.1 VEL 12.215 PTH 2.19 VHP 10.985 DPA 17.09 RAP 27.28 ECC 1.4579  
 LNCX AZMTH LNCX TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 3 1 3231.80 -25.64 112.96 265.41 77.56 1 56 53 2631.8 -27.10 104.60  
 90.00 21 5 54 4002.21 -6.30 160.91 258.11 62.34 22 12 36 3402.2 -9.96 154.13  
 100.00 2 47 51 2893.83 -28.11 88.66 265.97 79.39 3 36 5 2293.8 -29.29 80.06  
 100.00 22 3 45 3815.41 -4.10 145.97 256.90 60.36 23 7 21 3215.4 -8.01 139.37  
 110.00 4 40 15 2542.18 -33.64 62.92 266.94 83.52 5 22 37 1942.2 -34.17 53.72  
 110.00 22 27 51 3739.82 .65 137.29 253.94 55.82 23 30 11 3139.8 -3.84 131.08

Differential Corrections: TDE -.3760 TRA -.7252 TC3 .2518 BAU .0937 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.4022 RRA .0709 RC3 .0018 FAU .02585 SGT 997.6 SGR 445.1 SG3 90.1 ST 484.9 SR 437.6 SS 370.1  
 FDE .3321 FRA .4057 FC3 -.8043 BSP 2986 RRT .2361 RRF -.2536 RTF -.7659 CRT .8096 CRS .9015 CST .9820  
 BDE .5506 BRA .7287 BC3 .2518 FSP -221 SGB 1092.3 R23 -.0325 R13 -.7688 LSA 722.7 MSA 202.5 SSA 16.8  
 SG1 1004.3 SG2 429.6 THA 7.37 EL1 621.6 EL2 200.4 ALF 41.38

LAUNCH DATE JAN 24 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 16 1969

Heliocentric Conic Data: RL 147.27 LAL .00 LOL 123.84 VL 25.398 GAL .64 AZL 87.56 HCA 86.63 SMA 114.67 ECC .28443 INC 2.4445 VI 30.253  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.039 GAP -16.20 AZP 89.86 TAL 178.38 TAP 265.01 RCA 82.06 APO 147.29 V2 35.067  
 RC 43.658 GL 12.51 GP 8.35 ZAL 88.82 ZAP 8.78 ETS 254.29 ZAE 161.51 ETE 358.91 ZAC 123.47 ETC 159.24 CLP 2.73

Distance 203.195

Planetary Data: C3 24.991 VHL 4.999 DLA 24.95 RAL 28.17 RAD 6568.0 VEL 12.098 PTH 2.17 VHP 10.410 DPA 18.10 RAP 28.46 ECC 1.4113  
 LNCX AZMTH LNCX TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 3 20 3190.52 -26.22 110.08 262.42 78.90 1 56 30 2590.5 -27.49 101.64  
 90.00 20 57 39 3990.29 -6.68 160.23 255.32 62.42 22 4 10 3390.3 -10.32 153.45  
 100.00 2 47 18 2855.30 -28.56 85.89 262.90 80.78 3 34 54 2255.3 -29.54 77.22  
 100.00 21 56 22 3800.74 -4.59 145.16 254.17 60.43 22 59 43 3200.7 -8.49 138.55  
 110.00 4 38 36 2507.10 -33.87 60.21 263.67 85.11 5 20 23 1907.1 -34.18 50.98  
 110.00 22 21 34 3721.71 -.04 136.35 251.34 55.82 23 23 35 3121.7 -4.53 130.13

Differential Corrections: TDE -.3779 TRA -.7021 TC3 .3201 BAU .1071 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3838 RRA .0640 RC3 .0164 FAU .02753 SGT 1038.1 SGR 447.6 SG3 99.8 ST 508.5 SR 440.6 SS 384.2  
 FDE .3464 FRA .4089 FC3 -.9537 BSP 3126 RRT .2668 RRF -.2872 RTF -.7805 CRT .8216 CRS .9080 CST .9829  
 BDE .5386 BRA .7050 BC3 .3205 FSP -248 SGB 1130.5 R23 -.0376 R13 -.7839 LSA 748.2 MSA 200.2 SSA 17.3  
 SG1 1046.3 SG2 428.0 THA 7.89 EL1 642.8 EL2 198.7 ALF 40.04

LAUNCH DATE JAN 24 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 18 1969

Heliocentric Conic Data: RL 147.27 LAL .00 LOL 123.84 VL 25.641 GAL .43 AZL 87.70 HCA 89.84 SMA 115.92 ECC .27055 INC 2.3043 VI 30.253  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.198 GAP -15.23 AZP 89.99 TAL 178.83 TAP 268.67 RCA 84.56 APO 147.28 V2 35.053  
 RC 44.405 GL 12.55 GP 8.88 ZAL 89.86 ZAP 8.93 ETS 266.53 ZAE 159.15 ETE 361.57 ZAC 124.53 ETC 158.38 CLP .93

Distance 209.912

Planetary Data: C3 22.526 VHL 4.746 DLA 24.60 RAL 27.09 RAD 6567.9 VEL 11.996 PTH 2.14 VHP 9.862 DPA 19.14 RAP 29.60 ECC 1.3707  
 LNCX AZMTH LNCX TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 3 3144.31 -26.78 106.81 259.40 80.44 1 57 28 2544.3 -27.83 98.30  
 90.00 20 47 18 3985.70 -6.82 159.97 252.44 62.45 21 53 44 3385.7 -10.46 153.18  
 100.00 2 47 53 2812.76 -28.99 82.80 259.78 82.35 3 34 46 2212.8 -29.74 74.07  
 100.00 21 47 9 3792.48 -4.87 144.70 251.37 60.47 22 50 22 3192.5 -8.76 138.08  
 110.00 4 37 39 2469.35 -34.05 57.28 260.34 86.84 5 18 49 1869.3 -34.12 48.03  
 110.00 22 13 53 3708.66 -.54 135.67 248.68 55.82 23 15 42 3108.7 -5.02 129.45

Differential Corrections: TDE -.3785 TRA -.6772 TC3 .3994 BAU .1208 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.3667 RRA .0576 RC3 .0360 FAU .02943 SGT 1077.5 SGR 450.5 SG3 110.6 ST 530.7 SR 443.2 SS 396.7  
 FDE .3600 FRA .4113 FC3 -1.1312 BSP 3266 RRT .3017 RRF -.3247 RTF -.7948 CRT .8335 CRS .9142 CST .9840  
 BDE .5270 BRA .6797 BC3 .4011 FSP -280 SGB 1167.9 R23 -.0425 R13 -.7986 LSA 772.2 MSA 197.1 SSA 17.9  
 SG1 1087.6 SG2 425.5 THA 8.50 EL1 663.1 EL2 196.0 ALF 38.87

LAUNCH DATE JAN 24 1969 FLIGHT TIME 86.00 ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC DISTANCE 216.635  
 RL 147.27 LAL .00 LOL 123.84 VL 25.864 GAL .23 AZL 87.84 HCA 93.04 SMA 117.09 ECC .25774 INC 2.1643 V1 30.253  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.343 GAP -14.29 AZP 90.12 TAL 179.35 TAP 272.39 RCA 86.91 APO 147.27 V2 35.040  
 RC 45.309 GL 12.49 GP 9.48 ZAL 91.01 ZAP 9.52 ETS 278.08 ZAE 156.91 ETE 3.88 ZAC 125.51 ETC 157.44 CLP -.90

PLANETOCENTRIC CONIC  
 C3 20.383 VHL 4.515 DLA 24.14 RAL 25.94 RAD 6567.8 VEL 11.906 PTH 2.12 VHP 9.338 DPA 20.21 RAP 30.68 ECC 1.3354  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 8 3093.59 -27.30 103.19 256.34 82.18 1 59 42 2493.6 -28.10 94.62  
 90.00 20 35 2 3988.25 -6.74 160.12 249.52 62.43 21 41 30 3388.3 -10.38 153.33  
 100.00 2 49 37 2766.38 -29.36 79.40 256.62 84.11 3 35 44 2166.4 -29.86 70.63  
 100.00 21 36 14 3790.69 -4.93 144.61 248.53 60.48 22 39 25 3190.7 -8.82 137.98  
 110.00 4 37 29 2428.92 -34.16 54.12 256.97 88.70 5 17 58 1828.9 -33.96 44.88  
 110.00 22 4 52 3700.92 -.84 135.26 245.99 55.83 23 6 33 3100.9 -5.32 129.04

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3762 TRA -.6517 TC3 .4889 BAU .1343 SGT 1115.4 SGR 453.9 SG3 122.7 ST 549.5 SR 445.2 SS 405.3  
 RDE -.3504 RRA .0518 RC3 .0615 FAU .03157 RRT .3389 RRF -.3652 RTF -.8072 CRT .8438 CRS .9195 CST .9848  
 FDE .3708 FRA .4118 FC3-1.3409 BSP 3438 SGB 1204.2 R23 -.0486 R13 -.8116 LSA 791.6 MSA 193.8 SSA 18.6  
 BDE .5141 BRA .6538 BC3 .4928 FSP -317 SG1 1127.7 SG2 422.4 THA 9.15 EL1 680.4 EL2 193.0 ALF 37.95

LAUNCH DATE JAN 24 1969 FLIGHT TIME 88.00 ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC DISTANCE 223.359  
 RL 147.27 LAL .00 LOL 123.84 VL 26.068 GAL .03 AZL 87.98 HCA 96.25 SMA 118.20 ECC .24595 INC 2.0235 V1 30.253  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.476 GAP -13.40 AZP 90.22 TAL 179.91 TAP 276.16 RCA 89.13 APO 147.27 V2 35.027  
 RC 46.364 GL 12.35 GP 10.14 ZAL 92.25 ZAP 10.51 ETS 288.10 ZAE 154.82 ETE 5.98 ZAC 126.40 ETC 156.42 CLP -2.79

PLANETOCENTRIC CONIC  
 C3 18.521 VHL 4.304 DLA 23.55 RAL 24.74 RAD 6567.7 VEL 11.828 PTH 2.09 VHP 8.840 DPA 21.33 RAP 31.69 ECC 1.3048  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 29 3038.90 -27.75 99.25 253.26 84.11 2 3 8 2438.9 -28.27 90.63  
 90.00 20 21 6 3997.58 -6.45 160.64 246.59 62.37 21 27 43 3397.6 -10.10 153.87  
 100.00 2 52 29 2716.45 -29.65 75.72 253.45 86.02 3 37 46 2116.5 -29.89 66.92  
 100.00 21 23 46 3795.26 -4.77 144.86 245.68 60.46 22 27 1 3195.3 -8.67 138.24  
 110.00 4 38 9 2385.89 -34.18 50.76 253.60 90.69 5 17 55 1785.9 -33.70 41.55  
 110.00 21 54 36 3698.59 -.93 135.14 243.28 55.83 22 56 15 3098.6 -5.40 128.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3914 TRA -.6395 TC3 .5357 BAU .1344 SGT 1160.4 SGR 459.9 SG3 133.9 ST 591.1 SR 449.3 SS 424.8  
 RDE -.3371 RRA .0454 RC3 .0877 FAU .03295 RRT .3888 RRF -.4142 RTF -.8056 CRT .8601 CRS .9271 CST .9867  
 FDE .3936 FRA .4184 FC3-1.5402 BSP 2971 SGB 1248.2 R23 -.0589 R13 -.8109 LSA 834.0 MSA 189.0 SSA 19.3  
 BDE .5166 BRA .6411 BC3 .5428 FSP -312 SG1 1176.2 SG2 418.0 THA 10.04 EL1 718.1 EL2 188.6 ALF 36.05

LAUNCH DATE JAN 24 1969 FLIGHT TIME 90.00 ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC DISTANCE 230.079  
 RL 147.27 LAL .00 LOL 123.84 VL 26.255 GAL -.16 AZL 88.12 HCA 99.45 SMA 119.23 ECC .23513 INC 1.8811 V1 30.253  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.597 GAP -12.54 AZP 90.31 TAL 180.53 TAP 279.98 RCA 91.20 APO 147.27 V2 35.013  
 RC 47.558 GL 12.10 GP 10.88 ZAL 93.58 ZAP 11.85 ETS 296.33 ZAE 152.90 ETE 7.96 ZAC 127.18 ETC 155.33 CLP -4.72

PLANETOCENTRIC CONIC  
 C3 16.903 VHL 4.111 DLA 22.82 RAL 23.50 RAD 6567.7 VEL 11.760 PTH 2.08 VHP 8.364 DPA 22.49 RAP 32.83 ECC 1.2782  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 18 1 2980.64 -28.08 95.02 250.17 86.21 2 7 41 2380.6 -28.31 86.36  
 90.00 20 5 40 4013.38 -5.95 161.54 243.69 62.26 21 12 33 3413.4 -9.62 154.78  
 100.00 2 56 29 2663.16 -29.84 71.77 250.27 88.09 3 40 52 2063.2 -29.78 62.96  
 100.00 21 9 53 3806.08 -4.41 145.46 242.84 60.40 22 13 19 3206.1 -8.32 138.85  
 110.00 4 39 42 2340.22 -34.08 47.20 250.23 92.80 5 18 42 1740.2 -33.32 38.04  
 110.00 21 43 9 3701.79 -.80 135.31 240.60 55.83 22 44 51 3101.8 -5.28 129.09

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3637 TRA -.5974 TC3 .7116 BAU .1637 SGT 1189.6 SGR 465.9 SG3 151.6 ST 575.0 SR 448.2 SS 415.9  
 RDE -.3214 RRA .0412 RC3 .1364 FAU .03679 RRT .4264 RRF -.4624 RTF -.8345 CRT .8612 CRS .9290 CST .9859  
 FDE .3894 FRA .4106 FC3-1.8842 BSP 3895 SGB 1277.5 R23 -.0632 R13 -.8404 LSA 818.2 MSA 186.3 SSA 20.2  
 BDE .4853 BRA .5988 BC3 .7245 FSP -412 SG1 1208.3 SG2 414.8 THA 10.76 EL1 705.0 EL2 185.8 ALF 36.86

LAUNCH DATE JAN 24 1969 FLIGHT TIME 92.00 ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC DISTANCE 236.793  
 RL 147.27 LAL .00 LOL 123.84 VL 26.425 GAL -.35 AZL 88.26 HCA 102.65 SMA 120.20 ECC .22523 INC 1.7361 V1 30.253  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.707 GAP -11.72 AZP 90.38 TAL 181.19 TAP 283.84 RCA 92.13 APO 147.28 V2 35.000  
 RC 48.883 GL 11.73 GP 11.71 ZAL 94.98 ZAP 13.48 ETS 302.87 ZAE 151.16 ETE 9.89 ZAC 127.84 ETC 154.16 CLP -6.71

PLANETOCENTRIC CONIC  
 C3 15.502 VHL 3.937 DLA 21.96 RAL 22.25 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 7.913 DPA 23.71 RAP 33.47 ECC 1.2551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 24 38 2919.47 -28.28 90.56 247.11 88.44 2 13 18 2319.5 -28.20 81.89  
 90.00 19 49 6 4035.11 -5.26 162.76 240.85 62.14 20 56 21 3435.1 -8.95 156.02  
 100.00 3 1 33 2606.99 -29.89 67.59 247.13 90.29 3 45 0 2007.0 -29.53 58.80  
 100.00 20 54 53 3822.82 -3.85 146.38 240.07 60.33 21 58 36 3222.8 -7.77 139.79  
 110.00 4 42 11 2292.14 -33.86 43.46 246.92 95.00 5 20 23 1692.1 -32.80 34.39  
 110.00 21 30 44 3710.43 -.47 135.76 237.97 55.82 22 32 34 3110.4 -4.95 129.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3597 TRA -.5750 TC3 .8202 BAU .1743 SGT 1226.9 SGR 476.2 SG3 168.3 ST 589.7 SR 449.7 SS 420.1  
 RDE -.3088 RRA .0359 RC3 .1867 FAU .03964 RRT .4783 RRF -.5184 RTF -.8425 CRT .8702 CRS .9333 CST .9867  
 FDE .3990 FRA .4123 FC3-2.2136 BSP 3983 SGB 1316.1 R23 -.0735 R13 -.8495 LSA 832.4 MSA 182.1 SSA 21.2  
 BDE .4741 BRA .5762 BC3 .8412 FSP -460 SG1 1250.5 SG2 410.3 THA 11.80 EL1 719.0 EL2 181.7 ALF 36.25

LAUNCH DATE JAN 24 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 243.499

RL 147.27 LAL .00 LOL 123.84 VL 26.580 GAL -.52 AZL 88.41 HCA 105.84 SMA 121.11 ECC .21620 INC 1.5875 V1 30.253
RP 108.31 LAP 1.53 LOP 229.68 VP 36.806 GAP -10.94 A2P 90.43 TAL 181.89 TAP 287.73 RCA 94.92 APO 147.29 V2 34.987
RC 50.327 GL 11.23 GP 12.64 ZAL 96.43 ZAP 15.35 ETS 308.01 ZAE 149.60 ETE 11.85 ZAC 128.35 ETC 152.90 CLP -8.78

PLANETOCENTRIC CONIC

C3 14.288 VHL 3.780 DLA 20.95 RAL 21.02 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 7.484 DPA 24.99 RAP 34.21 ECC 1.2351
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 32 17 2855.74 -28.31 85.90 244.10 90.77 2 19 53 2255.7 -27.90 77.26
90.00 19 31 38 4062.41 -4.39 164.29 238.12 62.00 20 39 20 3462.4 -8.10 157.58
100.00 3 7 40 2548.18 -29.79 63.22 244.05 92.59 3 50 8 1948.2 -29.11 54.48
100.00 20 38 56 3845.21 -3.09 147.61 237.40 60.25 21 43 1 3245.2 -7.03 141.04
110.00 4 45 38 2241.71 -33.49 39.57 243.68 97.27 5 22 59 1641.7 -32.13 30.61
110.00 21 17 28 3724.44 .06 136.49 235.43 55.82 22 19 32 3124.4 -4.42 130.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3514 TRA -.5525 TC3 .9403 BAU .1858 SGT 1262.2 SGR 490.3 SG3 187.1 ST 597.1 SR 450.1 SS 418.1
RDE -.2967 RRA .0307 RC3 .2496 FAU .04291 RRT .5317 RRF -.5769 RTF -.8509 CRT .8770 CRS .9360 CST .9874
FDE .4035 FRA .4140 FC3-2.6001 BSP 4088 SGB 1354.1 R23 -.0852 R13 -.8592 LSA 837.7 MSA 178.1 SSA 22.3
BDE .4599 BRA .5533 BC3 .9729 FSP -514 SG1 1291.9 SG2 405.7 THA 12.97 EL1 726.3 EL2 177.8 ALF 35.95

LAUNCH DATE JAN 24 1969

FLIGHT TIME 96.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 250.194

RL 147.27 LAL .00 LOL 123.84 VL 26.721 GAL -.68 AZL 88.57 HCA 109.04 SMA 121.94 ECC .20800 INC 1.4342 V1 30.253
RP 108.36 LAP 1.36 LOP 232.88 VP 36.896 GAP -10.18 A2P 90.47 TAL 182.61 TAP 291.64 RCA 96.58 APO 147.31 V2 34.974
RC 51.881 GL 10.59 GP 13.69 ZAL 97.92 ZAP 17.45 ETS 312.05 ZAE 148.21 ETE 13.88 ZAC 128.70 ETC 151.58 CLP -10.92

PLANETOCENTRIC CONIC

C3 13.238 VHL 3.638 DLA 19.80 RAL 19.83 RAD 6567.5 VEL 11.603 PTH 2.03 VHP 7.079 DPA 26.35 RAP 34.82 ECC 1.2179
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 40 56 2789.77 -28.15 81.08 241.18 93.18 2 27 26 2189.8 -27.41 72.49
90.00 19 13 28 4094.98 -3.35 166.12 235.52 61.87 20 21 43 3495.0 -7.08 159.43
100.00 3 14 50 2486.98 -29.52 58.69 241.07 94.96 3 56 17 1887.0 -28.52 50.03
100.00 20 22 15 3873.01 -2.15 149.14 234.86 60.18 21 26 48 3273.0 -6.10 142.58
110.00 4 50 4 2189.03 -32.97 35.55 240.55 99.60 5 26 33 1589.0 -31.29 26.73
110.00 21 3 30 3743.72 .80 137.49 233.02 55.83 22 5 54 3143.7 -3.69 131.29

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3388 TRA -.5275 TC3 1.0696 BAU .1979 SGT 1292.3 SGR 509.8 SG3 208.0 ST 596.1 SR 449.2 SS 410.4
RDE -.2851 RRA .0257 RC3 .3265 FAU .04656 RRT .5866 RRF -.6368 RTF -.8601 CRT .8824 CRS .9377 CST .9879
FDE .4029 FRA .4143 FC3-3.0453 BSP 4265 SGB 1389.2 R23 -.0966 R13 -.8702 LSA 833.5 MSA 173.9 SSA 23.6
BDE .4428 BRA .5281 BC3 1.1184 FSP -580 SG1 1330.0 SG2 401.1 THA 14.36 EL1 725.9 EL2 173.6 ALF 36.00

LAUNCH DATE JAN 24 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 256.874

RL 147.27 LAL .00 LOL 123.84 VL 26.849 GAL -.84 AZL 88.72 HCA 112.23 SMA 122.72 ECC .20058 INC 1.2752 V1 30.253
RP 108.40 LAP 1.18 LOP 236.07 VP 36.976 GAP -9.45 A2P 90.48 TAL 183.34 TAP 295.57 RCA 98.10 APO 147.33 V2 34.961
RC 53.536 GL 9.80 GP 14.87 ZAL 99.42 ZAP 19.75 ETS 315.24 ZAE 147.00 ETE 16.03 ZAC 128.87 ETC 150.19 CLP -13.16

PLANETOCENTRIC CONIC

C3 12.331 VHL 3.512 DLA 18.50 RAL 18.70 RAD 6567.5 VEL 11.564 PTH 2.02 VHP 6.697 DPA 27.79 RAP 35.28 ECC 1.2029
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 50 34 2721.81 -27.80 76.14 238.37 95.64 2 35 56 2121.8 -26.72 67.64
90.00 18 54 50 4132.52 -2.14 168.22 233.11 61.76 20 3 42 3532.5 -5.90 161.55
100.00 3 23 3 2423.59 -29.05 54.04 238.20 97.36 4 3 26 1823.6 -27.73 45.49
100.00 20 5 2 3905.97 -1.03 150.95 232.49 60.12 21 10 8 3306.0 -5.00 144.41
110.00 4 55 32 2134.20 -32.27 31.42 237.57 101.95 5 31 7 1534.2 -30.29 22.77
110.00 20 49 2 3768.12 1.73 138.77 230.76 55.86 21 51 50 3168.1 -2.76 132.56

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3234 TRA -.5040 TC3 1.1987 BAU .2094 SGT 1318.8 SGR 536.2 SG3 231.2 ST 588.8 SR 446.6 SS 395.4
RDE -.2736 RRA .0207 RC3 .4201 FAU .05064 RRT .6405 RRF -.6962 RTF -.8675 CRT .8859 CRS .9375 CST .9884
FDE .3951 FRA .4147 FC3-3.5550 BSP 4401 SGB 1423.6 R23 -.1105 R13 -.8797 LSA 820.3 MSA 170.1 SSA 25.1
BDE .4236 BRA .5044 BC3 1.2702 FSP -652 SG1 1367.1 SG2 397.3 THA 15.98 EL1 719.3 EL2 169.6 ALF 36.23

LAUNCH DATE JAN 24 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 263.539

RL 147.27 LAL .00 LOL 123.84 VL 26.965 GAL -.98 AZL 88.89 HCA 115.42 SMA 123.43 ECC .19388 INC 1.1087 V1 30.253
RP 108.43 LAP 1.00 LOP 239.26 VP 37.048 GAP -8.76 A2P 90.48 TAL 184.09 TAP 299.50 RCA 99.50 APO 147.36 V2 34.948
RC 55.282 GL 8.83 GP 16.19 ZAL 100.92 ZAP 22.27 ETS 317.78 ZAE 145.95 ETE 18.37 ZAC 128.82 ETC 148.75 CLP -15.50

PLANETOCENTRIC CONIC

C3 11.551 VHL 3.399 DLA 17.04 RAL 17.66 RAD 6567.4 VEL 11.530 PTH 2.01 VHP 6.339 DPA 29.33 RAP 35.57 ECC 1.1901
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 1 13 2651.93 -27.23 71.10 235.71 98.10 2 45 25 2051.9 -25.83 62.72
90.00 18 35 53 4174.89 -.77 170.58 230.90 61.69 19 45 28 3574.9 -4.55 163.94
100.00 3 32 19 2358.12 -28.39 49.29 235.50 99.78 4 11 37 1758.1 -26.74 40.87
100.00 19 47 27 3943.93 .25 153.03 230.33 60.11 20 53 11 3343.9 -3.72 146.50
110.00 5 2 5 2077.26 -31.39 27.22 234.77 104.29 5 36 43 1477.3 -29.11 18.76
110.00 20 34 11 3797.55 2.86 140.30 228.70 55.92 21 37 28 3197.6 -1.64 134.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3055 TRA -.4825 TC3 1.3237 BAU .2203 SGT 1341.1 SGR 571.5 SG3 256.7 ST 575.4 SR 441.7 SS 373.8
RDE -.2619 RRA .0153 RC3 .5324 FAU .05508 RRT .6915 RRF -.7529 RTF -.8736 CRT .8876 CRS .9348 CST .9889
FDE .3798 FRA .4174 FC3-4.1285 BSP 4536 SGB 1457.8 R23 -.1262 R13 -.8886 LSA 798.4 MSA 166.6 SSA 26.9
BDE .4024 BRA .4828 BC3 1.4267 FSP -733 SG1 1403.4 SG2 394.5 THA 17.88 EL1 706.2 EL2 165.8 ALF 36.62



LAUNCH DATE JAN 24 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 270.187

RL 147.27 LAL .00 LOL 123.84 VL 27.070 GAL -1.11 AZL 89.07 HCA 118.60 SMA 124.08 ECC .18786 INC .9334 VI 30.253  
 RP 108.47 LAP .82 LOP 242.44 VP 37.113 GAP -8.09 AZP 90.45 TAL 184.83 TAP 303.43 RCA 100.77 APO 147.39 V2 34.936  
 RC 57.109 GL 7.68 GP 17.69 ZAL 102.40 ZAP 25.00 ETS 319.83 ZAE 145.03 ETE 20.94 ZAC 128.53 ETC 147.28 CLP -17.95

PLANETOCENTRIC CONIC

C3 10.881 VHL 3.299 DLA 15.43 RAL 16.73 RAD 6567.4 VEL 11.501 PTH 2.00 VHP 6.005 DPA 30.99 RAP 35.66 ECC 1.1791  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 12 56 2580.12 -26.44 66.00 233.24 100.54 2 55 56 1980.1 -24.71 57.75  
 90.00 18 16 45 4222.01 .75 173.21 228.93 61.69 19 27 7 3622.0 -3.04 166.58  
 100.00 3 42 43 2290.55 -27.51 44.46 233.00 102.18 4 20 54 1690.6 -25.56 36.20  
 100.00 19 29 39 3986.82 1.71 155.38 228.39 60.15 20 36 5 3386.8 -2.28 148.86  
 110.00 5 9 47 2018.17 -30.32 22.95 232.18 106.61 5 43 25 1418.2 -27.74 14.70  
 110.00 20 19 5 3831.96 4.17 142.11 226.86 56.04 21 22 57 3232.0 -.32 135.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2849 TRA -.4617 TC3 1.4413 BAU .2310 SGT 1356.9 SGR 617.8 SG3 284.7 ST 554.9 SR 433.6 SS 343.6  
 RDE -.2495 RRA .0094 RC3 .6670 FAU .05995 RRT .7381 RRF -.8046 RTF -.8787 CRT .8875 CRS .9278 CST .9896  
 FDE .3538 FRA .4219 FC3-4.7699 BSP 4649 SGB 1490.9 R23 -.1425 R13 -.8974 LSA 765.8 MSA 163.2 SSA 29.1  
 BDE .3787 BRA .4618 BC3 1.5882 FSP -820 SG1 1438.1 SG2 393.3 THA 20.15 EL1 685.4 EL2 161.8 ALF 37.16

LAUNCH DATE JAN 24 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 276.815

RL 147.27 LAL .00 LOL 123.84 VL 27.163 GAL -1.24 AZL 89.25 HCA 121.78 SMA 124.67 ECC .18248 INC .7473 VI 30.253  
 RP 108.51 LAP .64 LOP 245.62 VP 37.170 GAP -7.44 AZP 90.39 TAL 185.55 TAP 307.33 RCA 101.92 APO 147.42 V2 34.923  
 RC 59.010 GL 6.33 GP 19.39 ZAL 103.83 ZAP 27.96 ETS 321.50 ZAE 144.22 ETE 23.80 ZAC 127.98 ETC 145.79 CLP -20.54

PLANETOCENTRIC CONIC

C3 10.309 VHL 3.211 DLA 13.65 RAL 15.93 RAD 6567.4 VEL 11.476 PTH 1.99 VHP 5.696 DPA 32.77 RAP 35.50 ECC 1.1697  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 25 49 2506.23 -25.41 60.83 231.00 102.93 3 7 36 1906.2 -23.38 52.75  
 90.00 17 57 31 4273.99 2.43 176.11 227.22 61.78 19 8 45 3674.0 -1.37 169.48  
 100.00 3 54 20 2220.77 -26.41 39.56 230.72 104.53 4 31 21 1620.8 -24.16 31.49  
 100.00 19 11 41 4034.69 3.33 158.01 226.72 60.28 20 18 56 3434.7 -.65 151.49  
 110.00 5 18 41 1956.83 -29.04 18.63 229.83 108.87 5 51 18 1356.8 -26.19 10.61  
 110.00 20 3 50 3871.39 5.66 144.18 225.27 56.23 21 8 21 3271.4 1.19 137.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2612 TRA -.4432 TC3 1.5434 BAU .2412 SGT 1364.4 SGR 676.9 SG3 314.8 ST 527.0 SR 420.9 SS 304.7  
 RDE -.2357 RRA .0025 RC3 .8259 FAU .06512 RRT .7772 RRF -.8496 RTF -.8822 CRT .8844 CRS .9125 CST .9900  
 FDE .3150 FRA .4302 FC3-5.4685 BSP 4757 SGB 1523.1 R23 -.1597 R13 -.9059 LSA 721.7 MSA 160.6 SSA 31.7  
 BDE .3518 BRA .4432 BC3 1.7505 FSP -915 SG1 1471.0 SG2 395.1 THA 22.82 EL1 655.7 EL2 157.9 ALF 37.82

LAUNCH DATE JAN 24 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 283.423

RL 147.27 LAL .00 LOL 123.84 VL 27.247 GAL -1.35 AZL 89.45 HCA 124.97 SMA 125.21 ECC .17768 INC .5479 VI 30.253  
 RP 108.55 LAP .45 LOP 248.80 VP 37.220 GAP -6.82 AZP 90.31 TAL 186.25 TAP 311.21 RCA 102.96 APO 147.46 V2 34.911  
 RC 60.976 GL 4.77 GP 21.31 ZAL 105.20 ZAP 31.15 ETS 322.91 ZAE 143.47 ETE 27.00 ZAC 127.13 ETC 144.33 CLP -23.28

PLANETOCENTRIC CONIC

C3 9.825 VHL 3.134 DLA 11.69 RAL 15.30 RAD 6567.4 VEL 11.455 PTH 1.99 VHP 5.413 DPA 34.70 RAP 35.06 ECC 1.1617  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 40 2 2429.95 -24.15 55.60 229.01 105.26 3 20 31 1830.0 -21.82 47.70  
 90.00 17 38 14 4331.07 4.26 179.30 225.82 61.98 18 50 25 3731.1 .48 172.66  
 100.00 4 7 18 2148.50 -25.08 34.60 228.71 106.82 4 43 6 1548.5 -22.54 26.73  
 100.00 18 53 39 4087.75 5.11 160.94 225.35 60.51 20 1 46 3487.7 1.15 154.40  
 110.00 5 28 56 1893.02 -27.56 14.26 227.77 111.07 6 0 29 1293.0 -24.44 6.47  
 110.00 19 48 29 3915.99 7.34 146.54 223.97 56.52 20 53 45 3316.0 2.89 140.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2341 TRA -.4245 TC3 1.6350 BAU .2528 SGT 1364.4 SGR 752.4 SG3 347.4 ST 490.4 SR 401.7 SS 255.7  
 RDE -.2195 RRA -.0053 RC3 1.0152 FAU .07072 RRT .8103 RRF -.8874 RTF -.8859 CRT .8780 CRS .8784 CST .9879  
 FDE .2589 FRA .4412 FC3-6.2318 BSP 4902 SGB 1558.1 R23 -.1731 R13 -.9157 LSA 663.9 MSA 158.7 SSA 35.0  
 BDE .3209 BRA .4245 BC3 1.9245 FSP -1022 SG1 1506.0 SG2 399.4 THA 26.05 EL1 615.1 EL2 153.3 ALF 38.55

LAUNCH DATE JAN 24 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 290.009

RL 147.27 LAL .00 LOL 123.84 VL 27.322 GAL -1.44 AZL 89.67 HCA 128.14 SMA 125.69 ECC .17343 INC .3328 VI 30.253  
 RP 108.58 LAP .26 LOP 251.98 VP 37.264 GAP -6.23 AZP 90.21 TAL 186.91 TAP 315.05 RCA 103.89 APO 147.49 V2 34.900  
 RC 63.000 GL 2.96 GP 23.47 ZAL 106.47 ZAP 34.60 ETS 324.14 ZAE 142.73 ETE 30.61 ZAC 125.96 ETC 142.91 CLP -26.18

PLANETOCENTRIC CONIC

C3 9.421 VHL 3.069 DLA 9.55 RAL 14.84 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 5.158 DPA 36.78 RAP 34.29 ECC 1.1551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 55 44 2350.83 -22.62 50.30 227.32 107.50 3 34 55 1750.8 -20.02 42.60  
 90.00 17 18 51 4393.68 6.25 182.83 224.75 62.33 18 32 5 3793.7 2.50 176.16  
 100.00 4 21 46 2073.35 -23.51 29.58 227.00 109.02 4 56 19 1473.4 -20.70 21.91  
 100.00 18 35 30 4146.39 7.07 164.20 224.30 60.88 19 44 37 3546.4 3.13 157.62  
 110.00 5 40 41 1826.41 -25.85 9.83 226.01 113.19 6 11 7 1226.4 -22.48 2.29  
 110.00 19 33 5 3966.09 9.22 149.21 222.99 56.94 20 39 11 3366.1 4.80 142.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2051 TRA -.4087 TC3 1.6952 BAU .2642 SGT 1352.0 SGR 845.3 SG3 381.1 ST 448.8 SR 373.4 SS 199.6  
 RDE -.1996 RRA -.0150 RC3 1.2352 FAU .07644 RRT .8345 RRF -.9174 RTF -.8867 CRT .8673 CRS .7902 CST .9697  
 FDE .1825 FRA .4582 FC3-7.0240 BSP 5030 SGB 1594.5 R23 -.1850 R13 -.9251 LSA 594.9 MSA 159.0 SSA 39.1  
 BDE .2862 BRA .4090 BC3 2.0974 FSP -1134 SG1 1541.3 SG2 408.6 THA 29.86 EL1 564.8 EL2 147.7 ALF 38.98

LAUNCH DATE JAN 24 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC DISTANCE 296.573  
 RL 147.27 LAL .00 LOL 123.84 VL 27.389 GAL -1.53 AZL 89.90 HCA 131.32 SMA 126.13 ECC .16967 INC .0974 V1 30.253  
 RP 108.62 LAP .07 LOP 255.16 VP 37.302 GAP -5.65 AZP 90.06 TAL 187.53 TAP 318.85 RCA 104.73 APO 147.53 V2 34.889  
 RC 65.076 GL .89 GP 25.90 ZAL 107.64 ZAP 38.31 ETS 325.27 ZAE 141.93 ETE 34.65 ZAC 124.43 ETC 141.59 CLP -29.27

PLANETOCENTRIC CONIC  
 C3 9.094 VHL 3.016 DLA 7.19 RAL 14.58 RAD 6567.3 VEL 11.423 PTH 1.98 VHP 4.934 DPA 39.04 RAP 33.12 ECC 1.1497  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 12 2268.20 -20.83 44.91 225.96 109.62 3 51 1 1668.2 -17.97 37.40  
 90.00 16 59 19 4462.56 8.41 186.74 224.05 62.86 18 13 41 3862.6 4.70 180.01  
 100.00 4 38 0 1994.73 -21.67 24.46 225.62 111.11 5 11 14 1394.7 -18.61 17.00  
 100.00 18 17 13 4211.26 9.20 167.83 223.62 61.43 19 27 24 3611.3 5.31 161.20  
 110.00 5 54 7 1756.53 -23.90 5.34 224.59 115.20 6 23 23 1156.5 -20.30 358.04  
 110.00 19 17 35 4022.23 11.29 152.24 222.37 57.52 20 24 37 3422.2 6.92 145.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1749 TRA -.3948 TC3 1.7210 BAU .2766 SGT 1326.4 SGR 958.4 SG3 415.3 ST 403.5 SR 333.4 SS 148.9  
 RDE -.1747 RRA -.0273 RC3 1.4883 FAU .08210 RRT .8507 RRF -.9405 RTF -.8854 CRT .8526 CRS .5218 CST .8511  
 FDE .0834 FRA .4825 FC3-7.8158 BSP 5163 SGB 1636.5 R23 -.1911 R13 -.9350 LSA 517.1 MSA 163.8 SSA 43.5  
 BDE .2472 BRA .3957 BC3 2.2753 FSP -1247 SG1 1580.9 SG2 422.7 THA 34.38 EL1 504.5 EL2 139.3 ALF 38.65

LAUNCH DATE JAN 24 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC DISTANCE 303.113  
 RL 147.27 LAL .00 LOL 123.84 VL 27.447 GAL -1.61 AZL 90.16 HCA 134.49 SMA 126.51 ECC .16637 INC .1598 V1 30.253  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.335 GAP -5.10 AZP 89.89 TAL 188.09 TAP 322.59 RCA 105.46 APO 147.56 V2 34.878  
 RC 67.198 GL -1.48 GP 28.64 ZAL 108.66 ZAP 42.29 ETS 326.38 ZAE 140.99 ETE 39.15 ZAC 122.52 ETC 140.41 CLP -32.55

PLANETOCENTRIC CONIC  
 C3 8.841 VHL 2.973 DLA 4.61 RAL 14.54 RAD 6567.3 VEL 11.412 PTH 1.98 VHP 4.744 DPA 41.48 RAP 31.49 ECC 1.1455  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 47 2181.19 -18.74 39.38 224.97 111.62 4 9 8 1581.2 -15.64 32.07  
 90.00 16 39 27 4538.75 10.74 191.11 223.76 63.64 17 55 6 3938.7 7.12 184.31  
 100.00 4 56 18 1911.84 -19.55 19.22 224.62 113.08 5 28 9 1311.8 -16.26 11.97  
 100.00 17 58 38 4283.33 11.52 171.93 223.36 62.22 19 10 1 3683.3 7.71 165.21  
 110.00 6 9 30 1682.72 -21.68 .76 223.56 117.10 6 37 33 1082.7 -17.88 353.70  
 110.00 19 1 55 4085.22 13.56 155.70 222.16 58.32 20 10 0 3485.2 9.28 149.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1428 TRA -.3815 TC3 1.7118 BAU .2916 SGT 1286.9 SGR 1094.7 SG3 448.7 ST 354.5 SR 276.8 SS 141.7  
 RDE -.1421 RRA -.0429 RC3 1.7769 FAU .08752 RRT .8605 RRF -.9577 RTF -.8825 CRT .8342 CRS -.1150 CST .3856  
 FDE -.0441 FRA .5140 FC3-8.5698 BSP 5354 SGB 1689.5 R23 -.1872 R13 -.9462 LSA 433.1 MSA 180.6 SSA 46.4  
 BDE .2015 BRA .3839 BC3 2.4673 FSP -1362 SG1 1631.2 SG2 440.0 THA 39.66 EL1 431.9 EL2 125.3 ALF 36.66

LAUNCH DATE JAN 24 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC DISTANCE 309.630  
 RL 147.27 LAL .00 LOL 123.84 VL 27.498 GAL -1.67 AZL 90.45 HCA 137.66 SMA 126.85 ECC .16349 INC .4487 V1 30.253  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.363 GAP -4.57 AZP 89.67 TAL 188.60 TAP 326.26 RCA 106.11 APO 147.59 V2 34.867  
 RC 69.360 GL -4.19 GP 31.69 ZAL 109.52 ZAP 46.54 ETS 327.54 ZAE 139.81 ETE 44.08 ZAC 120.22 ETC 139.43 CLP -36.05

PLANETOCENTRIC CONIC  
 C3 8.668 VHL 2.944 DLA 1.76 RAL 14.76 RAD 6567.3 VEL 11.404 PTH 1.97 VHP 4.591 DPA 44.09 RAP 29.30 ECC 1.1426  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 54 56 2088.65 -16.33 33.66 224.42 113.46 4 29 44 1488.6 -13.02 26.55  
 90.00 16 19 1 4623.72 13.26 196.08 223.97 64.75 17 36 5 4023.7 9.75 189.16  
 100.00 5 17 5 1823.63 -17.10 13.81 224.06 114.90 5 47 29 1223.6 -13.61 6.76  
 100.00 17 39 33 4363.97 14.03 176.60 223.58 63.33 18 52 17 3764.0 10.34 169.75  
 110.00 6 27 13 1604.15 -19.17 356.05 222.96 118.86 6 53 57 1004.1 -15.17 349.21  
 110.00 18 45 55 4156.21 16.06 159.68 222.43 59.41 19 55 11 3556.2 11.89 153.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1132 TRA -.3718 TC3 1.6471 BAU .3088 SGT 1230.0 SGR 1254.8 SG3 478.8 ST 310.6 SR 201.5 SS 210.4  
 RDE -.1000 RRA -.0642 RC3 2.0946 FAU .09215 RRT .8613 RRF -.9701 RTF -.8743 CRT .8315 CRS -.5297 CST -.0553  
 FDE -.1978 FRA .5592 FC3-9.2044 BSP 5538 SGB 1757.2 R23 -.1762 R13 -.9570 LSA 360.8 MSA 221.7 SSA 44.7  
 BDE .1510 BRA .3773 BC3 2.6647 FSP -1463 SG1 1695.2 SG2 462.6 THA 45.66 EL1 357.3 EL2 97.3 ALF 30.89

LAUNCH DATE JAN 24 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC DISTANCE 316.123  
 RL 147.27 LAL .00 LOL 123.84 VL 27.543 GAL -1.72 AZL 90.77 HCA 140.83 SMA 127.15 ECC .16099 INC .7742 V1 30.253  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.386 GAP -4.06 AZP 89.40 TAL 189.04 TAP 329.87 RCA 106.68 APO 147.62 V2 34.858  
 RC 71.560 GL -7.30 GP 35.08 ZAL 110.16 ZAP 51.04 ETS 328.85 ZAE 138.29 ETE 49.39 ZAC 117.51 ETC 138.68 CLP -39.79

PLANETOCENTRIC CONIC  
 C3 8.582 VHL 2.930 DLA -1.40 RAL 15.25 RAD 6567.3 VEL 11.401 PTH 1.97 VHP 4.480 DPA 46.87 RAP 26.46 ECC 1.1412  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 20 17 1989.03 -13.53 27.68 224.38 115.11 4 53 26 1389.0 -10.04 20.75  
 90.00 15 57 37 4719.59 15.97 201.82 224.74 66.30 17 16 17 4119.6 12.63 194.73  
 100.00 5 40 58 1728.73 -14.30 8.16 224.00 116.53 6 9 47 1128.7 -10.62 1.30  
 100.00 17 19 36 4455.11 16.74 182.01 224.37 64.87 18 33 52 3855.1 13.22 174.99  
 110.00 6 47 43 1519.77 -16.33 351.16 222.86 120.46 7 13 3 919.8 -12.16 344.53  
 110.00 18 29 21 4236.84 18.80 164.33 223.27 60.91 19 39 57 3636.8 14.78 157.52

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0860 TRA -.3629 TC3 1.5232 BAU .3292 SGT 1152.7 SGR 1438.8 SG3 502.7 ST 272.7 SR 110.6 SS 326.5  
 RDE -.0442 RRA -.0924 RC3 2.4317 FAU .09549 RRT .8528 RRF -.9789 RTF -.8597 CRT .9027 CRS -.4008 CST -.1895  
 FDE -.3800 FRA .6148 FC3-9.6323 BSP 5786 SGB 1843.6 R23 -.1559 R13 -.9676 LSA 345.8 MSA 268.7 SSA 37.6  
 BDE .0966 BRA .3745 BC3 2.8694 FSP -1546 SG1 1778.1 SG2 487.1 THA 52.34 EL1 290.8 EL2 44.6 ALF 20.62

LAUNCH DATE JAN 24 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 322.591

RL 147.27 LAL .00 LOL 123.84 VL 27.581 GAL -1.76 AZL 91.15 HCA 144.00 SMA 127.40 ECC .15884 INC 1.1469 V1 30.253  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.406 GAP -3.56 AZP 89.07 TAL 189.41 TAP 333.40 RCA 107.17 APO 147.64 V2 34.848  
 RC 73.792 GL -10.84 GP 38.81 ZAL 110.57 ZAP 55.75 ETS 330.39 ZAE 136.33 ETE 54.97 ZAC 114.42 ETC 138.23 CLP -43.77

PLANETOCENTRIC CONIC

C3 8.604 VHL 2.933 CLA -4.90 RAL 16.06 RAD 6567.3 VEL 11.402 PTH 1.97 VHP 4.420 DPA 49.79 RAP 22.84 ECC 1.1416  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 49 43 1880.26 -10.31 21.32 224.95 116.52 5 21 3 1280.3 -6.66 14.54  
 90.00 15 34 38 4829.33 18.85 208.59 226.21 68.47 16 55 8 4229.3 15.76 201.28  
 100.00 6 8 45 1625.30 -11.07 2.18 224.55 117.94 6 35 50 1025.3 -7.25 355.47  
 100.00 16 58 17 4559.52 19.64 188.40 225.86 67.01 18 14 17 3959.5 16.36 181.15  
 110.00 7 11 42 1428.21 -13.10 346.03 223.35 121.86 7 35 30 828.2 -8.79 339.57  
 110.00 18 11 49 4329.37 21.76 169.87 224.80 62.97 19 23 59 3729.4 17.96 162.80

DIFFERENTIAL CORRECTIONS

TDE -.0620 TRA -.3520 TC3 1.3479 BAU .3552  
 RDE .0313 RRA -.1287 RC3 2.7783 FAU .09728  
 FDE -.5927 FRA .6752 FC3-9.7876 BSP 6162  
 BDE .0694 BRA .3748 BC3 3.0880 FSP -1611

MID-COURSE EXECUTION ACCURACY

SGT 1056.5 SGR 1650.5 SG3 518.9  
 RRT .8348 RRF -.9851 RTF -.8376  
 SGB 1959.6 R23 -.1266 R13 -.9773  
 SG1 1892.9 SG2 507.2 THA 59.46

ORBIT DETERMINATION ACCURACY

ST 241.0 SR 108.9 SS 472.0  
 CRT .3599 CRS .8115 CST -.1806  
 LSA 482.4 MSA 243.3 SSA 28.7  
 EL1 244.8 EL2 100.0 ALF 11.12

LAUNCH DATE JAN 24 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 329.034

RL 147.27 LAL .00 LOL 123.84 VL 27.613 GAL -1.79 AZL 91.58 HCA 147.16 SMA 127.62 ECC .15701 INC 1.5805 V1 30.253  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.421 GAP -3.09 AZP 88.67 TAL 189.70 TAP 336.86 RCA 107.58 APO 147.66 V2 34.839  
 RC 76.053 GL -14.90 GP 42.85 ZAL 110.68 ZAP 60.62 ETS 332.26 ZAE 133.85 ETE 60.69 ZAC 110.98 ETC 138.13 CLP -47.99

PLANETOCENTRIC CONIC

C3 8.767 VHL 2.961 CLA -8.82 RAL 17.23 RAD 6567.3 VEL 11.409 PTH 1.97 VHP 4.418 DPA 52.78 RAP 18.30 ECC 1.1443  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 24 34 1759.43 -6.56 14.42 226.28 117.61 5 53 54 1159.4 -2.81 7.75  
 90.00 15 9 8 4957.30 21.83 216.78 228.54 71.51 16 31 45 4357.3 19.11 209.17  
 100.00 6 41 37 1510.86 -7.35 355.72 225.85 119.06 7 6 48 910.9 -3.42 349.14  
 100.00 16 34 46 4681.10 22.68 196.15 228.22 69.99 17 52 47 4081.1 19.75 188.58  
 110.00 7 40 5 1327.80 -9.43 340.56 224.59 123.01 8 2 13 727.8 -5.02 334.25  
 110.00 17 52 48 4436.92 24.93 176.61 227.22 65.82 19 6 44 3836.9 21.45 169.19

DIFFERENTIAL CORRECTIONS

TDE -.0493 TRA -.3420 TC3 1.0978 BAU .3841  
 RDE .1288 RRA -.1795 RC3 3.0874 FAU .09632  
 FDE -.8157 FRA .7501 FC3-9.5116 BSP 6572  
 BDE .1379 BRA .3863 BC3 3.2767 FSP -1625

MID-COURSE EXECUTION ACCURACY

SGT 938.2 SGR 1878.4 SG3 521.1  
 RRT .7946 RRF -.9893 RTF -.7944  
 SGB 2099.7 R23 -.0961 R13 -.9847  
 SG1 2032.6 SG2 526.5 THA 66.70

ORBIT DETERMINATION ACCURACY

ST 223.3 SR 276.1 SS 628.9  
 CRT -.0244 CRS .9873 CST -.1597  
 LSA 686.4 MSA 223.5 SSA 21.0  
 EL1 276.2 EL2 223.1 ALF 93.25

LAUNCH DATE JAN 24 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 335.451

RL 147.27 LAL .00 LOL 123.84 VL 27.639 GAL -1.81 AZL 92.10 HCA 150.32 SMA 127.80 ECC .15546 INC 2.0951 V1 30.253  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.433 GAP -2.63 AZP 88.18 TAL 189.91 TAP 340.23 RCA 107.93 APO 147.67 V2 34.831  
 RC 78.340 GL -19.53 GP 47.21 ZAL 110.43 ZAP 65.54 ETS 334.54 ZAE 130.80 ETE 66.42 ZAC 107.23 ETC 138.43 CLP -52.45

PLANETOCENTRIC CONIC

C3 9.129 VHL 3.021 CLA -13.19 RAL 18.83 RAD 6567.3 VEL 11.424 PTH 1.98 VHP 4.488 DPA 55.79 RAP 12.69 ECC 1.1502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 7 0 1621.93 -2.17 6.71 228.62 118.24 6 34 2 1021.9 1.63 .08  
 90.00 14 39 25 5110.33 24.77 227.03 231.98 75.83 16 4 36 4510.3 22.58 219.05  
 100.00 7 21 29 1381.64 -3.02 348.56 228.15 119.75 7 44 30 781.6 .96 342.04  
 100.00 16 7 38 4825.85 25.72 205.83 231.70 74.22 17 28 4 4225.8 23.31 197.86  
 110.00 8 14 16 1216.27 -5.24 334.64 226.77 123.83 8 34 33 616.3 -.76 328.42  
 110.00 17 31 19 4563.98 28.20 185.04 230.80 69.83 18 47 23 3964.0 25.20 177.16

DIFFERENTIAL CORRECTIONS

TDE -.0505 TRA -.3276 TC3 .7935 BAU .4171  
 RDE .2571 RRA -.2467 RC3 3.3245 FAU .09256  
 FDE -1.0433 FRA .8256 FC3-8.7781 BSP 7075  
 BDE .2620 BRA .4100 BC3 3.4179 FSP -1591

MID-COURSE EXECUTION ACCURACY

SGT 803.8 SGR 2122.3 SG3 508.5  
 RRT .7169 RRF -.9922 RTF -.7144  
 SGB 2269.4 R23 -.0659 R13 -.9900  
 SG1 2204.4 SG2 539.5 THA 73.81

ORBIT DETERMINATION ACCURACY

ST 214.5 SR 512.0 SS 792.1  
 CRT -.1664 CRS .9980 CST -.2168  
 LSA 943.8 MSA 211.0 SSA 15.3  
 EL1 513.5 EL2 210.9 ALF 94.80

LAUNCH DATE JAN 24 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 341.843

RL 147.27 LAL .00 LOL 123.84 VL 27.661 GAL -1.82 AZL 92.72 HCA 153.47 SMA 127.95 ECC .15418 INC 2.7197 V1 30.253  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.442 GAP -2.18 AZP 87.57 TAL 190.04 TAP 343.51 RCA 108.22 APO 147.68 V2 34.824  
 RC 80.651 GL -24.79 GP 51.83 ZAL 109.77 ZAP 70.41 ETS 337.33 ZAE 127.18 ETE 72.04 ZAC 103.25 ETC 139.18 CLP -57.15

PLANETOCENTRIC CONIC

C3 9.790 VHL 3.129 CLA -18.05 RAL 20.92 RAD 6567.4 VEL 11.453 PTH 1.99 VHP 4.648 DPA 58.72 RAP 5.82 ECC 1.1611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 0 58 1458.87 3.09 357.61 232.37 118.16 7 25 17 858.9 6.83 350.93  
 90.00 14 2 10 5300.74 27.27 240.40 236.81 82.07 15 30 31 4700.7 25.89 232.01  
 100.00 8 11 37 1230.88 2.09 340.29 231.81 119.83 8 32 8 630.9 6.04 333.73  
 100.00 15 34 12 5003.97 28.41 218.37 236.61 80.29 16 57 36 4404.0 26.77 209.95  
 110.00 8 56 29 1090.28 -.44 328.05 230.24 124.18 9 14 40 490.3 4.05 321.84  
 110.00 17 5 49 4717.33 31.32 195.88 235.89 75.55 18 24 26 4117.3 29.02 187.44

DIFFERENTIAL CORRECTIONS

TDE -.0719 TRA -.3044 TC3 .4583 BAU .4540  
 RDE .4263 RRA -.3346 RC3 3.4385 FAU .08592  
 FDE -1.2614 FRA .8934 FC3-7.5977 BSP 7723  
 BDE .4323 BRA .4523 BC3 3.4689 FSP -1514

MID-COURSE EXECUTION ACCURACY

SGT 665.7 SGR 2377.9 SG3 480.3  
 RRT .5635 RRF -.9942 RTF -.5588  
 SGB 2469.4 R23 -.0390 R13 -.9935  
 SG1 2409.0 SG2 542.9 THA 80.55

ORBIT DETERMINATION ACCURACY

ST 219.9 SR 806.7 SS 952.1  
 CRT -.3848 CRS .9995 CST -.4071  
 LSA 1251.0 MSA 201.8 SSA 11.2  
 EL1 811.5 EL2 201.8 ALF 96.38

LAUNCH DATE JAN 24 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 348.208

RL 147.27 LAL .00 LOL 123.84 VL 27.678 GAL -1.81 AZL 93.50 HCA 156.63 SMA 128.07 ECC .15313 INC 3.4990 V1 30.253  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.448 GAP -1.75 AZP 86.79 TAL 190.09 TAP 346.71 RCA 108.46 APO 147.68 V2 34.816  
 RC 82.981 GL -30.71 GP 56.70 ZAL 108.62 ZAP 75.08 ETS 340.69 ZAE 122.99 ETE 77.50 ZAC 99.11 ETC 140.41 CLP -62.04

PLANETOCENTRIC CONIC

C3 10.932 VHL 3.306 DLA -23.40 RAL 23.62 RAD 6567.4 VEL 11.503 PTH 2.00 VHP 4.923 DPA 61.47 RAP 357.49 ECC 1.1799  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 16 27 1244.87 9.83 345.50 238.29 116.69 8 37 12 644.9 13.34 338.57  
 90.00 13 8 12 5559.18 28.28 259.20 243.15 91.41 14 40 51 4959.2 28.18 250.53  
 100.00 9 19 28 1041.50 8.42 329.80 237.54 118.79 9 36 49 441.5 12.20 323.05  
 100.00 14 47 52 5237.78 29.88 235.56 243.16 89.19 16 15 10 4637.8 29.45 226.78  
 110.00 9 50 48 943.25 5.17 320.36 235.55 123.84 10 6 31 343.2 9.58 314.05  
 110.00 16 33 2 4908.80 33.68 210.30 242.89 83.76 17 54 50 4308.8 32.45 201.28

DIFFERENTIAL CORRECTIONS

TOE -.1273 TRA -.2691 TC3 .1126 BAU .4904  
 RDE .6424 RRA -.4539 RC3 3.3535 FAU .07609  
 FDE -1.4387 FRA .9530 FC3 -6.0258 BSP 8394  
 BDE .6549 BRA .5277 BC3 3.3554 FSP -1376

MID-COURSE EXECUTION ACCURACY

SGT 558.9 SGR 2625.2 SG3 434.9  
 RRT .2419 RRF -.9956 RTF -.2349  
 SGB 2684.0 R23 -.0171 R13 -.9954  
 SG1 2628.8 SG2 541.5 THA 86.92

ORBIT DETERMINATION ACCURACY

ST 268.2 SR 1144.5 SS 1086.3  
 CRT -.6721 CRS .9998 CST -.6827  
 LSA 1588.5 MSA 196.3 SSA 8.3  
 EL1 1159.1 EL2 196.1 ALF 99.22

LAUNCH DATE JAN 24 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 354.545

RL 147.27 LAL .00 LOL 123.84 VL 27.691 GAL -1.79 AZL 94.51 HCA 159.77 SMA 128.15 ECC .15230 INC 4.5050 V1 30.253  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.452 GAP -1.34 AZP 85.77 TAL 190.05 TAP 349.82 RCA 108.64 APO 147.67 V2 34.810  
 RC 85.328 GL -37.25 GP 61.80 ZAL 106.95 ZAP 79.40 ETS 344.71 ZAE 118.29 ETE 82.80 ZAC 94.90 ETC 142.18 CLP -67.08

PLANETOCENTRIC CONIC

C3 12.900 VHL 3.592 DLA -29.18 RAL 27.05 RAD 6567.5 VEL 11.588 PTH 2.03 VHP 5.358 DPA 63.90 RAP 347.48 ECC 1.2123  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.64 9 55 9 989.53 22.55 332.53 249.00 109.03 10 11 38 389.5 24.94 324.60  
 97.36 11 56 52 5884.07 22.56 281.57 249.00 109.02 13 34 56 5284.1 24.95 273.64  
 100.00 11 22 38 705.90 18.65 310.15 247.37 113.79 11 34 24 105.9 21.71 302.69  
 100.00 13 12 4 5642.94 26.57 265.04 250.32 104.23 14 46 7 5042.9 28.26 256.65  
 110.00 11 7 13 754.42 12.19 310.25 243.81 122.18 11 19 48 154.4 16.36 303.62  
 110.00 15 43 58 5167.19 33.77 230.41 251.77 95.62 17 10 5 4567.2 34.18 221.19

DIFFERENTIAL CORRECTIONS

TOE -.2302 TRA -.2101 TC3 -.1842 BAU .5256  
 RDE .9218 RRA -.6124 RC3 3.0417 FAU .06405  
 FDE -1.5617 FRA .9900 FC3 -4.2983 BSP 9153  
 BDE .9501 BRA .6475 BC3 3.0473 FSP -1200

MID-COURSE EXECUTION ACCURACY

SGT 547.5 SGR 2861.6 SG3 376.7  
 RRT -.2549 RRF -.9965 RTF .2634  
 SGB 2913.5 R23 -.0004 R13 -.9966  
 SG1 2865.1 SG2 528.7 THA 92.89

ORBIT DETERMINATION ACCURACY

ST 384.8 SR 1509.7 SS 1181.2  
 CRT -.8632 CRS .9999 CST -.8683  
 LSA 1945.8 MSA 190.4 SSA 6.2  
 EL1 1546.4 EL2 189.7 ALF 102.60

LAUNCH DATE JAN 24 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 360.851

RL 147.27 LAL .00 LOL 123.84 VL 27.700 GAL -1.76 AZL 95.86 HCA 162.91 SMA 128.21 ECC .15167 INC 5.8624 V1 30.253  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.453 GAP -.94 AZP 84.39 TAL 189.92 TAP 352.83 RCA 108.77 APO 147.66 V2 34.804  
 RC 87.691 GL -44.28 GP 67.15 ZAL 104.77 ZAP 83.20 ETS 349.50 ZAE 113.08 ETE 88.06 ZAC 90.66 ETC 144.61 CLP -72.24

PLANETOCENTRIC CONIC

C3 16.410 VHL 4.051 DLA -35.20 RAL 31.37 RAD 6567.7 VEL 11.739 PTH 2.07 VHP 6.029 DPA 65.88 RAP 335.55 ECC 1.2701  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.15 8 32 47 1355.09 25.46 1.55 258.90 115.17 8 55 22 755.1 28.63 353.72  
 111.85 13 53 41 5625.33 25.48 263.27 258.91 115.16 15 27 27 5025.3 28.64 255.44  
 68.15 8 32 47 1355.09 25.46 1.55 258.90 115.17 8 55 22 755.1 28.63 353.72  
 111.85 13 53 41 5625.33 25.48 263.27 258.91 115.16 15 27 27 5025.3 28.64 255.44  
 68.15 8 32 47 1355.09 25.46 1.55 258.90 115.17 8 55 22 755.1 28.63 353.72  
 111.85 13 53 41 5625.33 25.48 263.27 258.91 115.16 15 27 27 5025.3 28.64 255.44

DIFFERENTIAL CORRECTIONS

TOE -.4078 TRA -.1111 TC3 -.3879 BAU .5519  
 RDE 1.2746 RRA -.8307 RC3 2.4857 FAU .05029  
 FDE -1.6043 FRA 1.0041 FC3 -2.6532 BSP 9863  
 BDE 1.3383 BRA .8381 BC3 2.5158 FSP -986

MID-COURSE EXECUTION ACCURACY

SGT 684.4 SGR 3061.6 SG3 309.0  
 RRT -.6663 RRF -.9972 RTF .6741  
 SGB 3137.1 R23 .0119 R13 -.9972  
 SG1 3096.3 SG2 504.6 THA 98.71

ORBIT DETERMINATION ACCURACY

ST 579.7 SR 1854.7 SS 1213.2  
 CRT -.9445 CRS .9999 CST -.9474  
 LSA 2283.5 MSA 183.7 SSA 4.6  
 EL1 1934.6 EL2 182.6 ALF 106.60

LAUNCH DATE JAN 24 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 367.121

RL 147.27 LAL .00 LOL 123.84 VL 27.705 GAL -1.71 AZL 97.81 HCA 166.03 SMA 128.25 ECC .15121 INC 7.8060 V1 30.253  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.452 GAP -.56 AZP 82.42 TAL 189.70 TAP 355.73 RCA 108.86 APO 147.64 V2 34.799  
 RC 90.065 GL -51.49 GP 72.87 ZAL 102.14 ZAP 86.34 ETS 355.32 ZAE 107.32 ETE 93.61 ZAC 86.43 ETC 148.02 CLP -77.47

PLANETOCENTRIC CONIC

C3 23.101 VHL 4.806 DLA -41.12 RAL 36.72 RAD 6567.9 VEL 12.020 PTH 2.15 VHP 7.078 DPA 67.21 RAP 321.44 ECC 1.3802  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.84 8 7 33 1571.22 26.50 19.95 271.88 122.67 8 33 44 971.2 30.60 12.55  
 121.16 15 1 36 5571.05 26.51 259.45 271.89 122.67 16 34 27 4971.1 30.61 252.04  
 58.84 8 7 33 1571.22 26.50 19.95 271.88 122.67 8 33 44 971.2 30.60 12.55  
 121.16 15 1 36 5571.05 26.51 259.45 271.89 122.67 16 34 27 4971.1 30.61 252.04  
 58.84 8 7 33 1571.22 26.50 19.95 271.88 122.67 8 33 44 971.2 30.60 12.55  
 121.16 15 1 36 5571.05 26.51 259.45 271.89 122.67 16 34 27 4971.1 30.61 252.04

DIFFERENTIAL CORRECTIONS

TOE -.7042 TRA .0672 TC3 -.4572 BAU .5631  
 RDE 1.7249 RRA -1.1362 RC3 1.7649 FAU .03623  
 FDE -1.5646 FRA .9924 FC3 -1.3577 BSP 10573  
 BDE 1.8631 BRA 1.1382 BC3 1.8231 FSP -765

MID-COURSE EXECUTION ACCURACY

SGT 953.4 SGR 3215.4 SG3 238.9  
 RRT -.8686 RRF -.9978 RTF .8746  
 SGB 3353.8 R23 .0200 R13 -.9977  
 SG1 3322.5 SG2 457.3 THA 104.73

ORBIT DETERMINATION ACCURACY

ST 840.1 SR 2126.4 SS 1176.6  
 CRT -.9762 CRS 1.0000 CST -.9781  
 LSA 2565.6 MSA 171.2 SSA 3.4  
 EL1 2280.0 EL2 170.0 ALF 111.21

LAUNCH DATE JAN 24 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 373.344

RL 147.27 LAL .00 LOL 123.84 VL 27.706 GAL -1.65 AZL 100.83 HCA 169.12 SMA 128.26 ECC .15091 INC10.8337 V1 30.253  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.449 GAP -.20 AZP 79.36 TAL 189.37 TAP 358.50 RCA 108.91 APO 147.62 V2 34.795  
 RC 92.449 GL -58.38 GP 79.19 ZAL 99.24 ZAP 88.69 ETS 3.25 ZAE 100.84 ETE 100.68 ZAC 82.09 ETC 153.60 CLP -82.99

PLANETOCENTRIC CONIC

C3 37.370 VHL 6.113 CLA -46.37 RAL 43.08 RAD 6568.5 VEL 12.599 PTH 2.29 VHP 8.812 DPA 67.57 RAP 304.91 ECC 1.6150  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.61 8 4 13 1767.80 24.23 35.74 287.66 130.82 8 33 41 1167.8 29.30 29.23  
 128.39 15 55 43 5614.59 24.24 261.48 287.67 130.82 17 29 18 5014.6 29.31 254.96  
 51.61 8 4 13 1767.80 24.23 35.74 287.66 130.82 8 33 41 1167.8 29.30 29.23  
 128.39 15 55 43 5614.59 24.24 261.48 287.67 130.82 17 29 18 5014.6 29.31 254.96  
 51.61 8 4 13 1767.80 24.23 35.74 287.66 130.82 8 33 41 1167.8 29.30 29.23  
 128.39 15 55 43 5614.59 24.24 261.48 287.67 130.82 17 29 18 5014.6 29.31 254.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.2227 TRA .4402 TC3 -.3944 BAU .5377 SGT 1379.7 SGR 3271.5 SG3 172.8 ST 1160.1 SR 2244.2 SS 1079.9  
 RDE 2.2939 RRA -1.5759 RC3 1.0013 FAU .02281 RRT -.9603 RRF -.9984 RTF .9635 CRT -.9909 CRS 1.0000 CST -.9920  
 FDE -1.4536 FRA .9674 FC3 -.5284 BSP 11222 SGB 3550.6 R23 .0242 R13 -.9983 LSA 2743.8 MSA 140.3 SSA 2.4  
 BDE 2.5995 BRA 1.6362 BC3 1.0762 FSP -.555 SG1 3532.6 SG2 356.6 THA 112.29 EL1 2522.5 EL2 138.9 ALF 117.21

LAUNCH DATE JAN 24 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 379.488

RL 147.27 LAL .00 LOL 123.84 VL 27.705 GAL -1.57 AZL 106.20 HCA 172.17 SMA 128.25 ECC .15073 INC16.2022 V1 30.253  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.444 GAP .14 AZP 73.94 TAL 188.91 TAP 1.08 RCA 108.92 APO 147.58 V2 34.791  
 RC 94.840 GL -63.95 GP 86.73 ZAL 96.29 ZAP 90.15 ETS 21.69 ZAE 93.08 ETE 117.84 ZAC 77.34 ETC 170.05 CLP -92.68

PLANETOCENTRIC CONIC

C3 73.981 VHL 8.601 CLA -50.02 RAL 49.86 RAD 6569.4 VEL 13.976 PTH 2.55 VHP 12.001 DPA 66.28 RAP 285.82 ECC 2.2175  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.88 8 15 6 1975.73 17.49 49.02 304.52 137.65 8 48 1 1375.7 23.31 43.58  
 133.12 16 38 56 5743.10 17.51 266.99 304.54 137.64 18 14 39 5143.1 23.33 261.54  
 46.88 8 15 6 1975.73 17.49 49.02 304.52 137.65 8 48 1 1375.7 23.31 43.58  
 133.12 16 38 56 5743.10 17.51 266.99 304.54 137.64 18 14 39 5143.1 23.33 261.54  
 46.88 8 15 6 1975.73 17.49 49.02 304.52 137.65 8 48 1 1375.7 23.31 43.58  
 133.12 16 38 56 5743.10 17.51 266.99 304.54 137.64 18 14 39 5143.1 23.33 261.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -2.4268 TRA 1.6295 TC3 -.2528 BAU .4100 SGT 2378.3 SGR 2851.0 SG3 117.2 ST 1694.2 SR 1995.3 SS 969.2  
 RDE 2.8493 RRA -1.9783 RC3 .3284 FAU .01040 RRT -.9997 RRF -.9987 RTF .9987 CRT -1.0000 CRS .9999 CST -.9997  
 FDE -1.3279 FRA .9706 FC3 -.1217 BSP 11766 SGB 3712.8 R23 -.0029 R13 -.9988 LSA 2791.2 MSA 21.7 SSA 1.6  
 BDE 3.7427 BRA 2.5630 BC3 .4145 FSP -379 SG1 3712.5 SG2 41.3 THA 129.83 EL1 2617.5 EL2 12.6 ALF 130.33

LAUNCH DATE JAN 24 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 385.447

RL 147.27 LAL .00 LOL 123.84 VL 27.701 GAL -1.45 AZL 118.03 HCA 175.06 SMA 128.22 ECC .15062 INC28.0271 V1 30.253  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.438 GAP .43 AZP 62.06 TAL 188.20 TAP 3.26 RCA 108.91 APO 147.53 V2 34.788  
 RC 97.236 GL -65.70 GP 82.44 ZAL 93.54 ZAP 90.69 ETS 149.15 ZAE 82.12 ETE 243.85 ZAC 71.07 ETC 296.74 CLP 95.27

PLANETOCENTRIC CONIC

C3 203.824 VHL 14.277 CLA -50.04 RAL 54.58 RAD 6571.1 VEL 18.032 PTH 3.01 VHP 19.121 DPA 61.32 RAP 263.93 ECC 4.3544  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.85 8 33 49 2174.64 7.32 57.35 318.38 139.64 9 10 4 1574.6 13.38 52.45  
 133.15 16 57 49 653.60 7.33 297.38 318.40 139.64 17 8 43 53.6 13.39 292.48  
 46.85 8 33 49 2174.64 7.32 57.35 318.38 139.64 9 10 4 1574.6 13.38 52.45  
 133.15 16 57 49 653.60 7.33 297.38 318.40 139.64 17 8 43 53.6 13.39 292.48  
 46.85 8 33 49 2174.64 7.32 57.35 318.38 139.64 9 10 4 1574.6 13.38 52.45  
 133.15 16 57 49 653.60 7.33 297.38 318.40 139.64 17 8 43 53.6 13.39 292.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7759 TRA 1.9009 TC3 -.0091 BAU .1365 SGT 1228.2 SGR 3589.9 SG3 78.0 ST 473.2 SR 2522.3 SS 972.1  
 RDE -5.9587 RRA 4.2791 RC3 .0493 FAU -.00402 RRT .5506 RRF .9969 RTF .6124 CRT -.3844 CRS -.9987 CST .3374  
 FDE -1.3648 FRA 1.1469 FC3 .0171 BSP 11964 SGB 3794.1 R23 -.0200 R13 .9996 LSA 2708.8 MSA 439.4 SSA .8  
 BDE 6.0090 BRA 4.6823 BC3 .0501 FSP -252 SG1 3658.3 SG2 1006.1 THA 78.45 EL1 2529.0 EL2 435.7 ALF 94.25

LAUNCH DATE JAN 24 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 390.643

RL 147.27 LAL .00 LOL 123.84 VL 27.694 GAL -1.17 AZL 153.90 HCA 177.27 SMA 128.17 ECC .15032 INC63.8978 V1 30.253  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.431 GAP .51 AZP 26.13 TAL 186.61 TAP 3.88 RCA 108.91 APO 147.44 V2 34.786  
 RC 99.636 GL -53.97 GP 60.10 ZAL 91.39 ZAP 90.43 ETS 173.89 ZAE 59.65 ETE 267.59 ZAC 59.24 ETC 327.15 CLP 90.86

PLANETOCENTRIC CONIC

C3 945.319 VHL 30.746 CLA -38.30 RAL 50.26 RAD 6572.9 VEL 32.659 PTH 3.49 VHP 39.511 DPA 44.26 RAP 239.36 ECC16.5576  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.06 9 21 10 2146.90 -.16 47.66 320.44 128.30 9 56 57 1546.9 4.79 41.78  
 116.94 15 36 4 969.65 -.14 318.61 320.46 128.30 15 52 14 369.6 4.81 312.73  
 63.06 9 21 10 2146.90 -.16 47.66 320.44 128.30 9 56 57 1546.9 4.79 41.78  
 116.94 15 36 4 969.65 -.14 318.61 320.46 128.30 15 52 14 369.6 4.81 312.73  
 63.06 9 21 10 2146.90 -.16 47.66 320.44 128.30 9 56 57 1546.9 4.79 41.78  
 116.94 15 36 4 969.65 -.14 318.61 320.46 128.30 15 52 14 369.6 4.81 312.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.1035 TRA -.7573 TC3 -.0771 BAU 2.9690 SGT 1077.8 SGR 3296.1 SG3 59.3 ST 952.7 SR 1923.5 SS 1369.4  
 RDE -9.5596 RRA10.1671 RC3 -.2219 FAU -.04991 RRT -.7813 RRF 1.0000 RTF -.7808 CRT -.9462 CRS -1.0000 CST .9463  
 FDE -1.9938 FRA 2.1194 FC3 .0457 BSP 10403 SGB 3467.8 R23 -.0515 R13 .9987 LSA 2529.8 MSA 287.7 SSA .4  
 BDE10.8366 BRA10.1953 BC3 .2349 FSP -184 SG1 3406.1 SG2 651.0 THA 104.89 EL1 2128.3 EL2 278.6 ALF 115.58

LAUNCH DATE JAN 24 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 399.910

RL 147.27 LAL .00 LOL 123.84 VL 27.684 GAL -1.67 AZL 37.21 HCA 183.24 SMA 128.11 ECC .15231 INC52.7920 V1 30.253  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.423 GAP 1.66 AZP 142.75 TAL 189.38 TAP 12.62 RCA 108.60 APO 147.62 V2 34.784  
 RC 102.038 GL 58.41 GP -69.04 ZAL 92.19 ZAP 91.97 ETS 178.04 ZAE 69.72 ETE 86.53 ZAC 88.87 ETC 40.52 CLP 95.51

PLANETOCENTRIC CONIC

C3 669.477 VHL 25.874 DLA 62.20 RAL 347.47 RAD 6572.6 VEL 28.121 PTH 3.42 VHP 30.926 DPA -68.90 RAP 153.42 ECC12.0179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.99 15 23 3 5028.64 -0.95 241.44 256.98 27.80 16 46 51 4428.6 -8.02 238.10  
 148.01 1 13 15 3337.44 -0.94 101.52 256.97 27.80 2 8 52 2737.4 -8.01 98.18  
 31.99 15 23 3 5028.64 -0.95 241.44 256.98 27.80 16 46 51 4428.6 -8.02 238.10  
 148.01 1 13 15 3337.44 -0.94 101.52 256.97 27.80 2 8 52 2737.4 -8.01 98.18  
 31.99 15 23 3 5028.64 -0.95 241.44 256.98 27.80 16 46 51 4428.6 -8.02 238.10  
 148.01 1 13 15 3337.44 -0.94 101.52 256.97 27.80 2 8 52 2737.4 -8.01 98.18

DIFFERENTIAL CORRECTIONS

TOE-3.0172 TRA 2.1914 TC3 -.0972 BAU 2.1295 SGT 1334.8 SGR 3581.3 SG3 63.7 ST 737.6 SR 3158.7 SS 1728.5  
 RDE-14.1509 RRA 2.7813 RC3 -.2172 FAU-.03344 RRT .8436 RRF -.9997 RTF -.8533 CRT .9519 CRS 1.0000 CST .9543  
 FDE 2.8951 FRA -.6052 FC3 .0432 BSP 11731 SGB 3822.0 R23 -.0406 R13 -.9991 LSA 3668.8 MSA 220.9 SSA .9  
 BDE14.4690 BRA 3.5408 BC3 .2379 FSP -205 SG1 3760.5 SG2 682.7 THA 71.93 EL1 3236.1 EL2 220.6 ALF 77.41

LAUNCH DATE JAN 24 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 405.439

RL 147.27 LAL .00 LOL 123.84 VL 27.672 GAL -1.44 AZL 62.19 HCA 185.79 SMA 128.03 ECC .15232 INC27.8129 V1 30.253  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.413 GAP 1.82 AZP 117.69 TAL 188.08 TAP 13.87 RCA 108.53 APO 147.53 V2 34.783  
 RC 104.441 GL 65.62 GP -84.38 ZAL 93.56 ZAP 94.16 ETS 193.95 ZAE 86.96 ETE 103.35 ZAC 98.61 ETC 57.67 CLP 137.85

PLANETOCENTRIC CONIC

C3 200.835 VHL 14.172 DLA 64.89 RAL 331.70 RAD 6571.1 VEL 17.949 PTH 3.00 VHP 16.253 DPA -71.05 RAP 101.13 ECC 4.3052  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.81 14 12 38 4913.78 -8.81 240.14 237.55 25.43 15 34 32 4313.8 -16.01 236.99  
 151.19 0 17 50 3197.95 -8.80 96.56 237.53 25.43 1 11 8 2598.0 -16.00 93.41  
 28.81 14 12 38 4913.78 -8.81 240.14 237.55 25.43 15 34 32 4313.8 -16.01 236.99  
 151.19 0 17 50 3197.95 -8.80 96.56 237.53 25.43 1 11 8 2598.0 -16.00 93.41  
 28.81 14 12 38 4913.78 -8.81 240.14 237.55 25.43 15 34 32 4313.8 -16.01 236.99  
 151.19 0 17 50 3197.95 -8.80 96.56 237.53 25.43 1 11 8 2598.0 -16.00 93.41

DIFFERENTIAL CORRECTIONS

TOE 1.9719 TRA .8946 TC3 -.0183 BAU .1487 SGT 1168.3 SGR 3983.8 SG3 91.5 ST 837.3 SR 2998.3 SS 1156.3  
 RDE-7.1307 RRA 2.8812 RC3 -.0522 FAU-.00020 RRT .0106 RRF -.9986 RTF .0319 CRT -.8317 CRS .9998 CST -.8432  
 FDE 1.9698 FRA -.7329 FC3 .0009 BSP 13669 SGB 4151.6 R23 -.0435 R13 -.9985 LSA 3289.8 MSA 452.8 SSA 1.4  
 BDE 7.3984 BRA 3.0169 BC3 .0554 FSP -314 SG1 3983.9 SG2 1168.2 THA 89.80 EL1 3079.9 EL2 452.6 ALF 103.37

LAUNCH DATE JAN 24 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 411.398

RL 147.27 LAL .00 LOL 123.84 VL 27.659 GAL -1.29 AZL 71.21 HCA 188.74 SMA 127.93 ECC .15275 INC18.7854 V1 30.253  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.403 GAP 2.09 AZP 108.58 TAL 187.18 TAP 15.93 RCA 108.39 APO 147.48 V2 34.783  
 RC 106.844 GL 65.00 GP -80.94 ZAL 94.70 ZAP 97.25 ETS 308.62 ZAE 96.39 ETE 218.24 ZAC 103.03 ETC 172.86 CLP-143.24

PLANETOCENTRIC CONIC

C3 96.531 VHL 9.825 DLA 63.67 RAL 331.57 RAD 6569.9 VEL 14.761 PTH 2.67 VHP 10.858 DPA -66.85 RAP 75.64 ECC 2.5887  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.25 14 15 27 4771.90 -16.99 235.36 232.88 27.63 15 34 59 4171.9 -24.04 231.73  
 149.75 0 13 56 3066.81 -16.98 93.42 232.86 27.63 1 5 3 2466.8 -24.03 89.78  
 30.25 14 15 27 4771.90 -16.99 235.36 232.88 27.63 15 34 59 4171.9 -24.04 231.73  
 149.75 0 13 56 3066.81 -16.98 93.42 232.86 27.63 1 5 3 2466.8 -24.03 89.78  
 30.25 14 15 27 4771.90 -16.99 235.36 232.88 27.63 15 34 59 4171.9 -24.04 231.73  
 149.75 0 13 56 3066.81 -16.98 93.42 232.86 27.63 1 5 3 2466.8 -24.03 89.78

DIFFERENTIAL CORRECTIONS

TOE 4.8885 TRA-2.1148 TC3 -.2280 BAU .3183 SGT 4007.7 SGR 1395.5 SG3 136.3 ST 2970.4 SR 1005.9 SS 1144.4  
 RDE 1.6471 RRA -.7569 RC3 -.0940 FAU .01427 RRT .9993 RRF .9953 RTF .9969 CRT .9999 CRS -.9988 CST -.9995  
 FDE 2.0257 FRA -.7713 FC3 -.1279 BSP 13037 SGB 4243.7 R23 -.0277 R13 .9968 LSA 3338.1 MSA 40.2 SSA 1.5  
 BDE 5.1585 BRA 2.2462 BC3 .2466 FSP -434 SG1 4243.4 SG2 48.0 THA 19.19 EL1 3136.0 EL2 15.9 ALF 18.71

LAUNCH DATE JAN 24 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 417.448

RL 147.27 LAL .00 LOL 123.84 VL 27.643 GAL -1.15 AZL 75.65 HCA 191.81 SMA 127.83 ECC .15337 INC14.3510 V1 30.253  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.392 GAP 2.39 AZP 104.06 TAL 186.36 TAP 18.16 RCA 108.22 APO 147.43 V2 34.784  
 RC 109.246 GL 62.58 GP -73.68 ZAL 95.47 ZAP 100.95 ETS 322.84 ZAE 103.31 ETE 231.95 ZAC 105.71 ETC 187.23 CLP-132.55

PLANETOCENTRIC CONIC

C3 59.559 VHL 7.717 DLA 61.97 RAL 335.41 RAD 6569.1 VEL 13.450 PTH 2.46 VHP 8.296 DPA -61.99 RAP 61.39 ECC 1.9802  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.27 14 35 34 4652.05 -23.31 230.08 232.15 30.78 15 53 7 4052.0 -30.11 225.78  
 147.73 0 24 26 2963.18 -23.30 90.49 232.14 30.78 1 13 49 2363.2 -30.10 86.19  
 32.27 14 35 34 4652.05 -23.31 230.08 232.15 30.78 15 53 7 4052.0 -30.11 225.78  
 147.73 0 24 26 2963.18 -23.30 90.49 232.14 30.78 1 13 49 2363.2 -30.10 86.19  
 32.27 14 35 34 4652.05 -23.31 230.08 232.15 30.78 15 53 7 4052.0 -30.11 225.78  
 147.73 0 24 26 2963.18 -23.30 90.49 232.14 30.78 1 13 49 2363.2 -30.10 86.19

DIFFERENTIAL CORRECTIONS

TOE 3.4609 TRA-1.5623 TC3 -.5209 BAU .5020 SGT 3652.3 SGR 2292.5 SG3 193.3 ST 2674.1 SR 1810.4 SS 1261.6  
 RDE 2.3759 RRA -.8596 RC3 -.3552 FAU .02791 RRT .9942 RRF .9991 RTF .9913 CRT .9986 CRS-1.0000 CST -.9983  
 FDE 2.3124 FRA -.8176 FC3 -.4057 BSP 13504 SGB 4312.2 R23 .0949 R13 .9947 LSA 3465.7 MSA 94.1 SSA 1.6  
 BDE 4.1980 BRA 1.7832 BC3 .6305 FSP -637 SG1 4307.1 SG2 209.6 THA 32.05 EL1 3228.3 EL2 80.3 ALF 34.08

LAUNCH DATE JAN 24 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 423.525

RL 147.27 LAL .00 LOL 123.84 VL 27.625 GAL -1.00 AZL 78.27 HCA 194.91 SMA 127.71 ECC .15413 INC11.7327 V1 30.253  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.380 GAP 2.69 AZP 101.35 TAL 185.52 TAP 20.43 RCA 108.03 APO 147.39 V2 34.785  
 RC 111.645 GL 59.74 GP -66.96 ZAL 95.88 ZAP 105.05 ETS 324.27 ZAE 108.93 ETE 232.11 ZAC 107.57 ETC 188.43 CLP-131.57

PLANETOCENTRIC CONIC

C3 42.283 VHL 6.503 DLA 60.22 RAL 340.03 RAD 6568.6 VEL 12.793 PTH 2.33 VHP 6.876 DPA -57.01 RAP 52.03 ECC 1.6959  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.35 14 59 9 4557.67 -27.75 224.93 232.52 34.14 16 15 7 3957.7 -34.26 219.93  
 145.65 0 37 44 2887.10 -27.74 87.84 232.50 34.14 1 25 51 2287.1 -34.25 82.84  
 34.35 14 59 9 4557.67 -27.75 224.93 232.52 34.14 16 15 7 3957.7 -34.26 219.93  
 145.65 0 37 44 2887.10 -27.74 87.84 232.50 34.14 1 25 51 2287.1 -34.25 82.84  
 34.35 14 59 9 4557.67 -27.75 224.93 232.52 34.14 16 15 7 3957.7 -34.26 219.93  
 145.65 0 37 44 2887.10 -27.74 87.84 232.50 34.14 1 25 51 2287.1 -34.25 82.84

DIFFERENTIAL CORRECTIONS

TOE 3.0052 TRA -1.3116 TC3 -.8740 BAU .5904  
 RDE 2.1012 RRA -.6563 RC3 -.5718 FAU .04115  
 FDE 2.6294 FRA -.8231 FC3 -.8425 BSP 13716  
 BOE 3.6670 BRA 1.4666 BC3 1.0444 FSP -852

MID-COURSE EXECUTION ACCURACY

SGT 3703.7 SGR 2310.1 SG3 254.8  
 RRT .9884 RRF .9986 RTF .9866  
 SGB 4365.1 R23 .1127 R13 .9922  
 SG1 4354.9 SGT 297.9 THA 31.82

ORBIT DETERMINATION ACCURACY

ST 2738.7 SR 1884.3 SS 1401.0  
 CRT .9975 CRS-1.0000 CST -.9975  
 LSA 3605.2 MSA 126.7 SSA 2.4  
 EL1 3322.4 EL2 110.6 ALF 34.50

LAUNCH DATE JAN 24 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 429.607

RL 147.27 LAL .00 LOL 123.84 VL 27.606 GAL -.85 AZL 80.00 HCA 198.03 SMA 127.58 ECC .15502 INC10.0024 V1 30.253  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.368 GAP 3.00 AZP 99.52 TAL 184.66 TAP 22.69 RCA 107.80 APO 147.36 V2 34.787  
 RC 114.042 GL 56.90 GP -60.79 ZAL 95.95 ZAP 109.35 ETS 324.03 ZAE 113.62 ETE 229.89 ZAC 108.95 ETC 187.64 CLP-132.77

PLANETOCENTRIC CONIC

C3 32.754 VHL 5.723 DLA 58.55 RAL 344.62 RAD 6568.3 VEL 12.415 PTH 2.24 VHP 6.022 DPA -52.09 RAP 45.43 ECC 1.5390  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.35 15 22 36 4483.59 -30.76 220.14 233.29 37.38 16 37 19 3883.6 -36.97 214.49  
 143.65 0 50 56 2832.23 -30.74 85.53 233.27 37.38 1 38 8 2232.2 -36.96 79.88  
 36.35 15 22 36 4483.59 -30.76 220.14 233.29 37.38 16 37 19 3883.6 -36.97 214.49  
 143.65 0 50 56 2832.23 -30.74 85.53 233.27 37.38 1 38 8 2232.2 -36.96 79.88  
 36.35 15 22 36 4483.59 -30.76 220.14 233.29 37.38 16 37 19 3883.6 -36.97 214.49  
 143.65 0 50 56 2832.23 -30.74 85.53 233.27 37.38 1 38 8 2232.2 -36.96 79.88

DIFFERENTIAL CORRECTIONS

TOE 2.7986 TRA -1.1380 TC3 -1.2696 BAU .6426  
 RDE 1.7931 RRA -.4761 RC3 -.7359 FAU .05339  
 FDE 2.8910 FRA -.7757 FC3 -1.4112 BSP 13865  
 BOE 3.3237 BRA 1.2336 BC3 1.4675 FSP -1060

MID-COURSE EXECUTION ACCURACY

SGT 3838.0 SGR 2183.2 SG3 313.9  
 RRT .9844 RRF .9979 RTF .9829  
 SGB 4415.5 R23 .1300 R13 .9894  
 SG1 4402.8 SG2 335.0 THA 29.43

ORBIT DETERMINATION ACCURACY

ST 2877.7 SR 1816.1 SS 1524.0  
 CRT .9969 CRS-1.0000 CST -.9971  
 LSA 3725.8 MSA 141.8 SSA 3.1  
 EL1 3400.7 EL2 120.0 ALF 32.22

LAUNCH DATE JAN 24 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 435.683

RL 147.27 LAL .00 LOL 123.84 VL 27.586 GAL -.69 AZL 81.23 HCA 201.17 SMA 127.44 ECC .15603 INC 8.7695 V1 30.253  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.355 GAP 3.30 AZP 98.19 TAL 183.76 TAP 24.93 RCA 107.56 APO 147.33 V2 34.790  
 RC 116.435 GL 54.18 GP -55.14 ZAL 95.71 ZAP 113.69 ETS 323.55 ZAE 117.48 ETE 226.84 ZAC 110.04 ETC 186.38 CLP-134.67

PLANETOCENTRIC CONIC

C3 26.897 VHL 5.186 DLA 57.01 RAL 349.00 RAD 6568.1 VEL 12.177 PTH 2.19 VHP 5.488 DPA -47.33 RAP 40.62 ECC 1.4427  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.20 15 44 59 4424.62 -32.77 215.80 234.32 40.35 16 58 43 3824.6 -38.70 209.59  
 141.80 1 3 30 2792.55 -32.76 83.57 234.30 40.35 1 50 3 2192.5 -38.69 77.36  
 38.20 15 44 59 4424.62 -32.77 215.80 234.32 40.35 16 58 43 3824.6 -38.70 209.59  
 141.80 1 3 30 2792.55 -32.76 83.57 234.30 40.35 1 50 3 2192.5 -38.69 77.36  
 38.20 15 44 59 4424.62 -32.77 215.80 234.32 40.35 16 58 43 3824.6 -38.70 209.59  
 141.80 1 3 30 2792.55 -32.76 83.57 234.30 40.35 1 50 3 2192.5 -38.69 77.36

DIFFERENTIAL CORRECTIONS

TDE 2.6813 TRA -.9966 TC3 -1.6908 BAU .6794  
 RDE 1.5241 RRA -.3347 RC3 -.8433 FAU .06384  
 FDE 3.0637 FRA -.6802 FC3 -2.0547 BSP 14013  
 BOE 3.0842 BRA 1.0513 BC3 1.8894 FSP -1241

MID-COURSE EXECUTION ACCURACY

SGT 3992.5 SGR 2015.4 SG3 365.6  
 RRT .9812 RRF .9969 RTF .9800  
 SGB 4472.3 R23 .1447 R13 .9864  
 SG1 4458.8 SG2 347.8 THA 26.52

ORBIT DETERMINATION ACCURACY

ST 3024.2 SR 1696.3 SS 1617.0  
 CRT .9967 CRS-1.0000 CST -.9968  
 LSA 3823.0 MSA 149.9 SSA 3.8  
 EL1 3465.3 EL2 120.7 ALF 29.25

LAUNCH DATE JAN 24 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 441.750

RL 147.27 LAL .00 LOL 123.84 VL 27.564 GAL -.53 AZL 82.16 HCA 204.31 SMA 127.29 ECC .15717 INC 7.8422 V1 30.253  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.343 GAP 3.60 AZP 97.15 TAL 182.82 TAP 27.13 RCA 107.29 APO 147.30 V2 34.794  
 RC 118.823 GL 51.62 GP -50.02 ZAL 95.20 ZAP 117.92 ETS 323.16 ZAE 120.61 ETE 223.45 ZAC 110.96 ETC 185.08 CLP-136.79

PLANETOCENTRIC CONIC

C3 23.018 VHL 4.798 DLA 55.62 RAL 353.17 RAD 6567.9 VEL 12.017 PTH 2.14 VHP 5.151 DPA -42.81 RAP 37.09 ECC 1.3788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.90 16 6 15 4376.82 -34.11 211.93 235.58 43.00 17 19 12 3776.8 -39.76 205.26  
 140.10 1 15 30 2763.71 -34.09 81.95 235.57 42.99 2 1 34 2163.7 -39.75 75.28  
 39.90 16 6 15 4376.82 -34.11 211.93 235.58 43.00 17 19 12 3776.8 -39.76 205.26  
 140.10 1 15 30 2763.71 -34.09 81.95 235.57 42.99 2 1 34 2163.7 -39.75 75.28  
 39.90 16 6 15 4376.82 -34.11 211.93 235.58 43.00 17 19 12 3776.8 -39.76 205.26  
 140.10 1 15 30 2763.71 -34.09 81.95 235.57 42.99 2 1 34 2163.7 -39.75 75.28

DIFFERENTIAL CORRECTIONS

TDE 2.6036 TRA -.8693 TC3 -2.1241 BAU .7098  
 RDE 1.2982 RRA -.2252 RC3 -.8986 FAU .07199  
 FDE 3.1400 FRA -.5444 FC3 -2.7075 BSP 14233  
 BOE 2.9093 BRA .8980 BC3 2.3064 FSP -1391

MID-COURSE EXECUTION ACCURACY

SGT 4147.5 SGR 1836.8 SG3 406.5  
 RRT .9784 RRF .9954 RTF .9773  
 SGB 4536.1 R23 .1565 R13 .9831  
 SG1 4522.7 SG2 348.3 THA 23.57

ORBIT DETERMINATION ACCURACY

ST 3158.4 SR 1557.1 SS 1676.3  
 CRT .9965 CRS-1.0000 CST -.9965  
 LSA 3896.9 MSA 155.0 SSA 4.7  
 EL1 3519.5 EL2 116.8 ALF 26.19

LAUNCH DATE JAN 24 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC DISTANCE 447.806  
 RL 147.27 LAL .00 LOL 123.84 VL 27.541 GAL -.35 AZL 82.88 HCA 207.46 SMA 127.14 ECC .15843 INC 7.1159 V1 30.253  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.330 GAP 3.90 AZP 96.32 TAL 181.84 TAP 29.30 RCA 107.00 APO 147.28 V2 34.798  
 RC 121.206 GL 49.20 GP -45.42 ZAL 94.44 ZAP 121.97 ETS 322.93 ZAE 123.07 ETE 219.97 ZAC 111.80 ETC 183.87 CLP-138.97

PLANETOCENTRIC CONIC  
 C3 20.310 VHL 4.507 OLA 54.36 RAL 357.18 RAD 6567.8 VEL 11.903 PTH 2.11 VHP 4.945 DPA -38.59 RAP 34.51 ECC 1.3342  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.44 16 26 35 4337.40 -34.97 208.51 237.09 45.33 17 38 53 3737.4 -40.38 201.46  
 138.56 1 27 7 2742.73 -34.96 80.64 237.07 45.32 2 12 49 2142.7 -40.36 73.59  
 41.44 16 26 35 4337.40 -34.97 208.51 237.09 45.33 17 38 53 3737.4 -40.38 201.46  
 138.56 1 27 7 2742.73 -34.96 80.64 237.07 45.32 2 12 49 2142.7 -40.36 73.59  
 41.44 16 26 35 4337.40 -34.97 208.51 237.09 45.33 17 38 53 3737.4 -40.38 201.46  
 138.56 1 27 7 2742.73 -34.96 80.64 237.07 45.32 2 12 49 2142.7 -40.36 73.59

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5508 TRA -.7502 TC3-2.5585 BAU .7375 SGT 4302.8 SGR 1666.5 SG3 436.8 ST 3280.7 SR 1419.0 SS 1708.3  
 RDE 1.1135 RRA -.1434 RC3 -.9116 FAU .07776 RRT .9759 RRF .9932 RTF .9752 CRT .9965 CRS-1.0000 CST -.9962  
 FDE 3.1380 FRA -.3879 FC3-3.3149 BSP 14498 SGB 4614.2 R23 .1627 R13 .9801 LSA 3958.5 MSA 157.4 SSA 5.6  
 BDE 2.7832 BRA .7638 BC3 2.7161 FSP -1503 SG1 4601.7 SG2 339.7 THA 20.82 EL1 3572.7 EL2 109.5 ALF 23.34

LAUNCH DATE JAN 24 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC DISTANCE 453.848  
 RL 147.27 LAL .00 LOL 123.84 VL 27.517 GAL -.16 AZL 83.47 HCA 210.61 SMA 126.98 ECC .15982 INC 6.5285 V1 30.253  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.316 GAP 4.20 AZP 95.63 TAL 180.83 TAP 31.44 RCA 106.68 APO 147.27 V2 34.803  
 RC 123.581 GL 46.92 GP -41.30 ZAL 93.45 ZAP 125.79 ETS 322.84 ZAE 124.95 ETE 216.55 ZAC 112.63 ETC 182.81 CLP-141.11

PLANETOCENTRIC CONIC  
 C3 18.345 VHL 4.283 OLA 53.23 RAL 1.07 RAD 6567.7 VEL 11.821 PTH 2.09 VHP 4.828 DPA -34.68 RAP 32.67 ECC 1.3019  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.85 16 46 11 4304.47 -35.52 205.48 238.84 47.35 17 57 55 3704.5 -40.70 198.14  
 137.15 1 38 33 2727.55 -35.50 79.59 238.83 47.34 2 24 0 2127.5 -40.68 72.25  
 42.85 16 46 11 4304.47 -35.52 205.48 238.84 47.35 17 57 55 3704.5 -40.70 198.14  
 137.15 1 38 33 2727.55 -35.50 79.59 238.83 47.34 2 24 0 2127.5 -40.68 72.25  
 42.85 16 46 11 4304.47 -35.52 205.48 238.84 47.35 17 57 55 3704.5 -40.70 198.14  
 137.15 1 38 33 2727.55 -35.50 79.59 238.83 47.34 2 24 0 2127.5 -40.68 72.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5094 TRA -.6321 TC3-2.9826 BAU .7634 SGT 4448.7 SGR 1506.0 SG3 455.8 ST 3384.3 SR 1287.5 SS 1713.3  
 RDE .9614 RRA -.0811 RC3 -.8899 FAU .08114 RRT .9733 RRF .9900 RTF .9732 CRT .9965 CRS-1.0000 CST -.9960  
 FDE 3.0675 FRA -.2178 FC3-3.8294 BSP 14785 SGB 4696.7 R23 .1637 R13 .9773 LSA 4002.7 MSA 158.6 SSA 6.5  
 BDE 2.6872 BRA .6373 BC3 3.1125 FSP -1577 SG1 4685.2 SG2 328.2 THA 18.33 EL1 3619.5 EL2 100.3 ALF 20.78

LAUNCH DATE JAN 24 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC DISTANCE 459.876  
 RL 147.27 LAL .00 LOL 123.84 VL 27.492 GAL .04 AZL 83.96 HCA 213.76 SMA 126.81 ECC .16133 INC 6.0410 V1 30.253  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.303 GAP 4.49 AZP 95.03 TAL 179.77 TAP 33.54 RCA 106.35 APO 147.27 V2 34.808  
 RC 125.948 GL 44.76 GP -37.65 ZAL 92.25 ZAP 129.34 ETS 322.87 ZAE 126.35 ETE 213.29 ZAC 113.48 ETC 181.91 CLP-143.19

PLANETOCENTRIC CONIC  
 C3 16.883 VHL 4.109 OLA 52.20 RAL 4.88 RAD 6567.7 VEL 11.759 PTH 2.08 VHP 4.776 DPA -31.08 RAP 31.41 ECC 1.2779  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.13 17 5 14 4276.64 -35.83 202.81 240.83 49.12 18 16 31 3676.6 -40.81 195.24  
 135.87 1 49 56 2716.83 -35.82 78.77 240.82 49.11 2 35 13 2116.8 -40.80 71.20  
 44.13 17 5 14 4276.64 -35.83 202.81 240.83 49.12 18 16 31 3676.6 -40.81 195.24  
 135.87 1 49 56 2716.83 -35.82 78.77 240.82 49.11 2 35 13 2116.8 -40.80 71.20  
 44.13 17 5 14 4276.64 -35.83 202.81 240.83 49.12 18 16 31 3676.6 -40.81 195.24  
 135.87 1 49 56 2716.83 -35.82 78.77 240.82 49.11 2 35 13 2116.8 -40.80 71.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4910 TRA -.5086 TC3-3.3836 BAU .7868 SGT 4597.3 SGR 1367.9 SG3 467.3 ST 3491.8 SR 1180.3 SS 1716.6  
 RDE .8462 RRA -.0311 RC3 -.8375 FAU .08202 RRT .9691 RRF .9857 RTF .9712 CRT .9967 CRS -.9999 CST -.9956  
 FDE 2.9825 FRA -.0345 FC3-4.2060 BSP 14667 SGB 4796.5 R23 .1613 R13 .9746 LSA 4062.8 MSA 161.3 SSA 7.4  
 BDE 2.6308 BRA .5095 BC3 3.4857 FSP -1536 SG1 4785.5 SG2 324.1 THA 16.16 EL1 3684.7 EL2 91.4 ALF 18.63

LAUNCH DATE JAN 24 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC DISTANCE 465.890  
 RL 147.27 LAL .00 LOL 123.84 VL 27.466 GAL .26 AZL 84.37 HCA 216.92 SMA 126.64 ECC .16298 INC 5.6276 V1 30.253  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.290 GAP 4.79 AZP 94.50 TAL 178.69 TAP 35.61 RCA 106.00 APO 147.27 V2 34.815  
 RC 128.306 GL 42.69 GP -34.42 ZAL 90.86 ZAP 132.62 ETS 322.97 ZAE 127.36 ETE 210.27 ZAC 114.40 ETC 181.15 CLP-145.18

PLANETOCENTRIC CONIC  
 C3 15.779 VHL 3.972 OLA 51.25 RAL 8.66 RAD 6567.6 VEL 11.712 PTH 2.06 VHP 4.771 DPA -27.79 RAP 30.62 ECC 1.2597  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.31 17 23 56 4252.80 -35.97 200.45 243.06 50.65 18 34 49 3652.8 -40.77 192.70  
 134.69 2 1 23 2709.68 -35.95 78.16 243.05 50.64 2 46 32 2109.7 -40.76 70.41  
 45.31 17 23 56 4252.80 -35.97 200.45 243.06 50.65 18 34 49 3652.8 -40.77 192.70  
 134.69 2 1 23 2709.68 -35.95 78.16 243.05 50.64 2 46 32 2109.7 -40.76 70.41  
 45.31 17 23 56 4252.80 -35.97 200.45 243.06 50.65 18 34 49 3652.8 -40.77 192.70  
 134.69 2 1 23 2709.68 -35.95 78.16 243.05 50.64 2 46 32 2109.7 -40.76 70.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4523 TRA -.3865 TC3-3.7713 BAU .8124 SGT 4720.4 SGR 1234.8 SG3 468.0 ST 3548.4 SR 1068.2 SS 1674.3  
 RDE .7405 RRA .0046 RC3 -.7800 FAU .08197 RRT .9650 RRF .9797 RTF .9694 CRT .9969 CRS -.9998 CST -.9952  
 FDE 2.8145 FRA .1354 FC3-4.4971 BSP 15414 SGB 4879.2 R23 .1529 R13 .9720 LSA 4063.2 MSA 161.4 SSA 8.4  
 BDE 2.5617 BRA .3865 BC3 3.8511 FSP -1621 SG1 4869.1 SG2 313.8 THA 14.23 EL1 3704.8 EL2 80.5 ALF 16.71



LAUNCH DATE JAN 24 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

RL 147.27 LAL .00 LOL 123.84 VL 27.439 GAL .48 AZL 84.73 HCA 220.08 SMA 126.46 ECC .16476 INC 5.2707 V1 30.253  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.276 GAP 5.09 AZP 94.04 TAL 177.57 TAP 37.65 RCA 105.62 APO 147.29 V2 34.821  
 RC 130.653 GL 40.70 GP -31.58 ZAL 89.30 ZAP 135.66 ETS 323.11 ZAE 128.07 ETE 207.52 ZAC 115.40 ETC 180.51 CLP-147.08

DISTANCE 471.888

PLANETOCENTRIC CONIC

C3 14.942 VHL 3.866 DLA 50.37 RAL 12.43 RAD 6567.6 VEL 11.676 PTH 2.05 VHP 4.801 DPA -24.77 RAP 30.23 ECC 1.2459  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.42 17 42 27 4232.51 -35.97 198.34 245.50 52.00 18 53 0 3632.5 -40.61 190.45  
 133.58 2 12 54 2705.55 -35.96 77.73 245.49 51.99 2 58 0 2105.6 -40.60 69.85  
 46.42 17 42 27 4232.51 -35.97 198.34 245.50 52.00 18 53 0 3632.5 -40.61 190.45  
 133.58 2 12 54 2705.55 -35.96 77.73 245.49 51.99 2 58 0 2105.6 -40.60 69.85  
 46.42 17 42 27 4232.51 -35.97 198.34 245.50 52.00 18 53 0 3632.5 -40.61 190.45  
 133.58 2 12 54 2705.55 -35.96 77.73 245.49 51.99 2 58 0 2105.6 -40.60 69.85

DIFFERENTIAL CORRECTIONS

TDE 2.4254 TRA -.2612 TC3-4.1396 BAU .8393  
 RDE .6591 RRA .0308 RC3 -.7181 FAU .08099  
 FDE 2.6474 FRA .2930 FC3-4.6922 BSP 15698  
 BOE 2.5133 BRA .2631 BC3 4.2014 FSP -1597

MID-COURSE EXECUTION ACCURACY

SGT 4851.2 SGR 1125.9 SG3 465.5  
 RRT .9603 RRF .9721 RTF .9682  
 SGB 4980.1 R23 .1384 R13 .9702  
 SG1 4970.7 SG2 306.6 THA 12.61

ORBIT DETERMINATION ACCURACY

ST 3600.8 SR 977.3 SS 1630.7  
 CRT .9973 CRS -.9995 CST -.9947  
 LSA 4068.7 MSA 161.0 SSA 9.3  
 EL1 3730.4 EL2 69.0 ALF 15.15

LAUNCH DATE JAN 24 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

RL 147.27 LAL .00 LOL 123.84 VL 27.411 GAL .72 AZL 85.04 HCA 223.24 SMA 126.28 ECC .16669 INC 4.9576 V1 30.253  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.263 GAP 5.39 AZP 93.62 TAL 176.42 TAP 39.66 RCA 105.23 APO 147.32 V2 34.829  
 RC 132.989 GL 38.76 GP -29.06 ZAL 87.57 ZAP 138.45 ETS 323.26 ZAE 128.53 ETE 205.05 ZAC 116.49 ETC 179.97 CLP-148.89

DISTANCE 477.872

PLANETOCENTRIC CONIC

C3 14.313 VHL 3.783 DLA 49.54 RAL 16.19 RAD 6567.6 VEL 11.649 PTH 2.05 VHP 4.860 DPA -22.00 RAP 30.15 ECC 1.2356  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.48 18 0 55 4214.84 -35.86 196.44 248.16 53.19 19 11 10 3614.8 -40.37 188.45  
 132.52 2 24 30 2704.11 -35.85 77.48 248.15 53.18 3 9 35 2104.1 -40.36 69.49  
 47.48 18 0 55 4214.84 -35.86 196.44 248.16 53.19 19 11 10 3614.8 -40.37 188.45  
 132.52 2 24 30 2704.11 -35.85 77.48 248.15 53.18 3 9 35 2104.1 -40.36 69.49  
 47.48 18 0 55 4214.84 -35.86 196.44 248.16 53.19 19 11 10 3614.8 -40.37 188.45  
 132.52 2 24 30 2704.11 -35.85 77.48 248.15 53.18 3 9 35 2104.1 -40.36 69.49

DIFFERENTIAL CORRECTIONS

TDE 2.4024 TRA -.1252 TC3-4.4552 BAU .8614  
 RDE .5946 RRA .0525 RC3 -.6432 FAU .07837  
 FDE 2.4773 FRA .4485 FC3-4.7400 BSP 15990  
 BOE 2.4749 BRA .1358 BC3 4.5014 FSP -1562

MID-COURSE EXECUTION ACCURACY

SGT 4968.5 SGR 1030.9 SG3 457.5  
 RRT .9529 RRF .9622 RTF .9668  
 SGB 5074.4 R23 .1233 R13 .9684  
 SG1 5065.1 SG2 306.6 THA 11.23

ORBIT DETERMINATION ACCURACY

ST 3640.7 SR 901.4 SS 1581.4  
 CRT .9978 CRS -.9990 CST -.9942  
 LSA 4067.2 MSA 161.4 SSA 10.3  
 EL1 3750.2 EL2 57.6 ALF 13.88

LAUNCH DATE JAN 24 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

RL 147.27 LAL .00 LOL 123.84 VL 27.383 GAL .96 AZL 85.32 HCA 226.41 SMA 126.09 ECC .16877 INC 4.6791 V1 30.253  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.250 GAP 5.69 AZP 93.23 TAL 175.24 TAP 41.65 RCA 104.81 APO 147.37 V2 34.837  
 RC 135.313 GL 36.87 GP -26.85 ZAL 85.70 ZAP 141.03 ETS 323.39 ZAE 128.82 ETE 202.85 ZAC 117.67 ETC 179.52 CLP-150.62

DISTANCE 483.840

PLANETOCENTRIC CONIC

C3 13.854 VHL 3.722 DLA 48.74 RAL 19.97 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 4.941 DPA -19.45 RAP 30.35 ECC 1.2280  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.51 18 19 23 4199.45 -35.65 194.71 251.00 54.25 19 29 22 3599.5 -40.03 186.65  
 131.49 2 36 10 2705.13 -35.64 77.39 250.99 54.24 3 21 15 2105.1 -40.02 69.33  
 48.51 18 19 23 4199.45 -35.65 194.71 251.00 54.25 19 29 22 3599.5 -40.03 186.65  
 131.49 2 36 10 2705.13 -35.64 77.39 250.99 54.24 3 21 15 2105.1 -40.02 69.33  
 48.51 18 19 23 4199.45 -35.65 194.71 251.00 54.25 19 29 22 3599.5 -40.03 186.65  
 131.49 2 36 10 2705.13 -35.64 77.39 250.99 54.24 3 21 15 2105.1 -40.02 69.33

DIFFERENTIAL CORRECTIONS

TDE 2.3744 TRA .0118 TC3-4.7472 BAU .8857  
 RDE .5419 RRA .0674 RC3 -.5750 FAU .07564  
 FDE 2.2988 FRA .5815 FC3-4.7266 BSP 16350  
 BOE 2.4355 BRA .0684 BC3 4.7819 FSP -1526

MID-COURSE EXECUTION ACCURACY

SGT 5084.2 SGR 950.7 SG3 446.8  
 RRT .9446 RRF .9501 RTF .9663  
 SGB 5172.3 R23 .1037 R13 .9674  
 SG1 5163.2 SG2 307.1 THA 10.05

ORBIT DETERMINATION ACCURACY

ST 3656.6 SR 835.7 SS 1521.1  
 CRT .9984 CRS -.9982 CST -.9937  
 LSA 4044.4 MSA 160.4 SSA 11.2  
 EL1 3750.6 EL2 45.5 ALF 12.86

LAUNCH DATE JAN 24 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

RL 147.27 LAL .00 LOL 123.84 VL 27.354 GAL 1.23 AZL 85.57 HCA 229.57 SMA 125.90 ECC .17101 INC 4.4284 V1 30.253  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.237 GAP 5.99 AZP 92.88 TAL 174.04 TAP 43.61 RCA 104.37 APO 147.43 V2 34.846  
 RC 137.625 GL 35.02 GP -24.89 ZAL 83.70 ZAP 143.41 ETS 323.49 ZAE 128.97 ETE 200.90 ZAC 118.94 ETC 179.14 CLP-152.27

DISTANCE 489.791

PLANETOCENTRIC CONIC

C3 13.538 VHL 3.679 DLA 47.95 RAL 23.76 RAD 6567.5 VEL 11.616 PTH 2.04 VHP 5.039 DPA -17.10 RAP 30.78 ECC 1.2228  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.54 18 37 57 4185.92 -35.34 193.12 254.00 55.20 19 47 43 3585.9 -39.62 185.00  
 130.46 2 47 48 2708.58 -35.33 77.47 253.99 55.19 3 32 57 2108.6 -39.61 69.36  
 49.54 18 37 57 4185.92 -35.34 193.12 254.00 55.20 19 47 43 3585.9 -39.62 185.00  
 130.46 2 47 48 2708.58 -35.33 77.47 253.99 55.19 3 32 57 2108.6 -39.61 69.36  
 49.54 18 37 57 4185.92 -35.34 193.12 254.00 55.20 19 47 43 3585.9 -39.62 185.00  
 130.46 2 47 48 2708.58 -35.33 77.47 253.99 55.19 3 32 57 2108.6 -39.61 69.36

DIFFERENTIAL CORRECTIONS

TOE 2.3443 TRA .1572 TC3-4.9950 BAU .9087  
 RDE .5000 RRA .0794 RC3 -.5083 FAU .07240  
 FDE 2.1232 FRA .7050 FC3-4.6299 BSP 16703  
 BOE 2.3971 BRA .1761 BC3 5.0208 FSP -1482

MID-COURSE EXECUTION ACCURACY

SGT 5193.4 SGR 883.4 SG3 434.0  
 RRT .9340 RRF .9357 RTF .9658  
 SGB 5268.0 R23 .0851 R13 .9667  
 SG1 5258.8 SG2 311.7 THA 9.06

ORBIT DETERMINATION ACCURACY

ST 3653.9 SR 780.7 SS 1456.1  
 CRT .9990 CRS -.9969 CST -.9931  
 LSA 4006.9 MSA 159.9 SSA 12.2  
 EL1 3736.2 EL2 33.5 ALF 12.05

LAUNCH DATE JAN 24 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 495.725

RL 147.27 LAL .00 LOL 123.84 VL 27.325 GAL 1.50 AZL 85.80 MCA 232.74 SMA 125.71 ECC .17342 INC 4.2001 V1 30.253  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.224 GAP 6.30 AZP 92.55 TAL 172.81 TAP 45.55 RCA 103.91 APO 147.51 V2 34.855  
 RC 139.923 GL 33.20 GP -23.16 ZAL 81.59 ZAP 145.62 ETS 323.54 ZAE 129.04 ETE 199.18 ZAC 120.31 ETC 178.81 CLP-153.84

PLANETOCENTRIC CONIC

C3 13.349 VHL 3.654 DLA 47.16 RAL 27.55 RAD 6567.5 VEL 11.608 PTH 2.03 VHP 5.154 DPA -14.91 RAP 31.41 ECC 1.2197  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.57 18 56 41 4173.90 -34.95 191.63 257.16 56.06 20 6 15 3573.9 -39.12 183.49  
 129.43 2 59 19 2714.50 -34.94 77.71 257.15 56.05 3 44 34 2114.5 -39.11 69.57  
 50.57 18 56 41 4173.90 -34.95 191.63 257.16 56.06 20 6 15 3573.9 -39.12 183.49  
 129.43 2 59 19 2714.50 -34.94 77.71 257.15 56.05 3 44 34 2114.5 -39.11 69.57  
 50.57 18 56 41 4173.90 -34.95 191.63 257.16 56.06 20 6 15 3573.9 -39.12 183.49  
 129.43 2 59 19 2714.50 -34.94 77.71 257.15 56.05 3 44 34 2114.5 -39.11 69.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3098 TRA .3099 TC3-5.1958 BAU .9307 SGT 5295.9 SGR 827.0 SG3 419.5 ST 3630.2 SR 734.5 SS 1386.4  
 RDE .4667 RRA .0892 RC3 -.4455 FAU .06888 RRT .9211 RRF .9190 RTF .9655 CRT .9995 CRS -.9950 CST -.9924  
 FDE 1.9515 FRA .8169 FC3-4.4670 BSP 17045 SGB 5360.0 R23 .0680 R13 .9662 LSA 3951.5 MSA 159.7 SSA 13.1  
 BDE 2.3565 BRA .3225 BC3 5.2149 FSP -1432 SG1 5350.5 SG2 318.7 THA 8.21 EL1 3703.7 EL2 22.2 ALF 11.43

LAUNCH DATE JAN 24 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 501.642

RL 147.27 LAL .00 LOL 123.84 VL 27.295 GAL 1.79 AZL 86.01 MCA 235.91 SMA 125.52 ECC .17601 INC 3.9902 V1 30.253  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.211 GAP 6.61 AZP 92.24 TAL 171.56 TAP 47.47 RCA 103.42 APO 147.61 V2 34.865  
 RC 142.207 GL 31.40 GP -21.62 ZAL 79.38 ZAP 147.66 ETS 323.53 ZAE 129.03 ETE 197.67 ZAC 121.75 ETC 178.53 CLP-155.35

PLANETOCENTRIC CONIC

C3 13.277 VHL 3.644 DLA 46.35 RAL 31.34 RAD 6567.5 VEL 11.604 PTH 2.03 VHP 5.281 DPA -12.88 RAP 32.22 ECC 1.2185  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.64 19 15 35 4163.15 -34.47 190.21 260.44 56.85 20 24 58 3563.2 -38.55 182.06  
 128.36 3 10 38 2722.89 -34.46 78.12 260.43 56.84 3 56 1 2122.9 -38.54 69.97  
 51.64 19 15 35 4163.15 -34.47 190.21 260.44 56.85 20 24 58 3563.2 -38.55 182.06  
 128.36 3 10 38 2722.89 -34.46 78.12 260.43 56.84 3 56 1 2122.9 -38.54 69.97  
 51.64 19 15 35 4163.15 -34.47 190.21 260.44 56.85 20 24 58 3563.2 -38.55 182.06  
 128.36 3 10 38 2722.89 -34.46 78.12 260.43 56.84 3 56 1 2122.9 -38.54 69.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2732 TRA .4743 TC3-5.3384 BAU .9501 SGT 5392.5 SGR 780.9 SG3 404.2 ST 3590.9 SR 696.7 SS 1316.3  
 RDE .4410 RRA .0981 RC3 -.3860 FAU .06505 RRT .9058 RRF .9005 RTF .9653 CRT .9998 CRS -.9921 CST -.9916  
 FDE 1.7892 FRA .9225 FC3-4.2413 BSP 17307 SGB 5448.7 R23 .0541 R13 .9658 LSA 3884.2 MSA 160.4 SSA 14.0  
 BDE 2.3155 BRA .4844 BC3 5.3524 FSP -1373 SG1 5438.9 SG2 328.1 THA 7.50 EL1 3657.8 EL2 14.5 ALF 10.98

LAUNCH DATE JAN 24 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 507.539

RL 147.27 LAL .00 LOL 123.84 VL 27.265 GAL 2.10 AZL 86.20 MCA 239.08 SMA 125.32 ECC .17880 INC 3.7953 V1 30.253  
 RP 108.66 LAP -3.26 LOP 362.86 VP 37.198 GAP 6.93 AZP 91.95 TAL 170.28 TAP 49.37 RCA 102.91 APO 147.73 V2 34.875  
 RC 144.478 GL 29.62 GP -20.25 ZAL 77.08 ZAP 149.57 ETS 323.44 ZAE 128.98 ETE 196.34 ZAC 123.28 ETC 178.27 CLP-156.79

PLANETOCENTRIC CONIC

C3 13.316 VHL 3.649 DLA 45.51 RAL 35.10 RAD 6567.5 VEL 11.606 PTH 2.03 VHP 5.421 DPA -10.97 RAP 33.17 ECC 1.2192  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.75 19 34 41 4153.36 -33.90 188.85 263.82 57.59 20 43 54 3553.4 -37.89 180.71  
 127.25 3 21 35 2733.95 -33.89 78.71 263.81 57.58 4 7 9 2134.0 -37.88 70.57  
 52.75 19 34 41 4153.36 -33.90 188.85 263.82 57.59 20 43 54 3553.4 -37.89 180.71  
 127.25 3 21 35 2733.95 -33.89 78.71 263.81 57.58 4 7 9 2134.0 -37.88 70.57  
 52.75 19 34 41 4153.36 -33.90 188.85 263.82 57.59 20 43 54 3553.4 -37.89 180.71  
 127.25 3 21 35 2733.95 -33.89 78.71 263.81 57.58 4 7 9 2134.0 -37.88 70.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2268 TRA .6433 TC3-5.4394 BAU .9702 SGT 5482.8 SGR 742.1 SG3 388.1 ST 3525.0 SR 663.8 SS 1240.5  
 RDE .4203 RRA .1052 RC3 -.3346 FAU .06138 RRT .8888 RRF .8803 RTF .9655 CRT .9996 CRS -.9880 CST -.9906  
 FDE 1.6291 FRA 1.0128 FC3-3.9903 BSP 17628 SGB 5532.8 R23 .0412 R13 .9658 LSA 3791.9 MSA 161.2 SSA 14.8  
 BDE 2.2661 BRA .6519 BC3 5.4497 FSP -1319 SG1 5522.5 SG2 337.6 THA 6.89 EL1 3586.9 EL2 18.3 ALF 10.66

LAUNCH DATE JAN 24 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 513.418

RL 147.27 LAL .00 LOL 123.84 VL 27.234 GAL 2.42 AZL 86.39 MCA 242.26 SMA 125.12 ECC .18179 INC 3.6128 V1 30.253  
 RP 108.63 LAP -3.20 LOP 360.5 VP 37.186 GAP 7.25 AZP 91.68 TAL 168.99 TAP 51.25 RCA 102.38 APO 147.87 V2 34.885  
 RC 146.734 GL 27.86 GP -19.03 ZAL 74.71 ZAP 151.35 ETS 323.26 ZAE 128.91 ETE 195.18 ZAC 124.87 ETC 178.03 CLP-158.17

PLANETOCENTRIC CONIC

C3 13.464 VHL 3.669 DLA 44.65 RAL 38.83 RAD 6567.5 VEL 11.612 PTH 2.03 VHP 5.572 DPA -9.18 RAP 34.26 ECC 1.2216  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.91 19 53 58 4144.31 -33.24 187.52 267.29 58.28 21 3 3 3544.3 -37.16 179.40  
 126.09 3 32 5 2747.79 -33.23 79.49 267.28 58.26 4 17 53 2147.8 -37.15 71.37  
 53.91 19 53 58 4144.31 -33.24 187.52 267.29 58.28 21 3 3 3544.3 -37.16 179.40  
 126.09 3 32 5 2747.79 -33.23 79.49 267.28 58.26 4 17 53 2147.8 -37.15 71.37  
 53.91 19 53 58 4144.31 -33.24 187.52 267.29 58.28 21 3 3 3544.3 -37.16 179.40  
 126.09 3 32 5 2747.79 -33.23 79.49 267.28 58.26 4 17 53 2147.8 -37.15 71.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1753 TRA .8222 TC3-5.4879 BAU .9892 SGT 5569.0 SGR 710.7 SG3 371.9 ST 3441.7 SR 636.5 SS 1165.0  
 RDE .4049 RRA .1120 RC3 -.2893 FAU .05774 RRT .8706 RRF .8591 RTF .9658 CRT .9988 CRS -.9824 CST -.9896  
 FDE 1.4784 FRA 1.0952 FC3-3.7131 BSP 17931 SGB 5614.2 R23 .0306 R13 .9660 LSA 3685.3 MSA 163.1 SSA 15.5  
 BDE 2.2127 BRA .8298 BC3 5.4955 FSP -1266 SG1 5603.4 SG2 347.5 THA 6.36 EL1 3500.0 EL2 30.6 ALF 10.47

LAUNCH DATE JAN 24 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 519.275

RL 147.27 LAL .00 LOL 123.84 VL 27.203 GAL 2.76 AZL 86.56 HCA 245.43 SMA 124.93 ECC .18499 INC 3.4406 V1 30.253  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.174 GAP 7.59 AZP 91.43 TAL 167.69 TAP 53.12 RCA 101.82 APO 148.04 V2 34.897  
 RC 148.977 GL 26.12 GP -17.94 ZAL 72.30 ZAP 153.02 ETS 322.99 ZAE 128.81 ETE 194.16 ZAC 126.53 ETC 177.80 CLP-159.50

PLANETOCENTRIC CONIC

C3 13.721 VHL 3.704 DLA 43.75 RAL 42.52 RAD 6567.5 VEL 11.624 PTH 2.04 VHP 5.734 DPA -7.50 RAP 35.46 ECC 1.2258  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.14 20 13 25 4135.85 -32.49 186.21 270.82 58.92 21 22 21 3535.9 -36.34 178.12  
 124.86 3 42 0 2764.50 -32.48 80.47 270.81 58.91 4 28 4 2164.5 -36.33 72.38  
 55.14 20 13 25 4135.85 -32.49 186.21 270.82 58.92 21 22 21 3535.9 -36.34 178.12  
 124.86 3 42 0 2764.50 -32.48 80.47 270.81 58.91 4 28 4 2164.5 -36.33 72.38  
 55.14 20 13 25 4135.85 -32.49 186.21 270.82 58.92 21 22 21 3535.9 -36.34 178.12  
 124.86 3 42 0 2764.50 -32.48 80.47 270.81 58.91 4 28 4 2164.5 -36.33 72.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.1165 TRA 1.0108 TC3-5.4837 BAU 1.0069 SGT 5648.6 SGR 684.8 SG3 355.7 ST 3339.8 SR 613.2 SS 1089.1  
 RDE .3933 RRA .1187 RC3 -.2494 FAU .05415 RRT .8513 RRF .8375 RTF .9661 CRT .9971 CRS -.9746 CST -.9883  
 FDE 1.3347 FRA 1.1701 FC3-3.4164 BSP 18225 SGB 5689.9 R23 .0224 R13 .9663 LSA 3562.1 MSA 166.5 SSA 16.1  
 BDE 2.1528 BRA 1.0177 BC3 5.4893 FSP -1213 SG1 5678.7 SG2 357.4 THA 5.92 EL1 3395.3 EL2 45.9 ALF 10.38

LAUNCH DATE JAN 24 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 525.109

RL 147.27 LAL .00 LOL 123.84 VL 27.172 GAL 3.11 AZL 86.72 HCA 248.61 SMA 124.73 ECC .18844 INC 3.2768 V1 30.253  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.162 GAP 7.93 AZP 91.20 TAL 166.37 TAP 54.98 RCA 101.22 APO 148.23 V2 34.908  
 RC 151.204 GL 24.40 GP -16.97 ZAL 69.85 ZAP 154.58 ETS 322.61 ZAE 128.70 ETE 193.26 ZAC 128.26 ETC 177.58 CLP-160.79

PLANETOCENTRIC CONIC

C3 14.091 VHL 3.754 DLA 42.81 RAL 46.13 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 5.906 DPA -5.90 RAP 36.77 ECC 1.2319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.44 20 33 3 4127.69 -31.67 184.90 274.40 59.53 21 41 50 3527.7 -35.45 176.85  
 123.56 3 51 10 2784.36 -31.66 81.66 274.39 59.52 4 37 35 2184.4 -35.44 73.62  
 56.44 20 33 3 4127.69 -31.67 184.90 274.40 59.53 21 41 50 3527.7 -35.45 176.85  
 123.56 3 51 10 2784.36 -31.66 81.66 274.39 59.52 4 37 35 2184.4 -35.44 73.62  
 56.44 20 33 3 4127.69 -31.67 184.90 274.40 59.53 21 41 50 3527.7 -35.45 176.85  
 123.56 3 51 10 2784.36 -31.66 81.66 274.39 59.52 4 37 35 2184.4 -35.44 73.62

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.0510 TRA 1.2096 TC3-5.4294 BAU 1.0236 SGT 5722.8 SGR 663.5 SG3 339.6 ST 3222.6 SR 593.2 SS 1014.6  
 RDE .3852 RRA .1257 RC3 -.2151 FAU .05065 RRT .8316 RRF .8159 RTF .9664 CRT .9942 CRS -.9642 CST -.9868  
 FDE 1.1993 FRA 1.2386 FC3-3.1116 BSP 18504 SGB 5761.1 R23 .0161 R13 .9666 LSA 3425.9 MSA 171.7 SSA 16.6  
 BDE 2.0869 BRA 1.2162 BC3 5.4337 FSP -1162 SG1 5749.4 SG2 366.8 THA 5.53 EL1 3276.1 EL2 63.0 ALF 10.37

LAUNCH DATE JAN 24 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 530.920

RL 147.27 LAL .00 LOL 123.84 VL 27.141 GAL 3.49 AZL 86.88 HCA 251.79 SMA 124.53 ECC .19214 INC 3.1199 V1 30.253  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.150 GAP 8.28 AZP 90.98 TAL 165.04 TAP 56.83 RCA 100.60 APO 148.46 V2 34.920  
 RC 153.416 GL 22.71 GP -16.09 ZAL 67.39 ZAP 156.06 ETS 322.11 ZAE 128.59 ETE 192.47 ZAC 130.03 ETC 177.36 CLP-162.03

PLANETOCENTRIC CONIC

C3 14.581 VHL 3.819 DLA 41.84 RAL 49.65 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.088 DPA -4.39 RAP 38.17 ECC 1.2400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.81 20 52 50 4119.67 -30.76 183.58 278.00 60.11 22 1 29 3519.7 -34.48 175.58  
 122.19 3 59 31 2807.50 -30.75 83.08 277.99 60.10 4 46 18 2207.5 -34.47 75.08  
 57.81 20 52 50 4119.67 -30.76 183.58 278.00 60.11 22 1 29 3519.7 -34.48 175.58  
 122.19 3 59 31 2807.50 -30.75 83.08 277.99 60.10 4 46 18 2207.5 -34.47 75.08  
 57.81 20 52 50 4119.67 -30.76 183.58 278.00 60.11 22 1 29 3519.7 -34.48 175.58  
 122.19 3 59 31 2807.50 -30.75 83.08 277.99 60.10 4 46 18 2207.5 -34.47 75.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9826 TRA 1.4224 TC3-5.3181 BAU 1.0373 SGT 5792.5 SGR 646.6 SG3 324.0 ST 3098.9 SR 576.5 SS 945.5  
 RDE .3804 RRA .1336 RC3 -.1844 FAU .04710 RRT .8120 RRF .7955 RTF .9667 CRT .9896 CRS -.9509 CST -.9851  
 FDE 1.0758 FRA 1.3042 FC3-2.7964 BSP 18683 SGB 5828.5 R23 .0125 R13 .9668 LSA 3285.9 MSA 178.8 SSA 16.9  
 BDE 2.0188 BRA 1.4287 BC3 5.3213 FSP -1104 SG1 5816.3 SG2 375.9 THA 5.20 EL1 3151.0 EL2 81.5 ALF 10.44

LAUNCH DATE JAN 24 1969

FLIGHT TIME 188.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 536.704

RL 147.27 LAL .00 LOL 123.84 VL 27.109 GAL 3.88 AZL 87.03 HCA 254.98 SMA 124.33 ECC .19612 INC 2.9685 V1 30.253  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.138 GAP 8.64 AZP 90.77 TAL 163.70 TAP 58.67 RCA 99.95 APO 148.71 V2 34.932  
 RC 155.612 GL 21.06 GP -15.30 ZAL 64.92 ZAP 157.45 ETS 321.48 ZAE 128.48 ETE 191.77 ZAC 131.86 ETC 177.13 CLP-163.24

PLANETOCENTRIC CONIC

C3 15.199 VHL 3.899 DLA 40.83 RAL 53.07 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 6.282 DPA -2.95 RAP 39.66 ECC 1.2501  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.25 21 12 46 4111.55 -29.78 182.24 281.62 60.66 22 21 18 3511.6 -33.44 174.30  
 120.75 4 6 53 2834.15 -29.77 84.74 281.61 60.65 4 54 7 2234.2 -33.43 76.80  
 59.25 21 12 46 4111.55 -29.78 182.24 281.62 60.66 22 21 18 3511.6 -33.44 174.30  
 120.75 4 6 53 2834.15 -29.77 84.74 281.61 60.65 4 54 7 2234.2 -33.43 76.80  
 59.25 21 12 46 4111.55 -29.78 182.24 281.62 60.66 22 21 18 3511.6 -33.44 174.30  
 120.75 4 6 53 2834.15 -29.77 84.74 281.61 60.65 4 54 7 2234.2 -33.43 76.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9044 TRA 1.6428 TC3-5.1746 BAU 1.0520 SGT 5856.2 SGR 632.0 SG3 308.8 ST 2960.5 SR 561.1 SS 877.1  
 RDE .3776 RRA .1417 RC3 -.1600 FAU .04387 RRT .7931 RRF .7758 RTF .9671 CRT .9829 CRS -.9334 CST -.9831  
 FDE .9572 FRA 1.3617 FC3-2.4987 BSP 18952 SGB 5890.2 R23 .0090 R13 .9671 LSA 3132.6 MSA 188.1 SSA 17.0  
 BDE 1.9415 BRA 1.6489 BC3 5.1771 FSP -1057 SG1 5877.7 SG2 383.5 THA 4.91 EL1 3011.5 EL2 101.4 ALF 10.57

LAUNCH DATE JAN 24 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC DISTANCE 542.459  
 RL 147.27 LAL .00 LOL 123.84 VL 27.078 GAL 4.30 AZL 87.18 HCA 258.16 SMA 124.13 ECC .20040 INC 2.8214 V1 30.253  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.127 GAP 9.02 AZP 90.58 TAL 162.35 TAP 60.51 RCA 99.25 APO 149.01 V2 34.945  
 RC 157.792 GL 19.44 GP -14.58 ZAL 62.47 ZAP 158.77 ETS 320.70 ZAE 128.36 ETE 191.15 ZAC 133.73 ETC 176.88 CLP-164.41

PLANETOCENTRIC CONIC  
 C3 15.956 VHL 3.994 DLA 39.80 RAL 56.38 RAD 6567.6 VEL 11.719 PTH 2.06 VHP 6.486 DPA -1.58 RAP 41.22 ECC 1.2626  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.78 21 32 51 4103.20 -28.74 180.86 285.24 61.19 22 41 14 3503.2 -32.34 172.98  
 119.22 4 13 12 2864.44 -28.73 86.65 285.23 61.18 5 0 56 2264.4 -32.33 78.77  
 60.78 21 32 51 4103.20 -28.74 180.86 285.24 61.19 22 41 14 3503.2 -32.34 172.98  
 119.22 4 13 12 2864.44 -28.73 86.65 285.23 61.18 5 0 56 2264.4 -32.33 78.77  
 60.78 21 32 51 4103.20 -28.74 180.86 285.24 61.19 22 41 14 3503.2 -32.34 172.98  
 119.22 4 13 12 2864.44 -28.73 86.65 285.23 61.18 5 0 56 2264.4 -32.33 78.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8212 TRA 1.8759 TC3-4.9892 BAU 1.0647 SGT 5914.2 SGR 619.6 SG3 294.0 ST 2818.3 SR 547.3 SS 813.9  
 RDE .3770 RRA .1507 RC3 -.1390 FAU .04072 RRT .7752 RRF .7575 RTF .9674 CRT .9736 CRS -.9114 CST -.9810  
 FDE .8475 FRA 1.4153 FC3-2.2093 BSP 19183 SGB 5946.6 R23 .0068 R13 .9674 LSA 2977.3 MSA 199.7 SSA 16.9  
 BOE 1.8598 BRA 1.8820 BC3 4.9912 FSP -1011 SG1 5933.7 SG2 390.1 THA 4.66 EL1 2868.3 EL2 122.8 ALF 10.73

LAUNCH DATE JAN 24 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC DISTANCE 548.182  
 RL 147.27 LAL .00 LOL 123.84 VL 27.046 GAL 4.73 AZL 87.32 HCA 261.35 SMA 123.93 ECC .20501 INC 2.6777 V1 30.253  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.116 GAP 9.41 AZP 90.40 TAL 160.99 TAP 62.34 RCA 98.52 APO 149.34 V2 34.957  
 RC 159.953 GL 17.86 GP -13.94 ZAL 60.05 ZAP 160.02 ETS 319.76 ZAE 128.25 ETE 190.60 ZAC 135.64 ETC 176.61 CLP-165.55

PLANETOCENTRIC CONIC  
 C3 16.865 VHL 4.107 DLA 38.74 RAL 59.57 RAD 6567.7 VEL 11.758 PTH 2.08 VHP 6.703 DPA -.27 RAP 42.85 ECC 1.2775  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.37 21 53 5 4094.36 -27.63 179.44 288.85 61.69 23 1 20 3494.4 -31.18 171.62  
 117.63 4 18 21 2898.60 -27.62 88.83 288.85 61.68 5 6 40 2298.6 -31.17 81.02  
 62.37 21 53 5 4094.36 -27.63 179.44 288.85 61.69 23 1 20 3494.4 -31.18 171.62  
 117.63 4 18 21 2898.60 -27.62 88.83 288.85 61.68 5 6 40 2298.6 -31.17 81.02  
 62.37 21 53 5 4094.36 -27.63 179.44 288.85 61.69 23 1 20 3494.4 -31.18 171.62  
 117.63 4 18 21 2898.60 -27.62 88.83 288.85 61.68 5 6 40 2298.6 -31.17 81.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7328 TRA 2.1215 TC3-4.7713 BAU 1.0761 SGT 5966.9 SGR 608.7 SG3 279.7 ST 2674.8 SR 534.4 SS 755.7  
 RDE .3780 RRA .1605 RC3 -.1216 FAU .03772 RRT .7587 RRF .7407 RTF .9677 CRT .9608 CRS -.8840 CST -.9786  
 FDE .7456 FRA 1.4654 FC3-1.9365 BSP 19401 SGB 5997.9 R23 .0050 R13 .9678 LSA 2822.3 MSA 213.5 SSA 16.7  
 BOE 1.7735 BRA 2.1276 BC3 4.7729 FSP -966 SG1 5984.8 SG2 395.4 THA 4.45 EL1 2723.8 EL2 145.5 ALF 10.90

LAUNCH DATE JAN 24 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC DISTANCE 553.870  
 RL 147.27 LAL .00 LOL 123.84 VL 27.014 GAL 5.20 AZL 87.46 HCA 264.54 SMA 123.73 ECC .20997 INC 2.5362 V1 30.253  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.105 GAP 9.82 AZP 90.24 TAL 159.64 TAP 64.18 RCA 97.75 APO 149.71 V2 34.970  
 RC 162.097 GL 16.32 GP -13.35 ZAL 57.67 ZAP 161.21 ETS 318.65 ZAE 128.14 ETE 190.11 ZAC 137.58 ETC 176.31 CLP-166.66

PLANETOCENTRIC CONIC  
 C3 17.943 VHL 4.236 DLA 37.67 RAL 62.62 RAD 6567.7 VEL 11.804 PTH 2.09 VHP 6.932 DPA -.98 RAP 44.54 ECC 1.2953  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.04 22 13 31 4084.80 -26.48 177.96 292.46 62.16 23 21 36 3484.8 -29.98 170.21  
 115.96 4 22 16 2936.86 -26.47 91.29 292.45 62.15 5 11 13 2336.9 -29.97 83.54  
 64.04 22 13 31 4084.80 -26.48 177.96 292.46 62.16 23 21 36 3484.8 -29.98 170.21  
 115.96 4 22 16 2936.86 -26.47 91.29 292.45 62.15 5 11 13 2336.9 -29.97 83.54  
 64.04 22 13 31 4084.80 -26.48 177.96 292.46 62.16 23 21 36 3484.8 -29.98 170.21  
 115.96 4 22 16 2936.86 -26.47 91.29 292.45 62.15 5 11 13 2336.9 -29.97 83.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6431 TRA 2.3843 TC3-4.5180 BAU 1.0841 SGT 6015.8 SGR 599.7 SG3 266.3 ST 2539.1 SR 522.8 SS 705.7  
 RDE .3810 RRA .1716 RC3 -.1058 FAU .03471 RRT .7438 RRF .7263 RTF .9679 CRT .9441 CRS -.8514 CST -.9764  
 FDE .6541 FRA 1.5154 FC3-1.6746 BSP 19524 SGB 6045.6 R23 .0048 R13 .9679 LSA 2676.8 MSA 229.4 SSA 16.4  
 BOE 1.6867 BRA 2.3904 BC3 4.5192 FSP -918 SG1 6032.4 SG2 399.7 THA 4.26 EL1 2586.8 EL2 169.2 ALF 11.05

LAUNCH DATE JAN 24 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC DISTANCE 559.519  
 RL 147.27 LAL .00 LOL 123.84 VL 26.983 GAL 5.69 AZL 87.60 HCA 267.74 SMA 123.54 ECC .21533 INC 2.3962 V1 30.253  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.094 GAP 10.25 AZP 90.09 TAL 158.28 TAP 66.02 RCA 96.93 APO 150.14 V2 34.983  
 RC 164.221 GL 14.84 GP -12.82 ZAL 55.34 ZAP 162.34 ETS 317.32 ZAE 128.03 ETE 189.68 ZAC 139.56 ETC 175.98 CLP-167.75

PLANETOCENTRIC CONIC  
 C3 19.210 VHL 4.383 DLA 36.59 RAL 65.53 RAD 6567.8 VEL 11.857 PTH 2.10 VHP 7.176 DPA 2.17 RAP 46.30 ECC 1.3161  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.79 22 34 14 4074.09 -25.28 176.39 296.04 62.62 23 42 8 3474.1 -28.74 168.71  
 114.21 4 24 47 2979.60 -25.27 94.07 296.03 62.61 5 14 26 2379.6 -28.72 86.38  
 65.79 22 34 14 4074.09 -25.28 176.39 296.04 62.62 23 42 8 3474.1 -28.74 168.71  
 114.21 4 24 47 2979.60 -25.27 94.07 296.03 62.61 5 14 26 2379.6 -28.72 86.38  
 65.79 22 34 14 4074.09 -25.28 176.39 296.04 62.62 23 42 8 3474.1 -28.74 168.71  
 114.21 4 24 47 2979.60 -25.27 94.07 296.03 62.61 5 14 26 2379.6 -28.72 86.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.5454 TRA 2.6572 TC3-4.2527 BAU 1.0924 SGT 6057.5 SGR 590.6 SG3 253.4 ST 2403.8 SR 510.9 SS 659.6  
 RDE .3848 RRA .1833 RC3 -.0935 FAU .03198 RRT .7303 RRF .7129 RTF .9681 CRT .9223 CRS -.8118 CST -.9741  
 FDE .5672 FRA 1.5603 FC3-1.4411 BSP 19728 SGB 6086.3 R23 .0040 R13 .9682 LSA 2532.4 MSA 247.0 SSA 16.0  
 BOE 1.5926 BRA 2.6635 BC3 4.2537 FSP -877 SG1 6073.0 SG2 402.4 THA 4.09 EL1 2449.8 EL2 193.8 ALF 11.16

LAUNCH DATE JAN 24 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 565.122

RL 147.27 LAL .00 LOL 123.84 VL 26.951 GAL 6.21 AZL 87.74 HCA 270.93 SMA 123.34 ECC .22111 INC 2.2566 V1 30.253  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.084 GAP 10.71 AZP 89.96 TAL 156.93 TAP 67.86 RCA 96.07 APO 150.61 V2 34.996  
 RC 166.326 GL 13.41 GP -12.34 ZAL 53.08 ZAP 163.41 ETS 315.77 ZAE 127.93 ETE 189.29 ZAC 141.55 ETC 175.60 CLP-168.82

PLANETOCENTRIC CONIC

C3 20.691 VHL 4.549 DLA 35.51 RAL 68.30 RAD 6567.8 VEL 11.919 PTH 2.12 VHP 7.434 DPA 3.31 RAP 48.10 ECC 1.3405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.62 22 55 18 4061.94 -24.05 174.72 299.60 63.05 24 3 0 3461.9 -27.46 167.10  
 112.38 4 25 49 3027.07 -24.03 97.17 299.59 63.04 5 16 17 2427.1 -27.45 89.55  
 67.62 22 55 18 4061.94 -24.05 174.72 299.60 63.05 24 3 0 3461.9 -27.46 167.10  
 112.38 4 25 49 3027.07 -24.03 97.17 299.59 63.04 5 16 17 2427.1 -27.45 89.55  
 67.62 22 55 18 4061.94 -24.05 174.72 299.60 63.05 24 3 0 3461.9 -27.46 167.10  
 112.38 4 25 49 3027.07 -24.03 97.17 299.59 63.04 5 16 17 2427.1 -27.45 89.55

DIFFERENTIAL CORRECTIONS

TDE 1.4448 TRA 2.9464 TC3-3.9708 BAU 1.0986  
 RDE .3897 RRA .1961 RC3 -.0828 FAU .02935  
 FDE .4878 FRA 1.6041 FC3-1.2279 BSP 19896  
 BDE 1.4965 BRA 2.9529 BC3 3.9717 FSP -838

MID-COURSE EXECUTION ACCURACY

SGT 6094.7 SGR 582.0 SG3 241.1  
 RRT .7186 RRF .7014 RTF .9684  
 SGB 6122.5 R23 .0034 R13 .9684  
 SG1 6109.1 SG2 403.8 THA 3.94

ORBIT DETERMINATION ACCURACY

ST 2279.1 SR 499.3 SS 620.5  
 CRT .8948 CRS -.7661 CST -.9721  
 LSA 2399.6 MSA 265.6 SSA 15.6  
 EL1 2322.9 EL2 218.7 ALF 11.19

LAUNCH DATE JAN 24 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 570.675

RL 147.27 LAL .00 LOL 123.84 VL 26.919 GAL 6.76 AZL 87.88 HCA 274.13 SMA 123.14 ECC .22737 INC 2.1167 V1 30.253  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.073 GAP 11.18 AZP 89.85 TAL 155.58 TAP 69.71 RCA 95.15 APO 151.14 V2 35.010  
 RC 168.410 GL 12.04 GP -11.90 ZAL 50.89 ZAP 164.42 ETS 313.95 ZAE 127.82 ETE 188.94 ZAC 143.57 ETC 175.18 CLP-169.88

PLANETOCENTRIC CONIC

C3 22.414 VHL 4.734 DLA 34.43 RAL 70.93 RAD 6567.9 VEL 11.991 PTH 2.14 VHP 7.710 DPA 4.39 RAP 49.95 ECC 1.3689  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.55 23 16 52 4047.78 -22.79 172.92 303.14 63.47 24 24 20 3447.8 -26.16 165.36  
 110.45 4 25 14 3079.80 -22.78 100.64 303.13 63.46 5 16 34 2479.8 -26.15 93.08  
 69.55 23 16 52 4047.78 -22.79 172.92 303.14 63.47 24 24 20 3447.8 -26.16 165.36  
 110.45 4 25 14 3079.80 -22.78 100.64 303.13 63.46 5 16 34 2479.8 -26.15 93.08  
 69.55 23 16 52 4047.78 -22.79 172.92 303.14 63.47 24 24 20 3447.8 -26.16 165.36  
 110.45 4 25 14 3079.80 -22.78 100.64 303.13 63.46 5 16 34 2479.8 -26.15 93.08

DIFFERENTIAL CORRECTIONS

TDE 1.3407 TRA 3.2518 TC3-3.6796 BAU 1.1028  
 RDE .3955 RRA .2100 RC3 -.0735 FAU .02683  
 FDE .4150 FRA 1.6468 FC3-1.0365 BSP 20064  
 BDE 1.3978 BRA 3.2586 BC3 3.6804 FSP -800

MID-COURSE EXECUTION ACCURACY

SGT 6126.6 SGR 573.5 SG3 229.5  
 RRT .7084 RRF .6914 RTF .9687  
 SGB 6153.4 R23 .0031 R13 .9687  
 SG1 6140.1 SG2 403.9 THA 3.81

ORBIT DETERMINATION ACCURACY

ST 2166.2 SR 487.5 SS 587.8  
 CRT .8609 CRS -.7148 CST -.9708  
 LSA 2279.1 MSA 284.7 SSA 15.1  
 EL1 2207.0 EL2 243.4 ALF 11.10

LAUNCH DATE JAN 24 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 576.171

RL 147.27 LAL .00 LOL 123.84 VL 26.888 GAL 7.35 AZL 88.02 HCA 277.33 SMA 122.95 ECC .23415 INC 1.9756 V1 30.253  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.063 GAP 11.69 AZP 89.75 TAL 154.25 TAP 71.58 RCA 94.16 APO 151.74 V2 35.023  
 RC 170.474 GL 10.72 GP -11.50 ZAL 48.78 ZAP 165.39 ETS 311.84 ZAE 127.71 ETE 188.63 ZAC 145.61 ETC 174.69 CLP-170.92

PLANETOCENTRIC CONIC

C3 24.414 VHL 4.941 DLA 33.36 RAL 73.41 RAD 6568.0 VEL 12.074 PTH 2.16 VHP 8.004 DPA 5.43 RAP 51.84 ECC 1.4018  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.58 23 39 9 4030.85 -21.51 170.92 306.66 63.87 24 46 20 3430.9 -24.85 163.42  
 108.42 4 22 47 3138.47 -21.50 104.52 306.65 63.86 5 15 5 2538.5 -24.83 97.03  
 71.58 23 39 9 4030.85 -21.51 170.92 306.66 63.87 24 46 20 3430.9 -24.85 163.42  
 108.42 4 22 47 3138.47 -21.50 104.52 306.65 63.86 5 15 5 2538.5 -24.83 97.03  
 110.00 5 29 11 2934.94 -26.90 91.37 309.29 68.07 6 18 6 2334.9 -29.63 83.24  
 110.00 3 35 52 3282.38 -16.31 112.73 303.70 59.53 4 30 34 2682.4 -20.23 105.80

DIFFERENTIAL CORRECTIONS

TDE 1.2373 TRA 3.5786 TC3-3.3774 BAU 1.1026  
 RDE .4024 RRA .2251 RC3 -.0647 FAU .02432  
 FDE .3505 FRA 1.6908 FC3 -.8626 BSP 20117  
 BDE 1.3011 BRA 3.5857 BC3 3.3780 FSP -760

MID-COURSE EXECUTION ACCURACY

SGT 6154.9 SGR 565.3 SG3 218.6  
 RRT .7001 RRF .6836 RTF .9690  
 SGB 6180.8 R23 .0033 R13 .9690  
 SG1 6167.7 SG2 402.8 THA 3.69

ORBIT DETERMINATION ACCURACY

ST 2071.3 SR 476.0 SS 562.5  
 CRT .8211 CRS -.6604 CST -.9705  
 LSA 2177.5 MSA 302.9 SSA 14.7  
 EL1 2108.5 EL2 266.9 ALF 10.86

LAUNCH DATE JAN 24 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 581.599

RL 147.27 LAL .00 LOL 123.84 VL 26.857 GAL 7.97 AZL 88.17 HCA 280.53 SMA 122.76 ECC .24150 INC 1.8323 V1 30.253  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.053 GAP 12.22 AZP 89.66 TAL 152.92 TAP 73.46 RCA 93.11 APO 152.41 V2 35.036  
 RC 172.518 GL 9.47 GP -11.13 ZAL 46.75 ZAP 166.30 ETS 309.37 ZAE 127.60 ETE 188.35 ZAC 147.66 ETC 174.12 CLP-171.96

PLANETOCENTRIC CONIC

C3 26.733 VHL 5.170 DLA 32.31 RAL 75.76 RAD 6568.1 VEL 12.170 PTH 2.18 VHP 8.318 DPA 6.42 RAP 53.77 ECC 1.4400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.75 0 6 26 4009.95 -20.23 168.64 310.15 64.25 1 13 16 3409.9 -23.52 161.20  
 106.25 4 18 9 3204.18 -20.21 108.90 310.14 64.24 5 11 33 2604.2 -23.51 101.46  
 73.75 0 6 26 4009.95 -20.23 168.64 310.15 64.25 1 13 16 3409.9 -23.52 161.20  
 106.25 4 18 9 3204.18 -20.21 108.90 310.14 64.24 5 11 33 2604.2 -23.51 101.46  
 110.00 6 7 9 2867.49 -28.53 86.80 313.96 70.32 6 54 57 2267.5 -30.94 78.43  
 110.00 3 16 36 3394.64 -12.33 119.00 305.61 57.86 4 13 10 2794.6 -16.49 112.36

DIFFERENTIAL CORRECTIONS

TDE 1.1271 TRA 3.9206 TC3-3.0826 BAU 1.1019  
 RDE .4096 RRA .2409 RC3 -.0573 FAU .02204  
 FDE .2893 FRA 1.7326 FC3 -.7137 BSP 20262  
 BDE 1.1992 BRA 3.9280 BC3 3.0832 FSP -726

MID-COURSE EXECUTION ACCURACY

SGT 6176.3 SGR 556.1 SG3 208.2  
 RRT .6927 RRF .6765 RTF .9695  
 SGB 6201.2 R23 .0029 R13 .9695  
 SG1 6188.3 SG2 400.3 THA 3.58

ORBIT DETERMINATION ACCURACY

ST 1986.8 SR 463.7 SS 541.5  
 CRT .7742 CRS -.6015 CST -.9710  
 LSA 2086.4 MSA 320.0 SSA 14.2  
 EL1 2019.6 EL2 288.7 ALF 10.46

LAUNCH DATE JAN 24 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 586.952

RL 147.27 LAL .00 LOL 123.84 VL 26.825 GAL 8.64 AZL 88.31 HCA 283.74 SMA 122.57 ECC .24950 INC 1.6859 V1 30.253  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.043 GAP 12.79 AZP 89.60 TAL 151.62 TAP 75.36 RCA 91.99 APO 153.15 V2 35.050  
 RC 174.540 GL 8.27 GP -10.80 ZAL 44.82 ZAP 167.15 ETS 306.51 ZAE 127.49 ETE 188.10 ZAC 149.71 ETC 173.46 CLP-172.99

PLANETOCENTRIC CONIC

C3 29.421 VHL 5.424 DLA 31.28 RAL 77.97 RAD 6568.2 VEL 12.280 PTH 2.21 VHP 8.656 DPA 7.35 RAP 55.74 ECC 1.4842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.12 0 31 24 3983.23 -18.93 165.96 313.61 64.62 1 37 47 3383.2 -22.19 158.57  
 103.88 4 10 47 3278.68 -18.92 113.90 313.60 64.61 5 5 25 2678.7 -22.18 106.51  
 76.12 0 31 24 3983.23 -18.93 165.96 313.61 64.62 1 37 47 3383.2 -22.19 158.57  
 103.88 4 10 47 3278.68 -18.92 113.90 313.60 64.61 5 5 25 2678.7 -22.18 106.51  
 110.00 6 36 34 2825.13 -29.47 83.86 318.21 71.84 7 23 39 2225.1 -31.66 75.34  
 110.00 3 4 47 3484.78 -9.02 123.88 307.90 56.89 4 2 52 2884.8 -13.32 117.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0143 TRA 4.2834 TC3-2.7913 BAU 1.0981 SGT 6192.4 SGR 546.5 SG3 198.4 ST 1918.0 SR 451.0 SS 525.8  
 RDE .4173 RRA .2576 RC3 -.0505 FAU .01984 RRT .6867 RRF .6708 RTF .9701 CRT .7215 CRS -.5412 CST -.9724  
 FDE .2335 FRA 1.7750 FC3 -.5839 BSP 20389 SGB 6216.5 R23 .0026 R13 .9701 LSA 2011.6 MSA 334.7 SSA 13.7  
 BDE 1.0968 BRA 4.2911 BC3 2.7918 FSP -694 SG1 6203.8 S62 396.5 THA 3.48 EL1 1946.1 EL2 307.8 ALF 9.88

LAUNCH DATE JAN 24 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 592.215

RL 147.27 LAL .00 LOL 123.84 VL 26.794 GAL 9.35 AZL 88.46 HCA 286.94 SMA 122.38 ECC .25822 INC 1.5352 V1 30.253  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.033 GAP 13.41 AZP 89.55 TAL 150.34 TAP 77.29 RCA 90.78 APO 153.98 V2 35.063  
 RC 176.542 GL 7.13 GP -10.49 ZAL 42.98 ZAP 167.94 ETS 303.19 ZAE 127.36 ETE 187.86 ZAC 151.77 ETC 172.69 CLP-174.02

PLANETOCENTRIC CONIC

C3 32.539 VHL 5.704 DLA 30.28 RAL 80.04 RAD 6568.3 VEL 12.406 PTH 2.24 VHP 9.019 DPA 8.25 RAP 57.73 ECC 1.5355  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.81 0 59 6 3947.01 -17.64 162.60 317.05 64.99 2 4 53 3347.0 -20.87 155.26  
 101.19 3 59 36 3365.50 -17.63 119.78 317.04 64.98 4 55 42 2765.5 -20.86 112.44  
 78.81 0 59 6 3947.01 -17.64 162.60 317.05 64.99 2 4 53 3347.0 -20.87 155.26  
 101.19 3 59 36 3365.50 -17.63 119.78 317.04 64.98 4 55 42 2765.5 -20.86 112.44  
 110.00 7 1 31 2795.66 -30.07 81.78 322.26 72.93 7 48 6 2195.7 -32.11 73.16  
 110.00 2 56 22 3564.85 -6.02 128.14 310.38 56.29 3 55 47 2964.9 -10.41 121.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .8992 TRA 4.6699 TC3-2.5065 BAU 1.0905 SGT 6204.3 SGR 536.2 SG3 189.3 ST 1865.0 SR 437.9 SS 515.0  
 RDE .4254 RRA .2751 RC3 -.0441 FAU .01772 RRT .6818 RRF .6662 RTF .9708 CRT .6642 CRS -.4816 CST -.9747  
 FDE .1827 FRA 1.8189 FC3 -.4715 BSP 20487 SGB 6227.4 R23 .0023 R13 .9708 LSA 1953.2 MSA 346.2 SSA 13.3  
 BDE .9948 BRA 4.6780 BC3 2.5068 FSP -663 SG1 6215.1 S62 391.6 THA 3.39 EL1 1888.2 EL2 323.3 ALF 9.13

LAUNCH DATE JAN 24 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 597.374

RL 147.27 LAL .00 LOL 123.84 VL 26.764 GAL 10.12 AZL 88.62 HCA 290.15 SMA 122.20 ECC .26774 INC 1.3793 V1 30.253  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.023 GAP 14.06 AZP 89.52 TAL 149.09 TAP 79.24 RCA 89.48 APO 154.91 V2 35.076  
 RC 178.523 GL 6.05 GP -10.21 ZAL 41.24 ZAP 168.67 ETS 299.35 ZAE 127.23 ETE 187.65 ZAC 153.82 ETC 171.79 CLP-175.05

PLANETOCENTRIC CONIC

C3 36.162 VHL 6.014 DLA 29.30 RAL 81.98 RAD 6568.4 VEL 12.551 PTH 2.27 VHP 9.412 DPA 9.09 RAP 59.75 ECC 1.5951  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.13 1 32 24 3891.92 -16.36 157.89 320.46 65.35 2 37 16 3291.9 -19.55 150.59  
 97.87 3 41 46 3473.87 -16.35 127.20 320.45 65.34 4 39 40 2873.9 -19.54 119.91  
 100.00 4 48 19 3260.64 -21.01 113.52 322.56 68.23 5 42 39 2660.6 -23.78 105.82  
 100.00 3 8 33 3580.39 -11.81 132.78 318.15 62.34 4 8 13 2980.4 -15.42 125.86  
 110.00 7 23 24 2774.81 -30.48 80.29 326.18 73.72 8 9 39 2174.8 -32.41 71.60  
 110.00 2 49 56 3638.98 -3.20 132.03 312.97 55.95 3 50 35 3039.0 -7.65 125.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7854 TRA 5.0851 TC3-2.2273 BAU 1.0770 SGT 6213.2 SGR 525.4 SG3 180.7 ST 1828.8 SR 424.7 SS 508.8  
 RDE .4341 RRA .2937 RC3 -.0378 FAU .01561 RRT .6782 RRF .6632 RTF .9717 CRT .6053 CRS -.4262 CST -.9777  
 FDE .1380 FRA 1.8660 FC3 -.3737 BSP 20478 SGB 6235.4 R23 .0023 R13 .9717 LSA 1912.7 MSA 353.8 SSA 12.8  
 BDE .8974 BRA 5.0936 BC3 2.2276 FSP -629 SG1 6223.5 S62 385.5 THA 3.30 EL1 1847.4 EL2 334.6 ALF 8.27

LAUNCH DATE JAN 24 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC

DISTANCE 602.409

RL 147.27 LAL .00 LOL 123.84 VL 26.733 GAL 10.95 AZL 88.78 HCA 293.37 SMA 122.02 ECC .27817 INC 1.2167 V1 30.253  
 RP 108.00 LAP -1.12 LOP 57.21 VP 37.014 GAP 14.78 AZP 89.52 TAL 147.88 TAP 81.24 RCA 88.07 APO 155.96 V2 35.089  
 RC 180.483 GL 5.03 GP -9.95 ZAL 39.59 ZAP 169.32 ETS 294.92 ZAE 127.08 ETE 187.45 ZAC 155.86 ETC 170.71 CLP-176.09

PLANETOCENTRIC CONIC

C3 40.381 VHL 6.355 DLA 28.36 RAL 83.78 RAD 6568.6 VEL 12.718 PTH 2.31 VHP 9.839 DPA 9.88 RAP 61.78 ECC 1.6646  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 88.44 2 31 15 3753.07 -15.09 147.09 323.83 65.71 3 33 48 3153.1 -18.25 139.83  
 91.56 2 57 21 3668.48 -15.08 140.90 323.82 65.70 3 58 29 3068.5 -18.23 133.64  
 100.00 5 25 58 3189.38 -22.74 108.93 327.11 70.06 6 19 7 2589.4 -25.25 101.03  
 100.00 2 45 19 3707.42 -7.70 139.98 320.05 61.03 3 47 7 3107.4 -11.50 133.26  
 110.00 7 42 59 2760.48 -30.75 79.26 329.99 74.28 8 28 59 2160.5 -32.60 70.53  
 110.00 2 44 47 3709.08 -.52 135.69 315.64 55.82 3 46 37 3109.1 -5.01 129.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .6645 TRA 5.5234 TC3-1.9654 BAU 1.0612 SGT 6214.8 SGR 513.3 SG3 172.6 ST 1801.9 SR 410.6 SS 505.3  
 RDE .4428 RRA .3124 RC3 -.0322 FAU .01366 RRT .6749 RRF .6604 RTF .9728 CRT .5438 CRS -.3718 CST -.9809  
 FDE .0951 FRA 1.9134 FC3 -.2928 BSP 20574 SGB 6236.0 R23 .0019 R13 .9728 LSA 1882.2 MSA 357.7 SSA 12.4  
 BDE .7985 BRA 5.5322 BC3 1.9656 FSP -602 SG1 6224.5 S62 378.2 THA 3.20 EL1 1816.2 EL2 341.9 ALF 7.32

LAUNCH DATE JAN 24 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 26 1969

MELIOCENTRIC CONIC DISTANCE 607.298  
 RL 147.27 LAL .00 LOL 123.84 VL 26.704 GAL 11.85 AZL 88.95 MCA 296.58 SMA 121.84 ECC .28962 INC 1.0458 V1 30.253  
 RP 107.96 LAP -.94 LOP 60.42 VP 37.004 GAP 15.55 AZP 89.53 TAL 146.71 TAP 83.29 RCA 86.55 APO 157.12 V2 35.102  
 RC 182.422 GL 4.06 GP -9.71 ZAL 38.06 ZAP 169.88 ETS 289.85 ZAE 126.91 ETE 187.27 ZAC 157.89 ETC 169.42 CLP-177.14

PLANETOCENTRIC CONIC  
 C3 45.309 VHL 6.731 DLA 27.44 RAL 85.46 RAD 6568.7 VEL 12.910 PTH 2.35 VHP 10.303 DPA 10.63 RAP 63.83 ECC 1.7457  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 52 41 3538.74 -19.58 133.38 329.63 69.12 4 51 40 2938.7 -22.24 125.72  
 90.00 1 49 19 3940.85 -8.23 157.42 324.43 62.81 2 55 0 3340.8 -11.81 150.58  
 100.00 5 53 38 3148.86 -23.65 106.27 331.22 71.17 6 46 7 2548.9 -26.01 98.26  
 100.00 2 31 3 3805.96 -4.41 145.45 322.36 60.41 3 34 29 3206.0 -8.32 138.84  
 110.00 8 0 39 2751.37 -30.92 78.60 333.73 74.63 8 46 30 2151.4 -32.71 69.84  
 110.00 2 40 31 3776.22 2.04 139.19 318.35 55.87 3 43 28 3176.2 -2.45 132.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .5407 TRA 5.9931 TC3-1.7160 BAU 1.0396 SGT 6212.0 SGR 500.3 SG3 164.9 ST 1786.1 SR 396.1 SS 504.9  
 RDE .4516 RRA .3317 RC3 -.0268 FAU .01175 RRT .6722 RRF .6583 RTF .9741 CRT .4828 CRS -.3215 CST -.9842  
 FDE .0559 FRA 1.9642 FC3 -.2245 BSP 20648 SGB 6232.2 R23 .0016 R13 .9741 LSA 1863.9 MSA 357.8 SSA 11.9  
 BDE .7045 BRA 6.0022 BC3 1.7162 FSP -576 SG1 6221.2 SG2 369.8 THA 3.11 EL1 1796.7 EL2 344.8 ALF 6.35

LAUNCH DATE JAN 24 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 28 1969

MELIOCENTRIC CONIC DISTANCE 612.012  
 RL 147.27 LAL .00 LOL 123.84 VL 26.674 GAL 12.82 AZL 89.13 MCA 299.80 SMA 121.66 ECC .30224 INC .8650 V1 30.253  
 RP 107.92 LAP -.75 LOP 63.64 VP 36.995 GAP 16.39 AZP 89.57 TAL 145.59 TAP 85.38 RCA 84.89 APO 158.43 V2 35.114  
 RC 184.340 GL 3.15 GP -9.49 ZAL 36.63 ZAP 170.34 ETS 284.12 ZAE 126.72 ETE 187.09 ZAC 159.88 ETC 167.86 CLP-178.21

PLANETOCENTRIC CONIC  
 C3 51.087 VHL 7.148 DLA 26.56 RAL 87.02 RAD 6568.9 VEL 13.132 PTH 2.40 VHP 10.811 DPA 11.33 RAP 65.88 ECC 1.8408  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 24 30 3483.75 -20.87 129.86 333.86 70.42 5 22 33 2883.8 -23.35 122.07  
 90.00 1 29 54 4055.87 -4.60 163.93 326.55 62.03 2 37 30 3455.9 -8.31 157.21  
 100.00 6 16 29 3122.74 -24.22 104.53 335.10 71.92 7 8 31 2522.7 -26.46 96.45  
 100.00 2 20 36 3892.11 -1.50 150.19 324.84 60.14 3 25 28 3292.1 -5.46 143.64  
 110.00 8 16 41 2746.61 -31.00 78.26 337.38 74.82 9 2 28 2146.6 -32.77 69.48  
 110.00 2 36 53 3841.01 4.51 142.58 321.10 56.08 3 40 54 3241.0 .03 136.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .4144 TRA 6.4977 TC3-1.4803 BAU 1.0111 SGT 6204.9 SGR 486.1 SG3 157.7 ST 1779.5 SR 381.1 SS 507.3  
 RDE .4606 RRA .3511 RC3 -.0217 FAU .00988 RRT .6699 RRF .6567 RTF .9756 CRT .4242 CRS -.2762 CST -.9872  
 FDE .0200 FRA 2.0190 FC3 -.1674 BSP 20696 SGB 6223.9 R23 .0013 R13 .9756 LSA 1855.7 MSA 354.2 SSA 11.5  
 BDE .6196 BRA 6.5072 BC3 1.4804 FSP -550 SG1 6213.4 SG2 360.4 THA 3.01 EL1 1787.1 EL2 343.7 ALF 5.39

LAUNCH DATE JAN 24 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 30 1969

MELIOCENTRIC CONIC DISTANCE 616.514  
 RL 147.27 LAL .00 LOL 123.84 VL 26.645 GAL 13.88 AZL 89.33 MCA 303.01 SMA 121.49 ECC .31618 INC .6719 V1 30.253  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.985 GAP 17.31 AZP 89.63 TAL 144.53 TAP 87.55 RCA 83.08 APO 159.90 V2 35.126  
 RC 186.236 GL 2.29 GP -9.29 ZAL 35.30 ZAP 170.68 ETS 277.72 ZAE 126.50 ETE 186.93 ZAC 161.84 ETC 165.95 CLP-179.30

PLANETOCENTRIC CONIC  
 C3 57.892 VHL 7.609 DLA 25.72 RAL 88.44 RAD 6569.1 VEL 13.388 PTH 2.45 VHP 11.369 DPA 11.98 RAP 67.93 ECC 1.9528  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 49 4 3450.99 -21.60 127.74 337.76 71.23 5 46 35 2851.0 -23.97 119.87  
 90.00 1 16 42 4150.37 -1.56 169.21 328.92 61.72 2 25 53 3550.4 -5.33 162.56  
 100.00 6 36 9 3105.75 -24.57 103.40 338.82 72.42 7 27 55 2505.8 -26.74 95.27  
 100.00 2 12 18 3970.84 1.17 154.51 327.40 60.13 3 18 29 3370.8 -2.82 147.98  
 110.00 8 31 17 2745.55 -31.02 78.18 340.96 74.86 9 17 2 2145.5 -32.78 69.40  
 110.00 2 33 40 3903.81 6.89 145.89 323.86 56.43 3 38 44 3303.8 2.43 139.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .2846 TRA 7.0413 TC3-1.2597 BAU .9751 SGT 6193.5 SGR 470.8 SG3 150.9 ST 1779.5 SR 365.7 SS 512.1  
 RDE .4698 RRA .3705 RC3 -.0168 FAU .00803 RRT .6678 RRF .6555 RTF .9772 CRT .3686 CRS -.2355 CST -.9900  
 FDE -.0132 FRA 2.0786 FC3 -.1201 BSP 20731 SGB 6211.4 R23 .0011 R13 .9772 LSA 1855.3 MSA 347.3 SSA 11.0  
 BDE .5493 BRA 7.0510 BC3 1.2598 FSP -526 SG1 6201.5 SG2 350.0 THA 2.92 EL1 1784.8 EL2 339.0 ALF 4.49

LAUNCH DATE JAN 24 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 1 1969

MELIOCENTRIC CONIC DISTANCE 620.758  
 RL 147.27 LAL .00 LOL 123.84 VL 26.617 GAL 15.04 AZL 89.54 MCA 306.23 SMA 121.32 ECC .33164 INC .4642 V1 30.253  
 RP 107.85 LAP -.37 LOP 70.07 VP 36.976 GAP 18.33 AZP 89.73 TAL 143.56 TAP 89.79 RCA 81.09 APO 161.56 V2 35.138  
 RC 188.109 GL 1.47 GP -9.11 ZAL 34.10 ZAP 170.88 ETS 270.73 ZAE 126.24 ETE 186.77 ZAC 163.75 ETC 163.59 CLP 179.57

PLANETOCENTRIC CONIC  
 C3 65.948 VHL 8.121 DLA 24.91 RAL 89.74 RAD 6569.3 VEL 13.686 PTH 2.50 VHP 11.986 DPA 12.58 RAP 69.97 ECC 2.0853  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 9 35 3430.16 -22.05 126.38 341.46 71.77 6 6 45 2830.2 -24.34 118.45  
 90.00 1 6 33 4234.37 1.15 173.89 331.41 61.70 2 17 8 3634.4 -2.64 167.27  
 100.00 6 53 26 3095.34 -24.78 102.70 342.41 72.73 7 45 1 2495.3 -26.91 94.54  
 100.00 2 5 24 4044.37 3.65 158.55 330.02 60.31 3 12 48 3444.4 -.32 152.02  
 110.00 8 44 34 2747.65 -30.98 78.33 344.45 74.78 9 30 21 2147.6 -32.76 69.56  
 110.00 2 30 45 3964.83 9.17 149.14 326.64 56.92 3 36 50 3364.8 4.75 142.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .1547 TRA 7.6319 TC3-1.0586 BAU .9334 SGT 6182.0 SGR 454.5 SG3 144.7 ST 1785.2 SR 350.1 SS 519.5  
 RDE .4792 RRA .3897 RC3 -.0122 FAU .00612 RRT .6657 RRF .6547 RTF .9787 CRT .3183 CRS -.2010 CST -.9924  
 FDE -.0429 FRA 2.1453 FC3 -.0804 BSP 20698 SGB 6198.7 R23 .0017 R13 .9787 LSA 1861.5 MSA 337.8 SSA 10.7  
 BDE .5036 BRA 7.6419 BC3 1.0587 FSP -501 SG1 6189.4 SG2 338.8 THA 2.81 EL1 1788.8 EL2 331.2 ALF 3.70

LAUNCH DATE JAN 25 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 5 1969

HELIOCENTRIC CONIC

DISTANCE 164.021

RL 147.28 LAL .00 LOL 124.85 VL 23.561 GAL 1.49 AZL 86.72 HCA 67.93 SMA 106.42 ECC .38468 INC 3.2831 V1 30.250  
 RP 107.86 LAP 3.04 LOP 192.75 VP 34.841 GAP -22.61 AZP 88.77 TAL 177.61 TAP 245.54 RCA 65.48 APO 147.36 V2 35.135  
 RC 42.657 GL 11.30 GP 6.30 ZAL 86.47 ZAP 13.95 ETS 208.51 ZAE 174.22 ETE 315.11 ZAC 116.85 ETC 162.68 CLP 12.47

PLANETOCENTRIC CONIC

C3 47.350 VHL 6.881 DLA 24.99 RAL 32.09 RAD 6568.8 VEL 12.989 PTH 2.37 VHP 14.018 DPA 13.07 RAP 21.79 ECC 1.7793  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 14 17 3353.45 -23.60 121.29 278.04 73.87 2 10 11 2753.5 -25.58 113.18  
 90.00 21 10 3 4148.24 -1.63 169.09 268.94 61.73 22 19 12 3548.2 -5.40 162.44  
 100.00 2 58 24 3017.78 -26.25 97.40 278.85 75.15 3 48 42 2417.8 -28.03 89.05  
 100.00 22 8 38 3959.14 .77 153.87 267.60 60.12 23 14 37 3359.1 -3.21 147.34  
 110.00 4 49 53 2669.00 -32.25 72.55 280.50 77.99 5 34 22 2069.0 -33.56 63.57  
 110.00 22 33 38 3880.69 6.01 144.67 264.34 56.29 23 38 19 3280.7 1.54 138.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3579 TRA -.8104 TC3 .0513 BAU .0361 SGT 805.0 SGR 430.8 SG3 55.8 ST 372.4 SR 418.3 SS 292.7  
 RDE -.5010 RRA .1107 RC3 -.0250 FAU .02007 RRT .1332 RRF -.1425 RTF -.6773 CRT .7543 CRS .8729 CST .9764  
 FDE .2629 FRA .3671 FC3 -.3670 BSP 2254 SGB 913.0 R23 -.0175 R13 -.6791 LSA 598.9 MSA 201.0 SSA 14.7  
 BDE .6157 BRA .8179 BC3 .0571 FSP -126 SG1 807.8 SG2 425.4 THA 5.65 EL1 525.1 EL2 194.8 ALF 49.39

LAUNCH DATE JAN 25 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 170.629

RL 147.28 LAL .00 LOL 124.85 VL 23.954 GAL 1.31 AZL 86.88 HCA 71.15 SMA 108.04 ECC .36386 INC 3.1203 V1 30.250  
 RP 107.89 LAP 2.95 LOP 195.98 VP 35.096 GAP -21.34 AZP 88.99 TAL 177.71 TAP 248.86 RCA 68.73 APO 147.35 V2 35.123  
 RC 42.436 GL 11.61 GP 6.61 ZAL 86.85 ZAP 12.61 ETS 213.37 ZAE 172.32 ETE 332.46 ZAC 118.16 ETC 162.17 CLP 10.76

PLANETOCENTRIC CONIC

C3 41.987 VHL 6.480 DLA 25.14 RAL 31.59 RAD 6568.6 VEL 12.781 PTH 2.33 VHP 13.306 DPA 13.96 RAP 23.08 ECC 1.6910  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 9 30 3332.84 -23.98 119.90 275.37 74.47 2 5 2 2732.8 -25.88 111.74  
 90.00 21 10 52 4108.40 -2.92 166.87 266.75 61.82 22 19 20 3508.4 -6.66 160.19  
 100.00 2 54 10 2995.37 -26.63 95.84 276.14 75.89 3 44 5 2395.4 -28.30 87.44  
 100.00 22 8 53 3921.10 -.52 151.78 265.42 60.11 23 14 14 3321.1 -4.49 145.24  
 110.00 4 46 22 2644.32 -32.58 70.70 277.66 79.03 5 30 26 2044.3 -33.75 61.66  
 110.00 22 33 10 3844.91 4.66 142.79 262.19 56.10 23 37 15 3244.9 .18 136.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3606 TRA -.7888 TC3 .0828 BAU .0482 SGT 840.7 SGR 434.4 SG3 61.6 ST 393.8 SR 422.9 SS 307.1  
 RDE -.4771 RRA .1014 RC3 -.0227 FAU .02108 RRT .1507 RRF -.1615 RTF -.6975 CRT .7663 CRS .8794 CST .9775  
 FDE .2751 FRA .3724 FC3 -.4347 BSP 2393 SGB 946.3 R23 -.0199 R13 -.6995 LSA 622.2 MSA 202.2 SSA 15.1  
 BDE .5980 BRA .7953 BC3 .0859 FSP -141 SG1 844.1 SG2 427.7 THA 6.00 EL1 543.3 EL2 196.9 ALF 47.66

LAUNCH DATE JAN 25 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 177.268

RL 147.28 LAL .00 LOL 124.85 VL 24.315 GAL 1.11 AZL 87.04 HCA 74.37 SMA 109.59 ECC .34437 INC 2.9637 V1 30.250  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.331 GAP -20.13 AZP 89.20 TAL 177.88 TAP 252.25 RCA 71.85 APO 147.34 V2 35.111  
 RC 42.394 GL 11.87 GP 6.94 ZAL 87.36 ZAP 11.39 ETS 219.46 ZAE 170.01 ETE 342.82 ZAC 119.45 ETC 161.60 CLP 9.05

PLANETOCENTRIC CONIC

C3 37.315 VHL 6.109 DLA 25.22 RAL 30.96 RAD 6568.5 VEL 12.597 PTH 2.28 VHP 12.626 DPA 14.87 RAP 24.36 ECC 1.6141  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 34 3307.90 -24.42 118.20 272.59 75.21 2 0 42 2707.9 -26.22 110.00  
 90.00 21 9 47 4073.75 -4.03 164.93 264.39 61.95 22 17 41 3473.8 -7.75 158.23  
 100.00 2 50 32 2969.50 -27.04 94.03 273.32 76.75 3 40 2 2369.5 -28.60 85.57  
 100.00 22 7 30 3887.39 -1.66 149.93 263.08 60.15 23 12 18 3287.4 -5.62 143.38  
 110.00 4 43 6 2617.31 -32.91 68.66 274.70 80.20 5 26 44 2017.3 -33.91 59.57  
 110.00 22 31 26 3812.34 3.42 141.08 259.91 55.97 23 34 58 3212.3 -1.07 134.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3626 TRA -.7666 TC3 .1216 BAU .0614 SGT 877.2 SGR 437.5 SG3 68.2 ST 415.4 SR 427.1 SS 321.2  
 RDE -.4543 RRA .0928 RC3 -.0185 FAU .02224 RRT .1697 RRF -.1825 RTF -.7163 CRT .7781 CRS .8861 CST .9784  
 FDE .2873 FRA .3768 FC3 -.5160 BSP 2554 SGB 980.2 R23 -.0231 R13 -.7186 LSA 645.7 MSA 202.6 SSA 15.6  
 BDE .5813 BRA .7722 BC3 .1230 FSP -160 SG1 881.3 SG2 429.1 THA 6.35 EL1 561.8 EL2 198.4 ALF 46.02

LAUNCH DATE JAN 25 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 183.934

RL 147.28 LAL .00 LOL 124.85 VL 24.648 GAL .91 AZL 87.19 HCA 77.58 SMA 111.09 ECC .32616 INC 2.8121 V1 30.250  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.549 GAP -18.97 AZP 89.39 TAL 178.12 TAP 255.70 RCA 74.86 APO 147.32 V2 35.099  
 RC 42.534 GL 12.10 GP 7.32 ZAL 88.00 ZAP 10.34 ETS 227.06 ZAE 167.54 ETE 349.49 ZAC 120.70 ETC 160.97 CLP 7.33

PLANETOCENTRIC CONIC

C3 33.248 VHL 5.766 DLA 25.21 RAL 30.21 RAD 6568.3 VEL 12.435 PTH 2.25 VHP 11.976 DPA 15.80 RAP 25.61 ECC 1.5472  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 2 44 3278.23 -24.92 116.17 269.72 76.11 1 57 22 2678.2 -26.59 107.90  
 90.00 21 6 38 4045.14 -4.94 163.32 261.88 62.08 22 14 3 3445.1 -8.64 156.60  
 100.00 2 47 40 2939.93 -27.49 91.95 270.39 77.77 3 36 40 2339.9 -28.90 83.43  
 100.00 22 4 23 3858.67 -2.64 148.35 260.60 60.21 23 8 42 3258.7 -6.58 141.79  
 110.00 4 40 12 2587.87 -33.23 66.43 271.61 81.48 5 23 20 1987.9 -34.05 57.28  
 110.00 22 28 21 3783.50 2.32 139.57 257.51 55.89 23 31 25 3183.5 -2.17 133.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3676 TRA -.7464 TC3 .1653 BAU .0737 SGT 917.4 SGR 440.3 SG3 75.4 ST 440.4 SR 431.0 SS 336.1  
 RDE -.4329 RRA .0848 RC3 -.0122 FAU .02350 RRT .1934 RRF -.2071 RTF -.7326 CRT .7915 CRS .8928 CST .9798  
 FDE .3007 FRA .3812 FC3 -.6119 BSP 2646 SGB 1017.6 R23 -.0260 R13 -.7351 LSA 672.0 MSA 202.2 SSA 16.1  
 BDE .5679 BRA .7512 BC3 .1657 FSP -179 SG1 922.5 SG2 429.6 THA 6.78 EL1 583.3 EL2 198.9 ALF 44.22



LAUNCH DATE JAN 25 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 13 1969

MELIOCENTRIC CONIC DISTANCE 190.620  
 RL 147.28 LAL .00 LOL 124.85 VL 24.954 GAL .71 AZL 87.34 MCA 80.80 SMA 112.52 ECC .30919 INC 2.6643 V1 30.250  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.749 GAP -17.87 AZP 89.57 TAL 178.42 TAP 259.22 RCA 77.73 APO 147.31 V2 35.086  
 RC 42.853 GL 12.29 GP 7.73 ZAL 88.77 ZAP 9.53 ETS 236.38 ZAE 165.03 ETE 354.16 ZAC 121.91 ETC 160.28 CLP 5.58

PLANETOCENTRIC CONIC  
 C3 29.708 VHL 5.450 DLA 25.11 RAL 29.34 RAD 6568.2 VEL 12.292 PTH 2.21 VHP 11.354 DPA 16.76 RAP 26.84 ECC 1.4889  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 1 9 3243.53 -25.47 113.78 266.79 77.19 1 55 12 2643.5 -26.98 105.44  
 90.00 21 1 19 4023.24 -5.64 162.09 259.22 62.20 22 8 22 3423.2 -9.32 155.34  
 100.00 2 45 42 2906.45 -27.95 89.56 267.37 78.94 3 34 8 2306.4 -29.19 80.98  
 100.00 21 59 27 3835.55 -3.42 147.08 258.00 60.29 23 3 22 3235.5 -7.35 140.50  
 110.00 4 37 45 2555.90 -33.53 63.98 268.41 82.91 5 20 21 1955.9 -34.14 54.79  
 110.00 22 23 53 3758.86 1.38 138.28 255.01 55.84 23 26 32 3158.9 -3.11 132.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3710 TRA -.7238 TC3 .2188 BAU .0869 SGT 956.6 SGR 443.0 SG3 83.5 ST 464.5 SR 434.7 SS 350.7  
 RDE -.4127 RRA .0773 RC3 -.0032 FAU .02489 RRT .2194 RRF -.2351 RTF -.7493 CRT .8045 CRS .8998 CST .9809  
 FDE .3145 FRA .3845 FC3 -.7255 BSP 2786 SGB 1054.2 R23 -.0299 R13 -.7522 LSA 697.9 MSA 200.9 SSA 16.6  
 BDE .5550 BRA .7279 BC3 .2188 FSP -202 SG1 962.7 S2 429.5 THA 7.25 EL1 604.4 EL2 198.4 ALF 42.64

LAUNCH DATE JAN 25 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 15 1969

MELIOCENTRIC CONIC DISTANCE 197.321  
 RL 147.28 LAL .00 LOL 124.85 VL 25.235 GAL .50 AZL 87.48 MCA 84.01 SMA 113.88 ECC .29342 INC 2.5193 V1 30.250  
 RP 108.05 LAP 2.51 LOP 208.86 VP 35.933 GAP -16.82 AZP 89.74 TAL 178.79 TAP 262.80 RCA 80.47 APO 147.30 V2 35.073  
 RC 43.347 GL 12.41 GP 8.19 ZAL 89.66 ZAP 9.03 ETS 247.34 ZAE 162.54 ETE 357.69 ZAC 123.06 ETC 159.52 CLP 3.82

PLANETOCENTRIC CONIC  
 C3 26.628 VHL 5.160 DLA 24.91 RAL 28.37 RAD 6568.1 VEL 12.166 PTH 2.18 VHP 10.761 DPA 17.75 RAP 28.03 ECC 1.4382  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 55 3203.70 -26.04 111.00 263.78 78.47 1 54 18 2603.7 -27.37 102.59  
 90.00 20 53 47 4008.48 -6.11 161.26 256.43 62.30 22 0 35 3408.5 -9.77 154.49  
 100.00 2 44 44 2868.94 -28.41 86.87 264.28 80.28 3 32 33 2268.9 -29.46 78.23  
 100.00 21 52 38 3818.47 -3.99 146.14 255.27 60.35 22 56 16 3218.5 -7.91 139.54  
 110.00 4 35 51 2521.32 -33.79 61.31 265.12 84.46 5 17 52 1921.3 -34.18 52.09  
 110.00 22 18 1 3738.86 .61 137.24 252.41 55.82 23 20 19 3138.9 -3.87 131.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3700 TRA -.6976 TC3 .2852 BAU .1016 SGT 992.3 SGR 445.6 SG3 92.5 ST 484.3 SR 437.8 SS 363.4  
 RDE -.3936 RRA .0705 RC3 .0096 FAU .02651 RRT .2459 RRF -.2656 RTF -.7667 CRT .8156 CRS .9063 CST .9817  
 FDE .3272 FRA .3862 FC3 -.8620 BSP 2981 SGB 1087.8 R23 -.0348 R13 -.7701 LSA 720.0 MSA 199.0 SSA 17.1  
 BDE .5402 BRA .7012 BC3 .2853 FSP -227 SG1 999.8 S2 428.7 THA 7.73 EL1 622.4 EL2 197.1 ALF 41.47

LAUNCH DATE JAN 25 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 17 1969

MELIOCENTRIC CONIC DISTANCE 204.035  
 RL 147.28 LAL .00 LOL 124.85 VL 25.493 GAL .30 AZL 87.62 MCA 87.22 SMA 115.18 ECC .27880 INC 2.3760 V1 30.250  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.102 GAP -15.81 AZP 89.88 TAL 179.23 TAP 266.45 RCA 83.06 APO 147.29 V2 35.060  
 RC 44.011 GL 12.47 GP 8.69 ZAL 90.68 ZAP 8.93 ETS 259.34 ZAE 160.13 ETE .53 ZAC 124.15 ETC 158.69 CLP 2.03

PLANETOCENTRIC CONIC  
 C3 23.951 VHL 4.894 DLA 24.60 RAL 27.30 RAD 6568.0 VEL 12.055 PTH 2.15 VHP 10.194 DPA 18.77 RAP 29.19 ECC 1.3942  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 2 3 3158.95 -26.61 107.85 260.73 79.95 1 54 42 2559.0 -27.73 99.36  
 90.00 20 44 7 4000.98 -6.34 160.84 253.56 62.34 21 50 48 3401.0 -10.00 154.06  
 100.00 2 44 52 2827.46 -28.85 83.87 261.13 81.81 3 31 59 2227.5 -29.68 75.16  
 100.00 21 43 59 3807.71 -4.35 145.55 252.47 60.40 22 47 27 3207.7 -8.26 138.94  
 110.00 4 34 36 2484.11 -33.99 58.43 261.77 86.16 5 16 0 1884.1 -34.15 49.18  
 110.00 22 10 44 3723.81 .04 136.46 249.73 55.82 23 12 48 3123.8 -4.45 130.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3733 TRA -.6756 TC3 .3558 BAU .1142 SGT 1033.9 SGR 448.5 SG3 102.5 ST 509.1 SR 440.9 SS 377.0  
 RDE -.3760 RRA .0639 RC3 .0261 FAU .02822 RRT .2797 RRF -.3010 RTF -.7813 CRT .8284 CRS .9126 CST .9830  
 FDE .3413 FRA .3895 FC3 -1.0201 BSP 3079 SGB 1127.0 R23 -.0390 R13 -.7851 LSA 746.2 MSA 196.4 SSA 17.7  
 BDE .5298 BRA .6786 BC3 .3567 FSP -253 SG1 1043.0 S2 426.9 THA 8.32 EL1 644.6 EL2 195.1 ALF 40.06

LAUNCH DATE JAN 25 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 19 1969

MELIOCENTRIC CONIC DISTANCE 210.755  
 RL 147.28 LAL .00 LOL 124.85 VL 25.730 GAL .10 AZL 87.77 MCA 90.42 SMA 116.40 ECC .26530 INC 2.2337 V1 30.250  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.257 GAP -14.85 AZP 90.02 TAL 179.73 TAP 270.16 RCA 85.52 APO 147.28 V2 35.047  
 RC 44.838 GL 12.45 GP 9.26 ZAL 91.81 ZAP 9.26 ETS 271.32 ZAE 157.83 ETE 2.94 ZAC 125.16 ETC 157.79 CLP .20

PLANETOCENTRIC CONIC  
 C3 21.626 VHL 4.650 DLA 24.17 RAL 26.15 RAD 6567.9 VEL 11.958 PTH 2.13 VHP 9.653 DPA 19.82 RAP 30.29 ECC 1.3559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 32 3109.60 -27.15 104.34 257.63 81.63 1 56 21 2509.6 -28.03 95.78  
 90.00 20 32 28 4000.67 -6.35 160.82 250.62 62.35 21 39 9 3400.7 -10.01 154.04  
 100.00 2 46 6 2782.11 -29.24 80.55 257.94 83.51 3 32 28 2182.1 -29.83 71.80  
 100.00 21 33 35 3803.39 -4.50 145.31 249.60 60.42 22 36 58 3203.4 -8.41 138.70  
 110.00 4 34 6 2444.26 -34.13 55.32 258.37 87.99 5 14 50 1844.3 -34.03 46.08  
 110.00 22 2 5 3714.01 -.34 135.95 247.01 55.82 23 3 59 3114.0 -4.82 129.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3629 TRA -.5986 TC3 .4431 BAU .1288 SGT 1011.5 SGR 451.9 SG3 113.4 ST 508.8 SR 443.5 SS 387.9  
 RDE -.3594 RRA .0579 RC3 .0475 FAU .03007 RRT .3349 RRF -.3393 RTF -.8161 CRT .8524 CRS .9182 CST .9879  
 FDE .3538 FRA .3913 FC3 -1.2036 BSP 3229 SGB 1107.8 R23 -.0096 R13 -.8190 LSA 756.3 MSA 183.7 SSA 17.5  
 BDE .5108 BRA .6014 BC3 .4456 FSP -281 SG1 1025.1 S2 420.1 THA 10.25 EL1 650.1 EL2 181.5 ALF 40.41

LAUNCH DATE JAN 25 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 217.479

RL 147.28 LAL .00 LOL 124.85 VL 25.947 GAL -.10 AZL 87.91 HCA 93.63 SMA 117.56 ECC .25285 INC 2.0913 V1 30.250  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.399 GAP -13.93 AZP 90.13 TAL 180.29 TAP 273.92 RCA 87.83 APO 147.28 V2 35.033  
 RC 45.818 GL 12.35 GP 9.88 ZAL 93.05 ZAP 10.02 ETS 282.24 ZAE 155.67 ETE 5.10 ZAC 126.09 ETC 156.81 CLP -1.66

PLANETOCENTRIC CONIC

C3 19.608 VHL 4.428 DLA 23.62 RAL 24.94 RAD 6567.8 VEL 11.874 PTH 2.11 VHP 9.137 DPA 20.91 RAP 31.33 ECC 1.3227  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 17 3056.13 -27.62 100.50 254.51 83.50 1 59 14 2456.1 -28.23 91.88  
 90.00 20 19 3 4007.27 -6.14 161.19 247.65 62.30 21 25 50 3407.3 -9.80 154.43  
 100.00 2 48 28 2733.14 -29.57 76.95 254.73 85.38 3 34 1 2133.1 -29.89 68.16  
 100.00 21 21 33 3805.49 -4.43 145.42 246.71 60.41 22 24 59 3205.5 -8.34 138.82  
 110.00 4 34 23 2401.78 -34.18 52.00 254.95 89.95 5 14 25 1801.8 -33.81 42.78  
 110.00 21 52 8 3709.62 -.50 135.72 244.27 55.82 22 53 57 3109.6 -4.99 129.50

DIFFERENTIAL CORRECTIONS

TDE -.3660 TRA -.6275 TC3 .5386 BAU .1427  
 RDE -.3434 RRA .0521 RC3 .0778 FAU .03260  
 FDE .3606 FRA .3934 FC3-1.4393 BSP 3476  
 BDE .5019 BRA .6297 BC3 .5442 FSP -333

MID-COURSE EXECUTION ACCURACY

SGT 1112.2 SGR 455.6 SG3 126.7  
 RRT .3514 RRF -.3806 RTF -.8100  
 SGB 1201.9 R23 -.0514 R13 -.8148  
 SG1 1125.6 SGT 421.5 THA 9.54

ORBIT DETERMINATION ACCURACY

ST 543.2 SR 444.9 SS 392.3  
 CRT .8464 CRS .9215 CST .9846  
 LSA 781.0 MSA 191.2 SSA 19.1  
 EL1 675.9 EL2 190.4 ALF 38.32

LAUNCH DATE JAN 25 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 224.201

RL 147.28 LAL .00 LOL 124.85 VL 26.146 GAL -.29 AZL 88.05 HCA 96.83 SMA 118.65 ECC .24142 INC 1.9481 V1 30.250  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.528 GAP -13.04 AZP 90.23 TAL 180.91 TAP 277.74 RCA 90.00 APO 147.29 V2 35.020  
 RC 46.944 GL 12.14 GP 10.58 ZAL 94.37 ZAP 11.17 ETS 291.49 ZAE 153.67 ETE 7.09 ZAC 126.92 ETC 155.75 CLP -3.58

PLANETOCENTRIC CONIC

C3 17.859 VHL 4.226 DLA 22.93 RAL 23.69 RAD 6567.7 VEL 11.800 PTH 2.09 VHP 8.646 DPA 22.04 RAP 32.30 ECC 1.2939  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 13 14 2999.07 -27.99 96.36 251.38 85.54 2 3 13 2399.1 -28.32 87.71  
 90.00 20 4 6 4020.40 -5.73 161.93 244.70 62.22 21 11 7 3420.4 -9.40 155.18  
 100.00 2 51 56 2680.87 -29.79 73.08 251.51 87.40 3 36 36 2080.9 -29.83 64.28  
 100.00 21 8 6 3813.84 -4.15 145.88 243.84 60.37 22 11 40 3213.8 -8.06 139.28  
 110.00 4 35 31 2356.77 -34.13 48.49 251.53 92.03 5 14 48 1756.8 -33.47 39.31  
 110.00 21 41 0 3710.70 -.46 135.77 241.54 55.82 22 42 50 3110.7 -4.94 129.55

DIFFERENTIAL CORRECTIONS

TDE -.3646 TRA -.5979 TC3 .6447 BAU .1563  
 RDE -.3294 RRA .0479 RC3 .1145 FAU .03514  
 FDE .3725 FRA .3857 FC3-1.7036 BSP 3655  
 BDE .4914 BRA .5998 BC3 .6548 FSP -374

MID-COURSE EXECUTION ACCURACY

SGT 1147.2 SGR 462.4 SG3 140.7  
 RRT .3986 RRF -.4315 RTF -.8213  
 SGB 1236.9 R23 -.0588 R13 -.8271  
 SG1 1164.2 SGT 417.9 THA 10.49

ORBIT DETERMINATION ACCURACY

ST 560.7 SR 447.1 SS 399.5  
 CRT .8586 CRS .9288 CST .9851  
 LSA 799.3 MSA 186.1 SSA 20.0  
 EL1 692.7 EL2 185.5 ALF 37.55

LAUNCH DATE JAN 25 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 230.920

RL 147.28 LAL .00 LOL 124.85 VL 26.327 GAL -.47 AZL 88.20 HCA 100.03 SMA 119.66 ECC .23095 INC 1.8030 V1 30.250  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.645 GAP -12.20 AZP 90.31 TAL 181.57 TAP 281.60 RCA 92.03 APO 147.30 V2 35.007  
 RC 48.205 GL 11.82 GP 11.37 ZAL 95.77 ZAP 12.63 ETS 298.99 ZAE 151.84 ETE 9.02 ZAC 127.63 ETC 154.62 CLP -5.55

PLANETOCENTRIC CONIC

C3 16.344 VHL 4.043 DLA 22.12 RAL 22.41 RAD 6567.7 VEL 11.736 PTH 2.07 VHP 8.179 DPA 23.23 RAP 33.19 ECC 1.2690  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 17 2938.96 -28.23 91.98 248.26 87.72 2 8 15 2339.0 -28.25 83.32  
 90.00 19 47 55 4039.64 -5.12 163.01 241.81 62.11 20 55 14 3439.6 -8.81 156.28  
 100.00 2 56 27 2625.62 -29.89 68.98 248.31 89.56 3 40 13 2025.6 -29.63 60.18  
 100.00 20 53 25 3828.21 -3.66 146.68 241.01 60.31 21 57 13 3228.2 -7.59 140.09  
 110.00 4 37 33 2309.34 -33.95 44.80 248.15 94.21 5 16 2 1709.3 -33.00 35.69  
 110.00 21 28 49 3717.25 -.21 136.11 238.86 55.82 22 30 46 3117.3 -4.70 129.90

DIFFERENTIAL CORRECTIONS

TDE -.3574 TRA -.5726 TC3 .7555 BAU .1687  
 RDE -.3158 RRA .0431 RC3 .1598 FAU .03791  
 FDE .3783 FRA .3841 FC3-2.0082 BSP 3789  
 BDE .4769 BRA .5742 BC3 .7722 FSP -420

MID-COURSE EXECUTION ACCURACY

SGT 1181.9 SGR 470.5 SG3 156.2  
 RRT .4456 RRF -.4832 RTF -.8320  
 SGB 1272.1 R23 -.0675 R13 -.8387  
 SG1 1203.0 SGT 413.8 THA 11.43

ORBIT DETERMINATION ACCURACY

ST 570.9 SR 448.0 SS 400.3  
 CRT .8662 CRS .9325 CST .9857  
 LSA 808.2 MSA 182.3 SSA 21.0  
 EL1 702.5 EL2 181.9 ALF 37.11

LAUNCH DATE JAN 25 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 237.632

RL 147.28 LAL .00 LOL 124.85 VL 26.492 GAL -.64 AZL 88.34 HCA 103.23 SMA 120.61 ECC .22140 INC 1.6551 V1 30.250  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.751 GAP -11.39 AZP 90.38 TAL 182.27 TAP 285.50 RCA 93.91 APO 147.32 V2 34.994  
 RC 49.590 GL 11.38 GP 12.24 ZAL 97.23 ZAP 14.37 ETS 304.92 ZAE 150.20 ETE 10.94 ZAC 128.21 ETC 153.40 CLP -7.58

PLANETOCENTRIC CONIC

C3 15.034 VHL 3.877 DLA 21.16 RAL 21.15 RAD 6567.6 VEL 11.680 PTH 2.05 VHP 7.735 DPA 24.47 RAP 33.98 ECC 1.2474  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 26 20 2876.25 -28.32 87.40 245.18 90.02 2 14 17 2276.3 -28.01 78.75  
 90.00 19 30 43 4064.55 -4.32 164.41 239.00 61.99 20 38 28 3464.6 -8.04 157.70  
 100.00 3 2 1 2567.74 -29.84 64.67 245.16 91.82 3 44 49 1967.7 -29.27 55.92  
 100.00 20 37 44 3848.30 -2.99 147.78 238.27 60.24 21 41 52 3248.3 -6.92 141.21  
 110.00 4 40 30 2259.62 -33.64 40.95 244.83 96.47 5 18 10 1659.6 -32.38 31.94  
 110.00 21 15 44 3729.18 .24 136.74 236.25 55.82 22 17 53 3129.2 -4.24 130.52

DIFFERENTIAL CORRECTIONS

TDE -.3497 TRA -.5490 TC3 .8747 BAU .1811  
 RDE -.3034 RRA .0384 RC3 .2157 FAU .04098  
 FDE .3839 FRA .3834 FC3-2.3599 BSP 3930  
 BDE .4629 BRA .5504 BC3 .9009 FSP -472

MID-COURSE EXECUTION ACCURACY

SGT 1218.1 SGR 482.3 SG3 173.7  
 RRT .4973 RRF -.5400 RTF -.8425  
 SGB 1310.1 R23 -.0777 R13 -.8505  
 SG1 1244.5 SGT 409.6 THA 12.52

ORBIT DETERMINATION ACCURACY

ST 579.2 SR 448.7 SS 399.9  
 CRT .8733 CRS .9359 CST .9862  
 LSA 815.1 MSA 178.5 SSA 22.0  
 EL1 710.7 EL2 178.1 ALF 36.77

LAUNCH DATE JAN 25 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 26.643 GAL -.81 AZL 88.50 HCA 106.42 SMA 121.49 ECC .21271 INC 1.5034 V1 30.250  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.847 GAP -10.61 AZP 90.43 TAL 183.00 TAP 289.42 RCA 95.65 APO 147.34 V2 34.980  
 RC 51.091 GL 10.80 GP 13.22 ZAL 98.74 ZAP 16.34 ETS 309.59 ZAE 148.73 ETE 12.90 ZAC 128.63 ETC 152.11 CLP -9.69

DISTANCE 244.334

PLANETOCENTRIC CONIC  
 C3 13.902 VHL 3.729 DLA 20.06 RAL 19.91 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 7.315 DPA 25.78 RAP 34.65 ECC 1.2288  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 23 2811.32 -28.22 82.65 242.18 92.40 2 21 14 2211.3 -27.59 74.04  
 90.00 19 12 47 4094.78 -3.35 166.11 236.33 61.87 20 21 2 3494.8 -7.09 159.42  
 100.00 3 8 35 2507.52 -29.63 60.21 242.09 94.16 3 50 23 1907.5 -28.74 51.52  
 100.00 20 21 16 3873.82 -2.12 149.18 235.65 60.18 21 25 49 3273.8 -6.08 142.63  
 110.00 4 44 25 2207.74 -33.17 36.97 241.62 98.78 5 21 12 1607.7 -31.60 28.10  
 110.00 21 1 56 3746.36 .90 137.63 233.76 55.83 22 4 22 3146.4 -3.59 131.42

DIFFERENTIAL CORRECTIONS  
 TDE -.3384 TRA -.5253 TC3 .9946 BAU .1923 SGT 1248.7 SGR 498.3 SG3 192.9 ST 580.9 SR 447.9 SS 392.3  
 RDE -.2912 RRA .0340 RC3 .2842 FAU .04440 RRT .5498 RRF -.5983 RTF -.8503 CRT .8786 CRS .9378 CST .9865  
 FDE .3831 FRA .3808 FC3 -2.7652 BSP 4075 SGB 1344.4 R23 -.0904 R13 -.8599 LSA 812.9 MSA 174.7 SSA 23.4  
 BDE .4465 BRA .5264 BC3 1.0344 FSP -533 SGI 1281.8 SG2 405.4 THA 13.78 EL1 712.5 EL2 174.4 ALF 36.67

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 26.779 GAL -.97 AZL 88.65 HCA 109.61 SMA 122.31 ECC .20483 INC 1.3468 V1 30.250  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.934 GAP -9.87 AZP 90.45 TAL 183.75 TAP 293.37 RCA 97.26 APO 147.36 V2 34.967  
 RC 52.697 GL 10.08 GP 14.33 ZAL 100.27 ZAP 18.54 ETS 313.28 ZAE 147.44 ETE 14.97 ZAC 128.89 ETC 150.76 CLP -11.89

DISTANCE 251.023

PLANETOCENTRIC CONIC  
 C3 12.926 VHL 3.595 DLA 18.81 RAL 18.72 RAD 6567.5 VEL 11.589 PTH 2.03 VHP 6.918 DPA 27.17 RAP 35.18 ECC 1.2127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 22 2744.44 -27.94 77.78 239.28 94.82 2 29 6 2144.4 -26.97 69.25  
 90.00 18 54 19 4130.02 -2.22 168.08 233.82 61.76 20 3 9 3530.0 -5.98 161.41  
 100.00 3 16 10 2445.18 -29.23 55.62 239.14 96.55 3 56 55 1845.2 -28.02 47.03  
 100.00 20 4 12 3904.51 -1.08 150.87 233.18 60.13 21 9 17 3304.5 -5.05 144.33  
 110.00 4 49 18 2153.80 -32.54 32.89 238.54 101.12 5 25 12 1553.8 -30.66 24.17  
 110.00 20 47 34 3768.66 1.75 138.80 231.41 55.86 21 50 22 3168.7 -2.74 132.59

DIFFERENTIAL CORRECTIONS  
 TDE -.3239 TRA -.5009 TC3 1.1251 BAU .2046 SGT 1277.6 SGR 520.5 SG3 214.7 ST 575.4 SR 445.7 SS 379.3  
 RDE -.2795 RRA .0296 RC3 .3681 FAU .04828 RRT .6045 RRF -.6582 RTF -.8597 CRT .8825 CRS .9383 CST .9869  
 FDE .3771 FRA .3787 FC3 -3.2337 BSP 4230 SGB 1379.5 R23 -.1022 R13 -.8711 LSA 802.4 MSA 170.9 SSA 24.8  
 BDE .4278 BRA .5018 BC3 1.1838 FSP -600 SGI 1319.9 SG2 401.3 THA 15.28 EL1 707.6 EL2 170.5 ALF 36.84

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 26.903 GAL -1.11 AZL 88.82 HCA 112.80 SMA 123.06 ECC .19772 INC 1.1839 V1 30.250  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.012 GAP -9.15 AZP 90.46 TAL 184.51 TAP 297.32 RCA 98.73 APO 147.40 V2 34.954  
 RC 54.398 GL 9.20 GP 15.57 ZAL 101.81 ZAP 20.94 ETS 316.21 ZAE 146.32 ETE 17.18 ZAC 128.94 ETC 149.35 CLP -14.18

DISTANCE 257.698

PLANETOCENTRIC CONIC  
 C3 12.086 VHL 3.476 DLA 17.42 RAL 17.61 RAD 6567.5 VEL 11.553 PTH 2.02 VHP 6.545 DPA 28.65 RAP 35.56 ECC 1.1989  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 19 2675.80 -27.44 72.82 236.53 97.26 2 37 55 2075.8 -26.15 64.39  
 90.00 18 35 31 4170.01 -.93 170.31 231.50 61.70 19 45 1 3570.0 -4.71 163.66  
 100.00 3 24 46 2380.91 -28.64 50.93 236.34 98.95 4 4 27 1780.9 -27.11 42.47  
 100.00 19 46 46 3940.14 .13 152.82 230.91 60.11 20 52 26 3340.1 -3.85 146.29  
 110.00 4 55 13 2097.91 -31.73 28.73 235.63 103.45 5 30 11 1497.9 -29.55 20.20  
 110.00 20 32 48 3795.90 2.79 140.22 229.25 55.92 21 36 4 3195.9 -1.70 134.01

DIFFERENTIAL CORRECTIONS  
 TDE -.3089 TRA -.4796 TC3 1.2448 BAU .2149 SGT 1301.8 SGR 550.2 SG3 238.5 ST 567.1 SR 441.7 SS 360.6  
 RDE -.2678 RRA .0250 RC3 .4682 FAU .05247 RRT .6571 RRF -.7166 RTF -.8653 CRT .8852 CRS .9368 CST .9874  
 FDE .3651 FRA .3778 FC3 -3.7586 BSP 4324 SGB 1413.3 R23 -.1180 R13 -.8794 LSA 786.2 MSA 167.2 SSA 26.6  
 BDE .4088 BRA .4803 BC3 1.3300 FSP -672 SGI 1356.1 SG2 398.1 THA 17.03 EL1 699.2 EL2 166.6 ALF 37.04

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.014 GAL -1.25 AZL 89.99 HCA 115.99 SMA 123.75 ECC .19132 INC 1.0132 V1 30.250  
 RP 108.45 LAP .91 LOP 240.85 VP 37.081 GAP -8.46 AZP 90.44 TAL 185.28 TAP 301.27 RCA 100.08 APO 147.43 V2 34.942  
 RC 56.186 GL 8.15 GP 16.97 ZAL 103.33 ZAP 23.55 ETS 318.56 ZAE 145.34 ETE 19.60 ZAC 128.78 ETC 147.90 CLP -16.58

DISTANCE 264.356

PLANETOCENTRIC CONIC  
 C3 11.365 VHL 3.371 DLA 15.88 RAL 16.60 RAD 6567.4 VEL 11.522 PTH 2.01 VHP 6.196 DPA 30.24 RAP 35.75 ECC 1.1870  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 4 16 2605.43 -26.74 67.79 233.95 99.69 2 47 42 2005.4 -25.13 59.49  
 90.00 18 16 31 4214.65 .51 172.80 229.41 61.69 19 26 46 3614.6 -3.28 166.17  
 100.00 3 34 25 2314.73 -27.85 46.18 233.72 101.33 4 13 0 1714.7 -26.00 37.86  
 100.00 19 29 4 3980.58 1.50 155.04 228.86 60.14 20 35 24 3380.6 -2.49 148.52  
 110.00 5 2 12 2040.07 -30.73 24.52 232.93 105.76 5 36 12 1440.1 -28.26 16.19  
 110.00 20 17 46 3828.00 4.02 141.90 227.29 56.03 21 21 34 3228.0 -.47 135.69

DIFFERENTIAL CORRECTIONS  
 TOE -.2881 TRA -.4572 TC3 1.3700 BAU .2266 SGT 1321.3 SGR 589.6 SG3 265.0 ST 547.1 SR 434.4 SS 332.6  
 RDE -.2554 RRA .0203 RC3 .5894 FAU .05717 RRT .7068 RRF -.7717 RTF -.8725 CRT .8849 CRS .9314 CST .9877  
 FDE .3422 FRA .3771 FC3 -4.3552 BSP 4488 SGB 1446.9 R23 -.1324 R13 -.8898 LSA 755.6 MSA 163.9 SSA 28.7  
 BDE .3851 BRA .4577 BC3 1.4914 FSP -758 SGI 1391.6 SG2 396.0 THA 19.11 EL1 679.3 EL2 163.0 ALF 37.63

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC DISTANCE 270.996  
 RL 147.28 LAL .00 LOL 124.85 VL 27.115 GAL -1.37 AZL 89.17 HCA 119.18 SMA 124.38 ECC .18558 INC .8333 V1 30.250  
 RP 108.49 LAP .73 LOP 244.03 VP 37.142 GAP -7.80 AZP 90.41 TAL 186.03 TAP 305.21 RCA 101.30 APO 147.47 V2 34.929  
 RC 58.051 GL 6.91 GP 18.55 ZAL 104.81 ZAP 26.39 ETS 320.47 ZAE 144.49 ETE 22.28 ZAC 128.36 ETC 146.43 CLP -19.11

PLANETOCENTRIC CONIC  
 C3 10.749 VHL 3.279 DLA 14.18 RAL 15.72 RAD 6567.4 VEL 11.495 PTH 2.00 VHP 5.871 DPA 31.94 RAP 35.72 ECC 1.1769  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 16 18 2533.28 -25.81 62.71 231.59 102.07 2 58 32 1933.3 -23.89 54.57  
 90.00 17 57 26 4263.88 2.10 175.54 227.58 61.75 19 8 30 3663.9 -1.69 168.92  
 100.00 3 45 11 2246.64 -26.84 41.36 231.33 103.67 4 22 38 1646.6 -24.70 33.22  
 100.00 19 11 14 4025.76 3.03 157.52 227.07 60.25 20 18 20 3425.8 -.96 151.00  
 110.00 5 10 19 1980.26 -29.55 20.26 230.46 108.03 5 43 19 1380.3 -26.80 12.16  
 110.00 20 2 36 3864.90 5.42 143.84 225.58 56.20 21 7 1 3264.9 .94 137.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2667 TRA -.4384 TC3 1.4745 BAU .2365 SGT 1332.8 SGR 640.4 SG3 293.4 ST 523.8 SR 423.6 SS 297.6  
 RDE -.2422 RRA .0148 RC3 .7317 FAU .06215 RRT .7500 RRF -.8208 RTF -.8764 CRT .8827 CRS .9197 CST .9880  
 FDE .3093 FRA .3804 FC3-5.0056 BSP 4581 SGB 1478.7 R23 -.1500 R13 -.8982 LSA 717.9 MSA 161.1 SSA 31.3  
 BDE .3603 BRA .4386 BC3 1.6461 FSP -846 SG1 1424.6 SG2 396.3 THA 21.57 EL1 654.5 EL2 159.3 ALF 38.19

LAUNCH DATE JAN 25 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC DISTANCE 277.616  
 RL 147.28 LAL .00 LOL 124.85 VL 27.205 GAL -1.48 AZL 89.36 HCA 122.36 SMA 124.96 ECC .18047 INC .6419 V1 30.250  
 RP 108.53 LAP .54 LOP 247.21 VP 37.197 GAP -7.16 AZP 90.34 TAL 186.76 TAP 309.12 RCA 102.41 APO 147.51 V2 34.917  
 RC 59.985 GL 5.47 GP 20.33 ZAL 106.24 ZAP 29.45 ETS 322.06 ZAE 143.73 ETE 25.28 ZAC 127.67 ETC 144.96 CLP -21.78

PLANETOCENTRIC CONIC  
 C3 10.226 VHL 3.198 DLA 12.32 RAL 14.98 RAD 6567.4 VEL 11.472 PTH 1.99 VHP 5.573 DPA 33.77 RAP 35.43 ECC 1.1683  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 29 32 2459.13 -24.65 57.59 229.47 104.39 3 10 31 1859.1 -22.44 49.62  
 90.00 17 38 19 4317.86 3.83 178.56 226.03 61.92 18 50 17 3717.9 .05 171.93  
 100.00 3 57 11 2176.44 -25.62 36.51 229.18 105.95 4 33 27 1576.4 -23.19 28.55  
 100.00 18 53 21 4075.78 4.71 160.28 225.55 60.45 20 1 17 3475.8 .74 153.74  
 110.00 5 19 40 1918.32 -28.17 15.97 228.25 110.22 5 51 39 1318.3 -25.15 8.10  
 110.00 19 47 21 3906.67 6.99 146.04 224.14 56.45 20 52 28 3306.7 2.54 139.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2414 TRA -.4193 TC3 1.5696 BAU .2474 SGT 1336.4 SGR 705.4 SG3 324.4 ST 491.1 SR 406.9 SS 292.1  
 RDE -.2269 RRA .0089 RC3 .9011 FAU .06757 RRT .7869 RRF -.8632 RTF -.8801 CRT .8768 CRS .8937 CST .9868  
 FDE .2602 FRA .3843 FC3-5.7201 BSP 4717 SGB 1511.2 R23 -.1654 R13 -.9076 LSA 666.3 MSA 158.8 SSA 34.5  
 BDE .3313 BRA .4194 BC3 1.8098 FSP -947 SG1 1457.5 SG2 399.1 THA 24.52 EL1 618.6 EL2 155.3 ALF 38.91

LAUNCH DATE JAN 25 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC DISTANCE 284.215  
 RL 147.28 LAL .00 LOL 124.85 VL 27.285 GAL -1.58 AZL 89.56 HCA 125.54 SMA 125.48 ECC .17592 INC .4367 V1 30.250  
 RP 108.57 LAP .36 LOP 250.39 VP 37.245 GAP -6.55 AZP 90.25 TAL 187.46 TAP 313.00 RCA 103.40 APO 147.55 V2 34.906  
 RC 61.981 GL 3.81 GP 22.34 ZAL 107.58 ZAP 32.76 ETS 323.42 ZAE 143.02 ETE 28.65 ZAC 126.67 ETC 143.53 CLP -24.60

PLANETOCENTRIC CONIC  
 C3 9.787 VHL 3.128 DLA 10.29 RAL 14.40 RAD 6567.4 VEL 11.453 PTH 1.99 VHP 5.301 DPA 35.75 RAP 34.83 ECC 1.1611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 44 5 2382.65 -23.26 52.42 227.63 106.62 3 23 48 1782.6 -20.76 44.64  
 90.00 17 19 12 4376.86 5.72 181.88 224.80 62.22 18 32 8 3776.9 1.95 175.22  
 100.00 4 10 32 2103.84 -24.17 31.60 227.32 108.15 4 45 36 1503.8 -21.46 23.85  
 100.00 18 35 26 4130.90 6.55 163.34 224.34 60.77 19 44 17 3530.9 2.61 156.77  
 110.00 5 30 22 1854.01 -26.58 11.65 226.34 112.34 6 1 16 1254.0 -23.31 4.01  
 110.00 19 32 5 3953.49 8.75 148.53 223.00 56.82 20 37 59 3353.5 4.32 142.24

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2127 TRA -.4018 TC3 1.6453 BAU .2589 SGT 1330.8 SGR 786.9 SG3 357.3 ST 450.6 SR 382.3 SS 198.1  
 RDE -.2084 RRA .0016 RC3 1.0997 FAU .07327 RRT .8163 RRF -.8981 RTF -.8828 CRT .8657 CRS .8273 CST .9761  
 FDE .1923 FRA .3928 FC3-6.4809 BSP 4864 SGB 1546.0 R23 -.1776 R13 -.9177 LSA 601.6 MSA 158.1 SSA 38.5  
 BDE .2978 BRA .4018 BC3 1.9789 FSP -1056 SG1 1491.9 SG2 405.5 THA 28.02 EL1 571.3 EL2 150.9 ALF 39.60

LAUNCH DATE JAN 25 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC DISTANCE 290.792  
 RL 147.28 LAL .00 LOL 124.85 VL 27.357 GAL -1.68 AZL 89.79 HCA 128.72 SMA 125.94 ECC .17190 INC .2144 V1 30.250  
 RP 108.60 LAP .17 LOP 253.57 VP 37.286 GAP -5.97 AZP 90.13 TAL 188.12 TAP 316.83 RCA 104.29 APO 147.59 V2 34.894  
 RC 64.032 GL 1.91 GP 24.61 ZAL 108.81 ZAP 36.32 ETS 324.64 ZAE 142.29 ETE 32.43 ZAC 125.34 ETC 142.18 CLP -27.60

PLANETOCENTRIC CONIC  
 C3 9.426 VHL 3.070 DLA 8.07 RAL 14.02 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 5.059 DPA 37.89 RAP 33.88 ECC 1.1551  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 0 13 2303.31 -21.62 47.18 226.11 108.75 3 38 36 1703.3 -18.86 39.59  
 90.00 17 0 1 4441.40 7.75 185.53 223.91 62.68 18 14 2 3841.4 4.03 178.83  
 100.00 4 25 27 2028.38 -22.48 26.63 225.78 110.24 4 59 15 1428.4 -19.52 19.09  
 100.00 18 17 27 4191.56 8.56 166.73 223.48 61.25 19 27 19 3591.6 4.65 160.11  
 110.00 5 42 36 1786.97 -24.77 7.28 224.75 114.35 6 12 23 1187.0 -21.27 359.88  
 110.00 19 16 48 4005.74 10.68 151.34 222.20 57.33 20 23 34 3405.7 6.30 144.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1840 TRA -.3877 TC3 1.6862 BAU .2705 SGT 1313.0 SGR 886.6 SG3 391.0 ST 408.6 SR 348.1 SS 145.0  
 RDE -.1861 RRA -.0078 RC3 1.3284 FAU .07899 RRT .8371 RRF -.9255 RTF -.8825 CRT .8504 CRS .6282 CST .9029  
 FDE .1053 FRA .4092 FC3-7.2551 BSP 4989 SGB 1584.4 R23 -.1874 R13 -.9275 LSA 530.8 MSA 160.1 SSA 43.2  
 BDE .2617 BRA .3878 BC3 2.1466 FSP -1167 SG1 1528.6 SG2 416.7 THA 32.15 EL1 516.9 EL2 144.8 ALF 39.64

LAUNCH DATE JAN 25 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 297.346

RL 147.28 LAL .00 LOL 124.85 VL 27.420 GAL -1.76 AZL 90.03 HCA 131.89 SMA 126.35 ECC .16836 INC .0242 V1 30.250  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.322 GAP -5.40 AZP 89.98 TAL 188.73 TAP 320.62 RCA 105.08 APO 147.63 V2 34.883  
 RC 66.131 GL -.25 GP 27.15 ZAL 109.92 ZAP 40.15 ETS 325.80 ZAE 141.47 ETE 36.66 ZAC 123.64 ETC 140.95 CLP -30.79

PLANETOCENTRIC CONIC

C3 9.139 VHL 3.023 CLA 5.65 RAL 13.85 RAD 6567.3 VEL 11.425 PTH 1.98 VHP 4.848 DPA 40.20 RAP 32.51 ECC 1.1504  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 18 10 2220.42 -19.71 41.85 224.93 110.75 3 55 10 1620.4 -16.71 34.46  
 90.00 16 40 40 4512.27 9.94 189.58 223.41 63.35 17 55 52 3912.3 6.28 182.81  
 100.00 4 42 11 1949.43 -20.53 21.58 224.59 112.21 5 14 40 1349.4 -17.34 14.24  
 100.00 17 59 20 4258.50 10.73 170.51 223.00 61.93 19 10 18 3658.5 6.89 163.82  
 110.00 5 56 33 1716.68 -22.72 2.85 223.53 116.25 6 25 9 1116.7 -19.01 355.68  
 110.00 19 1 27 4064.00 12.80 154.53 221.78 58.03 20 9 11 3464.0 8.49 148.09

DIFFERENTIAL CORRECTIONS

TDE -.1551 TRA -.3762 TC3 1.6877 BAU .2832  
 RDE -.1580 RRA -.0202 RC3 1.5884 FAU .08453  
 FDE -.0045 FRA .4350 FC3-8.0070 BSP 5106  
 BDE .2213 BRA .3768 BC3 2.3176 FSP -1275

MID-COURSE EXECUTION ACCURACY

SGT 1281.0 SGR 1006.7 SG3 424.4  
 RRT .8495 RRF -.9463 RTF -.8791  
 SGB 1629.3 R23 -.1912 R13 -.9376  
 SG1 1570.6 SG2 433.1 THA 37.01

ORBIT DETERMINATION ACCURACY

ST 365.4 SR 301.0 SS 120.6  
 CRT .8306 CRS .0521 CST .5263  
 LSA 455.9 MSA 169.0 SSA 47.5  
 EL1 453.7 EL2 135.0 ALF 38.39

LAUNCH DATE JAN 25 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 303.876

RL 147.28 LAL .00 LOL 124.85 VL 27.475 GAL -1.82 AZL 90.30 HCA 135.06 SMA 126.72 ECC .16526 INC .2949 V1 30.250  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.353 GAP -4.86 AZP 89.79 TAL 189.28 TAP 324.34 RCA 105.78 APO 147.66 V2 34.873  
 RC 68.274 GL -2.71 GP 29.99 ZAL 110.87 ZAP 44.24 ETS 326.97 ZAE 140.47 ETE 41.34 ZAC 121.56 ETC 139.88 CLP -34.19

PLANETOCENTRIC CONIC

C3 8.927 VHL 2.988 CLA 3.01 RAL 13.90 RAD 6567.3 VEL 11.416 PTH 1.98 VHP 4.672 DPA 42.67 RAP 30.64 ECC 1.1469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 19 2133.01 -17.51 36.38 224.15 112.62 4 13 52 1533.0 -14.29 29.18  
 90.00 16 20 58 4590.61 12.29 194.13 223.35 64.29 17 37 28 3990.6 8.74 187.26  
 100.00 5 1 4 1866.12 -18.30 16.40 223.79 114.05 5 32 10 1266.1 -14.90 9.26  
 100.00 17 40 54 4332.74 13.07 174.78 222.96 62.87 18 53 7 3732.7 9.33 167.99  
 110.00 6 12 31 1642.45 -20.41 358.32 222.70 118.03 6 39 54 1042.5 -16.50 351.38  
 110.00 18 45 56 4129.17 15.12 158.15 221.78 58.97 19 54 45 3529.2 10.90 151.59

DIFFERENTIAL CORRECTIONS

TDE -.1255 TRA -.3657 TC3 1.6490 BAU .2985  
 RDE -.1213 RRA -.0362 RC3 1.8811 FAU .08967  
 FDE -.1420 FRA .4685 FC3-8.6962 BSP 5274  
 BDE .1746 BRA .3675 BC3 2.5015 FSP -1382

MID-COURSE EXECUTION ACCURACY

SGT 1233.8 SGR 1150.0 SG3 456.3  
 RRT .8545 RRF -.9617 RTF -.8728  
 SGB 1686.6 R23 -.1850 R13 -.9488  
 SG1 1624.4 SG2 453.6 THA 42.65

ORBIT DETERMINATION ACCURACY

ST 321.2 SR 236.0 SS 167.1  
 CRT .8096 CRS -.5373 CST -.0307  
 LSA 383.1 MSA 194.0 SSA 48.7  
 EL1 381.1 EL2 116.8 ALF 34.43

LAUNCH DATE JAN 25 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 310.382

RL 147.28 LAL .00 LOL 124.85 VL 27.523 GAL -1.88 AZL 90.59 HCA 138.23 SMA 127.04 ECC .16257 INC .5940 V1 30.250  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.379 GAP -4.33 AZP 89.56 TAL 189.76 TAP 327.99 RCA 106.39 APO 147.70 V2 34.862  
 RC 70.456 GL -5.52 GP 33.15 ZAL 111.63 ZAP 48.59 ETS 328.24 ZAE 139.19 ETE 46.44 ZAC 119.10 ETC 139.03 CLP -37.82

PLANETOCENTRIC CONIC

C3 8.795 VHL 2.966 CLA .09 RAL 14.22 RAD 6567.3 VEL 11.410 PTH 1.97 VHP 4.535 DPA 45.32 RAP 28.17 ECC 1.1447  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 1 11 2039.85 -14.98 30.71 223.82 114.31 4 35 10 1439.8 -11.57 23.69  
 90.00 16 0 36 4678.07 14.82 199.32 223.79 65.59 17 18 34 4078.1 11.40 192.31  
 100.00 5 22 34 1777.32 -15.76 11.03 223.44 115.74 5 52 11 1177.3 -12.16 4.08  
 100.00 17 21 54 4415.82 15.59 179.66 223.42 64.17 18 35 30 3815.8 11.99 172.72  
 110.00 6 30 54 1563.39 -17.81 353.66 222.32 119.67 6 56 58 963.4 -13.73 346.93  
 110.00 18 30 3 4202.52 17.65 162.33 222.29 60.24 19 40 5 3602.5 13.56 155.61

DIFFERENTIAL CORRECTIONS

TDE -.0961 TRA -.3554 TC3 1.5651 BAU .3176  
 RDE -.0727 RRA -.0569 RC3 2.2021 FAU .09401  
 FDE -.3107 FRA .5102 FC3-9.2547 BSP 5530  
 BDE .1205 BRA .3599 BC3 2.7016 FSP -1484

MID-COURSE EXECUTION ACCURACY

SGT 1169.4 SGR 1318.2 SG3 484.6  
 RRT .8524 RRF -.9729 RTF -.8630  
 SGB 1762.2 R23 -.1673 R13 -.9605  
 SG1 1696.9 SG2 475.1 THA 49.01

ORBIT DETERMINATION ACCURACY

ST 278.7 SR 149.5 SS 270.0  
 CRT .8151 CRS -.6609 CST -.2391  
 LSA 337.3 MSA 239.2 SSA 43.9  
 EL1 306.3 EL2 78.8 ALF 25.41

LAUNCH DATE JAN 25 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 316.864

RL 147.28 LAL .00 LOL 124.85 VL 27.565 GAL -1.92 AZL 90.93 HCA 141.40 SMA 127.32 ECC .16024 INC .9325 V1 30.250  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.401 GAP -3.83 AZP 89.27 TAL 190.17 TAP 331.57 RCA 106.92 APO 147.72 V2 34.853  
 RC 72.672 GL -8.72 GP 36.63 ZAL 112.16 ZAP 53.18 ETS 329.69 ZAE 137.54 ETE 51.87 ZAC 116.24 ETC 138.44 CLP -41.68

PLANETOCENTRIC CONIC

C3 8.755 VHL 2.959 CLA -3.12 RAL 14.82 RAD 6567.3 VEL 11.408 PTH 1.97 VHP 4.443 DPA 48.10 RAP 25.02 ECC 1.1441  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 27 26 1939.29 -12.08 24.75 224.02 115.81 4 59 45 1339.3 -8.51 17.89  
 90.00 15 39 9 4776.89 17.51 205.33 224.84 67.38 16 58 45 4176.9 14.29 198.13  
 100.00 5 47 19 1681.59 -12.85 5.41 223.63 117.22 6 15 21 1081.6 -9.10 358.63  
 100.00 17 1 56 4509.82 18.29 185.33 224.48 65.94 18 17 6 3909.8 14.89 178.19  
 110.00 6 52 13 1478.41 -14.88 348.82 222.46 121.13 7 16 52 878.4 -10.65 342.27  
 110.00 18 13 32 4285.76 20.39 167.23 223.40 61.95 19 24 57 3685.8 16.48 160.29

DIFFERENTIAL CORRECTIONS

TDE -.0722 TRA -.3478 TC3 1.4157 BAU .3397  
 RDE -.0096 RRA -.0860 RC3 2.5339 FAU .09678  
 FDE -.5024 FRA .5673 FC3-9.5702 BSP 5806  
 BDE .0728 BRA .3583 BC3 2.9026 FSP -1557

MID-COURSE EXECUTION ACCURACY

SGT 1084.6 SGR 1508.9 SG3 505.5  
 RRT .8379 RRF -.9807 RTF -.8432  
 SGB 1858.2 R23 -.1432 R13 -.9710  
 SG1 1790.0 SG2 499.0 THA 55.93

ORBIT DETERMINATION ACCURACY

ST 247.3 SR 69.8 SS 399.7  
 CRT .8028 CRS .0836 CST -.2524  
 LSA 407.1 MSA 242.5 SSA 35.0  
 EL1 253.7 EL2 40.6 ALF 13.11

LAUNCH DATE JAN 25 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 323.321

RL 147.28 LAL .00 LOL 124.85 VL 27.600 GAL -1.96 AZL 91.32 HCA 144.56 SMA 127.56 ECC .15825 INC 1.3210 V1 30.250
RP 108.76 LAP -.77 LOP 269.42 VP 37.419 GAP -3.34 AZP 88.92 TAL 190.51 TAP 335.07 RCA 107.37 APO 147.75 V2 34.844
RC 74.919 GL -12.36 GP 40.43 ZAL 112.42 ZAP 57.94 ETS 331.41 ZAE 135.42 ETE 57.53 ZAC 113.03 ETC 138.18 CLP -45.80

PLANETOCENTRIC CONIC

C3 8.830 VHL 2.971 DLA -6.68 RAL 15.74 RAD 6567.3 VEL 11.411 PTH 1.98 VHP 4.403 DPA 50.99 RAP 21.05 ECC 1.1453
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 58 5 1829.06 -8.74 18.38 224.87 117.04 5 28 34 1229.1 -5.04 11.65
90.00 15 15 54 4890.37 20.33 212.46 226.61 69.85 16 37 24 4290.4 17.40 205.00
100.00 6 16 14 1576.93 -9.51 359.43 224.46 118.47 6 42 31 976.9 -5.64 352.78
100.00 16 40 25 4617.73 21.15 192.07 226.28 68.37 17 57 23 4017.7 18.03 184.67
110.00 7 17 12 1386.08 -11.57 343.72 223.23 122.39 7 40 18 786.1 -7.22 337.33
110.00 17 55 57 4381.35 23.34 173.09 225.24 64.28 19 8 59 3781.4 19.68 165.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0548 TRA -.3389 TC3 1.2075 BAU .3663 SGT 979.3 SGR 1721.8 SG3 516.4 ST 224.9 SR 167.1 SS 547.3
RDE .0735 RRA -.1243 RC3 2.8587 FAU .09756 RRT .8083 RRF -.9862 RTF -.8099 CRT .0111 CRS .9606 CST -.2151
FDE -.7159 FRA .6318 FC3-9.5654 BSP 6178 SGB 1980.8 R23 -.1129 R13 -.9800 LSA 572.5 MSA 222.7 SSA 26.2
BDE .0917 BRA .3610 BC3 3.1033 FSP -1602 SG1 1911.6 SG2 519.3 THA 63.17 EL1 224.9 EL2 167.0 ALF 1.06

LAUNCH DATE JAN 25 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 329.753

RL 147.28 LAL .00 LOL 124.85 VL 27.630 GAL -1.98 AZL 91.77 HCA 147.72 SMA 127.76 ECC .15656 INC 1.7745 V1 30.250
RP 108.78 LAP -.95 LOP 272.59 VP 37.432 GAP -2.87 AZP 88.50 TAL 190.77 TAP 338.49 RCA 107.76 APO 147.76 V2 34.835
RC 77.194 GL -16.51 GP 44.53 ZAL 112.36 ZAP 62.82 ETS 333.49 ZAE 132.78 ETE 63.28 ZAC 109.49 ETC 138.29 CLP -50.16

PLANETOCENTRIC CONIC

C3 9.059 VHL 3.010 DLA -10.65 RAL 17.05 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 4.424 DPA 53.93 RAP 16.13 ECC 1.1491
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 34 37 1705.89 -4.86 11.41 226.54 117.93 6 3 3 1105.9 -1.08 4.76
90.00 14 49 44 5023.38 23.20 221.15 229.31 73.29 16 13 27 4423.4 20.69 213.38
100.00 6 50 39 1460.59 -5.68 352.92 226.09 119.40 7 14 59 860.6 -1.72 346.37
100.00 16 16 23 4743.91 24.09 200.29 229.00 171.74 17 35 27 4143.9 21.37 192.55
110.00 7 46 51 1284.60 -7.82 338.25 224.78 123.38 8 8 15 684.6 -3.37 331.99
110.00 17 36 40 4492.66 26.44 180.25 228.03 67.50 18 51 33 3892.7 23.15 172.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0473 TRA -.3277 TC3 .9453 BAU .3978 SGT 857.2 SGR 1955.5 SG3 515.0 ST 211.3 SR 367.6 SS 707.1
RDE .1831 RRA -.1762 RC3 3.1460 FAU .09591 RRT .7534 RRF -.9900 RTF -.7523 CRT -.1406 CRS .9960 CST -.2073
FDE -.9437 FRA .7044 FC3-9.1659 BSP 6668 SGB 2135.2 R23 -.0810 R13 -.9868 LSA 797.6 MSA 208.2 SSA 19.1
BDE .1891 BRA .3720 BC3 3.2849 FSP -1610 SG1 2067.5 SG2 533.1 THA 70.37 EL1 369.4 EL2 208.2 ALF 96.78

LAUNCH DATE JAN 25 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 336.159

RL 147.28 LAL .00 LOL 124.85 VL 27.654 GAL -1.99 AZL 92.31 HCA 150.88 SMA 127.93 ECC .15514 INC 2.3148 V1 30.250
RP 108.81 LAP -1.13 LOP 275.76 VP 37.443 GAP -2.41 AZP 87.98 TAL 190.95 TAP 341.83 RCA 108.08 APO 147.77 V2 34.827
RC 79.493 GL -21.22 GP 48.90 ZAL 111.91 ZAP 67.71 ETS 336.02 ZAE 129.58 ETE 68.98 ZAC 105.68 ETC 138.80 CLP -54.76

PLANETOCENTRIC CONIC

C3 9.509 VHL 3.084 DLA -15.06 RAL 18.78 RAD 6567.3 VEL 11.441 PTH 1.98 VHP 4.521 DPA 56.83 RAP 10.11 ECC 1.1565
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 19 33 1564.31 -3.1 3.49 229.30 118.32 6 45 38 964.3 3.48 356.86
90.00 14 18 39 5183.81 25.90 232.12 233.15 78.14 15 45 3 4583.8 24.01 223.96
100.00 7 32 44 1328.22 -1.21 345.63 228.80 119.87 7 54 52 728.2 2.77 339.11
100.00 15 48 10 4895.14 26.91 210.63 232.90 76.48 17 9 45 4295.1 24.79 202.48
110.00 8 22 45 1171.53 -3.54 332.29 227.35 124.02 8 42 17 571.5 .95 326.09
110.00 17 14 38 4624.59 29.55 189.24 232.05 71.99 18 31 42 4024.6 26.81 181.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0588 TRA -.3127 TC3 .6262 BAU .4317 SGT 723.2 SGR 2196.0 SG3 496.9 ST 211.3 SR 620.4 SS 864.0
RDE .3233 RRA -.2466 RC3 3.3375 FAU .09108 RRT .6390 RRF -.9926 RTF -.6356 CRT -.2989 CRS .9992 CST -.3267
FDE -1.1624 FRA .7815 FC3-8.2925 BSP 7203 SGB 2312.0 R23 -.0520 R13 -.9913 LSA 1065.6 MSA 200.5 SSA 14.0
BDE .3286 BRA .3982 BC3 3.3957 FSP -1559 SG1 2247.2 SG2 543.6 THA 77.36 EL1 624.0 EL2 200.4 ALF 96.48

LAUNCH DATE JAN 25 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 342.539

RL 147.28 LAL .00 LOL 124.85 VL 27.674 GAL -1.99 AZL 92.97 HCA 154.04 SMA 128.06 ECC .15397 INC 2.9735 V1 30.250
RP 108.83 LAP -1.30 LOP 278.92 VP 37.451 GAP -1.98 AZP 87.33 TAL 191.04 TAP 345.08 RCA 108.34 APO 147.78 V2 34.820
RC 81.813 GL -26.56 GP 53.51 ZAL 111.02 ZAP 72.48 ETS 339.08 ZAE 125.83 ETE 74.56 ZAC 101.69 ETC 139.77 CLP -59.59

PLANETOCENTRIC CONIC

C3 10.296 VHL 3.209 DLA -19.94 RAL 21.04 RAD 6567.4 VEL 11.475 PTH 1.99 VHP 4.712 DPA 59.60 RAP 2.84 ECC 1.1694
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 17 54 1392.66 5.21 353.89 233.61 117.87 7 41 6 792.7 8.90 347.16
90.00 13 38 18 5387.06 27.93 246.63 238.40 85.13 15 8 6 4787.1 26.96 238.10
100.00 8 26 31 1171.22 4.10 337.01 233.00 119.64 8 46 2 571.2 8.02 330.41
100.00 15 12 23 5083.72 29.19 224.17 238.25 83.24 16 37 6 4483.7 27.95 215.59
110.00 9 7 28 1042.91 1.37 325.58 231.30 124.16 9 24 51 442.9 5.84 319.35
110.00 16 47 55 4784.81 32.36 200.87 237.66 78.33 18 7 40 4184.8 30.41 192.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0942 TRA -.2876 TC3 .2882 BAU .4687 SGT 600.7 SGR 2443.7 SG3 463.8 ST 234.9 SR 925.8 SS 1012.0
RDE .5057 RRA -.3394 RC3 3.3927 FAU .08345 RRT .4107 RRF -.9944 RTF -.4051 CRT -.5512 CRS .9998 CST -.5640
FDE -1.3633 FRA .8510 FC3-7.0166 BSP 7863 SGB 2516.4 R23 -.0271 R13 -.9941 LSA 1377.9 MSA 194.3 SSA 10.4
BDE .5144 BRA .4448 BC3 3.4049 FSP -1465 SG1 2456.7 SG2 544.8 THA 83.94 EL1 935.3 EL2 194.0 ALF 98.32

LAUNCH DATE JAN 25 1969

FLIGHT TIME 126.00

ARRIVAL DATE MAY 31 1969

Heliocentric Conic

RL 147.28 LAL .00 LOL 124.85 VL 27.689 GAL -1.98 AZL 93.80 MCA 157.18 SMA 128.16 ECC .15303 INC 3.7997 V1 30.250  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.455 GAP -1.55 AZP 86.50 TAL 191.05 TAP 348.23 RCA 108.55 APO 147.78 V2 34.813  
 RC 84.153 GL -32.53 GP 58.34 ZAL 109.62 ZAP 76.99 ETS 342.74 ZAE 121.56 ETE 79.98 ZAC 97.59 ETC 141.24 CLP -64.60

Distance 348.892

Planetocentric Conic

C3 11.632 VHL 3.411 DLA -25.28 RAL 23.92 RAD 6567.4 VEL 11.533 PTH 2.01 VHP 5.027 DPA 62.15 RAP 354.13 ECC 1.1914  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 44 51 1149.72 12.68 339.96 240.47 115.53 9 4 1 549.7 16.02 332.87  
 90.00 12 34 21 5680.00 27.77 267.99 244.96 95.78 14 9 1 5080.0 28.28 259.37  
 100.00 9 42 20 964.15 10.92 325.42 239.56 118.00 9 58 24 364.1 14.58 318.54  
 100.00 14 19 34 5340.81 29.73 243.21 245.13 93.22 15 48 34 4740.8 29.86 234.41  
 110.00 10 5 57 890.06 7.18 317.55 237.30 123.51 10 20 47 290.1 11.53 311.17  
 110.00 16 12 26 4987.66 34.09 216.42 245.16 87.36 17 35 34 4387.7 33.35 207.26

Differential Corrections

TDE -.1682 TRA -.2474 TC3 -.0414 BAU .5045  
 RDE .7367 RRA -.4651 RC3 3.2442 FAU .07290  
 FDE -1.5172 FRA .9111 FC3-5.4260 BSP 8535  
 BDE .7556 BRA .5268 BC3 3.2445 FSP -1314

Mid-Course Execution Accuracy

SGT 540.3 SGR 2678.7 SG3 414.9  
 RRT -.0102 RRF -.9957 RTF .0178  
 SGB 2732.6 R23 -.0072 R13 -.9957  
 SG1 2678.7 SG2 540.3 THA 90.12

Orbit Determination Accuracy

ST 314.4 SR 1266.2 SS 1129.8  
 CRT -.7887 CRS .9999 CST -.7950  
 LSA 1715.3 MSA 190.3 SSA 7.7  
 EL1 1290.7 EL2 189.6 ALF 101.33

LAUNCH DATE JAN 25 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 2 1969

Heliocentric Conic

RL 147.28 LAL .00 LOL 124.85 VL 27.699 GAL -1.95 AZL 94.87 MCA 160.33 SMA 128.24 ECC .15229 INC 4.8738 V1 30.250  
 RP 108.87 LAP -1.64 LOP 285.25 VP 37.458 GAP -1.15 AZP 85.41 TAL 190.97 TAP 351.29 RCA 108.71 APO 147.77 V2 34.807  
 RC 86.508 GL -39.08 GP 63.39 ZAL 107.68 ZAP 81.09 ETS 347.07 ZAE 116.79 ETE 85.27 ZAC 93.44 ETC 143.26 CLP -69.77

Distance 355.216

Planetocentric Conic

C3 13.923 VHL 3.731 DLA -31.00 RAL 27.57 RAD 6567.5 VEL 11.632 PTH 2.04 VHP 5.514 DPA 64.36 RAP 343.80 ECC 1.2291  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.83 9 9 18 1146.37 23.50 344.58 251.20 110.82 9 28 25 546.4 26.12 336.66  
 103.17 12 38 59 5760.41 23.51 272.74 251.20 110.81 14 15 0 5160.4 26.13 264.83  
 76.83 9 9 18 1146.37 23.50 344.58 251.20 110.82 9 28 25 546.4 26.12 336.66  
 103.17 12 38 59 5760.41 23.51 272.74 251.20 110.81 14 15 0 5160.4 26.13 264.83  
 110.00 11 32 53 679.34 14.88 306.09 246.75 121.14 11 44 13 79.3 18.89 299.28  
 110.00 15 14 35 5275.43 32.74 238.68 254.12 100.41 16 42 30 4675.4 33.83 229.62

Differential Corrections

TDE -.2970 TRA -.1797 TC3 -.3079 BAU .5379  
 RDE 1.0327 RRA -.6314 RC3 2.8730 FAU .06043  
 FDE -1.6133 FRA .9471 FC3-3.7575 BSP 9303  
 BDE 1.0745 BRA .6564 BC3 2.8895 FSP -1133

Mid-Course Execution Accuracy

SGT 603.6 SGR 2896.7 SG3 355.0  
 RRT -.4872 RRF -.9965 RTF .4952  
 SGB 2958.9 R23 .0077 R13 -.9966  
 SG1 2912.1 SG2 524.3 THA 95.99

Orbit Determination Accuracy

ST 466.2 SR 1622.8 SS 1205.4  
 CRT -.9131 CRS .9999 CST -.9165  
 LSA 2066.3 MSA 184.9 SSA 5.8  
 EL1 1678.4 EL2 183.8 ALF 104.88

LAUNCH DATE JAN 25 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 4 1969

Heliocentric Conic

RL 147.28 LAL .00 LOL 124.85 VL 27.706 GAL -1.91 AZL 96.34 MCA 163.46 SMA 128.28 ECC .15174 INC 6.3363 V1 30.250  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.458 GAP -.76 AZP 83.92 TAL 190.80 TAP 354.26 RCA 108.82 APO 147.75 V2 34.802  
 RC 88.877 GL -46.04 GP 68.70 ZAL 105.23 ZAP 84.63 ETS 352.22 ZAE 111.53 ETE 90.60 ZAC 89.30 ETC 145.99 CLP -75.07

Distance 361.509

Planetocentric Conic

C3 18.023 VHL 4.245 DLA -36.88 RAL 32.13 RAD 6567.7 VEL 11.807 PTH 2.09 VHP 6.257 DPA 66.10 RAP 331.63 ECC 1.2966  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.32 8 16 23 1422.98 25.92 7.23 261.74 117.21 8 40 6 823.0 29.35 359.49  
 114.68 14 8 21 5600.75 25.93 261.56 261.75 117.19 15 41 41 5000.7 29.36 253.81  
 65.32 8 16 23 1422.98 25.92 7.23 261.74 117.21 8 40 6 823.0 29.35 359.49  
 114.68 14 8 21 5600.75 25.93 261.56 261.75 117.19 15 41 41 5000.7 29.36 253.81  
 65.32 8 16 23 1422.98 25.92 7.23 261.74 117.21 8 40 6 823.0 29.35 359.49  
 114.68 14 8 21 5600.75 25.93 261.56 261.75 117.19 15 41 41 5000.7 29.36 253.81

Differential Corrections

TDE -.5114 TRA -.0640 TC3 -.4672 BAU .5611  
 RDE 1.4037 RRA -.8617 RC3 2.2815 FAU .04667  
 FDE -1.6287 FRA .9624 FC3-2.2417 BSP 9985  
 BDE 1.4939 BRA .8641 BC3 2.3289 FSP -918

Mid-Course Execution Accuracy

SGT 803.4 SGR 3075.0 SG3 287.7  
 RRT -.7768 RRF -.9972 RTF .7837  
 SGB 3178.2 R23 .0184 R13 -.9972  
 SG1 3139.3 SG2 495.6 THA 101.77

Orbit Determination Accuracy

ST 691.1 SR 1944.9 SS 1217.6  
 CRT -.9628 CRS 1.0000 CST -.9651  
 LSA 2389.8 MSA 177.9 SSA 4.3  
 EL1 2056.4 EL2 176.5 ALF 109.03

LAUNCH DATE JAN 25 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 6 1969

Heliocentric Conic

RL 147.28 LAL .00 LOL 124.85 VL 27.710 GAL -1.86 AZL 98.46 MCA 166.57 SMA 128.31 ECC .15135 INC 8.4566 V1 30.250  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.456 GAP -.38 AZP 81.77 TAL 190.53 TAP 357.11 RCA 108.89 APO 147.73 V2 34.797  
 RC 91.256 GL -53.11 GP 74.40 ZAL 102.36 ZAP 87.47 ETS 358.56 ZAE 105.73 ETE 96.44 ZAC 85.15 ETC 149.88 CLP -80.55

Distance 367.763

Planetocentric Conic

C3 25.930 VHL 5.092 DLA -42.55 RAL 37.75 RAD 6568.0 VEL 12.137 PTH 2.18 VHP 7.422 DPA 67.16 RAP 317.36 ECC 1.4267  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.81 7 59 4 1623.36 26.21 24.29 275.29 124.80 8 26 7 1023.4 30.58 17.08  
 123.19 15 10 27 5575.65 26.23 259.64 275.30 124.79 16 43 23 4975.7 30.59 252.43  
 56.81 7 59 4 1623.36 26.21 24.29 275.29 124.80 8 26 7 1023.4 30.58 17.08  
 123.19 15 10 27 5575.65 26.23 259.64 275.30 124.79 16 43 23 4975.7 30.59 252.43  
 56.81 7 59 4 1623.36 26.21 24.29 275.29 124.80 8 26 7 1023.4 30.58 17.08  
 123.19 15 10 27 5575.65 26.23 259.64 275.30 124.79 16 43 23 4975.7 30.59 252.43

Differential Corrections

TDE -.8661 TRA .1491 TC3 -.4909 BAU .5654  
 RDE 1.8713 RRA -1.1846 RC3 1.5554 FAU .03285  
 FDE -1.5655 FRA .9545 FC3-1.0969 BSP 10665  
 BDE 2.0620 BRA 1.1940 BC3 1.6310 FSP -703

Mid-Course Execution Accuracy

SGT 1118.7 SGR 3196.3 SG3 219.9  
 RRT -.9106 RRF -.9978 RTF .9158  
 SGB 3386.4 R23 .0251 R13 -.9977  
 SG1 3357.6 SG2 440.2 THA 108.00

Orbit Determination Accuracy

ST 977.0 SR 2174.9 SS 1164.1  
 CRT -.9834 CRS 1.0000 CST -.9850  
 LSA 2648.3 MSA 163.5 SSA 3.2  
 EL1 2378.8 EL2 162.0 ALF 113.95

LAUNCH DATE JAN 25 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

DISTANCE 373.967

RL 147.28 LAL .00 LOL 124.85 VL 27.709 GAL -1.79 AZL 101.82 HCA 169.66 SMA 128.31 ECC .15111 INC11.8209 V1 30.250  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.452 GAP -.02 AZP 78.37 TAL 190.16 TAP 359.82 RCA 108.92 APO 147.69 V2 34.793  
 RC 93.644 GL -59.71 GP 80.78 ZAL 99.26 ZAP 89.50 ETS 7.80 ZAE 99.14 ETE 104.64 ZAC 80.85 ETC 156.78 CLP -86.86

PLANETOCENTRIC CONIC

C3 43.171 VHL 6.570 DLA -47.40 RAL 44.33 RAD 6568.6 VEL 12.827 PTH 2.34 VHP 9.370 DPA 67.21 RAP 300.77 ECC 1.7105  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.26 8 0 25 1816.42 23.00 39.19 291.33 132.66 8 30 42 1216.4 28.28 32.93  
 129.74 16 1 36 5638.84 23.02 262.60 291.35 132.66 17 35 35 5038.8 28.29 256.35  
 50.26 8 0 25 1816.42 23.00 39.19 291.33 132.66 8 30 42 1216.4 28.28 32.93  
 129.74 16 1 36 5638.84 23.02 262.60 291.35 132.66 17 35 35 5038.8 28.29 256.35  
 50.26 8 0 25 1816.42 23.00 39.19 291.33 132.66 8 30 42 1216.4 28.28 32.93  
 129.74 16 1 36 5638.84 23.02 262.60 291.35 132.66 17 35 35 5038.8 28.29 256.35

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.5017 TRA .6189 TC3 -.3926 BAU .5270 SGT 1617.7 SGR 3187.3 SG3 157.5 ST 1331.3 SR 2225.0 SS 1060.8  
 RDE 2.4462 RRA -1.6347 RC3 .8244 FAU .01998 RRT -.9759 RRF -.9985 RTF .9781 CRT -.9942 CRS 1.0000 CST -.9950  
 FDE -1.4440 FRA .9377 FC3 -.4007 BSP 11341 SGB 3574.4 R23 .0273 R13 -.9982 LSA 2798.7 MSA 124.1 SSA 2.3  
 BDE 2.8704 BRA 1.7480 BC3 .9132 FSP -508 SGI 3560.3 SG2 316.3 THA 116.57 ELI 2589.9 EL2 122.5 ALF 120.83

LAUNCH DATE JAN 25 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

DISTANCE 380.078

RL 147.28 LAL .00 LOL 124.85 VL 27.706 GAL -1.70 AZL 107.96 HCA 172.69 SMA 128.28 ECC .15098 INC17.9630 V1 30.250  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.446 GAP .30 AZP 72.17 TAL 189.63 TAP 2.32 RCA 108.92 APO 147.65 V2 34.789  
 RC 96.038 GL -64.72 GP 88.48 ZAL 96.15 ZAP 90.64 ETS 36.33 ZAE 91.08 ETE 131.78 ZAC 75.99 ETC 183.41 CLP -114.67

PLANETOCENTRIC CONIC

C3 89.222 VHL 9.446 DLA -50.41 RAL 51.07 RAD 6569.7 VEL 14.511 PTH 2.63 VHP 13.038 DPA 65.40 RAP 281.64 ECC 2.4684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.38 8 14 24 2022.13 15.42 51.35 307.87 138.61 8 48 6 1422.1 21.35 46.10  
 133.62 16 41 24 5782.07 15.44 268.56 307.88 138.61 18 17 46 5182.1 21.36 263.31  
 46.38 8 14 24 2022.13 15.42 51.35 307.87 138.61 8 48 6 1422.1 21.35 46.10  
 133.62 16 41 24 5782.07 15.44 268.56 307.88 138.61 18 17 46 5182.1 21.36 263.31  
 46.38 8 14 24 2022.13 15.42 51.35 307.87 138.61 8 48 6 1422.1 21.35 46.10  
 133.62 16 41 24 5782.07 15.44 268.56 307.88 138.61 18 17 46 5182.1 21.36 263.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.2421 TRA 2.3113 TC3 -.2314 BAU .3551 SGT 2982.9 SGR 2229.2 SG3 106.5 ST 2074.4 SR 1642.6 SS 960.1  
 RDE 2.5992 RRA -1.6136 RC3 .1873 FAU .00779 RRT -.9976 RRF -.9960 RTF .9995 CRT -.9992 CRS .9989 CST -1.0000  
 FDE -1.3292 FRA .9677 FC3 -.0756 BSP 11712 SGB 3723.8 R23 .0284 R13 -.9988 LSA 2814.2 MSA 54.4 SSA 1.1  
 BDE 4.1553 BRA 2.8189 BC3 .2977 FSP -342 SGI 3721.7 SG2 123.8 THA 143.25 ELI 2645.5 EL2 50.8 ALF 141.63

LAUNCH DATE JAN 25 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

DISTANCE 385.959

RL 147.28 LAL .00 LOL 124.85 VL 27.700 GAL -1.56 AZL 122.17 HCA 175.51 SMA 128.24 ECC .15087 INC32.1683 V1 30.250  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.439 GAP .57 AZP 57.91 TAL 188.81 TAP 4.32 RCA 108.89 APO 147.59 V2 34.787  
 RC 98.436 GL -65.00 GP 79.45 ZAL 93.32 ZAP 90.87 ETS 158.05 ZAE 79.05 ETE 252.03 ZAC 69.10 ETC 304.85 CLP 94.78

PLANETOCENTRIC CONIC

C3 264.602 VHL 16.267 DLA -49.05 RAL 54.93 RAD 6571.5 VEL 19.645 PTH 3.12 VHP 21.571 DPA 59.17 RAP 259.71 ECC 5.3547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.12 8 35 26 2201.64 5.32 57.74 320.28 138.83 9 12 8 1601.6 11.31 52.80  
 131.88 16 51 8 700.42 5.34 299.76 320.29 138.83 17 2 49 100.4 11.33 294.82  
 48.12 8 35 26 2201.64 5.32 57.74 320.28 138.83 9 12 8 1601.6 11.31 52.80  
 131.88 16 51 8 700.42 5.34 299.76 320.29 138.83 17 2 49 100.4 11.33 294.82  
 48.12 8 35 26 2201.64 5.32 57.74 320.28 138.83 9 12 8 1601.6 11.31 52.80  
 131.88 16 51 8 700.42 5.34 299.76 320.29 138.83 17 2 49 100.4 11.33 294.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6641 TRA 1.3049 TC3 -.0145 BAU .3779 SGT 915.1 SGR 3658.4 SG3 72.3 ST 622.7 SR 2484.1 SS 1017.3  
 RDE -6.6395 RRA 5.1959 RC3 .1058 FAU -.00825 RRT .1705 RRF .9992 RTF .2079 CRT -.7722 CRS -.9997 CST .7552  
 FDE -1.4446 FRA 1.2250 FC3 -.0270 BSP 11831 SGB 3771.1 R23 -.0270 R13 .9995 LSA 2727.6 MSA 392.0 SSA .6  
 BDE 6.8449 BRA 5.3572 BC3 .1068 FSP -232 SGI 3661.9 SG2 900.9 THA 87.40 ELI 2531.4 EL2 388.3 ALF 101.22

LAUNCH DATE JAN 25 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 390.798

RL 147.28 LAL .00 LOL 124.85 VL 27.692 GAL -1.20 AZL 165.77 HCA 177.40 SMA 128.18 ECC .15042 INC75.7714 V1 30.250  
 RP 108.94 LAP -2.52 LOP 304.21 VP 37.431 GAP .55 AZP 14.24 TAL 186.81 TAP 4.21 RCA 108.90 APO 147.47 V2 34.785  
 RC 100.837 GL -48.84 GP 53.57 ZAL 91.24 ZAP 90.42 ETS 174.91 ZAE 53.03 ETE 268.04 ZAC 55.64 ETC 330.32 CLP 90.70

PLANETOCENTRIC CONIC

C31270.429 VHL 35.643 DLA -33.25 RAL 48.68 RAD 6573.1 VEL 37.306 PTH 3.54 VHP 45.512 DPA 38.19 RAP 235.98 ECC21.9081  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.80 9 59 47 2013.05 -.60 36.69 319.59 123.24 10 33 20 1413.0 3.78 30.41  
 108.20 14 36 59 1128.36 -.59 330.91 319.60 123.25 14 55 47 528.4 3.79 324.63  
 71.80 9 59 47 2013.05 -.60 36.69 319.59 123.24 10 33 20 1413.0 3.78 30.41  
 108.20 14 36 59 1128.36 -.59 330.91 319.60 123.25 14 55 47 528.4 3.79 324.63  
 110.00 13 47 37 1279.91 -7.64 338.01 314.95 123.42 14 8 57 679.9 -3.19 331.74  
 110.00 15 48 20 909.49 6.45 318.58 324.24 123.64 16 3 29 309.5 10.82 312.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.7002 TRA -1.0790 TC3 -.0864 BAU 3.9628 SGT 1123.5 SGR 3058.9 SG3 57.6 ST 918.6 SR 1686.5 SS 1447.6  
 RDE -9.7050 RRA11.0808 RC3 .2167 FAU -.06852 RRT -.8215 RRF 1.0000 RTF -.8189 CRT -.9489 CRS -1.0000 CST .9482  
 FDE -2.1165 FRA 2.4320 FC3 .0467 BSP 9790 SGB 3258.7 R23 -.0645 R13 .9979 LSA 2389.7 MSA 270.3 SSA .6  
 BOE11.2552 BRA11.1332 BC3 .2333 FSP -180 SGI 3200.7 SG2 612.3 THA 107.45 ELI 1903.2 EL2 256.8 ALF 117.88



LAUNCH DATE JAN 25 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 16 1969

MELIOCENTRIC CONIC

DISTANCE 400.354

RL 147.28 LAL .00 LOL 124.85 VL 27.681 GAL -1.76 AZL 43.70 HCA 183.65 SMA 128.11 ECC .15271 INC46.3037 V1 30.250  
 RP 108.95 LAP -2.64 LOP 307.38 VP 37.422 GAP 1.78 AZP 136.25 TAL 189.86 TAP 13.51 RCA 108.55 APO 147.67 V2 34.784  
 RC 103.240 GL 60.79 GP -72.90 ZAL 92.60 ZAP 92.41 ETS 178.90 ZAE 73.74 ETE 88.09 ZAC 90.90 ETC 42.73 CLP 98.23

PLANETOCENTRIC CONIC

C3 525.249 VHL 22.918 DLA 63.69 RAL 343.38 RAD 6572.4 VEL 25.427 PTH 3.35 VHP 27.238 DPA -71.01 RAP 143.12 ECC 9.6443  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.23 14 58 36 5018.37 -2.02 242.04 252.40 26.32 16 22 14 4418.4 -9.19 238.87  
 149.77 0 57 12 3313.09 -2.01 100.07 252.38 26.32 1 52 25 2713.1 -9.18 96.90  
 30.23 14 58 36 5018.37 -2.02 242.04 252.40 26.32 16 22 14 4418.4 -9.19 238.87  
 149.77 0 57 12 3313.09 -2.01 100.07 252.38 26.32 1 52 25 2713.1 -9.18 96.90  
 30.23 14 58 36 5018.37 -2.02 242.04 252.40 26.32 16 22 14 4418.4 -9.19 238.87  
 149.77 0 57 12 3313.09 -2.01 100.07 252.38 26.32 1 52 25 2713.1 -9.18 96.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -2.0580 TRA 2.0057 TC3 -.0863 BAU 1.5403 SGT 1304.4 SGR 3677.5 SG3 66.5 ST 616.5 SR 3175.0 SS 1552.9  
 RDE -12.5372 RRA 2.9307 RC3 -.2016 FAU -.02402 RRT .8103 RRF -.9996 RTF -.8209 CRT .9118 CRS 1.0000 CST .9152  
 FDE 2.6019 FRA -.6541 FC3 .0396 BSP 12257 SGB 3902.0 R23 -.0387 R13 -.9991 LSA 3579.1 MSA 249.4 SSA 1.1  
 BDE 12.7050 BRA 3.6010 BC3 .2193 FSP -219 SG1 3832.5 SG2 733.4 THA 73.34 EL1 3224.7 EL2 249.3 ALF 79.90

LAUNCH DATE JAN 25 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 18 1969

MELIOCENTRIC CONIC

DISTANCE 406.001

RL 147.28 LAL .00 LOL 124.85 VL 27.668 GAL -1.55 AZL 64.12 HCA 186.31 SMA 128.02 ECC .15282 INC25.8816 V1 30.250  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.412 GAP 1.97 AZP 115.75 TAL 188.66 TAP 14.97 RCA 108.46 APO 147.59 V2 34.783  
 RC 105.643 GL 65.72 GP -84.69 ZAL 94.07 ZAP 94.87 ETS 207.08 ZAE 88.72 ETE 117.00 ZAC 99.27 ETC 71.96 CLP 156.38

PLANETOCENTRIC CONIC

C3 175.430 VHL 13.245 DLA 64.85 RAL 331.36 RAD 6570.9 VEL 17.227 PTH 2.94 VHP 15.128 DPA -70.77 RAP 95.29 ECC 3.8871  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.86 14 7 27 4891.92 -10.14 239.55 236.56 25.57 15 28 59 4291.9 -17.33 236.36  
 151.14 0 12 26 3176.44 -10.13 96.03 236.54 25.57 1 5 23 2576.4 -17.32 92.84  
 28.86 14 7 27 4891.92 -10.14 239.55 236.56 25.57 15 28 59 4291.9 -17.33 236.36  
 151.14 0 12 26 3176.44 -10.13 96.03 236.54 25.57 1 5 23 2576.4 -17.32 92.84  
 28.86 14 7 27 4891.92 -10.14 239.55 236.56 25.57 15 28 59 4291.9 -17.33 236.36  
 151.14 0 12 26 3176.44 -10.13 96.03 236.54 25.57 1 5 23 2576.4 -17.32 92.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.3185 TRA .2388 TC3 -.0136 BAU .0430 SGT 1456.4 SGR 3898.0 SG3 96.6 ST 1437.4 SR 2703.3 SS 1119.0  
 RDE -5.9064 RRA 2.8916 RC3 -.0123 FAU .00265 RRT -.5198 RRF -.9925 RTF .6159 CRT -.9274 CRS .9979 CST -.9498  
 FDE 1.9087 FRA -.7405 FC3 -.0131 BSP 13521 SGB 4161.2 R23 -.0514 R13 -.9981 LSA 3224.1 MSA 481.1 SSA 1.5  
 BDE 6.7748 BRA 2.9015 BC3 .0183 FSP -327 SG1 3978.6 SG2 1218.9 THA 102.15 EL1 3023.7 EL2 480.9 ALF 116.98

LAUNCH DATE JAN 25 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 20 1969

MELIOCENTRIC CONIC

DISTANCE 411.976

RL 147.28 LAL .00 LOL 124.85 VL 27.653 GAL -1.40 AZL 72.02 HCA 189.30 SMA 127.92 ECC .15329 INC17.9767 V1 30.250  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.401 GAP 2.24 AZP 107.76 TAL 187.75 TAP 17.05 RCA 108.31 APO 147.53 V2 34.783  
 RC 108.045 GL 64.62 GP -79.64 ZAL 95.25 ZAP 98.14 ETS 311.14 ZAE 97.50 ETE 221.13 ZAC 103.34 ETC 176.50 CLP-141.94

PLANETOCENTRIC CONIC

C3 89.176 VHL 9.443 DLA 63.41 RAL 332.19 RAD 6569.7 VEL 14.509 PTH 2.63 VHP 10.422 DPA -66.26 RAP 72.50 ECC 2.4676  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.56 14 14 43 4753.35 -18.00 234.59 232.84 28.07 15 33 57 4153.4 -25.01 230.87  
 149.44 0 11 46 3050.62 -17.99 93.00 232.83 28.07 1 2 37 2450.6 -25.00 89.28  
 30.56 14 14 43 4753.35 -18.00 234.59 232.84 28.07 15 33 57 4153.4 -25.01 230.87  
 149.44 0 11 46 3050.62 -17.99 93.00 232.83 28.07 1 2 37 2450.6 -25.00 89.28  
 30.56 14 14 43 4753.35 -18.00 234.59 232.84 28.07 15 33 57 4153.4 -25.01 230.87  
 149.44 0 11 46 3050.62 -17.99 93.00 232.83 28.07 1 2 37 2450.6 -25.00 89.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.5306 TRA -2.0477 TC3 -.2739 BAU .3595 SGT 3940.7 SGR 1575.0 SG3 142.0 ST 2872.3 SR 1176.0 SS 1137.2  
 RDE 1.8646 RRA -.7891 RC3 -.1260 FAU .01633 RRT .9993 RRF -.9985 RTF .9958 CRT .9998 CRS -.9997 CST -.9992  
 FDE 2.0148 FRA -.7796 FC3 -.1585 BSP 12994 SGB 4243.8 R23 .0867 R13 .9962 LSA 3305.2 MSA 44.8 SSA .4  
 BDE 4.8993 BRA 2.1945 BC3 .3015 FSP -451 SG1 4243.4 SG2 55.9 THA 21.77 EL1 3103.6 EL2 19.3 ALF 22.26

LAUNCH DATE JAN 25 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 22 1969

MELIOCENTRIC CONIC

DISTANCE 418.025

RL 147.28 LAL .00 LOL 124.85 VL 27.636 GAL -1.25 AZL 76.07 HCA 192.37 SMA 127.80 ECC .15394 INC13.9256 V1 30.250  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.390 GAP 2.54 AZP 103.61 TAL 186.90 TAP 19.27 RCA 108.13 APO 147.48 V2 34.784  
 RC 110.446 GL 62.09 GP -72.52 ZAL 96.05 ZAP 101.97 ETS 321.66 ZAE 104.12 ETE 230.99 ZAC 105.91 ETC 187.11 CLP-133.67

PLANETOCENTRIC CONIC

C3 56.621 VHL 7.525 DLA 61.64 RAL 336.18 RAD 6569.0 VEL 13.341 PTH 2.44 VHP 8.103 DPA -61.30 RAP 59.40 ECC 1.9318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.65 14 35 40 4638.03 -23.96 229.29 232.32 31.32 15 52 58 4038.0 -30.72 224.88  
 147.35 0 22 38 2952.45 -23.95 90.16 232.30 31.31 1 11 51 2352.4 -30.70 85.75  
 32.65 14 35 40 4638.03 -23.96 229.29 232.32 31.32 15 52 58 4038.0 -30.72 224.88  
 147.35 0 22 38 2952.45 -23.95 90.16 232.30 31.31 1 11 51 2352.4 -30.70 85.75  
 32.65 14 35 40 4638.03 -23.96 229.29 232.32 31.32 15 52 58 4038.0 -30.72 224.88  
 147.35 0 22 38 2952.45 -23.95 90.16 232.30 31.31 1 11 51 2352.4 -30.70 85.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.3665 TRA -1.5702 TC3 -.5809 BAU .5237 SGT 3697.5 SGR 2220.4 SG3 198.2 ST 2672.4 SR 1754.9 SS 1254.5  
 RDE 2.2472 RRA -.8092 RC3 -.3756 FAU .02972 RRT .9922 RRF .9990 RTF .9902 CRT .9980 CRS -1.0000 CST -.9980  
 FDE 2.2950 FRA -.8229 FC3 -.4544 BSP 13473 SGB 4312.9 R23 .0998 R13 .9947 LSA 3432.8 MSA 106.0 SSA 1.8  
 BDE 4.0476 BRA 1.7664 BC3 .6918 FSP -651 SG1 4306.4 SG2 238.0 THA 30.89 EL1 3195.8 EL2 92.2 ALF 33.27

LAUNCH DATE JAN 25 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 424.096

RL 147.28 LAL .00 LOL 124.85 VL 27.617 GAL -1.10 AZL 78.53 HCA 195.47 SMA 127.68 ECC .15473 INC11.4739 V1 30.250  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.378 GAP 2.84 AZP 101.07 TAL 186.04 TAP 21.51 RCA 107.92 APO 147.43 V2 34.786  
 RC 112.844 GL 59.24 GP -65.93 ZAL 96.48 ZAP 106.14 ETS 322.97 ZAE 109.54 ETE 230.89 ZAC 107.73 ETC 188.13 CLP-132.97

PLANETOCENTRIC CONIC

C3 40.858 VHL 6.392 DLA 59.88 RAL 340.77 RAD 6568.6 VEL 12.737 PTH 2.32 VHP 6.791 DPA -56.28 RAP 50.70 ECC 1.6724  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.76 14 59 14 4547.10 -28.13 224.17 232.72 34.69 16 15 1 3947.1 -34.60 219.07  
 145.24 0 35 43 2880.38 -28.12 87.58 232.69 34.68 1 23 43 2280.4 -34.58 82.48  
 34.76 14 59 14 4547.10 -28.13 224.17 232.72 34.69 16 15 1 3947.1 -34.60 219.07  
 145.24 0 35 43 2880.38 -28.12 87.58 232.69 34.68 1 23 43 2280.4 -34.58 82.48  
 34.76 14 59 14 4547.10 -28.13 224.17 232.72 34.69 16 15 1 3947.1 -34.60 219.07  
 145.24 0 35 43 2880.38 -28.12 87.58 232.69 34.68 1 23 43 2280.4 -34.58 82.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.9634 TRA-1.3286 TC3 -.9439 BAU .6056 SGT 3760.8 SGR 2220.4 SG3 257.4 ST 2750.3 SR 1805.7 SS 1386.3  
 ROE 1.9799 RRA -.6205 RC3 -.5815 FAU .04259 RRT .9869 RRF .9984 RTF .9856 CRT .9971 CRS-1.0000 CST -.9972  
 FDE 2.5891 FRA -.8223 FC3 -.9025 BSP 13701 SGB 4367.3 R23 .1180 R13 .9914 LSA 3567.7 MSA 132.8 SSA 2.6  
 BDE 3.5640 BRA 1.4664 BC3 1.1086 FSP -860 SG1 4356.4 SG2 309.4 THA 30.40 EL1 3288.1 EL2 115.7 ALF 33.26

LAUNCH DATE JAN 25 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 430.171

RL 147.28 LAL .00 LOL 124.85 VL 27.597 GAL -.95 AZL 80.17 HCA 198.60 SMA 127.54 ECC .15565 INC 9.8276 V1 30.250  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.365 GAP 3.14 AZP 99.32 TAL 185.15 TAP 23.74 RCA 107.69 APO 147.39 V2 34.789  
 RC 115.239 GL 56.41 GP -59.87 ZAL 96.56 ZAP 110.47 ETS 322.85 ZAE 114.06 ETE 228.68 ZAC 109.12 ETC 187.42 CLP-134.16

PLANETOCENTRIC CONIC

C3 31.967 VHL 5.654 DLA 58.21 RAL 345.31 RAD 6568.3 VEL 12.383 PTH 2.24 VHP 5.994 DPA -51.34 RAP 44.55 ECC 1.5261  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.75 15 22 26 4475.43 -30.96 219.43 233.49 37.90 16 37 2 3875.4 -37.13 213.69  
 143.25 0 48 41 2828.14 -30.95 85.33 233.48 37.89 1 35 49 2228.1 -37.12 79.59  
 36.75 15 22 26 4475.43 -30.96 219.43 233.49 37.90 16 37 2 3875.4 -37.13 213.69  
 143.25 0 48 41 2828.14 -30.95 85.33 233.48 37.89 1 35 49 2228.1 -37.12 79.59  
 36.75 15 22 26 4475.43 -30.96 219.43 233.49 37.90 16 37 2 3875.4 -37.13 213.69  
 143.25 0 48 41 2828.14 -30.95 85.33 233.48 37.89 1 35 49 2228.1 -37.12 79.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.7717 TRA-1.1566 TC3-1.3442 BAU .6542 SGT 3892.4 SGR 2095.1 SG3 313.3 ST 2887.4 SR 1736.6 SS 1501.0  
 ROE 1.6940 RRA -.4522 RC3 -.7322 FAU .05418 RRT .9830 RRF .9976 RTF .9821 CRT .9966 CRS-1.0000 CST -.9968  
 FDE 2.8261 FRA -.7695 FC3-1.4672 BSP 13830 SGB 4420.5 R23 .1349 R13 .9885 LSA 3685.7 MSA 145.8 SSA 3.3  
 BDE 3.2484 BRA 1.2419 BC3 1.5307 FSP -1054 SG1 4407.4 SG2 340.0 THA 28.06 EL1 3367.2 EL2 122.7 ALF 30.98

LAUNCH DATE JAN 25 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 436.239

RL 147.28 LAL .00 LOL 124.85 VL 27.576 GAL -.78 AZL 81.36 HCA 201.73 SMA 127.39 ECC .15669 INC 8.6415 V1 30.250  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.352 GAP 3.44 AZP 98.04 TAL 184.22 TAP 25.95 RCA 107.43 APO 147.36 V2 34.792  
 RC 117.630 GL 53.71 GP -54.33 ZAL 96.33 ZAP 114.80 ETS 322.50 ZAE 117.78 ETE 225.70 ZAC 110.24 ETC 186.27 CLP-135.99

PLANETOCENTRIC CONIC

C3 26.419 VHL 5.140 DLA 56.69 RAL 349.64 RAD 6568.1 VEL 12.157 PTH 2.18 VHP 5.492 DPA -46.59 RAP 40.07 ECC 1.4348  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.59 15 44 39 4418.02 -32.87 215.14 234.53 40.83 16 58 17 3818.0 -38.74 208.86  
 141.41 1 1 3 2790.25 -32.85 83.43 234.51 40.82 1 47 33 2190.2 -38.73 77.15  
 38.59 15 44 39 4418.02 -32.87 215.14 234.53 40.83 16 58 17 3818.0 -38.74 208.86  
 141.41 1 1 3 2790.25 -32.85 83.43 234.51 40.82 1 47 33 2190.2 -38.73 77.15  
 38.59 15 44 39 4418.02 -32.87 215.14 234.53 40.83 16 58 17 3818.0 -38.74 208.86  
 141.41 1 1 3 2790.25 -32.85 83.43 234.51 40.82 1 47 33 2190.2 -38.73 77.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.6567 TRA-1.0157 TC3-1.7707 BAU .6909 SGT 4041.6 SGR 1935.1 SG3 361.4 ST 3025.9 SR 1619.7 SS 1584.3  
 ROE 1.4422 RRA -.3198 RC3 -.8314 FAU .06408 RRT .9799 RRF .9964 RTF .9792 CRT .9964 CRS-1.0000 CST -.9966  
 FDE 2.9722 FRA -.6721 FC3-2.0999 BSP 14052 SGB 4480.1 R23 .1491 R13 .9853 LSA 3777.0 MSA 152.6 SSA 4.0  
 BDE 3.0229 BRA 1.0649 BC3 1.9562 FSP -1229 SG1 4466.5 SG2 349.1 THA 25.28 EL1 3429.9 EL2 121.8 ALF 28.11

LAUNCH DATE JAN 25 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 442.298

RL 147.28 LAL .00 LOL 124.85 VL 27.553 GAL -.61 AZL 82.26 HCA 204.88 SMA 127.24 ECC .15786 INC 7.7421 V1 30.250  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.339 GAP 3.74 AZP 97.03 TAL 183.25 TAP 28.12 RCA 107.15 APO 147.33 V2 34.796  
 RC 120.015 GL 51.16 GP -49.31 ZAL 95.81 ZAP 118.99 ETS 322.23 ZAE 120.78 ETE 222.41 ZAC 111.22 ETC 185.07 CLP-138.03

PLANETOCENTRIC CONIC

C3 22.705 VHL 4.765 DLA 55.31 RAL 353.78 RAD 6567.9 VEL 12.003 PTH 2.14 VHP 5.176 DPA -42.10 RAP 36.80 ECC 1.3737  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.27 16 5 47 4371.31 -34.13 211.32 235.82 43.43 17 18 38 3771.3 -39.74 204.59  
 139.73 1 12 57 2762.53 -34.12 81.85 235.80 43.43 1 58 59 2162.5 -39.73 75.12  
 40.27 16 5 47 4371.31 -34.13 211.32 235.82 43.43 17 18 38 3771.3 -39.74 204.59  
 139.73 1 12 57 2762.53 -34.12 81.85 235.80 43.43 1 58 59 2162.5 -39.73 75.12  
 40.27 16 5 47 4371.31 -34.13 211.32 235.82 43.43 17 18 38 3771.3 -39.74 204.59  
 139.73 1 12 57 2762.53 -34.12 81.85 235.80 43.43 1 58 59 2162.5 -39.73 75.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.5825 TRA -.8883 TC3-2.2070 BAU .7213 SGT 4193.9 SGR 1764.6 SG3 399.6 ST 3156.6 SR 1489.4 SS 1639.0  
 ROE 1.2332 RRA -.2171 RC3 -.8808 FAU .07169 RRT .9771 RRF .9947 RTF .9766 CRT .9962 CRS-1.0000 CST -.9963  
 FDE 3.0342 FRA -.5379 FC3-2.7334 BSP 14243 SGB 4550.0 R23 .1595 R13 .9821 LSA 3852.8 MSA 156.7 SSA 4.9  
 BDE 2.8618 BRA .9144 BC3 2.3762 FSP -1362 SG1 4536.8 SG2 347.2 THA 22.49 EL1 3488.3 EL2 117.0 ALF 25.21

LAUNCH DATE JAN 25 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 448.346  
 RL 147.28 LAL .00 LOL 124.85 VL 27.529 GAL -.42 AZL 82.97 HCA 208.02 SMA 127.08 ECC .15914 INC 7.0331 V1 30.250  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.325 GAP 4.03 A2P 96.22 TAL 182.24 TAP 30.26 RCA 106.86 APO 147.30 V2 34.800  
 RC 122.394 GL 48.76 GP -44.80 ZAL 95.04 ZAP 122.99 ETS 322.09 ZAE 123.14 ETE 219.03 ZAC 112.12 ETC 183.94 CLP-140.12

PLANETOCENTRIC CONIC  
 C3 20.090 VHL 4.482 DLA 54.07 RAL 357.77 RAD 6567.8 VEL 11.894 PTH 2.11 VHP 4.983 DPA -37.91 RAP 34.43 ECC 1.3306  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.80 16 26 2 4332.61 -34.95 207.94 237.36 45.72 17 38 15 3732.6 -40.31 200.85  
 138.20 1 24 31 2742.33 -34.94 80.57 237.34 45.71 2 10 14 2142.3 -40.30 73.48  
 41.80 16 26 2 4332.61 -34.95 207.94 237.36 45.72 17 38 15 3732.6 -40.31 200.85  
 138.20 1 24 31 2742.33 -34.94 80.57 237.34 45.71 2 10 14 2142.3 -40.30 73.48  
 41.80 16 26 2 4332.61 -34.95 207.94 237.36 45.72 17 38 15 3732.6 -40.31 200.85  
 138.20 1 24 31 2742.33 -34.94 80.57 237.34 45.71 2 10 14 2142.3 -40.30 73.48

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5289 TRA -.7667 TC3-2.6417 BAU .7486 SGT 4341.5 SGR 1600.8 SG3 426.8 ST 3272.1 SR 1358.4 SS 1665.1  
 RDE 1.0601 RRA -.1384 RC3 -.8891 FAU .07691 RRT .9744 RRF .9923 RTF .9743 CRT .9962 CRS-1.0000 CST -.9960  
 FDE 3.0187 FRA -.3809 FC3-3.3142 BSP 14517 SGB 4627.2 R23 .1652 R13 .9790 LSA 3911.4 MSA 158.8 SSA 5.8  
 BDE 2.7422 BRA .7791 BC3 2.7873 FSP -1465 SG1 4614.8 SG2 338.6 THA 19.87 EL1 3541.2 EL2 109.3 ALF 22.49

LAUNCH DATE JAN 25 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC DISTANCE 454.380  
 RL 147.28 LAL .00 LOL 124.85 VL 27.504 GAL -.23 AZL 83.54 HCA 211.18 SMA 126.91 ECC .16055 INC 6.4568 V1 30.250  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.312 GAP 4.33 A2P 95.53 TAL 181.20 TAP 32.37 RCA 106.54 APO 147.29 V2 34.805  
 RC 124.766 GL 46.50 GP -40.78 ZAL 94.04 ZAP 126.74 ETS 322.07 ZAE 124.95 ETE 215.73 ZAC 113.02 ETC 182.95 CLP-142.18

PLANETOCENTRIC CONIC  
 C3 18.182 VHL 4.264 DLA 52.96 RAL 1.66 RAD 6567.7 VEL 11.814 PTH 2.09 VHP 4.875 DPA -34.03 RAP 32.76 ECC 1.2992  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.18 16 45 36 4300.19 -35.47 204.96 239.14 47.71 17 57 17 3700.2 -40.61 197.59  
 136.82 1 36 0 2727.65 -35.46 79.54 239.13 47.70 2 21 27 2127.7 -40.60 72.17  
 43.18 16 45 36 4300.19 -35.47 204.96 239.14 47.71 17 57 17 3700.2 -40.61 197.59  
 136.82 1 36 0 2727.65 -35.46 79.54 239.13 47.70 2 21 27 2127.7 -40.60 72.17  
 43.18 16 45 36 4300.19 -35.47 204.96 239.14 47.71 17 57 17 3700.2 -40.61 197.59  
 136.82 1 36 0 2727.65 -35.46 79.54 239.13 47.70 2 21 27 2127.7 -40.60 72.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4885 TRA -.6479 TC3-3.0688 BAU .7752 SGT 4485.4 SGR 1450.1 SG3 444.3 ST 3372.7 SR 1236.1 SS 1668.6  
 RDE .9190 RRA -.0792 RC3 -.8671 FAU .07998 RRT .9716 RRF .9888 RTF .9723 CRT .9963 CRS-1.0000 CST -.9957  
 FDE 2.9454 FRA -.2148 FC3-3.8081 BSP 14874 SGB 4714.0 R23 .1651 R13 .9762 LSA 3957.5 MSA 159.7 SSA 6.7  
 BDE 2.6528 BRA .6528 BC3 3.1889 FSP -1540 SG1 4702.6 SG2 327.4 THA 17.53 EL1 3590.7 EL2 100.0 ALF 20.08

LAUNCH DATE JAN 25 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC DISTANCE 460.399  
 RL 147.28 LAL .00 LOL 124.85 VL 27.478 GAL -.02 AZL 84.02 HCA 214.33 SMA 126.74 ECC .16209 INC 5.9766 V1 30.250  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.298 GAP 4.62 A2P 94.94 TAL 180.12 TAP 34.45 RCA 106.20 APO 147.28 V2 34.811  
 RC 127.128 GL 44.34 GP -37.21 ZAL 92.82 ZAP 130.22 ETS 322.15 ZAE 126.30 ETE 212.59 ZAC 113.95 ETC 182.10 CLP-144.18

PLANETOCENTRIC CONIC  
 C3 16.756 VHL 4.093 DLA 51.94 RAL 5.49 RAD 6567.7 VEL 11.753 PTH 2.07 VHP 4.829 DPA -30.48 RAP 31.64 ECC 1.2758  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.45 17 4 41 4272.71 -35.76 202.33 241.18 49.44 18 15 54 3672.7 -40.71 194.73  
 135.55 1 47 27 2717.28 -35.75 78.75 241.16 49.43 2 32 44 2117.3 -40.69 71.15  
 44.45 17 4 41 4272.71 -35.76 202.33 241.18 49.44 18 15 54 3672.7 -40.71 194.73  
 135.55 1 47 27 2717.28 -35.75 78.75 241.16 49.43 2 32 44 2117.3 -40.69 71.15  
 44.45 17 4 41 4272.71 -35.76 202.33 241.18 49.44 18 15 54 3672.7 -40.71 194.73  
 135.55 1 47 27 2717.28 -35.75 78.75 241.16 49.43 2 32 44 2117.3 -40.69 71.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3905 TRA -.5615 TC3-3.5018 BAU .8066 SGT 4586.9 SGR 1281.3 SG3 443.6 ST 3368.9 SR 1075.4 SS 1572.5  
 RDE .7676 RRA -.0563 RC3 -.8381 FAU .08221 RRT .9742 RRF .9835 RTF .9742 CRT .9969 CRS -.9999 CST -.9959  
 FDE 2.6909 FRA -.1286 FC3-4.2476 BSP 16382 SGB 4762.5 R23 .1371 R13 .9765 LSA 3867.5 MSA 143.9 SSA 7.7  
 BDE 2.5107 BRA .5643 BC3 3.6007 FSP -1787 SG1 4754.3 SG2 279.1 THA 15.28 EL1 3535.4 EL2 80.2 ALF 17.66

LAUNCH DATE JAN 25 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC DISTANCE 466.406  
 RL 147.28 LAL .00 LOL 124.85 VL 27.451 GAL .19 AZL 84.43 HCA 217.49 SMA 126.56 ECC .16376 INC 5.5680 V1 30.250  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.284 GAP 4.92 A2P 94.42 TAL 179.01 TAP 36.50 RCA 105.84 APO 147.29 V2 34.818  
 RC 129.481 GL 42.28 GP -34.06 ZAL 91.41 ZAP 133.44 ETS 322.29 ZAE 127.27 ETE 209.69 ZAC 114.94 ETC 181.38 CLP-146.10

PLANETOCENTRIC CONIC  
 C3 15.675 VHL 3.959 DLA 51.01 RAL 9.29 RAD 6567.6 VEL 11.707 PTH 2.06 VHP 4.828 DPA -27.21 RAP 30.98 ECC 1.2580  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.61 17 23 28 4249.23 -35.89 199.99 243.45 50.95 18 34 17 3649.2 -40.66 192.22  
 134.39 1 59 1 2710.36 -35.88 78.15 243.44 50.94 2 44 12 2110.4 -40.65 70.38  
 45.61 17 23 28 4249.23 -35.89 199.99 243.45 50.95 18 34 17 3649.2 -40.66 192.22  
 134.39 1 59 1 2710.36 -35.88 78.15 243.44 50.94 2 44 12 2110.4 -40.65 70.38  
 45.61 17 23 28 4249.23 -35.89 199.99 243.45 50.95 18 34 17 3649.2 -40.66 192.22  
 134.39 1 59 1 2710.36 -35.88 78.15 243.44 50.94 2 44 12 2110.4 -40.65 70.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4256 TRA -.4007 TC3-3.8713 BAU .8270 SGT 4750.6 SGR 1193.7 SG3 454.7 ST 3522.3 SR 1028.3 SS 1622.0  
 RDE .7104 RRA .0026 RC3 -.7659 FAU .08088 RRT .9633 RRF .9777 RTF .9685 CRT .9967 CRS -.9997 CST -.9949  
 FDE 2.6851 FRA .1273 FC3-4.4670 BSP 15438 SGB 4898.3 R23 .1518 R13 .9709 LSA 4008.6 MSA 161.4 SSA 8.6  
 BDE 2.5275 BRA .4007 BC3 3.9464 FSP -1562 SG1 4888.4 SG2 311.4 THA 13.66 EL1 3668.5 EL2 79.7 ALF 16.23

LAUNCH DATE JAN 25 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

RL 147.28 LAL .00 LOL 124.85 VL 27.423 GAL .42 AZL 84.79 HCA 220.65 SMA 126.38 ECC .16557 INC 5.2140 V1 30.250  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.271 GAP 5.22 AZP 93.96 TAL 177.87 TAP 38.51 RCA 105.45 APO 147.30 V2 34.825  
 RC 131.823 GL 40.29 GP -31.28 ZAL 89.82 ZAP 136.41 ETS 322.46 ZAE 127.96 ETE 207.04 ZAC 116.01 ETC 180.77 CLP-147.94

DISTANCE 472.397

PLANETOCENTRIC CONIC

C3 14.854 VML 3.854 DLA 50.15 RAL 13.09 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 4.862 DPA -24.23 RAP 30.69 ECC 1.2445  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.71 17 42 5 4229.06 -35.89 197.91 245.95 52.27 18 52 34 3629.1 -40.50 190.00  
 133.29 2 10 43 2706.36 -35.88 77.74 245.94 52.26 2 55 49 2106.4 -40.49 69.84  
 46.71 17 42 5 4229.06 -35.89 197.91 245.95 52.27 18 52 34 3629.1 -40.50 190.00  
 133.29 2 10 43 2706.36 -35.88 77.74 245.94 52.26 2 55 49 2106.4 -40.49 69.84  
 46.71 17 42 5 4229.06 -35.89 197.91 245.95 52.27 18 52 34 3629.1 -40.50 190.00  
 133.29 2 10 43 2706.36 -35.88 77.74 245.94 52.26 2 55 49 2106.4 -40.49 69.84

DIFFERENTIAL CORRECTIONS

TDE 2.4057 TRA -.2688 TC3-4.2222 BAU .8498  
 ROE .6378 RRA .0303 RC3 -.6968 FAU .07912  
 FOE 2.5384 FRA .2907 FC3-4.6113 BSP 15676  
 BOE 2.4888 BRA .2705 BC3 4.2793 FSP -1532

MID-COURSE EXECUTION ACCURACY

SGT 4875.6 SGR 1092.0 SG3 451.7  
 RRT .9570 RRF .9695 RTF .9669  
 SGB 4996.4 R23 .1395 R13 .9688  
 SGI 4986.8 SG2 309.7 THA 12.15

ORBIT DETERMINATION ACCURACY

ST 3582.6 SR 948.6 SS 1588.1  
 CRT .9972 CRS -.9994 CST -.9944  
 LSA 4028.7 MSA 162.2 SSA 9.6  
 EL1 3705.4 EL2 68.9 ALF 14.80

LAUNCH DATE JAN 25 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

RL 147.28 LAL .00 LOL 124.85 VL 27.395 GAL .66 AZL 85.10 HCA 223.81 SMA 126.19 ECC .16752 INC 4.9027 V1 30.250  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.257 GAP 5.51 AZP 93.54 TAL 176.69 TAP 40.50 RCA 105.05 APO 147.33 V2 34.833  
 RC 134.153 GL 38.35 GP -28.82 ZAL 88.06 ZAP 139.15 ETS 322.62 ZAE 128.41 ETE 204.66 ZAC 117.17 ETC 180.26 CLP-149.69

DISTANCE 478.373

PLANETOCENTRIC CONIC

C3 14.236 VML 3.773 DLA 49.33 RAL 16.89 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 4.923 DPA -21.48 RAP 30.71 ECC 1.2343  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.76 18 0 40 4211.50 -35.77 196.03 248.65 53.44 19 10 52 3611.5 -40.25 188.02  
 132.24 2 22 29 2705.05 -35.76 77.50 248.64 53.43 3 7 34 2105.1 -40.24 69.50  
 47.76 18 0 40 4211.50 -35.77 196.03 248.65 53.44 19 10 52 3611.5 -40.25 188.02  
 132.24 2 22 29 2705.05 -35.76 77.50 248.64 53.43 3 7 34 2105.1 -40.24 69.50  
 47.76 18 0 40 4211.50 -35.77 196.03 248.65 53.44 19 10 52 3611.5 -40.25 188.02  
 132.24 2 22 29 2705.05 -35.76 77.50 248.64 53.43 3 7 34 2105.1 -40.24 69.50

DIFFERENTIAL CORRECTIONS

TDE 2.3787 TRA -.1357 TC3-4.5454 BAU .8733  
 ROE .5762 RRA .0493 RC3 -.6284 FAU .07679  
 FOE 2.3679 FRA .4322 FC3-4.6700 BSP 16035  
 BOE 2.4475 BRA .1444 BC3 4.5886 FSP -1511

MID-COURSE EXECUTION ACCURACY

SGT 4991.3 SGR 1001.9 SG3 443.6  
 RRT .9501 RRF .9590 RTF .9661  
 SGB 5090.8 R23 .1208 R13 .9675  
 SGI 5081.6 SG2 307.1 THA 10.84

ORBIT DETERMINATION ACCURACY

ST 3614.9 SR 875.8 SS 1535.4  
 CRT .9978 CRS -.9989 CST -.9940  
 LSA 4020.7 MSA 160.8 SSA 10.5  
 EL1 3719.0 EL2 56.8 ALF 13.59

LAUNCH DATE JAN 25 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

RL 147.28 LAL .00 LOL 124.85 VL 27.366 GAL .92 AZL 85.37 HCA 226.97 SMA 126.00 ECC .16963 INC 4.6252 V1 30.250  
 RP 108.77 LAP -3.38 LOP 351.73 VP 37.244 GAP 5.81 AZP 93.16 TAL 175.49 TAP 42.47 RCA 104.63 APO 147.38 V2 34.841  
 RC 136.471 GL 36.46 GP -26.65 ZAL 86.16 ZAP 141.67 ETS 322.76 ZAE 128.70 ETE 202.54 ZAC 118.41 ETC 179.82 CLP-151.37

DISTANCE 484.333

PLANETOCENTRIC CONIC

C3 13.785 VML 3.713 DLA 48.53 RAL 20.71 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 5.005 DPA -18.96 RAP 30.98 ECC 1.2269  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.78 18 19 19 4196.15 -35.56 194.31 251.55 54.49 19 29 15 3596.2 -39.92 186.23  
 131.22 2 34 18 2706.24 -35.55 77.43 251.54 54.48 3 19 24 2106.2 -39.91 69.35  
 48.78 18 19 19 4196.15 -35.56 194.31 251.55 54.49 19 29 15 3596.2 -39.92 186.23  
 131.22 2 34 18 2706.24 -35.55 77.43 251.54 54.48 3 19 24 2106.2 -39.91 69.35  
 48.78 18 19 19 4196.15 -35.56 194.31 251.55 54.49 19 29 15 3596.2 -39.92 186.23  
 131.22 2 34 18 2706.24 -35.55 77.43 251.54 54.48 3 19 24 2106.2 -39.91 69.35

DIFFERENTIAL CORRECTIONS

TDE 2.3517 TRA .0066 TC3-4.8301 BAU .8961  
 ROE .5276 RRA .0654 RC3 -.5597 FAU .07384  
 FOE 2.1999 FRA .5692 FC3-4.6373 BSP 16372  
 BOE 2.4101 BRA .0658 BC3 4.8624 FSP -1473

MID-COURSE EXECUTION ACCURACY

SGT 5102.4 SGR 926.8 SG3 433.2  
 RRT .9406 RRF .9463 RTF .9651  
 SGB 5185.9 R23 .1036 R13 .9662  
 SGI 5176.6 SG2 310.2 THA 9.73

ORBIT DETERMINATION ACCURACY

ST 3630.7 SR 815.6 SS 1478.8  
 CRT .9984 CRS -.9981 CST -.9934  
 LSA 4001.0 MSA 160.8 SSA 11.5  
 EL1 3720.9 EL2 45.1 ALF 12.64

LAUNCH DATE JAN 25 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

RL 147.28 LAL .00 LOL 124.85 VL 27.337 GAL 1.19 AZL 85.63 HCA 230.14 SMA 125.81 ECC .17190 INC 4.3749 V1 30.250  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.230 GAP 6.12 AZP 92.81 TAL 174.27 TAP 44.41 RCA 104.18 APO 147.44 V2 34.850  
 RC 138.775 GL 34.61 GP -24.74 ZAL 84.12 ZAP 144.00 ETS 322.86 ZAE 128.87 ETE 200.66 ZAC 119.74 ETC 179.45 CLP-152.97

DISTANCE 490.277

PLANETOCENTRIC CONIC

C3 13.476 VML 3.671 DLA 47.75 RAL 24.55 RAD 6567.5 VEL 11.613 PTH 2.03 VHP 5.105 DPA -16.62 RAP 31.48 ECC 1.2218  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.80 18 38 5 4182.64 -35.25 192.72 254.61 55.43 19 47 48 3582.6 -39.50 184.60  
 130.20 2 46 6 2709.85 -35.24 77.51 254.60 55.42 3 31 16 2109.9 -39.49 69.39  
 49.80 18 38 5 4182.64 -35.25 192.72 254.61 55.43 19 47 48 3582.6 -39.50 184.60  
 130.20 2 46 6 2709.85 -35.24 77.51 254.60 55.42 3 31 16 2109.9 -39.49 69.39  
 49.80 18 38 5 4182.64 -35.25 192.72 254.61 55.43 19 47 48 3582.6 -39.50 184.60  
 130.20 2 46 6 2709.85 -35.24 77.51 254.60 55.42 3 31 16 2109.9 -39.49 69.39

DIFFERENTIAL CORRECTIONS

TDE 2.3198 TRA .1526 TC3-5.0785 BAU .9193  
 ROE .4883 RRA .0770 RC3 -.4963 FAU .07072  
 FOE 2.0304 FRA .6877 FC3-4.5432 BSP 16735  
 BOE 2.3706 BRA .1709 BC3 5.1027 FSP -1433

MID-COURSE EXECUTION ACCURACY

SGT 5209.3 SGR 863.5 SG3 420.8  
 RRT .9296 RRF .9313 RTF .9648  
 SGB 5280.4 R23 .0844 R13 .9656  
 SGI 5271.0 SG2 314.6 THA 8.79

ORBIT DETERMINATION ACCURACY

ST 3623.9 SR 764.1 SS 1414.4  
 CRT .9990 CRS -.9967 CST -.9927  
 LSA 3961.3 MSA 159.7 SSA 12.5  
 EL1 3703.5 EL2 33.0 ALF 11.90

LAUNCH DATE JAN 25 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.307 GAL 1.47 AZL 85.85 HCA 233.31 SMA 125.61 ECC .17434 INC 4.1465 V1 30.250  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.217 GAP 6.42 AZP 92.48 TAL 173.02 TAP 46.33 RCA 103.71 APO 147.51 V2 34.860  
 RC 141.067 GL 32.78 GP -23.04 ZAL 81.97 ZAP 146.16 ETS 322.90 ZAE 128.94 ETE 199.00 ZAC 121.15 ETC 179.13 CLP-154.50

PLANETOCENTRIC CONIC  
 C3 13.293 VHL 3.646 OLA 46.95 RAL 28.38 RAD 6567.5 VEL 11.605 PTH 2.03 VHP 5.221 DPA -14.45 RAP 32.17 ECC 1.2188  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.84 18 57 2 4170.63 -34.85 191.23 257.82 56.29 20 6 32 3570.6 -39.00 183.09  
 129.16 2 57 47 2715.94 -34.84 77.77 257.81 56.27 3 43 3 2115.9 -38.99 69.62  
 50.84 18 57 2 4170.63 -34.85 191.23 257.82 56.29 20 6 32 3570.6 -39.00 183.09  
 129.16 2 57 47 2715.94 -34.84 77.77 257.81 56.27 3 43 3 2115.9 -38.99 69.62  
 50.84 18 57 2 4170.63 -34.85 191.23 257.82 56.29 20 6 32 3570.6 -39.00 183.09  
 129.16 2 57 47 2715.94 -34.84 77.77 257.81 56.27 3 43 3 2115.9 -38.99 69.62

DIFFERENTIAL CORRECTIONS  
 TDE 2.2840 TRA .3081 TC3-5.2765 BAU .9409  
 RDE .4571 RRA .0872 RC3 -.4360 FAU .06728  
 FDE 1.8654 FRA .7990 FC3-4.3814 BSP 17057  
 BOE 2.3293 BRA .3202 BC3 5.2945 FSP -1383

MID-COURSE EXECUTION ACCURACY  
 SGT 5309.4 SGR 810.8 SG3 406.9  
 RRT .9162 RRF .9141 RTF .9645  
 SGB 5371.0 R23 .0678 R13 .9651  
 SG1 5316.3 SG2 321.8 THA 7.99

ORBIT DETERMINATION ACCURACY  
 ST 3597.3 SR 720.9 SS 1346.1  
 CRT .9995 CRS -.9946 CST -.9920  
 LSA 3904.7 MSA 159.7 SSA 13.4  
 EL1 3668.8 EL2 21.8 ALF 11.33

LAUNCH DATE JAN 25 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.276 GAL 1.76 AZL 86.06 HCA 236.48 SMA 125.42 ECC .17696 INC 3.9361 V1 30.250  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.204 GAP 6.73 AZP 92.18 TAL 171.75 TAP 48.23 RCA 103.22 APO 147.61 V2 34.870  
 RC 143.344 GL 30.97 GP -21.53 ZAL 79.72 ZAP 148.17 ETS 322.87 ZAE 128.95 ETE 197.54 ZAC 122.65 ETC 178.84 CLP-155.97

PLANETOCENTRIC CONIC  
 C3 13.227 VHL 3.637 OLA 46.14 RAL 32.22 RAD 6567.5 VEL 11.602 PTH 2.03 VHP 5.349 DPA -12.43 RAP 33.03 ECC 1.2177  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.91 19 16 10 4159.82 -34.36 189.82 261.16 57.07 20 25 30 3559.8 -38.42 181.66  
 128.09 3 9 14 2724.59 -34.35 78.20 261.15 57.06 3 54 39 2124.6 -38.41 70.04  
 51.91 19 16 10 4159.82 -34.36 189.82 261.16 57.07 20 25 30 3559.8 -38.42 181.66  
 128.09 3 9 14 2724.59 -34.35 78.20 261.15 57.06 3 54 39 2124.6 -38.41 70.04  
 51.91 19 16 10 4159.82 -34.36 189.82 261.16 57.07 20 25 30 3559.8 -38.42 181.66  
 128.09 3 9 14 2724.59 -34.35 78.20 261.15 57.06 3 54 39 2124.6 -38.41 70.04

DIFFERENTIAL CORRECTIONS  
 TDE 2.2421 TRA .4707 TC3-5.4253 BAU .9618  
 RDE .4324 RRA .0955 RC3 -.3810 FAU .06373  
 FDE 1.7049 FRA .8977 FC3-4.1713 BSP 17400  
 BOE 2.2835 BRA .4803 BC3 5.4387 FSP -1336

MID-COURSE EXECUTION ACCURACY  
 SGT 5403.3 SGR 766.8 SG3 392.0  
 RRT .9008 RRF .8949 RTF .9645  
 SGB 5457.4 R23 .0526 R13 .9649  
 SG1 5447.4 SG2 330.3 THA 7.31

ORBIT DETERMINATION ACCURACY  
 ST 3548.8 SR 684.4 SS 1273.8  
 CRT .9998 CRS -.9915 CST -.9911  
 LSA 3828.7 MSA 159.8 SSA 14.3  
 EL1 3614.1 EL2 14.6 ALF 10.91

LAUNCH DATE JAN 25 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.245 GAL 2.07 AZL 86.26 HCA 239.65 SMA 125.22 ECC .17978 INC 3.7405 V1 30.250  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.192 GAP 7.05 AZP 91.89 TAL 170.46 TAP 50.11 RCA 102.71 APO 147.73 V2 34.880  
 RC 145.608 GL 29.18 GP -20.19 ZAL 77.38 ZAP 150.03 ETS 322.77 ZAE 128.92 ETE 196.26 ZAC 124.21 ETC 178.58 CLP-157.37

PLANETOCENTRIC CONIC  
 C3 13.273 VHL 3.643 OLA 45.30 RAL 36.03 RAD 6567.5 VEL 11.604 PTH 2.03 VHP 5.489 DPA -10.54 RAP 34.03 ECC 1.2184  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.03 19 35 31 4149.91 -33.79 188.45 264.60 57.81 20 44 41 3549.9 -37.76 180.30  
 126.97 3 20 19 2735.98 -33.77 78.82 264.59 57.79 4 5 55 2136.0 -37.74 70.67  
 53.03 19 35 31 4149.91 -33.79 188.45 264.60 57.81 20 44 41 3549.9 -37.76 180.30  
 126.97 3 20 19 2735.98 -33.77 78.82 264.59 57.79 4 5 55 2136.0 -37.74 70.67  
 53.03 19 35 31 4149.91 -33.79 188.45 264.60 57.81 20 44 41 3549.9 -37.76 180.30  
 126.97 3 20 19 2735.98 -33.77 78.82 264.59 57.79 4 5 55 2136.0 -37.74 70.67

DIFFERENTIAL CORRECTIONS  
 TDE 2.1981 TRA .6454 TC3-5.5118 BAU .9798  
 RDE .4140 RRA .1035 RC3 -.3294 FAU .05996  
 FDE 1.5559 FRA .9909 FC3-3.9111 BSP 17628  
 BOE 2.2367 BRA .6537 BC3 5.5216 FSP -1276

MID-COURSE EXECUTION ACCURACY  
 SGT 5491.9 SGR 731.5 SG3 376.8  
 RRT .8833 RRF .8746 RTF .9646  
 SGB 5540.5 R23 .0411 R13 .9649  
 SG1 5530.0 SG2 340.5 THA 6.74

ORBIT DETERMINATION ACCURACY  
 ST 3486.0 SR 654.8 SS 1203.3  
 CRT .9996 CRS -.9871 CST -.9901  
 LSA 3742.0 MSA 160.9 SSA 15.1  
 EL1 3546.9 EL2 19.2 ALF 10.63

LAUNCH DATE JAN 25 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.214 GAL 2.40 AZL 86.44 HCA 242.83 SMA 125.02 ECC .18280 INC 3.5571 V1 30.250  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.179 GAP 7.38 AZP 91.63 TAL 169.15 TAP 51.98 RCA 102.17 APO 147.87 V2 34.891  
 RC 147.857 GL 27.41 GP -18.99 ZAL 74.97 ZAP 151.78 ETS 322.57 ZAE 128.86 ETE 195.13 ZAC 125.85 ETC 178.34 CLP-158.73

PLANETOCENTRIC CONIC  
 C3 13.428 VHL 3.664 OLA 44.43 RAL 39.81 RAD 6567.5 VEL 11.611 PTH 2.03 VHP 5.641 DPA -8.76 RAP 35.15 ECC 1.2210  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.21 19 55 5 4140.73 -33.12 187.11 268.12 58.49 21 4 5 3540.7 -37.01 178.98  
 125.79 3 30 54 2750.20 -33.10 79.62 268.11 58.48 4 16 44 2150.2 -37.00 71.50  
 54.21 19 55 5 4140.73 -33.12 187.11 268.12 58.49 21 4 5 3540.7 -37.01 178.98  
 125.79 3 30 54 2750.20 -33.10 79.62 268.11 58.48 4 16 44 2150.2 -37.00 71.50  
 54.21 19 55 5 4140.73 -33.12 187.11 268.12 58.49 21 4 5 3540.7 -37.01 178.98  
 125.79 3 30 54 2750.20 -33.10 79.62 268.11 58.48 4 16 44 2150.2 -37.00 71.50

DIFFERENTIAL CORRECTIONS  
 TDE 2.1429 TRA .8260 TC3-5.5571 BAU .9989  
 RDE .3993 RRA .1106 RC3 -.2862 FAU .05647  
 FDE 1.4085 FRA 1.0721 FC3-3.6406 BSP 17957  
 BOE 2.1798 BRA .8333 BC3 5.5644 FSP -1229

MID-COURSE EXECUTION ACCURACY  
 SGT 5575.3 SGR 701.8 SG3 361.2  
 RRT .8650 RRF .8532 RTF .9649  
 SGB 5619.3 R23 .0304 R13 .9651  
 SG1 5608.4 SG2 350.1 THA 6.24

ORBIT DETERMINATION ACCURACY  
 ST 3396.5 SR 628.6 SS 1127.6  
 CRT .9987 CRS -.9810 CST -.9889  
 LSA 3629.9 MSA 163.1 SSA 15.8  
 EL1 3454.1 EL2 31.9 ALF 10.47

LAUNCH DATE JAN 25 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 26 1969

MELIOCENTRIC CONIC

DISTANCE 519.722

RL 147.28 LAL .00 LOL 124.85 VL 27.183 GAL 2.75 AZL 86.62 HCA 246.01 SMA 124.82 ECC .18605 INC 3.3837 V1 30.250
RP 108.58 LAP -3.09 LOP 10.82 VP 37.167 GAP 7.71 AZP 91.38 TAL 167.83 TAP 53.83 RCA 101.60 APO 148.04 V2 34.902
RC 150.092 GL 25.66 GP -17.92 ZAL 72.52 ZAP 153.41 ETS 322.27 ZAE 128.78 ETE 194.14 ZAC 127.54 ETC 178.11 CLP-160.03

PLANETOCENTRIC CONIC

C3 13.693 VHL 3.700 DLA 43.52 RAL 43.53 RAD 6567.5 VEL 11.622 PTH 2.04 VHP 5.803 CPA -7.09 RAP 36.40 ECC 1.2254
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
55.46 20 14 49 4132.07 -32.36 185.78 271.70 59.14 21 23 41 3532.1 -36.18 177.68
124.54 3 40 52 2767.41 -32.35 80.63 271.69 59.13 4 27 0 2167.4 -36.17 72.54
55.46 20 14 49 4132.07 -32.36 185.78 271.70 59.14 21 23 41 3532.1 -36.18 177.68
124.54 3 40 52 2767.41 -32.35 80.63 271.69 59.13 4 27 0 2167.4 -36.17 72.54
55.46 20 14 49 4132.07 -32.36 185.78 271.70 59.14 21 23 41 3532.1 -36.18 177.68
124.54 3 40 52 2767.41 -32.35 80.63 271.69 59.13 4 27 0 2167.4 -36.17 72.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.0820 TRA 1.0170 TC3-5.5472 BAU 1.0165 SGT 5653.5 SGR 677.6 SG3 345.7 ST 3291.1 SR 606.6 SS 1053.4
RDE .3887 RRA .1179 RC3 -.2479 FAU .05296 RRT .8457 RRF .8316 RTF .9652 CRT .9968 CRS -.9727 CST -.9875
FDE 1.2702 FRA 1.1471 FC3-3.3485 BSP 18243 SGB 5694.0 R23 .0226 R13 .9654 LSA 3504.4 MSA 166.8 SSA 16.4
BDE 2.1179 BRA 1.0238 BC3 5.5527 FSP -1178 SG1 5682.6 SG2 359.8 THA 5.81 EL1 3346.2 EL2 47.6 ALF 10.41

LAUNCH DATE JAN 25 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 28 1969

MELIOCENTRIC CONIC

DISTANCE 525.549

RL 147.28 LAL .00 LOL 124.85 VL 27.151 GAL 3.11 AZL 86.78 HCA 249.19 SMA 124.62 ECC .18953 INC 3.2186 V1 30.250
RP 108.54 LAP -3.01 LOP 14.01 VP 37.155 GAP 8.05 AZP 91.14 TAL 166.49 TAP 55.68 RCA 101.00 APO 148.24 V2 34.914
RC 152.312 GL 23.94 GP -16.96 ZAL 70.03 ZAP 154.95 ETS 321.86 ZAE 128.69 ETE 193.27 ZAC 129.30 ETC 177.88 CLP-161.29

PLANETOCENTRIC CONIC

C3 14.074 VHL 3.752 DLA 42.57 RAL 47.19 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 5.976 DPA -5.50 RAP 37.74 ECC 1.2316
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.78 20 34 45 4123.62 -31.52 184.44 275.33 59.75 21 43 28 3523.6 -35.27 176.39
123.22 3 50 4 2787.89 -31.50 81.87 275.32 59.74 4 36 32 2187.9 -35.26 73.82
56.78 20 34 45 4123.62 -31.52 184.44 275.33 59.75 21 43 28 3523.6 -35.27 176.39
123.22 3 50 4 2787.89 -31.50 81.87 275.32 59.74 4 36 32 2187.9 -35.26 73.82
56.78 20 34 45 4123.62 -31.52 184.44 275.33 59.75 21 43 28 3523.6 -35.27 176.39
123.22 3 50 4 2787.89 -31.50 81.87 275.32 59.74 4 36 32 2187.9 -35.26 73.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.0179 TRA 1.2220 TC3-5.4748 BAU 1.0309 SGT 5726.7 SGR 658.5 SG3 330.5 ST 3176.7 SR 588.3 SS 983.4
RDE .3818 RRA .1258 RC3 -.2131 FAU .04938 RRT .8260 RRF .8107 RTF .9654 CRT .9937 CRS -.9617 CST -.9860
FDE 1.1431 FRA 1.2189 FC3-3.0372 BSP 18425 SGB 5764.4 R23 .0175 R13 .9656 LSA 3372.6 MSA 172.5 SSA 16.9
BDE 2.0537 BRA 1.2285 BC3 5.4790 FSP -1121 SG1 5752.5 SG2 369.5 THA 5.45 EL1 3230.0 EL2 65.0 ALF 10.43

LAUNCH DATE JAN 25 1969

FLIGHT TIME 186.00

ARRIVAL DATE JUL 30 1969

MELIOCENTRIC CONIC

DISTANCE 531.351

RL 147.28 LAL .00 LOL 124.85 VL 27.120 GAL 3.49 AZL 86.94 HCA 252.37 SMA 124.42 ECC .19328 INC 3.0602 V1 30.250
RP 108.50 LAP -2.92 LOP 17.20 VP 37.143 GAP 8.40 AZP 90.93 TAL 165.14 TAP 57.51 RCA 100.37 APO 148.46 V2 34.926
RC 154.516 GL 22.24 GP -16.10 ZAL 67.53 ZAP 156.40 ETS 321.33 ZAE 128.59 ETE 192.50 ZAC 131.10 ETC 177.64 CLP-162.51

PLANETOCENTRIC CONIC

C3 14.576 VHL 3.818 DLA 41.58 RAL 50.74 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.160 DPA -4.00 RAP 39.17 ECC 1.2399
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
58.17 20 54 50 4115.26 -30.60 183.09 278.98 60.34 22 3 25 3515.3 -34.28 175.09
121.83 3 58 22 2811.75 -30.58 83.34 278.97 60.32 4 45 14 2211.7 -34.27 75.34
58.17 20 54 50 4115.26 -30.60 183.09 278.98 60.34 22 3 25 3515.3 -34.28 175.09
121.83 3 58 22 2811.75 -30.58 83.34 278.97 60.32 4 45 14 2211.7 -34.27 75.34
58.17 20 54 50 4115.26 -30.60 183.09 278.98 60.34 22 3 25 3515.3 -34.28 175.09
121.83 3 58 22 2811.75 -30.58 83.34 278.97 60.32 4 45 14 2211.7 -34.27 75.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9432 TRA 1.4335 TC3-5.3668 BAU 1.0465 SGT 5793.9 SGR 642.0 SG3 315.3 ST 3043.6 SR 571.6 SS 913.0
RDE .3771 RRA .1337 RC3 -.1851 FAU .04611 RRT .8067 RRF .7901 RTF .9659 CRT .9888 CRS -.9472 CST -.9841
FDE 1.0203 FRA 1.2808 FC3-2.7385 BSP 18702 SGB 5829.3 R23 .0127 R13 .9660 LSA 3223.5 MSA 179.9 SSA 17.1
BDE 1.9794 BRA 1.4397 BC3 5.3700 FSP -1075 SG1 5817.1 SG2 377.8 THA 5.13 EL1 3095.7 EL2 84.0 ALF 10.53

LAUNCH DATE JAN 25 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 1 1969

MELIOCENTRIC CONIC

DISTANCE 537.127

RL 147.28 LAL .00 LOL 124.85 VL 27.088 GAL 3.89 AZL 87.09 HCA 255.55 SMA 124.21 ECC .19731 INC 2.9072 V1 30.250
RP 108.47 LAP -2.82 LOP 20.39 VP 37.131 GAP 8.77 AZP 90.73 TAL 163.79 TAP 59.34 RCA 99.71 APO 148.72 V2 34.938
RC 156.704 GL 20.58 GP -15.32 ZAL 65.03 ZAP 157.77 ETS 320.66 ZAE 128.49 ETE 191.82 ZAC 132.96 ETC 177.40 CLP-163.69

PLANETOCENTRIC CONIC

C3 15.208 VHL 3.900 DLA 40.56 RAL 54.20 RAD 6567.6 VEL 11.687 PTH 2.06 VHP 6.354 DPA -2.57 RAP 40.69 ECC 1.2503
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.65 21 15 5 4106.77 -29.60 181.71 282.64 60.89 22 23 32 3506.8 -33.23 173.77
120.35 4 5 41 2839.20 -29.59 85.05 282.63 60.88 4 53 0 2239.2 -33.22 77.12
59.65 21 15 5 4106.77 -29.60 181.71 282.64 60.89 22 23 32 3506.8 -33.23 173.77
120.35 4 5 41 2839.20 -29.59 85.05 282.63 60.88 4 53 0 2239.2 -33.22 77.12
59.65 21 15 5 4106.77 -29.60 181.71 282.64 60.89 22 23 32 3506.8 -33.23 173.77
120.35 4 5 41 2839.20 -29.59 85.05 282.63 60.88 4 53 0 2239.2 -33.22 77.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.8621 TRA 1.6568 TC3-5.2141 BAU 1.0606 SGT 5855.8 SGR 628.0 SG3 300.6 ST 2902.3 SR 556.6 SS 846.2
RDE .3746 RRA .1422 RC3 -.1612 FAU .04295 RRT .7881 RRF .7706 RTF .9663 CRT .9816 CRS -.9284 CST -.9819
FDE .9054 FRA 1.3385 FC3-2.4448 BSP 18955 SGB 5889.4 R23 .0093 R13 .9664 LSA 3068.1 MSA 189.8 SSA 17.2
BDE 1.8994 BRA 1.6629 BC3 5.2166 FSP -1030 SG1 5876.8 SG2 385.2 THA 4.85 EL1 2953.4 EL2 104.5 ALF 10.67

LAUNCH DATE JAN 25 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.056 GAL 4.31 AZL 87.24 HCA 258.74 SMA 124.01 ECC .20164 INC 2.7585 V1 30.250  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.119 GAP 9.15 AZP 90.54 TAL 162.43 TAP 61.17 RCA 99.01 APO 149.02 V2 34.951  
 RC 158.875 GL 18.95 GP -14.62 ZAL 62.54 ZAP 159.06 ETS 319.84 ZAE 128.39 ETE 191.21 ZAC 134.85 ETC 177.14 CLP-164.84

PLANETOCENTRIC CONIC  
 C3 15.982 VHL 3.998 DLA 39.51 RAL 57.53 RAD 6567.6 VEL 11.720 PTH 2.07 VHP 6.560 DPA -1.21 RAP 42.28 ECC 1.2630  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.20 21 35 30 4097.93 -28.54 180.29 286.30 61.42 22 43 48 3497.9 -32.11 172.41  
 118.80 4 11 52 2870.46 -28.52 87.03 286.29 61.41 4 59 42 2270.5 -32.10 79.16  
 61.20 21 35 30 4097.93 -28.54 180.29 286.30 61.42 22 43 48 3497.9 -32.11 172.41  
 118.80 4 11 52 2870.46 -28.52 87.03 286.29 61.41 4 59 42 2270.5 -32.10 79.16  
 61.20 21 35 30 4097.93 -28.54 180.29 286.30 61.42 22 43 48 3497.9 -32.11 172.41  
 118.80 4 11 52 2870.46 -28.52 87.03 286.29 61.41 4 59 42 2270.5 -32.10 79.16

DIFFERENTIAL CORRECTIONS  
 TDE 1.7761 TRA 1.8928 TC3-5.0203 BAU 1.0731 SGT 5912.3 SGR 616.3 SG3 286.4 ST 2758.1 SR 543.1 SS 784.8  
 RDE .3743 RRA .1517 RC3 -.1407 FAU .03987 RRT .7706 RRF .7527 RTF .9666 CRT .9715 CRS -.9046 CST -.9795  
 FDE .7992 FRA 1.3929 FC3-2.1598 BSP 19180 SGB 5944.4 R23 .0071 R13 .9667 LSA 2911.5 MSA 202.2 SSA 17.1  
 BDE 1.8151 BRA 1.8988 BC3 5.0222 FSP -984 SG1 5931.5 SG2 391.5 THA 4.61 EL1 2808.2 EL2 126.5 ALF 10.85

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 27.024 GAL 4.76 AZL 87.39 HCA 261.93 SMA 123.81 ECC .20631 INC 2.6128 V1 30.250  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.108 GAP 9.54 AZP 90.37 TAL 161.06 TAP 62.99 RCA 98.27 APO 149.36 V2 34.964  
 RC 161.027 GL 17.37 GP -13.98 ZAL 60.09 ZAP 160.29 ETS 318.85 ZAE 128.29 ETE 190.68 ZAC 136.78 ETC 176.85 CLP-165.96

PLANETOCENTRIC CONIC  
 C3 16.911 VHL 4.112 DLA 38.44 RAL 60.74 RAD 6567.7 VEL 11.760 PTH 2.08 VHP 6.777 DPA .09 RAP 43.94 ECC 1.2783  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.84 21 56 6 4088.48 -27.42 178.82 289.95 61.93 23 4 14 3488.5 -30.94 171.00  
 117.16 4 16 50 2905.76 -27.40 89.29 289.94 61.91 5 5 16 2305.8 -30.93 81.48  
 62.84 21 56 6 4088.48 -27.42 178.82 289.95 61.93 23 4 14 3488.5 -30.94 171.00  
 117.16 4 16 50 2905.76 -27.40 89.29 289.94 61.91 5 5 16 2305.8 -30.93 81.48  
 62.84 21 56 6 4088.48 -27.42 178.82 289.95 61.93 23 4 14 3488.5 -30.94 171.00  
 117.16 4 16 50 2905.76 -27.40 89.29 289.94 61.91 5 5 16 2305.8 -30.93 81.48

DIFFERENTIAL CORRECTIONS  
 TDE 1.6848 TRA 2.1416 TC3-4.7932 BAU 1.0840 SGT 5963.6 SGR 606.0 SG3 272.8 ST 2613.5 SR 530.4 SS 728.7  
 RDE .3756 RRA .1620 RC3 -.1234 FAU .03692 RRT .7544 RRF .7363 RTF .9669 CRT .9577 CRS -.8750 CST -.9770  
 FDE .7006 FRA 1.4439 FC3-1.8901 BSP 19387 SGB 5994.3 R23 .0055 R13 .9670 LSA 2756.0 MSA 216.9 SSA 16.8  
 BDE 1.7262 BRA 2.1477 BC3 4.7948 FSP -941 SG1 5981.1 SG2 396.6 THA 4.40 EL1 2662.6 EL2 149.9 ALF 11.04

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 26.992 GAL 5.23 AZL 87.53 HCA 265.12 SMA 123.61 ECC .21134 INC 2.4694 V1 30.250  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.097 GAP 9.95 AZP 90.21 TAL 159.69 TAP 64.81 RCA 97.49 APO 149.74 V2 34.977  
 RC 163.161 GL 15.84 GP -13.40 ZAL 57.69 ZAP 161.45 ETS 317.68 ZAE 128.19 ETE 190.20 ZAC 138.75 ETC 176.54 CLP-167.06

PLANETOCENTRIC CONIC  
 C3 18.014 VHL 4.244 DLA 37.35 RAL 63.81 RAD 6567.7 VEL 11.807 PTH 2.09 VHP 7.008 DPA 1.33 RAP 45.66 ECC 1.2965  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.55 22 16 56 4078.14 -26.24 177.28 293.59 62.41 23 24 54 3478.1 -29.72 169.53  
 115.45 4 20 29 2945.36 -26.23 91.85 293.58 62.40 5 9 34 2345.4 -29.71 84.10  
 64.55 22 16 56 4078.14 -26.24 177.28 293.59 62.41 23 24 54 3478.1 -29.72 169.53  
 115.45 4 20 29 2945.36 -26.23 91.85 293.58 62.40 5 9 34 2345.4 -29.71 84.10  
 64.55 22 16 56 4078.14 -26.24 177.28 293.59 62.41 23 24 54 3478.1 -29.72 169.53  
 115.45 4 20 29 2945.36 -26.23 91.85 293.58 62.40 5 9 34 2345.4 -29.71 84.10

DIFFERENTIAL CORRECTIONS  
 TDE 1.5921 TRA 2.4072 TC3-4.5316 BAU 1.0916 SGT 6010.7 SGR 597.2 SG3 259.9 ST 2477.3 SR 518.8 SS 680.7  
 RDE .3787 RRA .1735 RC3 -.1079 FAU .03398 RRT .7400 RRF .7223 RTF .9671 CRT .9395 CRS -.8396 CST -.9745  
 FDE .6119 FRA 1.4944 FC3-1.6332 BSP 19506 SGB 6040.3 R23 .0051 R13 .9672 LSA 2610.5 MSA 233.6 SSA 16.5  
 BDE 1.6365 BRA 2.4135 BC3 4.5329 FSP -895 SG1 6027.0 SG2 400.6 THA 4.22 EL1 2525.0 EL2 174.4 ALF 11.19

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC  
 RL 147.28 LAL .00 LOL 124.85 VL 26.959 GAL 5.73 AZL 87.67 HCA 268.32 SMA 123.41 ECC .21677 INC 2.3272 V1 30.250  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.086 GAP 10.38 AZP 90.07 TAL 158.32 TAP 66.64 RCA 96.66 APO 150.16 V2 34.990  
 RC 165.276 GL 14.35 GP -12.88 ZAL 55.34 ZAP 162.56 ETS 316.30 ZAE 128.09 ETE 189.77 ZAC 140.74 ETC 176.18 CLP-168.14

PLANETOCENTRIC CONIC  
 C3 19.310 VHL 4.394 DLA 36.26 RAL 66.73 RAD 6567.8 VEL 11.861 PTH 2.10 VHP 7.253 DPA 2.51 RAP 47.43 ECC 1.3178  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.34 22 38 4 4066.52 -25.03 175.64 297.21 62.87 23 45 51 3466.5 -28.46 167.96  
 113.66 4 22 41 2989.62 -25.02 94.73 297.20 62.85 5 12 30 2389.6 -28.44 87.05  
 66.34 22 38 4 4066.52 -25.03 175.64 297.21 62.87 23 45 51 3466.5 -28.46 167.96  
 113.66 4 22 41 2989.62 -25.02 94.73 297.20 62.85 5 12 30 2389.6 -28.44 87.05  
 66.34 22 38 4 4066.52 -25.03 175.64 297.21 62.87 23 45 51 3466.5 -28.46 167.96  
 113.66 4 22 41 2989.62 -25.02 94.73 297.20 62.85 5 12 30 2389.6 -28.44 87.05

DIFFERENTIAL CORRECTIONS  
 TDE 1.4916 TRA 2.6835 TC3-4.2588 BAU 1.0997 SGT 6051.5 SGR 588.3 SG3 247.4 ST 2343.0 SR 506.9 SS 636.8  
 RDE .3826 RRA .1857 RC3 -.0956 FAU .03131 RRT .7269 RRF .7092 RTF .9674 CRT .9158 CRS -.7969 CST -.9721  
 FDE .5275 FRA 1.5401 FC3-1.4037 BSP 19704 SGB 6080.0 R23 .0042 R13 .9675 LSA 2467.5 MSA 252.0 SSA 16.1  
 BDE 1.5399 BRA 2.6900 BC3 4.2599 FSP -856 SG1 6066.7 SG2 403.0 THA 4.06 EL1 2388.9 EL2 199.7 ALF 11.29

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 25 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC DISTANCE 565.493  
 RL 147.28 LAL .00 LOL 124.85 VL 26.927 GAL 6.25 AZL 87.81 HCA 271.51 SMA 123.22 ECC .22263 INC 2.1854 V1 30.250  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.075 GAP 10.84 AZP 89.94 TAL 156.96 TAP 68.47 RCA 95.78 APO 150.65 V2 35.003  
 RC 167.370 GL 12.93 GP -12.40 ZAL 53.05 ZAP 163.61 ETS 314.68 ZAE 128.00 ETE 189.39 ZAC 142.75 ETC 175.79 CLP-169.19

PLANETOCENTRIC CONIC  
 C3 20.825 VHL 4.563 DLA 35.16 RAL 69.51 RAD 6567.8 VEL 11.925 PTH 2.12 VHP 7.514 DPA 3.63 RAP 49.26 ECC 1.3427  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.23 22 59 37 4053.26 -23.79 173.89 300.80 63.31 24 7 10 3453.3 -27.17 166.27  
 111.77 4 23 20 3038.84 -23.77 97.96 300.79 63.29 5 13 58 2438.8 -27.16 90.34  
 68.23 22 59 37 4053.26 -23.79 173.89 300.80 63.31 24 7 10 3453.3 -27.17 166.27  
 111.77 4 23 20 3038.84 -23.77 97.96 300.79 63.29 5 13 58 2438.8 -27.16 90.34  
 68.23 22 59 37 4053.26 -23.79 173.89 300.80 63.31 24 7 10 3453.3 -27.17 166.27  
 111.77 4 23 20 3038.84 -23.77 97.96 300.79 63.29 5 13 58 2438.8 -27.16 90.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.3875 TRA 2.9756 TC3-3.9704 BAU 1.1056 SGT 6086.9 SGR 579.7 SG3 235.5 ST 2219.5 SR 495.2 SS 599.8  
 RDE .3876 RRA .1989 RC3 -.0848 FAU .02874 RRT .7153 RRF .6979 RTF .9677 CRT .8859 CRS -.7477 CST -.9701  
 FDE .4503 FRA 1.5845 FC3-1.1946 BSP 19879 SGB 6114.4 R23 .0037 R13 .9678 LSA 2336.1 MSA 271.4 SSA 15.6  
 BDE 1.4406 BRA 2.9823 BC3 3.9713 FSP -818 SG1 6101.1 SG2 404.2 THA 3.91 EL1 2262.9 EL2 225.3 ALF 11.29

LAUNCH DATE JAN 25 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC DISTANCE 571.033  
 RL 147.28 LAL .00 LOL 124.85 VL 26.896 GAL 6.81 AZL 87.96 HCA 274.71 SMA 123.02 ECC .22897 INC 2.0430 V1 30.250  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.065 GAP 11.32 AZP 89.83 TAL 155.61 TAP 70.32 RCA 94.85 APO 151.19 V2 35.016  
 RC 169.445 GL 11.56 GP -11.97 ZAL 50.85 ZAP 164.60 ETS 312.79 ZAE 127.90 ETE 189.05 ZAC 144.79 ETC 175.33 CLP-170.24

PLANETOCENTRIC CONIC  
 C3 22.588 VHL 4.753 DLA 34.07 RAL 72.15 RAD 6567.9 VEL 11.999 PTH 2.14 VHP 7.792 DPA 4.71 RAP 51.13 ECC 1.3717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.21 23 21 44 4037.65 -22.52 171.98 304.37 63.72 24 29 2 3437.7 -25.86 164.42  
 109.79 4 22 13 3093.69 -22.50 101.58 304.36 63.71 5 13 46 2493.7 -25.84 94.02  
 70.21 23 21 44 4037.65 -22.52 171.98 304.37 63.72 24 29 2 3437.7 -25.86 164.42  
 109.79 4 22 13 3093.69 -22.50 101.58 304.36 63.71 5 13 46 2493.7 -25.84 94.02  
 110.00 4 44 21 3026.20 -24.44 97.32 305.37 65.32 5 34 47 2426.2 -27.56 89.53  
 110.00 4 2 43 3153.14 -20.60 105.17 303.32 62.10 4 55 16 2553.1 -24.17 97.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.2803 TRA 3.2846 TC3-3.6730 BAU 1.1094 SGT 6117.5 SGR 571.2 SG3 224.3 ST 2109.5 SR 483.3 SS 569.4  
 RDE .3934 RRA .2131 RC3 -.0754 FAU .02628 RRT .7054 RRF .6882 RTF .9681 CRT .8491 CRS -.6927 CST -.9688  
 FDE .3795 FRA 1.6280 FC3-1.0071 BSP 20034 SGB 6144.1 R23 .0032 R13 .9681 LSA 2218.7 MSA 291.0 SSA 15.1  
 BDE 1.3394 BRA 3.2915 BC3 3.6737 FSP -782 SG1 6130.8 SG2 404.0 THA 3.78 EL1 2149.6 EL2 250.6 ALF 11.16

LAUNCH DATE JAN 25 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC DISTANCE 576.514  
 RL 147.28 LAL .00 LOL 124.85 VL 26.864 GAL 7.41 AZL 88.10 HCA 277.91 SMA 122.82 ECC .23585 INC 1.8993 V1 30.250  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.054 GAP 11.83 AZP 89.74 TAL 154.26 TAP 72.17 RCA 93.86 APO 151.79 V2 35.030  
 RC 171.498 GL 10.25 GP -11.57 ZAL 48.73 ZAP 165.54 ETS 310.59 ZAE 127.80 ETE 188.74 ZAC 146.83 ETC 174.81 CLP-171.27

PLANETOCENTRIC CONIC  
 C3 24.636 VHL 4.963 DLA 33.00 RAL 74.64 RAD 6568.0 VEL 12.084 PTH 2.16 VHP 8.088 DPA 5.73 RAP 53.04 ECC 1.4054  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.31 23 44 44 4018.78 -21.23 169.84 307.91 64.13 24 51 42 3418.8 -24.53 162.34  
 107.69 4 19 5 3154.99 -21.21 105.65 307.90 64.12 5 11 40 2555.0 -24.52 98.15  
 72.31 23 44 44 4018.78 -21.23 169.84 307.91 64.13 24 51 42 3418.8 -24.53 162.34  
 107.69 4 19 5 3154.99 -21.21 105.65 307.90 64.12 5 11 40 2555.0 -24.52 98.15  
 110.00 5 41 29 2901.74 -27.72 89.14 310.99 69.15 6 29 51 2301.7 -20.30 80.89  
 110.00 3 25 26 3320.03 -14.99 114.86 304.35 58.92 4 20 46 2720.0 -19.00 108.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.1739 TRA 3.6153 TC3-3.3653 BAU 1.1086 SGT 6144.6 SGR 562.9 SG3 213.9 ST 2018.6 SR 471.6 SS 546.6  
 RDE .4003 RRA .2286 RC3 -.0664 FAU .02381 RRT .6973 RRF .6806 RTF .9684 CRT .8059 CRS -.6352 CST -.9688  
 FDE .3169 FRA 1.6732 FC3 -.8368 BSP 20084 SGB 6170.3 R23 .0034 R13 .9685 LSA 2121.3 MSA 309.5 SSA 14.6  
 BDE 1.2403 BRA 3.6225 BC3 3.3659 FSP -743 SG1 6157.2 SG2 402.7 THA 3.67 EL1 2054.7 EL2 274.3 ALF 10.86

LAUNCH DATE JAN 25 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC DISTANCE 581.927  
 RL 147.28 LAL .00 LOL 124.85 VL 26.832 GAL 8.05 AZL 88.25 HCA 281.12 SMA 122.63 ECC .24331 INC 1.7531 V1 30.250  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.044 GAP 12.37 AZP 89.66 TAL 152.93 TAP 74.05 RCA 92.79 APO 152.47 V2 35.043  
 RC 173.532 GL 9.00 GP -11.21 ZAL 46.69 ZAP 166.43 ETS 308.03 ZAE 127.70 ETE 188.46 ZAC 148.89 ETC 174.20 CLP-172.30

PLANETOCENTRIC CONIC  
 C3 27.012 VHL 5.197 DLA 31.94 RAL 76.98 RAD 6568.1 VEL 12.181 PTH 2.19 VHP 8.406 DPA 6.70 RAP 54.99 ECC 1.4445  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.57 0 12 54 3995.29 -19.93 167.37 311.43 64.52 1 19 29 3395.3 -23.20 159.94  
 105.43 4 13 33 3224.00 -19.92 110.26 311.42 64.50 5 7 17 2624.0 -23.18 102.82  
 74.57 0 12 54 3995.29 -19.93 167.37 311.43 64.52 1 19 29 3395.3 -23.20 159.94  
 105.43 4 13 33 3224.00 -19.92 110.26 311.42 64.50 5 7 17 2624.0 -23.18 102.82  
 110.00 6 16 7 2844.44 -29.05 85.21 315.50 71.14 7 3 32 2244.4 -31.34 76.75  
 110.00 3 9 30 3422.84 -11.31 120.54 306.47 57.52 4 6 33 2822.8 -15.51 113.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.0601 TRA 3.9611 TC3-3.0662 BAU 1.1075 SGT 6164.6 SGR 553.6 SG3 203.8 ST 1938.5 SR 459.2 SS 527.8  
 RDE .4074 RRA .2447 RC3 -.0588 FAU .02157 RRT .6901 RRF .6736 RTF .9690 CRT .7553 CRS -.5730 CST -.9696  
 FDE .2573 FRA 1.7160 FC3 -.6914 BSP 20226 SGB 6189.4 R23 .0029 R13 .9690 LSA 2034.8 MSA 326.6 SSA 14.2  
 BDE 1.1357 BRA 3.9686 BC3 3.0668 FSP -711 SG1 6176.5 SG2 399.9 THA 3.56 EL1 1970.0 EL2 296.1 ALF 10.38



LAUNCH DATE JAN 25 1969 FLIGHT TIME 206.00 ARRIVAL DATE AUG 19 1969

Heliocentric Conic: RL 147.28 LAL .00 LOL 124.85 VL 26.801 GAL 8.72 AZL 88.40 HCA 284.32 SMA 122.44 ECC .25143 INC 1.6035 V1 30.250  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.034 GAP 12.95 AZP 89.60 TAL 151.62 TAP 75.95 RCA 91.66 APO 153.23 V2 35.056  
 RC 175.544 GL 7.81 GP -10.88 ZAL 44.75 ZAP 167.26 ETS 305.08 ZAE 127.59 ETE 188.21 ZAC 150.96 ETC 173.50 CLP-173.32

Distance 587.261

Planetocentric Conic: C3 29.767 VHL 5.456 DLA 30.90 RAL 79.18 RAD 6568.2 VEL 12.294 PTH 2.21 VHP 8.747 DPA 7.63 RAP 56.97 ECC 1.4899  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.08 0 39 7 3964.74 -18.63 164.41 314.91 64.89 1 45 12 3364.7 -21.86 157.03  
 102.92 4 4 55 3303.03 -18.62 115.58 314.91 64.88 4 59 58 2703.0 -21.85 108.20  
 77.08 0 39 7 3964.74 -18.63 164.41 314.91 64.89 1 45 12 3364.7 -21.86 157.03  
 102.92 4 4 55 3303.03 -18.62 115.58 314.91 64.88 4 59 58 2703.0 -21.85 108.20  
 110.00 6 44 7 2806.48 -29.86 82.54 319.70 72.52 7 30 53 2206.5 -31.95 73.96  
 110.00 2 59 6 3509.29 -8.11 125.19 308.88 56.68 3 57 35 2909.3 -12.43 118.77

Differential Corrections: TOE .9443 TRA 4.3286 TC3-2.7709 BAU 1.1029 SGT 6179.9 SGR 543.8 SG3 194.4 ST 1875.5 SR 446.4 SS 514.4  
 RDE .4151 RRA .2616 RC3 -.0517 FAU .01941 RRT .6842 RRF .6680 RTF .9696 CRT .6989 CRS -.5105 CST -.9714  
 FDE .2032 FRA 1.7596 FC3 -.5644 BSP 20342 SGB 6203.7 R23 .0026 R13 .9697 LSA 1966.0 MSA 340.9 SSA 13.7  
 BDE 1.0315 BRA 4.3365 BC3 2.7714 FSP -679 SGI 6191.1 SG2 395.9 THA 3.46 EL1 1902.0 EL2 314.8 ALF 9.71

Mid-Course Execution Accuracy: SGT 6179.9 SGR 543.8 SG3 194.4 ST 1875.5 SR 446.4 SS 514.4  
 RRT .6842 RRF .6680 RTF .9696 CRT .6989 CRS -.5105 CST -.9714  
 SGB 6203.7 R23 .0026 R13 .9697 LSA 1966.0 MSA 340.9 SSA 13.7  
 SGI 6191.1 SG2 395.9 THA 3.46 EL1 1902.0 EL2 314.8 ALF 9.71

LAUNCH DATE JAN 25 1969 FLIGHT TIME 208.00 ARRIVAL DATE AUG 21 1969

Heliocentric Conic: RL 147.28 LAL .00 LOL 124.85 VL 26.770 GAL 9.45 AZL 88.55 HCA 287.53 SMA 122.25 ECC .26029 INC 1.4496 V1 30.250  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.024 GAP 13.57 AZP 89.56 TAL 150.34 TAP 77.87 RCA 90.43 APO 154.07 V2 35.069  
 RC 177.535 GL 6.68 GP -10.57 ZAL 42.91 ZAP 168.02 ETS 301.65 ZAE 127.47 ETE 187.98 ZAC 153.02 ETC 172.66 CLP-174.34

Distance 592.503

Planetocentric Conic: C3 32.966 VHL 5.742 DLA 29.89 RAL 81.25 RAD 6568.3 VEL 12.423 PTH 2.24 VHP 9.115 DPA 8.50 RAP 58.98 ECC 1.5425  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.00 1 8 59 3921.74 -17.34 160.57 318.37 65.26 2 14 20 3321.7 -20.53 153.23  
 100.00 3 51 33 3397.34 -17.33 122.00 318.37 65.25 4 48 10 2797.3 -20.52 114.66  
 80.00 1 8 59 3921.74 -17.34 160.57 318.37 65.26 2 14 20 3321.7 -20.53 153.23  
 100.00 3 51 33 3397.34 -17.33 122.00 318.37 65.25 4 48 10 2797.3 -20.52 114.66  
 110.00 7 8 12 2779.69 -30.39 80.64 323.72 73.54 7 54 31 2179.7 -32.34 71.97  
 110.00 2 51 30 3587.39 -5.16 129.32 311.43 56.16 3 51 18 2987.4 -9.57 123.01

Differential Corrections: TOE .8254 TRA 4.7191 TC3-2.4837 BAU 1.0948 SGT 6190.2 SGR 533.3 SG3 185.5 ST 1827.9 SR 433.1 SS 505.5  
 RDE .4231 RRA .2794 RC3 -.0451 FAU .01733 RRT .6792 RRF .6634 RTF .9704 CRT .6380 CRS -.4490 CST -.9742  
 FDE .1535 FRA 1.8045 FC3 -.4550 BSP 20446 SGB 6213.1 R23 .0022 R13 .9705 LSA 1913.2 MSA 351.7 SSA 13.2  
 BDE .9275 BRA 4.7274 BC3 2.4841 FSP -649 SGI 6200.8 SG2 390.7 THA 3.36 EL1 1849.4 EL2 329.7 ALF 8.88

Mid-Course Execution Accuracy: SGT 6190.2 SGR 533.3 SG3 185.5 ST 1827.9 SR 433.1 SS 505.5  
 RRT .6792 RRF .6634 RTF .9704 CRT .6380 CRS -.4490 CST -.9742  
 SGB 6213.1 R23 .0022 R13 .9705 LSA 1913.2 MSA 351.7 SSA 13.2  
 SGI 6200.8 SG2 390.7 THA 3.36 EL1 1849.4 EL2 329.7 ALF 8.88

LAUNCH DATE JAN 25 1969 FLIGHT TIME 210.00 ARRIVAL DATE AUG 23 1969

Heliocentric Conic: RL 147.28 LAL .00 LOL 124.85 VL 26.739 GAL 10.23 AZL 88.71 HCA 290.74 SMA 122.07 ECC .26997 INC 1.2900 V1 30.250  
 RP 108.02 LAP -1.21 LOP 55.60 VP 37.014 GAP 14.23 AZP 89.54 TAL 149.08 TAP 79.83 RCA 89.11 APO 155.02 V2 35.083  
 RC 179.506 GL 5.61 GP -10.29 ZAL 41.16 ZAP 168.72 ETS 297.71 ZAE 127.34 ETE 187.76 ZAC 155.08 ETC 171.68 CLP-175.37

Distance 597.638

Planetocentric Conic: C3 36.686 VHL 6.057 DLA 28.91 RAL 83.18 RAD 6568.4 VEL 12.572 PTH 2.28 VHP 9.513 DPA 9.33 RAP 61.01 ECC 1.6038  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 83.89 1 47 21 3850.29 -16.06 154.68 321.80 65.63 2 51 32 3250.3 -19.21 147.38  
 96.11 3 28 35 3522.77 -16.04 130.66 321.79 65.62 4 27 18 2922.8 -19.20 123.36  
 100.00 5 3 27 3218.03 -22.06 110.79 324.43 69.30 5 57 5 2618.0 -24.68 102.97  
 100.00 2 55 10 3630.26 -10.21 135.63 318.84 61.75 3 55 40 3030.3 -13.91 128.79  
 110.00 7 29 30 2760.76 -30.75 79.28 327.62 74.27 8 15 30 2160.8 -32.59 70.55  
 110.00 2 45 37 3660.30 -2.39 133.14 314.08 55.89 3 46 37 3060.3 -6.85 126.90

Differential Corrections: TOE .7082 TRA 5.1395 TC3-2.2024 BAU 1.0804 SGT 6198.0 SGR 522.3 SG3 177.3 ST 1797.6 SR 419.7 SS 501.2  
 RDE .4318 RRA .2980 RC3 -.0385 FAU .01524 RRT .6756 RRF .6604 RTF .9714 CRT .5761 CRS -.3927 CST -.9776  
 FDE .1098 FRA 1.8528 FC3 -.3597 BSP 20431 SGB 6220.0 R23 .0021 R13 .9714 LSA 1878.9 MSA 358.3 SSA 12.8  
 BDE .8294 BRA 5.1481 BC3 2.2028 FSP -617 SGI 6208.1 SG2 384.4 THA 3.27 EL1 1814.4 EL2 339.9 ALF 7.94

Mid-Course Execution Accuracy: SGT 6198.0 SGR 522.3 SG3 177.3 ST 1797.6 SR 419.7 SS 501.2  
 RRT .6756 RRF .6604 RTF .9714 CRT .5761 CRS -.3927 CST -.9776  
 SGB 6220.0 R23 .0021 R13 .9714 LSA 1878.9 MSA 358.3 SSA 12.8  
 SGI 6208.1 SG2 384.4 THA 3.27 EL1 1814.4 EL2 339.9 ALF 7.94

LAUNCH DATE JAN 25 1969 FLIGHT TIME 212.00 ARRIVAL DATE AUG 25 1969

Heliocentric Conic: RL 147.28 LAL .00 LOL 124.85 VL 26.708 GAL 11.08 AZL 88.88 HCA 293.96 SMA 121.88 ECC .28057 INC 1.1232 V1 30.250  
 RP 107.98 LAP -1.03 LOP 58.81 VP 37.004 GAP 14.95 AZP 89.54 TAL 147.87 TAP 81.82 RCA 87.69 APO 156.08 V2 35.095  
 RC 181.455 GL 4.60 GP -10.04 ZAL 39.52 ZAP 169.34 ETS 293.18 ZAE 127.19 ETE 187.57 ZAC 157.12 ETC 170.50 CLP-176.40

Distance 602.646

Planetocentric Conic: C3 41.021 VHL 6.405 DLA 27.97 RAL 84.98 RAD 6568.6 VEL 12.743 PTH 2.32 VHP 9.946 DPA 10.11 RAP 63.06 ECC 1.6751  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 24 11 3587.91 -18.35 136.47 326.77 68.05 4 23 59 2987.9 -21.17 128.93  
 90.00 2 6 6 3841.58 -11.26 151.71 323.50 63.85 3 10 8 3241.6 -14.69 144.71  
 100.00 5 36 21 3161.83 -23.37 107.13 328.78 70.81 6 29 3 2561.8 -25.77 99.15  
 100.00 2 36 37 3742.89 -6.52 141.96 320.98 60.76 3 39 0 3142.9 -10.37 135.28  
 110.00 7 48 36 2747.92 -30.98 78.35 331.43 74.77 8 34 24 2147.9 -32.76 69.58  
 110.00 2 40 52 3729.57 .26 136.76 316.79 55.82 3 43 1 3129.6 -4.23 130.54

Differential Corrections: TOE .5830 TRA 5.5834 TC3-1.9392 BAU 1.0636 SGT 6198.8 SGR 509.8 SG3 169.4 ST 1776.5 SR 405.5 SS 499.4  
 RDE .4404 RRA .3169 RC3 -.0326 FAU .01332 RRT .6721 RRF .6574 RTF .9726 CRT .5120 CRS -.3376 CST -.9811  
 FDE .0678 FRA 1.9017 FC3 -.2811 BSP 20523 SGB 6219.7 R23 .0018 R13 .9726 LSA 1854.5 MSA 361.0 SSA 12.3  
 BDE .7306 BRA 5.5924 BC3 1.9395 FSP -591 SGI 6208.3 SG2 376.9 THA 3.18 EL1 1789.1 EL2 345.9 ALF 6.93

Mid-Course Execution Accuracy: SGT 6198.8 SGR 509.8 SG3 169.4 ST 1776.5 SR 405.5 SS 499.4  
 RRT .6721 RRF .6574 RTF .9726 CRT .5120 CRS -.3376 CST -.9811  
 SGB 6219.7 R23 .0018 R13 .9726 LSA 1854.5 MSA 361.0 SSA 12.3  
 SGI 6208.3 SG2 376.9 THA 3.18 EL1 1789.1 EL2 345.9 ALF 6.93

LAUNCH DATE JAN 25 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC DISTANCE 607.502  
 RL 147.28 LAL .00 LOL 124.85 VL 26.678 GAL 11.99 AZL 89.05 HCA 297.17 SMA 121.71 ECC .29223 INC .9479 V1 30.250  
 RP 107.94 LAP -.84 LOP 62.03 VP 36.994 GAP 15.74 AZP 89.57 TAL 146.69 TAP 83.87 RCA 86.14 APO 157.27 V2 35.108  
 RC 183.384 GL 3.65 GP -9.80 ZAL 37.99 ZAP 169.87 ETS 288.03 ZAE 127.02 ETE 187.38 ZAC 159.15 ETC 169.08 CLP-177.45

PLANETOCENTRIC CONIC  
 C3 46.089 VHL 6.789 DLA 27.05 RAL 86.65 RAD 6568.7 VEL 12.940 PTH 2.36 VHP 10.417 DPA 10.84 RAP 65.12 ECC 1.7585  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 5 56 3501.88 -20.45 131.03 331.44 69.98 5 4 18 2901.9 -23.00 123.28  
 90.00 1 37 41 3986.27 -6.81 160.00 325.27 62.45 2 44 7 3386.3 -10.44 153.21  
 100.00 6 2 8 3127.32 -24.12 104.84 332.81 71.79 6 54 15 2527.3 -26.38 96.77  
 100.00 2 24 10 3836.06 -3.40 147.11 323.40 60.28 3 28 6 3236.1 -7.33 140.53  
 110.00 8 5 53 2740.05 -31.12 77.78 335.16 75.08 8 51 33 2140.1 -32.85 68.99  
 110.00 2 36 54 3796.10 2.80 140.23 319.55 55.92 3 40 10 3196.1 -1.69 134.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4552 TRA 6.0587 TC3-1.6894 BAU 1.0411 SGT 6194.8 SGR 496.4 SG3 162.0 ST 1766.2 SR 390.9 SS 500.5  
 RDE .4492 RRA .3360 RC3 -.0271 FAU .01144 RRT .6693 RRF .6552 RTF .9739 CRT .4494 CRS -.2874 CST -.9845  
 FDE .0294 FRA 1.9539 FC3 -.2149 BSP 20593 SGB 6214.7 R23 .0014 R13 .9739 LSA 1842.0 MSA 359.7 SSA 11.9  
 BDE .6395 BRA 6.0680 BC3 1.6896 FSP -565 SG1 6203.8 SG2 368.3 THA 3.08 EL1 1775.2 EL2 347.5 ALF 5.91

LAUNCH DATE JAN 25 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC DISTANCE 612.177  
 RL 147.28 LAL .00 LOL 124.85 VL 26.649 GAL 12.98 AZL 89.24 HCA 300.39 SMA 121.53 ECC .30507 INC .7619 V1 30.250  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.985 GAP 16.59 AZP 89.61 TAL 145.58 TAP 85.97 RCA 84.45 APO 158.60 V2 35.120  
 RC 185.291 GL 2.74 GP -9.59 ZAL 36.56 ZAP 170.30 ETS 282.22 ZAE 126.83 ETE 187.21 ZAC 161.14 ETC 167.35 CLP-178.52

PLANETOCENTRIC CONIC  
 C3 52.037 VHL 7.214 DLA 26.18 RAL 88.19 RAD 6568.9 VEL 13.168 PTH 2.40 VHP 10.933 DPA 11.52 RAP 67.18 ECC 1.8564  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 34 24 3457.65 -21.46 128.17 335.53 71.07 5 32 1 2857.6 -23.84 120.32  
 90.00 1 21 31 4091.13 -3.47 165.90 327.56 61.88 2 29 42 3491.1 -7.20 159.21  
 100.00 6 23 52 3104.74 -24.59 103.33 336.66 72.45 7 15 37 2504.7 -26.76 95.20  
 100.00 2 14 44 3919.27 -.58 151.68 325.96 60.11 3 20 4 3319.3 -4.55 145.14  
 110.00 8 21 36 2736.36 -31.18 77.51 338.81 75.23 9 7 12 2136.4 -32.89 68.71  
 110.00 2 33 30 3860.41 5.25 143.60 322.33 56.17 3 37 50 3260.4 .77 137.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .3247 TRA 6.5700 TC3-1.4537 BAU 1.0114 SGT 6186.8 SGR 482.0 SG3 155.0 ST 1764.5 SR 375.9 SS 504.3  
 RDE .4582 RRA .3553 RC3 -.0217 FAU .00959 RRT .6667 RRF .6534 RTF .9755 CRT .3897 CRS -.2426 CST -.9877  
 FDE -.0058 FRA 2.0103 FC3 -.1595 BSP 20637 SGB 6205.5 R23 .0012 R13 .9755 LSA 1839.3 MSA 354.8 SSA 11.4  
 BDE .5616 BRA 6.5796 BC3 1.4538 FSP -540 SG1 6195.1 SG2 358.7 THA 2.98 EL1 1770.8 EL2 345.0 ALF 4.93

LAUNCH DATE JAN 25 1969

FLIGHT TIME 218.00

ARRIVAL DATE AUG 31 1969

HELIOCENTRIC CONIC DISTANCE 616.633  
 RL 147.28 LAL .00 LOL 124.85 VL 26.620 GAL 14.06 AZL 89.44 HCA 303.61 SMA 121.36 ECC .31927 INC .5632 V1 30.250  
 RP 107.87 LAP -.47 LOP 68.46 VP 36.975 GAP 17.53 AZP 89.69 TAL 144.53 TAP 88.13 RCA 82.61 APO 160.10 V2 35.132  
 RC 187.175 GL 1.89 GP -9.39 ZAL 35.25 ZAP 170.60 ETS 275.79 ZAE 126.60 ETE 187.04 ZAC 163.09 ETC 165.21 CLP-179.61

PLANETOCENTRIC CONIC  
 C3 59.050 VHL 7.684 DLA 25.34 RAL 89.61 RAD 6569.1 VEL 13.432 PTH 2.46 VHP 11.501 DPA 12.15 RAP 69.23 ECC 1.9718  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 57 21 3430.08 -22.05 126.37 339.37 71.78 5 54 31 2830.1 -24.34 118.45  
 90.00 1 9 51 4180.97 -.58 170.92 330.03 61.69 2 19 32 3581.0 -4.36 164.28  
 100.00 6 42 46 3090.21 -24.89 102.35 340.35 72.88 7 34 16 2490.2 -26.99 94.18  
 100.00 2 7 7 3996.07 2.02 155.89 328.58 60.17 3 13 43 3396.1 -1.96 149.37  
 110.00 8 35 54 2736.24 -31.18 77.50 342.39 75.23 9 21 30 2136.2 -32.90 68.70  
 110.00 2 30 29 3922.81 7.60 146.90 325.14 56.57 3 35 51 3322.8 3.15 140.64

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .1948 TRA 7.1250 TC3-1.2305 BAU .9715 SGT 6176.3 SGR 466.6 SG3 148.5 ST 1770.2 SR 360.7 SS 510.6  
 RDE .4676 RRA .3746 RC3 -.0165 FAU .00768 RRT .6647 RRF .6524 RTF .9772 CRT .3354 CRS -.2045 CST -.9905  
 FDE -.0372 FRA 2.0731 FC3 -.1127 BSP 20564 SGB 6193.9 R23 .0011 R13 .9772 LSA 1845.0 MSA 346.8 SSA 11.0  
 BDE .5065 BRA 7.1349 BC3 1.2306 FSP -514 SG1 6184.1 SG2 348.2 THA 2.88 EL1 1774.5 EL2 339.0 ALF 4.06

LAUNCH DATE JAN 25 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 2 1969

HELIOCENTRIC CONIC DISTANCE 620.821  
 RL 147.28 LAL .00 LOL 124.85 VL 26.591 GAL 15.24 AZL 89.65 HCA 306.83 SMA 121.19 ECC .33504 INC .3487 V1 30.250  
 RP 107.83 LAP -.28 LOP 71.68 VP 36.966 GAP 18.56 AZP 89.79 TAL 143.56 TAP 90.38 RCA 80.59 APO 161.79 V2 35.144  
 RC 189.037 GL 1.09 GP -9.20 ZAL 34.06 ZAP 170.77 ETS 268.83 ZAE 126.34 ETE 186.88 ZAC 164.98 ETC 162.53 CLP 179.26

PLANETOCENTRIC CONIC  
 C3 67.363 VHL 8.207 DLA 24.53 RAL 90.89 RAD 6569.3 VEL 13.737 PTH 2.51 VHP 12.129 DPA 12.74 RAP 71.28 ECC 2.1086  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 16 49 3412.52 -22.42 125.22 343.02 72.24 6 13 42 2812.5 -24.64 117.25  
 90.00 1 0 38 4262.11 2.04 175.44 332.58 61.75 2 11 40 3662.1 -1.75 168.82  
 100.00 6 59 26 3081.66 -25.06 101.77 343.92 73.14 7 50 48 2481.7 -27.13 93.58  
 100.00 2 0 42 4068.19 4.46 159.86 331.24 60.41 3 8 30 3468.2 .48 153.33  
 110.00 8 48 54 2739.17 -31.13 77.72 345.88 75.12 9 34 34 2139.2 -32.86 68.92  
 110.00 2 27 43 3983.44 9.86 150.14 327.94 57.10 3 34 7 3383.4 5.46 143.82

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .0560 TRA 7.7198 TC3-1.0265 BAU .9245 SGT 6159.0 SGR 449.6 SG3 142.4 ST 1778.3 SR 344.9 SS 518.7  
 RDE .4768 RRA .3931 RC3 -.0120 FAU .00586 RRT .6620 RRF .6507 RTF .9791 CRT .2835 CRS -.1686 CST -.9928  
 FDE -.0680 FRA 2.1403 FC3 -.0753 BSP 20613 SGB 6175.4 R23 .0009 R13 .9791 LSA 1854.0 MSA 336.3 SSA 10.5  
 BDE .4800 BRA 7.7298 BC3 1.0265 FSP -493 SG1 6166.2 SG2 536.6 THA 2.77 EL1 1781.1 EL2 330.2 ALF 3.26

LAUNCH DATE JAN 26 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 6 1969

HELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 23.702 GAL 1.09 AZL 86.78 HCA 68.52 SMA 107.01 ECC .37690 INC 3.2227 V1 30.247  
 RP 107.87 LAP 3.00 LOP 194.36 VP 34.933 GAP -22.14 AZP 88.82 TAL 178.20 TAP 246.73 RCA 66.68 APO 147.34 V2 35.129  
 RC 42.524 GL 11.43 GP 6.53 ZAL 87.86 ZAP 13.51 ETS 210.62 ZAE 173.20 ETE 326.69 ZAC 117.70 ETC 162.33 CLP 11.86

DISTANCE 164.817

PLANETOCENTRIC CONIC  
 C3 45.209 VHL 6.724 CLA 24.97 RAL 31.63 RAD 6568.7 VEL 12.906 PTH 2.35 VHP 13.757 DPA 13.68 RAP 22.62 ECC 1.7440  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 54 3340.67 -23.83 120.43 276.77 74.24 2 4 34 2740.7 -25.77 112.29  
 90.00 21 3 59 4137.79 -1.97 168.51 267.77 61.75 22 12 57 3537.8 -5.73 161.85  
 100.00 2 52 57 3005.22 -26.46 96.53 277.55 75.56 3 43 2 2405.2 -28.19 88.15  
 100.00 22 2 37 3948.48 .41 153.28 266.45 60.11 23 8 26 3348.5 -3.57 146.75  
 110.00 4 44 20 2656.70 -32.42 71.63 279.12 78.51 5 28 37 2056.7 -33.66 62.62  
 110.00 22 27 43 3869.76 5.60 144.09 263.22 56.22 23 32 13 3269.8 1.13 137.87

DIFFERENTIAL CORRECTIONS  
 TDE -.3531 TRA -.7849 TC3 .0679 BAU .0433 SGT 802.0 SGR 430.6 SG3 57.1 ST 373.5 SR 418.4 SS 289.2  
 RDE -.4896 RRA .1081 RC3 -.0230 FAU .02045 RRT .1381 RRF -.1488 RTF -.6788 CRT .7601 CRS .8776 CST .9761  
 FDE .2599 FRA .3532 FC3 -.3916 BSP 2262 SGB 910.3 R23 -.0187 R13 -.6808 LSA 598.8 MSA 198.6 SSA 14.9  
 BDE .6037 BRA .7923 BC3 .0717 FSP -129 SG1 805.1 S62 424.8 THA 5.88 EL1 526.7 EL2 192.8 ALF 49.25

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 8 1969

HELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 24.086 GAL .91 AZL 86.94 HCA 71.74 SMA 108.62 ECC .35645 INC 3.0586 V1 30.247  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.183 GAP -20.88 AZP 89.04 TAL 178.35 TAP 250.09 RCA 69.90 APO 147.33 V2 35.117  
 RC 42.392 GL 11.71 GP 6.85 ZAL 88.32 ZAP 12.22 ETS 215.96 ZAE 171.02 ETE 339.32 ZAC 119.00 ETC 161.78 CLP 10.14

DISTANCE 171.438

PLANETOCENTRIC CONIC  
 C3 40.097 VHL 6.332 CLA 25.07 RAL 31.05 RAD 6568.5 VEL 12.707 PTH 2.31 VHP 13.053 DPA 14.58 RAP 23.90 ECC 1.6599  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 42 3316.81 -24.27 118.81 274.00 74.94 1 59 59 2716.8 -26.10 110.62  
 90.00 21 3 31 4101.18 -3.15 166.47 265.45 61.84 22 11 52 3501.2 -6.89 159.78  
 100.00 2 49 7 2980.17 -26.87 94.78 274.74 76.39 3 38 47 2380.2 -28.48 86.35  
 100.00 22 1 47 3913.05 -.79 151.34 264.15 60.12 23 7 0 3313.0 -4.76 144.80  
 110.00 4 40 59 2630.17 -32.76 69.64 276.18 79.64 5 24 49 2030.2 -33.84 60.57  
 110.00 22 26 24 3835.82 4.31 142.31 260.97 56.06 23 30 20 3235.8 -.17 136.10

DIFFERENTIAL CORRECTIONS  
 TDE -.3573 TRA -.7644 TC3 .1012 BAU .0553 SGT 839.1 SGR 434.2 SG3 63.2 ST 396.2 SR 423.0 SS 303.2  
 RDE -.4663 RRA .0994 RC3 -.0198 FAU .02152 RRT .1575 RRF -.1688 RTF -.6974 CRT .7731 CRS .8843 CST .9774  
 FDE .2718 FRA .3576 FC3 -.4646 BSP 2376 SGB 944.8 R23 -.0208 R13 -.6996 LSA 622.8 MSA 199.5 SSA 15.3  
 BDE .5875 BRA .7708 BC3 .1031 FSP -145 SG1 842.8 S62 426.9 THA 6.28 EL1 545.9 EL2 194.7 ALF 47.42

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 24.439 GAL .73 AZL 87.10 HCA 74.96 SMA 110.16 ECC .33734 INC 2.9007 V1 30.247  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.413 GAP -19.68 AZP 89.25 TAL 178.57 TAP 253.53 RCA 73.00 APO 147.32 V2 35.105  
 RC 42.442 GL 11.95 GP 7.21 ZAL 88.92 ZAP 11.06 ETS 222.63 ZAE 168.60 ETE 347.16 ZAC 120.25 ETC 161.18 CLP 8.41

DISTANCE 178.088

PLANETOCENTRIC CONIC  
 C3 35.653 VHL 5.971 CLA 25.09 RAL 30.34 RAD 6568.4 VEL 12.531 PTH 2.27 VHP 12.380 DPA 15.50 RAP 25.16 ECC 1.5868  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 1 30 3288.37 -24.76 116.87 271.14 75.80 1 56 18 2688.4 -26.47 108.62  
 90.00 21 1 2 4070.26 -4.14 164.73 262.97 61.96 22 8 52 3470.3 -7.86 158.03  
 100.00 2 45 59 2951.50 -27.32 92.76 271.82 77.37 3 35 11 2351.5 -28.78 84.27  
 100.00 21 59 13 3882.36 -1.83 149.65 261.69 60.16 23 3 56 3282.4 -5.79 143.10  
 110.00 4 37 57 2601.20 -33.09 67.44 273.10 80.90 5 21 18 2001.2 -33.99 58.32  
 110.00 22 23 45 3805.42 3.16 140.72 258.58 55.95 23 27 10 3205.4 -1.33 134.51

DIFFERENTIAL CORRECTIONS  
 TDE -.3612 TRA -.7436 TC3 .1418 BAU .0679 SGT 877.2 SGR 437.5 SG3 69.9 ST 419.6 SR 427.3 SS 317.5  
 RDE -.4443 RRA .0912 RC3 -.0147 FAU .02269 RRT .1788 RRF -.1917 RTF -.7156 CRT .7860 CRS .8912 CST .9786  
 FDE .2845 FRA .3614 FC3 -.5509 BSP 2487 SGB 980.3 R23 -.0240 R13 -.7181 LSA 647.6 MSA 199.6 SSA 15.8  
 BDE .5726 BRA .7491 BC3 .1425 FSP -164 SG1 881.8 S62 428.2 THA 6.68 EL1 565.9 EL2 195.9 ALF 45.67

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 24.764 GAL .54 AZL 87.25 HCA 78.17 SMA 111.64 ECC .31950 INC 2.7475 V1 30.247  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.626 GAP -18.54 AZP 89.44 TAL 178.86 TAP 257.03 RCA 75.97 APO 147.31 V2 35.092  
 RC 42.671 GL 12.15 GP 7.60 ZAL 89.66 ZAP 10.10 ETS 230.91 ZAE 166.10 ETE 352.47 ZAC 121.47 ETC 160.52 CLP 6.67

DISTANCE 184.761

PLANETOCENTRIC CONIC  
 C3 31.790 VHL 5.638 CLA 25.02 RAL 29.50 RAD 6568.3 VEL 12.376 PTH 2.23 VHP 11.738 DPA 16.44 RAP 26.39 ECC 1.5232  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 59 27 3255.01 -25.29 114.57 268.19 76.83 1 53 42 2655.0 -26.86 106.26  
 90.00 20 56 24 4045.78 -4.92 163.36 260.33 62.08 22 3 50 3445.8 -8.62 156.63  
 100.00 2 43 41 2918.97 -27.78 90.46 268.80 78.50 3 32 20 2319.0 -29.09 81.90  
 100.00 21 54 51 3857.05 -2.69 148.26 259.10 60.22 22 59 8 3257.1 -6.63 141.70  
 110.00 4 35 19 2569.71 -33.41 65.04 269.90 82.29 5 18 9 1969.7 -34.11 55.87  
 110.00 22 19 43 3779.07 2.15 139.34 256.08 55.88 23 22 42 3179.1 -2.34 133.14

DIFFERENTIAL CORRECTIONS  
 TDE -.3616 TRA -.7181 TC3 .1941 BAU .0826 SGT 911.8 SGR 440.4 SG3 77.4 ST 439.8 SR 431.1 SS 330.4  
 RDE -.4234 RRA .0839 RC3 -.0069 FAU .02408 RRT .2008 RRF -.2168 RTF -.7346 CRT .7978 CRS .8981 CST .9794  
 FDE .2965 FRA .3629 FC3 -.6557 BSP 2675 SGB 1012.6 R23 -.0279 R13 -.7375 LSA 669.9 MSA 198.8 SSA 16.3  
 BDE .5568 BRA .7229 BC3 .1942 FSP -185 SG1 917.3 S62 428.9 THA 7.10 EL1 583.9 EL2 195.8 ALF 44.28

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 191.454

RL 147.30 LAL -.00 LOL 125.87 VL 25.062 GAL .34 AZL 87.40 HCA R1.39 SMA 113.06 ECC .30292 INC 2.5981 V1 30.247  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.821 GAP -17.45 AZP 89.61 TAL 179.21 TAP 260.60 RCA 78.81 APO 147.30 V2 35.080  
 RC 43.078 GL 12.30 GP 8.04 ZAL 90.52 ZAP 9.41 ETS 240.89 ZAE 163.59 ETE 356.37 ZAC 122.64 ETC 159.79 CLP 4.91

PLANETOCENTRIC CONIC

C3 28.435 VHL 5.332 DLA 24.85 RAL 28.55 RAD 6568.1 VEL 12.240 PTH 2.20 VHP 11.124 DPA 17.41 RAP 27.60 ECC 1.4680  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 58 42 3216.64 -25.86 111.91 265.17 78.05 1 52 18 2616.6 -27.25 103.52  
 90.00 20 49 35 4028.22 -5.48 162.37 257.56 62.18 21 56 43 3428.2 -9.16 155.63  
 100.00 2 42 20 2882.49 -28.25 87.85 265.70 79.79 3 30 23 2282.5 -29.37 79.22  
 100.00 21 48 38 3837.60 -3.35 147.19 256.39 60.28 22 52 35 3237.6 -7.28 140.61  
 110.00 4 33 12 2535.66 -33.69 62.42 266.61 83.82 5 15 27 1935.7 -34.17 53.21  
 110.00 22 14 16 3757.20 1.32 138.20 253.48 55.84 23 16 53 3157.2 -3.18 131.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3645 TRA -.6955 TC3 .2513 BAU .0955 SGT 950.5 SGR 443.4 SG3 85.7 ST 463.1 SR 434.8 SS 344.6  
 RDE -.4039 RRA .0768 RC3 .0035 FAU .02550 RRT .2280 RRF -.2462 RTF -.7522 CRT .8105 CRS .9048 CST .9806  
 FDE .3101 FRA .3661 FC3 -.7762 BSP 2820 SGB 1048.8 R23 -.0316 R13 -.7555 LSA 695.0 MSA 197.4 SSA 16.8  
 BDE .5440 BRA .6997 BC3 .2513 FSP -208 SG1 957.2 SG2 428.7 THA 7.61 EL1 604.6 EL2 195.1 ALF 42.77

LAUNCH DATE JAN 26 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 198.161

RL 147.30 LAL -.00 LOL 125.87 VL 25.337 GAL .15 AZL 87.55 HCA 84.60 SMA 114.40 ECC .28753 INC 2.4512 V1 30.247  
 RP 108.07 LAP 2.44 LOP 210.46 VP 36.001 GAP -16.41 AZP 89.77 TAL 179.64 TAP 264.23 RCA 81.51 APO 147.30 V2 35.067  
 RC 43.658 GL 12.39 GP 8.52 ZAL 91.51 ZAP 9.07 ETS 252.30 ZAE 161.14 ETE 359.43 ZAC 123.75 ETC 158.99 CLP 3.12

PLANETOCENTRIC CONIC

C3 25.522 VHL 5.052 DLA 24.58 RAL 27.50 RAD 6568.0 VEL 12.120 PTH 2.17 VHP 10.538 DPA 18.41 RAP 28.77 ECC 1.4200  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 59 16 3173.34 -26.44 108.87 262.10 79.47 1 52 10 2573.3 -27.62 100.40  
 90.00 20 40 38 4017.84 -5.81 161.79 254.69 62.24 21 47 35 3417.8 -9.48 155.03  
 100.00 2 42 1 2842.05 -28.70 84.93 262.53 81.27 3 29 24 2242.1 -29.61 76.24  
 100.00 21 40 33 3824.36 -3.79 146.46 253.58 60.33 22 44 18 3224.4 -7.72 139.87  
 110.00 4 31 41 2498.99 -33.92 59.58 263.24 85.48 5 13 20 1899.0 -34.17 50.35  
 110.00 22 7 24 3740.18 .66 137.31 250.81 55.82 23 9 44 3140.2 -3.82 131.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3715 TRA -.6790 TC3 .3156 BAU .1079 SGT 998.1 SGR 446.6 SG3 95.3 ST 492.1 SR 438.4 SS 359.2  
 RDE -.3858 RRA .0700 RC3 .0183 FAU .02720 RRT .2609 RRF -.2802 RTF -.7656 CRT .8239 CRS .9112 CST .9820  
 FDE .3248 FRA .3700 FC3 -.9226 BSP 2815 SGB 1093.5 R23 -.0368 R13 -.7692 LSA 724.4 MSA 195.7 SSA 17.5  
 BDE .5356 BRA .6826 BC3 .3161 FSP -228 SG1 1006.4 SG2 427.6 THA 8.14 EL1 629.8 EL2 194.1 ALF 41.00

LAUNCH DATE JAN 26 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 204.878

RL 147.30 LAL -.00 LOL 125.87 VL 25.588 GAL -.05 AZL 87.69 HCA 87.81 SMA 115.68 ECC .27330 INC 2.3060 V1 30.247  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.166 GAP -15.42 AZP 89.91 TAL 180.13 TAP 267.93 RCA 84.07 APO 147.30 V2 35.053  
 RC 44.405 GL 12.40 GP 9.05 ZAL 92.62 ZAP 9.14 ETS 264.33 ZAE 158.78 ETE 359.19 ZAC 124.79 ETC 158.12 CLP 1.30

PLANETOCENTRIC CONIC

C3 22.995 VHL 4.795 DLA 24.18 RAL 26.36 RAD 6567.9 VEL 12.016 PTH 2.14 VHP 9.979 DPA 19.43 RAP 29.89 ECC 1.3784  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 3125.35 -26.99 105.46 258.97 81.09 1 53 16 2525.3 -27.94 96.93  
 90.00 20 29 37 4014.69 -5.91 161.61 251.74 62.26 21 36 32 3414.7 -9.58 154.85  
 100.00 2 42 48 2797.72 -29.12 81.70 259.31 82.92 3 29 26 2197.7 -29.79 72.96  
 100.00 21 30 41 3817.54 -4.02 146.09 250.70 60.35 22 34 19 3217.5 -7.94 139.49  
 110.00 4 30 51 2459.68 -34.09 56.52 259.81 87.28 5 11 51 1859.7 -34.09 47.28  
 110.00 21 59 7 3728.36 .21 136.69 248.07 55.82 23 1 16 3128.4 -4.27 130.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3637 TRA -.6321 TC3 .3942 BAU .1217 SGT 1008.5 SGR 449.1 SG3 104.4 ST 500.7 SR 439.6 SS 356.9  
 RDE -.3673 RRA .0677 RC3 .0377 FAU .02910 RRT .2892 RRF -.3116 RTF -.7717 CRT .8365 CRS .9206 CST .9816  
 FDE .3263 FRA .3446 FC3 -1.0956 BSP 3280 SGB 1104.0 R23 -.0418 R13 -.7761 LSA 731.4 MSA 189.8 SSA 18.4  
 BDE .5169 BRA .6357 BC3 .3960 FSP -282 SG1 1018.7 SG2 425.7 THA 8.91 EL1 639.0 EL2 188.8 ALF 40.57

LAUNCH DATE JAN 26 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 211.600

RL 147.30 LAL -.00 LOL 125.87 VL 25.819 GAL -.24 AZL 87.84 HCA 91.01 SMA 116.89 ECC .26016 INC 2.1615 V1 30.247  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.317 GAP -14.47 AZP 90.04 TAL 180.68 TAP 271.69 RCA 86.48 APO 147.30 V2 35.040  
 RC 45.309 GL 12.33 GP 9.65 ZAL 93.84 ZAP 9.66 ETS 275.90 ZAE 156.56 ETE 359.42 ZAC 125.76 ETC 157.18 CLP -.55

PLANETOCENTRIC CONIC

C3 20.804 VHL 4.561 DLA 23.67 RAL 25.15 RAD 6567.8 VEL 11.924 PTH 2.12 VHP 9.446 DPA 20.50 RAP 30.95 ECC 1.3424  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 22 3073.14 -27.48 101.72 255.81 82.90 1 55 35 2473.1 -28.18 93.13  
 90.00 20 16 46 4018.51 -5.79 161.82 248.75 62.23 21 23 44 3418.5 -9.46 155.07  
 100.00 2 44 40 2749.74 -29.47 78.17 256.05 84.74 3 30 30 2149.7 -29.89 69.39  
 100.00 21 19 9 3817.14 -4.04 146.07 247.79 60.36 22 22 46 3217.1 -7.95 139.47  
 110.00 4 30 47 2417.76 -34.18 53.25 256.35 89.22 5 11 4 1817.8 -33.91 44.02  
 110.00 21 49 31 3721.88 -.04 136.36 245.29 55.82 22 51 33 3121.9 -4.52 130.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3610 TRA -.6193 TC3 .4934 BAU .1384 SGT 1062.8 SGR 453.1 SG3 117.5 ST 520.4 SR 442.6 SS 371.1  
 RDE -.3518 RRA .0596 RC3 .0638 FAU .03137 RRT .3263 RRF -.3534 RTF -.7978 CRT .8431 CRS .9219 CST .9832  
 FDE .3407 FRA .3631 FC3 -1.3053 BSP 3372 SGB 1155.4 R23 -.0464 R13 -.8025 LSA 753.7 MSA 189.5 SSA 18.9  
 BDE .5041 BRA .6221 BC3 .4975 FSP -305 SG1 1075.0 SG2 423.5 THA 9.39 EL1 656.6 EL2 188.6 ALF 39.54

LAUNCH DATE JAN 26 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 218.324

RL 147.30 LAL -.00 LOL 125.87 VL 26.030 GAL -.42 AZL 87.98 HCA 94.21 SMA 118.03 ECC .24809 INC 2.0169 V1 30.247  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.454 GAP -13.56 AZP 90.15 TAL 181.29 TAP 275.50 RCA 88.75 APO 147.31 V2 35.027  
 RC 46.364 GL 12.16 GP 10.31 ZAL 95.16 ZAP 10.59 ETS 286.12 ZAE 154.48 ETE 6.23 ZAC 126.63 ETC 156.16 CLP -2.45

PLANETOCENTRIC CONIC

C3 18.908 VHL 4.348 DLA 23.03 RAL 23.89 RAD 6567.8 VEL 11.844 PTH 2.10 VHP 8.938 DPA 21.61 RAP 31.95 ECC 1.3112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 8 44 3017.26 -27.89 97.68 252.63 84.88 1 59 1 2417.3 -28.31 89.04  
 90.00 20 2 19 4028.95 -5.46 162.41 245.76 62.17 21 9 28 3429.0 -9.14 155.67  
 100.00 2 47 37 2698.43 -29.73 74.38 252.79 86.72 3 32 36 2098.4 -29.87 65.58  
 100.00 21 6 7 3823.02 -3.84 146.39 244.87 60.33 22 9 50 3223.0 -7.76 139.80  
 110.00 4 31 31 2373.35 -34.16 49.78 252.88 91.27 5 11 5 1773.4 -33.61 40.58  
 110.00 21 38 42 3720.86 -.07 136.30 242.52 55.82 22 40 43 3120.9 -4.56 130.09

DIFFERENTIAL CORRECTIONS

TDE -.3606 TRA -.5973 TC3 .5833 BAU .1494  
 RDE -.3371 RRA .0546 RC3 .0949 FAU .03356  
 FDE .3518 FRA .3617 FC3-1.5365 BSP 3431  
 BDE .4936 BRA .5998 BC3 .5910 FSP -341

MID-COURSE EXECUTION ACCURACY

SGT 1102.0 SGR 458.5 SG3 130.1  
 RRT .3683 RRF -.3993 RTF -.8079  
 SGB 1193.6 R23 -.0548 R13 -.8134  
 SGI 1117.0 SG2 420.5 THA 10.17

ORBIT DETERMINATION ACCURACY

ST 540.2 SR 444.8 SS 378.8  
 CRT .8534 CRS .9274 CST .9839  
 LSA 773.3 MSA 186.2 SSA 19.8  
 EL1 674.7 EL2 185.6 ALF 38.55

LAUNCH DATE JAN 26 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 225.047

RL 147.30 LAL -.00 LOL 125.87 VL 26.223 GAL -.60 AZL 88.13 HCA 97.42 SMA 119.10 ECC .23703 INC 1.8712 V1 30.247  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.579 GAP -12.69 AZP 90.24 TAL 181.94 TAP 279.36 RCA 90.87 APO 147.32 V2 35.013  
 RC 47.558 GL 11.89 GP 11.04 ZAL 96.56 ZAP 11.88 ETS 294.60 ZAE 152.57 ETE 8.16 ZAC 127.39 ETC 155.06 CLP -4.40

PLANETOCENTRIC CONIC

C3 17.268 VHL 4.155 DLA 22.26 RAL 22.59 RAD 6567.7 VEL 11.775 PTH 2.08 VHP 8.454 DPA 22.76 RAP 32.88 ECC 1.2842  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 14 12 2958.22 -28.17 93.39 249.46 87.02 2 3 30 2358.2 -28.29 84.72  
 90.00 19 46 32 4045.64 -4.93 163.35 242.81 62.08 20 53 58 3445.6 -8.62 156.62  
 100.00 2 51 37 2644.10 -29.87 70.35 249.53 88.84 3 35 41 2044.1 -29.71 61.55  
 100.00 20 51 48 3834.99 -3.44 147.05 241.99 60.29 21 55 43 3235.0 -7.37 140.47  
 110.00 4 33 8 2326.55 -34.03 46.13 249.43 93.42 5 11 54 1726.5 -33.18 37.00  
 110.00 21 26 47 3725.31 .10 136.53 239.79 55.82 22 28 52 3125.3 -4.39 130.32

DIFFERENTIAL CORRECTIONS

TDE -.3560 TRA -.5739 TC3 .6872 BAU .1617  
 RDE -.3233 RRA .0498 RC3 .1349 FAU .03614  
 FDE .3598 FRA .3601 FC3-1.8118 BSP 3545  
 BDE .4809 BRA .5760 BC3 .7003 FSP -381

MID-COURSE EXECUTION ACCURACY

SGT 1139.3 SGR 465.6 SG3 144.6  
 RRT .4135 RRF -.4492 RTF -.8192  
 SGB 1230.8 R23 -.0636 R13 -.8257  
 SGI 1158.0 SG2 417.1 THA 11.04

ORBIT DETERMINATION ACCURACY

ST 554.1 SR 446.3 SS 382.4  
 CRT .8619 CRS .9317 CST .9845  
 LSA 786.5 MSA 182.8 SSA 20.7  
 EL1 687.8 EL2 182.4 ALF 37.90

LAUNCH DATE JAN 26 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 231.763

RL 147.30 LAL -.00 LOL 125.87 VL 26.399 GAL -.78 AZL 88.28 HCA 100.61 SMA 120.09 ECC .22691 INC 1.7234 V1 30.247  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.693 GAP -11.86 AZP 90.32 TAL 182.65 TAP 283.26 RCA 92.84 APO 147.34 V2 35.000  
 RC 48.883 GL 11.50 GP 11.87 ZAL 98.03 ZAP 13.46 ETS 301.41 ZAE 150.84 ETE 10.05 ZAC 128.03 ETC 153.89 CLP -6.41

PLANETOCENTRIC CONIC

C3 15.851 VHL 3.981 DLA 21.35 RAL 21.29 RAD 6567.6 VEL 11.715 PTH 2.06 VHP 7.995 DPA 23.97 RAP 33.71 ECC 1.2609  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 20 42 2896.49 -28.31 88.88 246.32 89.28 2 8 58 2296.5 -28.11 80.22  
 90.00 19 29 40 4068.15 -4.21 164.62 239.94 61.97 20 37 28 3468.1 -7.92 157.91  
 100.00 2 56 39 2587.10 -29.88 66.11 246.32 91.07 3 39 46 1987.1 -29.41 57.34  
 100.00 20 36 24 3852.77 -2.83 148.03 239.18 60.23 21 40 37 3252.8 -6.78 141.46  
 110.00 4 35 37 2277.47 -33.77 42.33 246.05 95.66 5 13 34 1677.5 -32.62 33.28  
 110.00 21 13 55 3735.17 .47 137.05 237.12 55.82 22 16 10 3135.2 -4.01 130.84

DIFFERENTIAL CORRECTIONS

TDE -.3471 TRA -.5469 TC3 .8066 BAU .1754  
 RDE -.3101 RRA .0457 RC3 .1854 FAU .03914  
 FDE .3633 FRA .3555 FC3-2.1378 BSP 3760  
 BDE .4654 BRA .5488 BC3 .8276 FSP -434

MID-COURSE EXECUTION ACCURACY

SGT 1173.1 SGR 475.3 SG3 161.0  
 RRT .4627 RRF -.5033 RTF -.8319  
 SGB 1265.7 R23 -.0718 R13 -.8395  
 SGI 1196.4 SG2 413.2 THA 12.08

ORBIT DETERMINATION ACCURACY

ST 560.5 SR 446.8 SS 380.3  
 CRT .8690 CRS .9353 CST .9849  
 LSA 791.2 MSA 178.8 SSA 21.8  
 EL1 694.2 EL2 178.5 ALF 37.63

LAUNCH DATE JAN 26 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 238.472

RL 147.30 LAL -.00 LOL 125.87 VL 26.559 GAL -.94 AZL 88.43 HCA 103.81 SMA 121.02 ECC .21771 INC 1.5727 V1 30.247  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.796 GAP -11.06 AZP 90.38 TAL 183.39 TAP 287.20 RCA 94.68 APO 147.37 V2 34.987  
 RC 50.327 GL 10.99 GP 12.79 ZAL 99.55 ZAP 15.31 ETS 306.80 ZAE 149.29 ETE 11.97 ZAC 128.52 ETC 152.64 CLP -8.49

PLANETOCENTRIC CONIC

C3 14.628 VHL 3.825 DLA 20.30 RAL 20.01 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 7.560 DPA 25.24 RAP 34.44 ECC 1.2407  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 28 9 2832.54 -28.27 84.20 243.24 91.62 2 15 22 2232.5 -27.75 75.57  
 90.00 19 11 59 4096.06 -3.31 166.18 237.19 61.86 20 20 15 3496.1 -7.05 159.49  
 100.00 3 2 40 2527.79 -29.72 61.71 243.17 93.38 3 44 48 1927.8 -28.93 52.99  
 100.00 20 20 9 3876.04 -2.05 149.31 236.49 60.17 21 24 45 3276.0 -6.00 142.75  
 110.00 4 39 1 2226.30 -33.35 38.39 242.75 97.96 5 16 8 1626.3 -31.89 29.46  
 110.00 21 0 17 3750.29 1.05 137.84 234.55 55.83 22 2 47 3150.3 -3.44 131.63

DIFFERENTIAL CORRECTIONS

TDE -.3378 TRA -.5229 TC3 .9242 BAU .1871  
 RDE -.2978 RRA .0417 RC3 .2463 FAU .04236  
 FDE .3644 FRA .3512 FC3-2.5072 BSP 3893  
 BDE .4503 BRA .5245 BC3 .9565 FSP -488

MID-COURSE EXECUTION ACCURACY

SGT 1205.5 SGR 488.8 SG3 179.0  
 RRT .5147 RRF -.5606 RTF -.8412  
 SGB 1300.8 R23 -.0828 R13 -.8502  
 SGI 1234.8 SG2 409.1 THA 13.27

ORBIT DETERMINATION ACCURACY

ST 565.0 SR 446.6 SS 375.0  
 CRT .8752 CRS .9380 CST .9852  
 LSA 792.5 MSA 175.0 SSA 23.1  
 EL1 698.7 EL2 174.7 ALF 37.41

LAUNCH DATE JAN 26 1969

FLIGHT TIME 94.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 245.170

RL 147.30 LAL -.00 LOL 125.87 VL 26.704 GAL -1.10 AZL 88.58 HCA 107.00 SMA 121.88 ECC .20935 INC 1.4178 V1 30.247  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.889 GAP -10.29 AZP 90.41 TAL 184.15 TAP 291.16 RCA 96.37 APO 147.40 V2 34.974  
 RC 51.881 GL 10.33 GP 13.83 ZAL 101.11 ZAP 17.38 ETS 311.06 ZAE 147.92 ETE 13.96 ZAC 128.86 ETC 151.32 CLP -10.65

PLANETOCENTRIC CONIC

C3 13.575 VHL 3.684 DLA 19.10 RAL 18.77 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 7.148 DPA 26.58 RAP 35.04 ECC 1.2234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 36 32 2766.67 -28.05 79.40 240.27 94.02 2 22 39 2166.7 -27.20 70.83  
 90.00 18 53 42 4129.02 -2.25 168.02 234.59 61.77 20 2 31 3529.0 -6.01 161.36  
 100.00 3 9 39 2466.41 -29.39 57.18 240.14 95.74 3 50 45 1866.4 -28.28 48.55  
 100.00 20 3 17 3904.50 -1.08 150.87 233.94 60.13 21 8 21 3304.5 -5.05 144.33  
 110.00 4 43 23 2173.17 -32.78 34.35 239.58 100.28 5 19 36 1573.2 -31.01 25.57  
 110.00 20 46 2 3770.51 1.82 138.89 232.12 55.86 21 48 53 3170.5 -2.67 132.69

DIFFERENTIAL CORRECTIONS

TDE -.3253 TRA -.4992 TC3 1.0479 BAU .1989  
 RDE -.2857 RRA .0379 RC3 .3211 FAU .04601  
 FDE .3599 FRA .3464 FC3-2.9346 BSP 4039  
 BDE .4330 BRA .5006 BC3 1.0960 FSP -551

MID-COURSE EXECUTION ACCURACY

SGT 1235.7 SGR 507.3 SG3 199.2  
 RRT .5684 RRF -.6198 RTF -.8500  
 SGB 1335.8 R23 -.0951 R13 -.8608  
 SG1 1272.9 SG2 405.2 THA 14.65

ORBIT DETERMINATION ACCURACY

ST 563.2 SR 444.8 SS 363.6  
 CRT .8796 CRS .9391 CST .9854  
 LSA 785.7 MSA 171.3 SSA 24.5  
 EL1 697.0 EL2 171.0 ALF 37.42

LAUNCH DATE JAN 26 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 251.854

RL 147.30 LAL -.00 LOL 125.87 VL 26.836 GAL -1.24 AZL 88.74 HCA 110.19 SMA 122.68 ECC .20180 INC 1.2577 V1 30.247  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.972 GAP -9.55 AZP 90.43 TAL 184.93 TAP 295.13 RCA 97.92 APO 147.44 V2 34.961  
 RC 53.536 GL 9.52 GP 14.99 ZAL 102.68 ZAP 19.68 ETS 314.43 ZAE 146.73 ETE 16.07 ZAC 129.01 ETC 149.94 CLP -12.90

PLANETOCENTRIC CONIC

C3 12.669 VHL 3.559 DLA 17.77 RAL 17.60 RAD 6567.5 VEL 11.578 PTH 2.02 VHP 6.760 DPA 28.00 RAP 35.50 ECC 1.2085  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 50 2699.12 -27.63 74.50 237.42 96.44 2 30 50 2099.1 -26.45 66.03  
 90.00 18 35 3 4166.73 -1.04 170.13 232.17 61.70 19 44 29 3566.7 -4.81 163.48  
 100.00 3 17 36 2403.20 -28.87 52.55 237.24 98.12 3 57 40 1803.2 -27.44 44.04  
 100.00 19 45 58 3937.89 .05 152.70 231.57 60.11 20 51 36 3337.9 -3.93 146.17  
 110.00 4 48 42 2118.20 -32.04 30.23 236.57 102.61 5 24 0 1518.2 -29.97 21.63  
 110.00 20 31 22 3795.66 2.78 140.21 229.86 55.92 21 34 37 3195.7 -1.71 134.00

DIFFERENTIAL CORRECTIONS

TDE -.3097 TRA -.4765 TC3 1.1698 BAU .2100  
 RDE -.2737 RRA .0340 RC3 .4111 FAU .05003  
 FDE .3484 FRA .3420 FC3-3.4186 BSP 4157  
 BDE .4133 BRA .4777 BC3 1.2399 FSP -619

MID-COURSE EXECUTION ACCURACY

SGT 1261.2 SGR 532.1 SG3 221.5  
 RRT .6215 RRF -.6790 RTF -.8573  
 SGB 1368.9 R23 -.1093 R13 -.8706  
 SG1 1308.6 SG2 401.8 THA 16.27

ORBIT DETERMINATION ACCURACY

ST 554.6 SR 441.1 SS 345.5  
 CRT .8820 CRS .9381 CST .9856  
 LSA 769.8 MSA 167.9 SSA 26.3  
 EL1 688.5 EL2 167.4 ALF 37.66

LAUNCH DATE JAN 26 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 258.522

RL 147.30 LAL -.00 LOL 125.87 VL 26.956 GAL -1.38 AZL 88.91 HCA 113.38 SMA 123.41 ECC .19500 INC 1.0910 V1 30.247  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.047 GAP -8.85 AZP 90.43 TAL 185.72 TAP 299.10 RCA 99.35 APO 147.48 V2 34.948  
 RC 55.282 GL 8.56 GP 16.30 ZAL 104.24 ZAP 22.18 ETS 317.13 ZAE 145.69 ETE 18.36 ZAC 128.96 ETC 148.51 CLP -15.25

PLANETOCENTRIC CONIC

C3 11.893 VHL 3.449 DLA 16.29 RAL 16.52 RAD 6567.5 VEL 11.545 PTH 2.01 VHP 6.396 DPA 29.52 RAP 35.78 ECC 1.1957  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 56 5 2630.02 -27.01 69.54 234.74 98.85 2 39 55 2030.0 -25.51 61.19  
 90.00 18 16 10 4209.00 .33 172.48 229.97 61.68 19 26 19 3609.0 -3.46 165.85  
 100.00 3 26 34 2338.26 -28.15 47.86 234.52 100.50 4 5 32 1738.3 -26.41 39.49  
 100.00 19 28 23 3976.00 1.34 154.79 229.41 60.13 20 34 39 3376.0 -2.64 148.27  
 110.00 4 55 2 2061.46 -31.12 26.07 233.75 104.92 5 29 23 1461.5 -28.76 17.66  
 110.00 20 16 24 3825.56 3.92 141.77 227.80 56.02 21 20 9 3225.6 -1.56 135.56

DIFFERENTIAL CORRECTIONS

TDE -.2927 TRA -.4552 TC3 1.2870 BAU .2206  
 RDE -.2618 RRA .0301 RC3 .5184 FAU .05441  
 FDE .3309 FRA .3385 FC3-3.9607 BSP 4281  
 BDE .3927 BRA .4561 BC3 1.3875 FSP -696

MID-COURSE EXECUTION ACCURACY

SGT 1282.7 SGR 565.4 SG3 246.0  
 RRT .6728 RRF -.7362 RTF -.8635  
 SGB 1401.7 R23 -.1250 R13 -.8798  
 SG1 1343.7 SG2 399.3 THA 18.18

ORBIT DETERMINATION ACCURACY

ST 541.4 SR 435.3 SS 322.1  
 CRT .8830 CRS .9348 CST .9857  
 LSA 747.4 MSA 164.5 SSA 28.3  
 EL1 675.1 EL2 163.8 ALF 38.01

LAUNCH DATE JAN 26 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 265.173

RL 147.30 LAL -.00 LOL 125.87 VL 27.063 GAL -1.51 AZL 89.08 HCA 116.57 SMA 124.08 ECC .18889 INC .9162 V1 30.247  
 RP 108.47 LAP .82 LOP 242.44 VP 37.113 GAP -8.17 AZP 90.41 TAL 186.50 TAP 303.07 RCA 100.64 APO 147.52 V2 34.936  
 RC 57.109 GL 7.42 GP 17.77 ZAL 105.77 ZAP 24.89 ETS 319.31 ZAE 144.79 ETE 20.88 ZAC 128.67 ETC 147.06 CLP -17.72

PLANETOCENTRIC CONIC

C3 11.229 VHL 3.351 DLA 14.67 RAL 15.55 RAD 6567.4 VEL 11.516 PTH 2.01 VHP 6.056 DPA 31.15 RAP 35.86 ECC 1.1848  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 20 2559.37 -26.17 64.54 232.26 101.22 2 50 0 1959.4 -24.36 56.34  
 90.00 17 57 12 4255.72 1.84 175.09 228.02 61.74 19 8 7 3655.7 -1.96 168.46  
 100.00 3 36 34 2271.61 -27.23 43.12 232.01 102.83 4 14 26 1671.6 -25.19 34.91  
 100.00 19 10 39 4018.70 2.79 157.14 227.49 60.23 20 17 38 3418.7 -1.20 150.61  
 110.00 5 2 26 2002.95 -30.01 21.87 231.16 107.18 5 35 49 1402.9 -27.37 13.67  
 110.00 20 1 17 3860.13 5.24 143.59 225.97 56.17 21 5 37 3260.1 .76 137.36

DIFFERENTIAL CORRECTIONS

TDE -.2702 TRA -.4330 TC3 1.4057 BAU .2323  
 RDE -.2485 RRA .0261 RC3 .6477 FAU .05933  
 FDE .3001 FRA .3344 FC3-4.5747 BSP 4439  
 BDE .3671 BRA .4338 BC3 1.5477 FSP -784

MID-COURSE EXECUTION ACCURACY

SGT 1298.7 SGR 609.2 SG3 273.4  
 RRT .7203 RRF -.7894 RTF -.8706  
 SGB 1434.5 R23 -.1393 R13 -.8907  
 SG1 1378.1 SG2 398.2 THA 20.45

ORBIT DETERMINATION ACCURACY

ST 516.6 SR 425.3 SS 288.1  
 CRT .8805 CRS .9256 CST .9855  
 LSA 709.8 MSA 161.5 SSA 30.9  
 EL1 649.7 EL2 160.4 ALF 38.73

LAUNCH DATE JAN 26 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 8 1969

MELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.159 GAL -1.62 AZL 89.27 HCA 119.75 SMA 124.69 ECC .18344 INC .7316 V1 30.247  
 RP 108.51 LAP .64 LOP 245.62 VP 37.172 GAP -7.51 AZP 90.36 TAL 187.26 TAP 307.01 RCA 101.82 APO 147.56 V2 34.923  
 RC 59.010 GL 6.09 GP 19.43 ZAL 107.24 ZAP 27.83 ETS 321.11 ZAE 144.01 ETE 23.69 ZAC 128.12 ETC 145.60 CLP -20.32

DISTANCE 271.805

PLANETOCENTRIC CONIC  
 C3 10.664 VHL 3.266 DLA 12.89 RAL 14.72 RAD 6567.4 VEL 11.491 PTH 2.00 VHP 5.741 DPA 32.89 RAP 35.71 ECC 1.1755  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 19 40 2487.06 -25.11 59.51 230.02 103.53 3 1 7 1887.1 -23.00 51.47  
 90.00 17 38 14 4306.89 3.48 177.95 226.34 61.88 18 50 1 3706.9 -3.30 171.32  
 100.00 3 47 41 2203.19 -26.11 38.35 229.74 105.10 4 24 24 1603.2 -23.78 30.32  
 100.00 18 52 54 4065.98 4.38 159.74 225.84 60.40 20 0 40 3466.0 .41 153.21  
 110.00 5 10 58 1942.62 -28.73 17.64 228.82 109.38 5 43 20 1342.6 -25.81 9.67  
 110.00 19 46 7 3899.32 6.72 145.65 224.40 56.40 20 51 6 3299.3 2.26 139.41

DIFFERENTIAL CORRECTIONS  
 TDE -.2465 TRA -.4140 TC3 1.5044 BAU .2429 SGT 1306.8 SGR 665.1 SG3 302.7 ST 487.7 SR 410.8 SS 246.3  
 RDE -.2338 RRA .0215 RC3 .7993 FAU .06455 RRT .7612 RRF -.8361 RTF -.8748 CRT .8751 CRS .9052 CST .9845  
 FDE .2572 FRA .3337 FC3-5.2403 BSP 4568 SGB 1466.3 R23 -1.555 R13 -.9000 LSA 664.0 MSA 159.1 SSA 34.0  
 BDE .3398 BRA .4145 BC3 1.7036 FSP -879 SG1 1410.8 SG2 399.5 THA 23.14 EL1 618.1 EL2 156.9 ALF 39.42

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 10 1969

MELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.246 GAL -1.73 AZL 89.46 HCA 122.93 SMA 125.24 ECC .17859 INC .5349 V1 30.247  
 RP 108.55 LAP .45 LOP 248.80 VP 37.224 GAP -6.89 AZP 90.29 TAL 188.00 TAP 310.93 RCA 102.88 APO 147.61 V2 34.911  
 RC 60.976 GL 4.57 GP 21.31 ZAL 108.64 ZAP 31.01 ETS 322.63 ZAE 143.29 ETE 26.83 ZAC 127.28 ETC 144.16 CLP -23.07

DISTANCE 278.416

PLANETOCENTRIC CONIC  
 C3 10.188 VHL 3.192 DLA 10.96 RAL 14.04 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.453 DPA 34.78 RAP 35.27 ECC 1.1677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 33 13 2412.84 -23.83 54.44 228.04 105.76 3 13 26 1812.8 -21.44 46.59  
 90.00 17 19 18 4362.67 5.27 181.08 224.95 62.14 18 32 1 3762.7 1.50 174.43  
 100.00 4 0 3 2132.79 -24.77 33.54 227.74 107.29 4 35 36 1532.8 -22.17 25.71  
 100.00 18 35 9 4117.95 6.12 162.62 224.48 60.68 19 43 47 3518.0 2.17 156.06  
 110.00 5 20 44 1880.29 -27.24 13.40 226.77 111.49 5 52 4 1280.3 -24.08 5.66  
 110.00 19 30 57 3943.22 8.36 147.99 223.11 56.73 20 36 40 3343.2 3.93 141.70

DIFFERENTIAL CORRECTIONS  
 TDE -.2210 TRA -.3974 TC3 1.5825 BAU .2533 SGT 1306.0 SGR 735.7 SG3 334.1 ST 453.6 SR 390.0 SS 197.1  
 RDE -.2169 RRA .0158 RC3 .9766 FAU .07006 RRT .7944 RRF -.8756 RTF -.8770 CRT .8657 CRS .8565 CST .9779  
 FDE .1991 FRA .3373 FC3-5.9535 BSP 4672 SGB 1499.0 R23 -.1713 R13 -.9092 LSA 608.6 MSA 157.6 SSA 37.9  
 BDE .3097 BRA .3977 BC3 1.8596 FSP -979 SG1 1443.4 SG2 404.3 THA 26.33 EL1 578.3 EL2 153.1 ALF 40.03

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 12 1969

MELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.323 GAL -1.82 AZL 89.68 HCA 126.11 SMA 125.74 ECC .17429 INC .3236 V1 30.247  
 RP 108.58 LAP .26 LOP 251.98 VP 37.269 GAP -6.28 AZP 90.19 TAL 188.70 TAP 314.81 RCA 103.83 APO 147.66 V2 34.900  
 RC 63.000 GL 2.83 GP 23.41 ZAL 109.95 ZAP 34.43 ETS 323.97 ZAE 142.60 ETE 30.37 ZAC 126.13 ETC 142.79 CLP -25.99

DISTANCE 285.006

PLANETOCENTRIC CONIC  
 C3 9.793 VHL 3.129 DLA 8.86 RAL 13.54 RAD 6567.4 VEL 11.453 PTH 1.99 VHP 5.193 DPA 36.81 RAP 34.51 ECC 1.1612  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 48 8 2336.31 -22.32 49.34 226.36 107.89 3 27 4 1736.3 -19.67 41.68  
 90.00 17 0 23 4423.43 7.19 184.51 223.90 62.54 18 14 7 3823.4 3.45 177.82  
 100.00 4 13 48 2060.03 -23.21 28.70 226.04 109.39 4 48 8 1460.0 -20.35 21.07  
 100.00 18 17 25 4174.94 8.01 165.79 223.45 61.10 19 27 0 3574.9 4.09 159.19  
 110.00 5 31 53 1815.67 -25.56 9.13 225.03 113.51 6 2 8 1215.7 -22.16 1.63  
 110.00 19 15 49 3992.06 10.18 150.61 222.14 57.19 20 22 21 3392.1 5.78 144.27

DIFFERENTIAL CORRECTIONS  
 TDE -.1922 TRA -.3806 TC3 1.6425 BAU .2651 SGT 1295.4 SGR 823.8 SG3 367.3 ST 411.7 SR 360.2 SS 142.9  
 RDE -.1963 RRA .0093 RC3 1.1840 FAU .07586 RRT .8209 RRF -.9078 RTF -.8792 CRT .8501 CRS .7105 CST .9325  
 FDE .1211 FRA .3433 FC3-6.7066 BSP 4834 SGB 1535.1 R23 -.1811 R13 -.9200 LSA 541.3 MSA 157.7 SSA 42.6  
 BDE .2747 BRA .3807 BC3 2.0248 FSP -1091 SG1 1478.8 SG2 412.1 THA 30.15 EL1 526.5 EL2 148.3 ALF 40.52

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 14 1969

MELIOCENTRIC CONIC  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.391 GAL -1.91 AZL 89.90 HCA 129.29 SMA 126.19 ECC .17050 INC .0936 V1 30.247  
 RP 108.62 LAP .07 LOP 255.16 VP 37.309 GAP -5.70 AZP 90.06 TAL 189.35 TAP 318.63 RCA 104.67 APO 147.70 V2 34.889  
 RC 65.076 GL .85 GP 25.78 ZAL 111.13 ZAP 38.11 ETS 325.19 ZAE 141.86 ETE 34.34 ZAC 124.63 ETC 141.51 CLP -29.09

DISTANCE 291.574

PLANETOCENTRIC CONIC  
 C3 9.473 VHL 3.078 DLA 6.59 RAL 13.24 RAD 6567.3 VEL 11.439 PTH 1.98 VHP 4.963 DPA 39.00 RAP 33.37 ECC 1.1559  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 4 40 2256.91 -20.57 44.18 225.01 109.90 3 42 17 1656.9 -17.68 36.70  
 90.00 16 41 26 4489.73 9.25 188.29 223.20 63.12 17 56 16 3889.7 5.57 181.54  
 100.00 4 29 9 1984.43 -21.42 23.80 224.67 111.37 5 2 13 1384.4 -18.32 16.37  
 100.00 17 59 39 4237.44 10.05 169.31 222.78 61.70 19 10 16 3637.4 6.19 162.65  
 110.00 5 44 34 1748.39 -23.66 4.83 223.62 115.42 6 13 42 1148.4 -20.04 357.56  
 110.00 19 0 43 4046.25 12.16 153.55 221.53 57.80 20 8 9 3446.2 7.82 147.14

DIFFERENTIAL CORRECTIONS  
 TDE -.1637 TRA -.3684 TC3 1.6622 BAU .2769 SGT 1271.4 SGR 930.3 SG3 400.8 ST 369.8 SR 319.3 SS 106.3  
 RDE -.1709 RRA .0003 RC3 1.4202 FAU .08157 RRT .8379 RRF -.9327 RTF -.8772 CRT .8280 CRS .2132 CST .6412  
 FDE .0225 FRA .3592 FC3-7.4552 BSP 4943 SGB 1575.4 R23 -.1887 R13 -.9301 LSA 470.5 MSA 162.3 SSA 47.7  
 BDE .2367 BRA .3684 BC3 2.1863 FSP -1199 SG1 1516.8 SG2 425.6 THA 34.63 EL1 467.6 EL2 141.6 ALF 39.96

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 298.118

RL 147.30 LAL -.00 LOL 125.87 VL 27.451 GAL -1.98 AZL 90.16 HCA 132.46 SMA 126.58 ECC .16717 INC .1550 V1 30.247  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.343 GAP -5.15 AZP 89.90 TAL 189.94 TAP 322.40 RCA 105.42 APO 147.74 V2 34.878  
 RC 67.198 GL -1.40 GP 28.43 ZAL 112.17 ZAP 42.05 ETS 326.39 ZAE 141.00 ETE 38.76 ZAC 122.77 ETC 140.38 CLP -32.39

PLANETOCENTRIC CONIC

C3 9.225 VHL 3.037 CLA 4.11 RAL 13.15 RAD 6567.3 VEL 11.429 PTH 1.98 VHP 4.766 DPA 41.35 RAP 31.78 ECC 1.1518  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 23 6 2173.86 -18.56 38.92 224.03 111.78 3 59 20 1573.9 -15.44 31.63  
 90.00 16 22 18 4562.45 11.46 192.49 222.91 63.93 17 38 21 3962.4 7.86 185.66  
 100.00 4 46 22 1905.28 -19.37 18.81 223.67 113.22 5 18 7 1305.3 -16.06 11.58  
 100.00 17 41 43 4306.26 12.24 173.25 222.51 62.52 18 53 30 3706.3 8.46 166.49  
 110.00 5 59 2 1677.85 -21.53 .46 222.59 117.21 6 27 0 1077.9 -17.71 353.41  
 110.00 18 45 33 4106.45 14.32 156.88 221.30 58.62 19 53 59 3506.5 10.06 150.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1351 TRA -.3577 TC3 1.6441 BAU .2906 SGT 1232.9 SGR 1058.2 SG3 433.6 ST 327.2 SR 263.7 SS 133.4  
 RDE -.1388 RRA -.0115 RC3 1.6874 FAU .08704 RRT .8471 RRF -.9515 RTF -.8723 CRT .7995 CRS -.5089 CST .0032  
 FDE -.1001 FRA .3825 FC3-8.1686 BSP 5089 SGB 1624.7 R23 -.1880 R13 -.9410 LSA 400.8 MSA 176.5 SSA 51.2  
 BDE .1937 BRA .3579 BC3 2.3559 FSP -1309 SG1 1563.0 SG2 443.6 THA 39.87 EL1 399.8 EL2 129.7 ALF 37.39

LAUNCH DATE JAN 26 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 304.638

RL 147.30 LAL -.00 LOL 125.87 VL 27.503 GAL -2.04 AZL 90.43 HCA 135.63 SMA 126.93 ECC .16427 INC .4322 V1 30.247  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.371 GAP -4.61 AZP 89.69 TAL 190.47 TAP 326.10 RCA 106.08 APO 147.78 V2 34.867  
 RC 69.360 GL -3.95 GP 31.37 ZAL 113.03 ZAP 46.25 ETS 327.64 ZAE 139.93 ETE 43.62 ZAC 120.53 ETC 139.43 CLP -35.91

PLANETOCENTRIC CONIC

C3 9.052 VHL 3.009 CLA 1.41 RAL 13.30 RAD 6567.3 VEL 11.421 PTH 1.98 VHP 4.605 DPA 43.86 RAP 29.65 ECC 1.1490  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 43 51 2086.15 -16.26 33.51 223.45 113.51 4 18 37 1486.1 -12.94 26.40  
 90.00 16 2 46 4642.84 13.82 197.22 223.07 65.04 17 20 9 4042.8 10.34 190.26  
 100.00 5 5 51 1821.66 -17.05 13.69 223.08 114.93 5 36 12 1221.7 -13.54 6.65  
 100.00 17 23 27 4382.57 14.60 177.69 222.69 63.62 18 36 30 3782.6 10.94 170.81  
 110.00 6 15 36 1603.34 -19.14 356.00 221.96 118.88 6 42 19 1003.3 -15.14 349.16  
 110.00 18 30 11 4173.65 16.67 160.67 221.53 59.71 19 39 45 3573.6 12.52 154.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1058 TRA -.3476 TC3 1.5881 BAU .3077 SGT 1179.9 SGR 1210.3 SG3 464.6 ST 284.4 SR 188.1 SS 222.3  
 RDE -.0966 RRA -.0270 RC3 1.9861 FAU .09204 RRT .8495 RRF -.9654 RTF -.8650 CRT .7697 CRS -.7522 CST -.2847  
 FDE -.2522 FRA .4143 FC3-8.8029 BSP 5312 SGB 1690.3 R23 -.1756 R13 -.9531 LSA 346.2 MSA 208.2 SSA 49.6  
 BDE .1433 BRA .3486 BC3 2.5430 FSP -1418 SG1 1625.5 SG2 463.4 THA 45.86 EL1 324.3 EL2 105.3 ALF 30.53

LAUNCH DATE JAN 26 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 311.133

RL 147.30 LAL -.00 LOL 125.87 VL 27.548 GAL -2.09 AZL 90.74 HCA 138.80 SMA 127.23 ECC .16176 INC .7425 V1 30.247  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.396 GAP -4.09 AZP 89.44 TAL 190.93 TAP 329.73 RCA 106.65 APO 147.81 V2 34.858  
 RC 71.560 GL -6.84 GP 34.63 ZAL 113.67 ZAP 50.70 ETS 329.03 ZAE 138.55 ETE 48.87 ZAC 117.90 ETC 138.73 CLP -39.67

PLANETOCENTRIC CONIC

C3 8.961 VHL 2.994 CLA -1.55 RAL 13.72 RAD 6567.3 VEL 11.417 PTH 1.98 VHP 4.485 DPA 46.52 RAP 26.90 ECC 1.1475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 7 27 1992.44 -13.63 27.88 223.35 115.06 4 40 39 1392.4 -10.14 20.94  
 90.00 15 42 29 4732.67 16.33 202.62 223.76 66.54 17 1 21 4132.7 13.02 195.50  
 100.00 5 28 4 1732.38 -14.41 8.37 222.97 116.48 5 56 57 1132.4 -10.74 1.51  
 100.00 17 4 32 4467.96 17.11 182.78 223.40 65.11 18 19 0 3868.0 13.62 175.74  
 110.00 6 34 39 1523.94 -16.47 351.39 221.81 120.39 7 0 3 923.9 -12.31 344.75  
 110.00 18 14 27 4249.16 19.20 165.06 222.28 61.16 19 25 16 3649.2 15.21 158.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0811 TRA -.3407 TC3 1.4698 BAU .3272 SGT 1106.3 SGR 1383.7 SG3 489.7 ST 251.2 SR 95.4 SS 339.5  
 RDE -.0425 RRA -.0489 RC3 2.3019 FAU .09576 RRT .8403 RRF -.9753 RTF -.8488 CRT .8012 CRS -.6248 CST -.3220  
 FDE -.4277 FRA .4609 FC3-9.2514 BSP 5542 SGB 1771.6 R23 -.1563 R13 -.9642 LSA 364.2 MSA 230.3 SSA 41.9  
 BDE .0915 BRA .3442 BC3 2.7311 FSP -1504 SG1 1703.3 SG2 487.2 THA 52.52 EL1 263.1 EL2 54.5 ALF 17.71

LAUNCH DATE JAN 26 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 317.604

RL 147.30 LAL -.00 LOL 125.87 VL 27.587 GAL -2.13 AZL 91.09 HCA 141.96 SMA 127.49 ECC .15960 INC 1.0942 V1 30.247  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.415 GAP -3.59 AZP 89.14 TAL 191.31 TAP 333.28 RCA 107.15 APO 147.84 V2 34.848  
 RC 73.792 GL -10.12 GP 38.19 ZAL 114.08 ZAP 55.35 ETS 330.63 ZAE 136.76 ETE 54.42 ZAC 114.92 ETC 138.32 CLP -43.67

PLANETOCENTRIC CONIC

C3 8.968 VHL 2.995 CLA -4.82 RAL 14.43 RAD 6567.3 VEL 11.417 PTH 1.98 VHP 4.412 DPA 49.30 RAP 23.42 ECC 1.1476  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 34 40 1890.96 -10.63 21.94 223.81 116.40 5 6 11 1291.0 -7.00 15.14  
 90.00 15 20 56 4834.43 18.97 208.91 225.08 68.58 16 41 31 4234.4 15.90 201.59  
 100.00 5 53 44 1635.86 -11.41 2.78 223.40 117.82 6 21 0 1035.9 -7.60 356.06  
 100.00 16 44 33 4564.75 19.78 188.73 224.74 67.12 18 0 37 3964.8 16.51 181.46  
 110.00 6 56 48 1438.46 -13.47 346.59 222.20 121.72 7 20 46 838.5 -9.17 340.12  
 110.00 17 57 59 4334.92 21.93 170.21 223.67 63.10 19 10 14 3734.9 18.15 163.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0611 TRA -.3338 TC3 1.2958 BAU .3509 SGT 1013.3 SGR 1579.8 SG3 507.1 ST 226.2 SR 85.1 SS 476.1  
 RDE .0285 RRA -.0784 RC3 2.6242 FAU .09786 RRT .8182 RRF -.9823 RTF -.8220 CRT .1771 CRS -.8186 CST -.2794  
 FDE -.6276 FRA .5182 FC3-9.4475 BSP 5854 SGB 1876.9 R23 -.1288 R13 -.9743 LSA 486.0 MSA 218.7 SSA 32.2  
 BDE .0674 BRA .3429 BC3 2.9267 FSP -1568 SG1 1806.4 SG2 509.5 THA 59.64 EL1 226.8 EL2 83.5 ALF 4.41



LAUNCH DATE JAN 26 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 324.050

RL 147.30 LAL -.00 LOL 125.87 VL 27.620 GAL -2.15 AZL 91.50 HCA 145.13 SMA 127.72 ECC .15776 INC 1.4991 V1 30.247  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.431 GAP -3.11 AZP 88.77 TAL 191.62 TAP 336.75 RCA 107.57 APO 147.86 V2 34.839  
 RC 76.053 GL -13.85 GP 42.05 ZAL 114.18 ZAP 60.16 ETS 332.55 ZAE 134.49 ETE 60.13 ZAC 111.59 ETC 138.25 CLP -47.92

PLANETOCENTRIC CONIC

C3 9.098 VHL 3.016 DLA -8.42 RAL 15.47 RAD 6567.3 VEL 11.423 PTH 1.98 VHP 4.393 DPA 52.14 RAP 19.10 ECC 1.1497  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 6 35 1779.20 -7.18 15.54 224.95 117.46 5 36 15 1179.2 -3.45 8.86  
 90.00 14 57 21 4951.72 21.71 216.42 227.17 71.37 16 19 53 4351.7 18.97 208.82  
 100.00 6 23 51 1529.96 -7.98 356.79 224.52 118.90 6 49 21 930.0 -4.06 350.19  
 100.00 16 22 46 4676.20 22.57 195.83 226.85 69.86 17 40 43 4076.2 19.62 188.28  
 110.00 7 22 47 1345.43 -10.08 341.51 223.24 122.84 7 45 12 745.4 -5.68 335.18  
 110.00 17 40 20 4433.49 24.84 176.39 225.84 65.72 18 54 13 3833.5 21.35 168.98

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0485 TRA -.3251 TC3 1.0700 BAU .3796  
 RDE .1215 RRA -.1178 RC3 2.9321 FAU .09790  
 FDE -.8462 FRA .5838 FC3-9.3161 BSP 6284  
 BDE .1308 BRA .3458 BC3 3.1212 FSP -1603

SGT 902.6 SGR 1798.1 SG3 514.2  
 RRT .7774 RRF -.9872 RTF -.7779  
 SGB 2011.9 R23 -.0967 R13 -.9826  
 SG1 1942.0 SG2 525.7 THA 66.89

ST 209.6 SR 246.4 SS 626.6  
 CRT -.1456 CRS .9903 CST -.2364  
 LSA 674.3 MSA 204.8 SSA 23.8  
 EL1 252.1 EL2 202.6 ALF 110.94

LAUNCH DATE JAN 26 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 330.470

RL 147.30 LAL -.00 LOL 125.87 VL 27.647 GAL -2.17 AZL 91.97 HCA 148.29 SMA 127.90 ECC .15620 INC 1.9736 V1 30.247  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.444 GAP -2.65 AZP 88.32 TAL 191.84 TAP 340.13 RCA 107.92 APO 147.88 V2 34.831  
 RC 78.340 GL -18.08 GP 46.18 ZAL 113.94 ZAP 65.02 ETS 334.86 ZAE 131.69 ETE 65.89 ZAC 107.97 ETC 138.56 CLP -52.42

PLANETOCENTRIC CONIC

C3 9.397 VHL 3.065 DLA -12.43 RAL 16.90 RAD 6567.3 VEL 11.436 PTH 1.98 VHP 4.438 DPA 54.99 RAP 13.80 ECC 1.1546  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 44 57 1653.45 -3.18 8.47 226.96 118.15 6 12 30 1053.5 .61 1.84  
 90.00 14 30 24 5090.03 24.43 225.65 230.22 75.22 15 55 14 4490.0 22.16 217.71  
 100.00 6 59 55 1411.59 -4.03 350.21 226.49 119.64 7 23 26 811.6 -.06 343.68  
 100.00 15 58 7 4807.12 25.37 204.55 229.93 73.63 17 18 15 4207.1 22.88 196.63  
 110.00 7 53 46 1242.93 -6.25 336.05 225.12 123.68 8 14 29 642.9 -1.78 329.81  
 110.00 17 20 46 4548.55 27.84 183.99 229.01 69.31 18 36 34 3948.5 24.77 176.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0512 TRA -.3151 TC3 .7824 BAU .4114  
 RDE .2401 RRA -.1728 RC3 3.1801 FAU .09506  
 FDE-1.0648 FRA .6609 FC3-8.7586 BSP 6762  
 BDE .2455 BRA .3594 BC3 3.2750 FSP -1587

SGT 776.5 SGR 2027.8 SG3 506.7  
 RRT .6933 RRF -.9906 RTF -.6913  
 SGB 2171.4 R23 -.0662 R13 -.9884  
 SG1 2103.3 SG2 539.5 THA 74.06

ST 205.2 SR 463.4 SS 779.4  
 CRT -.2541 CRS .9985 CST -.2865  
 LSA 908.4 MSA 197.1 SSA 17.5  
 EL1 467.0 EL2 196.9 ALF 97.82

LAUNCH DATE JAN 26 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 336.865

RL 147.30 LAL -.00 LOL 125.87 VL 27.669 GAL -2.17 AZL 92.54 HCA 151.44 SMA 128.05 ECC .15491 INC 2.5408 V1 30.247  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.453 GAP -2.20 AZP 87.77 TAL 191.98 TAP 343.43 RCA 108.21 APO 147.89 V2 34.824  
 RC 80.651 GL -22.88 GP 50.56 ZAL 113.28 ZAP 69.85 ETS 337.64 ZAE 128.36 ETE 71.57 ZAC 104.14 ETC 139.30 CLP -57.16

PLANETOCENTRIC CONIC

C3 9.942 VHL 3.153 DLA -16.86 RAL 18.79 RAD 6567.4 VEL 11.460 PTH 1.99 VHP 4.563 DPA 57.76 RAP 7.40 ECC 1.1636  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 32 44 1507.02 1.54 .30 230.16 118.28 6 57 51 907.0 5.31 353.64  
 90.00 13 57 38 5258.68 26.84 237.40 234.46 80.62 15 25 17 4658.7 25.27 229.08  
 100.00 7 44 28 1275.57 .57 342.74 229.62 119.89 8 5 43 675.6 4.54 336.21  
 100.00 15 28 35 4965.37 27.93 215.60 234.24 78.90 16 51 21 4365.4 26.12 207.27  
 110.00 8 31 30 1128.21 -1.89 330.03 228.08 124.14 8 50 18 528.2 2.60 323.82  
 110.00 16 58 3 4685.49 30.76 193.57 233.47 74.29 18 16 8 4085.5 28.30 185.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0737 TRA -.2930 TC3 .4571 BAU .4464  
 RDE .3926 RRA -.2467 RC3 3.3272 FAU .08931  
 FDE-1.2730 FRA .7399 FC3-7.7776 BSP 7329  
 BDE .3994 BRA .3877 BC3 3.3585 FSP -1521

SGT 650.7 SGR 2265.1 SG3 484.0  
 RRT .5260 RRF -.9929 RTF -.5218  
 SGB 2356.7 R23 -.0386 R13 -.9922  
 SG1 2292.4 SG2 546.8 THA 80.88

ST 216.8 SR 729.8 SS 928.8  
 CRT -.4488 CRS .9996 CST -.4633  
 LSA 1185.4 MSA 192.3 SSA 13.0  
 EL1 736.8 EL2 191.9 ALF 98.15

LAUNCH DATE JAN 26 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 343.233

RL 147.30 LAL -.00 LOL 125.87 VL 27.686 GAL -2.16 AZL 93.24 HCA 154.60 SMA 128.17 ECC .15385 INC 3.2357 V1 30.247  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.459 GAP -1.77 AZP 87.08 TAL 192.04 TAP 346.63 RCA 108.45 APO 147.89 V2 34.816  
 RC 82.981 GL -28.27 GP 55.14 ZAL 112.15 ZAP 74.50 ETS 340.98 ZAE 124.49 ETE 77.11 ZAC 100.16 ETC 140.50 CLP -62.12

PLANETOCENTRIC CONIC

C3 10.867 VHL 3.297 DLA -21.76 RAL 21.20 RAD 6567.4 VEL 11.500 PTH 2.00 VHP 4.787 DPA 60.37 RAP 359.76 ECC 1.1788  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 36 26 1324.00 7.38 350.02 235.08 117.42 7 58 30 724.0 11.00 343.20  
 90.00 13 13 14 5477.64 28.28 253.23 240.08 88.42 14 44 32 4877.6 27.76 244.61  
 100.00 8 42 32 1110.65 6.13 333.66 234.40 119.31 9 1 3 510.6 9.99 327.00  
 100.00 14 49 49 5166.22 29.70 230.25 240.01 86.40 16 15 55 4566.2 28.88 221.54  
 110.00 9 18 57 996.50 3.14 323.16 232.55 124.06 9 35 34 396.5 7.59 316.89  
 110.00 16 29 53 4853.13 33.18 206.03 239.57 81.28 17 50 47 4253.1 31.62 197.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1244 TRA -.2711 TC3 .1227 BAU .4834  
 RDE .5888 RRA -.3438 RC3 3.3248 FAU .08079  
 FDE-1.4565 FRA .8098 FC3-6.4364 BSP 8016  
 BDE .6019 BRA .4379 BC3 3.3271 FSP -1415

SGT 557.5 SGR 2503.4 SG3 446.6  
 RRT .2025 RRF -.9946 RTF -.1960  
 SGB 2564.7 R23 -.0157 R13 -.9945  
 SG1 2506.0 SG2 545.4 THA 87.29

ST 264.5 SR 1043.6 SS 1065.0  
 CRT -.6949 CRS .9999 CST -.7018  
 LSA 1502.6 MSA 188.0 SSA 9.7  
 EL1 1060.2 EL2 187.2 ALF 100.31

LAUNCH DATE JAN 26 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 349.573

RL 147.30 LAL -.00 LOL 125.87 VL 27.699 GAL -2.14 AZL 94.11 HCA 157.74 SMA 128.26 ECC .15301 INC 4.1121 V1 30.247  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.462 GAP -1.36 AZP 86.19 TAL 192.00 TAP 349.74 RCA 108.63 APO 147.88 V2 34.810  
 RC 85.328 GL -34.28 GP 59.92 ZAL 110.50 ZAP 78.83 ETS 344.93 ZAE 120.14 ETE 82.50 ZAC 96.11 ETC 142.19 CLP -67.26

PLANETOCENTRIC CONIC

C3 12.420 VHL 3.524 DLA -27.07 RAL 24.28 RAD 6567.5 VEL 11.567 PTH 2.02 VHP 5.142 DPA 62.72 RAP 350.72 ECC 1.2044  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 23 31 1024.98 16.22 332.51 243.17 113.54 9 40 36 425.0 19.26 325.16  
 90.00 11 50 39 5832.38 26.25 278.88 246.51 101.03 13 27 52 5232.4 27.50 270.44  
 100.00 10 9 49 875.42 13.71 320.30 241.95 116.83 10 24 25 275.4 17.20 313.25  
 100.00 13 47 3 5457.18 28.98 251.78 247.02 97.66 15 18 0 4857.2 29.74 243.06  
 110.00 10 22 24 835.92 9.20 314.67 239.30 123.07 10 36 20 235.9 13.49 308.20  
 110.00 15 50 57 5069.44 34.17 222.80 247.49 91.14 17 15 27 4469.4 33.95 213.57

DIFFERENTIAL CORRECTIONS

TOE -.2192 TRA -.2254 TC3 -.1861 BAU .5185  
 RDE .8345 RRA -.4757 RC3 3.1173 FAU .06965  
 FDE-1.5868 FRA .8698 FC3-4.8553 BSP 8692  
 BDE .8628 BRA .5263 BC3 3.1229 FSP -1253

MID-COURSE EXECUTION ACCURACY

SGT 559.9 SGR 2724.5 SG3 394.9  
 RRT -.2716 RRF -.9957 RTF .2792  
 SGB 2781.4 R23 .0022 R13 -.9958  
 SGI 2728.9 SG2 538.0 THA 93.32

ORBIT DETERMINATION ACCURACY

ST 377.1 SR 1383.1 SS 1166.5  
 CRT -.8657 CRS .9999 CST -.8694  
 LSA 1838.9 MSA 184.9 SSA 7.3  
 EL1 1421.7 EL2 183.6 ALF 103.51

LAUNCH DATE JAN 26 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 355.884

RL 147.30 LAL -.00 LOL 125.87 VL 27.708 GAL -2.11 AZL 95.26 HCA 160.88 SMA 128.32 ECC .15235 INC 5.2599 V1 30.247  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.464 GAP -.96 AZP 85.03 TAL 191.88 TAP 352.76 RCA 108.77 APO 147.87 V2 34.804  
 RC 87.691 GL -40.82 GP 64.91 ZAL 108.30 ZAP 82.70 ETS 349.58 ZAE 115.32 ETE 87.79 ZAC 92.04 ETC 144.47 CLP -72.56

PLANETOCENTRIC CONIC

C3 15.078 VHL 3.883 DLA -32.71 RAL 28.14 RAD 6567.6 VEL 11.682 PTH 2.05 VHP 5.683 DPA 64.71 RAP 340.14 ECC 1.2481  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.89 8 40 53 1247.81 24.27 352.62 253.52 112.63 9 1 41 647.8 27.13 344.74  
 107.11 13 4 8 5694.29 24.29 268.06 253.53 112.62 14 39 2 5094.3 27.14 260.18  
 72.89 8 40 53 1247.81 24.27 352.62 253.52 112.63 9 1 41 647.8 27.13 344.74  
 107.11 13 4 8 5694.29 24.29 268.06 253.53 112.62 14 39 2 5094.3 27.14 260.18  
 110.00 12 6 27 5872.18 18.15 278.56 250.31 119.48 13 44 19 5272.2 21.94 271.47  
 110.00 14 37 45 5405.97 30.72 248.32 256.05 105.78 16 7 51 4806.0 32.58 239.59

DIFFERENTIAL CORRECTIONS

TDE -.3767 TRA -.1474 TC3 -.4174 BAU .5494  
 RDE 1.1451 RRA -.6516 RC3 2.6934 FAU .05684  
 FDE-1.6544 FRA .9079 FC3-3.2634 BSP 9421  
 BDE 1.2054 BRA .6681 BC3 2.7255 FSP -1064

MID-COURSE EXECUTION ACCURACY

SGT 693.4 SGR 2921.6 SG3 333.7  
 RRT -.6525 RRF -.9965 RTF .6507  
 SGB 3002.7 R23 .0154 R13 -.9965  
 SGI 2957.5 SG2 519.1 THA 99.09

ORBIT DETERMINATION ACCURACY

ST 561.3 SR 1725.2 SS 1222.0  
 CRT -.9430 CRS 1.0000 CST -.9454  
 LSA 2179.9 MSA 180.0 SSA 5.5  
 EL1 1805.4 EL2 178.5 ALF 107.23

LAUNCH DATE JAN 26 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 362.163

RL 147.30 LAL -.00 LOL 125.87 VL 27.712 GAL -2.07 AZL 96.84 HCA 164.01 SMA 128.35 ECC .15188 INC 6.8376 V1 30.247  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.462 GAP -.57 AZP 83.42 TAL 191.67 TAP 355.68 RCA 108.86 APO 147.84 V2 34.799  
 RC 90.065 GL -47.72 GP 70.18 ZAL 105.59 ZAP 85.96 ETS 355.10 ZAE 110.02 ETE 93.23 ZAC 87.99 ETC 147.52 CLP -78.02

PLANETOCENTRIC CONIC

C3 19.859 VHL 4.456 DLA -38.44 RAL 32.96 RAD 6567.8 VEL 11.884 PTH 2.11 VHP 6.506 DPA 66.21 RAP 327.79 ECC 1.3268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.84 8 3 13 1482.36 26.17 12.24 264.68 119.22 8 27 55 882.4 29.85 4.61  
 117.16 14 20 14 5587.08 26.19 260.59 264.69 119.21 15 53 21 4987.1 29.86 252.95  
 62.84 8 3 13 1482.36 26.17 12.24 264.68 119.22 8 27 55 882.4 29.85 4.61  
 117.16 14 20 14 5587.08 26.19 260.59 264.69 119.21 15 53 21 4987.1 29.86 252.95  
 62.84 8 3 13 1482.36 26.17 12.24 264.68 119.22 8 27 55 882.4 29.85 4.61  
 117.16 14 20 14 5587.08 26.19 260.59 264.69 119.21 15 53 21 4987.1 29.86 252.95

DIFFERENTIAL CORRECTIONS

TDE -.6328 TRA -.0122 TC3 -.5320 BAU .5689  
 RDE 1.5325 RRA -.8940 RC3 2.0757 FAU .04314  
 FDE-1.6445 FRA .9242 FC3-1.8808 BSP 10110  
 BDE 1.6580 BRA .8941 BC3 2.1428 FSP -854

MID-COURSE EXECUTION ACCURACY

SGT 941.9 SGR 3075.4 SG3 267.4  
 RRT -.8460 RRF -.9972 RTF .8522  
 SGB 3216.4 R23 .0246 R13 -.9970  
 SGI 3179.5 SG2 485.7 THA 104.88

ORBIT DETERMINATION ACCURACY

ST 813.8 SR 2019.7 SS 1216.0  
 CRT -.9743 CRS 1.0000 CST -.9760  
 LSA 2488.1 MSA 172.4 SSA 4.1  
 EL1 2170.8 EL2 170.7 ALF 111.57

LAUNCH DATE JAN 26 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 368.402

RL 147.30 LAL -.00 LOL 125.87 VL 27.714 GAL -2.01 AZL 99.16 HCA 167.12 SMA 128.36 ECC .15156 INC 9.1557 V1 30.247  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.459 GAP -.20 AZP 81.07 TAL 191.35 TAP 358.47 RCA 108.91 APO 147.81 V2 34.795  
 RC 92.449 GL -54.63 GP 75.87 ZAL 102.49 ZAP 88.50 ETS 2.06 ZAE 104.16 ETE 99.47 ZAC 83.91 ETC 151.99 CLP -83.84

PLANETOCENTRIC CONIC

C3 29.210 VHL 5.405 DLA -43.84 RAL 38.83 RAD 6568.2 VEL 12.271 PTH 2.21 VHP 7.799 DPA 67.03 RAP 313.43 ECC 1.4807  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.01 7 52 13 1672.46 25.71 28.26 278.73 126.83 8 20 5 1072.5 30.31 21.26  
 124.99 15 18 6 5585.83 25.72 260.14 278.75 126.82 16 51 12 4985.8 30.32 253.15  
 55.01 7 52 13 1672.46 25.71 28.26 278.73 126.83 8 20 5 1072.5 30.31 21.26  
 124.99 15 18 6 5585.83 25.72 260.14 278.75 126.82 16 51 12 4985.8 30.32 253.15  
 55.01 7 52 13 1672.46 25.71 28.26 278.73 126.83 8 20 5 1072.5 30.31 21.26  
 124.99 15 18 6 5585.83 25.72 260.14 278.75 126.82 16 51 12 4985.8 30.32 253.15

DIFFERENTIAL CORRECTIONS

TDE-1.0550 TRA .2441 TC3 -.5114 BAU .5657  
 RDE 2.0130 RRA -1.2338 RC3 1.3554 FAU .02968  
 FDE-1.5608 FRA .9210 FC3 -.8797 BSP 10752  
 BDE 2.2727 BRA 1.2577 BC3 1.4487 FSP -646

MID-COURSE EXECUTION ACCURACY

SGT 1298.2 SGR 3160.6 SG3 202.2  
 RRT -.9377 RRF -.9978 RTF .9422  
 SGB 3416.9 R23 .0296 R13 -.9976  
 SGI 3390.9 SG2 420.4 THA 111.41

ORBIT DETERMINATION ACCURACY

ST 1123.8 SR 2202.7 SS 1148.3  
 CRT -.9882 CRS 1.0000 CST -.9895  
 LSA 2722.0 MSA 155.4 SSA 3.0  
 EL1 2468.1 EL2 153.6 ALF 116.87

LAUNCH DATE JAN 26 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

RL 147.30 LAL -.00 LOL 125.87 VL 27.712 GAL -1.93 AZL 102.91 HCA 170.20 SMA 128.35 ECC .15137 INC12.9073 V1 30.247  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.455 GAP .15 AZP 77.27 TAL 190.93 TAP 1.13 RCA 108.92 APO 147.77 V2 34.791  
 RC 94.840 GL -60.92 GP 82.34 ZAL 99.20 ZAP 90.21 ETS 13.15 ZAE 97.44 ETE 109.36 ZAC 79.62 ETC 160.75 CLP -91.56

DISTANCE 374.583

PLANETOCENTRIC CONIC

C3 50.114 VHL 7.079 DLA -48.27 RAL 45.61 RAD 6568.8 VEL 13.095 PTH 2.39 VHP 9.990 DPA 66.75 RAP 296.78 ECC 1.8248  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.12 7 57 40 1863.47 21.58 42.30 294.94 134.30 8 28 44 1263.5 27.04 36.30  
 130.88 16 6 40 5666.57 21.59 263.84 294.95 134.29 17 41 7 5066.6 27.05 257.83  
 49.12 7 57 40 1863.47 21.58 42.30 294.94 134.30 8 28 44 1263.5 27.04 36.30  
 130.88 16 6 40 5666.57 21.59 263.84 294.95 134.29 17 41 7 5066.6 27.05 257.83  
 49.12 7 57 40 1863.47 21.58 42.30 294.94 134.30 8 28 44 1263.5 27.04 36.30  
 130.88 16 6 40 5666.57 21.59 263.84 294.95 134.29 17 41 7 5066.6 27.05 257.83

DIFFERENTIAL CORRECTIONS

TDE-1.8430 TRA .8436 TC3 -.3827 BAU .5091  
 RDE 2.5644 RRA-1.6813 RC3 .6565 FAU .01723  
 FDE-1.4310 FRA .9160 FC3 -.2976 BSP 11345  
 BDE 3.1580 BRA 1.8811 BC3 .7599 FSP -461

MID-COURSE EXECUTION ACCURACY

SGT 1889.7 SGR 3058.1 SG3 143.5  
 RRT -.9858 RRF -.9986 RTF -.9871  
 SGB 3594.9 R23 .0305 R13 -.9982  
 SG1 3584.7 SG2 270.4 THA 121.55

ORBIT DETERMINATION ACCURACY

ST 1523.2 SR 2164.5 SS 1040.6  
 CRT -.9965 CRS 1.0000 CST -.9970  
 LSA 2841.9 MSA 106.5 SSA 2.1  
 EL1 2644.6 EL2 104.5 ALF 125.10

LAUNCH DATE JAN 26 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

RL 147.30 LAL -.00 LOL 125.87 VL 27.707 GAL -1.83 AZL 109.98 HCA 173.20 SMA 128.31 ECC .15127 INC19.9775 V1 30.247  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.448 GAP .46 AZP 70.15 TAL 190.34 TAP 3.53 RCA 108.90 APO 147.72 V2 34.788  
 RC 97.236 GL -65.28 GP 88.81 ZAL 95.96 ZAP 91.03 ETS 60.67 ZAE 89.00 ETE 155.41 ZAC 74.59 ETC 206.52 CLP 149.87

DISTANCE 380.659

PLANETOCENTRIC CONIC

C3 108.490 VHL 10.416 DLA -50.57 RAL 52.22 RAD 6570.1 VEL 15.160 PTH 2.72 VHP 14.229 DPA 64.37 RAP 277.61 ECC 2.7855  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.17 8 14 23 2065.73 13.30 53.32 311.00 139.26 8 48 48 1465.7 19.30 48.22  
 133.83 16 42 44 5822.49 13.32 270.21 311.01 139.26 18 19 46 5222.5 19.31 265.10  
 46.17 8 14 23 2065.73 13.30 53.32 311.00 139.26 8 48 48 1465.7 19.30 48.22  
 133.83 16 42 44 5822.49 13.32 270.21 311.01 139.26 18 19 46 5222.5 19.31 265.10  
 46.17 8 14 23 2065.73 13.30 53.32 311.00 139.26 8 48 48 1465.7 19.30 48.22  
 133.83 16 42 44 5822.49 13.32 270.21 311.01 139.26 18 19 46 5222.5 19.31 265.10

DIFFERENTIAL CORRECTIONS

TDE-4.4171 TRA 3.0505 TC3 -.1889 BAU .2855  
 RDE 1.3621 RRA -.6292 RC3 .0552 FAU .00526  
 FDE-1.3403 FRA .9735 FC3 -.0420 BSP 11725  
 BDE 4.6223 BRA 3.1147 BC3 .1968 FSP -312

MID-COURSE EXECUTION ACCURACY

SGT 3611.0 SGR 933.6 SG3 97.1  
 RRT -.9805 RRF -.9744 RTF .9992  
 SGB 3729.8 R23 -.0396 R13 -.9988  
 SG1 3725.5 SG2 177.7 THA 165.74

ORBIT DETERMINATION ACCURACY

ST 2555.8 SR 766.9 SS 958.3  
 CRT -.9950 CRS .9933 CST -.9999  
 LSA 2834.2 MSA 76.7 SSA 1.1  
 EL1 2667.4 EL2 73.7 ALF 163.36

LAUNCH DATE JAN 26 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

RL 147.30 LAL -.00 LOL 125.87 VL 27.700 GAL -1.66 AZL 127.19 HCA 175.94 SMA 128.26 ECC .15114 INC37.1917 V1 30.247  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.441 GAP .70 AZP 52.88 TAL 189.38 TAP 5.32 RCA 108.88 APO 147.65 V2 34.786  
 RC 99.636 GL -63.76 GP 76.08 ZAL 93.07 ZAP 90.98 ETS 163.40 ZAE 75.59 ETE 256.67 ZAC 66.88 ETC 309.64 CLP 94.09

DISTANCE 386.439

PLANETOCENTRIC CONIC

C3 348.192 VHL 18.660 DLA -47.55 RAL 55.01 RAD 6571.9 VEL 21.668 PTH 3.22 VHP 24.519 DPA 56.57 RAP 255.64 ECC 6.7304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.06 8 38 23 2218.18 3.56 57.40 321.73 137.45 9 15 22 1618.2 9.43 52.34  
 129.94 16 40 59 749.06 3.58 302.57 321.75 137.45 16 53 28 149.1 9.45 297.52  
 50.06 8 38 23 2218.18 3.56 57.40 321.73 137.45 9 15 22 1618.2 9.43 52.34  
 129.94 16 40 59 749.06 3.58 302.57 321.75 137.45 16 53 28 149.1 9.45 297.52  
 50.06 8 38 23 2218.18 3.56 57.40 321.73 137.45 9 15 22 1618.2 9.43 52.34  
 129.94 16 40 59 749.06 3.58 302.57 321.75 137.45 16 53 28 149.1 9.45 297.52

DIFFERENTIAL CORRECTIONS

TDE 2.3952 TRA .8591 TC3 -.0269 BAU .7127  
 RDE-7.4208 RRA 6.1113 RC3 .1507 FAU-.01358  
 FDE-1.5500 FRA 1.3361 FC3 .0338 BSP 11568  
 BDE 7.7977 BRA 6.1714 BC3 .1531 FSP -215

MID-COURSE EXECUTION ACCURACY

SGT 838.9 SGR 3638.5 SG3 67.6  
 RRT -.2115 RRF .9997 RTF -.1906  
 SGB 3733.9 R23 -.0328 R13 .9994  
 SG1 3643.0 SG2 818.9 THA 92.94

ORBIT DETERMINATION ACCURACY

ST 744.8 SR 2426.5 SS 1079.8  
 CRT -.8732 CRS -.9999 CST .8658  
 LSA 2735.5 MSA 354.2 SSA .5  
 EL1 2513.9 EL2 350.3 ALF 105.31

LAUNCH DATE JAN 26 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

RL 147.30 LAL -.00 LOL 125.87 VL 27.690 GAL -1.21 AZL 178.35 HCA 177.42 SMA 128.19 ECC .15048 INC88.3529 V1 30.247  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.432 GAP .56 AZP 1.65 TAL 186.86 TAP 4.28 RCA 108.90 APO 147.49 V2 34.784  
 RC 102.038 GL -43.21 GP 46.80 ZAL 91.11 ZAP 90.38 ETS 175.63 ZAE 46.17 ETE 268.18 ZAC 52.08 ETC 334.05 CLP 90.56

DISTANCE 390.823

PLANETOCENTRIC CONIC

C31633.678 VHL 40.419 DLA -27.68 RAL 47.19 RAD 6573.2 VEL 41.892 PTH 3.57 VHP 51.347 DPA 31.72 RAP 233.31 ECC27.8862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 11 15 45 1750.60 -6.28 13.93 315.75 117.67 11 44 56 1150.6 -2.53 7.26  
 90.00 13 1 14 1407.30 4.74 354.72 321.55 117.95 13 24 41 807.3 8.45 348.00  
 100.00 11 53 30 1628.57 -11.18 2.36 313.14 117.91 12 20 39 1028.6 -7.36 355.66  
 100.00 15 6 10 1004.56 9.62 327.72 324.19 118.44 15 22 55 404.6 13.35 320.91  
 110.00 12 0 46 1605.76 -19.22 356.14 308.65 118.83 12 27 32 1005.8 -15.23 349.30  
 110.00 17 15 24 600.13 17.61 301.58 328.76 119.78 17 25 24 .1 21.44 294.54

DIFFERENTIAL CORRECTIONS

TDE 6.0459 TRA-1.3242 TC3 -.0936 BAU 4.8714  
 RDE-9.1051 RRA11.4203 RC3 .2024 FAU-.08910  
 FDE-2.1393 FRA 2.7250 FC3 .0472 BSP 9390  
 BDE10.9296 BRA11.4969 BC3 .2230 FSP -185

MID-COURSE EXECUTION ACCURACY

SGT 1162.9 SGR 2772.3 SG3 56.5  
 RRT -.8475 RRF .9999 RTF -.8430  
 SGB 3006.3 R23 -.0814 R13 .9967  
 SG1 2949.8 SG2 580.1 THA 110.39

ORBIT DETERMINATION ACCURACY

ST 859.7 SR 1403.2 SS 1466.2  
 CRT -.9468 CRS-1.0000 CST .9450  
 LSA 2188.8 MSA 258.8 SSA .5  
 EL1 1628.3 EL2 238.5 ALF 120.85

LAUNCH DATE JAN 26 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 17 1969

Heliocentric Conic: RL 147.30 LAL -0.00 LOL 125.87 VL 27.678 GAL -1.86 AZL 48.84 HCA 184.10 SMA 126.11 ECC .15317 INC41.1596 V1 30.247  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.422 GAP 1.91 AZP 131.09 TAL 190.36 TAP 14.46 RCA 108.49 APO 147.73 V2 34.783  
 RC 104.441 GL 62.49 GP -76.03 ZAL 93.06 ZAP 92.92 ETS 180.43 ZAE 77.10 ETE 90.26 ZAC 92.57 ETC 45.54 CLP 102.19

Distance 400.836

Planetocentric Conic: C3 421.402 VHL 20.528 CLA 64.62 RAL 340.11 RAD 6572.2 VEL 23.296 PTH 3.29 VHP 24.267 DPA -72.30 RAP 132.90 ECC 7.9352  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.14 14 39 2 5003.54 -3.20 242.22 248.60 25.43 16 2 26 4403.5 -10.42 239.15  
 150.86 0 42 44 3290.08 -3.19 99.01 248.58 25.43 1 37 34 2690.1 -10.41 95.94  
 29.14 14 39 2 5003.54 -3.20 242.22 248.60 25.43 16 2 26 4403.5 -10.42 239.15  
 150.86 0 42 44 3290.08 -3.19 99.01 248.58 25.43 1 37 34 2690.1 -10.41 95.94  
 29.14 14 39 2 5003.54 -3.20 242.22 248.60 25.43 16 2 26 4403.5 -10.42 239.15  
 150.86 0 42 44 3290.08 -3.19 99.01 248.58 25.43 1 37 34 2690.1 -10.41 95.94

Differential Corrections: TDE -1.1733 TRA 1.7994 TC3 -.0733 BAU 1.1020 MGT 1253.1 SGR 3754.3 SG3 69.7 ST 480.5 SR 3146.1 SS 1409.2  
 RDE -11.0647 RRA 3.0730 RC3 -.1814 FAU -.01697 RRT .7608 RRF -.9996 RTF -.7697 CRT .8087 CRS 1.0000 CST .8130  
 FDE 2.3603 FRA -.6810 FC3 .0349 BSP 12445 SGB 3958.0 R23 -.0397 R13 -.9989 LSA 3469.3 MSA 280.5 SSA 1.2  
 BDE 11.1267 BRA 3.5610 BC3 .1956 FSP -229 SG1 3878.9 S62 787.1 THA 75.12 EL1 3170.2 EL2 280.5 ALF 82.90

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 19 1969

Heliocentric Conic: RL 147.30 LAL -0.00 LOL 125.87 VL 27.663 GAL -1.66 AZL 65.77 HCA 186.85 SMA 128.01 ECC .15336 INC24.2341 V1 30.247  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.411 GAP 2.12 AZP 114.08 TAL 189.23 TAP 16.08 RCA 108.38 APO 147.64 V2 34.783  
 RC 106.844 GL 65.68 GP -84.34 ZAL 94.61 ZAP 95.62 ETS 227.61 ZAE 90.32 ETE 138.01 ZAC 99.87 ETC 93.64 CLP 173.37

Distance 406.563

Planetocentric Conic: C3 155.135 VHL 12.455 DLA 64.73 RAL 331.29 RAD 6570.7 VEL 16.627 PTH 2.89 VHP 14.176 DPA -70.36 RAP 90.02 ECC 3.5531  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.01 14 3 33 4870.26 -11.42 238.90 235.82 25.82 15 24 43 4270.3 -18.60 235.65  
 150.99 0 7 52 3155.82 -11.41 95.54 235.81 25.82 1 0 28 2555.8 -18.59 92.29  
 29.01 14 3 33 4870.26 -11.42 238.90 235.82 25.82 15 24 43 4270.3 -18.60 235.65  
 150.99 0 7 52 3155.82 -11.41 95.54 235.81 25.82 1 0 28 2555.8 -18.59 92.29  
 29.01 14 3 33 4870.26 -11.42 238.90 235.82 25.82 15 24 43 4270.3 -18.60 235.65  
 150.99 0 7 52 3155.82 -11.41 95.54 235.81 25.82 1 0 28 2555.8 -18.59 92.29

Differential Corrections: TDE 4.5350 TRA -.8993 TC3 -.0376 BAU .1023 MGT 2284.3 SGR 3507.9 SG3 102.4 ST 2104.5 SR 2137.8 SS 1084.5  
 RDE -4.2408 RRA 2.7043 RC3 .0319 FAU .00585 RRT -.8456 RRF -.9763 RTF .9392 CRT -.9585 CRS .9903 CST -.9889  
 FDE 1.8489 FRA -.7616 FC3 -.0327 BSP 14379 SGB 4186.1 R23 -.0581 R13 -.9976 LSA 3160.5 MSA 431.8 SSA 1.6  
 BDE 6.2089 BRA 2.8376 BC3 .0493 FSP -368 SG1 4050.7 S62 1056.1 THA 121.20 EL1 2968.6 EL2 431.8 ALF 134.53

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 21 1969

Heliocentric Conic: RL 147.30 LAL -0.00 LOL 125.87 VL 27.647 GAL -1.50 AZL 72.75 HCA 189.85 SMA 127.90 ECC .15387 INC17.2468 V1 30.247  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.400 GAP 2.40 AZP 107.01 TAL 188.31 TAP 18.16 RCA 108.22 APO 147.58 V2 34.784  
 RC 109.246 GL 64.20 GP -78.36 ZAL 95.82 ZAP 99.06 ETS 312.41 ZAE 98.56 ETE 222.73 ZAC 103.65 ETC 178.86 CLP-141.29

Distance 412.553

Planetocentric Conic: C3 82.828 VHL 9.101 DLA 63.12 RAL 332.87 RAD 6569.6 VEL 14.289 PTH 2.60 VHP 10.037 DPA -65.61 RAP 69.59 ECC 2.3631  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.90 14 14 19 4735.43 -18.94 233.81 232.87 28.55 15 33 15 4135.4 -25.92 229.98  
 149.10 0 9 44 3035.41 -18.93 92.61 232.85 28.55 1 0 20 2435.4 -25.91 88.79  
 30.90 14 14 19 4735.43 -18.94 233.81 232.87 28.55 15 33 15 4135.4 -25.92 229.98  
 149.10 0 9 44 3035.41 -18.93 92.61 232.85 28.55 1 0 20 2435.4 -25.91 88.79  
 30.90 14 14 19 4735.43 -18.94 233.81 232.87 28.55 15 33 15 4135.4 -25.92 229.98  
 149.10 0 9 44 3035.41 -18.93 92.61 232.85 28.55 1 0 20 2435.4 -25.91 88.79

Differential Corrections: TDE 4.2351 TRA -2.0039 TC3 -.3246 BAU .3989 MGT 3904.3 SGR 1670.8 SG3 147.6 ST 2794.6 SR 1268.6 SS 1129.7  
 RDE 1.9457 RRA -.7900 RC3 -.1564 FAU .01843 RRT .9970 RRF .9993 RTF .9945 CRT .9992 CRS -1.0000 CST -.9988  
 FDE 2.0017 FRA -.7893 FC3 -.1926 BSP 13083 SGB 4246.8 R23 .0880 R13 .9956 LSA 3269.7 MSA 64.5 SSA 1.0  
 BDE 4.6606 BRA 2.1540 BC3 .3603 FSP -472 SG1 4245.1 S62 119.5 THA 23.12 EL1 3068.7 EL2 47.4 ALF 24.40

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 23 1969

Heliocentric Conic: RL 147.30 LAL -0.00 LOL 125.87 VL 27.629 GAL -1.35 AZL 76.47 HCA 192.93 SMA 127.78 ECC .15455 INC13.5276 V1 30.247  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.388 GAP 2.69 AZP 103.20 TAL 187.44 TAP 20.36 RCA 108.03 APO 147.52 V2 34.785  
 RC 111.645 GL 61.58 GP -71.37 ZAL 96.65 ZAP 103.01 ETS 320.54 ZAE 104.91 ETE 230.05 ZAC 106.11 ETC 187.02 CLP-134.79

Distance 418.600

Planetocentric Conic: C3 53.968 VHL 7.346 DLA 61.30 RAL 336.97 RAD 6569.0 VEL 13.241 PTH 2.42 VHP 7.929 DPA -60.57 RAP 57.54 ECC 1.8882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.06 14 35 54 4624.45 -24.56 228.49 232.50 31.87 15 52 58 4024.4 -31.27 223.98  
 146.94 0 20 52 2942.37 -24.55 89.84 232.48 31.87 1 9 55 2342.4 -31.26 85.33  
 33.06 14 35 54 4624.45 -24.56 228.49 232.50 31.87 15 52 58 4024.4 -31.27 223.98  
 146.94 0 20 52 2942.37 -24.55 89.84 232.48 31.87 1 9 55 2342.4 -31.26 85.33  
 33.06 14 35 54 4624.45 -24.56 228.49 232.50 31.87 15 52 58 4024.4 -31.27 223.98  
 146.94 0 20 52 2942.37 -24.55 89.84 232.48 31.87 1 9 55 2342.4 -31.26 85.33

Differential Corrections: TDE 3.2781 TRA -1.5780 TC3 -.6431 BAU .5442 MGT 3741.4 SGR 2147.1 SG3 202.6 ST 2670.0 SR 1697.7 SS 1246.2  
 RDE 2.1239 RRA -.7618 RC3 -.3940 FAU .03145 RRT .9901 RRF .9988 RTF .9890 CRT .9974 CRS -1.0000 CST -.9976  
 FDE 2.2743 FRA -.8267 FC3 -.5046 BSP 13494 SGB 4313.7 R23 .1051 R13 .9933 LSA 3398.6 MSA 116.9 SSA 2.0  
 BDE 3.9061 BRA 1.7522 BC3 .7542 FSP -668 SG1 4305.7 S62 262.5 THA 29.73 EL1 3162.5 EL2 102.7 ALF 32.42

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 26 1969 FLIGHT TIME 150.00 ARRIVAL DATE JUN 25 1969

MELIOCENTRIC CONIC DISTANCE 424.665  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.609 GAL -1.20 AZL 78.77 HCA 196.03 SMA 127.64 ECC .15537 INC11.2253 VI 30.247  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.375 GAP 2.99 AZP 100.80 TAL 186.54 TAP 22.58 RCA 107.81 APO 147.48 V2 34.787  
 RC 114.042 GL 58.72 GP -64.89 ZAL 97.09 ZAP 107.24 ETS 321.75 ZAE 110.14 ETE 229.73 ZAC 107.91 ETC 187.90 CLP-134.32  
 PLANETOCENTRIC CONIC  
 C3 39.532 VHL 6.287 DLA 59.52 RAL 341.53 RAD 6568.5 VEL 12.685 PTH 2.30 VHP 6.715 DPA -55.51 RAP 49.46 ECC 1.6506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.18 14 59 25 4536.78 -28.48 223.39 232.93 35.24 16 15 2 3936.8 -34.90 218.19  
 144.82 0 33 45 2874.04 -28.47 87.33 232.90 35.24 1 21 39 2274.0 -34.89 82.13  
 35.18 14 59 25 4536.78 -28.48 223.39 232.93 35.24 16 15 2 3936.8 -34.90 218.19  
 144.82 0 33 45 2874.04 -28.47 87.33 232.90 35.24 1 21 39 2274.0 -34.89 82.13  
 35.18 14 59 25 4536.78 -28.48 223.39 232.93 35.24 16 15 2 3936.8 -34.90 218.19  
 144.82 0 33 45 2874.04 -28.47 87.33 232.90 35.24 1 21 39 2274.0 -34.89 82.13  
 DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.9175 TRA-1.5473 TC3-1.0163 BAU .6209 SGT 3816.0 SGR 2134.6 SG3 259.6 ST 2756.3 SR 1729.3 SS 1369.8  
 RDE 1.8653 RRA -.5885 RC3 -.5893 FAU .04396 RRT .9853 RRF .9981 RTF .9847 CRT .9966 CRS-1.0000 CST -.9970  
 FDE 2.5445 FRA -.8228 FC3 -.9626 BSP 13761 SGB 4372.5 R23 .1231 R13 .9905 LSA 3527.7 MSA 138.5 SSA 2.7  
 BDE 3.4628 BRA 1.4702 BC3 1.1748 FSP -871 SG1 4360.8 SG2 319.0 THA 29.03 EL1 3251.7 EL2 120.3 ALF 32.07

LAUNCH DATE JAN 26 1969 FLIGHT TIME 152.00 ARRIVAL DATE JUN 27 1969

MELIOCENTRIC CONIC DISTANCE 430.732  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.588 GAL -1.04 AZL 80.34 HCA 199.16 SMA 127.50 ECC .15632 INC 9.6563 VI 30.247  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.362 GAP 3.28 AZP 99.13 TAL 185.62 TAP 24.78 RCA 107.57 APO 147.43 V2 34.790  
 RC 116.435 GL 55.90 GP -58.94 ZAL 97.18 ZAP 111.59 ETS 321.73 ZAE 114.49 ETE 227.53 ZAC 109.31 ETC 187.25 CLP-135.50  
 PLANETOCENTRIC CONIC  
 C3 31.219 VHL 5.587 DLA 57.87 RAL 346.01 RAD 6568.2 VEL 12.353 PTH 2.23 VHP 5.969 DPA -50.57 RAP 43.73 ECC 1.5138  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.17 15 22 25 4467.33 -31.15 218.70 233.71 38.43 16 36 52 3867.3 -37.27 212.88  
 142.83 0 46 27 2824.33 -31.14 85.14 233.69 38.42 1 33 32 2224.3 -37.26 79.32  
 37.17 15 22 25 4467.33 -31.15 218.70 233.71 38.43 16 36 52 3867.3 -37.27 212.88  
 142.83 0 46 27 2824.33 -31.14 85.14 233.69 38.42 1 33 32 2224.3 -37.26 79.32  
 37.17 15 22 25 4467.33 -31.15 218.70 233.71 38.43 16 36 52 3867.3 -37.27 212.88  
 142.83 0 46 27 2824.33 -31.14 85.14 233.69 38.42 1 33 32 2224.3 -37.26 79.32  
 DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.7384 TRA-1.1771 TC3-1.4236 BAU .6678 SGT 3945.5 SGR 2011.5 SG3 312.5 ST 2889.8 SR 1658.3 SS 1475.3  
 RDE 1.5985 RRA -.4316 RC3 -.7307 FAU .05508 RRT .9816 RRF .9972 RTF .9813 CRT .9962 CRS-1.0000 CST -.9966  
 FDE 2.7554 FRA -.7660 FC3-1.5274 BSP 13899 SGB 4428.6 R23 .1395 R13 .9875 LSA 3640.8 MSA 149.3 SSA 3.4  
 BDE 3.1708 BRA 1.2538 BC3 1.6002 FSP -1055 SG1 4415.3 SG2 343.0 THA 26.76 EL1 3329.5 EL2 124.7 ALF 29.80

LAUNCH DATE JAN 26 1969 FLIGHT TIME 154.00 ARRIVAL DATE JUN 29 1969

MELIOCENTRIC CONIC DISTANCE 436.793  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.565 GAL -.87 AZL 81.49 HCA 202.30 SMA 127.35 ECC .15738 INC 8.5140 VI 30.247  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.348 GAP 3.58 AZP 97.89 TAL 184.66 TAP 26.96 RCA 107.30 APO 147.39 V2 34.794  
 RC 118.823 GL 53.22 GP -53.51 ZAL 96.95 ZAP 115.90 ETS 321.51 ZAE 118.07 ETE 224.61 ZAC 110.48 ETC 186.20 CLP-137.26  
 PLANETOCENTRIC CONIC  
 C3 25.957 VHL 5.095 DLA 56.36 RAL 350.30 RAD 6568.0 VEL 12.138 PTH 2.18 VHP 5.498 DPA -45.83 RAP 39.58 ECC 1.4272  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.00 15 44 27 4411.43 -32.95 214.46 234.76 41.31 16 57 58 3811.4 -38.78 208.11  
 141.00 0 58 39 2788.10 -32.93 83.28 234.75 41.31 1 45 7 2188.1 -38.77 76.94  
 39.00 15 44 27 4411.43 -32.95 214.46 234.76 41.31 16 57 58 3811.4 -38.78 208.11  
 141.00 0 58 39 2788.10 -32.93 83.28 234.75 41.31 1 45 7 2188.1 -38.77 76.94  
 39.00 15 44 27 4411.43 -32.95 214.46 234.76 41.31 16 57 58 3811.4 -38.78 208.11  
 141.00 0 58 39 2788.10 -32.93 83.28 234.75 41.31 1 45 7 2188.1 -38.77 76.94  
 DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.6309 TRA-1.0346 TC3-1.8523 BAU .7029 SGT 4089.9 SGR 1855.7 SG3 357.4 ST 3025.6 SR 1548.1 SS 1553.0  
 RDE 1.3664 RRA -.3056 RC3 -.8195 FAU .06430 RRT .9784 RRF .9959 RTF .9783 CRT .9960 CRS-1.0000 CST -.9963  
 FDE 2.8841 FRA -.6637 FC3-2.1445 BSP 14073 SGB 4491.2 R23 .1532 R13 .9842 LSA 3733.4 MSA 155.4 SSA 4.2  
 BDE 2.9646 BRA 1.0788 BC3 2.0255 FSP -1213 SG1 4477.5 SG2 350.4 THA 24.10 EL1 3396.4 EL2 123.0 ALF 27.04

LAUNCH DATE JAN 26 1969 FLIGHT TIME 156.00 ARRIVAL DATE JUL 1 1969

MELIOCENTRIC CONIC DISTANCE 442.844  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.541 GAL -.69 AZL 82.36 HCA 205.44 SMA 127.19 ECC .15857 INC 7.6410 VI 30.247  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.335 GAP 3.88 AZP 96.91 TAL 183.66 TAP 29.11 RCA 107.02 APO 147.36 V2 34.798  
 RC 121.206 GL 50.69 GP -48.60 ZAL 96.43 ZAP 120.05 ETS 321.34 ZAE 120.96 ETE 221.41 ZAC 111.51 ETC 185.08 CLP-139.22  
 PLANETOCENTRIC CONIC  
 C3 22.398 VHL 4.733 DLA 55.00 RAL 354.41 RAD 6567.9 VEL 11.991 PTH 2.14 VHP 5.202 DPA -41.36 RAP 36.56 ECC 1.3686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.66 16 5 28 4365.70 -34.14 210.70 236.07 43.87 17 18 14 3765.7 -39.70 203.91  
 139.34 1 10 27 2761.54 -34.13 81.75 236.06 43.87 1 56 28 2161.5 -39.69 74.97  
 40.66 16 5 28 4365.70 -34.14 210.70 236.07 43.87 17 18 14 3765.7 -39.70 203.91  
 139.34 1 10 27 2761.54 -34.13 81.75 236.06 43.87 1 56 28 2161.5 -39.69 74.97  
 40.66 16 5 28 4365.70 -34.14 210.70 236.07 43.87 17 18 14 3765.7 -39.70 203.91  
 139.34 1 10 27 2761.54 -34.13 81.75 236.06 43.87 1 56 28 2161.5 -39.69 74.97  
 DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.5573 TRA -.9064 TC3-2.2909 BAU .7331 SGT 4236.3 SGR 1694.2 SG3 392.5 ST 3149.4 SR 1423.8 SS 1600.6  
 RDE 1.1709 RRA -.2086 RC3 -.8631 FAU .07136 RRT .9756 RRF .9940 RTF .9757 CRT .9959 CRS-1.0000 CST -.9960  
 FDE 2.9281 FRA -.5297 FC3-2.7583 BSP 14297 SGB 4562.6 R23 .1627 R13 .9810 LSA 3805.7 MSA 158.6 SSA 5.1  
 BDE 2.8126 BRA .9300 BC3 2.4481 FSP -1338 SG1 4549.4 SG2 346.5 THA 21.44 EL1 3454.3 EL2 117.2 ALF 24.27

LAUNCH DATE JAN 26 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 448.883

RL 147.30 LAL -0.00 LOL 125.87 VL 27.516 GAL -0.50 AZL 83.05 HCA 208.59 SMA 127.02 ECC .15988 INC 6.9487 V1 30.247
RP 108.89 LAP -3.32 LOP 334.28 VP 37.321 GAP 4.17 AZP 96.11 TAL 182.63 TAP 31.22 RCA 106.71 APO 147.33 V2 34.803
RC 123.581 GL 48.31 GP -44.19 ZAL 95.65 ZAP 123.99 ETS 321.29 ZAE 123.22 ETE 218.14 ZAC 112.48 ETC 184.04 CLP-141.23

PLANETOCENTRIC CONIC

C3 19.873 VHL 4.458 DLA 53.77 RAL 358.39 RAD 6567.8 VEL 11.885 PTH 2.11 VHP 5.021 DPA -37.21 RAP 34.39 ECC 1.3271
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.17 16 25 38 4327.75 -34.92 207.36 237.64 46.12 17 37 46 3727.8 -40.24 200.23
137.83 1 22 1 2742.03 -34.91 80.50 237.63 46.11 2 7 43 2142.0 -40.23 73.37
42.17 16 25 38 4327.75 -34.92 207.36 237.64 46.12 17 37 46 3727.8 -40.24 200.23
137.83 1 22 1 2742.03 -34.91 80.50 237.63 46.11 2 7 43 2142.0 -40.23 73.37
42.17 16 25 38 4327.75 -34.92 207.36 237.64 46.12 17 37 46 3727.8 -40.24 200.23
137.83 1 22 1 2742.03 -34.91 80.50 237.63 46.11 2 7 43 2142.0 -40.23 73.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5055 TRA -0.7838 TC3-2.7265 BAU .7601 SGT 4380.1 SGR 1539.0 SG3 417.3 ST 3261.4 SR 1301.9 SS 1624.0
RDE 1.0105 RRA -0.1339 RC3 -0.8666 FAU .07603 RRT .9727 RRF .9913 RTF .9734 CRT .9959 CRS-1.0000 CST -.9958
FDE 2.9056 FRA -0.3747 FC3-3.3119 BSP 14548 SGB 4642.6 R23 .1673 R13 .9779 LSA 3865.7 MSA 160.3 SSA 6.0
BOE 2.7016 BRA .7952 BC3 2.8609 FSP -1426 SG1 4630.3 SG2 338.0 THA 18.97 EL1 3509.9 EL2 109.3 ALF 21.70

LAUNCH DATE JAN 26 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 454.909

RL 147.30 LAL -0.00 LOL 125.87 VL 27.491 GAL -0.30 AZL 83.62 HCA 211.74 SMA 126.85 ECC .16131 INC 6.3832 V1 30.247
RP 108.87 LAP -3.35 LOP 337.45 VP 37.307 GAP 4.46 AZP 95.43 TAL 181.56 TAP 33.30 RCA 106.39 APO 147.31 V2 34.808
RC 125.948 GL 46.05 GP -40.26 ZAL 94.63 ZAP 127.67 ETS 321.34 ZAE 124.96 ETE 214.94 ZAC 113.45 ETC 183.11 CLP-143.21

PLANETOCENTRIC CONIC

C3 18.020 VHL 4.245 DLA 52.68 RAL 2.28 RAD 6567.7 VEL 11.807 PTH 2.09 VHP 4.922 DPA -33.37 RAP 32.89 ECC 1.2966
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
43.53 16 45 11 4295.82 -35.41 204.42 239.47 48.07 17 56 47 3695.8 -40.51 197.02
136.47 1 33 31 2727.85 -35.40 79.50 239.46 48.06 2 18 59 2127.8 -40.50 72.10
43.53 16 45 11 4295.82 -35.41 204.42 239.47 48.07 17 56 47 3695.8 -40.51 197.02
136.47 1 33 31 2727.85 -35.40 79.50 239.46 48.06 2 18 59 2127.8 -40.50 72.10
43.53 16 45 11 4295.82 -35.41 204.42 239.47 48.07 17 56 47 3695.8 -40.51 197.02
136.47 1 33 31 2727.85 -35.40 79.50 239.46 48.06 2 18 59 2127.8 -40.50 72.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4636 TRA -0.6627 TC3-3.1544 BAU .7866 SGT 4517.2 SGR 1394.9 SG3 432.6 ST 3355.4 SR 1186.3 SS 1623.3
RDE .8780 RRA -0.0766 RC3 -0.8431 FAU .07872 RRT .9695 RRF .9875 RTF .9713 CRT .9960 CRS-1.0000 CST -.9954
FDE 2.8251 FRA -0.2095 FC3-3.7819 BSP 14883 SGB 4727.7 R23 .1668 R13 .9750 LSA 3908.3 MSA 161.1 SSA 6.9
BOE 2.6154 BRA .6671 BC3 3.2652 FSP -1490 SG1 4716.3 SG2 327.3 THA 16.75 EL1 3557.5 EL2 99.8 ALF 19.42

LAUNCH DATE JAN 26 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 460.921

RL 147.30 LAL -0.00 LOL 125.87 VL 27.464 GAL -0.09 AZL 84.09 HCA 214.90 SMA 126.67 ECC .16287 INC 5.9100 V1 30.247
RP 108.85 LAP -3.38 LOP 340.62 VP 37.293 GAP 4.76 AZP 94.85 TAL 180.46 TAP 35.36 RCA 106.04 APO 147.30 V2 34.815
RC 128.306 GL 43.90 GP -36.77 ZAL 93.39 ZAP 131.09 ETS 321.47 ZAE 126.25 ETE 211.92 ZAC 114.45 ETC 182.31 CLP-145.14

PLANETOCENTRIC CONIC

C3 16.629 VHL 4.078 DLA 51.68 RAL 6.13 RAD 6567.7 VEL 11.748 PTH 2.07 VHP 4.882 DPA -29.85 RAP 31.91 ECC 1.2737
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
44.78 17 4 19 4268.67 -35.69 201.82 241.55 49.77 18 15 27 3668.7 -40.60 194.20
135.22 1 45 3 2717.84 -35.68 78.73 241.53 49.76 2 30 21 2117.8 -40.59 71.11
44.78 17 4 19 4268.67 -35.69 201.82 241.55 49.77 18 15 27 3668.7 -40.60 194.20
135.22 1 45 3 2717.84 -35.68 78.73 241.53 49.76 2 30 21 2117.8 -40.59 71.11
44.78 17 4 19 4268.67 -35.69 201.82 241.55 49.77 18 15 27 3668.7 -40.60 194.20
135.22 1 45 3 2717.84 -35.68 78.73 241.53 49.76 2 30 21 2117.8 -40.59 71.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4169 TRA -0.5524 TC3-3.5856 BAU .8173 SGT 4652.9 SGR 1264.1 SG3 439.8 ST 3417.6 SR 1073.8 SS 1590.8
RDE .7639 RRA -0.0399 RC3 -0.8111 FAU .08046 RRT .9679 RRF .9823 RTF .9706 CRT .9964 CRS -.9999 CST -.9952
FDE 2.6829 FRA -0.0691 FC3-4.1890 BSP 15422 SGB 4821.6 R23 .1542 R13 .9734 LSA 3916.5 MSA 157.0 SSA 7.9
BOE 2.5347 BRA .5538 BC3 3.6762 FSP -1550 SG1 4811.7 SG2 307.4 THA 14.79 EL1 3581.3 EL2 87.2 ALF 17.39

LAUNCH DATE JAN 26 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 466.920

RL 147.30 LAL -0.00 LOL 125.87 VL 27.436 GAL .13 AZL 84.49 HCA 218.06 SMA 126.49 ECC .16457 INC 5.5061 V1 30.247
RP 108.83 LAP -3.39 LOP 343.80 VP 37.279 GAP 5.05 AZP 94.34 TAL 179.32 TAP 37.38 RCA 105.67 APO 147.30 V2 34.821
RC 130.653 GL 41.85 GP -33.69 ZAL 91.95 ZAP 134.25 ETS 321.64 ZAE 127.20 ETE 209.12 ZAC 115.51 ETC 181.62 CLP-146.99

PLANETOCENTRIC CONIC

C3 15.571 VHL 3.946 DLA 50.76 RAL 9.95 RAD 6567.6 VEL 11.703 PTH 2.06 VHP 4.886 DPA -26.63 RAP 31.37 ECC 1.2563
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.93 17 23 9 4245.47 -35.81 199.52 243.87 51.25 18 33 54 3645.5 -40.54 191.72
134.07 1 56 45 2711.12 -35.80 78.15 243.86 51.25 2 41 56 2111.1 -40.54 70.36
45.93 17 23 9 4245.47 -35.81 199.52 243.87 51.25 18 33 54 3645.5 -40.54 191.72
134.07 1 56 45 2711.12 -35.80 78.15 243.86 51.25 2 41 56 2111.1 -40.54 70.36
45.93 17 23 9 4245.47 -35.81 199.52 243.87 51.25 18 33 54 3645.5 -40.54 191.72
134.07 1 56 45 2711.12 -35.80 78.15 243.86 51.25 2 41 56 2111.1 -40.54 70.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4059 TRA -0.4134 TC3-3.9546 BAU .8377 SGT 4779.6 SGR 1156.0 SG3 442.0 ST 3506.1 SR 995.9 SS 1580.9
RDE .6858 RRA .0011 RC3 -0.7440 FAU .07921 RRT .9608 RRF .9755 RTF .9676 CRT .9966 CRS -.9997 CST -.9946
FDE 2.5776 FRA .1213 FC3-4.4042 BSP 15494 SGB 4917.4 R23 .1508 R13 .9700 LSA 3969.6 MSA 161.6 SSA 8.9
BOE 2.5017 BRA .4134 BC3 4.0239 FSP -1514 SG1 4907.4 SG2 312.1 THA 13.14 EL1 3644.0 EL2 79.0 ALF 15.81

LAUNCH DATE JAN 26 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC DISTANCE 472.903  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.408 GAL .37 AZL 84.84 HCA 221.22 SMA 126.30 ECC .16640 INC 5.1551 V1 30.247  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.265 GAP 5.34 AZP 93.88 TAL 178.15 TAP 39.37 RCA 105.28 APO 147.31 V2 34.829  
 RC 132.989 GL 39.86 GP -30.98 ZAL 90.33 ZAP 137.15 ETS 321.82 ZAE 127.86 ETE 206.57 ZAC 116.65 ETC 181.04 CLP-148.77

PLANETOCENTRIC CONIC  
 C3 14.765 VHL 3.843 DLA 49.91 RAL 13.78 RAD 6567.6 VEL 11.668 PTH 2.05 VHP 4.923 DPA -23.67 RAP 31.17 ECC 1.2430  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.01 17 41 53 4225.39 -35.80 197.45 246.42 52.56 18 52 19 3625.4 -40.38 189.53  
 132.99 2 8 33 2707.36 -35.79 77.76 246.41 52.55 2 53 40 2107.4 -40.37 69.84  
 47.01 17 41 53 4225.39 -35.80 197.45 246.42 52.56 18 52 19 3625.4 -40.38 189.53  
 132.99 2 8 33 2707.36 -35.79 77.76 246.41 52.55 2 53 40 2107.4 -40.37 69.84  
 47.01 17 41 53 4225.39 -35.80 197.45 246.42 52.56 18 52 19 3625.4 -40.38 189.53  
 132.99 2 8 33 2707.36 -35.79 77.76 246.41 52.55 2 53 40 2107.4 -40.37 69.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3795 TRA -.2808 TC3-4.3040 BAU .8600 SGT 4894.1 SGR 1056.1 SG3 437.1 ST 3554.8 SR 918.1 SS 1540.4  
 ROE .6155 RRA .0275 RC3 -.6748 FAU .07722 RRT .9539 RRF .9665 RTF .9660 CRT .9971 CRS -.9994 CST -.9941  
 FDE 2.4244 FRA .2786 FC3-4.5277 BSP 15752 SGB 5006.8 R23 .1376 R13 .9678 LSA 3978.2 MSA 161.7 SSA 9.8  
 BOE 2.4578 BRA .2822 BC3 4.3566 FSP -1487 SGI 4997.2 SG2 310.5 THA 11.68 EL1 3670.8 EL2 68.0 ALF 14.45

LAUNCH DATE JAN 26 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC DISTANCE 478.872  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.379 GAL .62 AZL 85.15 HCA 224.38 SMA 126.11 ECC .16838 INC 4.8457 V1 30.247  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.252 GAP 5.64 AZP 93.47 TAL 176.96 TAP 41.34 RCA 104.87 APO 147.34 V2 34.837  
 RC 135.313 GL 37.92 GP -28.58 ZAL 88.54 ZAP 139.83 ETS 322.00 ZAE 128.31 ETE 204.28 ZAC 117.87 ETC 180.55 CLP-150.47

PLANETOCENTRIC CONIC  
 C3 14.159 VHL 3.763 DLA 49.10 RAL 17.62 RAD 6567.6 VEL 11.642 PTH 2.04 VHP 4.986 DPA -20.95 RAP 31.27 ECC 1.2330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.05 18 0 37 4207.96 -35.68 195.59 249.17 53.71 19 10 45 3608.0 -40.13 187.57  
 131.95 2 20 29 2706.19 -35.67 77.53 249.16 53.70 3 5 35 2106.2 -40.12 69.51  
 48.05 18 0 37 4207.96 -35.68 195.59 249.17 53.71 19 10 45 3608.0 -40.13 187.57  
 131.95 2 20 29 2706.19 -35.67 77.53 249.16 53.70 3 5 35 2106.2 -40.12 69.51  
 48.05 18 0 37 4207.96 -35.68 195.59 249.17 53.71 19 10 45 3608.0 -40.13 187.57  
 131.95 2 20 29 2706.19 -35.67 77.53 249.16 53.70 3 5 35 2106.2 -40.12 69.51

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3542 TRA -.1428 TC3-4.6306 BAU .8841 SGT 5010.4 SGR 973.8 SG3 430.1 ST 3587.6 SR 851.9 SS 1491.6  
 ROE .5590 RRA .0476 RC3 -.6111 FAU .07504 RRT .9463 RRF .9555 RTF .9649 CRT .9977 CRS -.9988 CST -.9936  
 FDE 2.2647 FRA .4235 FC3-4.5884 BSP 16069 SGB 5104.1 R23 .1206 R13 .9663 LSA 3974.3 MSA 161.2 SSA 10.8  
 BOE 2.4196 BRA .1506 BC3 4.6707 FSP -1459 SGI 5094.7 SG2 309.7 THA 10.46 EL1 3686.9 EL2 56.4 ALF 13.33

LAUNCH DATE JAN 26 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC DISTANCE 484.824  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.349 GAL .87 AZL 85.43 HCA 227.54 SMA 125.91 ECC .17051 INC 4.5693 V1 30.247  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.238 GAP 5.94 AZP 93.09 TAL 175.74 TAP 43.28 RCA 104.44 APO 147.38 V2 34.846  
 RC 137.625 GL 36.03 GP -26.46 ZAL 86.61 ZAP 142.30 ETS 322.14 ZAE 128.60 ETE 202.24 ZAC 119.17 ETC 180.12 CLP-152.10

PLANETOCENTRIC CONIC  
 C3 13.716 VHL 3.704 DLA 48.31 RAL 21.48 RAD 6567.5 VEL 11.623 PTH 2.04 VHP 5.070 DPA -18.45 RAP 31.63 ECC 1.2257  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.07 18 19 26 4192.68 -35.46 193.88 252.12 54.74 19 29 18 3592.7 -39.79 185.79  
 130.93 2 32 27 2707.52 -35.45 77.47 252.11 54.73 3 17 35 2107.5 -39.78 69.38  
 49.07 18 19 26 4192.68 -35.46 193.88 252.12 54.74 19 29 18 3592.7 -39.79 185.79  
 130.93 2 32 27 2707.52 -35.45 77.47 252.11 54.73 3 17 35 2107.5 -39.78 69.38  
 49.07 18 19 26 4192.68 -35.46 193.88 252.12 54.74 19 29 18 3592.7 -39.79 185.79  
 130.93 2 32 27 2707.52 -35.45 77.47 252.11 54.73 3 17 35 2107.5 -39.78 69.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3254 TRA -.0017 TC3-4.9216 BAU .9081 SGT 5121.7 SGR 903.7 SG3 420.3 ST 3599.2 SR 795.6 SS 1435.1  
 ROE .5134 RRA .0623 RC3 -.5480 FAU .07236 RRT .9369 RRF .9422 RTF .9643 CRT .9984 CRS -.9979 CST -.9930  
 FDE 2.1020 FRA .5514 FC3-4.5670 BSP 16453 SGB 5200.8 R23 .1011 R13 .9654 LSA 3952.3 MSA 160.0 SSA 11.8  
 BOE 2.3814 BRA .0624 BC3 4.9520 FSP -1431 SGI 5191.4 SG2 311.6 THA 9.42 EL1 3685.8 EL2 44.3 ALF 12.45

LAUNCH DATE JAN 26 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC DISTANCE 490.760  
 RL 147.30 LAL -.00 LOL 125.87 VL 27.319 GAL 1.15 AZL 85.68 HCA 230.71 SMA 125.72 ECC .17281 INC 4.3193 V1 30.247  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.224 GAP 6.24 AZP 92.74 TAL 174.49 TAP 45.20 RCA 103.99 APO 147.44 V2 34.855  
 RC 139.923 GL 34.17 GP -24.58 ZAL 84.53 ZAP 144.58 ETS 322.24 ZAE 128.77 ETE 200.43 ZAC 120.55 ETC 179.76 CLP-153.65

PLANETOCENTRIC CONIC  
 C3 13.414 VHL 3.663 DLA 47.53 RAL 25.36 RAD 6567.5 VEL 11.610 PTH 2.03 VHP 5.171 DPA -16.14 RAP 32.19 ECC 1.2208  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.09 18 38 23 4179.20 -35.15 192.30 255.24 55.67 19 48 2 3579.2 -39.37 184.17  
 129.91 2 44 25 2711.30 -35.14 77.57 255.23 55.66 3 29 37 2111.3 -39.36 69.44  
 50.09 18 38 23 4179.20 -35.15 192.30 255.24 55.67 19 48 2 3579.2 -39.37 184.17  
 129.91 2 44 25 2711.30 -35.14 77.57 255.23 55.66 3 29 37 2111.3 -39.36 69.44  
 50.09 18 38 23 4179.20 -35.15 192.30 255.24 55.67 19 48 2 3579.2 -39.37 184.17  
 129.91 2 44 25 2711.30 -35.14 77.57 255.23 55.66 3 29 37 2111.3 -39.36 69.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2928 TRA .1476 TC3-5.1644 BAU .9302 SGT 5224.2 SGR 844.2 SG3 408.1 ST 3590.0 SR 747.8 SS 1372.5  
 ROE .4768 RRA .0746 RC3 -.4854 FAU .06915 RRT .9250 RRF .9265 RTF .9638 CRT .9990 CRS -.9964 CST -.9924  
 FDE 1.9399 FRA .6707 FC3-4.4625 BSP 16797 SGB 5292.0 R23 .0835 R13 .9646 LSA 3912.2 MSA 159.5 SSA 12.8  
 BOE 2.3418 BRA .1653 BC3 5.1871 FSP -1390 SGI 5282.4 SG2 317.2 THA 8.53 EL1 3666.9 EL2 32.4 ALF 11.76

LAUNCH DATE JAN 26 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 496.679

RL 147.30 LAL -.00 LOL 125.87 VL 27.288 GAL 1.43 AZL 85.91 HCA 233.88 SMA 125.52 ECC .17527 INC 4.0909 V1 30.247
RP 108.69 LAP -3.30 LOP 359.68 VP 37.211 GAP 6.54 AZP 92.41 TAL 173.22 TAP 47.10 RCA 103.52 APO 147.52 V2 34.865
RC 142.207 GL 32.34 GP -22.92 ZAL 82.34 ZAP 146.69 ETS 322.27 ZAE 128.86 ETE 198.83 ZAC 122.02 ETC 179.44 CLP-155.14

PLANETOCENTRIC CONIC

C3 13.238 VHL 3.638 DLA 46.74 RAL 29.24 RAD 6567.5 VEL 11.603 PTH 2.03 VHP 5.287 DPA -13.99 RAP 32.94 ECC 1.2179
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
51.13 18 57 32 4167.18 -34.75 190.82 258.50 56.52 20 6 59 3567.2 -38.86 182.66
128.87 2 56 16 2717.59 -34.73 77.84 258.49 56.51 3 41 33 2117.6 -38.85 69.69
51.13 18 57 32 4167.18 -34.75 190.82 258.50 56.52 20 6 59 3567.2 -38.86 182.66
128.87 2 56 16 2717.59 -34.73 77.84 258.49 56.51 3 41 33 2117.6 -38.85 69.69
51.13 18 57 32 4167.18 -34.75 190.82 258.50 56.52 20 6 59 3567.2 -38.86 182.66
128.87 2 56 16 2717.59 -34.73 77.84 258.49 56.51 3 41 33 2117.6 -38.85 69.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2553 TRA .3049 TC3-5.3598 BAU .9516 SGT 5321.3 SGR 794.6 SG3 394.6 ST 3559.7 SR 707.3 SS 1305.0
RDE .4476 RRA .0848 RC3 -.4273 FAU .06576 RRT .9111 RRF .9087 RTF .9635 CRT .9995 CRS -.9941 CST -.9916
FDE 1.7806 FRA .7793 FC3-4.3006 BSP 17120 SGB 5380.3 R23 .0669 R13 .9641 LSA 3853.4 MSA 159.2 SSA 13.7
BOE 2.2993 BRA .3165 BC3 5.3768 FSP -1344 SG1 5370.5 SG2 324.5 THA 7.78 EL1 3629.2 EL2 21.3 ALF 11.23

LAUNCH DATE JAN 26 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC

DISTANCE 502.581

RL 147.30 LAL -.00 LOL 125.87 VL 27.257 GAL 1.74 AZL 86.12 HCA 237.05 SMA 125.32 ECC .17793 INC 3.8801 V1 30.247
RP 108.66 LAP -3.26 LOP 2.86 VP 37.198 GAP 6.85 AZP 92.11 TAL 171.93 TAP 48.99 RCA 103.02 APO 147.61 V2 34.875
RC 144.478 GL 30.52 GP -21.44 ZAL 80.05 ZAP 148.66 ETS 322.23 ZAE 128.88 ETE 197.42 ZAC 123.55 ETC 179.15 CLP-156.57

PLANETOCENTRIC CONIC

C3 13.179 VHL 3.630 DLA 45.92 RAL 33.12 RAD 6567.5 VEL 11.600 PTH 2.03 VHP 5.417 DPA -11.98 RAP 33.84 ECC 1.2169
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.20 19 16 55 4156.27 -34.25 189.40 261.89 57.31 20 26 11 3556.3 -38.28 181.23
127.80 3 7 51 2726.54 -34.24 78.29 261.88 57.29 3 53 17 2126.5 -38.27 70.13
52.20 19 16 55 4156.27 -34.25 189.40 261.89 57.31 20 26 11 3556.3 -38.28 181.23
127.80 3 7 51 2726.54 -34.24 78.29 261.88 57.29 3 53 17 2126.5 -38.27 70.13
52.20 19 16 55 4156.27 -34.25 189.40 261.89 57.31 20 26 11 3556.3 -38.28 181.23
127.80 3 7 51 2726.54 -34.24 78.29 261.88 57.29 3 53 17 2126.5 -38.27 70.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2133 TRA .4705 TC3-5.5031 BAU .9718 SGT 5413.6 SGR 754.1 SG3 380.5 ST 3510.0 SR 673.8 SS 1235.8
RDE .4250 RRA .0935 RC3 -.3741 FAU .06227 RRT .8953 RRF .8893 RTF .9636 CRT .9998 CRS -.9908 CST -.9907
FDE 1.6287 FRA .8777 FC3-4.0910 BSP 17426 SGB 5465.8 R23 .0524 R13 .9640 LSA 3778.3 MSA 159.4 SSA 14.6
BOE 2.2538 BRA .4797 BC3 5.5158 FSP -1295 SG1 5455.7 SG2 333.4 THA 7.13 EL1 3574.1 EL2 14.7 ALF 10.86

LAUNCH DATE JAN 26 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC

DISTANCE 508.464

RL 147.30 LAL -.00 LOL 125.87 VL 27.226 GAL 2.05 AZL 86.32 HCA 240.23 SMA 125.12 ECC .18077 INC 3.6839 V1 30.247
RP 108.63 LAP -3.20 LOP 6.05 VP 37.185 GAP 7.17 AZP 91.83 TAL 170.62 TAP 50.85 RCA 102.50 APO 147.73 V2 34.885
RC 146.734 GL 28.73 GP -20.12 ZAL 77.67 ZAP 150.49 ETS 322.10 ZAE 128.86 ETE 196.18 ZAC 125.16 ETC 178.89 CLP-157.95

PLANETOCENTRIC CONIC

C3 13.231 VHL 3.637 DLA 45.08 RAL 36.98 RAD 6567.5 VEL 11.602 PTH 2.03 VHP 5.558 DPA -10.10 RAP 34.89 ECC 1.2177
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
53.33 19 36 31 4146.29 -33.66 188.02 265.39 58.04 20 45 37 3546.3 -37.60 179.87
126.67 3 19 3 2738.23 -33.65 78.93 265.38 58.02 4 4 41 2138.2 -37.59 70.78
53.33 19 36 31 4146.29 -33.66 188.02 265.39 58.04 20 45 37 3546.3 -37.60 179.87
126.67 3 19 3 2738.23 -33.65 78.93 265.38 58.02 4 4 41 2138.2 -37.59 70.78
53.33 19 36 31 4146.29 -33.66 188.02 265.39 58.04 20 45 37 3546.3 -37.60 179.87
126.67 3 19 3 2738.23 -33.65 78.93 265.38 58.02 4 4 41 2138.2 -37.59 70.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1661 TRA .6472 TC3-5.5879 BAU .9901 SGT 5500.1 SGR 720.8 SG3 365.9 ST 3441.5 SR 645.5 SS 1164.9
RDE .4075 RRA .1019 RC3 -.3252 FAU .05866 RRT .8777 RRF .8686 RTF .9636 CRT .9995 CRS -.9861 CST -.9896
FDE 1.4830 FRA .9697 FC3-3.8381 BSP 17676 SGB 5547.1 R23 .0408 R13 .9639 LSA 3686.7 MSA 160.7 SSA 15.4
BOE 2.2041 BRA .6551 BC3 5.5974 FSP -1240 SG1 5536.5 SG2 343.2 THA 6.59 EL1 3501.5 EL2 20.2 ALF 10.62

LAUNCH DATE JAN 26 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 514.326

RL 147.30 LAL -.00 LOL 125.87 VL 27.194 GAL 2.39 AZL 86.50 HCA 243.40 SMA 124.91 ECC .18383 INC 3.4996 V1 30.247
RP 108.59 LAP -3.13 LOP 9.23 VP 37.172 GAP 7.50 AZP 91.57 TAL 169.30 TAP 52.70 RCA 101.95 APO 147.88 V2 34.897
RC 148.977 GL 26.95 GP -18.95 ZAL 75.22 ZAP 152.20 ETS 321.88 ZAE 128.82 ETE 195.09 ZAC 126.83 ETC 178.64 CLP-159.27

PLANETOCENTRIC CONIC

C3 13.393 VHL 3.660 DLA 44.20 RAL 40.81 RAD 6567.5 VEL 11.609 PTH 2.03 VHP 5.710 DPA -8.34 RAP 36.06 ECC 1.2204
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
54.53 19 56 21 4136.91 -32.98 186.66 268.96 58.72 21 5 18 3536.9 -36.85 178.53
125.47 3 29 42 2752.91 -32.97 79.77 268.95 58.71 4 15 35 2152.9 -36.83 71.64
54.53 19 56 21 4136.91 -32.98 186.66 268.96 58.72 21 5 18 3536.9 -36.85 178.53
125.47 3 29 42 2752.91 -32.97 79.77 268.95 58.71 4 15 35 2152.9 -36.83 71.64
54.53 19 56 21 4136.91 -32.98 186.66 268.96 58.72 21 5 18 3536.9 -36.85 178.53
125.47 3 29 42 2752.91 -32.97 79.77 268.95 58.71 4 15 35 2152.9 -36.83 71.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1097 TRA .8306 TC3-5.6249 BAU 1.0084 SGT 5581.2 SGR 693.2 SG3 350.9 ST 3349.8 SR 621.1 SS 1091.5
RDE .3940 RRA .1094 RC3 -.2830 FAU .05519 RRT .8591 RRF .8472 RTF .9639 CRT .9985 CRS -.9796 CST -.9883
FDE 1.3421 FRA 1.0509 FC3-3.5671 BSP 17975 SGB 5624.1 R23 .0308 R13 .9642 LSA 3573.7 MSA 163.1 SSA 16.2
BOE 2.1462 BRA .8378 BC3 5.6320 FSP -1192 SG1 5613.0 SG2 352.8 THA 6.11 EL1 3406.7 EL2 33.3 ALF 10.49



LAUNCH DATE JAN 26 1969 FLIGHT TIME 182.00 ARRIVAL DATE JUL 27 1969

Heliocentric Conic: RL 147.30 LAL -.00 LOL 125.87 VL 27.162 GAL 2.74 AZL 86.67 MCA 246.58 SMA 124.71 ECC .18712 INC 3.3251 VI 30.247  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.160 GAP 7.83 AZP 91.32 TAL 167.96 TAP 54.54 RCA 101.37 APO 148.04 V2 34.908  
 RC 151.204 GL 25.19 GP -17.90 ZAL 72.73 ZAP 153.80 ETS 321.55 ZAE 128.75 ETE 194.13 ZAC 128.56 ETC 178.40 CLP-160.54

Distance 520.168

Planetocentric Conic: C3 13.668 VHL 3.697 CLA 43.28 RAL 44.57 RAD 6567.5 VEL 11.621 PTH 2.04 VHP 5.873 DPA -6.67 RAP 37.34 ECC 1.2249  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.79 20 16 22 4128.03 -32.21 185.31 272.59 59.37 21 25 10 3528.0 -36.00 177.22  
 124.21 3 39 43 2770.64 -32.20 80.82 272.59 59.36 4 25 54 2170.6 -35.99 72.73  
 55.79 20 16 22 4128.03 -32.21 185.31 272.59 59.37 21 25 10 3528.0 -36.00 177.22  
 124.21 3 39 43 2770.64 -32.20 80.82 272.59 59.36 4 25 54 2170.6 -35.99 72.73  
 55.79 20 16 22 4128.03 -32.21 185.31 272.59 59.37 21 25 10 3528.0 -36.00 177.22  
 124.21 3 39 43 2770.64 -32.20 80.82 272.59 59.36 4 25 54 2170.6 -35.99 72.73

Differential Corrections: TDE 2.0463 TRA 1.0240 TC3-5.6078 BAU 1.0257 SGT 5657.0 SGR 670.6 SG3 336.0 ST 3240.4 SR 600.1 SS 1018.4  
 RDE .3842 RRA .1171 RC3 -.2460 FAU .05177 RRT .8397 RRF .8255 RTF .9643 CRT .9965 CRS -.9706 CST -.9868  
 FDE 1.2083 FRA 1.1252 FC3-3.2792 BSP 18258 SGB 5696.6 R23 .0229 R13 .9645 LSA 3445.2 MSA 167.1 SSA 16.7  
 BDE 2.0821 BRA 1.0306 BC3 5.6131 FSP -1144 SG1 5685.0 SG2 362.3 THA 5.71 EL1 3295.2 EL2 49.3 ALF 10.46

MID-COURSE EXECUTION ACCURACY: SGT 5657.0 SGR 670.6 SG3 336.0  
 RRT .8397 RRF .8255 RTF .9643  
 SGB 5696.6 R23 .0229 R13 .9645  
 SG1 5685.0 SG2 362.3 THA 5.71

ORBIT DETERMINATION ACCURACY: ST 3240.4 SR 600.1 SS 1018.4  
 CRT .9965 CRS -.9706 CST -.9868  
 LSA 3445.2 MSA 167.1 SSA 16.7  
 EL1 3295.2 EL2 49.3 ALF 10.46

LAUNCH DATE JAN 26 1969 FLIGHT TIME 184.00 ARRIVAL DATE JUL 29 1969

Heliocentric Conic: RL 147.30 LAL -.00 LOL 125.87 VL 27.130 GAL 3.10 AZL 86.84 MCA 249.76 SMA 124.51 ECC .19065 INC 3.1587 VI 30.247  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.147 GAP 8.17 AZP 91.09 TAL 166.61 TAP 56.37 RCA 100.77 APO 148.24 V2 34.920  
 RC 153.416 GL 23.46 GP -16.95 ZAL 70.20 ZAP 155.31 ETS 321.11 ZAE 128.68 ETE 193.28 ZAC 130.35 ETC 178.17 CLP-161.78

Distance 525.986

Planetocentric Conic: C3 14.060 VHL 3.750 DLA 42.31 RAL 48.26 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 6.047 DPA -5.10 RAP 38.72 ECC 1.2314  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.14 20 36 36 4119.29 -31.35 183.95 276.27 59.99 21 45 15 3519.3 -35.08 175.90  
 122.86 3 48 54 2791.77 -31.34 82.10 276.26 59.97 4 35 26 2191.8 -35.07 74.05  
 57.14 20 36 36 4119.29 -31.35 183.95 276.27 59.99 21 45 15 3519.3 -35.08 175.90  
 122.86 3 48 54 2791.77 -31.34 82.10 276.26 59.97 4 35 26 2191.8 -35.07 74.05  
 57.14 20 36 36 4119.29 -31.35 183.95 276.27 59.99 21 45 15 3519.3 -35.08 175.90  
 122.86 3 48 54 2791.77 -31.34 82.10 276.26 59.97 4 35 26 2191.8 -35.07 74.05

Differential Corrections: TDE 1.9765 TRA 1.2281 TC3-5.5386 BAU 1.0418 SGT 5728.3 SGR 652.2 SG3 321.3 ST 3117.2 SR 582.1 SS 947.7  
 RDE .3776 RRA .1251 RC3 -.2141 FAU .04846 RRT .8204 RRF .8045 RTF .9647 CRT .9931 CRS -.9587 CST -.9850  
 FDE 1.0829 FRA 1.1939 FC3-2.9840 BSP 18525 SGB 5765.4 R23 .0170 R13 .9648 LSA 3305.1 MSA 173.0 SSA 17.1  
 BDE 2.0123 BRA 1.2344 BC3 5.5428 FSP -1097 SG1 5753.4 SG2 371.3 THA 5.36 EL1 3170.4 EL2 67.2 ALF 10.51

MID-COURSE EXECUTION ACCURACY: SGT 5728.3 SGR 652.2 SG3 321.3  
 RRT .8204 RRF .8045 RTF .9647  
 SGB 5765.4 R23 .0170 R13 .9648  
 SG1 5753.4 SG2 371.3 THA 5.36

ORBIT DETERMINATION ACCURACY: ST 3117.2 SR 582.1 SS 947.7  
 CRT .9931 CRS -.9587 CST -.9850  
 LSA 3305.1 MSA 173.0 SSA 17.1  
 EL1 3170.4 EL2 67.2 ALF 10.51

LAUNCH DATE JAN 26 1969 FLIGHT TIME 186.00 ARRIVAL DATE JUL 31 1969

Heliocentric Conic: RL 147.30 LAL -.00 LOL 125.87 VL 27.098 GAL 3.49 AZL 87.00 MCA 252.95 SMA 124.30 ECC .19444 INC 2.9989 VI 30.247  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.135 GAP 8.52 AZP 90.88 TAL 165.25 TAP 58.19 RCA 100.13 APO 148.47 V2 34.932  
 RC 155.612 GL 21.76 GP -16.10 ZAL 67.66 ZAP 156.73 ETS 320.54 ZAE 128.59 ETE 192.53 ZAC 132.18 ETC 177.92 CLP-162.97

Distance 531.780

Planetocentric Conic: C3 14.574 VHL 3.818 DLA 41.31 RAL 51.85 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.231 DPA -4.3.61 RAP 40.19 ECC 1.2399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.56 20 57 0 4110.58 -30.41 182.56 279.96 60.57 22 5 31 3510.6 -34.08 174.57  
 121.44 3 57 10 2816.37 -30.40 83.62 279.95 60.56 4 44 6 2216.4 -34.07 75.63  
 58.56 20 57 0 4110.58 -30.41 182.56 279.96 60.57 22 5 31 3510.6 -34.08 174.57  
 121.44 3 57 10 2816.37 -30.40 83.62 279.95 60.56 4 44 6 2216.4 -34.07 75.63  
 58.56 20 57 0 4110.58 -30.41 182.56 279.96 60.57 22 5 31 3510.6 -34.08 174.57  
 121.44 3 57 10 2816.37 -30.40 83.62 279.95 60.56 4 44 6 2216.4 -34.07 75.63

Differential Corrections: TDE 1.9020 TRA 1.4453 TC3-5.4127 BAU 1.0553 SGT 5793.8 SGR 637.2 SG3 306.9 ST 2985.8 SR 566.6 SS 880.9  
 RDE .3737 RRA .1338 RC3 -.1854 FAU .04510 RRT .8012 RRF .7845 RTF .9650 CRT .9878 CRS -.9431 CST -.9830  
 FDE .9666 FRA 1.2588 FC3-2.6793 BSP 18708 SGB 5828.8 R23 .0133 R13 .9651 LSA 3158.9 MSA 181.2 SSA 17.4  
 BDE 1.9384 BRA 1.4515 BC3 5.4159 FSP -1045 SG1 5816.4 SG2 379.8 THA 5.06 EL1 3037.8 EL2 86.7 ALF 10.63

MID-COURSE EXECUTION ACCURACY: SGT 5793.8 SGR 637.2 SG3 306.9  
 RRT .8012 RRF .7845 RTF .9650  
 SGB 5828.8 R23 .0133 R13 .9651  
 SG1 5816.4 SG2 379.8 THA 5.06

ORBIT DETERMINATION ACCURACY: ST 2985.8 SR 566.6 SS 880.9  
 CRT .9878 CRS -.9431 CST -.9830  
 LSA 3158.9 MSA 181.2 SSA 17.4  
 EL1 3037.8 EL2 86.7 ALF 10.63

LAUNCH DATE JAN 26 1969 FLIGHT TIME 188.00 ARRIVAL DATE AUG 2 1969

Heliocentric Conic: RL 147.30 LAL -.00 LOL 125.87 VL 27.066 GAL 3.90 AZL 87.16 MCA 256.13 SMA 124.10 ECC .19852 INC 2.8444 VI 30.247  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.123 GAP 8.89 AZP 90.68 TAL 163.88 TAP 60.01 RCA 99.46 APO 148.73 V2 34.945  
 RC 157.792 GL 20.09 GP -15.34 ZAL 65.12 ZAP 158.07 ETS 319.84 ZAE 128.51 ETE 191.86 ZAC 134.06 ETC 177.67 CLP-164.13

Distance 537.547

Planetocentric Conic: C3 15.221 VHL 3.901 DLA 40.28 RAL 55.33 RAD 6567.6 VEL 11.688 PTH 2.06 VHP 6.426 DPA -2.19 RAP 41.73 ECC 1.2505  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.07 21 17 34 4101.68 -29.40 181.15 283.66 61.13 22 25 56 3501.7 -33.00 173.21  
 119.93 4 4 23 2844.68 -29.39 85.40 283.66 61.12 4 51 48 2244.7 -32.99 77.46  
 60.07 21 17 34 4101.68 -29.40 181.15 283.66 61.13 22 25 56 3501.7 -33.00 173.21  
 119.93 4 4 23 2844.68 -29.39 85.40 283.66 61.12 4 51 48 2244.7 -32.99 77.46  
 60.07 21 17 34 4101.68 -29.40 181.15 283.66 61.13 22 25 56 3501.7 -33.00 173.21  
 119.93 4 4 23 2844.68 -29.39 85.40 283.66 61.12 4 51 48 2244.7 -32.99 77.46

Differential Corrections: TDE 1.8189 TRA 1.6718 TC3-5.2508 BAU 1.0690 SGT 5854.6 SGR 624.2 SG3 292.8 ST 2842.9 SR 552.1 SS 816.2  
 RDE .3717 RRA .1428 RC3 -.1622 FAU .04201 RRT .7830 RRF .7654 RTF .9655 CRT .9800 CRS -.9228 CST -.9806  
 FDE 1.8557 FRA 1.3171 FC3-2.3895 BSP 18951 SGB 5887.8 R23 .0099 R13 .9655 LSA 3002.7 MSA 191.8 SSA 17.4  
 BDE 1.8565 BRA 1.6779 BC3 5.2533 FSP -1002 SG1 5875.1 SG2 386.9 THA 4.79 EL1 2894.0 EL2 107.8 ALF 10.79

MID-COURSE EXECUTION ACCURACY: SGT 5854.6 SGR 624.2 SG3 292.8  
 RRT .7830 RRF .7654 RTF .9655  
 SGB 5887.8 R23 .0099 R13 .9655  
 SG1 5875.1 SG2 386.9 THA 4.79

ORBIT DETERMINATION ACCURACY: ST 2842.9 SR 552.1 SS 816.2  
 CRT .9800 CRS -.9228 CST -.9806  
 LSA 3002.7 MSA 191.8 SSA 17.4  
 EL1 2894.0 EL2 107.8 ALF 10.79

LAUNCH DATE JAN 26 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 543.284

RL 147.30 LAL -.00 LOL 125.87 VL 27.033 GAL 4.33 AZL 87.31 HCA 259.32 SMA 123.89 ECC .20291 INC 2.6939 V1 30.247  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.112 GAP 9.27 AZP 90.50 TAL 162.50 TAP 61.82 RCA 98.76 APO 149.03 V2 34.957  
 RC 159.953 GL 18.46 GP -14.64 ZAL 62.61 ZAP 159.34 ETS 318.97 ZAE 128.42 ETE 191.27 ZAC 135.98 ETC 177.39 CLP-165.27

PLANETOCENTRIC CONIC

C3 16.013 VHL 4.002 DLA 39.21 RAL 58.69 RAD 6567.6 VEL 11.722 PTH 2.07 VMP 6.633 DPA -.84 RAP 43.35 ECC 1.2635  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.66 21 38 21 4092.25 -28.32 179.68 287.37 61.67 22 46 33 3492.3 -31.87 171.81  
 118.34 4 10 25 2877.01 -28.31 87.45 287.36 61.65 4 58 22 2277.0 -31.86 171.81  
 61.66 21 38 21 4092.25 -28.32 179.68 287.37 61.67 22 46 33 3492.3 -31.87 171.81  
 118.34 4 10 25 2877.01 -28.31 87.45 287.36 61.65 4 58 22 2277.0 -31.86 171.81  
 61.66 21 38 21 4092.25 -28.32 179.68 287.37 61.67 22 46 33 3492.3 -31.87 171.81  
 118.34 4 10 25 2877.01 -28.31 87.45 287.36 61.65 4 58 22 2277.0 -31.86 171.81

DIFFERENTIAL CORRECTIONS

TOE 1.7299 TRA 1.9105 TC3-5.0484 BAU 1.0812  
 RDE .3717 RRA .1527 RC3 -.1422 FAU .03902  
 FDE .7526 FRA 1.3719 FC3-2.1094 BSP 19171  
 BDE 1.7694 BRA 1.9166 BC3 5.0504 FSP -958

MID-COURSE EXECUTION ACCURACY

SGT 5909.6 SGR 613.0 SG3 279.1  
 RRT .7658 RRF .7478 RTF .9658  
 SGB 5941.4 R23 .0076 R13 .9659  
 SG1 5928.3 SG2 392.9 THA 4.56

ORBIT DETERMINATION ACCURACY

ST 2696.6 SR 538.8 SS 756.4  
 CRT .9691 CRS -.8970 CST -.9779  
 LSA 2844.6 MSA 205.0 SSA 17.2  
 EL1 2746.8 EL2 130.5 ALF 10.98

LAUNCH DATE JAN 26 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 548.988

RL 147.30 LAL -.00 LOL 125.87 VL 27.001 GAL 4.78 AZL 87.45 HCA 262.51 SMA 123.69 ECC .20763 INC 2.5465 V1 30.247  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.100 GAP 9.67 AZP 90.33 TAL 161.12 TAP 63.63 RCA 98.01 APO 149.37 V2 34.970  
 RC 162.097 GL 16.87 GP -14.02 ZAL 60.13 ZAP 160.54 ETS 317.94 ZAE 128.33 ETE 190.75 ZAC 137.93 ETC 177.09 CLP-166.37

PLANETOCENTRIC CONIC

C3 16.964 VHL 4.119 DLA 38.12 RAL 61.92 RAD 6567.7 VEL 11.762 PTH 2.08 VMP 6.852 DPA .45 RAP 45.03 ECC 1.2792  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.33 21 59 18 4082.17 -27.18 178.16 291.05 62.17 23 7 20 3482.2 -30.68 170.35  
 116.67 4 15 11 2913.48 -27.17 89.79 291.05 62.16 5 3 45 2313.5 -30.67 81.98  
 63.33 21 59 18 4082.17 -27.18 178.16 291.05 62.17 23 7 20 3482.2 -30.68 170.35  
 116.67 4 15 11 2913.48 -27.17 89.79 291.05 62.16 5 3 45 2313.5 -30.67 81.98  
 63.33 21 59 18 4082.17 -27.18 178.16 291.05 62.17 23 7 20 3482.2 -30.68 170.35  
 116.67 4 15 11 2913.48 -27.17 89.79 291.05 62.16 5 3 45 2313.5 -30.67 81.98

DIFFERENTIAL CORRECTIONS

TOE 1.6357 TRA 2.1621 TC3-4.8134 BAU 1.0920  
 RDE .3732 RRA .1635 RC3 -.1253 FAU .03614  
 FDE .6571 FRA 1.4232 FC3-1.8444 BSP 19380  
 BDE 1.6777 BRA 2.1683 BC3 4.8150 FSP -917

MID-COURSE EXECUTION ACCURACY

SGT 5959.5 SGR 603.1 SG3 266.0  
 RRT .7500 RRF .7319 RTF .9662  
 SGB 5989.9 R23 .0060 R13 .9662  
 SG1 5976.7 SG2 397.8 THA 4.36

ORBIT DETERMINATION ACCURACY

ST 2550.9 SR 526.4 SS 702.4  
 CRT .9541 CRS -.8650 CST -.9751  
 LSA 2688.6 MSA 220.5 SSA 17.0  
 EL1 2600.1 EL2 154.6 ALF 11.18

LAUNCH DATE JAN 26 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 554.655

RL 147.30 LAL -.00 LOL 125.87 VL 26.968 GAL 5.26 AZL 87.60 HCA 265.70 SMA 123.49 ECC .21273 INC 2.4010 V1 30.247  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.089 GAP 10.08 AZP 90.18 TAL 159.74 TAP 65.44 RCA 97.22 APO 149.76 V2 34.983  
 RC 164.221 GL 15.34 GP -13.45 ZAL 57.70 ZAP 161.69 ETS 316.71 ZAE 128.24 ETE 190.28 ZAC 139.91 ETC 176.76 CLP-167.45

PLANETOCENTRIC CONIC

C3 18.091 VHL 4.253 DLA 37.02 RAL 65.00 RAD 6567.7 VEL 11.810 PTH 2.09 VMP 7.085 DPA 1.68 RAP 46.78 ECC 1.2977  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.09 22 20 34 4070.95 -26.00 176.55 294.73 62.66 23 28 25 3470.9 -29.44 168.81  
 114.91 4 18 32 2954.55 -25.98 92.45 294.72 62.65 5 7 46 2354.5 -29.43 84.71  
 65.09 22 20 34 4070.95 -26.00 176.55 294.73 62.66 23 28 25 3470.9 -29.44 168.81  
 114.91 4 18 32 2954.55 -25.98 92.45 294.72 62.65 5 7 46 2354.5 -29.43 84.71  
 65.09 22 20 34 4070.95 -26.00 176.55 294.73 62.66 23 28 25 3470.9 -29.44 168.81  
 114.91 4 18 32 2954.55 -25.98 92.45 294.72 62.65 5 7 46 2354.5 -29.43 84.71

DIFFERENTIAL CORRECTIONS

TOE 1.5398 TRA 2.4307 TC3-4.5442 BAU 1.0994  
 RDE .3764 RRA .1755 RC3 -.1100 FAU .03328  
 FDE .5708 FRA 1.4741 FC3-1.5924 BSP 19495  
 BDE 1.5851 BRA 2.4370 BC3 4.5455 FSP -872

MID-COURSE EXECUTION ACCURACY

SGT 6005.2 SGR 594.5 SG3 253.6  
 RRT .7359 RRF .7181 RTF .9664  
 SGB 6034.6 R23 .0055 R13 .9664  
 SG1 6021.2 SG2 401.5 THA 4.19

ORBIT DETERMINATION ACCURACY

ST 2414.4 SR 514.7 SS 656.3  
 CRT .9344 CRS -.8266 CST -.9725  
 LSA 2543.3 MSA 238.1 SSA 16.6  
 EL1 2462.1 EL2 179.8 ALF 11.33

LAUNCH DATE JAN 26 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 560.281

RL 147.30 LAL -.00 LOL 125.87 VL 26.936 GAL 5.76 AZL 87.74 HCA 268.90 SMA 123.29 ECC .21823 INC 2.2567 V1 30.247  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.078 GAP 10.51 AZP 90.04 TAL 158.36 TAP 67.26 RCA 96.39 APO 150.20 V2 34.996  
 RC 166.326 GL 13.86 GP -12.93 ZAL 55.33 ZAP 162.77 ETS 315.27 ZAE 128.16 ETE 189.86 ZAC 141.92 ETC 176.38 CLP-168.52

PLANETOCENTRIC CONIC

C3 19.417 VHL 4.406 DLA 35.91 RAL 67.94 RAD 6567.8 VEL 11.866 PTH 2.10 VMP 7.332 DPA 2.84 RAP 48.57 ECC 1.3196  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.93 22 42 7 4058.42 -24.77 174.85 298.38 63.12 23 49 46 3458.4 -28.16 167.17  
 113.07 4 20 24 3000.33 -24.76 95.44 298.37 63.11 5 10 25 2400.3 -28.16 87.77  
 66.93 22 42 7 4058.42 -24.77 174.85 298.38 63.12 23 49 46 3458.4 -28.16 167.17  
 113.07 4 20 24 3000.33 -24.76 95.44 298.37 63.11 5 10 25 2400.3 -28.16 87.77  
 66.93 22 42 7 4058.42 -24.77 174.85 298.38 63.12 23 49 46 3458.4 -28.16 167.17  
 113.07 4 20 24 3000.33 -24.76 95.44 298.37 63.11 5 10 25 2400.3 -28.16 87.77

DIFFERENTIAL CORRECTIONS

TOE 1.4364 TRA 2.7104 TC3-4.2632 BAU 1.1070  
 RDE .3804 RRA .1881 RC3 -.0976 FAU .03066  
 FDE .4890 FRA 1.5208 FC3-1.3669 BSP 19686  
 BDE 1.4859 BRA 2.7169 BC3 4.2643 FSP -835

MID-COURSE EXECUTION ACCURACY

SGT 6044.7 SGR 585.8 SG3 241.6  
 RRT .7232 RRF .7054 RTF .9667  
 SGB 6073.0 R23 .0046 R13 .9668  
 SG1 6059.6 SG2 403.6 THA 4.03

ORBIT DETERMINATION ACCURACY

ST 2281.4 SR 502.8 SS 614.8  
 CRT .9086 CRS -.7805 CST -.9699  
 LSA 2401.9 MSA 257.4 SSA 16.1  
 EL1 2327.1 EL2 205.9 ALF 11.41

LAUNCH DATE JAN 26 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 12 1969

MELIOCENTRIC CONIC

DISTANCE 565.861

RL 147.30 LAL -.00 LOL 125.87 VL 26.904 GAL 6.30 AZL 87.89 MCA 272.10 SMA 123.09 ECC .22417 INC 2.1126 V1 30.247  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.067 GAP 10.97 AZP 89.92 TAL 156.99 TAP 69.09 RCA 95.50 APO 150.68 V2 35.010  
 RC 168.410 GL 12.43 GP -12.46 ZAL 53.03 ZAP 163.80 ETS 313.58 ZAE 128.07 ETE 189.49 ZAC 143.95 ETC 175.96 CLP-169.56

PLANETOCENTRIC CONIC

C3 20.967 VHL 4.579 DLA 34.80 RAL 70.73 RAD 6567.9 VEL 11.931 PTH 2.12 VHP 7.594 DPA 3.96 RAP 50.42 ECC 1.3451  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.86 23 4 12 4043.82 -23.51 173.00 302.00 63.57 24 11 36 3443.8 -26.86 165.38  
 111.14 4 20 34 3051.55 -23.50 98.81 301.99 63.55 5 11 26 2451.6 -26.85 91.20  
 68.86 23 4 12 4043.82 -23.51 173.00 302.00 63.57 24 11 36 3443.8 -26.86 165.38  
 111.14 4 20 34 3051.55 -23.50 98.81 301.99 63.55 5 11 26 2451.6 -26.85 91.20  
 68.86 23 4 12 4043.82 -23.51 173.00 302.00 63.57 24 11 36 3443.8 -26.86 165.38  
 111.14 4 20 34 3051.55 -23.50 98.81 301.99 63.55 5 11 26 2451.6 -26.85 91.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.3291 TRA 3.0056 TC3-3.9682 BAU 1.1126 SGT 6078.7 SGR 577.3 SG3 230.1 ST 2160.1 SR 491.0 SS 580.1  
 RDE .3854 RRA .2017 RC3 -.0868 FAU .02814 RRT .7120 RRF .6943 RTF .9671 CRT .8759 CRS -.7276 CST -.9679  
 FDE .4139 FRA 1.5658 FC3-1.1620 BSP 19858 SGB 6106.1 R23 .0039 R13 .9671 LSA 2272.9 MSA 277.5 SSA 15.6  
 BOE 1.3839 BRA 3.0124 BC3 3.9691 FSP -799 SG1 6092.7 SG2 404.5 THA 3.89 EL1 2203.0 EL2 232.3 ALF 11.39

LAUNCH DATE JAN 26 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 14 1969

MELIOCENTRIC CONIC

DISTANCE 571.387

RL 147.30 LAL -.00 LOL 125.87 VL 26.871 GAL 6.87 AZL 88.03 MCA 275.30 SMA 122.89 ECC .23060 INC 1.9678 V1 30.247  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.056 GAP 11.46 AZP 89.82 TAL 155.63 TAP 70.92 RCA 94.55 APO 151.23 V2 35.023  
 RC 170.474 GL 11.07 GP -12.03 ZAL 50.81 ZAP 164.77 ETS 311.62 ZAE 127.98 ETE 189.15 ZAC 146.00 ETC 175.48 CLP-170.59

PLANETOCENTRIC CONIC

C3 22.772 VHL 4.772 DLA 33.70 RAL 73.37 RAD 6567.9 VEL 12.006 PTH 2.14 VHP 7.874 DPA 5.02 RAP 52.31 ECC 1.3748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.91 23 26 57 4026.57 -22.23 170.96 305.60 63.99 24 34 3 3426.6 -25.54 163.41  
 109.09 4 18 52 3108.72 -22.22 102.59 305.59 63.98 5 10 41 2508.7 -25.53 95.05  
 70.91 23 26 57 4026.57 -22.23 170.96 305.60 63.99 24 34 3 3426.6 -25.54 163.41  
 109.09 4 18 52 3108.72 -22.22 102.59 305.59 63.98 5 10 41 2508.7 -25.53 95.05  
 110.00 5 7 46 2959.22 -26.27 92.97 307.60 67.30 5 57 5 2359.2 -29.11 84.94  
 110.00 3 41 9 3224.07 -18.29 109.37 303.39 60.60 4 34 53 2624.1 -22.06 102.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.2189 TRA 3.3183 TC3-3.6637 BAU 1.1157 SGT 6107.7 SGR 568.8 SG3 219.3 ST 2053.5 SR 479.0 SS 552.2  
 RDE .3913 RRA .2162 RC3 -.0771 FAU .02571 RRT .7022 RRF .6848 RTF .9674 CRT .8359 CRS -.6690 CST -.9668  
 FDE .3453 FRA 1.6103 FC3 -.9775 BSP 20006 SGB 6134.1 R23 .0035 R13 .9675 LSA 2159.3 MSA 297.6 SSA 15.1  
 BOE 1.2802 BRA 3.3253 BC3 3.6645 FSP -764 SG1 6120.8 SG2 404.1 THA 3.76 EL1 2092.8 EL2 258.0 ALF 11.21

LAUNCH DATE JAN 26 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 16 1969

MELIOCENTRIC CONIC

DISTANCE 576.854

RL 147.30 LAL -.00 LOL 125.87 VL 26.839 GAL 7.48 AZL 88.18 MCA 278.50 SMA 122.70 ECC .23758 INC 1.8214 V1 30.247  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.046 GAP 11.97 AZP 89.73 TAL 154.27 TAP 72.77 RCA 93.55 APO 151.85 V2 35.036  
 RC 172.518 GL 9.77 GP -11.64 ZAL 48.67 ZAP 165.69 ETS 309.33 ZAE 127.89 ETE 188.85 ZAC 148.06 ETC 174.92 CLP-171.62

PLANETOCENTRIC CONIC

C3 24.870 VHL 4.987 DLA 32.62 RAL 75.86 RAD 6568.0 VEL 12.093 PTH 2.16 VHP 8.174 DPA 6.03 RAP 54.24 ECC 1.4093  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.09 23 50 41 4005.58 -20.93 168.67 309.17 64.40 24 57 26 3405.6 -24.20 161.18  
 106.91 4 15 0 3172.84 -20.92 106.87 309.16 64.39 5 7 53 2572.8 -24.19 99.38  
 73.09 23 50 41 4005.58 -20.93 168.67 309.17 64.40 24 57 26 3405.6 -24.20 161.18  
 106.91 4 15 0 3172.84 -20.92 106.87 309.16 64.39 5 7 53 2572.8 -24.19 99.38  
 110.00 5 52 25 2872.61 -28.41 87.15 312.61 70.14 6 40 18 2272.6 -30.85 78.80  
 110.00 3 16 22 3353.80 -13.80 116.75 305.10 58.41 4 12 16 2753.8 -17.88 110.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.1089 TRA 3.6523 TC3-3.3522 BAU 1.1148 SGT 6133.6 SGR 560.3 SG3 209.2 ST 1966.4 SR 467.1 SS 531.5  
 RDE .3981 RRA .2320 RC3 -.0680 FAU .02332 RRT .6943 RRF .6774 RTF .9679 CRT .7890 CRS -.6078 CST -.9670  
 FDE .2841 FRA 1.6560 FC3 -.8119 BSP 20063 SGB 6159.2 R23 .0034 R13 .9679 LSA 2065.7 MSA 316.4 SSA 14.6  
 BOE 1.1782 BRA 3.6597 BC3 3.3529 FSP -727 SG1 6146.0 SG2 402.4 THA 3.65 EL1 2001.4 EL2 282.0 ALF 10.83

LAUNCH DATE JAN 26 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 18 1969

MELIOCENTRIC CONIC

DISTANCE 582.250

RL 147.30 LAL -.00 LOL 125.87 VL 26.807 GAL 8.12 AZL 88.33 MCA 281.70 SMA 122.50 ECC .24515 INC 1.6724 V1 30.247  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.035 GAP 12.52 AZP 89.66 TAL 152.94 TAP 74.64 RCA 92.47 APO 152.54 V2 35.050  
 RC 174.540 GL 8.52 GP -11.28 ZAL 46.63 ZAP 166.56 ETS 306.69 ZAE 127.79 ETE 188.57 ZAC 150.13 ETC 174.27 CLP-172.64

PLANETOCENTRIC CONIC

C3 27.305 VHL 5.225 DLA 31.55 RAL 78.20 RAD 6568.1 VEL 12.193 PTH 2.19 VHP 8.495 DPA 6.99 RAP 56.21 ECC 1.4494  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.46 0 19 55 3978.90 -19.63 165.98 312.71 64.79 1 26 14 3378.9 -22.86 158.54  
 104.54 4 8 24 3245.74 -19.62 111.76 312.70 64.78 5 2 30 2645.7 -22.85 104.32  
 75.46 0 19 55 3978.90 -19.63 165.98 312.71 64.79 1 26 14 3378.9 -22.86 158.54  
 104.54 4 8 24 3245.74 -19.62 111.76 312.70 64.78 5 2 30 2645.7 -22.85 104.32  
 110.00 6 24 38 2822.70 -29.52 83.69 317.01 71.92 7 11 41 2222.7 +31.70 75.16  
 110.00 3 2 51 3449.94 -10.31 122.01 307.37 57.23 4 0 21 2849.9 -14.56 115.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .9920 TRA 4.0020 TC3-3.0486 BAU 1.1131 SGT 6152.3 SGR 550.9 SG3 199.6 ST 1891.8 SR 454.5 SS 515.1  
 RDE .4052 RRA .2484 RC3 -.0601 FAU .02112 RRT .6872 RRF .6705 RTF .9685 CRT .7345 CRS -.5428 CST -.9682  
 FDE .2262 FRA 1.6998 FC3 -.6696 BSP 20198 SGB 6177.0 R23 .0029 R13 .9685 LSA 1984.8 MSA 333.3 SSA 14.1  
 BOE 1.0716 BRA 4.0097 BC3 3.0492 FSP -696 SG1 6164.0 SG2 399.4 THA 3.54 EL1 1921.8 EL2 303.6 ALF 10.27

LAUNCH DATE JAN 26 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 20 1969

Heliocentric Conic

DISTANCE 587.565

RL 147.30 LAL -.00 LOL 125.87 VL 26.776 GAL 8.81 AZL 88.48 MCA 284.91 SMA 122.31 ECC .25340 INC 1.5197 V1 30.247  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.025 GAP 13.10 AZP 89.61 TAL 151.62 TAP 76.53 RCA 91.32 APO 153.31 V2 35.063  
 RC 176.542 GL 7.35 GP -10.95 ZAL 44.68 ZAP 167.36 ETS 303.64 ZAE 127.69 ETE 188.32 ZAC 152.21 ETC 173.51 CLP-173.65

Planetocentric Conic

C3 30.130 VHL 5.489 DLA 30.51 RAL 80.40 RAD 6568.2 VEL 12.309 PTH 2.22 VHP 8.840 DPA 7.90 RAP 58.21 ECC 1.4959  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.13 0 47 42 3943.52 -18.33 162.67 316.22 65.17 1 53 26 3343.5 -21.52 155.29  
 101.87 3 58 10 3330.32 -18.31 117.48 316.21 65.16 4 53 41 2730.3 -21.51 110.10  
 78.13 0 47 42 3943.52 -18.33 162.67 316.22 65.17 1 53 26 3343.5 -21.52 155.29  
 101.87 3 58 10 3330.32 -18.31 117.48 316.21 65.16 4 53 41 2730.3 -21.51 110.10  
 110.00 6 51 26 2788.45 -30.22 81.26 321.16 73.20 7 37 54 2188.5 -32.22 72.62  
 110.00 2 53 37 3533.39 -7.20 126.47 309.87 56.49 3 52 31 2933.4 -11.56 120.09

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .8727 TRA 4.3739 TC3-2.7500 BAU 1.1079 SGT 6166.6 SGR 540.9 SG3 190.5 ST 1834.5 SR 441.6 SS 503.8  
 RDE .4128 RRA .2656 RC3 -.0528 FAU .01899 RRT .6814 RRF .6649 RTF .9692 CRT .6742 CRS -.4778 CST -.9705  
 FDE .1733 FRA 1.7446 FC3 -.5458 BSP 20312 SGB 6190.3 R23 .0024 R13 .9692 LSA 1921.9 MSA 347.1 SSA 13.7  
 BDE .9654 BRA 4.3819 BC3 2.7505 FSP -666 SG1 6177.6 SG2 395.2 THA 3.43 EL1 1859.3 EL2 321.8 ALF 9.51

LAUNCH DATE JAN 26 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 22 1969

Heliocentric Conic

DISTANCE 592.786

RL 147.30 LAL -.00 LOL 125.87 VL 26.744 GAL 9.55 AZL 88.64 MCA 288.12 SMA 122.12 ECC .26240 INC 1.3624 V1 30.247  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.014 GAP 13.73 AZP 89.58 TAL 150.33 TAP 78.45 RCA 90.08 APO 154.17 V2 35.076  
 RC 178.523 GL 6.23 GP -10.65 ZAL 42.83 ZAP 168.10 ETS 300.12 ZAE 127.57 ETE 188.09 ZAC 154.28 ETC 172.61 CLP-174.67

Planetocentric Conic

C3 33.413 VHL 5.780 DLA 29.50 RAL 82.46 RAD 6568.3 VEL 12.441 PTH 2.25 VHP 9.212 DPA 8.76 RAP 60.23 ECC 1.5499  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 81.37 1 20 27 3891.30 -17.03 158.16 319.70 65.54 2 25 18 3291.3 -20.19 150.82  
 98.63 3 41 52 3434.56 -17.02 124.61 319.69 65.53 4 39 7 2834.6 -20.18 117.27  
 100.00 4 33 14 3270.18 -20.77 114.13 321.39 68.00 5 27 44 2670.2 -23.57 106.45  
 100.00 3 11 46 3530.92 -13.35 129.93 317.86 63.01 4 10 37 2930.9 -16.87 122.90  
 110.00 7 14 45 2764.08 -30.68 79.52 325.16 74.14 8 0 49 2164.1 -32.55 70.80  
 110.00 2 46 45 3609.78 -4.31 130.50 312.49 56.06 3 46 54 3009.8 -8.74 124.21

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .7506 TRA 4.7692 TC3-2.4601 BAU 1.0991 SGT 6176.0 SGR 530.2 SG3 181.9 ST 1793.3 SR 428.3 SS 497.0  
 RDE .4209 RRA .2835 RC3 -.0459 FAU .01695 RRT .6764 RRF .6604 RTF .9701 CRT .6098 CRS -.4150 CST -.9738  
 FDE .1251 FRA 1.7907 FC3 -.4391 BSP 20407 SGB 6198.7 R23 .0021 R13 .9701 LSA 1875.8 MSA 357.0 SSA 13.2  
 BDE .8605 BRA 4.7776 BC3 2.4606 FSP -636 SG1 6186.4 SG2 389.8 THA 3.34 EL1 1812.9 EL2 335.8 ALF 8.58

LAUNCH DATE JAN 26 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 24 1969

Heliocentric Conic

DISTANCE 597.897

RL 147.30 LAL -.00 LOL 125.87 VL 26.713 GAL 10.35 AZL 88.80 MCA 291.33 SMA 121.94 ECC .27223 INC 1.1990 V1 30.247  
 RP 108.00 LAP -1.12 LOP 57.21 VP 37.004 GAP 14.40 AZP 89.56 TAL 149.07 TAP 80.41 RCA 88.74 APO 155.13 V2 35.089  
 RC 180.483 GL 5.17 GP -10.37 ZAL 41.09 ZAP 168.77 ETS 296.07 ZAE 127.44 ETE 187.88 ZAC 156.34 ETC 171.54 CLP-175.69

Planetocentric Conic

C3 37.232 VHL 6.102 DLA 28.52 RAL 84.39 RAD 6568.5 VEL 12.594 PTH 2.28 VHP 9.615 DPA 9.57 RAP 62.28 ECC 1.6127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 86.47 2 9 24 3785.65 -15.75 149.78 323.15 65.91 3 12 29 3185.6 -18.87 142.48  
 93.53 3 8 17 3594.88 -15.73 135.81 323.14 65.90 4 8 12 2994.9 -18.86 128.51  
 100.00 5 16 11 3183.02 -22.89 108.52 326.19 70.23 6 9 14 2583.0 -25.37 100.60  
 100.00 2 44 10 3672.74 -8.84 138.03 319.64 61.33 3 45 23 3072.7 -12.60 131.26  
 110.00 7 35 29 2746.94 -31.00 78.28 329.05 74.81 8 21 16 2146.9 -32.77 69.51  
 110.00 2 41 21 3681.58 -1.58 134.25 315.20 55.85 3 42 43 3081.6 -6.05 128.02

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .6295 TRA 5.1944 TC3-2.1773 BAU 1.0839 SGT 6182.5 SGR 518.9 SG3 173.9 ST 1768.9 SR 414.8 SS 494.4  
 RDE .4295 RRA .3022 RC3 -.0391 FAU .01489 RRT .6727 RRF .6573 RTF .9711 CRT .5450 CRS -.3580 CST -.9776  
 FDE .0823 FRA 1.8402 FC3 -.3463 BSP 20392 SGB 6204.2 R23 .0020 R13 .9711 LSA 1847.7 MSA 362.4 SSA 12.7  
 BDE .7620 BRA 5.2031 BC3 2.1776 FSP -605 SG1 6192.3 SG2 383.3 THA 3.24 EL1 1783.8 EL2 344.8 ALF 7.57

LAUNCH DATE JAN 26 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 26 1969

Heliocentric Conic

DISTANCE 602.876

RL 147.30 LAL -.00 LOL 125.87 VL 26.683 GAL 11.20 AZL 88.97 MCA 294.55 SMA 121.75 ECC .28302 INC 1.0282 V1 30.247  
 RP 107.96 LAP -.94 LOP 60.42 VP 36.994 GAP 15.13 AZP 89.57 TAL 147.85 TAP 82.40 RCA 87.30 APO 156.21 V2 35.102  
 RC 182.422 GL 4.17 GP -10.12 ZAL 39.45 ZAP 169.36 ETS 291.45 ZAE 127.30 ETE 187.68 ZAC 158.39 ETC 170.24 CLP-176.72

Planetocentric Conic

C3 41.687 VHL 6.457 DLA 27.57 RAL 86.18 RAD 6568.6 VEL 12.769 PTH 2.32 VHP 10.054 DPA 10.33 RAP 64.34 ECC 1.6861  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 43 2 3532.99 -19.71 133.01 328.80 69.25 4 41 55 2933.0 -22.36 125.34  
 100.00 1 48 55 3904.64 -9.35 155.35 324.08 63.15 2 54 0 3304.6 -12.88 148.45  
 100.00 5 45 59 3136.67 -23.92 105.46 330.41 71.52 6 38 15 2536.7 -26.22 97.42  
 100.00 2 28 40 3776.19 -5.41 143.80 321.96 60.56 3 31 36 3176.2 -9.29 137.17  
 110.00 7 54 9 2735.53 -31.20 77.45 332.86 75.26 8 39 45 2135.5 -32.90 68.65  
 110.00 2 36 58 3750.09 1.04 137.83 317.96 55.83 3 39 29 3150.1 -3.45 131.62

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .5006 TRA 5.6437 TC3-1.9128 BAU 1.0662 SGT 6182.1 SGR 506.2 SG3 166.3 ST 1753.7 SR 400.5 SS 494.3  
 RDE .4380 RRA .3211 RC3 -.0330 FAU .01300 RRT .6691 RRF .6542 RTF .9723 CRT .4787 CRS -.3027 CST -.9814  
 FDE .0412 FRA 1.8904 FC3 -.2699 BSP 20478 SGB 6202.8 R23 .0016 R13 .9723 LSA 1829.7 MSA 363.8 SSA 12.3  
 BDE .6652 BRA 5.6528 BC3 1.9131 FSP -579 SG1 6191.4 SG2 375.6 THA 3.15 EL1 1764.6 EL2 349.4 ALF 6.49

LAUNCH DATE JAN 26 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 28 1969

MELIOCENTRIC CONIC

DISTANCE 607.698

RL 147.30 LAL -.00 LOL 125.87 VL 26.652 GAL 12.13 AZL 89.15 HCA 297.76 SMA 121.57 ECC .29488 INC .8482 V1 30.247  
 RP 107.92 LAP -.75 LOP 63.64 VP 36.984 GAP 15.93 AZP 89.60 TAL 146.68 TAP 84.44 RCA 85.72 APO 157.42 V2 35.114  
 RC 184.340 GL 3.23 GP -9.89 ZAL 37.92 ZAP 169.86 ETS 286.21 ZAE 127.13 ETE 187.50 ZAC 160.41 ETC 168.67 CLP-177.76

PLANETOCENTRIC CONIC

C3 46.901 VHL 6.848 DLA 26.66 RAL 87.84 RAD 6568.8 VEL 12.972 PTH 2.37 VHP 10.532 OPA 11.04 RAP 66.41 ECC 1.7719  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 17 33 3470.23 -21.18 128.99 333.17 70.75 5 15 24 2870.2 -23.61 121.16  
 90.00 1 27 39 4026.68 -5.53 162.29 326.19 62.18 2 34 45 3426.7 -9.21 155.54  
 100.00 6 10 14 3106.98 -24.55 103.48 334.38 72.38 7 2 1 2507.0 -26.72 95.36  
 100.00 2 17 39 3865.17 -2.42 148.71 324.48 60.20 3 22 4 3265.2 -6.36 142.15  
 110.00 8 11 5 2728.86 -31.31 76.97 336.58 75.53 8 56 33 2128.9 -32.98 68.14  
 110.00 2 33 18 3816.05 3.56 141.27 320.76 55.98 3 36 54 3216.1 -.93 135.07

DIFFERENTIAL CORRECTIONS

TDE .3689 TRA 6.1253 TC3-1.6623 BAU 1.0424  
 RDE .4468 RRA .3401 RC3 -.0272 FAU .01114  
 FDE .0035 FRA 1.9441 FC3 -.2056 BSP 20544  
 BDE .5794 BRA 6.1347 BC3 1.6625 FSP -555

MID-COURSE EXECUTION ACCURACY

SGT 6177.3 SGR 492.4 SG3 159.1  
 RRT .6660 RRF .6518 RTF .9738  
 SGB 6196.9 R23 .0012 R13 .9738  
 SGI 6186.0 SG2 366.8 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 1749.0 SR 385.8 SS 496.9  
 CRT .4146 CRS -.2528 CST -.9850  
 LSA 1823.3 MSA 361.1 SSA 11.8  
 EL1 1756.6 EL2 349.6 ALF 5.44

LAUNCH DATE JAN 26 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 30 1969

MELIOCENTRIC CONIC

DISTANCE 612.333

RL 147.30 LAL -.00 LOL 125.87 VL 26.623 GAL 13.14 AZL 89.34 HCA 300.98 SMA 121.40 ECC .30796 INC .6572 V1 30.247  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.974 GAP 16.79 AZP 89.66 TAL 145.57 TAP 86.55 RCA 84.01 APO 158.78 V2 35.126  
 RC 186.236 GL 2.34 GP -9.67 ZAL 36.51 ZAP 170.26 ETS 280.35 ZAE 126.94 ETE 187.32 ZAC 162.40 ETC 166.74 CLP-178.83

PLANETOCENTRIC CONIC

C3 53.027 VHL 7.282 DLA 25.78 RAL 89.37 RAD 6568.9 VEL 13.206 PTH 2.41 VHP 11.057 OPA 11.71 RAP 68.48 ECC 1.8727  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 43 37 3433.65 -21.98 126.61 337.16 71.68 5 40 51 2833.7 -24.28 118.69  
 90.00 1 13 47 4124.46 -2.40 167.77 328.61 61.78 2 22 32 3524.5 -6.15 161.10  
 100.00 6 31 0 3087.47 -24.94 102.16 338.19 72.97 7 22 28 2487.5 -27.04 93.99  
 100.00 2 9 5 3945.88 .32 153.14 327.10 60.11 3 14 51 3345.9 -3.66 146.61  
 110.00 8 26 28 2726.22 -31.36 76.77 340.24 75.63 9 11 54 2126.2 -33.01 67.94  
 110.00 2 30 7 3879.90 5.98 144.63 323.58 56.28 3 34 47 3279.9 1.51 138.39

DIFFERENTIAL CORRECTIONS

TDE .2334 TRA 6.6429 TC3-1.4267 BAU 1.0115  
 RDE .4557 RRA .3592 RC3 -.0217 FAU .00931  
 FDE -.0313 FRA 2.0020 FC3 -.1519 BSP 20589  
 BDE .5120 BRA 6.6526 BC3 1.4268 FSP -531

MID-COURSE EXECUTION ACCURACY

SGT 6168.0 SGR 477.6 SG3 152.4  
 RRT .6632 RRF .6498 RTF .9754  
 SGB 6186.5 R23 .0010 R13 .9754  
 SGI 6176.2 SG2 357.0 THA 2.95

ORBIT DETERMINATION ACCURACY

ST 1752.2 SR 370.7 SS 501.9  
 CRT .3539 CRS -.2084 CST -.9882  
 LSA 1825.7 MSA 354.9 SSA 11.4  
 EL1 1757.3 EL2 345.7 ALF 4.46

LAUNCH DATE JAN 26 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 1 1969

MELIOCENTRIC CONIC

DISTANCE 616.742

RL 147.30 LAL -.00 LOL 125.87 VL 26.594 GAL 14.24 AZL 89.55 HCA 304.20 SMA 121.23 ECC .32243 INC .4526 V1 30.247  
 RP 107.85 LAP -.37 LOP 70.07 VP 36.965 GAP 17.75 AZP 89.75 TAL 144.52 TAP 88.72 RCA 82.14 APO 160.31 V2 35.138  
 RC 188.109 GL 1.50 GP -9.48 ZAL 35.20 ZAP 170.52 ETS 273.90 ZAE 126.71 ETE 187.15 ZAC 164.34 ETC 164.31 CLP-179.92

PLANETOCENTRIC CONIC

C3 60.257 VHL 7.763 DLA 24.94 RAL 90.77 RAD 6569.1 VEL 13.476 PTH 2.46 VHP 11.634 OPA 12.32 RAP 70.54 ECC 1.9917  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 5 14 3410.34 -22.47 125.07 340.95 72.30 6 2 4 2810.3 -24.68 117.10  
 90.00 1 3 21 4210.57 .38 172.57 331.15 61.69 2 13 32 3610.6 -3.41 165.94  
 100.00 6 49 12 3075.16 -25.18 101.33 341.87 73.34 7 40 27 2475.2 -27.23 93.13  
 100.00 2 2 5 4020.97 2.87 157.26 329.77 60.23 3 9 6 3421.0 -1.12 150.74  
 110.00 8 40 28 2727.01 -31.34 76.83 343.81 75.60 9 25 55 2127.0 -33.00 68.00  
 110.00 2 27 17 3941.89 8.31 147.91 326.42 56.72 3 32 59 3341.9 3.88 141.64

DIFFERENTIAL CORRECTIONS

TDE .0987 TRA 7.2053 TC3-1.2036 BAU .9697  
 RDE .4651 RRA .3782 RC3 -.0164 FAU .00742  
 FDE -.0622 FRA 2.0666 FC3 -.1066 BSP 20526  
 BDE .4755 BRA 7.2152 BC3 1.2037 FSP -505

MID-COURSE EXECUTION ACCURACY

SGT 6156.3 SGR 461.9 SG3 146.1  
 RRT .6607 RRF .6484 RTF .9772  
 SGB 6173.6 R23 .0010 R13 .9772  
 SGI 6163.9 SG2 346.3 THA 2.85

ORBIT DETERMINATION ACCURACY

ST 1762.0 SR 355.5 SS 509.4  
 CRT .2994 CRS -.1712 CST -.9910  
 LSA 1836.0 MSA 345.8 SSA 10.9  
 EL1 1765.4 EL2 338.6 ALF 3.59

LAUNCH DATE JAN 26 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 3 1969

MELIOCENTRIC CONIC

DISTANCE 620.872

RL 147.30 LAL -.00 LOL 125.87 VL 26.565 GAL 15.45 AZL 89.77 HCA 307.42 SMA 121.06 ECC .33850 INC .2311 V1 30.247  
 RP 107.81 LAP -.18 LOP 73.29 VP 36.955 GAP 18.80 AZP 89.86 TAL 143.56 TAP 90.98 RCA 80.08 APO 162.04 V2 35.150  
 RC 189.959 GL .72 GP -9.29 ZAL 34.02 ZAP 170.65 ETS 266.97 ZAE 126.44 ETE 186.99 ZAC 166.21 ETC 161.24 CLP 178.95

PLANETOCENTRIC CONIC

C3 68.837 VHL 8.297 DLA 24.15 RAL 92.04 RAD 6569.3 VEL 13.791 PTH 2.52 VHP 12.274 OPA 12.88 RAP 72.59 ECC 2.1329  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 23 48 3395.63 -22.77 124.10 344.57 72.70 6 20 23 2795.6 -24.93 116.09  
 90.00 0 54 55 4289.29 2.92 176.96 333.76 61.82 2 6 25 3689.3 -.87 170.33  
 100.00 7 5 18 3068.34 -25.32 100.87 345.42 73.55 7 56 27 2468.3 -27.33 92.64  
 100.00 1 56 6 4091.80 5.25 161.17 332.48 60.53 3 4 18 3491.8 1.28 154.62  
 110.00 8 53 12 2730.77 -31.28 77.11 347.29 75.45 9 38 43 2130.8 -32.96 68.28  
 110.00 2 24 41 4002.14 10.55 151.15 329.25 57.30 3 31 23 3402.1 6.16 144.80

DIFFERENTIAL CORRECTIONS

TDE -.0446 TRA 7.8044 TC3-1.0004 BAU .9207  
 RDE .4744 RRA .3962 RC3 -.0117 FAU .00559  
 FDE -.0927 FRA 2.1358 FC3 -.0703 BSP 20535  
 BDE .4765 BRA 7.8144 BC3 1.0004 FSP -484

MID-COURSE EXECUTION ACCURACY

SGT 6135.2 SGR 444.5 SG3 140.1  
 RRT .6575 RRF .6463 RTF .9791  
 SGB 6151.3 R23 .0008 R13 .9791  
 SGI 6142.2 SG2 334.5 THA 2.74

ORBIT DETERMINATION ACCURACY

ST 1772.8 SR 339.7 SS 518.7  
 CRT .2479 CRS -.1363 CST -.9933  
 LSA 1848.1 MSA 334.3 SSA 10.5  
 EL1 1774.9 EL2 328.7 ALF 2.82

LAUNCH DATE JAN 27 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 7 1969

HELIOCENTRIC CONIC

DISTANCE 165.620

RL 147.32 LAL -.00 LOL 126.89 VL 23.842 GAL .68 AZL 86.84 HCA 69.12 SMA 107.61 ECC .36919 INC 3.1606 V1 30.243  
 RP 107.89 LAP 2.95 LOP 195.98 VP 35.025 GAP -21.67 AZP 88.87 TAL 178.83 TAP 247.95 RCA 67.88 APO 147.33 V2 35.123  
 RC 42.436 GL 11.54 GP 6.77 ZAL 89.32 ZAP 13.09 ETS 212.92 ZAE 171.99 ETE 335.09 ZAC 118.54 ETC 161.96 CLP 11.23

PLANETOCENTRIC CONIC

C3 43.186 VHL 6.572 DLA 24.91 RAL 31.11 RAD 6568.6 VEL 12.828 PTH 2.34 VHP 13.497 DPA 14.30 RAP 23.45 ECC 1.7107  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 3 55 3325.62 -24.11 119.41 275.42 74.68 1 59 20 2725.6 -25.98 111.24  
 90.00 20 56 57 4129.81 -2.23 168.07 266.51 61.76 22 5 47 3529.8 -5.98 161.40  
 100.00 2 47 45 2990.81 -26.70 95.52 276.17 76.04 3 37 36 2390.8 -28.36 87.11  
 100.00 21 55 47 3939.86 .12 152.81 265.21 60.11 23 1 27 3339.9 -3.86 146.28  
 110.00 4 38 53 2643.12 -32.60 70.61 277.67 79.08 5 22 56 2043.1 -33.76 61.57  
 110.00 22 21 9 3860.31 5.24 143.60 262.02 56.17 23 25 29 3260.3 .76 137.37

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3509 TRA -.7608 TC3 .0840 BAU .0499 SGT 800.5 SGR 430.4 SG3 58.4 ST 376.5 SR 418.4 SS 285.8  
 RDE -.4786 RRA .1060 RC3 -.0207 FAU .02082 RRT .1454 RRF -.1562 RTF -.6786 CRT .7678 CRS .8829 CST .9761  
 FDE .2571 FRA .3388 FC3 -.4175 BSP 2233 SGB 908.8 R23 -.0192 R13 -.6808 LSA 600.0 MSA 195.8 SSA 15.1  
 BDE .5935 BRA .7682 BC3 .0865 FSP -133 SG1 803.8 SG2 424.1 THA 6.20 EL1 529.6 EL2 190.6 ALF 48.92

LAUNCH DATE JAN 27 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 172.252

RL 147.32 LAL -.00 LOL 126.89 VL 24.217 GAL .52 AZL 87.00 HCA 72.34 SMA 109.20 ECC .34912 INC 2.9954 V1 30.243  
 RP 107.93 LAP 2.85 LOP 199.20 VP 35.270 GAP -20.42 AZP 89.09 TAL 179.03 TAP 251.37 RCA 71.08 APO 147.33 V2 35.111  
 RC 42.394 GL 11.80 GP 7.11 ZAL 89.88 ZAP 11.84 ETS 218.78 ZAE 169.65 ETE 344.46 ZAC 119.81 ETC 161.38 CLP 9.50

PLANETOCENTRIC CONIC

C3 38.319 VHL 6.190 DLA 24.96 RAL 30.44 RAD 6568.5 VEL 12.637 PTH 2.29 VHP 12.800 DPA 15.20 RAP 24.71 ECC 1.6306  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 23 3298.36 -24.59 117.55 272.57 75.49 1 55 21 2698.4 -26.34 109.32  
 90.00 20 55 6 4096.72 -3.29 166.22 264.06 61.86 22 3 23 3496.7 -7.03 159.53  
 100.00 2 44 23 2963.01 -27.14 93.58 273.26 76.97 3 33 46 2363.0 -28.67 85.10  
 100.00 21 53 47 3907.29 -.99 151.02 262.79 60.12 22 58 54 3307.3 -4.96 144.48  
 110.00 4 35 44 2614.64 -32.94 68.46 274.61 80.31 5 19 19 2014.6 -33.93 59.36  
 110.00 22 18 55 3828.43 4.03 141.92 259.66 56.03 23 22 44 3228.4 -.45 135.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3536 TRA -.7393 TC3 .1216 BAU .0629 SGT 836.4 SGR 434.2 SG3 64.8 ST 398.0 SR 423.1 SS 299.7  
 RDE -.4560 RRA .0977 RC3 -.0165 FAU .02195 RRT .1646 RRF -.1772 RTF -.6992 CRT .7800 CRS .8895 CST .9772  
 FDE .2691 FRA .3429 FC3 -.4960 BSP 2372 SGB 942.4 R23 -.0220 R13 -.7017 LSA 623.2 MSA 196.5 SSA 15.5  
 BDE .5770 BRA .7458 BC3 .1228 FSP -150 SG1 840.5 SG2 426.2 THA 6.59 EL1 548.2 EL2 192.3 ALF 47.25

LAUNCH DATE JAN 27 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 178.911

RL 147.32 LAL -.00 LOL 126.89 VL 24.562 GAL .35 AZL 87.16 HCA 75.55 SMA 110.73 ECC .33039 INC 2.8360 V1 30.243  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.495 GAP -19.24 AZP 89.29 TAL 179.30 TAP 254.85 RCA 74.15 APO 147.32 V2 35.099  
 RC 42.534 GL 12.01 GP 7.48 ZAL 90.57 ZAP 10.76 ETS 226.08 ZAE 167.17 ETE 350.58 ZAC 121.03 ETC 160.75 CLP 7.75

PLANETOCENTRIC CONIC

C3 34.096 VHL 5.839 DLA 24.92 RAL 29.64 RAD 6568.3 VEL 12.469 PTH 2.26 VHP 12.136 DPA 16.13 RAP 25.95 ECC 1.5611  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 57 55 3266.32 -25.12 115.36 269.62 76.47 1 52 21 2666.3 -26.73 107.06  
 90.00 20 51 11 4069.75 -4.15 164.71 261.46 61.96 21 59 0 3469.8 -7.87 158.00  
 100.00 2 41 47 2931.44 -27.61 91.34 270.25 78.06 3 30 39 2331.4 -28.98 82.81  
 100.00 21 50 0 3879.87 -1.92 149.52 260.22 60.16 22 54 39 3279.9 -5.87 142.96  
 110.00 4 32 57 2583.66 -33.27 66.11 271.42 81.67 5 16 0 1983.7 -34.07 56.95  
 110.00 22 15 19 3800.41 2.97 140.45 257.17 55.93 23 18 40 3200.4 -1.53 134.25

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3562 TRA -.7172 TC3 .1666 BAU .0761 SGT 873.0 SGR 437.5 SG3 71.7 ST 420.0 SR 427.3 SS 312.1  
 RDE -.4345 RRA .0902 RC3 -.0102 FAU .02321 RRT .1858 RRF -.2004 RTF -.7169 CRT .7923 CRS .8963 CST .9782  
 FDE .2804 FRA .3444 FC3 -.5892 BSP 2496 SGB 976.5 R23 -.0256 R13 -.7197 LSA 646.2 MSA 196.4 SSA 16.1  
 BDE .5618 BRA .7229 BC3 .1669 FSP -170 SG1 878.0 SG2 427.5 THA 6.98 EL1 567.2 EL2 193.1 ALF 45.63

LAUNCH DATE JAN 27 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 185.593

RL 147.32 LAL -.00 LOL 126.89 VL 24.879 GAL .17 AZL 87.32 HCA 78.77 SMA 112.20 ECC .31295 INC 2.6814 V1 30.243  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.703 GAP -18.11 AZP 89.48 TAL 179.64 TAP 258.40 RCA 77.09 APO 147.32 V2 35.086  
 RC 42.853 GL 12.18 GP 7.90 ZAL 91.40 ZAP 9.90 ETS 235.04 ZAE 164.65 ETE 354.94 ZAC 122.22 ETC 160.05 CLP 5.99

PLANETOCENTRIC CONIC

C3 30.432 VHL 5.516 DLA 24.78 RAL 28.72 RAD 6568.2 VEL 12.321 PTH 2.22 VHP 11.501 DPA 17.08 RAP 27.16 ECC 1.5008  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 40 3229.35 -25.68 112.79 266.59 77.64 1 50 30 2629.4 -27.13 104.43  
 90.00 20 45 5 4049.48 -4.80 163.57 258.71 62.06 21 52 34 3449.5 -8.50 156.84  
 100.00 2 40 5 2895.97 -28.08 88.81 267.14 79.31 3 28 21 2296.0 -29.27 80.21  
 100.00 21 44 22 3858.10 -2.65 148.32 257.52 60.21 22 48 40 3258.1 -6.60 141.75  
 110.00 4 30 37 2550.12 -33.57 63.53 268.13 83.16 5 13 7 1950.1 -34.16 54.34  
 110.00 22 10 19 3776.72 2.06 139.22 254.58 55.87 23 13 15 3176.7 -2.43 133.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3599 TRA -.6970 TC3 .2159 BAU .0878 SGT 912.3 SGR 441.0 SG3 79.4 ST 443.9 SR 431.6 SS 327.7  
 RDE -.4147 RRA .0829 RC3 -.0016 FAU .02450 RRT .2113 RRF -.2292 RTF -.7344 CRT .8049 CRS .9034 CST .9792  
 FDE .2951 FRA .3484 FC3 -.6969 BSP 2557 SGB 1013.3 R23 -.0308 R13 -.7377 LSA 672.4 MSA 195.8 SSA 16.5  
 BDE .5491 BRA .7019 BC3 .2159 FSP -182 SG1 918.4 SG2 428.2 THA 7.46 EL1 588.2 EL2 193.3 ALF 44.00

LAUNCH DATE JAN 27 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 25.171 GAL -.02 AZL 87.47 HCA 81.98 SMA 113.60 ECC .29674 INC 2.5303 V1 30.243  
 RP 108.05 LAP 2.51 LOP 208.86 VP 35.894 GAP -17.04 AZP 89.65 TAL 180.05 TAP 262.03 RCA 79.89 APO 147.32 V2 35.073  
 RC 43.347 GL 12.29 GP 8.35 ZAL 92.36 ZAP 9.35 ETS 245.63 ZAE 162.17 ETE 358.27 ZAC 123.34 ETC 159.28 CLP 4.21

DISTANCE 192.295

PLANETOCENTRIC CONIC

C3 27.253 VHL 5.220 DLA 24.54 RAL 27.68 RAD 6568.1 VEL 12.191 PTH 2.19 VHP 10.895 DPA 18.05 RAP 28.33 ECC 1.4485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 43 3187.35 -26.26 109.85 263.49 79.00 1 49 50 2587.3 -27.51 101.41  
 90.00 20 36 46 4036.35 -5.22 162.83 255.83 62.13 21 44 3 3436.4 -8.91 156.09  
 100.00 2 39 21 2856.44 -28.55 85.97 263.95 80.74 3 26 58 2256.4 -29.53 77.30  
 100.00 21 36 49 3842.49 -3.18 147.46 254.71 60.26 22 40 52 3242.5 -7.12 140.88  
 110.00 4 28 51 2513.89 -33.83 60.74 264.73 84.80 5 10 44 1913.9 -34.18 51.51  
 110.00 22 3 49 3757.81 1.34 138.23 251.89 55.84 23 6 27 3157.8 -3.15 132.02

DIFFERENTIAL CORRECTIONS

TOE -.3268 TRA -.6818 TC3 .3185 BAU .1162  
 RDE -.3909 RRA .0729 RC3 .0139 FAU .02679  
 FDE .2724 FRA .3740 FC3 -.8511 BSP 3296  
 BDE .5095 BRA .6857 BC3 .3189 FSP -229

MID-COURSE EXECUTION ACCURACY

SGT 957.0 SGR 438.2 SG3 89.9  
 RRT .2059 RRF -.2226 RTF -.7772  
 SGB 1052.5 R23 -.0234 R13 -.7795  
 SG1 962.3 SG2 426.5 THA 6.71

ORBIT DETERMINATION ACCURACY

ST 435.4 SR 429.8 SS 309.9  
 CRT .7873 CRS .8811 CST .9827  
 LSA 654.7 MSA 203.7 SSA 17.0  
 EL1 578.4 EL2 199.5 ALF 44.53

LAUNCH DATE JAN 27 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 25.438 GAL -.20 AZL 87.62 HCA 85.19 SMA 114.93 ECC .28175 INC 2.3816 V1 30.243  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.069 GAP -16.01 AZP 89.80 TAL 180.52 TAP 265.71 RCA 82.55 APO 147.32 V2 35.060  
 RC 44.011 GL 12.33 GP 8.86 ZAL 93.44 ZAP 9.18 ETS 257.33 ZAE 159.77 ETE .98 ZAC 124.41 ETC 158.45 CLP 2.40

DISTANCE 199.004

PLANETOCENTRIC CONIC

C3 24.503 VHL 4.950 DLA 24.18 RAL 26.56 RAD 6568.0 VEL 12.078 PTH 2.16 VHP 10.317 DPA 19.06 RAP 29.47 ECC 1.4033  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 58 4 3140.84 -26.82 106.57 260.34 80.56 1 50 25 2540.8 -27.85 98.05  
 90.00 20 26 29 4030.27 -5.41 162.49 252.88 62.16 21 33 39 3430.3 -9.10 155.75  
 100.00 2 39 41 2813.22 -28.98 82.83 260.71 82.34 3 26 34 2213.2 -29.74 74.11  
 100.00 21 27 33 3833.12 -3.50 146.95 251.83 60.29 22 31 26 3233.1 -7.43 140.36  
 110.00 4 27 44 2475.19 -34.03 57.73 261.29 86.57 5 8 59 1875.2 -34.13 48.49  
 110.00 21 55 59 3743.92 .81 137.50 249.14 55.83 22 58 23 3143.9 -3.68 131.30

DIFFERENTIAL CORRECTIONS

TOE -.3573 TRA -.6433 TC3 .3606 BAU .1185  
 RDE -.3772 RRA .0714 RC3 .0284 FAU .02802  
 FDE .3126 FRA .3427 FC3 -.9901 BSP 3021  
 BDE .5195 BRA .6473 BC3 .3617 FSP -247

MID-COURSE EXECUTION ACCURACY

SGT 982.2 SGR 446.8 SG3 97.8  
 RRT .2659 RRF -.2891 RTF -.7687  
 SGB 1079.0 R23 -.0384 R13 -.7727  
 SG1 991.0 SG2 426.8 THA 8.48

ORBIT DETERMINATION ACCURACY

ST 480.7 SR 437.4 SS 343.8  
 CRT .8270 CRS .9153 CST .9809  
 LSA 709.6 MSA 191.7 SSA 17.9  
 EL1 621.5 EL2 190.2 ALF 41.74

LAUNCH DATE JAN 27 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 25.683 GAL -.39 AZL 87.77 HCA 88.39 SMA 116.19 ECC .26791 INC 2.2345 V1 30.243  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.229 GAP -15.03 AZP 89.94 TAL 181.06 TAP 269.46 RCA 85.07 APO 147.32 V2 35.047  
 RC 44.838 GL 12.29 GP 9.42 ZAL 94.64 ZAP 9.44 ETS 269.22 ZAE 157.48 ETE 3.29 ZAC 125.41 ETC 157.54 CLP .55

DISTANCE 205.724

PLANETOCENTRIC CONIC

C3 22.121 VHL 4.703 DLA 23.71 RAL 25.36 RAD 6567.9 VEL 11.979 PTH 2.13 VHP 9.766 DPA 20.10 RAP 30.56 ECC 1.3641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 41 3089.94 -27.34 102.93 257.15 82.31 1 52 11 2489.9 -28.12 94.35  
 90.00 20 14 14 4031.28 -5.38 162.54 249.87 62.16 21 21 25 3431.3 -9.07 155.80  
 100.00 2 41 5 2766.25 -29.36 79.39 257.42 84.11 3 27 11 2166.2 -29.87 70.62  
 100.00 21 16 32 3830.20 -3.60 146.79 248.89 60.30 22 20 22 3230.2 -7.52 140.20  
 110.00 4 27 20 2435.84 -34.15 54.51 257.79 88.47 5 7 54 1833.8 -33.99 45.27  
 110.00 21 46 46 3735.37 .48 137.06 246.35 55.82 22 49 1 3135.4 -4.01 130.85

DIFFERENTIAL CORRECTIONS

TOE -.3586 TRA -.6210 TC3 .4369 BAU .1301  
 RDE -.3606 RRA .0660 RC3 .0503 FAU .02998  
 FDE .3225 FRA .3415 FC3-1.1733 BSP 3112  
 BDE .5085 BRA .6244 BC3 .4398 FSP -278

MID-COURSE EXECUTION ACCURACY

SGT 1020.9 SGR 450.4 SG3 108.6  
 RRT .3018 RRF -.3267 RTF -.7800  
 SGB 1115.9 R23 -.0439 R13 -.7846  
 SG1 1031.8 SG2 424.9 THA 9.15

ORBIT DETERMINATION ACCURACY

ST 502.4 SR 440.0 SS 352.0  
 CRT .8385 CRS .9208 CST .9820  
 LSA 730.6 MSA 189.0 SSA 18.7  
 EL1 640.8 EL2 188.0 ALF 40.49

LAUNCH DATE JAN 27 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 25.907 GAL -.57 AZL 87.91 HCA 91.60 SMA 117.38 ECC .25516 INC 2.0879 V1 30.243  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.376 GAP -14.10 AZP 90.06 TAL 181.67 TAP 273.26 RCA 87.43 APO 147.34 V2 35.033  
 RC 45.818 GL 12.17 GP 10.05 ZAL 95.95 ZAP 10.13 ETS 280.23 ZAE 155.33 ETE 5.37 ZAC 126.31 ETC 156.55 CLP -1.33

DISTANCE 212.448

PLANETOCENTRIC CONIC

C3 20.061 VHL 4.479 DLA 23.11 RAL 24.09 RAD 6567.8 VEL 11.893 PTH 2.11 VHP 9.240 DPA 21.18 RAP 31.59 ECC 1.3302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 30 3035.22 -27.77 98.99 253.93 84.24 1 55 5 2435.2 -28.28 90.36  
 90.00 20 0 18 4039.03 -5.14 162.98 246.85 62.11 21 7 37 3439.0 -8.83 156.25  
 100.00 2 43 32 2715.87 -29.65 75.67 254.11 86.05 3 28 48 2115.9 -29.89 66.88  
 100.00 21 3 57 3833.62 -3.48 146.97 245.94 60.29 22 7 50 3233.6 -7.41 140.39  
 110.00 4 27 42 2389.99 -34.18 51.08 254.27 90.50 5 7 32 1790.0 -33.73 41.87  
 110.00 21 36 16 3732.26 .36 136.90 243.54 55.82 22 38 29 3132.3 -4.13 130.69

DIFFERENTIAL CORRECTIONS

TOE -.3545 TRA -.5936 TC3 .5334 BAU .1446  
 RDE -.3452 RRA .0612 RC3 .0785 FAU .03219  
 FDE .3321 FRA .3382 FC3-1.3891 BSP 3313  
 BDE .4948 BRA .5968 BC3 .5391 FSP -314

MID-COURSE EXECUTION ACCURACY

SGT 1056.2 SGR 455.2 SG3 120.7  
 RRT .3402 RRF -.3698 RTF -.7970  
 SGB 1150.1 R23 -.0498 R13 -.8023  
 SG1 1069.6 SG2 422.7 THA 9.90

ORBIT DETERMINATION ACCURACY

ST 516.9 SR 442.3 SS 358.6  
 CRT .8483 CRS .9264 CST .9825  
 LSA 746.0 MSA 185.7 SSA 19.5  
 EL1 654.7 EL2 184.9 ALF 39.78

LAUNCH DATE JAN 27 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 219.172

RL 147.32 LAL -.00 LOL 126.89 VL 26.112 GAL -.75 AZL 88.06 HCA 94.80 SMA 118.50 ECC .24347 INC 1.9410 V1 30.243
RP 108.21 LAP 1.93 LOP 221.69 VP 36.509 GAP -13.20 AZP 90.16 TAL 182.32 TAP 277.12 RCA 89.65 APO 147.35 V2 35.020
RC 46.944 GL 11.94 GP 10.74 ZAL 97.35 ZAP 11.22 ETS 289.70 ZAE 153.35 ETE 7.32 ZAC 127.12 ETC 155.49 CLP -3.26

PLANETOCENTRIC CONIC

C3 18.281 VHL 4.276 DLA 22.38 RAL 22.78 RAD 6567.7 VEL 11.818 PTH 2.09 VHP 8.740 DPA 22.31 RAP 32.55 ECC 1.3009
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 9 25 2977.24 -28.10 94.77 250.71 86.33 1 59 2 2377.2 -28.31 86.12
90.00 19 44 57 4053.15 -4.69 163.77 243.85 62.04 20 52 30 3453.1 -8.39 157.05
100.00 2 47 3 2662.43 -29.84 71.71 250.81 88.12 3 31 25 2062.4 -29.78 62.91
100.00 20 50 0 3843.18 -3.16 147.50 243.01 60.26 21 54 4 3243.2 -7.09 140.92
110.00 4 28 54 2343.76 -34.09 47.48 250.77 92.63 5 7 58 1743.8 -33.35 38.31
110.00 21 24 38 3734.62 .45 137.02 240.76 55.82 22 26 53 3134.6 -4.04 130.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3496 TRA -.5688 TC3 .6341 BAU .1575 SGT 1092.2 SGR 461.2 SG3 134.1 ST 530.0 SR 443.9 SS 361.7
RDE -.3307 RRA .0568 RC3 .1140 FAU .03464 RRT .3825 RRF -.4166 RTF -.8100 CRT .8568 CRS .9309 CST .9830
FDE .3391 FRA .3346 FC3-1.6406 BSP 3444 SGB 1185.6 R23 -.0573 R13 -.8161 LSA 758.3 MSA 182.4 SSA 20.4
BDE .4813 BRA .5716 BC3 .6442 FSP -351 SG1 1108.8 SG2 419.7 THA 10.73 EL1 667.0 EL2 181.9 ALF 39.13

LAUNCH DATE JAN 27 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 225.894

RL 147.32 LAL -.00 LOL 126.89 VL 26.300 GAL -.92 AZL 88.21 HCA 98.00 SMA 119.55 ECC .23277 INC 1.7928 V1 30.243
RP 108.25 LAP 1.78 LOP 224.89 VP 36.631 GAP -12.34 AZP 90.25 TAL 183.03 TAP 281.03 RCA 91.72 APO 147.38 V2 35.007
RC 48.205 GL 11.60 GP 11.52 ZAL 98.82 ZAP 12.64 ETS 297.45 ZAE 151.53 ETE 9.19 ZAC 127.81 ETC 154.36 CLP -5.25

PLANETOCENTRIC CONIC

C3 16.746 VHL 4.092 DLA 21.51 RAL 21.45 RAD 6567.7 VEL 11.753 PTH 2.07 VHP 8.265 DPA 23.48 RAP 33.42 ECC 1.2756
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 15 21 2916.52 -28.28 90.34 247.51 88.54 2 3 57 2316.5 -28.19 81.68
90.00 19 28 27 4073.20 -4.04 164.90 240.92 61.95 20 36 20 3473.2 -7.77 158.20
100.00 2 51 33 2606.32 -29.89 67.54 247.53 90.32 3 34 59 2006.3 -29.53 58.76
100.00 20 34 56 3858.63 -2.64 148.35 240.15 60.21 21 39 14 3258.6 -6.58 141.78
110.00 4 30 57 2295.31 -33.88 43.71 247.32 94.85 5 9 13 1695.3 -32.84 34.63
110.00 21 12 1 3742.40 .75 137.43 238.03 55.82 22 14 23 3142.4 -3.74 131.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3449 TRA -.5459 TC3 .7396 BAU .1693 SGT 1128.9 SGR 469.4 SG3 149.2 ST 542.5 SR 444.9 SS 361.6
RDE -.3173 RRA .0527 RC3 .1582 FAU .03739 RRT .4297 RRF -.4681 RTF -.8199 CRT .8649 CRS .9348 CST .9835
FDE .3440 FRA .3300 FC3-1.9328 BSP 3563 SGB 1222.6 R23 -.0666 R13 -.8271 LSA 768.4 MSA 178.9 SSA 21.5
BDE .4686 BRA .5484 BC3 .7563 FSP -398 SG1 1149.6 SG2 416.3 THA 11.68 EL1 678.5 EL2 178.5 ALF 38.50

LAUNCH DATE JAN 27 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 232.608

RL 147.32 LAL -.00 LOL 126.89 VL 26.470 GAL -1.08 AZL 88.36 HCA 101.20 SMA 120.53 ECC .22302 INC 1.6425 V1 30.243
RP 108.29 LAP 1.61 LOP 228.09 VP 36.741 GAP -11.51 AZP 90.32 TAL 183.77 TAP 284.97 RCA 93.65 APO 147.41 V2 34.994
RC 49.590 GL 11.14 GP 12.39 ZAL 100.36 ZAP 14.35 ETS 303.64 ZAE 149.90 ETE 11.07 ZAC 128.38 ETC 153.14 CLP -7.30

PLANETOCENTRIC CONIC

C3 15.423 VHL 3.927 DLA 20.51 RAL 20.13 RAD 6567.6 VEL 11.696 PTH 2.06 VHP 7.814 DPA 24.71 RAP 34.20 ECC 1.2538
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 22 15 2853.48 -28.31 85.73 244.37 90.85 2 9 48 2253.5 -27.89 77.09
90.00 19 11 2 4098.78 -3.22 166.33 238.10 61.85 20 19 20 3498.8 -6.96 159.65
100.00 2 57 1 2547.85 -29.79 63.20 244.32 92.60 3 39 29 1947.9 -29.11 54.46
100.00 20 18 56 3879.65 -1.93 149.50 237.38 60.16 21 23 35 3279.6 -5.88 142.95
110.00 4 33 54 2244.79 -33.52 39.81 243.94 97.13 5 11 18 1644.8 -32.17 30.84
110.00 20 58 33 3755.48 1.25 138.11 235.39 55.84 22 1 8 3155.5 -3.24 131.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3349 TRA -.5195 TC3 .8587 BAU .1824 SGT 1161.3 SGR 480.7 SG3 166.0 ST 545.9 SR 444.8 SS 356.5
RDE -.3044 RRA .0492 RC3 .2130 FAU .04048 RRT .4796 RRF -.5235 RTF -.8320 CRT .8711 CRS .9380 CST .9836
FDE .3449 FRA .3227 FC3-2.2726 BSP 3745 SGB 1256.8 R23 -.0758 R13 -.8406 LSA 769.2 MSA 175.1 SSA 22.8
BDE .4525 BRA .5219 BC3 .8848 FSP -449 SG1 1187.2 SG2 412.6 THA 12.80 EL1 682.1 EL2 174.8 ALF 38.33

LAUNCH DATE JAN 27 1969

FLIGHT TIME 92.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 239.313

RL 147.32 LAL -.00 LOL 126.89 VL 26.625 GAL -1.24 AZL 88.51 HCA 104.39 SMA 121.43 ECC .21416 INC 1.4888 V1 30.243
RP 108.33 LAP 1.44 LOP 231.28 VP 36.840 GAP -10.72 AZP 90.37 TAL 184.55 TAP 288.94 RCA 95.43 APO 147.44 V2 34.980
RC 51.091 GL 10.54 GP 13.36 ZAL 101.93 ZAP 16.30 ETS 308.54 ZAE 148.45 ETE 13.00 ZAC 128.79 ETC 151.86 CLP -9.42

PLANETOCENTRIC CONIC

C3 14.284 VHL 3.779 DLA 19.37 RAL 18.85 RAD 6567.6 VEL 11.648 PTH 2.04 VHP 7.386 DPA 26.01 RAP 34.86 ECC 1.2351
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 30 3 2788.55 -28.15 80.99 241.31 93.23 2 16 31 2188.6 -27.40 72.40
90.00 18 52 58 4129.49 -2.24 168.05 235.41 61.76 20 1 47 3529.5 -5.99 161.38
100.00 3 3 27 2487.36 -29.52 58.72 241.20 94.94 3 44 54 1887.4 -28.52 50.06
100.00 20 2 14 3905.91 -1.04 150.95 234.74 60.12 21 7 20 3305.9 -5.00 144.41
110.00 4 37 44 2192.37 -33.00 35.80 240.68 99.45 5 14 17 1592.4 -31.35 26.97
110.00 20 44 27 3773.66 1.94 139.06 232.88 55.87 21 47 20 3173.7 -2.55 132.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3238 TRA -.4961 TC3 .9771 BAU .1941 SGT 1192.5 SGR 496.1 SG3 184.8 ST 546.4 SR 443.4 SS 346.5
RDE -.2921 RRA .0458 RC3 .2796 FAU .04392 RRT .5321 RRF -.5815 RTF -.8411 CRT .8758 CRS .9397 CST .9837
FDE .3414 FRA .3162 FC3-2.6620 BSP 3880 SGB 1291.6 R23 -.0875 R13 -.8514 LSA 765.0 MSA 171.6 SSA 24.2
BDE .4360 BRA .4982 BC3 1.0163 FSP -507 SG1 1225.1 SG2 408.9 THA 14.08 EL1 682.5 EL2 171.3 ALF 38.24



LAUNCH DATE JAN 27 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 1 1969

MELIOCENTRIC CONIC

DISTANCE 246.006

RL 147.32 LAL -.00 LOL 126.89 VL 26.766 GAL -1.38 AZL 88.67 HCA 107.58 SMA 122.28 ECC .20614 INC 1.3308 V1 30.243
RP 108.38 LAP 1.27 LOP 234.47 VP 36.930 GAP -9.97 AZP 90.40 TAL 185.35 TAP 292.93 RCA 97.07 APO 147.48 V2 34.967
RC 52.697 GL 9.81 GP 14.45 ZAL 103.53 ZAP 18.48 ETS 312.42 ZAE 147.17 ETE 15.03 ZAC 129.03 ETC 150.51 CLP -11.64

PLANETOCENTRIC CONIC

C3 13.306 VHL 3.648 DLA 18.09 RAL 17.62 RAD 6567.5 VEL 11.606 PTH 2.03 VHP 6.983 DPA 27.38 RAP 35.39 ECC 1.2190
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 38 45 2722.00 -27.80 76.15 238.38 95.63 2 24 7 2122.0 -26.73 67.65
90.00 18 34 27 4164.98 -1.09 170.03 232.90 61.70 19 43 52 3565.0 -4.87 163.38
100.00 3 10 49 2425.10 -29.07 54.15 238.21 97.31 3 51 14 1825.1 -27.75 45.59
100.00 19 45 4 3937.12 .02 152.66 232.28 60.11 20 50 41 3337.1 -3.95 146.13
110.00 4 42 31 2138.22 -32.32 31.72 237.58 101.78 5 18 9 1538.2 -30.37 23.06
110.00 20 29 52 3796.76 2.83 140.26 230.53 55.92 21 33 9 3196.8 -1.67 134.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3097 TRA -.4727 TC3 1.0985 BAU .2056 SGT 1220.2 SGR 517.1 SG3 205.7 ST 540.5 SR 440.3 SS 330.6
RDE -.2800 RRA .0425 RC3 .3602 FAU .04774 RRT .5858 RRF -.6409 RTF -.8497 CRT .8789 CRS .9397 CST .9836
FDE .3321 FRA .3090 FC3-3.1061 BSP 4017 SGB 1325.3 R23 -.1001 R13 -.8621 LSA 752.6 MSA 168.1 SSA 26.0
BOE .4175 BRA .4746 BC3 1.1560 FSP -572 SG1 1261.8 SG2 405.3 THA 15.59 EL1 676.7 EL2 167.8 ALF 38.39

LAUNCH DATE JAN 27 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 3 1969

MELIOCENTRIC CONIC

DISTANCE 252.684

RL 147.32 LAL -.00 LOL 126.89 VL 26.893 GAL -1.52 AZL 88.83 HCA 110.77 SMA 123.05 ECC .19892 INC 1.1672 V1 30.243
RP 108.42 LAP 1.09 LOP 237.66 VP 37.010 GAP -9.24 AZP 90.41 TAL 186.15 TAP 296.93 RCA 98.57 APO 147.53 V2 34.954
RC 54.398 GL 8.92 GP 15.68 ZAL 105.12 ZAP 20.86 ETS 315.52 ZAE 146.07 ETE 17.20 ZAC 129.07 ETC 149.12 CLP -13.94

PLANETOCENTRIC CONIC

C3 12.468 VHL 3.531 DLA 16.67 RAL 16.47 RAD 6567.5 VEL 11.570 PTH 2.02 VHP 6.604 DPA 28.84 RAP 35.75 ECC 1.2052
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 48 20 2654.02 -27.25 71.25 235.60 98.02 2 32 34 2054.0 -25.86 62.86
90.00 18 15 42 4204.98 .20 172.26 230.60 61.68 19 25 47 3605.0 -3.59 165.63
100.00 3 19 8 2361.25 -28.42 49.51 235.39 99.67 3 58 29 1761.2 -26.80 41.09
100.00 19 27 36 3972.99 1.24 154.63 230.02 60.13 20 53 49 3373.0 -2.74 148.10
110.00 4 48 15 2082.43 -31.47 27.60 234.65 104.08 5 22 57 1482.4 -29.22 19.12
110.00 20 14 58 3824.57 3.89 141.72 228.37 56.01 21 18 43 3224.6 -.60 135.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2943 TRA -.4516 TC3 1.2139 BAU .2161 SGT 1244.2 SGR 545.1 SG3 228.6 ST 530.4 SR 435.4 SS 309.5
RDE -.2679 RRA .0392 RC3 .4560 FAU .05189 RRT .6382 RRF -.6995 RTF -.8563 CRT .8804 CRS .9375 CST .9835
FDE .3171 FRA .3028 FC3-3.6030 BSP 4121 SGB 1358.3 R23 -.1152 R13 -.8715 LSA 734.0 MSA 164.8 SSA 28.0
BOE .3980 BRA .4533 BC3 1.2968 FSP -641 SG1 1297.4 SG2 402.4 THA 17.34 EL1 666.2 EL2 164.4 ALF 38.64

LAUNCH DATE JAN 27 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 5 1969

MELIOCENTRIC CONIC

DISTANCE 259.346

RL 147.32 LAL -.00 LOL 126.89 VL 27.008 GAL -1.65 AZL 89.00 HCA 113.96 SMA 123.76 ECC .19242 INC .9967 V1 30.243
RP 108.45 LAP .91 LOP 240.85 VP 37.081 GAP -8.54 AZP 90.40 TAL 186.96 TAP 300.92 RCA 99.95 APO 147.57 V2 34.942
RC 56.186 GL 7.87 GP 17.06 ZAL 106.69 ZAP 23.47 ETS 318.01 ZAE 145.11 ETE 19.58 ZAC 128.90 ETC 147.68 CLP -16.36

PLANETOCENTRIC CONIC

C3 11.751 VHL 3.428 DLA 15.11 RAL 15.43 RAD 6567.4 VEL 11.539 PTH 2.01 VHP 6.249 DPA 30.40 RAP 35.94 ECC 1.1934
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 58 52 2584.68 -26.49 66.32 233.01 100.39 2 41 57 1984.7 -24.79 58.07
90.00 17 56 51 4249.32 1.63 174.73 228.53 61.73 19 7 40 3649.3 -2.16 168.10
100.00 3 28 25 2295.88 -27.59 44.83 232.77 101.99 4 6 41 1695.9 -25.66 36.57
100.00 19 9 59 4013.36 2.61 156.84 227.99 60.21 20 16 52 3413.4 -1.38 150.32
110.00 4 54 58 2025.06 -30.45 23.44 231.95 106.34 5 28 44 1425.1 -27.91 15.17
110.00 19 59 55 3856.94 5.12 143.42 226.43 56.16 21 4 12 3256.9 .64 137.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2745 TRA -.4308 TC3 1.3259 BAU .2268 SGT 1262.2 SGR 581.9 SG3 254.0 ST 511.2 SR 426.8 SS 279.1
RDE -.2550 RRA .0359 RC3 .5708 FAU .05651 RRT .6874 RRF -.7551 RTF -.8623 CRT .8787 CRS .9304 CST .9830
FDE .2907 FRA .2966 FC3-4.1628 BSP 4250 SGB 1389.9 R23 -.1312 R13 -.8811 LSA 703.0 MSA 161.9 SSA 30.4
BOE .3747 BRA .4323 BC3 1.4436 FSP -722 SG1 1330.9 SG2 400.9 THA 19.42 EL1 646.1 EL2 161.2 ALF 39.17

LAUNCH DATE JAN 27 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 7 1969

MELIOCENTRIC CONIC

DISTANCE 265.990

RL 147.32 LAL -.00 LOL 126.89 VL 27.111 GAL -1.77 AZL 89.18 HCA 117.14 SMA 124.41 ECC .18661 INC .8176 V1 30.243
RP 108.49 LAP .73 LOP 244.03 VP 37.145 GAP -7.87 AZP 90.37 TAL 187.75 TAP 304.90 RCA 101.19 APO 147.62 V2 34.929
RC 58.051 GL 6.65 GP 18.61 ZAL 108.22 ZAP 26.29 ETS 320.06 ZAE 144.29 ETE 22.22 ZAC 128.49 ETC 146.24 CLP -18.91

PLANETOCENTRIC CONIC

C3 11.142 VHL 3.338 DLA 13.41 RAL 14.51 RAD 6567.4 VEL 11.512 PTH 2.01 VHP 5.919 DPA 32.07 RAP 35.90 ECC 1.1834
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 10 24 2513.95 -25.53 61.37 230.65 102.69 2 52 18 1913.9 -23.53 53.27
90.00 17 37 59 4297.93 3.20 177.45 226.72 61.85 18 49 37 3697.9 -.59 170.82
100.00 3 38 45 2228.99 -26.55 40.13 230.38 104.26 4 15 54 1629.0 -24.33 32.04
100.00 18 52 19 4058.12 4.12 159.31 226.21 60.37 19 59 57 3458.1 .14 152.78
110.00 5 2 46 1966.11 -29.25 19.27 229.48 108.54 5 35 32 1366.1 -26.44 11.22
110.00 19 44 47 3893.77 6.51 145.36 224.73 56.37 20 49 41 3293.8 2.04 139.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2510 TRA -.4090 TC3 1.4341 BAU .2382 SGT 1274.1 SGR 630.2 SG3 282.0 ST 483.0 SR 413.9 SS 240.0
RDE -.2408 RRA .0328 RC3 .7073 FAU .06159 RRT .7328 RRF -.8060 RTF -.8689 CRT .8738 CRS .9150 CST .9815
FDE .2523 FRA .2889 FC3-4.7857 BSP 4413 SGB 1421.4 R23 -.1452 R13 -.8921 LSA 660.1 MSA 159.1 SSA 33.4
BOE .3478 BRA .4104 BC3 1.5991 FSP -813 SG1 1363.8 SG2 400.6 THA 21.91 EL1 616.2 EL2 157.8 ALF 39.97

LAUNCH DATE JAN 27 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC DISTANCE 272.614  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.204 GAL -1.88 AZL 89.37 HCA 120.33 SMA 125.00 ECC .18144 INC .6282 V1 30.243  
 RP 108.53 LAP .54 LOP 247.21 VP 37.201 GAP -7.23 AZP 90.32 TAL 188.52 TAP 308.85 RCA 102.32 APO 147.68 V2 34.917  
 RC 59.985 GL 5.25 GP 20.35 ZAL 109.67 ZAP 29.33 ETS 321.76 ZAE 143.56 ETE 25.16 ZAC 127.80 ETC 144.80 CLP -21.59

PLANETOCENTRIC CONIC  
 C3 10.627 VHL 3.260 DLA 11.57 RAL 13.74 RAD 6567.4 VEL 11.490 PTH 2.00 VHP 5.615 DPA 33.86 RAP 35.61 ECC 1.1749  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 23 1 2441.67 -24.35 56.40 228.55 104.91 3 3 43 1841.7 -22.07 48.47  
 90.00 17 19 13 4350.83 4.89 180.41 225.20 62.07 18 31 44 3750.8 1.11 173.77  
 100.00 3 50 13 2160.45 -25.32 35.42 228.25 106.45 4 26 13 1560.5 -22.82 27.51  
 100.00 18 34 42 4107.28 5.77 162.02 224.72 60.62 19 43 9 3507.3 1.81 155.47  
 110.00 5 11 42 1905.47 -27.86 15.10 227.29 110.66 5 43 27 1305.5 -24.79 7.27  
 110.00 19 29 42 3935.02 8.06 147.55 223.31 56.67 20 35 17 3335.0 3.62 141.28

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2270 TRA -.3918 TC3 1.5199 BAU .2486 SGT 1278.7 SGR 691.5 SG3 312.1 ST 452.2 SR 395.9 SS 194.1  
 RDE -.2248 RRA .0288 RC3 .8667 FAU .06698 RRT .7706 RRF -.8502 RTF -.8720 CRT .8653 CRS .8783 CST .9765  
 FDE .2011 FRA .2863 FC3-5.4568 BSP 4526 SGB 1453.7 R23 -.1617 R13 -.9014 LSA 610.6 MSA 157.2 SSA 37.2  
 BOE .3195 BRA .3928 BC3 1.7497 FSP -910 SG1 1396.6 SG2 403.5 THA 24.83 EL1 580.8 EL2 154.5 ALF 40.61

LAUNCH DATE JAN 27 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC DISTANCE 279.216  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.286 GAL -1.97 AZL 89.57 HCA 123.51 SMA 125.53 ECC .17684 INC .4262 V1 30.243  
 RP 108.57 LAP .36 LOP 250.39 VP 37.251 GAP -6.61 AZP 90.24 TAL 189.26 TAP 312.76 RCA 103.33 APO 147.73 V2 34.906  
 RC 61.981 GL 3.64 GP 22.32 ZAL 111.04 ZAP 32.62 ETS 323.23 ZAE 142.88 ETE 28.47 ZAC 126.81 ETC 143.41 CLP -24.43

PLANETOCENTRIC CONIC  
 C3 10.196 VHL 3.193 DLA 9.58 RAL 13.13 RAD 6567.4 VEL 11.471 PTH 1.99 VHP 5.338 DPA 35.79 RAP 35.03 ECC 1.1678  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 36 52 2367.55 -22.96 51.41 226.72 107.04 3 16 20 1767.5 -20.41 43.67  
 90.00 17 0 31 4408.23 6.71 183.65 223.99 62.43 18 14 0 3808.2 2.96 176.97  
 100.00 4 2 55 2090.02 -23.87 30.68 226.41 108.54 4 37 45 1490.0 -21.12 22.97  
 100.00 18 17 9 4161.00 7.55 165.01 223.54 60.99 19 26 30 3561.0 3.63 158.43  
 110.00 5 21 52 1842.95 -26.29 10.92 225.40 112.68 5 52 35 1242.9 -22.98 3.32  
 110.00 19 14 42 3980.83 9.76 150.00 222.19 57.08 20 21 2 3360.8 5.36 143.68

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2014 TRA -.3767 TC3 1.5814 BAU .2588 SGT 1272.9 SGR 767.9 SG3 343.7 ST 416.9 SR 370.8 SS 143.5  
 RDE -.2062 RRA .0237 RC3 1.0514 FAU .07259 RRT .8003 RRF -.8869 RTF -.8732 CRT .8518 CRS .7758 CST .9485  
 FDE .1343 FRA .2884 FC3-6.1639 BSP 4626 SGB 1486.6 R23 -.1766 R13 -.9109 LSA 552.9 MSA 156.3 SSA 41.8  
 BOE .2883 BRA .3774 BC3 1.8990 FSP -1011 SG1 1428.9 SG2 410.1 THA 28.31 EL1 537.2 EL2 150.8 ALF 41.08

LAUNCH DATE JAN 27 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC DISTANCE 285.797  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.359 GAL -2.06 AZL 89.79 HCA 126.68 SMA 126.01 ECC .17279 INC .2087 V1 30.243  
 RP 108.60 LAP .17 LOP 253.57 VP 37.294 GAP -6.02 AZP 90.12 TAL 189.95 TAP 316.63 RCA 104.23 APO 147.78 V2 34.894  
 RC 64.032 GL 1.82 GP 24.52 ZAL 112.30 ZAP 36.16 ETS 324.55 ZAE 142.20 ETE 32.18 ZAC 125.50 ETC 142.10 CLP -27.44

PLANETOCENTRIC CONIC  
 C3 9.842 VHL 3.137 DLA 7.43 RAL 12.71 RAD 6567.4 VEL 11.456 PTH 1.99 VHP 5.090 DPA 37.87 RAP 34.09 ECC 1.1620  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 52 9 2291.13 -21.35 46.39 225.21 109.06 3 30 20 1691.1 -18.55 38.83  
 90.00 16 41 53 4470.56 8.66 187.19 223.12 62.93 17 56 23 3870.6 4.96 180.46  
 100.00 4 17 3 2017.28 -22.22 25.91 224.88 110.53 4 50 40 1417.3 -19.22 18.40  
 100.00 17 59 40 4219.65 9.47 168.31 222.69 61.52 19 9 59 3619.6 5.60 161.67  
 110.00 5 33 26 1778.23 -24.52 6.72 223.83 114.60 6 3 5 1178.2 -20.99 359.35  
 110.00 18 59 46 4031.46 11.62 152.74 221.40 57.63 20 6 57 3431.5 7.27 146.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1741 TRA -.3633 TC3 1.6167 BAU .2701 SGT 1256.1 SGR 861.9 SG3 376.7 ST 377.2 SR 335.8 SS 99.1  
 RDE -.1833 RRA .0173 RC3 1.2647 FAU .07836 RRT .8221 RRF -.9163 RTF -.8725 CRT .8309 CRS .3993 CST .7521  
 FDE .0469 FRA .2952 FC3-6.8927 BSP 4746 SGB 1523.3 R23 -.1870 R13 -.9211 LSA 487.6 MSA 157.8 SSA 47.2  
 BOE .2528 BRA .3637 BC3 2.0526 FSP -1119 SG1 1464.0 SG2 421.0 THA 32.44 EL1 483.6 EL2 145.8 ALF 41.01

LAUNCH DATE JAN 27 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC DISTANCE 292.354  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.424 GAL -2.14 AZL 90.03 HCA 129.86 SMA 126.43 ECC .16922 INC .0232 V1 30.243  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.331 GAP -5.45 AZP 89.98 TAL 190.59 TAP 320.45 RCA 105.04 APO 147.83 V2 34.883  
 RC 66.131 GL -.24 GP 26.99 ZAL 113.41 ZAP 39.95 ETS 325.80 ZAE 141.45 ETE 36.34 ZAC 123.84 ETC 140.91 CLP -30.65

PLANETOCENTRIC CONIC  
 C3 9.560 VHL 3.092 DLA 5.10 RAL 12.49 RAD 6567.3 VEL 11.443 PTH 1.98 VHP 4.873 DPA 40.10 RAP 32.75 ECC 1.1573  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 9 5 2211.78 -19.50 41.30 224.04 110.95 3 45 57 1611.8 -16.48 33.93  
 90.00 16 23 11 4538.47 10.74 191.10 222.63 63.64 17 38 50 3938.5 7.11 184.30  
 100.00 4 32 50 1941.67 -20.33 21.09 223.69 112.40 5 5 12 1341.7 -17.12 13.77  
 100.00 17 42 8 4283.82 11.53 171.96 222.21 62.23 18 53 32 3683.8 7.73 165.24  
 110.00 5 46 35 1710.84 -22.54 2.49 222.61 116.40 6 15 6 1110.8 -18.81 355.34  
 110.00 18 44 52 4087.41 13.64 155.82 220.98 58.35 19 52 59 3487.4 9.36 149.34

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1447 TRA -.3506 TC3 1.6234 BAU .2833 SGT 1226.9 SGR 976.2 SG3 410.2 ST 333.3 SR 287.4 SS 106.4  
 RDE -.1544 RRA .0093 RC3 1.5091 FAU .08414 RRT .8369 RRF -.9391 RTF -.8705 CRT .7987 CRS -.4310 CST .0666  
 FDE -.0649 FRA .3074 FC3-7.6190 BSP 4908 SGB 1567.9 R23 -.1886 R13 -.9329 LSA 418.3 MSA 165.3 SSA 52.3  
 BOE .2116 BRA .3508 BC3 2.2165 FSP -1232 SG1 1506.3 SG2 435.3 THA 37.30 EL1 418.0 EL2 137.9 ALF 39.73

LAUNCH DATE JAN 27 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 17 1969

MELIOCENTRIC CONIC

DISTANCE 298.888

RL 147.32 LAL -.00 LOL 126.89 VL 27.481 GAL -2.20 AZL 90.29 HCA 133.03 SMA 126.81 ECC .16611 INC .2849 V1 30.243  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.363 GAP -4.90 AZP 89.81 TAL 191.16 TAP 324.19 RCA 105.74 APO 147.87 V2 34.873  
 RC 68.274 GL -2.56 GP 29.74 ZAL 114.36 ZAP 44.01 ETS 327.05 ZAE 140.54 ETE 40.95 ZAC 121.81 ETC 139.89 CLP -34.07

PLANETOCENTRIC CONIC

C3 9.351 VHL 3.058 DLA 2.58 RAL 12.49 RAD 6567.3 VEL 11.434 PTH 1.98 VHP 4.690 DPA 42.49 RAP 30.92 ECC 1.1539  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 1 2128.69 -17.40 36.12 223.25 112.70 4 3 30 1528.7 -14.17 28.92  
 90.00 16 4 17 4612.90 12.95 195.44 222.55 64.60 17 21 10 4012.9 9.42 188.54  
 100.00 4 50 34 1862.45 -18.20 16.17 222.89 114.13 5 21 36 1262.4 -14.79 9.04  
 100.00 17 24 26 4354.38 13.74 176.04 222.15 63.19 18 37 0 3754.4 10.03 169.21  
 110.00 6 1 34 1640.22 -20.34 358.19 221.78 118.08 6 28 54 1040.2 -16.43 351.25  
 110.00 18 29 55 4149.37 15.83 159.29 220.96 59.30 19 39 4 3549.4 11.64 152.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1171 TRA -.3415 TC3 1.5841 BAU .2980 SGT 1181.9 SGR 1111.5 SG3 442.1 ST 293.0 SR 223.1 SS 180.3  
 RDE -.1178 RRA -.0022 RC3 1.7811 FAU .08946 RRT .8422 RRF -.9561 RTF -.8635 CRT .7585 CRS -.7803 CST -.3219  
 FDE -.1998 FRA .3306 FC3-8.2825 BSP 5068 SGB 1622.4 R23 -.1834 R13 -.9446 LSA 362.2 MSA 184.6 SSA 53.8  
 BOE .1661 BRA .3415 BC3 2.3836 FSP -1339 SG1 1557.4 SG2 454.8 TMA 42.91 EL1 347.3 EL2 122.7 ALF 35.01

LAUNCH DATE JAN 27 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 19 1969

MELIOCENTRIC CONIC

DISTANCE 305.398

RL 147.32 LAL -.00 LOL 126.89 VL 27.530 GAL -2.25 AZL 90.57 HCA 136.20 SMA 127.14 ECC .16340 INC .5720 V1 30.243  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.389 GAP -4.37 AZP 89.59 TAL 191.67 TAP 327.87 RCA 106.36 APO 147.91 V2 34.862  
 RC 70.456 GL -5.19 GP 32.78 ZAL 115.12 ZAP 48.31 ETS 328.40 ZAE 139.38 ETE 45.99 ZAC 119.41 ETC 139.08 CLP -37.72

PLANETOCENTRIC CONIC

C3 9.217 VHL 3.036 DLA -.17 RAL 12.74 RAD 6567.3 VEL 11.428 PTH 1.98 VHP 4.545 DPA 45.03 RAP 28.52 ECC 1.1517  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 49 22 2040.76 -15.01 30.77 222.89 114.30 4 23 23 1440.8 -11.60 23.74  
 90.00 15 44 55 4695.22 15.30 200.35 222.94 65.88 17 3 10 4095.2 11.91 193.31  
 100.00 5 10 38 1778.63 -15.79 11.11 222.51 115.71 5 40 17 1178.6 -12.21 4.16  
 100.00 17 6 20 4432.59 16.09 180.66 222.56 64.46 18 20 12 3832.6 12.52 173.68  
 110.00 6 18 42 1565.57 -17.89 353.79 221.36 119.63 6 44 48 965.6 -13.81 347.05  
 110.00 18 14 45 4218.41 18.18 163.26 221.42 60.54 19 25 4 3618.4 14.12 156.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0901 TRA -.3331 TC3 1.5023 BAU .3161 SGT 1120.8 SGR 1270.1 SG3 471.1 ST 255.4 SR 138.1 SS 287.9  
 RDE -.0702 RRA -.0177 RC3 2.0796 FAU .09408 RRT .8397 RRF -.9686 RTF -.8524 CRT .7212 CRS -.8154 CST -.3912  
 FDE -.3630 FRA .3634 FC3-8.8367 BSP 5306 SGB 1693.9 R23 -.1669 R13 -.9568 LSA 347.6 MSA 209.7 SSA 48.7  
 BOE .1142 BRA .3336 BC3 2.5655 FSP -1442 SG1 1625.8 SG2 475.5 TMA 49.25 EL1 276.6 EL2 88.3 ALF 23.89

LAUNCH DATE JAN 27 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 21 1969

MELIOCENTRIC CONIC

DISTANCE 311.882

RL 147.32 LAL -.00 LOL 126.89 VL 27.572 GAL -2.30 AZL 90.89 HCA 139.37 SMA 127.42 ECC .16106 INC .8934 V1 30.243  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.412 GAP -3.86 AZP 89.32 TAL 192.10 TAP 331.47 RCA 106.90 APO 147.94 V2 34.853  
 RC 72.672 GL -8.16 GP 36.12 ZAL 115.65 ZAP 52.84 ETS 329.92 ZAE 137.88 ETE 51.38 ZAC 116.65 ETC 138.54 CLP -41.61

PLANETOCENTRIC CONIC

C3 9.168 VHL 3.028 DLA -3.17 RAL 13.26 RAD 6567.3 VEL 11.426 PTH 1.98 VHP 4.442 DPA 47.69 RAP 25.47 ECC 1.1509  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 13 45 1946.55 -12.29 25.18 223.02 115.71 4 46 11 1346.5 -8.73 18.31  
 90.00 15 24 41 4787.36 17.78 205.97 223.88 67.59 16 44 28 4187.4 14.59 198.75  
 100.00 5 33 36 1688.93 -13.07 5.84 222.62 117.12 6 1 45 1088.9 -9.34 359.04  
 100.00 16 47 30 4520.21 18.58 185.97 223.52 66.15 18 2 50 3920.2 15.20 178.80  
 110.00 6 38 27 1485.92 -15.15 349.24 221.43 121.02 7 3 13 885.9 -10.93 342.68  
 110.00 17 59 9 4295.98 20.72 167.85 222.42 62.18 19 10 45 3696.0 16.83 160.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0686 TRA -.3273 TC3 1.3616 BAU .3373 SGT 1039.9 SGR 1450.0 SG3 493.6 ST 228.2 SR 52.1 SS 412.2  
 RDE -.0095 RRA -.0397 RC3 2.3911 FAU .09730 RRT .8243 RRF -.9774 RTF -.8309 CRT .6386 CRS -.1072 CST -.3538  
 FDE -.5470 FRA .4106 FC3-9.1880 BSP 5570 SGB 1784.4 R23 -.1432 R13 -.9679 LSA 422.8 MSA 210.7 SSA 39.1  
 BOE .0692 BRA .3297 BC3 2.7516 FSP -1522 SG1 1713.4 SG2 498.3 TMA 56.17 EL1 230.7 EL2 39.7 ALF 8.55

LAUNCH DATE JAN 27 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 23 1969

MELIOCENTRIC CONIC

DISTANCE 318.342

RL 147.32 LAL -.00 LOL 126.89 VL 27.608 GAL -2.33 AZL 91.26 HCA 142.53 SMA 127.66 ECC .15906 INC 1.2589 V1 30.243  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.430 GAP -3.36 AZP 89.00 TAL 192.46 TAP 334.99 RCA 107.36 APO 147.97 V2 34.844  
 RC 74.919 GL -11.51 GP 39.75 ZAL 115.91 ZAP 57.55 ETS 331.70 ZAE 135.95 ETE 57.02 ZAC 113.54 ETC 138.31 CLP -45.75

PLANETOCENTRIC CONIC

C3 9.222 VHL 3.037 DLA -6.47 RAL 14.08 RAD 6567.3 VEL 11.429 PTH 1.98 VHP 4.388 DPA 50.44 RAP 21.67 ECC 1.1518  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 41 58 1844.12 -9.20 19.25 223.73 116.90 5 12 42 1244.1 -5.52 12.50  
 90.00 15 3 1 4892.04 20.37 212.56 225.47 69.89 16 24 33 4292.0 17.44 205.11  
 100.00 6 0 13 1591.65 -9.99 .26 223.31 118.32 6 26 45 991.7 -6.13 353.60  
 100.00 16 27 27 4619.75 21.20 192.20 225.13 68.42 17 44 26 4019.7 18.08 184.79  
 110.00 7 1 25 1400.05 -12.08 344.48 222.07 122.22 7 24 45 800.0 -7.74 338.07  
 110.00 17 42 44 4384.12 23.42 173.26 224.09 64.36 18 55 48 3784.1 19.77 166.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0539 TRA -.3222 TC3 1.1631 BAU .3622 SGT 940.0 SGR 1649.4 SG3 506.9 ST 210.9 SR 144.9 SS 550.1  
 RDE .0690 RRA -.0708 RC3 2.6983 FAU .09860 RRT .7912 RRF -.9836 RTF -.7936 CRT -.1570 CRS .9678 CST -.2974  
 FDE -.7503 FRA .4727 FC3-9.2564 BSP 5900 SGB 1898.5 R23 -.1137 R13 -.9774 LSA 571.5 MSA 201.5 SSA 29.4  
 BOE .0876 BRA .3299 BC3 2.9383 FSP -1571 SG1 1826.1 SG2 519.3 TMA 63.41 EL1 213.1 EL2 141.6 ALF 168.88

LAUNCH DATE JAN 27 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 324.777

RL 147.32 LAL -.00 LOL 126.89 VL 27.639 GAL -2.35 AZL 91.68 HCA 145.69 SMA 127.87 ECC .15736 INC 1.6813 V1 30.243  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.444 GAP -2.89 AZP 88.61 TAL 192.73 TAP 338.42 RCA 107.75 APO 147.99 V2 34.835  
 RC 77.194 GL -15.32 GP 43.65 ZAL 115.85 ZAP 62.37 ETS 333.82 ZAE 133.53 ETE 62.78 ZAC 110.12 ETC 138.44 CLP -50.14

PLANETOCENTRIC CONIC

C3 9.409 VHL 3.067 DLA -10.12 RAL 15.25 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 4.391 DPA 53.22 RAP 16.99 ECC 1.1548  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 15 16 1730.73 -5.65 12.81 225.16 117.79 5 44 6 1130.7 -1.89 6.15  
 90.00 14 39 1 5013.26 23.00 220.48 227.87 73.01 16 2 34 4413.3 20.45 212.73  
 100.00 6 31 36 1484.46 -6.47 354.25 224.71 119.25 6 56 20 884.5 -2.53 347.68  
 100.00 16 5 22 4734.77 23.89 199.68 227.56 71.48 17 24 17 4134.8 21.14 191.97  
 110.00 7 28 28 1306.38 -8.63 339.42 223.39 123.20 7 50 14 706.4 -4.20 333.13  
 110.00 17 24 59 4485.61 26.25 179.78 226.58 67.28 18 39 45 3885.6 22.94 172.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0496 TRA -.3153 TC3 .9112 BAU .3917 SGT 824.0 SGR 1866.7 SG3 508.7 ST 202.7 SR 329.4 SS 697.1  
 RDE .1704 RRA -.1127 RC3 2.9780 FAU .09760 RRT .7280 RRF -.9880 RTF -.7274 CRT -.2554 CRS .9966 CST -.2922  
 FDE -.9657 FRA .5433 FC3-8.9802 BSP 6322 SGB 2040.5 R23 -.0818 R13 -.9847 LSA 773.0 MSA 194.0 SSA 21.8  
 BDE .1775 BRA .3348 BC3 3.1143 FSP -1584 SG1 1969.0 SG2 535.6 THA 70.70 EL1 335.5 EL2 192.4 ALF 103.42

LAUNCH DATE JAN 27 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 331.185

RL 147.32 LAL -.00 LOL 126.89 VL 27.663 GAL -2.35 AZL 92.18 HCA 148.85 SMA 128.04 ECC .15593 INC 2.1777 V1 30.243  
 RP 108.81 LAP -1.13 LOP 275.76 VP 37.455 GAP -2.43 AZP 88.14 TAL 192.91 TAP 341.76 RCA 108.07 APO 148.00 V2 34.827  
 RC 79.493 GL -19.62 GP 47.80 ZAL 115.42 ZAP 67.21 ETS 336.36 ZAE 130.58 ETE 68.54 ZAC 106.45 ETC 138.97 CLP -54.78

PLANETOCENTRIC CONIC

C3 9.782 VHL 3.128 DLA -14.15 RAL 16.81 RAD 6567.4 VEL 11.453 PTH 1.99 VHP 4.461 DPA 55.96 RAP 11.33 ECC 1.1610  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 55 37 1602.02 -1.52 5.60 227.53 118.28 6 22 19 1002.0 2.27 358.97  
 90.00 14 11 7 5157.27 25.52 230.27 231.28 77.29 15 37 4 4557.3 23.51 222.17  
 100.00 7 9 27 1363.83 -2.42 347.59 227.04 119.80 7 32 10 763.8 1.56 341.06  
 100.00 15 39 58 4870.70 26.51 208.93 231.01 75.66 17 1 9 4270.7 24.28 200.84  
 110.00 8 0 51 1202.83 -4.73 333.93 225.60 123.89 8 20 54 602.8 -.25 327.72  
 110.00 17 5 4 4604.46 29.12 187.83 230.13 71.25 18 21 48 4004.5 26.29 179.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0603 TRA -.3038 TC3 .6172 BAU .4256 SGT 700.5 SGR 2097.9 SG3 497.2 ST 204.9 SR 562.7 SS 847.2  
 RDE .3009 RRA -.1689 RC3 3.1955 FAU .09398 RRT .6083 RRF -.9911 RTF -.6054 CRT -.3791 CRS .9993 CST -.3927  
 FDE -1.1814 FRA .6187 FC3-8.3176 BSP 6877 SGB 2211.8 R23 -.0516 R13 -.9898 LSA 1020.1 MSA 188.3 SSA 16.1  
 BDE .3069 BRA .3477 BC3 3.2546 FSP -1561 SG1 2143.8 SG2 544.1 THA 77.71 EL1 568.7 EL2 187.6 ALF 98.83

LAUNCH DATE JAN 27 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 337.568

RL 147.32 LAL -.00 LOL 126.89 VL 27.683 GAL -2.35 AZL 92.77 HCA 152.00 SMA 128.17 ECC .15476 INC 2.7735 V1 30.243  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.463 GAP -1.99 AZP 87.55 TAL 193.01 TAP 345.02 RCA 108.34 APO 148.01 V2 34.820  
 RC 81.813 GL -24.48 GP 52.16 ZAL 114.54 ZAP 71.95 ETS 339.41 ZAE 127.12 ETE 74.19 ZAC 102.60 ETC 139.92 CLP -59.66

PLANETOCENTRIC CONIC

C3 10.430 VHL 3.230 DLA -18.60 RAL 18.84 RAD 6567.4 VEL 11.481 PTH 2.00 VHP 4.614 DPA 58.59 RAP 4.57 ECC 1.1717  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 46 39 1449.68 3.39 357.09 231.19 118.13 7 10 49 849.7 7.12 350.41  
 90.00 13 36 16 5335.25 27.57 242.88 235.89 83.28 15 5 11 4735.3 26.35 234.43  
 100.00 7 56 45 1223.47 2.34 339.88 230.61 119.81 8 17 8 623.5 6.29 333.32  
 100.00 15 8 51 5036.70 28.76 220.74 235.71 81.49 16 32 47 4436.7 27.29 212.25  
 110.00 8 40 32 1086.28 -.29 327.84 228.97 124.18 8 58 38 486.3 4.20 321.63  
 110.00 16 41 33 4746.66 31.80 198.04 235.04 76.74 18 0 40 4146.7 29.65 189.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0954 TRA -.2863 TC3 .2884 BAU .4612 SGT 592.0 SGR 2328.8 SG3 469.9 ST 233.5 SR 839.9 SS 987.7  
 RDE .4655 RRA -.2462 RC3 3.2946 FAU .08729 RRT .3653 RRF -.9932 RTF -.3602 CRT -.5977 CRS .9998 CST -.6041  
 FDE -1.3767 FRA .6990 FC3-7.2452 BSP 7476 SGB 2402.9 R23 -.0258 R13 -.9929 LSA 1304.2 MSA 185.5 SSA 12.0  
 BDE .4752 BRA .3776 BC3 3.3072 FSP -1482 SG1 2339.4 SG2 548.6 THA 84.38 EL1 851.9 EL2 184.5 ALF 99.90

LAUNCH DATE JAN 27 1969

FLIGHT TIME 124.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 343.924

RL 147.32 LAL -.00 LOL 126.89 VL 27.698 GAL -2.34 AZL 93.51 HCA 155.16 SMA 128.28 ECC .15380 INC 3.5066 V1 30.243  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.467 GAP -1.57 AZP 86.82 TAL 193.03 TAP 348.18 RCA 108.55 APO 148.00 V2 34.813  
 RC 84.153 GL -29.93 GP 56.71 ZAL 113.17 ZAP 76.46 ETS 343.02 ZAE 123.16 ETE 79.69 ZAC 98.65 ETC 141.34 CLP -64.75

PLANETOCENTRIC CONIC

C3 11.508 VHL 3.392 DLA -23.49 RAL 21.42 RAD 6567.4 VEL 11.528 PTH 2.01 VHP 4.872 DPA 61.02 RAP 356.60 ECC 1.1894  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 57 14 1250.78 9.65 345.83 236.79 116.75 8 18 5 650.8 13.17 338.92  
 90.00 12 46 18 5574.50 28.25 260.32 241.80 91.97 14 19 12 4974.5 28.23 251.65  
 100.00 9 0 2 1048.06 8.20 330.17 236.02 118.85 9 17 30 448.1 11.99 323.42  
 100.00 14 26 11 5252.45 29.89 236.65 241.83 89.77 15 53 43 4652.5 29.54 227.86  
 110.00 9 31 3 950.80 4.88 320.76 233.98 123.87 9 46 54 350.8 9.30 314.45  
 110.00 16 11 39 4922.48 33.77 211.36 241.60 84.38 17 33 42 4322.5 32.63 202.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1635 TRA -.2551 TC3 -.0356 BAU .4978 SGT 545.4 SGR 2554.7 SG3 428.5 ST 310.0 SR 1155.9 SS 1109.1  
 RDE .6737 RRA -.3488 RC3 3.2355 FAU .07796 RRT -.0469 RRF -.9947 RTF .0539 CRT -.8011 CRS .9999 CST -.8046  
 FDE -1.5379 FRA .7715 FC3-5.8646 BSP 8153 SGB 2612.3 R23 -.0050 R13 -.9947 LSA 1621.4 MSA 182.7 SSA 9.1  
 BDE .6933 BRA .4322 BC3 3.2357 FSP -1359 SG1 2554.8 SG2 544.8 THA 90.60 EL1 1183.0 EL2 181.3 ALF 102.42

LAUNCH DATE JAN 27 1969 FLIGHT TIME 126.00 ARRIVAL DATE JUN 2 1969

MELIOCENTRIC CONIC DISTANCE 350.252  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.709 GAL -2.31 AZL 94.44 HCA 158.30 SMA 128.35 ECC .15305 INC 4.4369 V1 30.243  
 RP 108.87 LAP -1.64 LOP 285.25 VP 37.470 GAP -1.16 AZP 85.88 TAL 192.95 TAP 351.25 RCA 108.70 APO 147.99 V2 34.807  
 RC 86.508 GL -35.96 GP 61.44 ZAL 111.26 ZAP 80.59 ETS 347.27 ZAE 118.73 ETE 85.04 ZAC 94.67 ETC 143.26 CLP -70.02

PLANETOCENTRIC CONIC  
 C3 13.303 VHL 3.647 DLA -28.77 RAL 24.69 RAD 6567.5 VEL 11.606 PTH 2.03 VHP 5.270 DPA 63.17 RAP 347.31 ECC 1.2189  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 84.67 9 50 20 943.30 22.10 328.96 246.98 108.91 10 6 4 343.3 24.48 321.06  
 95.33 11 19 14 655.54 22.11 307.88 246.99 108.90 11 30 10 55.5 24.49 299.98  
 100.00 10 47 32 757.67 17.20 313.31 244.90 114.83 11 0 9 157.7 20.41 305.98  
 100.00 13 4 44 5604.44 27.18 262.35 248.58 102.94 14 38 8 5004.4 28.69 253.87  
 110.00 10 40 35 779.49 11.28 311.62 241.56 122.48 10 53 35 179.5 15.49 305.04  
 110.00 15 28 10 5155.38 33.85 229.49 249.81 95.08 16 54 5 4555.4 34.18 220.26

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.2811 TRA -.2028 TC3 -.3197 BAU .5314 SGT 617.7 SGR 2758.2 SG3 374.5 ST 454.9 SR 1490.1 SS 1194.0  
 RDE .9328 RRA -.4877 RC3 2.9708 FAU .06625 RRT -.4900 RRF -.9957 RTF .4973 CRT -.9131 CRS 1.0000 CST -.9155  
 FDE-1.6437 FRA .8327 FC3-4.3117 BSP 8829 SGB 2826.5 R23 .0112 R13 -.9957 LSA 1954.6 MSA 180.3 SSA 6.9  
 BOE .9743 BRA .5282 BC3 2.9880 FSP -1190 SG1 2775.4 SG2 535.1 THA 96.51 EL1 1547.7 EL2 178.6 ALF 105.79

LAUNCH DATE JAN 27 1969 FLIGHT TIME 128.00 ARRIVAL DATE JUN 4 1969

MELIOCENTRIC CONIC DISTANCE 356.550  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.715 GAL -2.27 AZL 95.66 HCA 161.44 SMA 128.39 ECC .15248 INC 5.6645 V1 30.243  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.469 GAP -.76 AZP 84.63 TAL 192.78 TAP 354.22 RCA 108.82 APO 147.97 V2 34.802  
 RC 88.877 GL -42.49 GP 66.37 ZAL 108.80 ZAP 84.22 ETS 352.24 ZAE 113.87 ETE 90.36 ZAC 90.69 ETC 145.79 CLP -75.45

PLANETOCENTRIC CONIC  
 C3 16.377 VHL 4.047 DLA -34.32 RAL 28.77 RAD 6567.7 VEL 11.737 PTH 2.07 VHP 5.868 DPA 64.95 RAP 336.54 ECC 1.2695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.74 8 19 54 1326.64 24.88 359.01 255.97 114.44 8 42 0 726.6 27.96 351.19  
 110.26 13 22 17 5652.88 24.89 265.14 255.98 114.43 14 56 30 5052.9 27.97 257.31  
 69.74 8 19 54 1326.64 24.88 359.01 255.97 114.44 8 42 0 726.6 27.96 351.19  
 110.26 13 22 17 5652.88 24.89 265.14 255.98 114.43 14 56 30 5052.9 27.97 257.31  
 69.74 8 19 54 1326.64 24.88 359.01 255.97 114.44 8 42 0 726.6 27.96 351.19  
 110.26 13 22 17 5652.88 24.89 265.14 255.98 114.43 14 56 30 5052.9 27.97 257.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.4703 TRA -.1128 TC3 -.5121 BAU .5601 SGT 807.8 SGR 2935.6 SG3 313.1 ST 668.5 SR 1815.8 SS 1232.1  
 RDE 1.2584 RRA -.6722 RC3 2.5066 FAU .05330 RRT -.7609 RRF -.9965 RTF .7674 CRT -.9614 CRS 1.0000 CST -.9631  
 FDE-1.6864 FRA .8709 FC3-2.8174 BSP 9557 SGB 3044.7 R23 .0226 R13 -.9964 LSA 2287.3 MSA 175.4 SSA 5.2  
 BOE 1.3434 BRA .6816 BC3 2.5583 FSP -1000 SG1 3001.2 SG2 512.7 THA 102.19 EL1 1927.2 EL2 173.4 ALF 109.66

LAUNCH DATE JAN 27 1969 FLIGHT TIME 130.00 ARRIVAL DATE JUN 6 1969

MELIOCENTRIC CONIC DISTANCE 362.814  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.718 GAL -2.22 AZL 97.37 HCA 164.56 SMA 128.41 ECC .15208 INC 7.3692 V1 30.243  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.467 GAP -.38 AZP 82.89 TAL 192.52 TAP 357.09 RCA 108.89 APO 147.94 V2 34.797  
 RC 91.256 GL -49.31 GP 71.59 ZAL 105.84 ZAP 87.20 ETS 358.16 ZAE 108.53 ETE 95.95 ZAC 86.73 ETC 149.19 CLP -81.11

PLANETOCENTRIC CONIC  
 C3 21.951 VHL 4.685 DLA -39.88 RAL 33.84 RAD 6567.9 VEL 11.972 PTH 2.13 VHP 6.776 DPA 66.24 RAP 324.07 ECC 1.3613  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.66 7 52 26 1535.97 26.22 16.75 267.70 121.19 8 18 2 936.0 30.15 9.26  
 119.34 14 30 11 5581.49 26.23 260.15 267.71 121.18 16 3 12 4981.5 30.16 252.65  
 60.66 7 52 26 1535.97 26.22 16.75 267.70 121.19 8 18 2 936.0 30.15 9.26  
 119.34 14 30 11 5581.49 26.23 260.15 267.71 121.18 16 3 12 4981.5 30.16 252.65  
 60.66 7 52 26 1535.97 26.22 16.75 267.70 121.19 8 18 2 936.0 30.15 9.26  
 119.34 14 30 11 5581.49 26.23 260.15 267.71 121.18 16 3 12 4981.5 30.16 252.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.7734 TRA .0453 TC3 -.5821 BAU .5756 SGT 1094.2 SGR 3063.0 SG3 248.2 ST 946.2 SR 2078.6 SS 1209.8  
 RDE 1.6601 RRA -.9266 RC3 1.8729 FAU .03978 RRT -.8904 RRF -.9972 RTF .8959 CRT -.9816 CRS 1.0000 CST -.9831  
 FDE-1.6532 FRA .8888 FC3-1.5687 BSP 10241 SGB 3252.6 R23 .0303 R13 -.9969 LSA 2579.0 MSA 166.9 SSA 3.9  
 BOE 1.8314 BRA .9278 BC3 1.9613 FSP -795 SG1 3217.8 SG2 474.2 THA 108.05 EL1 2277.9 EL2 164.8 ALF 114.21

LAUNCH DATE JAN 27 1969 FLIGHT TIME 132.00 ARRIVAL DATE JUN 8 1969

MELIOCENTRIC CONIC DISTANCE 369.036  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.718 GAL -2.15 AZL 99.91 HCA 167.67 SMA 128.41 ECC .15182 INC 9.9094 V1 30.243  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.463 GAP -.02 AZP 80.31 TAL 192.16 TAP 359.83 RCA 108.92 APO 147.91 V2 34.793  
 RC 93.644 GL -56.05 GP 77.30 ZAL 102.53 ZAP 89.43 ETS 5.87 ZAE 102.61 ETE 102.74 ZAC 82.71 ETC 154.39 CLP -87.41

PLANETOCENTRIC CONIC  
 C3 33.022 VHL 5.746 DLA -45.00 RAL 39.97 RAD 6568.3 VEL 12.426 PTH 2.25 VHP 8.212 DPA 66.82 RAP 309.64 ECC 1.5435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.43 7 46 43 1719.30 24.98 31.91 282.19 128.74 8 15 22 1119.3 29.81 25.14  
 126.57 15 24 48 5600.63 25.00 260.87 282.20 128.73 16 58 8 5000.6 29.83 254.10  
 53.43 7 46 43 1719.30 24.98 31.91 282.19 128.74 8 15 22 1119.3 29.81 25.14  
 126.57 15 24 48 5600.63 25.00 260.87 282.20 128.73 16 58 8 5000.6 29.83 254.10  
 53.43 7 46 43 1719.30 24.98 31.91 282.19 128.74 8 15 22 1119.3 29.81 25.14  
 126.57 15 24 48 5600.63 25.00 260.87 282.20 128.73 16 58 8 5000.6 29.83 254.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE-1.2758 TRA .3544 TC3 -.5209 BAU .5637 SGT 1492.0 SGR 3105.1 SG3 185.7 ST 1281.0 SR 2209.1 SS 1130.8  
 RDE 2.1476 RRA -1.2807 RC3 1.1657 FAU .02669 RRT -.9558 RRF -.9979 RTF .9598 CRT -.9915 CRS 1.0000 CST -.9926  
 FDE-1.5529 FRA .8907 FC3 -.6997 BSP 10856 SGB 3445.0 R23 .0338 R13 -.9975 LSA 2789.0 MSA 146.5 SSA 2.8  
 BOE 2.4980 BRA 1.3288 BC3 1.2768 FSP -595 SG1 3421.9 SG2 397.9 THA 115.03 EL1 2549.6 EL2 144.5 ALF 120.00

LAUNCH DATE JAN 27 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 27.714 GAL -2.07 AZL 104.11 HCA 170.73 SMA 128.39 ECC .15167 INC14.1090 V1 30.243
RP 108.93 LAP -2.25 LOP 297.89 VP 37.457 GAP .32 AZP 76.07 TAL 191.68 TAP 2.41 RCA 108.91 APO 147.86 V2 34.789
RC 96.038 GL -62.00 GP 83.87 ZAL 99.07 ZAP 90.82 ETS 19.66 ZAE 95.73 ETE 115.21 ZAC 78.41 ETC 165.89 CLP -97.75

DISTANCE 375.194

PLANETOCENTRIC CONIC

C3 58.472 VHL 7.647 OLA -48.99 RAL 46.90 RAD 6569.1 VEL 13.410 PTH 2.45 VHP 10.683 DPA 66.20 RAP 292.93 ECC 1.9623
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.19 7 55 47 1909.17 19.98 45.11 298.45 135.72 8 27 36 1309.2 25.60 39.34
131.81 16 11 2 5697.07 20.00 265.15 298.47 135.71 17 45 59 5097.1 25.61 259.38
48.19 7 55 47 1909.17 19.98 45.11 298.45 135.72 8 27 36 1309.2 25.60 39.34
131.81 16 11 2 5697.07 20.00 265.15 298.47 135.71 17 45 59 5097.1 25.61 259.38
48.19 7 55 47 1909.17 19.98 45.11 298.45 135.72 8 27 36 1309.2 25.60 39.34
131.81 16 11 2 5697.07 20.00 265.15 298.47 135.71 17 45 59 5097.1 25.61 259.38

DIFFERENTIAL CORRECTIONS

TDE-2.2661 TRA 1.1294 TC3 -.3649 BAU .4852
RDE 2.6297 RRA-1.6897 RC3 .5021 FAU .01464
FDE-1.4201 FRA .8993 FC3 -.2168 BSP 11347
BOE 3.4714 BRA 2.0324 BC3 .6207 FSP -418

MID-COURSE EXECUTION ACCURACY

SGT 2204.0 SGR 2862.7 SG3 130.9
RRT -.9926 RRF -.9987 RTF .9928
SGB 3612.8 R23 .0326 R13 -.9982
SG1 3606.6 SG2 212.9 TMA 127.54

ORBIT DETERMINATION ACCURACY

ST 1741.6 SR 2053.8 SS 1022.6
CRT -.9981 CRS 1.0000 CST -.9983
LSA 2879.2 MSA 84.6 SSA 2.0
EL1 2691.5 EL2 82.0 ALF 130.29

LAUNCH DATE JAN 27 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 27.708 GAL -1.95 AZL 112.30 HCA 173.70 SMA 128.34 ECC .15160 INC22.3023 V1 30.243
RP 108.94 LAP -2.39 LOP 301.05 VP 37.450 GAP .62 AZP 74.72 TAL 191.02 TAP 4.72 RCA 108.89 APO 147.80 V2 34.787
RC 98.436 GL -65.62 GP 86.98 ZAL 95.72 ZAP 91.34 ETS 94.45 ZAE 86.80 ETE 188.46 ZAC 73.12 ETC 239.11 CLP 116.34

DISTANCE 381.228

PLANETOCENTRIC CONIC

C3 133.122 VHL 11.538 OLA -50.50 RAL 53.29 RAD 6570.4 VEL 15.952 PTH 2.82 VHP 15.608 DPA 63.17 RAP 273.71 ECC 3.1908
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.26 8 14 59 2105.85 11.18 54.92 313.90 139.58 8 50 5 1505.9 17.22 49.91
133.74 16 42 48 5863.90 11.20 271.93 313.92 139.58 18 20 31 5263.9 17.23 266.93
46.26 8 14 59 2105.85 11.18 54.92 313.90 139.58 8 50 5 1505.9 17.22 49.91
133.74 16 42 48 5863.90 11.20 271.93 313.92 139.58 18 20 31 5263.9 17.23 266.93
46.26 8 14 59 2105.85 11.18 54.92 313.90 139.58 8 50 5 1505.9 17.22 49.91
133.74 16 42 48 5863.90 11.20 271.93 313.92 139.58 18 20 31 5263.9 17.23 266.93

DIFFERENTIAL CORRECTIONS

TDE-4.6244 TRA 3.3117 TC3 -.1072 BAU .1959
RDE-2.2685 RRA 1.0146 RC3 -.0248 FAU .00267
FDE-1.3622 FRA .9912 FC3 -.0174 BSP 11770
BOE 5.1509 BRA 3.4636 BC3 .1101 FSP -286

MID-COURSE EXECUTION ACCURACY

SGT 3467.1 SGR 1378.3 SG3 88.9
RRT .9729 RRF .9715 RTF .9994
SGB 3731.0 R23 -.0350 R13 .9988
SG1 3719.2 SG2 297.0 TMA 21.29

ORBIT DETERMINATION ACCURACY

ST 2423.9 SR 1151.3 SS 964.5
CRT .9931 CRS -.9925 CST-1.0000
LSA 2848.8 MSA 124.7 SSA 1.3
EL1 2680.7 EL2 122.4 ALF 25.31

LAUNCH DATE JAN 27 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 27.699 GAL -1.75 AZL 133.32 HCA 176.33 SMA 128.28 ECC .15142 INC43.3185 V1 30.243
RP 108.94 LAP -2.52 LOP 304.22 VP 37.442 GAP .82 AZP 46.74 TAL 189.90 TAP 6.23 RCA 108.86 APO 147.71 V2 34.785
RC 100.837 GL -61.87 GP 72.20 ZAL 92.80 ZAP 91.05 ETS 167.07 ZAE 71.64 ETE 259.62 ZAC 64.33 ETC 313.05 CLP 93.38

DISTANCE 386.876

PLANETOCENTRIC CONIC

C3 463.888 VHL 21.538 OLA -45.45 RAL 54.80 RAD 6572.3 VEL 24.191 PTH 3.32 VHP 28.064 DPA 53.40 RAP 251.73 ECC 8.6344
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.83 8 43 36 2220.66 2.10 306.06 322.72 135.42 9 20 37 1620.7 7.77 50.84
127.17 16 26 12 802.22 2.11 306.06 322.73 135.41 16 39 34 202.2 7.79 300.82
52.83 8 43 36 2220.66 2.10 306.06 322.72 135.42 9 20 37 1620.7 7.77 50.84
127.17 16 26 12 802.22 2.11 306.06 322.73 135.41 16 39 34 202.2 7.79 300.82
52.83 8 43 36 2220.66 2.10 306.06 322.72 135.42 9 20 37 1620.7 7.77 50.84
127.17 16 26 12 802.22 2.11 306.06 322.73 135.41 16 39 34 202.2 7.79 300.82

DIFFERENTIAL CORRECTIONS

TDE 3.1131 TRA .4766 TC3 -.0410 BAU 1.1680
RDE-8.2817 RRA 7.1182 RC3 .1838 FAU-.02056
FDE-1.6822 FRA 1.4872 FC3 .0384 BSP 11171
BOE 8.8475 BRA 7.1342 BC3 .1883 FSP -199

MID-COURSE EXECUTION ACCURACY

SGT 865.9 SGR 3573.1 SG3 63.8
RRT -.4772 RRF .9999 RTF -.4657
SGB 3676.5 R23 -.0385 R13 .9993
SG1 3598.1 SG2 755.6 TMA 96.90

ORBIT DETERMINATION ACCURACY

ST 829.9 SR 2347.4 SS 1160.1
CRT -.9141 CRS-1.0000 CST .9103
LSA 2727.5 MSA 324.6 SSA .4
EL1 2469.1 EL2 320.0 ALF 108.23

LAUNCH DATE JAN 27 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

RL 147.32 LAL -.00 LOL 126.89 VL 27.687 GAL -2.33 AZL 10.52 HCA 182.68 SMA 128.20 ECC .15442 INC79.4744 V1 30.243
RP 108.95 LAP -2.64 LOP 307.38 VP 37.432 GAP 2.08 AZP 169.46 TAL 192.96 TAP 15.64 RCA 108.41 APO 148.00 V2 34.784
RC 103.240 GL 47.16 GP -53.90 ZAL 92.06 ZAP 91.70 ETS 177.89 ZAE 54.63 ETE 87.32 ZAC 78.19 ETC 41.03 CLP 92.89

DISTANCE 396.528

PLANETOCENTRIC CONIC

C31376.047 VHL 37.095 OLA 55.43 RAL 5.65 RAD 6573.1 VEL 38.695 PTH 3.55 VHP 45.167 DPA -60.27 RAP 183.10 ECC23.6463
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
40.13 16 44 52 5022.75 1.04 237.39 276.38 34.58 18 8 35 4422.7 -5.54 233.26
139.87 1 52 49 3412.36 1.06 107.73 276.36 34.58 2 49 41 2812.4 -5.53 103.59
40.13 16 44 52 5022.75 1.04 237.39 276.38 34.58 18 8 35 4422.7 -5.54 233.26
139.87 1 52 49 3412.36 1.06 107.73 276.36 34.58 2 49 41 2812.4 -5.53 103.59
40.13 16 44 52 5022.75 1.04 237.39 276.38 34.58 18 8 35 4422.7 -5.54 233.26
139.87 1 52 49 3412.36 1.06 107.73 276.36 34.58 2 49 41 2812.4 -5.53 103.59

DIFFERENTIAL CORRECTIONS

TDE-5.4450 TRA 2.4297 TC3 -.1108 BAU 4.4391
RD-16.6227 RRA .9165 RC3 -.2143 FAU-.07427
FDE 3.6573 FRA -.2215 FC3 .0467 BSP 9761
BOE17.4918 BRA 2.5968 BC3 .2413 FSP -179

MID-COURSE EXECUTION ACCURACY

SGT 1349.4 SGR 3030.3 SG3 57.5
RRT .8882 RRF-1.0000 RTF -.8908
SGB 3317.2 R23 -.0662 R13 -.9978
SG1 3266.9 SG2 575.1 TMA 67.69

ORBIT DETERMINATION ACCURACY

ST 864.5 SR 2569.0 SS 2206.0
CRT .9795 CRS 1.0000 CST .9801
LSA 3490.7 MSA 167.9 SSA .7
EL1 2705.5 EL2 165.3 ALF 71.69

LAUNCH DATE JAN 27 1969 FLIGHT TIME 142.00 ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC DISTANCE 401.342  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.674 GAL -1.96 AZL 52.97 HCA 184.57 SMA 128.11 ECC .15368 INC37.0334 V1 30.243  
 RP 108.95 LAP -2.75 LOP 310.54 VP 37.422 GAP 2.04 AZP 126.95 TAL 190.89 TAP 15.46 RCA 108.42 APO 147.80 V2 34.783  
 RC 105.643 GL 63.67 GP -78.55 ZAL 93.55 ZAP 93.49 ETS 182.92 ZAE 79.95 ETE 93.35 ZAC 93.97 ETC 49.27 CLP 107.86

PLANETOCENTRIC CONIC  
 C3 345.453 VHL 18.586 DLA 65.15 RAL 337.60 RAD 6571.9 VEL 21.605 PTH 3.22 VHP 21.863 DPA -72.98 RAP 123.18 ECC 6.6853  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.51 14 23 39 4985.78 -4.45 242.11 245.54 24.93 15 46 45 4385.8 -11.69 239.09  
 151.49 0 30 15 3267.80 -4.44 98.19 245.52 24.93 1 24 43 2667.8 -11.69 95.17  
 28.51 14 23 39 4985.78 -4.45 242.11 245.54 24.93 15 46 45 4385.8 -11.69 239.09  
 151.49 0 30 15 3267.80 -4.44 98.19 245.52 24.93 1 24 43 2667.8 -11.69 95.17  
 28.51 14 23 39 4985.78 -4.45 242.11 245.54 24.93 15 46 45 4385.8 -11.69 239.09  
 151.49 0 30 15 3267.80 -4.44 98.19 245.52 24.93 1 24 43 2667.8 -11.69 95.17

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3208 TRA 1.5667 TC3 -.0581 BAU .7711 SGT 1173.6 SGR 3821.5 SG3 73.3 ST 358.7 SR 3091.2 SS 1294.9  
 RDE -9.7800 RRA 3.1013 RC3 -.1565 FAU -.01147 RRT .6775 RRF -.9996 RTF -.6803 CRT .4811 CRS 1.0000 CST .4840  
 FDE 2.1672 FRA -.6975 FC3 .0287 BSP 12549 SGB 3997.6 R23 -.0431 R13 -.9987 LSA 3355.9 MSA 314.0 SSA 1.3  
 BDE 9.7853 BRA 3.4746 BC3 .1670 FSP -240 SG1 3907.5 SG2 844.2 THA 77.66 EL1 3096.1 EL2 314.0 ALF 86.77

LAUNCH DATE JAN 27 1969 FLIGHT TIME 144.00 ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC DISTANCE 407.131  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.658 GAL -1.77 AZL 67.19 HCA 187.39 SMA 128.00 ECC .15394 INC22.8102 V1 30.243  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.410 GAP 2.27 AZP 112.64 TAL 189.80 TAP 17.19 RCA 108.30 APO 147.71 V2 34.783  
 RC 108.045 GL 65.53 GP -83.55 ZAL 95.17 ZAP 96.42 ETS 252.17 ZAE 91.79 ETE 163.03 ZAC 100.42 ETC 119.35 CLP-173.90

PLANETOCENTRIC CONIC  
 C3 138.640 VHL 11.775 DLA 64.55 RAL 331.42 RAD 6570.5 VEL 16.124 PTH 2.84 VHP 13.363 DPA -69.85 RAP 85.25 ECC 3.2817  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.22 14 0 38 4849.00 -12.66 238.20 235.29 26.13 15 21 27 4249.0 -19.81 234.89  
 150.78 0 3 59 3136.09 -12.65 95.08 235.28 26.13 0 56 15 2536.1 -19.80 91.76  
 29.22 14 0 38 4849.00 -12.66 238.20 235.29 26.13 15 21 27 4249.0 -19.81 234.89  
 150.78 0 3 59 3136.09 -12.65 95.08 235.28 26.13 0 56 15 2536.1 -19.80 91.76  
 29.22 14 0 38 4849.00 -12.66 238.20 235.29 26.13 15 21 27 4249.0 -19.81 234.89  
 150.78 0 3 59 3136.09 -12.65 95.08 235.28 26.13 0 56 15 2536.1 -19.80 91.76

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 5.2268 TRA -2.0380 TC3 -.0884 BAU .1826 SGT 3440.7 SGR 2402.0 SG3 107.7 ST 2636.0 SR 1331.7 SS 1060.6  
 RDE -2.4135 RRA 1.8482 RC3 .0434 FAU .00838 RRT -.9484 RRF -.9603 RTF .9983 CRT -.9748 CRS .9798 CST -.9997  
 FDE 1.8093 FRA -.7719 FC3 -.0523 BSP 14412 SGB 4196.1 R23 -.0610 R13 -.9973 LSA 3126.5 MSA 267.3 SSA 1.7  
 BDE 5.7571 BRA 2.7512 BC3 .0985 FSP -388 SG1 4148.3 SG2 631.6 THA 145.58 EL1 2941.2 EL2 266.5 ALF 153.55

LAUNCH DATE JAN 27 1969 FLIGHT TIME 146.00 ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC DISTANCE 413.129  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.640 GAL -1.61 AZL 73.42 HCA 190.40 SMA 127.88 ECC .15448 INC16.5828 V1 30.243  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.398 GAP 2.55 AZP 106.32 TAL 188.86 TAP 19.27 RCA 108.13 APO 147.64 V2 34.784  
 RC 110.446 GL 63.75 GP -77.08 ZAL 96.42 ZAP 100.01 ETS 312.99 ZAE 99.58 ETE 223.61 ZAC 103.96 ETC 180.53 CLP-141.07

PLANETOCENTRIC CONIC  
 C3 77.300 VHL 8.792 DLA 62.81 RAL 333.60 RAD 6569.5 VEL 14.094 PTH 2.57 VHP 9.696 DPA -64.91 RAP 66.88 ECC 2.2722  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.27 14 14 11 4718.13 -19.83 233.00 232.94 29.06 15 32 49 4118.1 -26.77 229.07  
 148.73 0 7 50 3021.09 -19.82 92.24 232.92 29.06 0 58 11 2421.1 -26.75 88.31  
 31.27 14 14 11 4718.13 -19.83 233.00 232.94 29.06 15 32 49 4118.1 -26.77 229.07  
 148.73 0 7 50 3021.09 -19.82 92.24 232.92 29.06 0 58 11 2421.1 -26.75 88.31  
 31.27 14 14 11 4718.13 -19.83 233.00 232.94 29.06 15 32 49 4118.1 -26.77 229.07  
 148.73 0 7 50 3021.09 -19.82 92.24 232.92 29.06 0 58 11 2421.1 -26.75 88.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 3.9981 TRA -1.9672 TC3 -.3751 BAU .4314 SGT 3885.0 SGR 1713.4 SG3 152.9 ST 2738.1 SR 1316.0 SS 1123.4  
 RDE 1.9548 RRA -.7711 RC3 -.1832 FAU .02035 RRT .9940 RRF .9992 RTF .9932 CRT .9983 CRS -1.0000 CST -.9984  
 FDE 1.9903 FRA -.7956 FC3 -.2279 BSP 13031 SGB 4246.0 R23 .0919 R13 .9950 LSA 3237.9 MSA 84.4 SSA 1.4  
 BDE 4.4504 BRA 2.1129 BC3 .4175 FSP -487 SG1 4242.5 SG2 172.3 THA 23.71 EL1 3037.1 EL2 70.0 ALF 25.65

LAUNCH DATE JAN 27 1969 FLIGHT TIME 148.00 ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC DISTANCE 419.173  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.621 GAL -1.45 AZL 76.85 HCA 193.49 SMA 127.75 ECC .15519 INC13.1533 V1 30.243  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.386 GAP 2.84 AZP 102.80 TAL 187.96 TAP 21.45 RCA 107.92 APO 147.58 V2 34.786  
 RC 112.844 GL 61.05 GP -70.22 ZAL 97.26 ZAP 104.06 ETS 319.48 ZAE 105.68 ETE 229.14 ZAC 106.34 ETC 186.98 CLP-135.89

PLANETOCENTRIC CONIC  
 C3 51.559 VHL 7.180 DLA 60.95 RAL 337.78 RAD 6568.9 VEL 13.150 PTH 2.40 VHP 7.772 DPA -59.80 RAP 55.80 ECC 1.8485  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.48 14 36 14 4611.29 -25.12 227.67 232.70 32.44 15 53 6 4011.3 -31.79 223.05  
 146.52 0 19 9 2932.89 -25.11 89.53 232.68 32.43 1 8 2 2332.9 -31.78 84.91  
 33.48 14 36 14 4611.29 -25.12 227.67 232.70 32.44 15 53 6 4011.3 -31.79 223.05  
 146.52 0 19 9 2932.89 -25.11 89.53 232.68 32.43 1 8 2 2332.9 -31.78 84.91  
 33.48 14 36 14 4611.29 -25.12 227.67 232.70 32.44 15 53 6 4011.3 -31.79 223.05  
 146.52 0 19 9 2932.89 -25.11 89.53 232.68 32.43 1 8 2 2332.9 -31.78 84.91

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 3.1962 TRA -1.5856 TC3 -.7068 BAU .5635 SGT 3784.5 SGR 2075.1 SG3 206.7 ST 2667.7 SR 1640.0 SS 1237.1  
 RDE 2.0067 RRA -.7185 RC3 -.4109 FAU .03312 RRT .9880 RRF .9986 RTF .9879 CRT .9968 CRS -1.0000 CST -.9973  
 FDE 2.2510 FRA -.8301 FC3 -.5562 BSP 13477 SGB 4316.1 R23 .1105 R13 .9925 LSA 3364.6 MSA 126.1 SSA 2.2  
 BDE 3.7739 BRA 1.7408 BC3 .8175 FSP -680 SG1 4306.9 SG2 282.1 THA 28.58 EL1 3129.5 EL2 111.3 ALF 31.55

LAUNCH DATE JAN 27 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 26 1969

MELIOCENTRIC CONIC

DISTANCE 425.232

RL 147.32 LAL -.00 LOL 126.89 VL 27.600 GAL -1.30 AZL 79.01 MCA 196.60 SMA 127.61 ECC .15604 INC10.9858 V1 30.243  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.372 GAP 3.13 AZP 100.54 TAL 187.04 TAP 23.64 RCA 107.70 APO 147.52 V2 34.789  
 RC 115.239 GL 58.18 GP -63.86 ZAL 97.72 ZAP 108.35 ETS 320.61 ZAE 110.72 ETE 228.61 ZAC 108.12 ETC 187.72 CLP-135.62

PLANETOCENTRIC CONIC

C3 38.294 VHL 6.188 DLA 59.16 RAL 342.31 RAD 6568.5 VEL 12.636 PTH 2.29 VHP 6.646 DPA -54.71 RAP 48.31 ECC 1.6302  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.61 14 59 40 4526.65 -28.81 222.61 233.15 35.81 16 15 7 3926.7 -35.18 217.31  
 144.39 0 31 48 2868.09 -28.80 87.08 233.13 35.80 1 19 36 2268.1 -35.17 81.78  
 35.61 14 59 40 4526.65 -28.81 222.61 233.15 35.81 16 15 7 3926.7 -35.18 217.31  
 144.39 0 31 48 2868.09 -28.80 87.08 233.13 35.80 1 19 36 2268.1 -35.17 81.78  
 35.61 14 59 40 4526.65 -28.81 222.61 233.15 35.81 16 15 7 3926.7 -35.18 217.31  
 144.39 0 31 48 2868.09 -28.80 87.08 233.13 35.80 1 19 36 2268.1 -35.17 81.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.8728 TRA-1.3622 TC3-1.0885 BAU .6350 SGT 3865.7 SGR 2049.9 SG3 261.2 ST 2760.7 SR 1656.5 SS 1353.3  
 RDE 1.7592 RRA -.5557 RC3 -.5947 FAU .04519 RRT .9835 RRF .9978 RTF .9837 CRT .9961 CRS-1.0000 CST -.9967  
 FDE 2.4994 FRA -.8187 FC3-1.0215 BSP 13747 SGB 4375.5 R23 .1287 R13 .9896 LSA 3489.4 MSA 144.3 SSA 2.9  
 BOE 3.3686 BRA 1.4712 BC3 1.2403 FSP -875 SG1 4363.2 SG2 328.7 THA 27.71 EL1 3217.1 EL2 124.8 ALF 30.92

LAUNCH DATE JAN 27 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 28 1969

MELIOCENTRIC CONIC

DISTANCE 431.291

RL 147.32 LAL -.00 LOL 126.89 VL 27.578 GAL -1.13 AZL 80.51 MCA 199.73 SMA 127.46 ECC .15701 INC 9.4881 V1 30.243  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.359 GAP 3.43 AZP 98.94 TAL 186.09 TAP 25.81 RCA 107.45 APO 147.47 V2 34.792  
 RC 117.630 GL 55.38 GP -58.02 ZAL 97.81 ZAP 112.70 ETS 320.69 ZAE 114.92 ETE 226.42 ZAC 109.54 ETC 187.13 CLP-136.79

PLANETOCENTRIC CONIC

C3 30.506 VHL 5.523 DLA 57.51 RAL 346.73 RAD 6568.2 VEL 12.324 PTH 2.22 VHP 5.949 DPA -49.76 RAP 42.99 ECC 1.5021  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.60 15 22 31 4459.27 -31.32 217.96 233.95 38.96 16 36 51 3859.3 -37.39 212.05  
 142.40 0 44 16 2820.79 -31.31 84.95 233.93 38.95 1 31 17 2220.8 -37.38 79.05  
 37.60 15 22 31 4459.27 -31.32 217.96 233.95 38.96 16 36 51 3859.3 -37.39 212.05  
 142.40 0 44 16 2820.79 -31.31 84.95 233.93 38.95 1 31 17 2220.8 -37.38 79.05  
 37.60 15 22 31 4459.27 -31.32 217.96 233.95 38.96 16 36 51 3859.3 -37.39 212.05  
 142.40 0 44 16 2820.79 -31.31 84.95 233.93 38.95 1 31 17 2220.8 -37.38 79.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.7046 TRA-1.1953 TC3-1.5026 BAU .6808 SGT 3994.5 SGR 1930.5 SG3 311.2 ST 2890.3 SR 1584.7 SS 1450.3  
 RDE 1.5101 RRA -.4103 RC3 -.7268 FAU .05583 RRT .9800 RRF .9968 RTF .9804 CRT .9958 CRS-1.0000 CST -.9964  
 FDE 2.6861 FRA -.7591 FC3-1.5845 BSP 13926 SGB 4436.5 R23 .1444 R13 .9865 LSA 3597.9 MSA 152.9 SSA 3.6  
 BOE 3.0977 BRA 1.2637 BC3 1.6692 FSP -1051 SG1 4422.9 SG2 346.6 THA 25.51 EL1 3293.8 EL2 126.9 ALF 28.68

LAUNCH DATE JAN 27 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUN 30 1969

MELIOCENTRIC CONIC

DISTANCE 437.344

RL 147.32 LAL -.00 LOL 126.89 VL 27.554 GAL -.96 AZL 81.61 MCA 202.86 SMA 127.30 ECC .15810 INC 8.3868 V1 30.243  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.345 GAP 3.72 AZP 97.74 TAL 185.10 TAP 27.96 RCA 107.17 APO 147.42 V2 34.796  
 RC 120.015 GL 52.71 GP -52.70 ZAL 97.57 ZAP 116.99 ETS 320.58 ZAE 118.36 ETE 223.57 ZAC 110.74 ETC 186.16 CLP-138.48

PLANETOCENTRIC CONIC

C3 25.511 VHL 5.051 DLA 56.01 RAL 350.98 RAD 6568.0 VEL 12.120 PTH 2.17 VHP 5.507 DPA -45.04 RAP 39.14 ECC 1.4198  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.42 15 44 23 4404.80 -33.02 213.77 235.02 41.81 16 57 48 3804.8 -38.80 207.35  
 140.58 0 56 18 2786.16 -33.00 83.15 235.00 41.80 1 42 44 2186.2 -38.79 76.73  
 39.42 15 44 23 4404.80 -33.02 213.77 235.02 41.81 16 57 48 3804.8 -38.80 207.35  
 140.58 0 56 18 2786.16 -33.00 83.15 235.00 41.80 1 42 44 2186.2 -38.79 76.73  
 39.42 15 44 23 4404.80 -33.02 213.77 235.02 41.81 16 57 48 3804.8 -38.80 207.35  
 140.58 0 56 18 2786.16 -33.00 83.15 235.00 41.80 1 42 44 2186.2 -38.79 76.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6017 TRA-1.0526 TC3-1.9336 BAU .7145 SGT 4133.8 SGR 1780.1 SG3 352.9 ST 3020.6 SR 1479.0 SS 1520.7  
 RDE 1.2942 RRA -.2916 RC3 -.8062 FAU .06440 RRT .9768 RRF .9953 RTF .9774 CRT .9956 CRS-1.0000 CST -.9961  
 FDE 2.7947 FRA -.6540 FC3-2.1856 BSP 14120 SGB 4500.7 R23 .1574 R13 .9831 LSA 3687.7 MSA 158.1 SSA 4.4  
 BOE 2.9058 BRA 1.0922 BC3 2.0949 FSP -1199 SG1 4487.0 SG2 351.4 THA 22.96 EL1 3361.0 EL2 124.1 ALF 26.03

LAUNCH DATE JAN 27 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 2 1969

MELIOCENTRIC CONIC

DISTANCE 443.387

RL 147.32 LAL -.00 LOL 126.89 VL 27.529 GAL -.77 AZL 82.46 MCA 206.01 SMA 127.13 ECC .15931 INC 7.5390 V1 30.243  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.331 GAP 4.01 AZP 96.78 TAL 184.07 TAP 30.08 RCA 106.88 APO 147.39 V2 34.800  
 RC 122.394 GL 50.20 GP -47.88 ZAL 97.05 ZAP 121.10 ETS 320.51 ZAE 121.13 ETE 220.45 ZAC 111.83 ETC 185.13 CLP-140.37

PLANETOCENTRIC CONIC

C3 22.099 VHL 4.701 DLA 54.67 RAL 355.07 RAD 6567.9 VEL 11.978 PTH 2.13 VHP 5.229 DPA -40.61 RAP 36.36 ECC 1.3637  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.06 16 5 18 4360.02 -34.15 210.05 236.35 44.33 17 17 58 3760.0 -39.66 203.21  
 138.94 1 8 0 2760.70 -34.13 81.66 236.33 44.32 1 54 1 2160.7 -39.65 74.82  
 41.06 16 5 18 4360.02 -34.15 210.05 236.35 44.33 17 17 58 3760.0 -39.66 203.21  
 138.94 1 8 0 2760.70 -34.13 81.66 236.33 44.32 1 54 1 2160.7 -39.65 74.82  
 41.06 16 5 18 4360.02 -34.15 210.05 236.35 44.33 17 17 58 3760.0 -39.66 203.21  
 138.94 1 8 0 2760.70 -34.13 81.66 236.33 44.32 1 54 1 2160.7 -39.65 74.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5302 TRA -.9241 TC3-2.3751 BAU .7447 SGT 4276.8 SGR 1626.8 SG3 385.3 ST 3139.5 SR 1361.9 SS 1563.1  
 RDE 1.1124 RRA -.2001 RC3 -.8444 FAU .07095 RRT .9739 RRF .9932 RTF .9748 CRT .9956 CRS-1.0000 CST -.9958  
 FDE 2.8252 FRA -.5207 FC3-2.7794 BSP 14369 SGB 4575.7 R23 .1659 R13 .9798 LSA 3758.8 MSA 160.6 SSA 5.3  
 BOE 2.7640 BRA .9455 BC3 2.5208 FSP -1316 SG1 4562.6 SG2 346.2 THA 20.45 EL1 3420.1 EL2 117.6 ALF 23.39



LAUNCH DATE JAN 27 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 4 1969

## HELIOCENTRIC CONIC

DISTANCE 449.418

RL 147.32 LAL -0.00 LOL 126.89 VL 27.504 GAL -58 AZL 83.14 HCA 209.16 SMA 126.96 ECC .16064 INC 6.8626 V1 30.243  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.317 GAP 4.31 AZP 96.00 TAL 183.01 TAP 32.17 RCA 106.56 APO 147.35 V2 34.805  
 RC 124.766 GL 47.83 GP -43.57 ZAL 96.25 ZAP 124.98 ETS 320.53 ZAE 123.31 ETE 217.28 ZAC 112.87 ETC 184.15 CLP-142.30

## PLANETOCENTRIC CONIC

C3 19.660 VHL 4.434 DLA 53.47 RAL 359.04 RAD 6567.8 VEL 11.876 PTH 2.11 VHP 5.061 DPA -36.49 RAP 34.39 ECC 1.3236  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.55 16 25 25 4322.72 -34.89 206.77 237.95 46.53 17 37 28 3722.7 -40.16 199.59  
 137.45 1 19 33 2741.93 -34.87 80.44 237.94 46.52 2 5 15 2141.9 -40.15 73.27  
 42.55 16 25 25 4322.72 -34.89 206.77 237.95 46.53 17 37 28 3722.7 -40.16 199.59  
 137.45 1 19 33 2741.93 -34.87 80.44 237.94 46.52 2 5 15 2141.9 -40.15 73.27  
 42.55 16 25 25 4322.72 -34.89 206.77 237.95 46.53 17 37 28 3722.7 -40.16 199.59  
 137.45 1 19 33 2741.93 -34.87 80.44 237.94 46.52 2 5 15 2141.9 -40.15 73.27

## DIFFERENTIAL CORRECTIONS

## MID-COURSE EXECUTION ACCURACY

## ORBIT DETERMINATION ACCURACY

TOE 2.4773 TRA -.8002 TC3-2.8163 BAU .7730 SGT 4416.1 SGR 1479.5 SG3 408.0 ST 3244.2 SR 1245.9 SS 1580.5  
 RDE .9618 RRA -.1291 RC3 -.8482 FAU .07538 RRT .9709 RRF .9903 RTF .9724 CRT .9956 CRS-1.0000 CST -.9955  
 FDE 2.7902 FRA -.3673 FC3-3.3194 BSP 14639 SGB 4657.4 R23 .1696 R13 .9767 LSA 3814.3 MSA 161.7 SSA 6.2  
 BOE 2.6575 BRA .8106 BC3 2.9412 FSP -1398 SG1 4645.2 SGT 336.6 THA 18.12 EL1 3473.5 EL2 109.1 ALF 20.94

LAUNCH DATE JAN 27 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 6 1969

## HELIOCENTRIC CONIC

DISTANCE 455.437

RL 147.32 LAL -0.00 LOL 126.89 VL 27.477 GAL -37 AZL 83.69 HCA 212.31 SMA 126.78 ECC .16210 INC 6.3076 V1 30.243  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.303 GAP 4.60 AZP 95.34 TAL 181.92 TAP 34.23 RCA 106.23 APO 147.33 V2 34.811  
 RC 127.128 GL 45.59 GP -39.73 ZAL 95.21 ZAP 128.59 ETS 320.64 ZAE 124.97 ETE 214.19 ZAC 113.91 ETC 183.28 CLP-144.21

## PLANETOCENTRIC CONIC

C3 17.860 VHL 4.226 DLA 52.38 RAL 2.93 RAD 6567.7 VEL 11.800 PTH 2.09 VHP 4.970 DPA -32.69 RAP 33.05 ECC 1.2939  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.89 16 44 58 4291.26 -35.35 203.86 239.82 48.45 17 56 29 3691.3 -40.41 196.42  
 136.11 1 31 5 2728.24 -35.34 79.48 239.80 48.44 2 16 33 2128.2 -40.40 72.03  
 43.89 16 44 58 4291.26 -35.35 203.86 239.82 48.45 17 56 29 3691.3 -40.41 196.42  
 136.11 1 31 5 2728.24 -35.34 79.48 239.80 48.44 2 16 33 2128.2 -40.40 72.03  
 43.89 16 44 58 4291.26 -35.35 203.86 239.82 48.45 17 56 29 3691.3 -40.41 196.42  
 136.11 1 31 5 2728.24 -35.34 79.48 239.80 48.44 2 16 33 2128.2 -40.40 72.03

## DIFFERENTIAL CORRECTIONS

## MID-COURSE EXECUTION ACCURACY

## ORBIT DETERMINATION ACCURACY

TOE 2.4390 TRA -.6782 TC3-3.2455 BAU .7995 SGT 4552.9 SGR 1345.2 SG3 422.2 ST 3338.5 SR 1140.2 SS 1580.7  
 RDE .8400 RRA -.0750 RC3 -.8238 FAU .07775 RRT .9677 RRF .9861 RTF .9704 CRT .9958 CRS-1.0000 CST -.9952  
 FDE 2.7121 FRA -.2068 FC3-3.7691 BSP 14911 SGB 4747.4 R23 .1675 R13 .9739 LSA 3862.3 MSA 161.9 SSA 7.2  
 BOE 2.5796 BRA .6823 BC3 3.3484 FSP -1446 SG1 4736.2 SGT 325.9 THA 16.03 EL1 3526.4 EL2 99.4 ALF 18.80

LAUNCH DATE JAN 27 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 8 1969

## HELIOCENTRIC CONIC

DISTANCE 461.441

RL 147.32 LAL -0.00 LOL 126.89 VL 27.449 GAL -15 AZL 84.16 HCA 215.46 SMA 126.60 ECC .16368 INC 5.8414 V1 30.243  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.288 GAP 4.89 AZP 94.76 TAL 180.79 TAP 36.25 RCA 105.88 APO 147.32 V2 34.818  
 RC 129.481 GL 43.45 GP -36.33 ZAL 93.95 ZAP 131.94 ETS 320.81 ZAE 126.22 ETE 211.28 ZAC 114.98 ETC 182.52 CLP-146.07

## PLANETOCENTRIC CONIC

C3 16.502 VHL 4.062 DLA 51.40 RAL 6.79 RAD 6567.7 VEL 11.742 PTH 2.07 VHP 4.936 DPA -29.21 RAP 32.21 ECC 1.2716  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.12 17 4 6 4264.49 -35.61 201.30 241.94 50.11 18 15 11 3664.5 -40.48 193.65  
 134.88 1 42 44 2718.51 -35.60 78.72 241.93 50.10 2 28 2 2118.5 -40.47 71.07  
 45.12 17 4 6 4264.49 -35.61 201.30 241.94 50.11 18 15 11 3664.5 -40.48 193.65  
 134.88 1 42 44 2718.51 -35.60 78.72 241.93 50.10 2 28 2 2118.5 -40.47 71.07  
 45.12 17 4 6 4264.49 -35.61 201.30 241.94 50.11 18 15 11 3664.5 -40.48 193.65  
 134.88 1 42 44 2718.51 -35.60 78.72 241.93 50.10 2 28 2 2118.5 -40.47 71.07

## DIFFERENTIAL CORRECTIONS

## MID-COURSE EXECUTION ACCURACY

## ORBIT DETERMINATION ACCURACY

TOE 2.4041 TRA -.5565 TC3-3.6550 BAU .8245 SGT 4679.6 SGR 1221.8 SG3 427.9 ST 3412.9 SR 1042.8 SS 1560.4  
 RDE .7391 RRA -.0346 RC3 -.7785 FAU .07830 RRT .9639 RRF .9804 RTF .9688 CRT .9961 CRS -.9999 CST -.9948  
 FDE 2.5931 FRA -.0498 FC3-4.1078 BSP 15253 SGB 4836.5 R23 .1586 R13 .9716 LSA 3891.6 MSA 160.6 SSA 8.1  
 BOE 2.5151 BRA .5576 BC3 3.7370 FSP -1473 SG1 4826.2 SGT 315.3 THA 14.19 EL1 3567.6 EL2 88.4 ALF 16.94

LAUNCH DATE JAN 27 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 10 1969

## HELIOCENTRIC CONIC

DISTANCE 467.432

RL 147.32 LAL -0.00 LOL 126.89 VL 27.421 GAL .07 AZL 84.56 HCA 218.62 SMA 126.41 ECC .16539 INC 5.4420 V1 30.243  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.274 GAP 5.18 AZP 94.26 TAL 179.63 TAP 38.25 RCA 105.50 APO 147.32 V2 34.825  
 RC 131.823 GL 41.39 GP -33.32 ZAL 92.49 ZAP 135.03 ETS 321.01 ZAE 127.13 ETE 208.58 ZAC 116.11 ETC 181.87 CLP-147.86

## PLANETOCENTRIC CONIC

C3 15.467 VHL 3.933 DLA 50.50 RAL 10.64 RAD 6567.6 VEL 11.698 PTH 2.06 VHP 4.944 DPA -26.02 RAP 31.77 ECC 1.2545  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.26 17 23 1 4241.49 -35.72 199.02 244.31 51.57 18 33 43 3641.5 -40.42 191.20  
 133.74 1 54 30 2712.07 -35.71 78.16 244.30 51.56 2 39 43 2112.1 -40.41 70.35  
 46.26 17 23 1 4241.49 -35.72 199.02 244.31 51.57 18 33 43 3641.5 -40.42 191.20  
 133.74 1 54 30 2712.07 -35.71 78.16 244.30 51.56 2 39 43 2112.1 -40.41 70.35  
 46.26 17 23 1 4241.49 -35.72 199.02 244.31 51.57 18 33 43 3641.5 -40.42 191.20  
 133.74 1 54 30 2712.07 -35.71 78.16 244.30 51.56 2 39 43 2112.1 -40.41 70.35

## DIFFERENTIAL CORRECTIONS

## MID-COURSE EXECUTION ACCURACY

## ORBIT DETERMINATION ACCURACY

TOE 2.3786 TRA -.4227 TC3-4.0383 BAU .8483 SGT 4799.5 SGR 1116.2 SG3 428.6 ST 3478.8 SR 960.7 SS 1533.1  
 RDE .6594 RRA .0006 RC3 -.7226 FAU .07759 RRT .9582 RRF .9730 RTF .9666 CRT .9964 CRS -.9997 CST -.9943  
 FDE 2.4620 FRA .1198 FC3-4.3432 BSP 15291 SGB 4927.6 R23 .1498 R13 .9688 LSA 3917.8 MSA 161.7 SSA 9.1  
 BOE 2.4683 BRA .4227 BC3 4.1024 FSP -1428 SG1 4917.7 SGT 311.8 THA 12.61 EL1 3608.2 EL2 78.2 ALF 15.39

LAUNCH DATE JAN 27 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC DISTANCE 473.407  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.392 GAL .31 AZL 84.91 HCA 221.78 SMA 126.22 ECC .16725 INC 5.0941 V1 30.243  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.260 GAP 5.47 AZP 93.80 TAL 178.44 TAP 40.22 RCA 105.11 APO 147.33 V2 34.833  
 RC 134.153 GL 39.41 GP -30.67 ZAL 90.84 ZAP 137.88 ETS 321.21 ZAE 127.78 ETE 206.13 ZAC 117.31 ETC 181.32 CLP-149.58

PLANETOCENTRIC CONIC  
 C3 14.677 VHL 3.831 DLA 49.66 RAL 14.50 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 4.984 DPA -23.10 RAP 31.68 ECC 1.2415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.33 17 41 52 4221.59 -35.70 196.98 246.90 52.86 18 52 13 3621.6 -40.25 189.04  
 132.67 2 6 27 2708.49 -35.69 77.78 246.89 52.84 2 51 35 2108.5 -40.24 69.84  
 47.33 17 41 52 4221.59 -35.70 196.98 246.90 52.86 18 52 13 3621.6 -40.25 189.04  
 132.67 2 6 27 2708.49 -35.69 77.78 246.89 52.84 2 51 35 2108.5 -40.24 69.84  
 47.33 17 41 52 4221.59 -35.70 196.98 246.90 52.86 18 52 13 3621.6 -40.25 189.04  
 132.67 2 6 27 2708.49 -35.69 77.78 246.89 52.84 2 51 35 2108.5 -40.24 69.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3560 TRA -.2905 TC3-4.3980 BAU .8726 SGT 4921.6 SGR 1026.7 SC3 425.3 ST 3530.7 SR 891.8 SS 1499.0  
 RDE .5961 RRA .0259 RC3 -.6600 FAU .07587 RRT .9510 RRF .9636 RTF .9650 CRT .9970 CRS -.9993 CST -.9938  
 FDE 2.3233 FRA .2717 FC3-4.4753 BSP 15788 SGB 5027.5 R23 .1363 R13 .9668 LSA 3934.7 MSA 161.9 SSA 10.1  
 BDE 2.4302 BRA .2917 BC3 4.4473 FSP -1437 SG1 5017.8 SG2 311.4 THA 11.26 EL1 3641.0 EL2 67.4 ALF 14.14

LAUNCH DATE JAN 27 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC DISTANCE 479.368  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.362 GAL .57 AZL 85.21 HCA 224.95 SMA 126.02 ECC .16925 INC 4.7866 V1 30.243  
 RP 108.77 LAP -3.38 LOP 351.74 VP 37.246 GAP 5.76 AZP 93.39 TAL 177.22 TAP 42.17 RCA 104.69 APO 147.35 V2 34.841  
 RC 136.471 GL 37.47 GP -28.32 ZAL 89.02 ZAP 140.50 ETS 321.39 ZAE 128.22 ETE 203.92 ZAC 118.59 ETC 180.84 CLP-151.23

PLANETOCENTRIC CONIC  
 C3 14.082 VHL 3.753 DLA 48.86 RAL 18.38 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 5.049 DPA -20.41 RAP 31.86 ECC 1.2317  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.36 18 0 42 4204.30 -35.58 195.13 249.71 53.99 19 10 46 3604.3 -39.99 187.10  
 131.64 2 18 32 2707.45 -35.57 77.56 249.70 53.98 3 3 39 2107.4 -39.99 69.53  
 48.36 18 0 42 4204.30 -35.58 195.13 249.71 53.99 19 10 46 3604.3 -39.99 187.10  
 131.64 2 18 32 2707.45 -35.57 77.56 249.70 53.98 3 3 39 2107.4 -39.99 69.53  
 48.36 18 0 42 4204.30 -35.58 195.13 249.71 53.99 19 10 46 3604.3 -39.99 187.10  
 131.64 2 18 32 2707.45 -35.57 77.56 249.70 53.98 3 3 39 2107.4 -39.99 69.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.3249 TRA -.1542 TC3-4.7252 BAU .8966 SGT 5030.4 SGR 946.3 SC3 417.1 ST 3552.9 SR 827.9 SS 1445.8  
 RDE .5417 RRA .0445 RC3 -.5967 FAU .07354 RRT .9427 RRF .9517 RTF .9640 CRT .9976 CRS -.9987 CST -.9933  
 FDE 2.1617 FRA .4080 FC3-4.5212 BSP 16225 SGB 5118.6 R23 .1182 R13 .9654 LSA 3920.9 MSA 160.6 SSA 11.1  
 BDE 2.3872 BRA .1605 BC3 4.7627 FSP -1428 SG1 5109.2 SG2 310.8 THA 10.09 EL1 3647.7 EL2 55.6 ALF 13.09

LAUNCH DATE JAN 27 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC DISTANCE 485.313  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.331 GAL .83 AZL 85.49 HCA 228.11 SMA 125.82 ECC .17141 INC 4.5112 V1 30.243  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.232 GAP 6.06 AZP 93.02 TAL 175.97 TAP 44.09 RCA 104.26 APO 147.39 V2 34.850  
 RC 138.775 GL 35.58 GP -26.25 ZAL 87.05 ZAP 142.91 ETS 321.54 ZAE 128.51 ETE 201.96 ZAC 119.95 ETC 180.43 CLP-152.81

PLANETOCENTRIC CONIC  
 C3 13.648 VHL 3.694 DLA 48.08 RAL 22.28 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 5.134 DPA -17.93 RAP 32.29 ECC 1.2246  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.37 18 19 41 4189.07 -35.36 193.44 252.71 55.01 19 29 30 3589.1 -39.65 185.34  
 130.63 2 30 40 2708.95 -35.35 77.52 252.70 55.00 3 15 49 2108.9 -39.64 69.42  
 49.37 18 19 41 4189.07 -35.36 193.44 252.71 55.01 19 29 30 3589.1 -39.65 185.34  
 130.63 2 30 40 2708.95 -35.35 77.52 252.70 55.00 3 15 49 2108.9 -39.64 69.42  
 49.37 18 19 41 4189.07 -35.36 193.44 252.71 55.01 19 29 30 3589.1 -39.65 185.34  
 130.63 2 30 40 2708.95 -35.35 77.52 252.70 55.00 3 15 49 2108.9 -39.64 69.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2986 TRA -.0061 TC3-5.0032 BAU .9180 SGT 5135.6 SGR 880.9 SC3 407.4 ST 3566.7 SR 776.6 SS 1393.0  
 RDE .4999 RRA .0606 RC3 -.5328 FAU .07060 RRT .9322 RRF .9378 RTF .9631 CRT .9983 CRS -.9977 CST -.9926  
 FDE 2.0090 FRA .5409 FC3-4.4785 BSP 16479 SGB 5210.6 R23 .1010 R13 .9641 LSA 3903.7 MSA 160.2 SSA 12.1  
 BDE 2.3524 BRA .0609 BC3 5.0315 FSP -1384 SG1 5201.1 SG2 314.7 THA 9.12 EL1 3650.0 EL2 43.8 ALF 12.27

LAUNCH DATE JAN 27 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC DISTANCE 491.242  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.301 GAL 1.11 AZL 85.74 HCA 231.28 SMA 125.62 ECC .17373 INC 4.2618 V1 30.243  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.218 GAP 6.36 AZP 92.67 TAL 174.71 TAP 45.99 RCA 103.80 APO 147.45 V2 34.860  
 RC 141.067 GL 33.72 GP -24.42 ZAL 84.94 ZAP 145.15 ETS 321.62 ZAE 128.69 ETE 200.21 ZAC 121.38 ETC 180.07 CLP-154.32

PLANETOCENTRIC CONIC  
 C3 13.353 VHL 3.654 DLA 47.30 RAL 26.19 RAD 6567.5 VEL 11.608 PTH 2.03 VHP 5.237 DPA -15.64 RAP 32.91 ECC 1.2198  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.39 18 38 51 4175.56 -35.04 191.86 255.88 55.93 19 48 27 3575.6 -39.23 183.72  
 129.61 2 42 46 2712.96 -35.03 77.64 255.87 55.92 3 27 59 2113.0 -39.22 69.50  
 50.39 18 38 51 4175.56 -35.04 191.86 255.88 55.93 19 48 27 3575.6 -39.23 183.72  
 129.61 2 42 46 2712.96 -35.03 77.64 255.87 55.92 3 27 59 2113.0 -39.22 69.50  
 50.39 18 38 51 4175.56 -35.04 191.86 255.88 55.93 19 48 27 3575.6 -39.23 183.72  
 129.61 2 42 46 2712.96 -35.03 77.64 255.87 55.92 3 27 59 2113.0 -39.22 69.50

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2644 TRA .1447 TC3-5.2463 BAU .9404 SGT 5236.3 SGR 825.3 SC3 395.7 ST 3553.8 SR 731.9 SS 1331.1  
 RDE .4657 RRA .0727 RC3 -.4734 FAU .06751 RRT .9199 RRF .9215 RTF .9626 CRT .9990 CRS -.9961 CST -.9919  
 FDE 1.8525 FRA .6569 FC3-4.3767 BSP 16824 SGB 5300.9 R23 .0832 R13 .9634 LSA 3861.5 MSA 159.4 SSA 13.1  
 BDE 2.3118 BRA .1619 BC3 5.2676 FSP -1345 SG1 5291.2 SG2 320.3 THA 8.28 EL1 3628.2 EL2 31.9 ALF 11.63

LAUNCH DATE JAN 27 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC

DISTANCE 497.153

RL 147.32 LAL -.00 LOL 126.89 VL 27.269 GAL 1.40 AZL 85.97 HCA 234.45 SMA 125.42 ECC .17623 INC 4.0334 V1 30.243  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.205 GAP 6.67 A2P 92.35 TAL 173.42 TAP 47.87 RCA 103.32 APO 147.52 V2 34.870  
 RC 143.344 GL 31.88 GP -22.79 ZAL 82.71 ZAP 147.22 ETS 321.65 ZAE 128.78 ETE 198.67 ZAC 122.89 ETC 179.75 CLP-155.77

PLANETOCENTRIC CONIC

C3 13.184 VHL 3.631 DLA 46.50 RAL 30.12 RAD 6567.5 VEL 11.600 PTH 2.03 VHP 5.354 DPA -13.51 RAP 33.72 ECC 1.2170  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.43 18 58 13 4163.51 -34.63 190.37 259.20 56.77 20 7 36 3563.5 -38.72 182.21  
 128.57 2 54 45 2719.47 -34.62 77.93 259.19 56.76 3 40 4 2119.5 -38.71 69.77  
 51.43 18 58 13 4163.51 -34.63 190.37 259.20 56.77 20 7 36 3563.5 -38.72 182.21  
 128.57 2 54 45 2719.47 -34.62 77.93 259.19 56.76 3 40 4 2119.5 -38.71 69.77  
 51.43 18 58 13 4163.51 -34.63 190.37 259.20 56.77 20 7 36 3563.5 -38.72 182.21  
 128.57 2 54 45 2719.47 -34.62 77.93 259.19 56.76 3 40 4 2119.5 -38.71 69.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2256 TRA .3032 TC3-5.4418 BAU .9620 SGT 5532.3 SGR 779.2 SG3 382.9 ST 3520.1 SR 694.2 SS 1264.8  
 RDE .4384 RRA .0827 RC3 -.4188 FAU .06429 RRT .9058 RRF .9032 RTF .9625 CRT .9995 CRS -.9936 CST -.9911  
 FDE 1.6994 FRA .7621 FC3-4.2217 BSP 17164 SGB 5389.0 R23 .0661 R13 .9631 LSA 3801.0 MSA 158.8 SSA 14.0  
 BDE 2.2684 BRA .3143 BC3 5.4579 FSP -1303 SGI 5379.0 SG2 327.2 THA 7.57 EL1 3587.9 EL2 20.9 ALF 11.15

LAUNCH DATE JAN 27 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC

DISTANCE 503.047

RL 147.32 LAL -.00 LOL 126.89 VL 27.258 GAL 1.71 AZL 86.18 HCA 237.63 SMA 125.22 ECC .17891 INC 3.8223 V1 30.243  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.191 GAP 6.98 A2P 92.05 TAL 172.11 TAP 49.74 RCA 102.81 APO 147.62 V2 34.880  
 RC 145.608 GL 30.06 GP -21.34 ZAL 80.37 ZAP 149.14 ETS 321.59 ZAE 128.82 ETE 197.31 ZAC 124.47 ETC 179.46 CLP-157.17

PLANETOCENTRIC CONIC

C3 13.131 VHL 3.624 DLA 45.69 RAL 34.05 RAD 6567.5 VEL 11.598 PTH 2.03 VHP 5.484 DPA -11.52 RAP 34.67 ECC 1.2161  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.52 19 17 50 4152.52 -34.12 188.95 262.65 57.55 20 27 3 3552.5 -38.12 180.78  
 127.48 3 6 27 2728.72 -34.11 78.40 262.64 57.54 3 51 56 2128.7 -38.11 70.23  
 52.52 19 17 50 4152.52 -34.12 188.95 262.65 57.55 20 27 3 3552.5 -38.12 180.78  
 127.48 3 6 27 2728.72 -34.11 78.40 262.64 57.54 3 51 56 2128.7 -38.11 70.23  
 52.52 19 17 50 4152.52 -34.12 188.95 262.65 57.55 20 27 3 3552.5 -38.12 180.78  
 127.48 3 6 27 2728.72 -34.11 78.40 262.64 57.54 3 51 56 2128.7 -38.11 70.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1819 TRA .4713 TC3-5.5820 BAU .9820 SGT 5422.7 SGR 741.4 SG3 369.4 ST 3466.9 SR 662.9 SS 1196.8  
 RDE .4174 RRA .0918 RC3 -.3677 FAU .06088 RRT .8895 RRF .8834 RTF .9625 CRT .9997 CRS -.9901 CST -.9901  
 FDE 1.5531 FRA .8599 FC3-4.0137 BSP 17463 SGB 5473.2 R23 .0522 R13 .9629 LSA 3723.6 MSA 159.2 SSA 14.9  
 BDE 2.2215 BRA .4802 BC3 5.5941 FSP -1255 SGI 5462.8 SG2 336.2 THA 6.96 EL1 3529.7 EL2 15.0 ALF 10.82

LAUNCH DATE JAN 27 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 508.922

RL 147.32 LAL -.00 LOL 126.89 VL 27.206 GAL 2.03 AZL 86.37 HCA 240.80 SMA 125.01 ECC .18179 INC 3.6254 V1 30.243  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.178 GAP 7.29 A2P 91.77 TAL 170.78 TAP 51.59 RCA 102.29 APO 147.74 V2 34.891  
 RC 147.857 GL 28.25 GP -20.05 ZAL 77.95 ZAP 150.93 ETS 321.44 ZAE 128.82 ETE 196.11 ZAC 126.12 ETC 179.20 CLP-158.51

PLANETOCENTRIC CONIC

C3 13.190 VHL 3.632 DLA 44.84 RAL 37.95 RAD 6567.5 VEL 11.601 PTH 2.03 VHP 5.626 DPA -9.66 RAP 35.77 ECC 1.2171  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.66 19 37 42 4142.38 -33.52 187.56 266.19 58.28 20 46 44 3542.4 -37.44 179.40  
 126.34 3 17 44 2740.82 -33.51 79.07 266.18 58.26 4 3 25 2140.8 -37.43 70.91  
 53.66 19 37 42 4142.38 -33.52 187.56 266.19 58.28 20 46 44 3542.4 -37.44 179.40  
 126.34 3 17 44 2740.82 -33.51 79.07 266.18 58.26 4 3 25 2140.8 -37.43 70.91  
 53.66 19 37 42 4142.38 -33.52 187.56 266.19 58.28 20 46 44 3542.4 -37.44 179.40  
 126.34 3 17 44 2740.82 -33.51 79.07 266.18 58.26 4 3 25 2140.8 -37.43 70.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1337 TRA .6507 TC3-5.6595 BAU .9996 SGT 5506.8 SGR 710.7 SG3 355.4 ST 3396.2 SR 636.8 SS 1128.1  
 RDE .4013 RRA .1006 RC3 -.3202 FAU .05731 RRT .8717 RRF .8625 RTF .9626 CRT .9994 CRS -.9850 CST -.9889  
 FDE 1.4139 FRA .9512 FC3-3.7612 BSP 17695 SGB 5552.5 R23 .0411 R13 .9629 LSA 3631.3 MSA 160.7 SSA 15.8  
 BDE 2.1711 BRA .6584 BC3 5.6685 FSP -1202 SGI 5541.7 SG2 346.1 THA 6.44 EL1 3455.3 EL2 21.3 ALF 10.61

LAUNCH DATE JAN 27 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 514.777

RL 147.32 LAL -.00 LOL 126.89 VL 27.174 GAL 2.37 AZL 86.56 HCA 243.98 SMA 124.81 ECC .18489 INC 3.4402 V1 30.243  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.165 GAP 7.62 A2P 91.51 TAL 169.44 TAP 53.42 RCA 101.73 APO 147.88 V2 34.902  
 RC 150.092 GL 26.47 GP -18.90 ZAL 75.46 ZAP 152.61 ETS 321.20 ZAE 128.79 ETE 195.05 ZAC 127.83 ETC 178.95 CLP-159.80

PLANETOCENTRIC CONIC

C3 13.361 VHL 3.655 DLA 43.95 RAL 41.82 RAD 6567.5 VEL 11.608 PTH 2.03 VHP 5.779 DPA -7.91 RAP 36.98 ECC 1.2199  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.87 19 57 47 4132.88 -32.83 186.19 269.82 58.96 21 6 40 3532.9 -36.67 178.05  
 125.13 3 28 29 2755.89 -32.82 79.93 269.81 58.95 4 14 25 2155.9 -36.66 71.80  
 54.87 19 57 47 4132.88 -32.83 186.19 269.82 58.96 21 6 40 3532.9 -36.67 178.05  
 125.13 3 28 29 2755.89 -32.82 79.93 269.81 58.95 4 14 25 2155.9 -36.66 71.80  
 54.87 19 57 47 4132.88 -32.83 186.19 269.82 58.96 21 6 40 3532.9 -36.67 178.05  
 125.13 3 28 29 2755.89 -32.82 79.93 269.81 58.95 4 14 25 2155.9 -36.66 71.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0756 TRA .8364 TC3-5.6910 BAU 1.0178 SGT 5586.6 SGR 685.0 SG3 341.1 ST 3301.3 SR 613.8 SS 1056.2  
 RDE .3889 RRA .1085 RC3 -.2798 FAU .05394 RRT .8530 RRF .8410 RTF .9629 CRT .9983 CRS -.9780 CST -.9876  
 FDE 1.2782 FRA 1.0315 FC3-3.4952 BSP 17986 SGB 5628.4 R23 .0312 R13 .9632 LSA 3516.3 MSA 163.2 SSA 16.5  
 BDE 2.1117 BRA .8434 BC3 5.6979 FSP -1157 SGI 5617.2 SG2 355.5 THA 6.00 EL1 3357.7 EL2 34.8 ALF 10.52

LAUNCH DATE JAN 27 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC DISTANCE 520.611  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.141 GAL 2.73 AZL 86.74 HCA 247.16 SMA 124.60 ECC .18821 INC 3.2647 V1 30.243  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.153 GAP 7.95 AZP 91.27 TAL 168.09 TAP 55.25 RCA 101.15 APO 148.05 V2 34.914  
 RC 152.312 GL 24.71 GP -17.87 ZAL 72.93 ZAP 154.18 ETS 320.84 ZAE 128.74 ETE 194.11 ZAC 129.59 ETC 178.70 CLP-161.05

PLANETOCENTRIC CONIC  
 C3 13.646 VHL 3.694 DLA 43.01 RAL 45.62 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 5.943 DPA -6.26 RAP 38.29 ECC 1.2246  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.16 20 18 7 4123.68 -32.05 184.81 273.50 59.61 21 26 50 3523.7 -35.81 176.71  
 123.84 3 38 30 2774.26 -32.03 81.03 273.49 59.60 4 24 44 2174.3 -35.80 72.93  
 56.16 20 18 7 4123.68 -32.05 184.81 273.50 59.61 21 26 50 3523.7 -35.81 176.71  
 123.84 3 38 30 2774.26 -32.03 81.03 273.49 59.60 4 24 44 2174.3 -35.80 72.93  
 56.16 20 18 7 4123.68 -32.05 184.81 273.50 59.61 21 26 50 3523.7 -35.81 176.71  
 123.84 3 38 30 2774.26 -32.03 81.03 273.49 59.60 4 24 44 2174.3 -35.80 72.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.0097 TRA 1.0320 TC3-5.6679 BAU 1.0349 SGT 5660.7 SGR 663.9 SG3 326.7 ST 3188.1 SR 593.9 SS 984.3  
 RDE .3799 RRA .1164 RC3 -.2444 FAU .05063 RRT .8338 RRF .8195 RTF .9634 CRT .9961 CRS -.9684 CST -.9859  
 FDE 1.1489 FRA 1.1050 FC3-3.2124 BSP 18265 SGB 5699.5 R23 .0233 R13 .9636 LSA 3384.8 MSA 167.4 SSA 17.1  
 BOE 2.0453 BRA 1.0385 BC3 5.6732 FSP -1111 SGI 5687.8 SG2 364.8 THA 5.61 EL1 3242.5 EL2 51.3 ALF 10.51

LAUNCH DATE JAN 27 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC DISTANCE 526.421  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.109 GAL 3.10 AZL 86.90 HCA 250.34 SMA 124.39 ECC .19178 INC 3.0971 V1 30.243  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.140 GAP 8.29 AZP 91.04 TAL 166.72 TAP 57.06 RCA 100.54 APO 148.25 V2 34.926  
 RC 154.516 GL 22.97 GP -16.94 ZAL 70.36 ZAP 155.66 ETS 320.37 ZAE 128.67 ETE 193.29 ZAC 131.41 ETC 178.45 CLP-162.26

PLANETOCENTRIC CONIC  
 C3 14.048 VHL 3.748 DLA 42.04 RAL 49.35 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 6.117 DPA -4.69 RAP 39.71 ECC 1.2312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.53 20 38 30 4114.66 -31.17 183.42 277.22 60.23 21 47 13 3514.7 -34.87 175.37  
 122.47 3 47 41 2796.03 -31.16 82.35 277.21 60.22 4 34 17 2196.0 -34.86 74.31  
 57.53 20 38 30 4114.66 -31.17 183.42 277.22 60.23 21 47 13 3514.7 -34.87 175.37  
 122.47 3 47 41 2796.03 -31.16 82.35 277.21 60.22 4 34 17 2196.0 -34.86 74.31  
 57.53 20 38 30 4114.66 -31.17 183.42 277.22 60.23 21 47 13 3514.7 -34.87 175.37  
 122.47 3 47 41 2796.03 -31.16 82.35 277.21 60.22 4 34 17 2196.0 -34.86 74.31

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.9370 TRA 1.2383 TC3-5.5907 BAU 1.0507 SGT 5729.6 SGR 646.5 SG3 312.6 ST 3060.8 SR 576.5 SS 914.5  
 RDE .3737 RRA .1248 RC3 -.2135 FAU .04739 RRT .8145 RRF .7985 RTF .9638 CRT .9924 CRS -.9555 CST -.9839  
 FDE 1.0270 FRA 1.1731 FC3-2.9203 BSP 18530 SGB 5766.0 R23 .0174 R13 .9639 LSA 3241.4 MSA 173.9 SSA 17.4  
 BOE 1.9728 BRA 1.2446 BC3 5.5948 FSP -1066 SGI 5753.8 SG2 373.5 THA 5.27 EL1 3113.9 EL2 69.5 ALF 10.59

LAUNCH DATE JAN 27 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC DISTANCE 532.207  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.076 GAL 3.49 AZL 87.06 HCA 253.52 SMA 124.19 ECC .19562 INC 2.9359 V1 30.243  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.128 GAP 8.65 AZP 90.83 TAL 165.34 TAP 58.87 RCA 99.89 APO 148.48 V2 34.938  
 RC 156.704 GL 21.26 GP -16.10 ZAL 67.78 ZAP 157.05 ETS 319.77 ZAE 128.60 ETE 192.55 ZAC 133.27 ETC 178.20 CLP-163.43

PLANETOCENTRIC CONIC  
 C3 14.576 VHL 3.818 DLA 41.02 RAL 52.97 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.302 DPA -3.21 RAP 41.20 ECC 1.2399  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.98 20 59 21 4105.56 -30.22 182.01 280.96 60.82 22 7 47 3505.6 -33.85 174.01  
 121.02 3 55 53 2821.44 -30.21 83.93 280.95 60.81 4 42 54 2221.4 -33.84 75.94  
 58.98 20 59 21 4105.56 -30.22 182.01 280.96 60.82 22 7 47 3505.6 -33.85 174.01  
 121.02 3 55 53 2821.44 -30.21 83.93 280.95 60.81 4 42 54 2221.4 -33.84 75.94  
 58.98 20 59 21 4105.56 -30.22 182.01 280.96 60.82 22 7 47 3505.6 -33.85 174.01  
 121.02 3 55 53 2821.44 -30.21 83.93 280.95 60.81 4 42 54 2221.4 -33.84 75.94

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8603 TRA 1.4586 TC3-5.4569 BAU 1.0640 SGT 5794.3 SGR 632.7 SG3 298.8 ST 2927.0 SR 561.6 SS 849.6  
 RDE .3704 RRA .1341 RC3 -.1859 FAU .04414 RRT .7957 RRF .7789 RTF .9642 CRT .9867 CRS -.9386 CST -.9817  
 FDE .9147 FRA 1.2386 FC3-2.6214 BSP 18707 SGB 5828.7 R23 .0137 R13 .9642 LSA 3093.7 MSA 182.7 SSA 17.6  
 BOE 1.8968 BRA 1.4647 BC3 5.4601 FSP -1017 SGI 5816.2 SG2 381.7 THA 4.99 EL1 2979.1 EL2 89.6 ALF 10.73

LAUNCH DATE JAN 27 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC DISTANCE 537.965  
 RL 147.32 LAL -.00 LOL 126.89 VL 27.043 GAL 3.91 AZL 87.22 HCA 256.71 SMA 123.98 ECC .19975 INC 2.7799 V1 30.243  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.116 GAP 9.01 AZP 90.64 TAL 163.96 TAP 60.67 RCA 99.22 APO 148.75 V2 34.951  
 RC 158.875 GL 19.59 GP -15.35 ZAL 65.21 ZAP 158.37 ETS 319.02 ZAE 128.53 ETE 191.91 ZAC 135.17 ETC 177.93 CLP-164.57

PLANETOCENTRIC CONIC  
 C3 15.239 VHL 3.904 DLA 39.97 RAL 56.48 RAD 6567.6 VEL 11.689 PTH 2.06 VHP 6.499 DPA -1.80 RAP 42.78 ECC 1.2508  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.52 21 20 16 4096.14 -29.19 180.55 284.70 61.38 22 28 32 3496.1 -32.76 172.61  
 119.48 4 2 58 2850.72 -29.18 85.78 284.69 61.37 4 50 29 2250.7 -32.75 77.84  
 60.52 21 20 16 4096.14 -29.19 180.55 284.70 61.38 22 28 32 3496.1 -32.76 172.61  
 119.48 4 2 58 2850.72 -29.18 85.78 284.69 61.37 4 50 29 2250.7 -32.75 77.84  
 60.52 21 20 16 4096.14 -29.19 180.55 284.70 61.38 22 28 32 3496.1 -32.76 172.61  
 119.48 4 2 58 2850.72 -29.18 85.78 284.69 61.37 4 50 29 2250.7 -32.75 77.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7738 TRA 1.6871 TC3-5.2864 BAU 1.0775 SGT 5852.6 SGR 620.2 SG3 285.2 ST 2780.9 SR 547.5 SS 786.2  
 RDE .3687 RRA .1435 RC3 -.1633 FAU .04112 RRT .7777 RRF .7600 RTF .9646 CRT .9783 CRS -.9166 CST -.9791  
 FDE .8070 FRA 1.2965 FC3-2.3360 BSP 18953 SGB 5885.4 R23 .0103 R13 .9647 LSA 2934.8 MSA 194.0 SSA 17.6  
 BOE 1.8117 BRA 1.6932 BC3 5.2889 FSP -975 SGI 5872.6 SG2 388.6 THA 4.73 EL1 2832.0 EL2 111.3 ALF 10.92

LAUNCH DATE JAN 27 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 5 1969

MELIOCENTRIC CONIC

DISTANCE 543.692

RL 147.32 LAL -.00 LOL 126.89 VL 27.011 GAL 4.34 AZL 87.37 HCA 259.90 SMA 123.78 ECC .20419 INC 2.6277 V1 30.243  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.104 GAP 9.39 AZP 90.46 TAL 162.57 TAP 62.47 RCA 98.50 APO 149.05 V2 34.964  
 RC 161.027 GL 17.95 GP -14.67 ZAL 62.67 ZAP 159.62 ETS 318.11 ZAE 128.46 ETE 191.33 ZAC 137.11 ETC 177.64 CLP-165.69

PLANETOCENTRIC CONIC

C3 16.049 VHL 4.006 DLA 38.89 RAL 59.86 RAD 6567.6 VEL 11.723 PTH 2.07 VHP 6.707 DPA -.46 RAP 44.42 ECC 1.2641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.15 21 41 23 4086.15 -28.10 179.04 288.44 61.92 22 49 29 3486.2 -31.61 171.16  
 117.85 4 8 50 2884.13 -28.08 87.91 288.43 61.91 4 56 54 2284.1 -31.60 80.04  
 62.15 21 41 23 4086.15 -28.10 179.04 288.44 61.92 22 49 29 3486.2 -31.61 171.16  
 117.85 4 8 50 2884.13 -28.08 87.91 288.43 61.91 4 56 54 2284.1 -31.60 80.04  
 62.15 21 41 23 4086.15 -28.10 179.04 288.44 61.92 22 49 29 3486.2 -31.61 171.16  
 117.85 4 8 50 2884.13 -28.08 87.91 288.43 61.91 4 56 54 2284.1 -31.60 80.04

DIFFERENTIAL CORRECTIONS

TDE 1.6822 TRA 1.9286 TC3-5.0759 BAU 1.0895  
 RDE .3690 RRA .1538 RC3 -.1439 FAU .03821  
 FDE .7073 FRA 1.3515 FC3-2.0610 BSP 19172  
 BOE 1.7222 BRA 1.9348 BC3 5.0779 FSP -934

MID-COURSE EXECUTION ACCURACY

SGT 5906.6 SGR 609.7 SG3 272.1  
 RRT .7610 RRF .7428 RTF .9650  
 SGB 5930.0 R23 .0080 R13 .9651  
 SG1 5924.9 SG2 394.3 THA 4.51

ORBIT DETERMINATION ACCURACY

ST 2633.2 SR 534.5 SS 728.6  
 CRT .9665 CRS -.8886 CST -.9762  
 LSA 2776.1 MSA 208.0 SSA 17.4  
 EL1 2683.6 EL2 134.7 ALF 11.13

LAUNCH DATE JAN 27 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 7 1969

MELIOCENTRIC CONIC

DISTANCE 549.387

RL 147.32 LAL -.00 LOL 126.89 VL 26.978 GAL 4.80 AZL 87.52 HCA 263.09 SMA 123.57 ECC .20898 INC 2.4785 V1 30.243  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.092 GAP 9.79 AZP 90.30 TAL 161.18 TAP 64.27 RCA 97.75 APO 149.40 V2 34.977  
 RC 163.181 GL 16.37 GP -14.05 ZAL 60.16 ZAP 160.80 ETS 317.02 ZAE 128.38 ETE 190.82 ZAC 139.09 ETC 177.32 CLP-166.78

PLANETOCENTRIC CONIC

C3 17.021 VHL 4.126 DLA 37.79 RAL 63.11 RAD 6567.7 VEL 11.765 PTH 2.08 VHP 6.927 DPA .81 RAP 46.13 ECC 1.2801  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.86 22 2 45 4075.28 -26.94 177.45 292.17 62.44 23 10 40 3475.3 -30.40 169.64  
 116.14 4 13 21 2921.95 -26.93 90.34 292.16 62.42 5 2 3 2321.9 -30.39 82.54  
 63.86 22 2 45 4075.28 -26.94 177.45 292.17 62.44 23 10 40 3475.3 -30.40 169.64  
 116.14 4 13 21 2921.95 -26.93 90.34 292.16 62.42 5 2 3 2321.9 -30.39 82.54  
 63.86 22 2 45 4075.28 -26.94 177.45 292.17 62.44 23 10 40 3475.3 -30.40 169.64  
 116.14 4 13 21 2921.95 -26.93 90.34 292.16 62.42 5 2 3 2321.9 -30.39 82.54

DIFFERENTIAL CORRECTIONS

TDE 1.5889 TRA 2.1870 TC3-4.8229 BAU 1.0979  
 RDE .3711 RRA .1654 RC3 -.1261 FAU .03526  
 FDE .6172 FRA 1.4059 FC3-1.7932 BSP 19287  
 BOE 1.6316 BRA 2.1932 BC3 4.8245 FSP -889

MID-COURSE EXECUTION ACCURACY

SGT 5956.2 SGR 600.7 SG3 259.6  
 RRT .7457 RRF .7279 RTF .9653  
 SGB 5986.4 R23 .0072 R13 .9653  
 SG1 5973.1 SG2 399.1 THA 4.32

ORBIT DETERMINATION ACCURACY

ST 2492.5 SR 522.7 SS 678.7  
 CRT .9503 CRS -.8545 CST -.9733  
 LSA 2626.0 MSA 224.3 SSA 17.1  
 EL1 2541.7 EL2 159.6 ALF 11.32

LAUNCH DATE JAN 27 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 9 1969

MELIOCENTRIC CONIC

DISTANCE 555.044

RL 147.32 LAL -.00 LOL 126.89 VL 26.945 GAL 5.29 AZL 87.67 HCA 266.29 SMA 123.37 ECC .21414 INC 2.3311 V1 30.243  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.081 GAP 10.21 AZP 90.15 TAL 159.79 TAP 66.07 RCA 96.95 APO 149.79 V2 34.990  
 RC 165.276 GL 14.83 GP -13.49 ZAL 57.70 ZAP 161.92 ETS 315.74 ZAE 128.30 ETE 190.36 ZAC 141.09 ETC 176.97 CLP-167.84

PLANETOCENTRIC CONIC

C3 18.175 VHL 4.263 DLA 36.67 RAL 66.20 RAD 6567.7 VEL 11.813 PTH 2.09 VHP 7.161 DPA 2.03 RAP 47.90 ECC 1.2991  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.66 22 24 24 4063.25 -25.74 175.78 295.87 62.92 23 32 7 3463.2 -29.15 168.04  
 114.34 4 16 25 2964.41 -25.73 93.10 295.86 62.91 5 5 49 2364.4 -29.14 85.37  
 65.66 22 24 24 4063.25 -25.74 175.78 295.87 62.92 23 32 7 3463.2 -29.15 168.04  
 114.34 4 16 25 2964.41 -25.73 93.10 295.86 62.91 5 5 49 2364.4 -29.14 85.37  
 65.66 22 24 24 4063.25 -25.74 175.78 295.87 62.92 23 32 7 3463.2 -29.15 168.04  
 114.34 4 16 25 2964.41 -25.73 93.10 295.86 62.91 5 5 49 2364.4 -29.14 85.37

DIFFERENTIAL CORRECTIONS

TDE 1.4864 TRA 2.4547 TC3-4.5547 BAU 1.1071  
 RDE .3740 RRA .1774 RC3 -.1120 FAU .03259  
 FDE .5309 FRA 1.4547 FC3-1.5524 BSP 19486  
 BOE 1.5327 BRA 2.4611 BC3 4.5561 FSP -851

MID-COURSE EXECUTION ACCURACY

SGT 5999.2 SGR 591.8 SG3 247.5  
 RRT .7318 RRF .7138 RTF .9656  
 SGB 6028.3 R23 .0058 R13 .9657  
 SG1 6014.9 SG2 402.3 THA 4.15

ORBIT DETERMINATION ACCURACY

ST 2350.9 SR 510.5 SS 632.6  
 CRT .9286 CRS -.8123 CST -.9703  
 LSA 2475.6 MSA 242.9 SSA 16.7  
 EL1 2398.5 EL2 185.7 ALF 11.47

LAUNCH DATE JAN 27 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 11 1969

MELIOCENTRIC CONIC

DISTANCE 560.658

RL 147.32 LAL -.00 LOL 126.89 VL 26.912 GAL 5.80 AZL 87.82 HCA 269.48 SMA 123.17 ECC .21971 INC 2.1847 V1 30.243  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.070 GAP 10.65 AZP 90.02 TAL 158.40 TAP 67.88 RCA 96.11 APO 150.23 V2 35.003  
 RC 167.370 GL 13.35 GP -12.98 ZAL 55.31 ZAP 162.98 ETS 314.23 ZAE 128.22 ETE 189.95 ZAC 143.11 ETC 176.58 CLP-168.89

PLANETOCENTRIC CONIC

C3 19.532 VHL 4.419 DLA 35.55 RAL 69.15 RAD 6567.8 VEL 11.871 PTH 2.11 VHP 7.410 DPA 3.18 RAP 49.72 ECC 1.3214  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.55 22 46 27 4049.56 -24.50 173.99 299.55 63.39 23 53 56 3449.6 -27.86 166.32  
 112.45 4 17 52 3011.99 -24.49 96.22 299.55 63.38 5 8 4 2412.0 -27.85 88.55  
 67.55 22 46 27 4049.56 -24.50 173.99 299.55 63.39 23 53 56 3449.6 -27.86 166.32  
 112.45 4 17 52 3011.99 -24.49 96.22 299.55 63.38 5 8 4 2412.0 -27.85 88.55  
 67.55 22 46 27 4049.56 -24.50 173.99 299.55 63.39 23 53 56 3449.6 -27.86 166.32  
 112.45 4 17 52 3011.99 -24.49 96.22 299.55 63.38 5 8 4 2412.0 -27.85 88.55

DIFFERENTIAL CORRECTIONS

TDE 1.3799 TRA 2.7377 TC3-4.2656 BAU 1.1141  
 RDE .3781 RRA .1904 RC3 -.0996 FAU .03001  
 FDE .4514 FRA 1.5020 FC3-1.3304 BSP 19669  
 BOE 1.4307 BRA 2.7443 BC3 4.2667 FSP -815

MID-COURSE EXECUTION ACCURACY

SGT 6037.0 SGR 583.2 SG3 235.9  
 RRT .7199 RRF .7013 RTF .9660  
 SGB 6065.1 R23 .0048 R13 .9660  
 SG1 6051.6 SG2 404.2 THA 3.99

ORBIT DETERMINATION ACCURACY

ST 2219.4 SR 498.6 SS 593.5  
 CRT .9004 CRS -.7623 CST -.9676  
 LSA 2336.0 MSA 263.1 SSA 16.2  
 EL1 2264.7 EL2 212.6 ALF 11.54

LAUNCH DATE JAN 27 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 566.225

RL 147.32 LAL -.00 LOL 126.89 VL 26.880 GAL 6.35 AZL 87.96 HCA 272.68 SMA 122.97 ECC .22574 INC 2.0384 V1 30.243
RP 108.22 LAP -2.04 LOP 39.57 VP 37.059 GAP 11.11 AZP 89.90 TAL 157.02 TAP 69.70 RCA 95.21 APO 150.72 V2 35.016
RC 169.445 GL 11.93 GP -12.51 ZAL 52.99 ZAP 163.99 ETS 312.48 ZAE 128.14 ETE 189.58 ZAC 145.16 ETC 176.13 CLP-169.93

PLANETOCENTRIC CONIC

C3 21.119 VHL 4.596 DLA 34.43 RAL 71.94 RAD 6567.9 VEL 11.937 PTH 2.12 VHP 7.675 DPA 4.28 RAP 51.59 ECC 1.3476
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
69.54 23 9 5 4033.54 -23.23 172.03 303.21 63.84 24 16 18 3433.5 -26.55 164.43
110.46 4 17 32 3065.30 -23.21 99.74 303.20 63.83 5 8 37 2465.3 -26.53 92.13
69.54 23 9 5 4033.54 -23.23 172.03 303.21 63.84 24 16 18 3433.5 -26.55 164.43
110.46 4 17 32 3065.30 -23.21 99.74 303.20 63.83 5 8 37 2465.3 -26.53 92.13
69.54 23 9 5 4033.54 -23.23 172.03 303.21 63.84 24 16 18 3433.5 -26.55 164.43
110.46 4 17 32 3065.30 -23.21 99.74 303.20 63.83 5 8 37 2465.3 -26.53 92.13

DIFFERENTIAL CORRECTIONS

TOE 1.2697 TRA 3.0365 TC3-3.9636 BAU 1.1194
RDE .3832 RRA .2044 RC3 -.0886 FAU .02755
FDE .3786 FRA 1.5480 FC3-1.1294 BSP 19839
BDE 1.3262 BRA 3.0434 BC3 3.9646 FSP -781

MID-COURSE EXECUTION ACCURACY

SGT 6070.1 SGR 574.8 SG3 224.9
RRT .7084 RRF .6906 RTF .9664
SG6 6097.2 R23 .0042 R13 .9664
SG1 6083.8 SG2 404.8 THA 3.85

ORBIT DETERMINATION ACCURACY

ST 2101.0 SR 486.6 SS 561.3
CRT .8648 CRS -.7056 CST -.9656
LSA 2210.2 MSA 284.0 SSA 15.7
EL1 2143.2 EL2 239.5 ALF 11.47

LAUNCH DATE JAN 27 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 571.738

RL 147.32 LAL -.00 LOL 126.89 VL 26.847 GAL 6.93 AZL 88.11 HCA 275.88 SMA 122.77 ECC .23226 INC 1.8911 V1 30.243
RP 108.18 LAP -1.88 LOP 42.77 VP 37.048 GAP 11.60 AZP 89.81 TAL 155.64 TAP 71.52 RCA 94.25 APO 151.28 V2 35.030
RC 171.498 GL 10.57 GP -12.09 ZAL 50.76 ZAP 164.94 ETS 310.44 ZAE 128.06 ETE 189.25 ZAC 147.22 ETC 175.61 CLP-170.95

PLANETOCENTRIC CONIC

C3 22.967 VHL 4.792 DLA 33.32 RAL 74.58 RAD 6567.9 VEL 12.014 PTH 2.14 VHP 7.957 DPA 5.33 RAP 53.50 ECC 1.3780
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
71.66 23 32 31 4014.42 -21.93 169.87 306.83 64.26 24 39 25 3414.4 -25.21 162.32
108.34 4 15 10 3125.02 -21.92 103.70 306.82 64.25 5 7 15 2525.0 -25.20 96.16
71.66 23 32 31 4014.42 -21.93 169.87 306.83 64.26 24 39 25 3414.4 -25.21 162.32
108.34 4 15 10 3125.02 -21.92 103.70 306.82 64.25 5 7 15 2525.0 -25.20 96.16
110.00 5 23 23 2915.87 -27.38 90.09 309.44 68.68 6 11 59 2315.9 -30.02 81.90
110.00 3 27 24 3271.56 -16.68 112.11 303.87 59.72 4 21 56 2671.6 -20.58 105.15

DIFFERENTIAL CORRECTIONS

TOE 1.1565 TRA 3.3526 TC3-3.6535 BAU 1.1221
RDE .3891 RRA .2194 RC3 -.0788 FAU .02517
FDE .3119 FRA 1.5932 FC3 -.9489 BSP 19980
BDE 1.2202 BRA 3.3598 BC3 3.6544 FSP -747

MID-COURSE EXECUTION ACCURACY

SGT 6097.9 SGR 566.2 SG3 214.5
RRT .6989 RRF .6813 RTF .9668
SG6 6124.1 R23 .0036 R13 .9668
SG1 6110.8 SG2 404.1 THA 3.73

ORBIT DETERMINATION ACCURACY

ST 1998.4 SR 474.6 SS 535.9
CRT .8212 CRS -.6432 CST -.9647
LSA 2100.7 MSA 304.5 SSA 15.1
EL1 2036.8 EL2 265.7 ALF 11.23

LAUNCH DATE JAN 27 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 577.190

RL 147.32 LAL -.00 LOL 126.89 VL 26.815 GAL 7.54 AZL 88.26 HCA 279.09 SMA 122.57 ECC .23934 INC 1.7420 V1 30.243
RP 108.14 LAP -1.72 LOP 45.98 VP 37.037 GAP 12.11 AZP 89.72 TAL 154.28 TAP 73.37 RCA 93.24 APO 151.91 V2 35.043
RC 173.532 GL 9.28 GP -11.70 ZAL 48.61 ZAP 165.84 ETS 308.08 ZAE 127.98 ETE 188.95 ZAC 149.29 ETC 175.01 CLP-171.96

PLANETOCENTRIC CONIC

C3 25.116 VHL 5.012 DLA 32.23 RAL 77.08 RAD 6568.0 VEL 12.103 PTH 2.17 VHP 8.260 DPA 6.33 RAP 55.45 ECC 1.4133
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.93 0 1 4 3990.83 -20.63 167.39 310.43 64.67 1 7 35 3390.8 -23.87 159.90
106.07 4 10 25 3192.44 -20.62 108.21 310.42 64.66 5 3 37 2592.4 -23.85 100.72
73.93 0 1 4 3990.83 -20.63 167.39 310.43 64.67 1 7 35 3390.8 -23.87 159.90
106.07 4 10 25 3192.44 -20.62 108.21 310.42 64.66 5 3 37 2592.4 -23.85 100.72
110.00 6 2 27 2846.19 -29.01 85.33 314.18 71.07 6 49 53 2246.2 -31.31 76.88
110.00 3 8 12 3385.08 -12.68 118.47 305.89 57.99 4 4 37 2785.1 -16.82 111.81

DIFFERENTIAL CORRECTIONS

TOE 1.0434 TRA 3.6903 TC3-3.3367 BAU 1.1206
RDE .3959 RRA .2354 RC3 -.0694 FAU .02283
FDE .2524 FRA 1.6398 FC3 -.7868 BSP 20034
BDE 1.1160 BRA 3.6978 BC3 3.3374 FSP -711

MID-COURSE EXECUTION ACCURACY

SGT 6122.2 SGR 557.7 SG3 204.8
RRT .6912 RRF .6740 RTF .9673
SG6 6147.6 R23 .0035 R13 .9673
SG1 6134.4 SG2 402.2 THA 3.62

ORBIT DETERMINATION ACCURACY

ST 1916.2 SR 462.6 SS 517.5
CRT .7705 CRS -.5787 CST -.9653
LSA 2012.1 MSA 323.4 SSA 14.6
EL1 1949.8 EL2 289.8 ALF 10.78

LAUNCH DATE JAN 27 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 582.569

RL 147.32 LAL -.00 LOL 126.89 VL 26.782 GAL 8.20 AZL 88.41 HCA 282.29 SMA 122.38 ECC .24703 INC 1.5902 V1 30.243
RP 108.10 LAP -1.55 LOP 49.18 VP 37.026 GAP 12.66 AZP 89.66 TAL 152.94 TAP 75.23 RCA 92.15 APO 152.61 V2 35.056
RC 175.544 GL 8.05 GP -11.34 ZAL 46.56 ZAP 166.68 ETS 305.34 ZAE 127.89 ETE 188.68 ZAC 151.37 ETC 174.32 CLP-172.97

PLANETOCENTRIC CONIC

C3 27.612 VHL 5.255 DLA 31.16 RAL 79.42 RAD 6568.1 VEL 12.206 PTH 2.19 VHP 8.584 DPA 7.27 RAP 57.43 ECC 1.4544
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
76.43 0 27 35 3960.50 -19.32 164.43 313.99 65.07 1 33 35 3360.5 -22.52 157.00
103.57 4 2 35 3269.71 -19.31 113.41 313.99 65.06 4 57 5 2669.7 -22.51 105.98
76.43 0 27 35 3960.50 -19.32 164.43 313.99 65.07 1 33 35 3360.5 -22.52 157.00
103.57 4 2 35 3269.71 -19.31 113.41 313.99 65.06 4 57 5 2669.7 -22.51 105.98
110.00 6 32 48 2802.00 -29.95 82.23 318.50 72.69 7 19 30 2202.0 -32.02 73.63
110.00 2 56 33 3476.21 -9.34 123.42 308.30 56.97 3 54 29 2876.2 -13.62 116.94

DIFFERENTIAL CORRECTIONS

TOE .9234 TRA 4.0444 TC3-3.0289 BAU 1.1183
RDE .4030 RRA .2521 RC3 -.0613 FAU .02066
FDE .1960 FRA 1.6846 FC3 -.6478 BSP 20164
BDE 1.0075 BRA 4.0522 BC3 3.0295 FSP -681

MID-COURSE EXECUTION ACCURACY

SGT 6140.2 SGR 548.1 SG3 195.4
RRT .6842 RRF .6672 RTF .9679
SG6 6164.6 R23 .0029 R13 .9680
SG1 6151.7 SG2 399.0 THA 3.51

ORBIT DETERMINATION ACCURACY

ST 1847.4 SR 449.9 SS 503.4
CRT .7118 CRS -.5109 CST -.9670
LSA 1937.2 MSA 340.1 SSA 14.1
EL1 1875.7 EL2 311.2 ALF 10.12

LAUNCH DATE JAN 27 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 21 1969

MELIOCENTRIC CONIC DISTANCE 587.865  
 RL 147.32 LAL -.00 LOL 126.89 VL 26.751 GAL 8.90 AZL 88.57 HCA 285.50 SMA 122.18 ECC .25540 INC 1.4344 V1 30.243  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.015 GAP 13.25 AZP 89.62 TAL 151.62 TAP 77.12 RCA 90.98 APO 153.39 V2 35.069  
 RC 177.535 GL 6.88 GP -11.02 ZAL 44.61 ZAP 167.46 ETS 302.20 ZAE 127.79 ETE 188.43 ZAC 153.45 ETC 173.49 CLP-173.98

PLANETOCENTRIC CONIC  
 C3 30.510 VHL 5.524 DLA 30.11 RAL 81.61 RAD 6568.2 VEL 12.324 PTH 2.22 VHP 8.933 DPA 8.17 RAP 59.45 ECC 1.5021  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.31 0 57 23 3918.78 -18.01 160.67 317.53 65.46 2 2 42 3318.8 -21.18 153.29  
 100.69 3 50 19 3361.34 -18.00 119.64 317.52 65.45 4 46 20 2761.3 -21.16 112.26  
 79.31 0 57 23 3918.78 -18.01 160.67 317.53 65.46 2 2 42 3318.8 -21.18 153.29  
 100.69 3 50 19 3361.34 -18.00 119.64 317.52 65.45 4 46 20 2761.3 -21.16 112.26  
 110.00 6 58 33 2770.98 -30.55 80.01 322.61 73.87 7 44 44 2171.0 -32.46 71.32  
 110.00 2 48 19 3557.14 -6.31 127.73 310.88 56.33 3 47 36 2957.1 -10.69 121.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .8008 TRA 4.4204 TC3-2.7270 BAU 1.1125 SGT 6153.1 SGR 537.9 SG3 186.6 ST 1796.3 SR 436.8 SS 494.4  
 RDE .4106 RRA .2695 RC3 -.0537 FAU .01857 RRT .6784 RRF .6617 RTF .9687 CRT .6475 CRS -.4441 CST -.9699  
 FDE .1446 FRA 1.7304 FC3 -.5269 BSP 20268 SGB 6176.5 R23 .0025 R13 .9687 LSA 1880.7 MSA 353.1 SSA 13.6  
 BDE .8999 BRA 4.4286 BC3 2.7275 FSP -651 SG1 6163.9 SG2 394.5 THA 3.41 EL1 1819.2 EL2 328.7 ALF 9.25

LAUNCH DATE JAN 27 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 23 1969

MELIOCENTRIC CONIC DISTANCE 593.064  
 RL 147.32 LAL -.00 LOL 126.89 VL 26.719 GAL 9.65 AZL 88.73 HCA 288.71 SMA 121.99 ECC .26454 INC 1.2736 V1 30.243  
 RP 108.02 LAP -1.21 LOP 55.60 VP 37.005 GAP 13.89 AZP 89.59 TAL 150.32 TAP 79.03 RCA 89.72 APO 154.27 V2 35.083  
 RC 179.506 GL 5.77 GP -10.72 ZAL 42.76 ZAP 168.17 ETS 298.58 ZAE 127.68 ETE 188.20 ZAC 155.53 ETC 172.52 CLP-174.99

PLANETOCENTRIC CONIC  
 C3 33.879 VHL 5.821 DLA 29.09 RAL 83.67 RAD 6568.3 VEL 12.460 PTH 2.25 VHP 9.310 DPA 9.01 RAP 61.49 ECC 1.5576  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 83.02 1 34 25 3852.77 -16.71 155.17 321.03 65.83 2 38 38 3252.8 -19.84 147.83  
 96.98 3 29 40 3480.09 -16.70 127.83 321.02 65.82 4 27 40 2880.1 -19.83 120.49  
 100.00 4 51 20 3218.04 -22.06 110.79 323.37 69.30 5 44 58 2618.0 -24.68 102.97  
 100.00 2 55 26 3590.05 -11.50 133.34 318.41 62.22 3 55 16 2990.0 -15.13 126.43  
 110.00 7 21 10 2748.81 -30.96 78.42 326.59 74.74 8 6 59 2148.8 -32.74 69.65  
 110.00 2 42 5 3632.04 -3.47 131.67 313.57 55.97 3 42 37 3032.0 -7.91 125.40

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .6751 TRA 4.8202 TC3-2.4350 BAU 1.1031 SGT 6161.3 SGR 526.9 SG3 178.4 ST 1761.4 SR 423.3 SS 489.5  
 RDE .4186 RRA .2875 RC3 -.0466 FAU .01656 RRT .6734 RRF .6571 RTF .9697 CRT .5796 CRS -.3799 CST -.9736  
 FDE .0973 FRA 1.7775 FC3 -.4232 BSP 20366 SGB 6183.8 R23 .0020 R13 .9697 LSA 1841.2 MSA 361.9 SSA 13.2  
 BDE .7943 BRA 4.8287 BC3 2.4355 FSP -624 SG1 6171.6 SG2 388.9 THA 3.31 EL1 1779.1 EL2 341.5 ALF 8.24

LAUNCH DATE JAN 27 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 25 1969

MELIOCENTRIC CONIC DISTANCE 598.149  
 RL 147.32 LAL -.00 LOL 126.89 VL 26.688 GAL 10.46 AZL 88.89 HCA 291.92 SMA 121.81 ECC .27454 INC 1.1065 V1 30.243  
 RP 107.98 LAP -1.03 LOP 58.81 VP 36.994 GAP 14.57 AZP 89.59 TAL 149.06 TAP 80.98 RCA 88.37 APO 155.25 V2 35.095  
 RC 181.455 GL 7.73 GP -10.45 ZAL 41.02 ZAP 168.82 ETS 294.43 ZAE 127.55 ETE 187.99 ZAC 157.60 ETC 171.35 CLP-176.00

PLANETOCENTRIC CONIC  
 C3 37.802 VHL 6.148 DLA 28.11 RAL 85.59 RAD 6568.5 VEL 12.616 PTH 2.29 VHP 9.719 DPA 9.80 RAP 63.55 ECC 1.6221  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 9 37 3596.97 -18.12 137.03 325.69 67.86 4 9 34 2997.0 -20.97 129.51  
 90.00 2 9 46 3791.23 -12.76 148.77 323.23 64.50 3 12 57 3191.2 -16.09 141.67  
 100.00 5 27 29 3152.49 -23.57 106.51 327.87 71.07 6 20 1 2552.5 -25.94 98.51  
 100.00 2 34 35 3710.95 -7.58 140.17 320.53 61.00 3 36 26 3111.0 -11.39 133.46  
 110.00 7 41 24 2733.35 -31.23 77.29 330.48 75.35 8 26 57 2133.4 -32.93 68.48  
 110.00 2 37 9 3702.85 -7.76 135.36 316.33 55.82 3 38 52 3102.9 -5.24 129.14

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .5500 TRA 5.2502 TC3-2.1510 BAU 1.0872 SGT 6166.7 SGR 515.3 SG3 170.7 ST 1743.0 SR 409.7 SS 488.6  
 RDE .4271 RRA .3063 RC3 -.0396 FAU .01455 RRT .6696 RRF .6539 RTF .9708 CRT .5120 CRS -.3223 CST -.9778  
 FDE .0555 FRA 1.8282 FC3 -.3332 BSP 20354 SGB 6188.2 R23 .0019 R13 .9708 LSA 1819.5 MSA 366.0 SSA 12.7  
 BDE .6964 BRA 5.2592 BC3 2.1513 FSP -594 SG1 6176.4 SG2 382.1 THA 3.21 EL1 1756.2 EL2 349.3 ALF 7.15

LAUNCH DATE JAN 27 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 27 1969

MELIOCENTRIC CONIC DISTANCE 603.099  
 RL 147.32 LAL -.00 LOL 126.89 VL 26.657 GAL 11.33 AZL 89.07 HCA 295.14 SMA 121.62 ECC .28551 INC .9315 V1 30.243  
 RP 107.94 LAP -.84 LOP 62.03 VP 36.984 GAP 15.31 AZP 89.60 TAL 147.84 TAP 82.98 RCA 86.90 APO 156.35 V2 35.108  
 RC 183.384 GL 3.74 GP -10.20 ZAL 39.38 ZAP 169.38 ETS 289.72 ZAE 127.41 ETE 187.79 ZAC 159.65 ETC 169.93 CLP-177.03

PLANETOCENTRIC CONIC  
 C3 42.382 VHL 6.510 DLA 27.16 RAL 87.37 RAD 6568.6 VEL 12.796 PTH 2.33 VHP 10.163 DPA 10.55 RAP 65.62 ECC 1.6975  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 57 39 3491.66 -20.69 130.37 330.63 70.22 4 55 50 2891.7 -23.20 122.60  
 90.00 1 35 57 3954.30 -7.81 158.19 324.86 62.70 2 41 51 3354.3 -11.41 151.36  
 100.00 5 55 0 3113.32 -24.41 103.90 332.00 72.20 6 46 54 2513.3 -26.62 95.80  
 100.00 2 21 16 3807.88 -4.35 145.55 322.97 60.40 3 24 44 3207.9 -8.26 138.95  
 110.00 7 59 38 2723.31 -31.41 76.56 334.27 75.75 8 45 2 2123.3 -33.04 67.72  
 110.00 2 33 7 3770.65 1.83 138.90 319.14 55.86 3 35 58 3170.7 -2.66 132.70

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE .4172 TRA 5.7049 TC3-1.8856 BAU 1.0686 SGT 6165.2 SGR 502.3 SG3 163.3 ST 1733.9 SR 395.4 SS 490.0  
 RDE .4357 RRA .3251 RC3 -.0333 FAU .01268 RRT .6658 RRF .6507 RTF .9721 CRT .4438 CRS -.2672 CST -.9818  
 FDE .0152 FRA 1.8796 FC3 -.2590 BSP 20441 SGB 6185.6 R23 .0014 R13 .9721 LSA 1808.0 MSA 366.0 SSA 12.2  
 BDE .6032 BRA 5.7142 BC3 1.8859 FSP -569 SG1 6174.3 SG2 374.2 THA 3.12 EL1 1743.2 EL2 352.4 ALF 6.03

LAUNCH DATE JAN 27 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC

DISTANCE 607.887

RL 147.32 LAL -.00 LOL 126.89 VL 26.626 GAL 12.28 AZL 89.25 MCA 298.36 SMA 121.44 ECC .29758 INC .7468 V1 30.243  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.974 GAP 16.12 AZP 89.65 TAL 146.67 TAP 85.02 RCA 85.30 APO 157.58 V2 35.120  
 RC 185.291 GL 2.81 GP -9.97 ZAL 37.86 ZAP 169.85 ETS 284.41 ZAE 127.24 ETE 187.60 ZAC 161.67 ETC 168.18 CLP-178.07

PLANETOCENTRIC CONIC

C3 47.748 VHL 6.910 DLA 26.25 RAL 89.02 RAD 6568.8 VEL 13.004 PTH 2.37 VHP 10.649 DPA 11.24 RAP 67.70 ECC 1.7858  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 28 5 3442.02 -21.80 127.15 334.84 71.46 5 25 27 2842.0 -24.13 119.26  
 90.00 1 18 40 4063.85 -4.34 164.37 327.17 61.99 2 26 24 3463.9 -8.06 157.66  
 100.00 6 18 0 3087.65 -24.94 102.18 335.93 72.96 7 9 28 2487.6 -27.03 94.00  
 100.00 2 11 26 3893.46 -1.46 150.26 325.37 60.14 3 16 19 3293.5 -5.42 143.72  
 110.00 8 16 12 2717.81 -31.50 76.16 338.00 75.97 9 1 30 2117.8 -33.10 67.30  
 110.00 2 29 43 3836.06 4.32 142.32 321.98 56.06 3 33 39 3236.1 -1.16 136.11

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2815 TRA 6.1927 TC3-1.6345 BAU 1.0435 SGT 6159.4 SGR 488.3 SG3 156.3 ST 1734.8 SR 380.7 SS 494.1  
 RDE .4444 RRA .3441 RC3 -.0273 FAU .01084 RRT .6623 RRF .6482 RTF .9736 CRT .3786 CRS -.2181 CST -.9855  
 FDE -.0217 FRA 1.9348 FC3 -.1965 BSP 20491 SGB 6178.7 R23 .0011 R13 .9736 LSA 1807.6 MSA 361.9 SSA 11.8  
 BOE .5261 BRA 6.2023 BC3 1.6348 FSP -.544 SG1 6167.9 SG2 365.2 THA 3.02 EL1 1741.0 EL2 351.1 ALF 4.95

LAUNCH DATE JAN 27 1969

FLIGHT TIME 216.00

ARRIVAL DATE AUG 31 1969

HELIOCENTRIC CONIC

DISTANCE 612.480

RL 147.32 LAL -.00 LOL 126.89 VL 26.597 GAL 13.30 AZL 89.45 MCA 304.57 SMA 121.27 ECC .31090 INC .5505 V1 30.243  
 RP 107.87 LAP -.47 LOP 68.46 VP 36.964 GAP 17.00 AZP 89.71 TAL 145.56 TAP 87.13 RCA 83.56 APO 158.97 V2 35.132  
 RC 187.175 GL 1.94 GP -9.76 ZAL 36.45 ZAP 170.20 ETS 278.50 ZAE 127.05 ETE 187.43 ZAC 163.65 ETC 165.99 CLP-179.14

PLANETOCENTRIC CONIC

C3 54.057 VHL 7.352 DLA 25.38 RAL 90.53 RAD 6569.0 VEL 13.245 PTH 2.42 VHP 11.182 DPA 11.88 RAP 69.78 ECC 1.8896  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 52 19 3411.31 -22.45 125.14 338.77 72.27 5 49 10 2811.3 -24.66 117.17  
 90.00 1 6 33 4156.32 -1.37 169.55 329.69 61.71 2 15 49 3556.3 -5.14 162.90  
 100.00 6 37 55 3070.85 -25.27 101.04 339.72 73.47 7 29 6 2470.9 -27.29 92.82  
 100.00 2 3 38 3972.02 1.21 154.57 328.26 60.13 3 9 50 3372.0 -2.78 148.05  
 110.00 8 31 16 2716.18 -31.52 76.04 341.65 76.04 9 16 33 2116.2 -33.12 67.18  
 110.00 2 26 45 3899.45 6.72 145.66 324.84 56.41 3 31 45 3299.5 2.26 139.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1419 TRA 6.7172 TC3-1.3992 BAU 1.0113 SGT 6149.3 SGR 473.1 SG3 149.8 ST 1742.8 SR 365.6 SS 500.4  
 RDE .4534 RRA .3629 RC3 -.0218 FAU .00902 RRT .6593 RRF .6459 RTF .9753 CRT .3176 CRS -.1745 CST -.9888  
 FDE -.0560 FRA 1.9944 FC3 -.1445 BSP 20531 SGB 6167.5 R23 .0009 R13 .9753 LSA 1815.4 MSA 354.4 SSA 11.3  
 BOE .4751 BRA 6.7270 BC3 1.3993 FSP -.521 SG1 6157.3 SG2 355.3 THA 2.91 EL1 1746.8 EL2 345.9 ALF 3.97

LAUNCH DATE JAN 27 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 2 1969

HELIOCENTRIC CONIC

DISTANCE 616.839

RL 147.32 LAL -.00 LOL 126.89 VL 26.567 GAL 14.43 AZL 89.66 MCA 304.80 SMA 121.09 ECC .32565 INC .3398 V1 30.243  
 RP 107.83 LAP -.28 LOP 71.68 VP 36.954 GAP 17.97 AZP 89.81 TAL 144.51 TAP 89.31 RCA 81.66 APO 160.53 V2 35.144  
 RC 189.037 GL 1.12 GP -9.56 ZAL 35.15 ZAP 170.43 ETS 272.05 ZAE 126.82 ETE 187.26 ZAC 165.58 ETC 163.23 CLP 179.77

PLANETOCENTRIC CONIC

C3 61.513 VHL 7.843 DLA 24.55 RAL 91.92 RAD 6569.1 VEL 13.523 PTH 2.47 VHP 11.770 DPA 12.48 RAP 71.85 ECC 2.0124  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 12 47 3391.59 -22.85 123.83 342.51 72.81 6 9 19 2791.6 -24.99 115.82  
 90.00 0 57 8 4239.33 1.31 174.17 332.31 61.71 2 7 47 3639.3 -2.48 167.55  
 100.00 6 55 27 3060.58 -25.47 100.34 343.37 73.79 7 46 28 2460.6 -27.44 92.10  
 100.00 1 57 9 4045.58 3.70 158.61 330.98 60.32 3 4 35 3445.6 -.28 152.09  
 110.00 8 44 59 2917.88 -31.50 76.16 345.22 75.97 9 30 17 2117.9 -33.10 67.31  
 110.00 2 24 6 3961.04 9.03 148.94 327.71 56.89 3 30 7 3361.0 4.61 142.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0025 TRA 7.2867 IC3-1.1774 BAU .9683 SGT 6136.6 SGR 457.0 SG3 143.7 ST 1756.5 SR 350.4 SS 509.0  
 RDE .4628 RRA .3815 RC3 -.0162 FAU .00714 RRT .6564 RRF .6441 RTF .9772 CRT .2633 CRS -.1382 CST -.9916  
 FDE -.0867 FRA 2.0606 FC3 -.1006 BSP 20450 SGB 6153.6 R23 .0009 R13 .9772 LSA 1829.9 MSA 344.2 SSA 10.9  
 BOE .4628 BRA 7.2967 BC3 1.1775 FSP -.497 SG1 6143.9 SG2 344.3 THA 2.81 EL1 1759.0 EL2 337.5 ALF 3.12

LAUNCH DATE JAN 27 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 4 1969

HELIOCENTRIC CONIC

DISTANCE 620.909

RL 147.32 LAL -.00 LOL 126.89 VL 26.539 GAL 15.66 AZL 89.89 MCA 308.02 SMA 120.93 ECC .34203 INC .1117 V1 30.243  
 RP 107.79 LAP -.09 LOP 74.90 VP 36.944 GAP 19.04 AZP 89.93 TAL 143.56 TAP 91.58 RCA 79.57 APO 162.29 V2 35.155  
 RC 190.875 GL .34 GP -9.38 ZAL 33.98 ZAP 170.52 ETS 265.15 ZAE 126.55 ETE 187.09 ZAC 167.43 ETC 159.65 CLP 178.64

PLANETOCENTRIC CONIC

C3 70.372 VHL 8.389 DLA 23.75 RAL 93.18 RAD 6569.4 VEL 13.846 PTH 2.53 VHP 12.421 DPA 13.02 RAP 73.91 ECC 2.1582  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 30 32 3379.42 -23.09 123.02 346.10 73.14 6 26 52 2779.4 -25.19 114.98  
 90.00 0 49 24 4315.94 3.77 178.45 334.97 61.91 2 1 20 3715.9 -.01 171.82  
 100.00 7 11 3 3055.37 -25.56 99.98 346.90 73.95 8 1 58 2455.4 -27.52 91.73  
 100.00 1 51 35 4115.21 6.03 162.46 333.72 60.67 3 0 10 3515.2 2.08 155.91  
 110.00 8 57 27 2722.45 -31.42 76.50 348.70 75.79 9 42 50 2122.5 -33.05 67.65  
 110.00 2 21 39 4020.90 11.24 152.17 330.57 57.50 3 28 40 3420.9 6.87 145.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1468 TRA 7.8987 TC3 -.9747 BAU .9171 SGT 6117.6 SGR 439.3 SG3 137.9 ST 1771.8 SR 334.6 SS 519.3  
 RDE .4721 RRA .3989 RC3 -.0115 FAU .00533 RRT .6526 RRF .6415 RTF .9792 CRT .2119 CRS -.1040 CST -.9938  
 FDE -.1171 FRA 2.1317 FC3 -.0655 BSP 20487 SGB 6133.4 R23 .0007 R13 .9792 LSA 1846.8 MSA 331.8 SSA 10.4  
 BOE .4944 BRA 7.9088 BC3 .9748 FSP -.477 SG1 6124.3 SG2 332.5 THA 2.69 EL1 1773.2 EL2 326.7 ALF 2.37



LAUNCH DATE JAN 28 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 8 1969

Heliocentric Conic  
 RL 147.33 LAL -.00 LOL 127.90 VL 23.982 GAL .28 AZL 86.90 MCA 69.71 SMA 108.21 ECC .36156 INC 3.0968 V1 30.240  
 RP 107.91 LAP 2.90 LOP 197.59 VP 35.118 GAP -21.20 AZP 88.93 TAL 179.50 TAP 249.21 RCA 69.09 APO 147.34 V2 35.117  
 RC 42.392 GL 11.63 GP 7.02 ZAL 90.86 ZAP 12.68 ETS 215.43 ZAE 170.67 ETE 341.27 ZAC 119.36 ETC 161.58 CLP 10.59

Distance 166.428

Planeto-centric Conic  
 C3 41.282 VML 6.425 DLA 24.81 RAL 30.52 RAD 6568.6 VEL 12.753 PTH 2.32 VMP 13.238 DPA 14.91 RAP 24.26 ECC 1.6794  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 59 21 3308.24 -24.42 118.23 274.01 75.20 1 54 30 2708.2 -26.21 110.02  
 90.00 20 48 54 4124.46 -2.40 167.77 265.16 61.78 21 57 38 3524.5 -6.15 161.10  
 100.00 2 42 52 2974.51 -26.97 94.38 274.72 76.58 3 32 27 2374.5 -28.54 85.94  
 100.00 21 48 4 3933.42 -1.10 152.45 263.88 60.11 22 53 38 3333.4 -4.08 145.92  
 110.00 4 33 33 2628.21 -32.78 69.49 276.13 79.72 5 17 21 2028.2 -33.85 60.42  
 110.00 22 13 52 3852.49 4.95 143.18 260.74 56.13 23 18 5 3252.5 .47 136.97

Differential Corrections  
 TOE -.3498 TRA -.7390 TC3 .1004 BAW .0563 SGT 800.7 SGR 430.5 SG3 59.9 ST 380.5 SR 418.6 SS 283.3  
 ROE -.4682 RRA .1041 RC3 -.0180 FAU .02119 RRT .1537 RRF -.1648 RTF -.6792 CRT .7757 CRS .8884 CST .9762  
 FDE .2554 FRA .3254 FC3 -.4443 BSP 2138 SGB 909.1 RZ3 -.0201 R13 -.6817 LSA 602.3 MSA 193.1 SSA 15.3  
 BOE .5844 BRA .7463 BC3 .1020 FSP -131 SG1 804.5 SG2 423.3 THA 6.54 EL1 533.4 EL2 188.5 ALF 48.51

LAUNCH DATE JAN 28 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 10 1969

Heliocentric Conic  
 RL 147.33 LAL -.00 LOL 127.90 VL 24.348 GAL .13 AZL 87.07 MCA 72.93 SMA 109.80 ECC .34189 INC 2.9305 V1 30.240  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.356 GAP -19.97 AZP 89.14 TAL 179.75 TAP 252.68 RCA 72.26 APO 147.33 V2 35.105  
 RC 42.442 GL 11.86 GP 7.37 ZAL 91.50 ZAP 11.49 ETS 221.86 ZAE 168.23 ETE 348.43 ZAC 120.59 ETC 160.96 CLP 8.84

Distance 173.071

Planeto-centric Conic  
 C3 36.654 VML 6.054 DLA 24.80 RAL 29.78 RAD 6568.4 VEL 12.571 PTH 2.28 VMP 12.549 DPA 15.82 RAP 25.50 ECC 1.6032  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 31 3277.50 -24.94 116.12 271.07 76.13 1 51 9 2677.5 -26.60 107.85  
 90.00 20 45 40 4095.12 -3.34 166.13 262.59 61.86 21 53 55 3495.1 -7.08 159.44  
 100.00 2 40 0 2943.89 -27.43 92.23 271.72 77.63 3 29 4 2343.9 -28.86 83.71  
 100.00 21 44 52 3903.96 -1.10 150.84 261.34 60.13 22 49 56 3304.0 -5.07 144.30  
 110.00 4 30 38 2597.75 -33.13 67.18 272.96 81.05 5 13 56 1997.8 -34.01 58.05  
 110.00 22 10 44 3822.86 3.82 141.63 258.28 56.01 23 14 26 3222.9 -.67 135.42

Differential Corrections  
 TOE -.3554 TRA -.7230 TC3 .1349 BAW .0664 SGT 841.4 SGR 434.3 SG3 66.3 ST 405.3 SR 423.2 SS 295.8  
 ROE -.4461 RRA .0964 RC3 -.0129 FAU .02234 RRT .1743 RRF -.1863 RTF -.6920 CRT .7880 CRS .8949 CST .9773  
 FDE .2663 FRA .3277 FC3 -.5277 BSP 2144 SGB 946.8 RZ3 -.0246 R13 -.6948 LSA 626.9 MSA 194.2 SSA 15.9  
 BOE .5704 BRA .7294 BC3 .1355 FSP -147 SG1 845.9 SG2 425.3 THA 6.89 EL1 554.2 EL2 190.6 ALF 46.57

LAUNCH DATE JAN 28 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 12 1969

Heliocentric Conic  
 RL 147.33 LAL -.00 LOL 127.90 VL 24.685 GAL -.03 AZL 87.23 MCA 76.14 SMA 111.32 ECC .32355 INC 2.7698 V1 30.240  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.577 GAP -18.80 AZP 89.34 TAL 180.07 TAP 256.22 RCA 75.30 APO 147.33 V2 35.092  
 RC 42.671 GL 12.05 GP 7.77 ZAL 92.30 ZAP 10.49 ETS 229.82 ZAE 165.72 ETE 353.35 ZAC 121.79 ETC 160.29 CLP 7.08

Distance 179.740

Planeto-centric Conic  
 C3 32.644 VML 5.713 DLA 24.69 RAL 28.87 RAD 6568.3 VEL 12.410 PTH 2.24 VMP 11.893 DPA 16.75 RAP 26.72 ECC 1.5372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 54 50 3241.82 -25.49 113.66 268.03 77.24 1 48 52 2641.8 -27.00 105.32  
 90.00 20 40 15 4072.31 -4.07 164.85 259.86 61.95 21 48 7 3472.3 -7.79 158.14  
 100.00 2 37 57 2909.34 -27.91 89.77 268.61 78.84 3 26 27 2309.3 -29.17 81.19  
 100.00 21 39 48 3880.02 -1.91 149.52 258.66 60.16 22 44 28 3280.0 -5.87 142.97  
 110.00 4 28 7 2564.68 -33.45 64.65 269.66 82.51 5 10 52 1964.7 -34.12 55.47  
 110.00 22 6 8 3797.45 2.85 140.30 255.69 55.92 23 9 25 3197.4 -1.64 134.09

Differential Corrections  
 TOE -.3359 TRA -.7206 TC3 .2021 BAW .0882 SGT 894.0 SGR 435.1 SG3 75.8 ST 412.8 SR 426.0 SS 303.6  
 ROE -.4239 RRA .0836 RC3 -.0039 FAU .02409 RRT .1768 RRF -.1918 RTF -.7423 CRT .7766 CRS .8788 CST .9806  
 FDE .2675 FRA .3687 FC3 -.6390 BSP 2850 SGB 994.3 RZ3 -.0223 R13 -.7445 LSA 634.6 MSA 202.9 SSA 16.1  
 BOE .5408 BRA .7254 BC3 .2021 FSP -198 SG1 898.3 SG2 426.2 THA 6.35 EL1 559.1 EL2 198.2 ALF 46.16

LAUNCH DATE JAN 28 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 14 1969

Heliocentric Conic  
 RL 147.33 LAL -.00 LOL 127.90 VL 24.994 GAL -.20 AZL 87.39 MCA 79.36 SMA 112.77 ECC .30650 INC 2.6137 V1 30.240  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.780 GAP -17.69 AZP 89.52 TAL 180.46 TAP 259.82 RCA 78.21 APO 147.33 V2 35.080  
 RC 43.078 GL 12.18 GP 8.20 ZAL 93.22 ZAP 9.75 ETS 239.44 ZAE 163.22 ETE 357.01 ZAC 122.93 ETC 159.56 CLP 5.30

Distance 186.430

Planeto-centric Conic  
 C3 29.173 VML 5.401 DLA 24.49 RAL 27.87 RAD 6568.2 VEL 12.270 PTH 2.21 VMP 11.266 DPA 17.71 RAP 27.90 ECC 1.4801  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 54 22 3201.36 -26.07 110.84 264.93 78.54 1 47 44 2601.4 -27.39 102.42  
 90.00 20 32 43 4056.30 -4.58 163.95 257.00 62.03 21 40 19 3456.3 -8.29 157.23  
 100.00 2 36 51 2870.95 -28.39 87.02 265.41 80.21 3 24 42 2271.0 -29.45 78.37  
 100.00 21 32 55 3861.94 -2.52 148.53 255.86 60.20 22 37 17 3261.9 -6.47 141.97  
 110.00 4 26 8 2529.07 -33.73 61.91 266.27 84.11 5 8 17 1929.1 -34.18 52.69  
 110.00 22 0 8 3776.59 2.06 139.21 253.01 55.87 23 3 4 3176.6 -2.44 135.01

Differential Corrections  
 TOE -.3534 TRA -.6679 TC3 .2475 BAW .0965 SGT 904.5 SGR 440.7 SG3 81.5 ST 441.8 SR 430.8 SS 315.3  
 ROE -.4032 RRA .0833 RC3 .0055 FAU .02523 RRT .2187 RRF -.2355 RTF -.7328 CRT .8109 CRS .9072 CST .9792  
 FDE .2850 FRA .3259 FC3 -.7486 BSP 2647 SGB 1006.2 RZ3 -.0300 R13 -.7363 LSA 665.6 MSA 192.0 SSA 17.0  
 BOE .5377 BRA .6731 BC3 .2475 FSP -198 SG1 911.1 SG2 426.9 THA 7.81 EL1 587.2 EL2 189.7 ALF 44.12

LAUNCH DATE JAN 28 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC DISTANCE 193.135  
 RL 147.33 LAL -.00 LOL 127.90 VL 25.278 GAL -.38 AZL 87.54 HCA 82.57 SMA 114.16 ECC .29070 INC 2.4610 V1 30.240  
 RP 108.07 LAP 2.44 LOP 210.46 VP 35.966 GAP -16.63 AZP 89.68 TAL 180.92 TAP 263.49 RCA 80.97 APO 147.34 V2 35.067  
 RC 43.658 GL 12.25 GP 8.68 ZAL 94.28 ZAP 9.35 ETS 250.52 ZAE 160.78 ETE 359.92 ZAC 124.02 ETC 158.75 CLP 3.49

PLANETOCENTRIC CONIC  
 C3 26.169 VHL 5.116 DLA 24.17 RAL 26.76 RAD 6568.1 VEL 12.147 PTH 2.18 VHP 10.668 DPA 18.70 RAP 29.05 ECC 1.4307  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 55 11 3156.12 -26.65 107.65 261.75 80.04 1 47 47 2556.1 -27.75 99.16  
 90.00 20 23 3 4047.44 -4.87 163.45 254.05 62.07 21 30 30 3447.4 -8.57 156.73  
 100.00 2 36 45 2828.66 -28.84 83.95 262.15 81.76 3 23 54 2228.7 -29.68 75.25  
 100.00 21 24 10 3850.14 -2.92 147.88 252.97 60.24 22 28 20 3250.1 -6.86 141.31  
 110.00 4 24 44 2490.83 -33.96 58.95 262.80 85.85 5 6 15 1890.8 -34.16 49.71  
 110.00 21 52 41 3760.74 1.45 138.38 250.24 55.84 22 55 21 3160.7 -3.04 132.18

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3520 TRA -.6421 TC3 .3199 BAU .1121 SGT 940.1 SGR 444.0 SG3 90.6 ST 459.8 SR 434.1 SS 324.7  
 RDE -.3868 RRA .0775 RC3 .0202 FAU .02694 RRT .2456 RRF -.2666 RTF -.7530 CRT .8217 CRS .9135 CST .9798  
 FDE .2949 FRA .3238 FC3 -.8914 BSP 2837 SGB 1039.7 R23 -.0346 R13 -.7569 LSA 684.7 MSA 190.2 SSA 17.6  
 BOE .5230 BRA .6467 BC3 .3205 FSP -225 SG1 948.1 SG2 426.8 TMA 8.31 EL1 603.7 EL2 188.5 ALF 43.00

LAUNCH DATE JAN 28 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC DISTANCE 199.851  
 RL 147.33 LAL -.00 LOL 127.90 VL 25.539 GAL -.55 AZL 87.69 HCA 85.78 SMA 115.47 ECC .27610 INC 2.3106 V1 30.240  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.137 GAP -15.62 AZP 89.83 TAL 181.45 TAP 267.23 RCA 83.59 APO 147.35 V2 35.053  
 RC 44.405 GL 12.24 GP 9.21 ZAL 95.46 ZAP 9.36 ETS 262.36 ZAE 158.44 ETE 2.36 ZAC 125.04 ETC 157.88 CLP 1.65

PLANETOCENTRIC CONIC  
 C3 23.573 VHL 4.855 DLA 23.73 RAL 25.56 RAD 6568.0 VEL 12.040 PTH 2.15 VHP 10.098 DPA 19.72 RAP 30.16 ECC 1.3880  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 57 15 3106.53 -27.18 104.12 258.53 81.74 1 49 2 2506.5 -28.04 95.56  
 90.00 20 11 26 4045.61 -4.93 163.35 251.03 62.08 21 18 52 3445.6 -8.62 156.62  
 100.00 2 37 42 2782.67 -29.24 80.59 258.84 83.49 3 24 4 2182.7 -29.83 71.84  
 100.00 21 13 41 3844.70 -3.11 147.58 250.02 60.25 22 17 46 3244.7 -7.04 141.01  
 110.00 4 24 1 2490.03 -34.12 55.77 259.28 87.73 5 4 51 1850.0 -34.06 46.53  
 110.00 21 43 51 3750.11 1.04 137.83 247.43 55.83 22 46 21 3150.1 -3.45 131.62

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3530 TRA -.6184 TC3 .3935 BAU .1246 SGT 977.3 SGR 447.8 SG3 100.6 ST 480.5 SR 437.3 SS 334.0  
 RDE -.3698 RRA .0722 RC3 .0392 FAU .02878 RRT .2790 RRF -.3028 RTF -.7673 CRT .8335 CRS .9198 CST .9806  
 FDE .3057 FRA .3217 FC3 -1.0569 BSP 2944 SGB 1075.0 R23 -.0401 R13 -.7718 LSA 705.7 MSA 187.8 SSA 18.4  
 BOE .5112 BRA .6226 BC3 .3954 FSP -253 SG1 987.1 SG2 425.7 TMA 8.97 EL1 622.3 EL2 186.5 ALF 41.77

LAUNCH DATE JAN 28 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC DISTANCE 206.574  
 RL 147.33 LAL -.00 LOL 127.90 VL 25.777 GAL -.73 AZL 87.84 HCA 88.98 SMA 116.71 ECC .26265 INC 2.1616 V1 30.240  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.293 GAP -14.65 AZP 89.96 TAL 182.05 TAP 271.03 RCA 86.06 APO 147.37 V2 35.040  
 RC 45.309 GL 12.15 GP 9.81 ZAL 96.74 ZAP 9.81 ETS 273.91 ZAE 156.22 ETE 4.51 ZAC 125.98 ETC 156.93 CLP -.22

PLANETOCENTRIC CONIC  
 C3 21.330 VHL 4.618 DLA 23.17 RAL 24.29 RAD 6567.9 VEL 11.946 PTH 2.13 VHP 9.554 DPA 20.78 RAP 31.21 ECC 1.3510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 31 3053.01 -27.64 100.27 255.28 83.61 1 51 24 2453.0 -28.24 91.66  
 90.00 19 58 4 4050.63 -4.77 163.63 247.98 62.05 21 5 35 3450.6 -8.47 156.91  
 100.00 2 39 41 2733.24 -29.57 76.96 255.49 85.38 3 25 14 2133.2 -29.89 68.17  
 100.00 21 1 35 3845.63 -3.08 147.63 247.04 60.25 22 5 41 3245.6 -7.01 141.06  
 110.00 4 24 3 2406.73 -34.18 52.39 255.72 89.73 5 4 10 1806.7 -33.84 43.16  
 110.00 21 33 42 3744.90 .85 137.56 244.60 55.83 22 36 7 3144.9 -3.64 131.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3518 TRA -.5941 TC3 .4786 BAU .1377 SGT 1014.2 SGR 452.2 SG3 111.7 ST 498.5 SR 439.9 SS 341.3  
 RDE -.3539 RRA .0674 RC3 .0636 FAU .03082 RRT .3156 RRF -.3429 RTF -.7824 CRT .8440 CRS .9255 CST .9813  
 FDE .3194 FRA .3187 FC3 -1.2508 BSP 3103 SGB 1110.5 R23 -.0460 R13 -.7876 LSA 723.8 MSA 185.0 SSA 19.2  
 BOE .4990 BRA .5979 BC3 .4828 FSP -284 SG1 1026.3 SG2 424.0 TMA 9.68 EL1 638.9 EL2 184.1 ALF 40.77

LAUNCH DATE JAN 28 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC DISTANCE 213.299  
 RL 147.33 LAL -.00 LOL 127.90 VL 25.995 GAL -.90 AZL 87.99 HCA 92.18 SMA 117.88 ECC .25029 INC 2.0129 V1 30.240  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.435 GAP -13.72 AZP 90.08 TAL 182.70 TAP 274.88 RCA 88.38 APO 147.39 V2 35.027  
 RC 46.364 GL 11.96 GP 10.46 ZAL 98.13 ZAP 10.68 ETS 284.28 ZAE 154.16 ETE 6.48 ZAC 126.83 ETC 155.91 CLP -2.13

PLANETOCENTRIC CONIC  
 C3 19.395 VHL 4.404 DLA 22.48 RAL 22.98 RAD 6567.8 VEL 11.865 PTH 2.10 VHP 9.037 DPA 21.87 RAP 32.20 ECC 1.3192  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 4 53 2996.10 -28.01 96.15 252.01 85.65 1 54 49 2396.1 -28.32 87.50  
 90.00 19 43 11 4062.13 -4.40 164.28 244.94 62.00 20 50 53 3462.1 -8.11 157.57  
 100.00 2 42 42 2680.69 -29.79 73.07 252.14 87.41 3 27 23 2080.7 -29.83 64.26  
 100.00 20 48 3 3852.77 -2.83 148.03 244.07 60.23 21 52 16 3252.8 -6.78 141.46  
 110.00 4 24 52 2361.06 -34.14 48.82 252.17 91.84 5 4 13 1761.1 -33.51 39.64  
 110.00 21 22 22 3745.17 .86 137.57 241.77 55.83 22 24 48 3145.2 -3.63 131.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3463 TRA -.5683 TC3 .5766 BAU .1515 SGT 1049.3 SGR 457.4 SG3 124.3 ST 510.7 SR 441.5 SS 342.9  
 RDE -.3387 RRA .0633 RC3 .0953 FAU .03319 RRT .3539 RRF -.3862 RTF -.7965 CRT .8522 CRS .9302 CST .9816  
 FDE .3206 FRA .3124 FC3 -1.4816 BSP 3270 SGB 1144.7 R23 -.0533 R13 -.8025 LSA 734.7 MSA 182.1 SSA 20.2  
 BOE .4844 BRA .5718 BC3 .5844 FSP -323 SG1 1064.1 SG2 421.8 TMA 10.42 EL1 650.2 EL2 181.4 ALF 40.14

LAUNCH DATE JAN 28 1969 FLIGHT TIME 86.00 ARRIVAL DATE APR 24 1969

Heliocentric Conic: RL 147.33 LAL -.00 LOL 127.90 VL 26.194 GAL -1.07 AZL 88.14 MCA 95.38 SMA 118.98 ECC .23898 INC 1.8637 V1 30.240  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.565 GAP -12.84 AZP 90.17 TAL 183.41 TAP 278.79 RCA 90.55 APO 147.41 V2 35.013  
 RC 47.558 GL 11.67 GP 11.20 ZAL 99.61 ZAP 11.92 ETS 293.00 ZAE 152.27 ETE 8.36 ZAC 127.57 ETC 154.81 CLP -4.10

Distance 220.023

Planetocentric Conic: C3 17.728 VHL 4.210 DLA 21.66 RAL 21.63 RAD 6567.7 VEL 11.795 PTH 2.09 VHP 8.545 DPA 23.01 RAP 33.11 ECC 1.2918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 10 17 2936.35 -28.24 91.79 248.76 87.82 1 59 13 2336.3 -28.24 83.13  
 90.00 19 27 4 4079.70 -3.84 165.26 241.95 61.92 20 35 3 3479.7 -7.56 158.57  
 100.00 2 46 42 2625.42 -29.89 68.96 248.80 89.57 3 30 28 2025.4 -29.63 60.17  
 100.00 20 33 19 3865.86 -2.39 148.75 241.15 60.19 21 37 45 3265.9 -6.34 142.19  
 110.00 4 26 30 2313.18 -33.97 45.09 248.65 94.04 5 5 4 1713.2 -33.04 35.98  
 110.00 21 10 0 3750.87 1.07 137.87 238.99 55.83 22 12 31 3150.9 -3.42 131.66

Differential Corrections: TOE -.3425 TRA -.5443 TC3 .6775 BAU .1637 SGT 1085.3 SGR 464.6 SG3 138.2 ST 524.1 SR 442.9 SS 344.3  
 RDE -.3249 RRA .0594 RC3 .1342 FAU .03574 RRT .3991 RRF -.4353 RTF -.8083 CRT .8611 CRS .9347 CST .9821  
 FDE .3265 FRA .3065 FC3-1.7456 BSP 3389 SGB 1180.6 R23 -.0612 R13 -.8153 LSA 746.4 MSA 178.5 SSA 21.2  
 BOE .4721 BRA .5476 BC3 .6906 FSP -364 SG1 1103.8 SG2 418.8 THA 11.35 EL1 662.7 EL2 178.1 ALF 39.44

Orbit Determination Accuracy: ST 524.1 SR 442.9 SS 344.3 CRT .8611 CRS .9347 CST .9821 LSA 746.4 MSA 178.5 SSA 21.2 EL1 662.7 EL2 178.1 ALF 39.44

LAUNCH DATE JAN 28 1969 FLIGHT TIME 88.00 ARRIVAL DATE APR 26 1969

Heliocentric Conic: RL 147.33 LAL -.00 LOL 127.90 VL 26.376 GAL -1.23 AZL 88.29 MCA 98.58 SMA 120.01 ECC .22866 INC 1.7131 V1 30.240  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.682 GAP -11.99 AZP 90.26 TAL 184.16 TAP 282.74 RCA 92.57 APO 147.45 V2 35.000  
 RC 48.883 GL 11.26 GP 12.02 ZAL 101.15 ZAP 13.47 ETS 300.07 ZAE 150.55 ETE 10.21 ZAC 128.19 ETC 153.63 CLP -6.13

Distance 226.743

Planetocentric Conic: C3 16.293 VHL 4.036 DLA 20.70 RAL 20.28 RAD 6567.7 VEL 11.734 PTH 2.07 VHP 8.077 DPA 24.21 RAP 33.93 ECC 1.2681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 38 2874.23 -28.32 87.25 245.55 90.09 2 4 32 2274.2 -28.00 78.60  
 90.00 19 9 57 4102.93 -3.09 166.56 239.06 61.84 20 18 20 3502.9 -6.83 159.88  
 100.00 2 51 40 2567.78 -29.84 64.68 245.52 91.82 3 34 28 1967.8 -29.27 55.92  
 100.00 20 17 36 3884.61 -1.76 149.78 238.32 60.15 21 22 20 3284.6 -5.72 143.23  
 110.00 4 29 0 2263.26 -33.67 41.23 245.20 96.31 5 6 43 1663.3 -32.43 32.21  
 110.00 20 56 45 3761.89 1.49 138.44 236.29 55.85 21 59 27 3161.9 -3.00 132.24

Differential Corrections: TOE -.3341 TRA -.5195 TC3 .7888 BAU .1764 SGT 1118.9 SGR 474.0 SG3 153.9 ST 530.3 SR 443.0 SS 339.7  
 RDE -.3116 RRA .0560 RC3 .1829 FAU .03867 RRT .4464 RRF -.4878 RTF -.8199 CRT .8675 CRS .9379 CST .9822  
 FDE .3273 FRA .2990 FC3-2.0549 BSP 3537 SGB 1215.2 R23 -.0704 R13 -.8282 LSA 749.5 MSA 175.2 SSA 22.5  
 BOE .4569 BRA .5226 BC3 .8097 FSP -411 SG1 1141.9 SG2 415.6 THA 12.37 EL1 668.5 EL2 174.8 ALF 39.11

Orbit Determination Accuracy: ST 530.3 SR 443.0 SS 339.7 CRT .8675 CRS .9379 CST .9822 LSA 749.5 MSA 175.2 SSA 22.5 EL1 668.5 EL2 174.8 ALF 39.11

LAUNCH DATE JAN 28 1969 FLIGHT TIME 90.00 ARRIVAL DATE APR 28 1969

Heliocentric Conic: RL 147.33 LAL -.00 LOL 127.90 VL 26.541 GAL -1.38 AZL 88.44 MCA 101.78 SMA 120.96 ECC .21927 INC 1.5600 V1 30.240  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.789 GAP -11.17 AZP 90.32 TAL 184.94 TAP 286.72 RCA 94.44 APO 147.49 V2 34.987  
 RC 50.327 GL 10.73 GP 12.93 ZAL 102.74 ZAP 15.29 ETS 305.69 ZAE 149.02 ETE 12.08 ZAC 128.67 ETC 152.39 CLP -8.22

Distance 233.455

Planetocentric Conic: C3 15.059 VHL 3.881 DLA 19.61 RAL 18.95 RAD 6567.6 VEL 11.681 PTH 2.05 VHP 7.634 DPA 25.47 RAP 34.64 ECC 1.2478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 23 53 2810.19 -28.22 82.57 242.42 92.44 2 10 43 2210.2 -27.58 73.96  
 90.00 18 52 6 4131.38 -2.18 168.15 236.30 61.76 20 0 58 3531.4 -5.93 161.49  
 100.00 2 57 34 2508.11 -29.63 60.25 242.33 94.14 3 39 22 1908.1 -28.74 51.56  
 100.00 20 1 7 3908.68 -.94 151.10 235.61 60.12 21 6 16 3508.7 -4.91 144.56  
 110.00 4 32 22 2211.50 -33.21 37.26 241.86 98.61 5 9 14 1611.5 -31.66 28.37  
 110.00 20 42 48 3778.06 2.11 139.29 233.70 55.87 21 45 46 3178.1 -2.38 133.08

Differential Corrections: TOE -.3246 TRA -.4960 TC3 .9020 BAU .1880 SGT 1150.7 SGR 486.8 SG3 171.2 ST 533.4 SR 442.2 SS 331.4  
 RDE -.2990 RRA .0529 RC3 .2419 FAU .04186 RRT .4972 RRF -.5439 RTF -.8298 CRT .8729 CRS .9402 CST .9822  
 FDE .3252 FRA .2910 FC3-2.4067 BSP 3664 SGB 1249.4 R23 -.0812 R13 -.8396 LSA 748.2 MSA 171.7 SSA 23.9  
 BOE .4413 BRA .4988 BC3 .9338 FSP -462 SG1 1179.5 SG2 412.1 THA 13.57 EL1 671.3 EL2 171.4 ALF 38.91

Orbit Determination Accuracy: ST 533.4 SR 442.2 SS 331.4 CRT .8729 CRS .9402 CST .9822 LSA 748.2 MSA 171.7 SSA 23.9 EL1 671.3 EL2 171.4 ALF 38.91

LAUNCH DATE JAN 28 1969 FLIGHT TIME 92.00 ARRIVAL DATE APR 30 1969

Heliocentric Conic: RL 147.33 LAL -.00 LOL 127.90 VL 26.691 GAL -1.53 AZL 88.60 MCA 104.97 SMA 121.85 ECC .21076 INC 1.4035 V1 30.240  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.884 GAP -10.40 AZP 90.36 TAL 185.75 TAP 290.72 RCA 96.17 APO 147.53 V2 34.974  
 RC 51.881 GL 10.06 GP 13.96 ZAL 104.35 ZAP 17.34 ETS 310.15 ZAE 147.66 ETE 14.04 ZAC 128.99 ETC 151.08 CLP -10.40

Distance 240.155

Planetocentric Conic: C3 14.001 VHL 3.742 DLA 18.38 RAL 17.67 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 7.216 DPA 26.79 RAP 35.23 ECC 1.2304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 0 2744.54 -27.94 77.79 239.40 94.82 2 17 45 2144.5 -26.98 69.25  
 90.00 18 33 46 4164.68 -1.10 170.01 233.70 61.70 19 43 10 3564.7 -4.88 163.36  
 100.00 3 4 22 2446.71 -29.24 55.73 239.25 96.49 3 45 9 1846.7 -28.04 47.14  
 100.00 19 44 5 3937.74 .04 152.69 233.06 60.11 20 49 43 3337.7 -3.93 146.16  
 110.00 4 36 37 2158.06 -32.59 33.21 238.66 100.93 5 12 35 1558.1 -30.74 24.48  
 110.00 20 28 19 3799.16 2.92 140.39 231.27 55.93 21 31 38 3199.2 -1.57 134.18

Differential Corrections: TOE -.3096 TRA -.4704 TC3 1.0256 BAU .2008 SGT 1179.0 SGR 504.4 SG3 190.9 ST 526.5 SR 439.4 SS 316.0  
 RDE -.2865 RRA .0503 RC3 .3144 FAU .04554 RRT .5498 RRF -.6027 RTF -.8410 CRT .8758 CRS .9410 CST .9816  
 FDE .3163 FRA .2803 FC3-2.8162 BSP 3855 SGB 1282.4 R23 -.0921 R13 -.8526 LSA 735.7 MSA 168.2 SSA 25.6  
 BOE .4219 BRA .4731 BC3 1.0727 FSP -526 SG1 1215.5 SG2 408.7 THA 14.97 EL1 664.9 EL2 168.0 ALF 39.14

Orbit Determination Accuracy: ST 526.5 SR 439.4 SS 316.0 CRT .8758 CRS .9410 CST .9816 LSA 735.7 MSA 168.2 SSA 25.6 EL1 664.9 EL2 168.0 ALF 39.14

LAUNCH DATE JAN 28 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 2 1969

Heliocentric Conic: RL 147.33 LAL -0.00 LOL 127.90 VL 26.827 GAL -1.67 AZL 88.76 HCA 108.16 SMA 122.67 ECC .20309 INC 1.2423 V1 30.240  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.971 GAP -9.65 AZP 90.39 TAL 186.58 TAP 294.74 RCA 97.76 APO 147.58 V2 34.961  
 RC 53.536 GL 9.25 GP 15.11 ZAL 105.98 ZAP 19.62 ETS 313.70 ZAE 146.48 ETE 16.12 ZAC 129.13 ETC 149.71 CLP -12.67

Distance 246.843

Planetocentric Conic: C3 13.095 VML 3.619 OLA 17.02 RAL 16.46 RAD 6567.5 VEL 11.597 PTH 2.03 VHP 6.821 DPA 28.19 RAP 35.68 ECC 1.2155  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 40 59 2677.55 -27.46 72.94 236.53 97.20 2 25 37 2077.6 -26.18 64.51  
 90.00 18 15 8 4202.51 .12 172.12 231.29 61.68 19 25 11 3602.5 -3.67 165.49  
 100.00 3 12 4 2383.82 -28.67 51.14 236.34 98.84 3 51 48 1783.8 -27.15 42.67  
 100.00 19 26 44 3971.47 1.19 154.54 230.70 60.13 20 32 56 3371.5 -2.79 148.02  
 110.00 4 41 48 2103.10 -31.81 29.12 235.63 103.24 5 16 51 1503.1 -29.66 20.57  
 110.00 20 13 30 3824.95 3.90 141.74 229.01 56.01 21 17 15 3225.0 -.59 135.53

Differential Corrections: TOE -.2944 TRA -.4482 TC3 1.1421 BAW .2119 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2742 RRA .0477 RC3 .4006 FAU .04953 RRT .6027 RRF -.6618 RTF -.8488 CRT .8773 CRS .9396 CST .9811  
 FDE .3019 FRA .2705 FC3-3.2747 BSP 3982 SGB 1315.3 R23 -.1058 R13 -.8629 LSA 718.4 MSA 165.0 SSA 27.6  
 BDE .4023 BRA .4507 BC3 1.2103 FSP -592 SGI 1251.2 SGI 405.7 THA 16.59 EL1 655.4 EL2 164.7 ALF 39.38

LAUNCH DATE JAN 28 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 4 1969

Heliocentric Conic: RL 147.33 LAL -0.00 LOL 127.90 VL 26.949 GAL -1.80 AZL 88.92 HCA 111.35 SMA 123.42 ECC .19618 INC 1.0752 V1 30.240  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.048 GAP -8.93 AZP 90.39 TAL 187.41 TAP 298.76 RCA 99.21 APO 147.63 V2 34.948  
 RC 55.282 GL 8.28 GP 16.40 ZAL 107.59 ZAP 22.11 ETS 316.55 ZAE 145.47 ETE 18.37 ZAC 129.07 ETC 148.30 CLP -15.04

Distance 253.516

Planetocentric Conic: C3 12.321 VML 3.510 OLA 15.52 RAL 15.35 RAD 6567.5 VEL 11.563 PTH 2.02 VHP 6.451 DPA 29.69 RAP 35.95 ECC 1.2028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 50 51 2609.37 -26.78 68.07 233.84 99.56 2 34 20 2009.4 -25.19 59.76  
 90.00 17 56 23 4244.59 1.48 174.47 229.12 61.72 19 7 8 3644.6 -2.31 167.84  
 100.00 3 20 43 2319.57 -27.91 46.92 233.61 101.16 3 59 22 1719.6 -26.09 38.19  
 100.00 19 9 12 4009.63 2.48 156.64 228.56 60.20 20 16 2 3409.6 -1.50 150.12  
 110.00 4 47 55 2046.73 -30.85 25.00 232.81 105.50 5 22 2 1446.7 -28.42 16.65  
 110.00 19 58 30 3855.23 5.05 143.33 226.96 56.15 21 2 45 3255.2 .57 137.11

Differential Corrections: TOE -.2771 TRA -.4276 TC3 1.2520 BAW .2222 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2616 RRA .0451 RC3 .5027 FAU .05388 RRT .6538 RRF -.7193 RTF -.8551 CRT .8767 CRS .9347 CST .9802  
 FDE .2802 FRA .2617 FC3-3.7862 BSP 4086 SGB 1347.1 R23 -.1213 R13 -.8726 LSA 693.4 MSA 162.1 SSA 29.9  
 BDE .3811 BRA .4299 BC3 1.3492 FSP -665 SGI 1285.2 SGI 403.5 THA 18.50 EL1 639.8 EL2 161.6 ALF 39.77

LAUNCH DATE JAN 28 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 6 1969

Heliocentric Conic: RL 147.33 LAL -0.00 LOL 127.90 VL 27.060 GAL -1.92 AZL 89.10 HCA 114.54 SMA 124.11 ECC .18999 INC .9008 V1 30.240  
 RP 108.47 LAP .82 LOP 242.44 VP 37.116 GAP -8.24 AZP 90.37 TAL 188.23 TAP 302.77 RCA 100.53 APO 147.69 V2 34.936  
 RC 57.109 GL 7.15 GP 17.85 ZAL 109.16 ZAP 24.81 ETS 318.87 ZAE 144.59 ETE 20.85 ZAC 128.78 ETC 146.87 CLP -17.53

Distance 260.171

Planetocentric Conic: C3 11.662 VML 3.415 OLA 13.89 RAL 14.35 RAD 6567.4 VEL 11.535 PTH 2.01 VHP 6.106 DPA 31.29 RAP 36.03 ECC 1.1919  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 1 38 2540.01 -25.90 63.18 231.37 101.85 2 43 58 1940.0 -24.01 55.02  
 90.00 17 37 38 4290.80 2.97 177.05 227.19 61.83 18 49 9 3690.8 -.82 170.42  
 100.00 3 30 19 2254.01 -26.96 41.88 231.10 103.43 4 7 53 1654.0 -24.84 33.72  
 100.00 18 51 38 4052.03 3.91 158.97 226.67 60.34 19 59 10 3452.0 -.06 152.44  
 110.00 4 55 1 1988.97 -29.73 20.88 230.23 107.70 5 28 10 1389.0 -27.02 12.70  
 110.00 19 43 25 3889.84 6.36 145.15 225.15 56.34 20 48 15 3289.8 1.89 138.91

Differential Corrections: TOE -.2568 TRA -.4071 TC3 1.3566 BAW .2328 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2480 RRA .0427 RC3 .6244 FAU .05871 RRT .7015 RRF -.7735 RTF -.8608 CRT .8733 CRS .9235 CST .9784  
 FDE .2477 FRA .2516 FC3-4.3586 BSP 4221 SGB 1378.3 R23 -.1373 R13 -.8824 LSA 658.4 MSA 159.2 SSA 32.9  
 BDE .3571 BRA .4093 BC3 1.4934 FSP -749 SGI 1318.2 SGI 402.7 THA 20.78 EL1 616.3 EL2 158.4 ALF 40.36

LAUNCH DATE JAN 28 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 8 1969

Heliocentric Conic: RL 147.33 LAL -0.00 LOL 127.90 VL 27.159 GAL -2.03 AZL 89.28 HCA 117.72 SMA 124.74 ECC .18448 INC .7175 V1 30.240  
 RP 108.51 LAP .64 LOP 245.62 VP 37.177 GAP -7.58 AZP 90.33 TAL 189.04 TAP 306.76 RCA 101.72 APO 147.75 V2 34.923  
 RC 59.010 GL 5.85 GP 19.48 ZAL 110.67 ZAP 27.74 ETS 320.79 ZAE 143.83 ETE 23.61 ZAC 128.23 ETC 145.44 CLP -20.15

Distance 266.807

Planetocentric Conic: C3 11.104 VML 3.332 OLA 12.13 RAL 13.49 RAD 6567.4 VEL 11.511 PTH 2.00 VHP 5.786 DPA 33.00 RAP 35.87 ECC 1.1827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 13 26 2469.40 -24.83 58.29 229.14 104.08 2 54 35 1869.4 -22.65 50.30  
 90.00 17 18 59 4341.07 4.58 179.86 225.54 62.03 18 31 20 3741.1 .80 173.22  
 100.00 3 40 58 2187.09 -25.82 37.24 228.85 105.62 4 17 25 1587.1 -23.42 29.25  
 100.00 18 34 8 4098.62 5.48 161.54 225.05 60.57 19 42 26 3498.6 1.52 155.00  
 110.00 5 3 11 1929.78 -28.43 16.76 227.91 109.83 5 35 21 1329.8 -25.47 8.84  
 110.00 19 28 23 3928.69 7.82 147.21 223.61 56.62 20 33 52 3328.7 3.38 140.94

Differential Corrections: TOE -.2342 TRA -.3890 TC3 1.4451 BAW .2428 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE -.2329 RRA .0398 RC3 .7664 FAU .06386 RRT .7428 RRF -.8216 RTF -.8646 CRT .8659 CRS .8965 CST .9738  
 FDE .2027 FRA .2442 FC3-4.9792 BSP 4325 SGB 1408.6 R23 -.1542 R13 -.8919 LSA 614.2 MSA 157.0 SSA 36.4  
 BDE .3303 BRA .3911 BC3 1.6358 FSP -838 SGI 1349.3 SGI 404.3 THA 23.47 EL1 584.8 EL2 155.4 ALF 41.02

LAUNCH DATE JAN 28 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 10 1969

MELIOCENTRIC CONIC DISTANCE 273.422  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.247 GAL -2.13 AZL 89.48 MCA 120.90 SMA 125.30 ECC .17957 INC .5233 V1 30.240  
 RP 108.55 LAP .45 LOP 248.80 VP 37.231 GAP -6.95 AZP 90.27 TAL 189.81 TAP 310.71 RCA 102.80 APO 147.80 V2 34.911  
 RC 60.976 GL 4.37 GP 21.31 ZAL 112.10 ZAP 30.89 ETS 322.42 ZAE 143.16 ETE 26.70 ZAC 127.40 ETC 144.04 CLP -22.92

PLANETOCENTRIC CONIC  
 C3 10.635 VML 3.261 OLA 10.23 RAL 12.79 RAD 6567.4 VEL 11.490 PTH 2.00 VHP 5.493 DPA 34.83 RAP 35.44 ECC 1.1750  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 26 20 2397.33 -23.54 53.40 227.18 106.21 3 6 17 1797.3 -21.10 45.58  
 90.00 17 0 27 4395.51 6.31 182.93 224.19 62.34 18 13 43 3795.5 2.55 176.26  
 100.00 3 52 44 2118.63 -24.48 32.59 226.87 107.71 4 28 3 1518.6 -21.83 24.80  
 100.00 18 16 43 4149.44 7.17 164.37 223.72 60.90 19 25 53 3549.4 3.24 157.79  
 110.00 5 12 30 1869.04 -26.96 12.65 225.88 111.86 5 43 39 1269.0 -23.75 4.95  
 110.00 19 13 27 3971.79 9.43 149.51 222.34 56.99 20 19 39 3371.8 5.01 143.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.2079 TRA -.3710 TC3 1.5225 BAU .2539 SGT 1248.3 SGR 719.8 SG3 321.5 ST 416.8 SR 378.9 SS 142.1  
 RDE -.2151 RRA .0369 RC3 .9338 FAU .06947 RRT .7782 RRF -.8633 RTF -.8684 CRT .8525 CRS .8205 CST .9530  
 FDE .1409 FRA .2370 FC3-5.6549 BSP 4473 SGB 1441.0 R23 -.1678 R13 -.9028 LSA 558.3 MSA 155.3 SSA 40.9  
 BOE .2992 BRA .3728 BC3 1.7860 FSP -940 SG1 1381.9 SG2 408.4 THA 26.68 EL1 542.4 EL2 152.2 ALF 41.80

LAUNCH DATE JAN 28 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 12 1969

MELIOCENTRIC CONIC DISTANCE 280.016  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.326 GAL -2.22 AZL 89.68 MCA 124.08 SMA 125.81 ECC .17524 INC .3157 V1 30.240  
 RP 108.58 LAP .26 LOP 251.98 VP 37.277 GAP -6.34 AZP 90.18 TAL 190.54 TAP 314.62 RCA 103.77 APO 147.86 V2 34.900  
 RC 63.000 GL 2.70 GP 23.36 ZAL 113.42 ZAP 34.29 ETS 323.85 ZAE 142.51 ETE 30.18 ZAC 126.26 ETC 142.70 CLP -25.85

PLANETOCENTRIC CONIC  
 C3 10.247 VML 3.201 OLA 8.19 RAL 12.25 RAD 6567.4 VEL 11.473 PTH 1.99 VHP 5.227 DPA 36.81 RAP 34.69 ECC 1.1686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 40 29 2323.45 -22.05 48.50 225.52 108.23 3 19 13 1723.5 -19.36 40.86  
 90.00 16 42 3 4454.36 8.15 186.27 223.16 62.79 17 56 17 3854.4 4.44 179.55  
 100.00 4 5 48 2048.33 -22.94 27.93 225.19 109.70 4 39 56 1448.3 -20.05 20.33  
 100.00 17 59 26 4204.71 8.99 167.47 222.71 61.37 19 9 31 3604.7 5.09 160.84  
 110.00 5 23 4 1806.51 -25.31 8.54 224.16 113.78 5 53 10 1206.5 -21.88 1.07  
 110.00 18 58 39 4019.29 11.18 152.08 221.40 57.48 20 5 38 3419.3 6.81 145.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.1818 TRA -.3570 TC3 1.5694 BAU .2646 SGT 1237.8 SGR 802.4 SG3 353.5 ST 379.9 SR 348.8 SS 95.0  
 RDE -.1942 RRA .0326 RC3 1.1258 FAU .07521 RRT .8047 RRF -.8973 RTF -.8688 CRT .8330 CRS .5425 CST .8191  
 FDE .0634 FRA .2366 FC3-6.3540 BSP 4581 SGB 1475.1 R23 -.1807 R13 -.9130 LSA 498.8 MSA 155.2 SSA 46.3  
 BOE .2661 BRA .3585 BC3 1.9314 FSP -1044 SG1 1415.1 SG2 416.6 THA 30.47 EL1 493.9 EL2 148.4 ALF 42.06

LAUNCH DATE JAN 28 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 14 1969

MELIOCENTRIC CONIC DISTANCE 286.587  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.396 GAL -2.30 AZL 89.91 MCA 127.25 SMA 126.27 ECC .17142 INC .0920 V1 30.240  
 RP 108.62 LAP .07 LOP 255.16 VP 37.318 GAP -5.75 AZP 90.06 TAL 191.22 TAP 318.48 RCA 104.62 APO 147.92 V2 34.889  
 RC 65.076 GL .80 GP 25.66 ZAL 114.61 ZAP 37.95 ETS 325.17 ZAE 141.83 ETE 34.09 ZAC 124.79 ETC 141.47 CLP -28.97

PLANETOCENTRIC CONIC  
 C3 9.933 VML 3.152 OLA 5.99 RAL 11.91 RAD 6567.4 VEL 11.460 PTH 1.99 VHP 4.992 DPA 38.93 RAP 33.56 ECC 1.1635  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 56 7 2247.27 -20.35 43.56 224.19 110.13 3 33 35 1647.3 -17.42 36.11  
 90.00 16 23 42 4518.09 10.12 189.92 222.48 63.41 17 39 0 3918.1 6.47 183.14  
 100.00 4 20 18 1975.76 -21.20 23.25 223.84 111.58 4 53 14 1375.8 -18.08 15.84  
 100.00 17 42 13 4264.84 10.93 170.87 222.05 62.00 18 53 17 3664.8 7.10 164.18  
 110.00 5 35 3 1741.84 -23.47 4.42 222.77 115.60 6 4 5 1141.8 -19.83 357.17  
 110.00 18 43 57 4071.52 13.07 154.94 220.79 58.13 19 51 49 3471.5 8.77 148.49

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.1551 TRA -.3451 TC3 1.5852 BAU .2761 SGT 1214.9 SGR 903.0 SG3 386.4 ST 340.9 SR 308.0 SS 85.5  
 RDE -.1686 RRA .0269 RC3 1.3453 FAU .08100 RRT .8229 RRF -.9242 RTF -.8665 CRT .8040 CRS -.2885 CST -.1716  
 FDE -.0342 FRA .2421 FC3-7.0598 BSP 4703 SGB 1513.7 R23 -.1884 R13 -.9238 LSA 436.6 MSA 158.2 SSA 52.2  
 BOE .2291 BRA .3462 BC3 2.0791 FSP -1152 SG1 1451.5 SG2 429.5 THA 34.95 EL1 436.6 EL2 143.0 ALF 41.40

LAUNCH DATE JAN 28 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 16 1969

MELIOCENTRIC CONIC DISTANCE 293.134  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.457 GAL -2.36 AZL 90.15 MCA 130.43 SMA 126.68 ECC .16808 INC .1500 V1 30.240  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.353 GAP -5.19 AZP 89.90 TAL 191.85 TAP 322.27 RCA 105.38 APO 147.97 V2 34.878  
 RC 67.198 GL -1.33 GP 28.23 ZAL 115.65 ZAP 41.86 ETS 326.46 ZAE 141.05 ETE 38.45 ZAC 122.97 ETC 140.38 CLP -32.29

PLANETOCENTRIC CONIC  
 C3 9.690 VML 3.113 OLA 3.62 RAL 11.78 RAD 6567.3 VEL 11.449 PTH 1.99 VHP 4.788 DPA 41.21 RAP 32.00 ECC 1.1595  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 13 29 2168.10 -18.41 38.56 223.20 111.90 3 49 37 1568.1 -15.28 31.28  
 90.00 16 5 18 4587.43 12.20 193.95 222.18 64.25 17 21 45 3987.4 8.64 187.08  
 100.00 4 36 31 1900.27 -19.24 18.50 222.84 113.33 5 8 11 1300.3 -15.92 11.28  
 100.00 17 24 57 4330.50 13.00 174.65 221.78 62.84 18 37 8 3730.5 9.26 167.86  
 110.00 5 48 38 1674.53 -21.43 .26 221.74 117.29 6 16 33 1074.5 -17.60 353.22  
 110.00 18 29 19 4129.01 15.12 158.14 220.56 58.97 19 38 8 3529.0 10.89 151.58

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.1266 TRA -.3342 TC3 1.5713 BAU .2900 SGT 1179.4 SGR 1024.4 SG3 419.4 ST 298.9 SR 252.0 SS 146.4  
 RDE -.1358 RRA .0194 RC3 1.5946 FAU .08670 RRT .8338 RRF -.9449 RTF -.8626 CRT .7586 CRS -.7839 CST -.3552  
 FDE -.1580 FRA .2536 FC3-7.7464 BSP 4877 SGB 1562.2 R23 -.1863 R13 -.9362 LSA 377.6 MSA 168.7 SSA 56.4  
 BOE .1857 BRA .3347 BC3 2.2387 FSP -1265 SG1 1497.3 SG2 445.5 THA 40.19 EL1 367.4 EL2 133.6 ALF 38.64

LAUNCH DATE JAN 28 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 299.658

RL 147.33 LAL -.00 LOL 127.90 VL 27.511 GAL -2.42 AZL 90.42 MCA 133.60 SMA 127.03 ECC .16516 INC .4173 V1 30.240
RP 108.68 LAP -.30 LOP 261.50 VP 37.383 GAP -4.64 AZP 89.71 TAL 192.40 TAP 326.00 RCA 106.05 APO 148.01 V2 34.867
RC 69.360 GL -3.72 GP 31.07 ZAL 116.50 ZAP 46.02 ETS 327.79 ZAE 140.07 ETE 43.25 ZAC 120.78 ETC 139.49 CLP -35.83

PLANETOCENTRIC CONIC

C3 9.518 VHL 3.085 DLA 1.06 RAL 11.88 RAD 6567.3 VEL 11.441 PTH 1.98 VHP 4.620 DPA 43.62 RAP 29.92 ECC 1.1566
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 32 55 2085.06 -16.23 33.44 222.61 113.53 4 7 40 1485.1 -12.91 26.34
90.00 15 46 38 4663.43 14.40 198.44 222.32 65.36 17 4 22 4063.4 10.96 191.46
100.00 4 54 45 1821.09 -17.03 13.66 222.24 114.94 5 25 6 1221.1 -13.53 6.62
100.00 17 7 29 4402.63 15.20 178.87 221.93 63.95 18 20 52 3802.6 11.57 171.96
110.00 6 4 7 1603.94 -19.16 356.03 221.10 118.86 6 30 51 1003.9 -15.17 349.20
110.00 18 14 36 4192.54 17.31 161.76 220.76 60.05 19 24 29 3592.5 13.20 155.06

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1006 TRA -.3268 TC3 1.5093 BAU .3056 SGT 1127.3 SGR 1166.4 SCS 449.9 ST 262.5 SR 179.1 SS 241.8
RDE -.0946 RRA .0081 RC3 1.8686 FAU .09178 RRT .8346 RRF -.9602 RTF -.8525 CRT .7015 CRS -.8719 CST -.4597
FDE -.3042 FRA .2777 FC3 -8.3486 BSP 5051 SGB 1622.1 R23 -.1766 R13 -.9483 LSA 348.0 MSA 188.1 SSA 54.6
BOE .1381 BRA .3269 BC3 2.4021 FSP -1368 SG1 1553.7 SG2 466.1 THA 46.17 EL1 297.1 EL2 112.8 ALF 30.42

LAUNCH DATE JAN 28 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 306.156

RL 147.33 LAL -.00 LOL 127.90 VL 27.557 GAL -2.47 AZL 90.71 MCA 136.77 SMA 127.34 ECC .16264 INC .7138 V1 30.240
RP 108.72 LAP -.49 LOP 264.67 VP 37.407 GAP -4.12 AZP 89.48 TAL 192.88 TAP 329.65 RCA 106.63 APO 148.05 V2 34.858
RC 71.560 GL -6.42 GP 34.20 ZAL 117.15 ZAP 50.42 ETS 329.25 ZAE 138.82 ETE 48.45 ZAC 118.23 ETC 138.83 CLP -39.61

PLANETOCENTRIC CONIC

C3 9.422 VHL 3.070 DLA -1.72 RAL 12.23 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 4.491 DPA 46.17 RAP 27.25 ECC 1.1551
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 54 53 1996.96 -13.76 28.15 222.46 114.99 4 28 10 1397.0 -10.28 21.20
90.00 15 27 26 4747.58 16.73 203.53 222.94 66.82 16 46 33 4147.6 13.45 196.39
100.00 5 15 26 1737.15 -14.55 8.65 222.07 116.40 5 44 23 1137.2 -10.89 1.78
100.00 16 49 34 4482.63 17.53 183.67 222.57 65.39 18 4 17 3882.6 14.06 176.59
110.00 6 21 30 1529.27 -16.65 351.70 220.89 120.29 6 47 20 929.3 -12.51 345.05
110.00 17 59 39 4263.27 19.66 165.89 221.44 61.46 19 10 43 3663.3 15.70 159.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0780 TRA -.3217 TC3 1.3977 BAU .3243 SGT 1057.5 SGR 1329.7 SCS 476.1 ST 233.1 SR 88.1 SS 355.4
RDE -.0420 RRA -.0081 RC3 2.1621 FAU .09585 RRT .8245 RRF -.9712 RTF -.8347 CRT .6461 CRS -.7694 CST -.4346
FDE -.4736 FRA .3149 FC3 -8.8069 BSP 5269 SGB 1699.0 R23 -.1574 R13 -.9603 LSA 382.9 MSA 199.2 SSA 46.3
BOE .0886 BRA .3218 BC3 2.5746 FSP -1457 SG1 1627.1 SG2 489.0 THA 52.83 EL1 240.5 EL2 65.1 ALF 14.83

LAUNCH DATE JAN 28 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 312.630

RL 147.33 LAL -.00 LOL 127.90 VL 27.596 GAL -2.50 AZL 91.05 MCA 139.93 SMA 127.61 ECC .16047 INC 1.0474 V1 30.240
RP 108.74 LAP -.67 LOP 267.84 VP 37.428 GAP -3.62 AZP 89.20 TAL 193.28 TAP 333.21 RCA 107.13 APO 148.09 V2 34.848
RC 73.792 GL -9.45 GP 37.62 ZAL 117.54 ZAP 55.02 ETS 330.92 ZAE 137.19 ETE 53.97 ZAC 115.34 ETC 138.46 CLP -43.64

PLANETOCENTRIC CONIC

C3 9.415 VHL 3.068 DLA -4.76 RAL 12.85 RAD 6567.3 VEL 11.437 PTH 1.98 VHP 4.406 DPA 48.81 RAP 23.89 ECC 1.1549
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 20 4 1902.26 -10.97 22.60 222.82 116.27 4 51 46 1302.3 -7.35 15.79
90.00 15 7 14 4841.99 19.16 209.39 224.13 68.74 16 27 56 4242.0 16.10 202.04
100.00 5 39 10 1647.07 -11.76 3.42 222.41 117.68 6 6 37 1047.1 -7.97 356.69
100.00 16 30 49 4572.41 19.98 189.21 223.77 67.30 17 47 1 3972.4 16.74 181.92
110.00 6 42 17 1449.47 -13.86 347.20 221.19 121.56 7 6 26 849.5 -9.58 340.71
110.00 17 44 11 4342.78 22.18 170.69 222.69 63.29 18 56 34 3742.8 18.41 163.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0589 TRA -.3158 TC3 1.2417 BAU .3479 SGT 971.0 SGR 1517.2 SCS 496.4 ST 210.1 SR 69.6 SS 486.0
RDE -.0268 RRA -.0298 RC3 2.4694 FAU .09864 RRT .8025 RRF -.9793 RTF -.8075 CRT -.1020 CRS .8265 CST -.3639
FDE -.6691 FRA .3609 FC3 -9.0707 BSP 5606 SGB 1801.3 R23 -.1287 R13 -.9714 LSA 496.4 MSA 193.8 SSA 35.9
BOE .0647 BRA .3172 BC3 2.7640 FSP -1535 SG1 1728.0 SG2 508.7 THA 59.95 EL1 210.2 EL2 69.2 ALF 177.83

LAUNCH DATE JAN 28 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 319.078

RL 147.33 LAL -.00 LOL 127.90 VL 27.630 GAL -2.53 AZL 91.43 MCA 143.10 SMA 127.83 ECC .15862 INC 1.4274 V1 30.240
RP 108.77 LAP -.86 LOP 271.01 VP 37.444 GAP -3.14 AZP 88.86 TAL 193.60 TAP 336.70 RCA 107.56 APO 148.11 V2 34.839
RC 76.053 GL -12.88 GP 41.30 ZAL 117.65 ZAP 59.77 ETS 332.88 ZAE 135.11 ETE 59.69 ZAC 112.12 ETC 138.42 CLP -47.92

PLANETOCENTRIC CONIC

C3 9.517 VHL 3.085 DLA -8.09 RAL 13.78 RAD 6567.3 VEL 11.441 PTH 1.98 VHP 4.372 DPA 51.51 RAP 19.75 ECC 1.1566
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 49 20 1798.85 -7.80 16.66 223.79 117.31 5 19 19 1198.8 -4.07 9.96
90.00 14 45 24 4949.62 21.67 216.28 226.00 71.31 16 7 54 4349.6 18.92 208.69
100.00 6 6 46 1549.03 -8.61 357.86 223.36 118.74 6 32 35 949.0 -4.70 351.24
100.00 16 10 39 4674.67 22.53 195.73 225.67 69.82 17 28 34 4074.7 19.58 188.18
110.00 7 6 6 1363.26 -10.74 342.48 222.07 122.65 7 28 50 763.3 -6.36 336.12
110.00 17 27 48 4433.21 24.83 176.37 224.65 65.71 18 41 42 3833.2 21.34 168.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0505 TRA -.3121 TC3 1.0204 BAU .3741 SGT 864.8 SGR 1718.3 SCS 505.2 ST 200.0 SR 218.7 SS 622.5
RDE .1130 RRA -.0622 RC3 2.7577 FAU .09907 RRT .7537 RRF -.9848 RTF -.7549 CRT -.2870 CRS .9909 CST -.3239
FDE -.8733 FRA .4267 FC3 -9.0118 BSP 5951 SGB 1923.7 R23 -.0977 R13 -.9801 LSA 662.6 MSA 188.6 SSA 26.8
BOE .1237 BRA .3182 BC3 2.9404 FSP -1567 SG1 1849.8 SG2 528.0 THA 67.27 EL1 238.9 EL2 175.4 ALF 126.31

LAUNCH DATE JAN 28 1969 FLIGHT TIME 118.00 ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC DISTANCE 325.501  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.657 GAL -2.54 AZL 91.87 HCA 146.26 SMA 128.02 ECC .15706 INC 1.8676 V1 30.240  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.457 GAP -2.67 AZP 88.45 TAL 193.83 TAP 340.09 RCA 107.91 APO 148.13 V2 34.831  
 RC 78.340 GL -16.75 GP 45.24 ZAL 117.42 ZAP 64.59 ETS 355.22 ZAE 132.54 ETE 65.47 ZAC 108.63 ETC 138.76 CLP -52.46

PLANETOCENTRIC CONIC  
 C3 9.764 VHL 3.125 OLA -11.76 RAL 15.07 RAD 6567.4 VEL 11.452 PTH 1.99 VHP 4.397 OPA 54.21 RAP 14.73 ECC 1.1607  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 24 6 1683.64 -4.15 10.16 225.52 118.04 5 52 10 1083.6 -0.37 3.52  
 90.00 14 20 53 5074.93 24.16 224.62 228.72 74.77 15 45 28 4474.9 21.84 216.72  
 100.00 6 39 29 1440.45 -5.00 351.81 225.05 119.51 7 3 30 840.4 -1.04 345.27  
 100.00 15 48 12 4793.36 25.10 203.61 228.42 73.21 17 8 5 4193.4 22.56 195.74  
 110.00 7 34 15 1268.96 -7.23 337.42 223.68 123.50 7 55 24 669.0 -2.78 331.17  
 110.00 17 9 55 4537.61 27.57 183.25 227.47 68.94 18 25 33 3937.6 24.46 175.46

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.0544 TRA -.3059 TC3 .7522 BAU .4049 SGT 747.8 SGR 1934.8 SG3 502.2 ST 199.2 SR 417.4 SS 765.0  
 RDE .2232 RRA -.1064 RC3 3.0089 FAU .09711 RRT .6617 RRF -.9887 RTF -.6602 CRT -.3573 CRS .9985 CST -.3673  
 FDE -1.0839 FRA .5016 FC3 -8.6100 BSP 6412 SGB 2074.3 R23 -.0661 R13 -.9865 LSA 874.4 MSA 184.8 SSA 20.0  
 BDE .2297 BRA .3239 BC3 3.1015 FSP -1567 SG1 2002.3 SG2 541.8 THA 74.49 EL1 424.9 EL2 182.8 ALF 101.91

LAUNCH DATE JAN 28 1969 FLIGHT TIME 120.00 ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC DISTANCE 331.898  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.679 GAL -2.54 AZL 92.39 HCA 149.41 SMA 128.17 ECC .15576 INC 2.3869 V1 30.240  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.466 GAP -2.22 AZP 87.94 TAL 193.98 TAP 343.39 RCA 108.21 APO 148.14 V2 34.824  
 RC 80.651 GL -21.12 GP 49.38 ZAL 116.78 ZAP 69.38 ETS 338.01 ZAE 129.46 ETE 71.22 ZAC 104.92 ETC 139.49 CLP -57.25

PLANETOCENTRIC CONIC  
 C3 10.217 VHL 3.196 OLA -15.81 RAL 16.76 RAD 6567.4 VEL 11.472 PTH 1.99 VHP 4.492 OPA 56.83 RAP 8.72 ECC 1.1681  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 6 40 1551.49 .11 2.78 228.26 118.32 6 32 31 951.5 3.89 356.14  
 90.00 13 51 50 5225.13 26.45 235.02 232.46 79.49 15 18 55 4625.1 24.73 226.77  
 100.00 7 19 16 1317.24 -.84 345.03 227.73 119.88 7 41 13 717.2 3.14 338.50  
 100.00 15 21 55 4934.61 27.51 213.41 232.22 77.82 16 44 9 4334.6 25.56 205.16  
 110.00 8 8 5 1164.30 -3.27 331.91 226.22 124.05 8 27 30 564.3 1.22 325.71  
 110.00 16 49 35 4660.32 30.28 191.77 231.41 73.32 18 7 15 4060.3 27.70 183.53

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.0754 TRA -.2939 TC3 .4492 BAU .4398 SGT 632.9 SGR 2162.4 SG3 486.1 ST 213.0 SR 663.2 SS 909.2  
 RDE .3648 RRA -.1650 RC3 3.1882 FAU .09255 RRT .4859 RRF -.9915 RTF -.4821 CRT -.5152 CRS .9996 CST -.5186  
 FDE -1.2917 FRA .5787 FC3 -7.8420 BSP 6994 SGB 2253.2 R23 -.0374 R13 -.9908 LSA 1130.8 MSA 181.3 SSA 14.9  
 BDE .3725 BRA .3370 BC3 3.2197 FSP -1529 SG1 2185.7 SG2 547.3 THA 81.36 EL1 672.9 EL2 179.9 ALF 100.12

LAUNCH DATE JAN 28 1969 FLIGHT TIME 122.00 ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC DISTANCE 338.269  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.697 GAL -2.53 AZL 93.01 HCA 152.57 SMA 128.29 ECC .15469 INC 3.0128 V1 30.240  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.472 GAP -1.78 AZP 87.33 TAL 194.04 TAP 346.61 RCA 108.45 APO 148.14 V2 34.816  
 RC 82.981 GL -26.04 GP 53.72 ZAL 115.69 ZAP 74.01 ETS 341.32 ZAE 125.88 ETE 76.83 ZAC 101.09 ETC 140.66 CLP -62.26

PLANETOCENTRIC CONIC  
 C3 10.976 VHL 3.313 OLA -20.27 RAL 18.94 RAD 6567.4 VEL 11.505 PTH 2.00 VHP 4.674 OPA 59.30 RAP 1.65 ECC 1.1806  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 1 30 1391.71 5.24 353.84 232.40 117.87 7 24 42 791.7 8.93 347.11  
 90.00 13 14 21 5414.01 28.07 248.59 237.42 86.10 14 44 35 4814.0 27.23 240.02  
 100.00 8 9 43 1171.59 4.09 337.03 231.77 119.64 8 29 14 571.6 8.00 330.43  
 100.00 14 48 49 5109.37 29.38 226.05 237.30 84.22 16 13 59 4509.4 28.27 217.43  
 110.00 8 49 54 1045.65 1.27 325.72 230.01 124.16 9 7 19 445.6 5.74 319.49  
 110.00 16 25 7 4808.07 32.67 202.62 236.74 79.32 17 45 16 4208.1 30.85 193.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.1252 TRA -.2748 TC3 .1213 BAU .4752 SGT 556.8 SGR 2382.5 SG3 454.1 ST 264.5 SR 945.7 SS 1037.7  
 RDE .5398 RRA -.2469 RC3 3.2361 FAU .08489 RRT .1514 RRF -.9934 RTF -.1455 CRT -.7244 CRS .9999 CST -.7265  
 FDE -1.4687 FRA .6628 FC3 -6.6953 BSP 7589 SGB 2446.7 R23 -.0135 R13 -.9933 LSA 1417.2 MSA 180.4 SSA 11.2  
 BDE .5541 BRA .3694 BC3 3.2384 FSP -1432 SG1 2384.1 SG2 550.0 THA 87.86 EL1 965.6 EL2 178.6 ALF 101.87

LAUNCH DATE JAN 28 1969 FLIGHT TIME 124.00 ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC DISTANCE 344.612  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.709 GAL -2.51 AZL 93.79 HCA 155.71 SMA 128.38 ECC .15384 INC 3.7868 V1 30.240  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.476 GAP -1.37 AZP 86.55 TAL 194.01 TAP 349.72 RCA 108.63 APO 148.13 V2 34.810  
 RC 85.328 GL -31.53 GP 58.21 ZAL 114.08 ZAP 78.36 ETS 345.21 ZAE 121.83 ETE 82.29 ZAC 97.18 ETC 142.30 CLP -67.47

PLANETOCENTRIC CONIC  
 C3 12.223 VHL 3.496 OLA -25.15 RAL 21.69 RAD 6567.5 VEL 11.559 PTH 2.02 VHP 4.967 OPA 61.55 RAP 353.42 ECC 1.2012  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 21 36 1168.89 12.12 341.09 238.80 115.79 8 41 5 568.9 15.49 334.03  
 90.00 12 16 12 5681.69 27.76 268.12 243.49 95.84 13 50 54 5081.7 28.28 259.49  
 100.00 9 19 36 981.62 10.36 326.42 237.88 118.20 9 35 58 381.6 14.05 319.57  
 100.00 14 0 53 5344.19 29.72 243.46 243.67 93.35 15 29 57 4744.2 29.87 234.66  
 110.00 9 43 53 905.47 6.60 318.37 235.61 123.62 9 58 58 305.5 10.97 312.01  
 110.00 15 53 6 4993.11 34.11 216.84 243.72 87.61 17 16 19 4393.1 33.40 207.67

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.2118 TRA -.2394 TC3 -.1863 BAU .5119 SGT 570.3 SGR 2597.3 SG3 410.0 ST 370.7 SR 1263.5 SS 1146.3  
 RDE .7609 RRA -.3538 RC3 3.1269 FAU .07496 RRT -.2971 RRF -.9948 RTF .3041 CRT -.8715 CRS .9999 CST -.8731  
 FDE -1.6103 FRA .7350 FC3 -5.3096 BSP 8303 SGB 2659.2 R23 .0052 R13 -.9948 LSA 1736.6 MSA 178.1 SSA 8.5  
 BDE .7899 BRA .4272 BC3 3.1325 FSP -1303 SG1 2603.1 SG2 543.4 THA 93.90 EL1 1304.9 EL2 176.1 ALF 104.61

LAUNCH DATE JAN 28 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 350.928

RL 147.33 LAL -.00 LOL 127.90 VL 27.718 GAL -2.47 AZL 94.78 MCA 158.86 SMA 128.44 ECC .15317 INC 4.7751 V1 30.240  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.477 GAP -.96 AZP 85.55 TAL 193.89 TAP 352.75 RCA 108.77 APO 148.11 V2 34.804  
 RC 87.691 GL -37.58 GP 62.88 ZAL 111.91 ZAP 82.28 ETS 349.75 ZAE 117.35 ETE 87.62 ZAC 93.27 ETC 144.44 CLP -72.86

PLANETOCENTRIC CONIC

C3 14.289 VHL 3.780 DLA -30.38 RAL 25.15 RAD 6567.6 VEL 11.648 PTH 2.04 VMP 5.409 DPA 63.51 RAP 343.93 ECC 1.2352  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.51 9 0 3 1113.44 22.91 341.87 248.99 110.51 9 18 37 513.4 25.50 333.98  
 101.49 12 5 20 5804.74 22.93 275.82 248.99 110.50 13 42 5 5204.7 25.51 267.94  
 78.51 9 0 3 1113.44 22.91 341.87 248.99 110.51 9 18 37 513.4 25.50 333.98  
 101.49 12 5 20 5804.74 22.93 275.82 248.99 110.50 13 42 5 5204.7 25.51 267.94  
 110.00 11 1 19 718.37 13.49 308.27 244.13 121.71 11 13 17 118.4 17.59 301.55  
 110.00 15 3 15 5247.81 33.06 236.59 252.03 99.21 16 30 43 4647.8 33.98 227.47

DIFFERENTIAL CORRECTIONS

TDE -.3549 TRA -.1797 TC3 -.4407 BAU .5441  
 RDE 1.0322 RRA -.4999 RC3 2.8139 FAU .06288  
 FDE-1.6909 FRA .7977 FC3-3.8099 BSP 8973  
 BOE 1.0915 BRA .5312 BC3 2.8482 FSP -1128

MID-COURSE EXECUTION ACCURACY

SGT 707.2 SGR 2783.0 SG3 354.4  
 RRT -.6469 RRF -.9958 RTF .6535  
 SGB 2871.4 R23 .0197 R13 -.9956  
 SC1 2821.7 SGT 531.9 TMA 99.68

ORBIT DETERMINATION ACCURACY

ST 546.4 SR 1587.9 SS 1214.5  
 CRT -.9422 CRS 1.0000 CST -.9437  
 LSA 2064.9 MSA 176.4 SSA 6.5  
 EL1 1670.2 EL2 174.0 ALF 108.17

LAUNCH DATE JAN 28 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 357.213

RL 147.33 LAL -.00 LOL 127.90 VL 27.722 GAL -2.43 AZL 96.09 MCA 161.99 SMA 128.47 ECC .15268 INC 6.0894 V1 30.240  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.475 GAP -.57 AZP 84.21 TAL 193.68 TAP 355.67 RCA 108.86 APO 148.09 V2 34.799  
 RC 90.065 GL -44.08 GP 67.75 ZAL 109.19 ZAP 85.65 ETS 355.04 ZAE 112.45 ETE 92.99 ZAC 89.39 ETC 147.23 CLP -78.44

PLANETOCENTRIC CONIC

C3 17.838 VHL 4.223 DLA -35.83 RAL 29.46 RAD 6567.7 VEL 11.799 PTH 2.09 VMP 6.069 DPA 65.10 RAP 333.03 ECC 1.2936  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.07 8 3 22 1392.56 25.31 4.45 258.52 116.25 8 26 35 792.6 28.62 356.69  
 112.93 13 36 26 5626.36 25.32 263.27 258.53 116.24 15 10 12 5026.4 28.63 255.51  
 67.07 8 3 22 1392.56 25.31 4.45 258.52 116.25 8 26 35 792.6 28.62 356.69  
 112.93 13 36 26 5626.36 25.32 263.27 258.53 116.24 15 10 12 5026.4 28.63 255.51  
 67.07 8 3 22 1392.56 25.31 4.45 258.52 116.25 8 26 35 792.6 28.62 356.69  
 112.93 13 36 26 5626.36 25.32 263.27 258.53 116.24 15 10 12 5026.4 28.63 255.51

DIFFERENTIAL CORRECTIONS

TDE -.5797 TRA -.0760 TC3 -.5937 BAU .5691  
 RDE 1.3687 RRA -.6952 RC3 2.3113 FAU .04974  
 FDE-1.7069 FRA .8387 FC3-2.4139 BSP 9648  
 BOE 1.4864 BRA .6994 BC3 2.3864 FSP -933

MID-COURSE EXECUTION ACCURACY

SGT 941.3 SGR 2934.8 SG3 292.9  
 RRT -.8295 RRF -.9965 RTF .8353  
 SGB 3082.0 R23 .0300 R13 -.9962  
 SC1 3039.9 SGT 507.6 TMA 105.34

ORBIT DETERMINATION ACCURACY

ST 787.5 SR 1890.2 SS 1234.5  
 CRT -.9726 CRS 1.0000 CST -.9740  
 LSA 2384.9 MSA 172.0 SSA 4.9  
 EL1 2040.7 EL2 169.5 ALF 112.22

LAUNCH DATE JAN 28 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 363.462

RL 147.33 LAL -.00 LOL 127.90 VL 27.724 GAL -2.37 AZL 97.93 MCA 165.11 SMA 128.48 ECC .15234 INC 7.9340 V1 30.240  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.472 GAP -.20 AZP 82.33 TAL 193.37 TAP 358.48 RCA 108.91 APO 148.05 V2 34.795  
 RC 92.449 GL -50.82 GP 72.95 ZAL 106.01 ZAP 88.34 ETS 1.40 ZAE 107.07 ETE 98.79 ZAC 85.51 ETC 151.03 CLP -84.34

PLANETOCENTRIC CONIC

C3 24.333 VHL 4.933 DLA -41.21 RAL 34.78 RAD 6568.0 VEL 12.071 PTH 2.16 VMP 7.069 DPA 66.19 RAP 320.49 ECC 1.4005  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.72 7 43 33 1585.44 26.07 20.88 270.79 123.11 8 9 58 985.4 30.24 13.54  
 121.28 14 38 42 5582.23 26.09 260.11 270.80 123.10 16 11 45 4982.2 30.25 252.77  
 58.72 7 43 33 1585.44 26.07 20.88 270.79 123.11 8 9 58 985.4 30.24 13.54  
 121.28 14 38 42 5582.23 26.09 260.11 270.80 123.10 16 11 45 4982.2 30.25 252.77  
 58.72 7 43 33 1585.44 26.07 20.88 270.79 123.11 8 9 58 985.4 30.24 13.54  
 121.28 14 38 42 5582.23 26.09 260.11 270.80 123.10 16 11 45 4982.2 30.25 252.77

DIFFERENTIAL CORRECTIONS

TDE -.9347 TRA -1.104 TC3 -.6177 BAU .5800  
 RDE 1.7826 RRA -.9610 RC3 1.6725 FAU .03650  
 FDE-1.6543 FRA .8578 FC3-1.2986 BSP 10332  
 BOE 2.0128 BRA .9674 BC3 1.7829 FSP -736

MID-COURSE EXECUTION ACCURACY

SGT 1256.6 SGR 3035.0 SG3 230.0  
 RRT -.9194 RRF -.9972 RTF .9244  
 SGB 3284.9 R23 .0357 R13 -.9968  
 SC1 3252.3 SGT 461.3 TMA 111.29

ORBIT DETERMINATION ACCURACY

ST 1087.0 SR 2118.5 SS 1198.7  
 CRT -.9865 CRS 1.0000 CST -.9877  
 LSA 2660.9 MSA 161.4 SSA 3.7  
 EL1 2375.7 EL2 159.0 ALF 116.98

LAUNCH DATE JAN 28 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 369.655

RL 147.33 LAL -.00 LOL 127.90 VL 27.721 GAL -2.29 AZL 100.72 MCA 168.21 SMA 128.46 ECC .15213 INC 10.7250 V1 30.240  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.467 GAP .15 AZP 79.50 TAL 192.96 TAP 1.17 RCA 108.92 APO 148.01 V2 34.791  
 RC 94.840 GL -57.37 GP 78.68 ZAL 102.49 ZAP 80.27 ETS 10.04 ZAE 101.07 ETE 106.34 ZAC 81.55 ETC 157.15 CLP -91.37

PLANETOCENTRIC CONIC

C3 37.466 VHL 6.121 DLA -46.04 RAL 41.15 RAD 6568.5 VEL 12.603 PTH 2.29 VMP 8.665 DPA 66.53 RAP 305.99 ECC 1.6166  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.05 7 42 22 1764.45 24.06 35.27 285.63 130.51 8 11 47 1164.4 29.10 28.73  
 127.95 15 30 44 5619.25 24.07 261.76 285.64 130.51 17 4 23 5019.3 29.11 255.23  
 52.05 7 42 22 1764.45 24.06 35.27 285.63 130.51 8 11 47 1164.4 29.10 28.73  
 127.95 15 30 44 5619.25 24.07 261.76 285.64 130.51 17 4 23 5019.3 29.11 255.23  
 52.05 7 42 22 1764.45 24.06 35.27 285.63 130.51 8 11 47 1164.4 29.10 28.73  
 127.95 15 30 44 5619.25 24.07 261.76 285.64 130.51 17 4 23 5019.3 29.11 255.23

DIFFERENTIAL CORRECTIONS

TDE -1.5335 TRA -.4840 TC3 -.5201 BAU .5585  
 RDE 2.2670 RRA -1.3243 RC3 .9863 FAU .02386  
 FDE-1.5414 FRA .8648 FC3 -.5514 BSP 10924  
 BOE 2.7370 BRA 1.4100 BC3 1.1150 FSP -545

MID-COURSE EXECUTION ACCURACY

SGT 1700.5 SGR 3024.9 SG3 170.6  
 RRT -.9682 RRF -.9979 RTF .9717  
 SGB 3470.1 R23 .0377 R13 -.9975  
 SC1 3450.0 SGT 373.1 TMA 118.93

ORBIT DETERMINATION ACCURACY

ST 1448.9 SR 2188.9 SS 1111.6  
 CRT -.9938 CRS 1.0000 CST -.9948  
 LSA 2847.4 MSA 137.2 SSA 2.7  
 EL1 2621.5 EL2 134.9 ALF 123.44



LAUNCH DATE JAN 28 1969 FLIGHT TIME 134.00 ARRIVAL DATE JUN 11 1969

MELIOCENTRIC CONIC DISTANCE 375.798  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.716 GAL -2.20 AZL 105.45 MCA 171.26 SMA 128.43 ECC .15203 INC15.4464 V1 30.240  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.460 GAP .49 AZP 74.72 TAL 192.43 TAP 3.69 RCA 108.90 APO 147.95 V2 34.788  
 RC 97.236 GL -62.95 GP 85.36 ZAL 98.88 ZAP 91.35 ETS 27.94 ZAE 93.99 ETE 122.80 ZAC 77.19 ETC 172.80 CLP-106.94

PLANETOCENTRIC CONIC  
 C3 68.602 VML 8.283 OLA -49.55 RAL 48.20 RAD 6569.3 VEL 13.782 PTH 2.52 VHP 11.460 DPA 65.56 RAP 289.22 ECC 2.1290  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.48 7 54 41 1953.36 18.25 47.62 301.86 136.91 8 27 15 1353.4 24.00 42.06  
 132.52 16 14 40 5729.92 18.27 266.52 301.88 136.90 17 50 10 5129.9 24.01 260.96  
 47.48 7 54 41 1953.36 18.25 47.62 301.86 136.91 8 27 15 1353.4 24.00 42.06  
 132.52 16 14 40 5729.92 18.27 266.52 301.88 136.90 17 50 10 5129.9 24.01 260.96  
 47.48 7 54 41 1953.36 18.25 47.62 301.86 136.91 8 27 15 1353.4 24.00 42.06  
 132.52 16 14 40 5729.92 18.27 266.52 301.88 136.90 17 50 10 5129.9 24.01 260.96

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE-2.8051 TRA 1.4879 TC3 -.3427 BAU .4571 SGT 2569.8 SGR 2560.6 SG3 119.6 ST 1998.0 SR 1865.8 SS 1008.5  
 RDE 2.5909 RRA-1.6204 RC3 .3619 FAU .01230 RRT -.9967 RRF -.9980 RTF .9961 CRT -.9992 CRS 1.0000 CST -.9991  
 FDE-1.4141 FRA .8861 FC3 -.1552 BSP 11502 SGB 3627.7 R23 .0335 R13 -.9982 LSA 2913.2 MSA 59.8 SSA 1.9  
 BOE 3.8185 BRA 2.1999 BC3 .4984 FSP -386 SG1 3624.8 SG2 146.4 THA 135.10 EL1 2733.1 EL2 55.9 ALF 136.96

LAUNCH DATE JAN 28 1969 FLIGHT TIME 136.00 ARRIVAL DATE JUN 13 1969

MELIOCENTRIC CONIC DISTANCE 381.782  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.708 GAL -2.07 AZL 115.01 MCA 174.19 SMA 128.37 ECC .15196 INC25.0097 V1 30.240  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.452 GAP .77 AZP 65.10 TAL 191.68 TAP 5.87 RCA 108.86 APO 147.88 V2 34.786  
 RC 99.636 GL -65.70 GP 84.79 ZAL 95.43 ZAP 91.57 ETS 123.14 ZAE 84.46 ETE 216.41 ZAC 71.54 ETC 266.67 CLP 107.52

PLANETOCENTRIC CONIC  
 C3 164.995 VML 12.845 OLA -50.17 RAL 54.25 RAD 6570.8 VEL 16.921 PTH 2.92 VHP 17.215 DPA 61.76 RAP 269.91 ECC 3.7154  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.68 8 16 16 2141.56 9.12 56.11 316.55 139.56 8 51 58 1541.6 15.16 51.16  
 133.32 16 41 20 618.01 9.13 295.88 316.56 139.55 16 51 38 18.0 15.17 290.93  
 46.68 8 16 16 2141.56 9.12 56.11 316.55 139.56 8 51 58 1541.6 15.16 51.16  
 133.32 16 41 20 618.01 9.13 295.88 316.56 139.55 16 51 38 18.0 15.17 290.93  
 46.68 8 16 16 2141.56 9.12 56.11 316.55 139.56 8 51 58 1541.6 15.16 51.16  
 133.32 16 41 20 618.01 9.13 295.88 316.56 139.55 16 51 38 18.0 15.17 290.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE-2.2784 TRA 2.8997 TC3 -.0371 BAU .0852 SGT 2262.7 SGR 2961.8 SG3 81.8 ST 1183.2 SR 2415.1 SS 979.8  
 RDE-5.2778 RRA 2.5805 RC3 -.0108 FAU-.00016 RRT .8989 RRF .9799 RTF .9675 CRT .9516 CRS -.9944 CST -.9787  
 FDE-1.3968 FRA 1.0239 FC3 .0009 BSP 11726 SGB 3727.2 R23 -.0362 R13 .9990 LSA 2843.0 MSA 331.9 SSA 1.1  
 BOE 5.7486 BRA 3.8816 BC3 .0386 FSP -263 SG1 3638.8 SG2 807.0 THA 53.43 EL1 2669.2 EL2 329.0 ALF 64.59

LAUNCH DATE JAN 28 1969 FLIGHT TIME 138.00 ARRIVAL DATE JUN 15 1969

MELIOCENTRIC CONIC DISTANCE 387.258  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.697 GAL -1.83 AZL 140.78 MCA 176.67 SMA 128.30 ECC .15170 INC50.7781 V1 30.240  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.443 GAP .92 AZP 39.27 TAL 190.35 TAP 7.02 RCA 108.84 APO 147.76 V2 34.784  
 RC 102.038 GL -59.21 GP 67.73 ZAL 92.53 ZAP 91.03 ETS 169.75 ZAE 67.09 ETE 261.60 ZAC 61.40 ETC 315.91 CLP 92.72

PLANETOCENTRIC CONIC  
 C3 623.312 VML 24.966 OLA -42.63 RAL 54.28 RAD 6572.6 VEL 27.287 PTH 3.40 VHP 32.284 CPA 49.55 RAP 248.03 ECC11.2581  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.69 8 52 44 2203.46 .94 53.41 323.24 132.62 9 29 27 1603.5 6.34 47.91  
 123.31 16 5 5 865.10 .95 310.63 323.26 132.62 16 19 30 265.1 6.36 305.13  
 56.69 8 52 44 2203.46 .94 53.41 323.24 132.62 9 29 27 1603.5 6.34 47.91  
 123.31 16 5 5 865.10 .95 310.63 323.26 132.62 16 19 30 265.1 6.36 305.13  
 56.69 8 52 44 2203.46 .94 53.41 323.24 132.62 9 29 27 1603.5 6.34 47.91  
 123.31 16 5 5 865.10 .95 310.63 323.26 132.62 16 19 30 265.1 6.36 305.13

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 3.8616 TRA .1199 TC3 -.0545 BAU 1.7563 SGT 927.8 SGR 3464.2 SG3 60.8 ST 886.3 SR 2240.1 SS 1257.8  
 RDE-9.1700 RRA 8.1974 RC3 .2036 FAU-.02960 RRT -.6366 RRF 1.0000 RTF -.6293 CRT -.9351 CRS-1.0000 CST .9328  
 FDE-1.8415 FRA 1.6791 FC3 .0411 BSP 11326 SGB 3586.3 R23 -.0450 R13 .9990 LSA 2701.1 MSA 300.0 SSA .3  
 BOE 9.9499 BRA 8.1983 BC3 .2108 FSP -197 SG1 3516.3 SG2 704.9 THA 100.08 EL1 2391.0 EL2 294.2 ALF 110.63

LAUNCH DATE JAN 28 1969 FLIGHT TIME 140.00 ARRIVAL DATE JUN 17 1969

MELIOCENTRIC CONIC DISTANCE 396.759  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.685 GAL -2.58 AZL 21.37 MCA 182.90 SMA 128.21 ECC .15472 INC68.6324 V1 30.240  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.433 GAP 2.14 AZP 158.61 TAL 193.21 TAP 16.11 RCA 108.37 APO 148.05 V2 34.783  
 RC 104.441 GL 51.89 GP -59.84 ZAL 92.39 ZAP 92.01 ETS 178.12 ZAE 60.68 ETE 88.31 ZAC 81.53 ETC 43.31 CLP 93.99

PLANETOCENTRIC CONIC  
 C31071.860 VML 32.739 OLA 59.23 RAL .43 RAD 6573.0 VEL 34.542 PTH 3.51 VHP 39.689 DPA -65.29 RAP 175.42 ECC18.6401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.53 16 7 49 5037.70 .53 240.02 270.76 30.77 17 31 46 4437.7 -6.34 236.33  
 144.47 1 40 24 3378.27 .54 104.38 270.74 30.77 2 36 42 2778.3 -6.33 100.69  
 35.53 16 7 49 5037.70 .53 240.02 270.76 30.77 17 31 46 4437.7 -6.34 236.33  
 144.47 1 40 24 3378.27 .54 104.38 270.74 30.77 2 36 42 2778.3 -6.33 100.69  
 35.53 16 7 49 5037.70 .53 240.02 270.76 30.77 17 31 46 4437.7 -6.34 236.33  
 144.47 1 40 24 3378.27 .54 104.38 270.74 30.77 2 36 42 2778.3 -6.33 100.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE-4.5232 TRA 2.3603 TC3 -.1058 BAU 3.4921 SGT 1326.2 SGR 3247.6 SG3 58.5 ST 828.1 SR 2846.5 SS 2037.4  
 RD-16.2253 RRA 1.8895 RC3 -.2195 FAU-.05591 RRT .8743 RRF -.9999 RTF -.8783 CRT .9739 CRS 1.0000 CST .9748  
 FDE 3.3858 FRA -.4166 FC3 .0452 BSP 10994 SGB 3507.9 R23 -.0563 R13 -.9984 LSA 3592.5 MSA 182.2 SSA .8  
 BOE16.8440 BRA 3.0234 BC3 .2437 FSP -193 SG1 3455.4 SG2 604.9 THA 69.70 EL1 2959.0 EL2 180.8 ALF 74.12

LAUNCH DATE JAN 28 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 19 1969

Heliocentric Conic

DISTANCE 401.866

RL 147.33 LAL -.00 LOL 127.90 VL 27.669 GAL -2.06 AZL 56.33 MCA 185.07 SMA 128.11 ECC .15423 INC33.6747 V1 30.240  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.421 GAP 2.18 AZP 123.57 TAL 191.42 TAP 16.49 RCA 108.35 APO 147.86 V2 34.783  
 RC 106.844 GL 64.46 GP -80.51 ZAL 94.08 ZAP 94.12 ETS 186.84 ZAE 82.42 ETE 97.82 ZAC 95.15 ETC 54.40 CLP 115.83

Planetocentric Conic

C3 288.772 VHL 16.993 DLA 65.42 RAL 335.76 RAD 6571.7 VEL 20.250 PTH 3.15 VHP 19.900 DPA -73.21 RAP 114.22 ECC 5.7524  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.20 14 11 40 4966.22 -5.74 241.80 243.14 24.71 15 34 27 4366.2 -12.99 238.80  
 151.80 0 19 43 3245.99 -5.73 97.53 243.12 24.71 1 13 49 2646.0 -12.99 94.53  
 28.20 14 11 40 4966.22 -5.74 241.80 243.14 24.71 15 34 27 4366.2 -12.99 238.80  
 151.80 0 19 43 3245.99 -5.73 97.53 243.12 24.71 1 13 49 2646.0 -12.99 94.53  
 28.20 14 11 40 4966.22 -5.74 241.80 243.14 24.71 15 34 27 4366.2 -12.99 238.80  
 151.80 0 19 43 3245.99 -5.73 97.53 243.12 24.71 1 13 49 2646.0 -12.99 94.53

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE .5535 TRA 1.2889 TC3 -.0416 BAU .5136  
 RDE -8.6445 RRA 3.1206 RC3 -.1264 FAU -.00693  
 FDE 2.0131 FRA -.7107 FC3 .0208 BSP 12817  
 BDE 8.6622 BRA 3.3763 BC3 .1330 FSP -255

SGT 1070.6 SGR 3883.0 SG3 77.2  
 RRT .5194 RRF -.8994 RTF -.5074  
 SGB 4027.9 R23 -.0486 R13 -.9984  
 SG1 3924.8 SG2 905.1 THA 81.39

ST 364.8 SR 3011.8 SS 1204.3  
 CRT -.2786 CRS 1.0000 CST -.2838  
 LSA 3245.3 MSA 350.1 SSA 1.4  
 EL1 3013.6 EL2 350.1 ALF 91.96

LAUNCH DATE JAN 28 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 21 1969

Heliocentric Conic

DISTANCE 407.701

RL 147.33 LAL -.00 LOL 127.90 VL 27.652 GAL -1.88 AZL 68.43 MCA 187.93 SMA 127.99 ECC .15456 INC21.5655 V1 30.240  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.409 GAP 2.42 AZP 111.38 TAL 190.36 TAP 18.29 RCA 108.21 APO 147.77 V2 34.784  
 RC 109.246 GL 65.30 GP -82.50 ZAL 95.75 ZAP 97.25 ETS 272.21 ZAE 93.17 ETE 183.48 ZAC 100.93 ETC 140.52 CLP-165.23

Planetocentric Conic

C3 125.028 VHL 11.182 DLA 64.32 RAL 331.72 RAD 6570.3 VEL 15.696 PTH 2.79 VHP 12.661 DPA -69.26 RAP 80.92 ECC 3.0576  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.49 13 58 32 4828.18 -13.84 237.46 234.93 26.51 15 19 0 4228.2 -20.97 234.07  
 150.51 0 0 36 3117.31 -13.83 94.65 234.91 26.51 0 52 34 2517.3 -20.96 91.25  
 29.49 13 58 32 4828.18 -13.84 237.46 234.93 26.51 15 19 0 4228.2 -20.97 234.07  
 150.51 0 0 36 3117.31 -13.83 94.65 234.91 26.51 0 52 34 2517.3 -20.96 91.25  
 29.49 13 58 32 4828.18 -13.84 237.46 234.93 26.51 15 19 0 4228.2 -20.97 234.07  
 150.51 0 0 36 3117.31 -13.83 94.65 234.91 26.51 0 52 34 2517.3 -20.96 91.25

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 5.2990 TRA -2.5370 TC3 -.1473 BAU .2491  
 RDE -.9039 RRA .8238 RC3 .0231 FAU .01068  
 FDE 1.7794 FRA -.7795 FC3 -.0740 BSP 14300  
 BDE 5.3756 BRA 2.6674 BC3 .1491 FSP -404

SGT 4059.5 SGR 1079.9 SG3 112.9  
 RRT -.9574 RRF -.9414 RTF .9980  
 SGB 4200.7 R23 -.0669 R13 -.9969  
 SG1 4189.8 SG2 302.3 THA 165.64

ST 2860.5 SR 547.7 SS 1042.3  
 CRT -.9707 CRS .9642 CST -.9997  
 LSA 3090.5 MSA 133.7 SSA 1.7  
 EL1 2909.6 EL2 129.5 ALF 169.45

LAUNCH DATE JAN 28 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 23 1969

Heliocentric Conic

DISTANCE 413.703

RL 147.33 LAL -.00 LOL 127.90 VL 27.634 GAL -1.71 AZL 74.03 MCA 190.96 SMA 127.86 ECC .15513 INC15.9749 V1 30.240  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.397 GAP 2.70 AZP 105.70 TAL 189.40 TAP 20.36 RCA 108.03 APO 147.70 V2 34.785  
 RC 111.645 GL 63.27 GP -75.82 ZAL 97.03 ZAP 100.99 ETS 313.16 ZAE 100.55 ETE 224.04 ZAC 104.26 ETC 181.76 CLP-141.13

Planetocentric Conic

C3 72.446 VHL 8.512 DLA 62.47 RAL 334.37 RAD 6569.4 VEL 13.921 PTH 2.54 VHP 9.391 DPA -64.17 RAP 64.37 ECC 2.1923  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.67 14 14 17 4701.43 -20.66 232.17 233.05 29.60 15 32 38 4101.4 -27.56 228.14  
 148.33 0 6 1 3007.60 -20.65 91.87 233.03 29.60 0 56 9 2407.6 -27.55 87.84  
 31.67 14 14 17 4701.43 -20.66 232.17 233.05 29.60 15 32 38 4101.4 -27.56 228.14  
 148.33 0 6 1 3007.60 -20.65 91.87 233.03 29.60 0 56 9 2407.6 -27.55 87.84  
 31.67 14 14 17 4701.43 -20.66 232.17 233.05 29.60 15 32 38 4101.4 -27.56 228.14  
 148.33 0 6 1 3007.60 -20.65 91.87 233.03 29.60 0 56 9 2407.6 -27.55 87.84

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 3.7972 TRA -1.9411 TC3 -.4293 BAU .4624  
 RDE 1.9225 RRA -.7459 RC3 -.2089 FAU .02227  
 FDE 1.9768 FRA -.8024 FC3 -.2661 BSP 13050  
 BDE 4.2561 BRA 2.0795 BC3 .4775 FSP -505

SGT 3880.9 SGR 1726.7 SG3 157.9  
 RRT .9908 RRF .9988 RTF .9919  
 SGB 4247.7 R23 .0969 R13 .9943  
 SG1 4242.3 SG2 214.0 THA 23.85

ST 2693.2 SR 1334.6 SS 1116.6  
 CRT .9973 CRS -.9999 CST -.9980  
 LSA 3204.9 MSA 101.5 SSA 1.7  
 EL1 3004.5 EL2 88.1 ALF 26.32

LAUNCH DATE JAN 28 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 25 1969

Heliocentric Conic

DISTANCE 419.743

RL 147.33 LAL -.00 LOL 127.90 VL 27.613 GAL -1.56 AZL 77.20 MCA 194.05 SMA 127.72 ECC .15587 INC12.7998 V1 30.240  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.383 GAP 2.99 AZP 102.43 TAL 188.48 TAP 22.52 RCA 107.81 APO 147.63 V2 34.787  
 RC 114.042 GL 60.51 GP -69.08 ZAL 97.89 ZAP 105.13 ETS 318.47 ZAE 106.42 ETE 228.26 ZAC 106.58 ETC 186.98 CLP-136.98

Planetocentric Conic

C3 49.362 VHL 7.026 DLA 60.58 RAL 338.61 RAD 6568.8 VEL 13.066 PTH 2.38 VHP 7.630 DPA -58.99 RAP 54.18 ECC 1.8124  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.92 14 36 42 4598.48 -25.65 226.85 232.92 33.02 15 53 21 3998.5 -32.26 222.12  
 146.08 0 17 26 2924.02 -25.63 89.23 232.90 33.01 1 6 10 2324.0 -32.25 84.50  
 33.92 14 36 42 4598.48 -25.65 226.85 232.92 33.02 15 53 21 3998.5 -32.26 222.12  
 146.08 0 17 26 2924.02 -25.63 89.23 232.90 33.01 1 6 10 2324.0 -32.25 84.50  
 33.92 14 36 42 4598.48 -25.65 226.85 232.92 33.02 15 53 21 3998.5 -32.26 222.12  
 146.08 0 17 26 2924.02 -25.63 89.23 232.90 33.01 1 6 10 2324.0 -32.25 84.50

Differential Corrections

Mid-Course Execution Accuracy

Orbit Determination Accuracy

TDE 3.1183 TRA -1.5923 TC3 -.7725 BAU .5822  
 RDE 1.8954 RRA -.6771 RC3 -.4262 FAU .03474  
 FDE 2.2246 FRA -.8314 FC3 -.6093 BSP 13486  
 BDE 3.6492 BRA 1.7303 BC3 .8823 FSP -693

SGT 3825.4 SGR 2002.9 SG3 210.4  
 RRT .9857 RRF .9982 RTF .9868  
 SGB 4318.0 R23 .1162 R13 .9916  
 SG1 4307.6 SG2 299.3 THA 27.44

ST 2664.0 SR 1582.1 SS 1226.9  
 CRT .9962 CRS -1.0000 CST -.9970  
 LSA 3329.8 MSA 134.5 SSA 2.4  
 EL1 3096.1 EL2 118.9 ALF 30.66

LAUNCH DATE JAN 28 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 27 1969

MELIOCENTRIC CONIC

DISTANCE 425.796

RL 147.33 LAL -.00 LOL 127.90 VL 27.591 GAL -1.39 AZL 79.25 MCA 197.16 SMA 127.57 ECC .15674 INC10.7543 V1 30.240  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.370 GAP 3.28 AZP 100.29 TAL 187.52 TAP 24.68 RCA 107.58 APO 147.57 V2 34.790  
 RC 116.435 GL 57.63 GP -62.84 ZAL 98.35 ZAP 109.46 ETS 319.54 ZAE 111.29 ETE 227.55 ZAC 108.35 ETC 187.61 CLP-136.86

PLANETOCENTRIC CONIC

C3 37.136 VHL 6.094 DLA 58.79 RAL 343.10 RAD 6568.4 VEL 12.590 PTH 2.28 VHP 6.585 DPA -53.88 RAP 47.24 ECC 1.6112  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.06 15 0 4 4516.69 -29.11 221.81 233.39 36.38 16 15 21 3916.7 -35.43 216.41  
 143.94 0 29 52 2862.54 -29.10 86.84 233.37 36.37 1 17 34 2262.5 -35.42 81.45  
 36.06 15 0 4 4516.69 -29.11 221.81 233.39 36.38 16 15 21 3916.7 -35.43 216.41  
 143.94 0 29 52 2862.54 -29.10 86.84 233.37 36.37 1 17 34 2262.5 -35.42 81.45  
 36.06 15 0 4 4516.69 -29.11 221.81 233.39 36.38 16 15 21 3916.7 -35.43 216.41  
 143.94 0 29 52 2862.54 -29.10 86.84 233.37 36.37 1 17 34 2262.5 -35.42 81.45

DIFFERENTIAL CORRECTIONS

TDE 2.8272 TRA-1.3765 TC3-1.1616 BAU .6488  
 RDE 1.6595 RRA -.5252 RC3 -.5986 FAU .04634  
 FDE 2.4520 FRA -.8142 FC3-1.0802 B9P 13734  
 BOE 3.2783 BRA 1.4733 BC3 1.3068 F9P -878

MID-COURSE EXECUTION ACCURACY

SGT 3912.5 SGR 1968.5 SG3 262.5  
 RRT .9817 RRF .9975 RTF .9827  
 SGB 4379.7 R23 .1341 R13 .9886  
 SG1 4366.8 SG2 336.3 THA -26.45

ORBIT DETERMINATION ACCURACY

ST 2762.0 SR 1586.4 SS 1335.9  
 CRT .9956 CRS-1.0000 CST -.9964  
 LSA 3450.8 MSA 149.3 SSA 3.1  
 EL1 3182.6 EL2 128.6 ALF 29.82

LAUNCH DATE JAN 28 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 29 1969

MELIOCENTRIC CONIC

DISTANCE 431.848

RL 147.33 LAL -.00 LOL 127.90 VL 27.568 GAL -1.22 AZL 80.68 MCA 200.29 SMA 127.41 ECC .15774 INC 9.3225 V1 30.240  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.356 GAP 3.57 AZP 98.75 TAL 186.54 TAP 26.83 RCA 107.32 APO 147.51 V2 34.794  
 RC 118.823 GL 54.83 GP -57.10 ZAL 98.44 ZAP 115.82 ETS 319.70 ZAE 115.33 ETE 225.36 ZAC 109.79 ETC 187.06 CLP-138.02

PLANETOCENTRIC CONIC

C3 29.828 VHL 5.461 DLA 57.14 RAL 347.48 RAD 6568.2 VEL 12.296 PTH 2.21 VHP 5.933 DPA -48.93 RAP 42.31 ECC 1.4909  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.04 15 22 44 4451.29 -31.48 217.20 234.20 39.50 16 36 56 3851.3 -37.49 211.22  
 141.96 0 42 8 2817.49 -31.47 84.77 234.19 39.50 1 29 5 2217.5 -37.48 78.78  
 36.04 15 22 44 4451.29 -31.48 217.20 234.20 39.50 16 36 56 3851.3 -37.49 211.22  
 141.96 0 42 8 2817.49 -31.47 84.77 234.19 39.50 1 29 5 2217.5 -37.48 78.78  
 36.04 15 22 44 4451.29 -31.48 217.20 234.20 39.50 16 36 56 3851.3 -37.49 211.22  
 141.96 0 42 8 2817.49 -31.47 84.77 234.19 39.50 1 29 5 2217.5 -37.48 78.78

DIFFERENTIAL CORRECTIONS

TDE 2.6689 TRA-1.2113 TC3-1.5805 BAU .6926  
 RDE 1.4267 RRA -.3889 RC3 -.7204 FAU .05642  
 FDE 2.8155 FRA -.7495 FC3-1.6375 B9P 13934  
 BOE 3.0263 BRA 1.2722 BC3 1.7369 F9P -1044

MID-COURSE EXECUTION ACCURACY

SGT 4038.1 SGR 1850.7 SG3 309.5  
 RRT .9783 RRF .9963 RTF .9794  
 SGB 4442.0 R23 .1493 R13 .9853  
 SG1 4428.2 SG2 350.0 THA 24.31

ORBIT DETERMINATION ACCURACY

ST 2887.3 SR 1513.8 SS 1424.4  
 CRT .9954 CRS-1.0000 CST -.9961  
 LSA 3554.2 MSA 156.5 SSA 3.8  
 EL1 3257.5 EL2 129.0 ALF 27.61

LAUNCH DATE JAN 28 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 1 1969

MELIOCENTRIC CONIC

DISTANCE 437.893

RL 147.33 LAL -.00 LOL 127.90 VL 27.543 GAL -1.04 AZL 81.74 MCA 203.43 SMA 127.25 ECC .15885 INC 8.2599 V1 30.240  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.342 GAP 3.86 AZP 97.59 TAL 185.52 TAP 28.95 RCA 107.04 APO 147.46 V2 34.798  
 RC 121.206 GL 52.19 GP -51.88 ZAL 98.20 ZAP 118.07 ETS 319.69 ZAE 118.65 ETE 222.56 ZAC 111.04 ETC 186.16 CLP-139.66

PLANETOCENTRIC CONIC

C3 25.080 VHL 5.008 DLA 55.66 RAL 351.69 RAD 6568.0 VEL 12.102 PTH 2.17 VHP 5.519 DPA -44.23 RAP 38.76 ECC 1.4127  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.85 15 44 28 4398.15 -33.07 213.07 235.29 42.31 16 57 46 3798.1 -38.80 206.58  
 140.15 0 54 1 2784.40 -33.06 83.02 235.27 42.30 1 40 25 2184.4 -38.79 76.53  
 39.85 15 44 28 4398.15 -33.07 213.07 235.29 42.31 16 57 46 3798.1 -38.80 206.58  
 140.15 0 54 1 2784.40 -33.06 83.02 235.27 42.30 1 40 25 2184.4 -38.79 76.53  
 39.85 15 44 28 4398.15 -33.07 213.07 235.29 42.31 16 57 46 3798.1 -38.80 206.58  
 140.15 0 54 1 2784.40 -33.06 83.02 235.27 42.30 1 40 25 2184.4 -38.79 76.53

DIFFERENTIAL CORRECTIONS

TDE 2.5697 TRA-1.0698 TC3-2.0168 BAU .7267  
 RDE 1.2254 RRA -.2781 RC3 -.7938 FAU .06453  
 FDE 2.7047 FRA -.6437 FC3-2.2277 B9P 14147  
 BOE 2.8469 BRA 1.1053 BC3 2.1674 F9P -1182

MID-COURSE EXECUTION ACCURACY

SGT 4175.1 SGR 1707.6 SG3 348.4  
 RRT .9751 RRF .9947 RTF .9764  
 SGB 4510.8 R23 .1614 R13 .9819  
 SG1 4497.1 SG2 351.7 THA 21.88

ORBIT DETERMINATION ACCURACY

ST 3011.8 SR 1412.4 SS 1487.6  
 CRT .9952 CRS-1.0000 CST -.9958  
 LSA 3640.4 MSA 160.6 SSA 4.6  
 EL1 3324.2 EL2 125.0 ALF 25.06

LAUNCH DATE JAN 28 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 3 1969

MELIOCENTRIC CONIC

DISTANCE 443.928

RL 147.33 LAL -.00 LOL 127.90 VL 27.517 GAL -.85 AZL 82.56 MCA 206.57 SMA 127.08 ECC .16008 INC 7.4359 V1 30.240  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.327 GAP 4.15 AZP 96.66 TAL 184.47 TAP 31.04 RCA 106.73 APO 147.42 V2 34.803  
 RC 123.581 GL 49.69 GP -47.17 ZAL 97.67 ZAP 122.13 ETS 319.71 ZAE 121.31 ETE 219.53 ZAC 112.19 ETC 185.20 CLP-141.47

PLANETOCENTRIC CONIC

C3 21.806 VHL 4.670 DLA 54.33 RAL 355.75 RAD 6567.9 VEL 11.966 PTH 2.13 VHP 5.258 DPA -39.83 RAP 36.21 ECC 1.3589  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.48 16 5 16 4354.30 -34.14 209.40 236.65 44.79 17 17 50 3754.3 -39.61 202.50  
 138.52 1 5 38 2759.96 -34.13 81.57 236.64 44.78 1 51 38 2160.0 -39.60 74.68  
 41.48 16 5 16 4354.30 -34.14 209.40 236.65 44.79 17 17 50 3754.3 -39.61 202.50  
 138.52 1 5 38 2759.96 -34.13 81.57 236.64 44.78 1 51 38 2160.0 -39.60 74.68  
 41.48 16 5 16 4354.30 -34.14 209.40 236.65 44.79 17 17 50 3754.3 -39.61 202.50  
 138.52 1 5 38 2759.96 -34.13 81.57 236.64 44.78 1 51 38 2160.0 -39.60 74.68

DIFFERENTIAL CORRECTIONS

TDE 2.5022 TRA -.9387 TC3-2.4570 BAU .7555  
 RDE 1.0571 RRA -.1905 RC3 -.8243 FAU .07041  
 FDE 2.7245 FRA -.5076 FC3-2.7954 B9P 14371  
 BOE 2.7163 BRA .9578 BC3 2.5916 F9P -1286

MID-COURSE EXECUTION ACCURACY

SGT 4312.0 SGR 1560.7 SG3 377.9  
 RRT .9719 RRF .9923 RTF .9737  
 SGB 4585.7 R23 .1693 R13 .9786  
 SG1 4572.6 SG2 346.3 THA 19.50

ORBIT DETERMINATION ACCURACY

ST 3127.5 SR 1302.8 SS 1525.9  
 CRT .9952 CRS-1.0000 CST -.9955  
 LSA 3712.2 MSA 162.7 SSA 5.5  
 EL1 3386.0 EL2 118.1 ALF 22.55

LAUNCH DATE JAN 28 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 449.951

RL 147.33 LAL -.00 LOL 127.90 VL 27.490 GAL -.65 AZL 83.23 HCA 209.72 SMA 126.90 ECC .16143 INC 6.7750 V1 30.240  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.313 GAP 4.44 AZP 95.89 TAL 183.38 TAP 33.11 RCA 106.41 APO 147.38 V2 34.808  
 RC 125.948 GL 47.33 GP -42.96 ZAL 96.86 ZAP 125.95 ETS 319.80 ZAE 123.40 ETE 216.45 ZAC 113.29 ETC 184.29 CLP-143.33

PLANETOCENTRIC CONIC

C3 19.450 VHL 4.410 DLA 53.15 RAL 359.72 RAD 6567.8 VEL 11.867 PTH 2.11 VHP 5.101 DPA -35.75 RAP 34.43 ECC 1.3201  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.94 16 25 21 4317.62 -34.84 206.15 238.28 46.95 17 37 18 3717.6 -40.07 198.93  
 137.06 1 17 9 2741.93 -34.83 80.39 238.27 46.94 2 2 51 2141.9 -40.06 73.17  
 42.94 16 25 21 4317.62 -34.84 206.15 238.28 46.95 17 37 18 3717.6 -40.07 198.93  
 137.06 1 17 9 2741.93 -34.83 80.39 238.27 46.94 2 2 51 2141.9 -40.06 73.17  
 42.94 16 25 21 4317.62 -34.84 206.15 238.28 46.95 17 37 18 3717.6 -40.07 198.93  
 137.06 1 17 9 2741.93 -34.83 80.39 238.27 46.94 2 2 51 2141.9 -40.06 73.17

DIFFERENTIAL CORRECTIONS

TOE 2.4517 TRA -.8141 TC3-2.8982 BAU .7835  
 ROE .9179 RRA -.1235 RC3 -.8242 FAU .07435  
 FDE 2.6852 FRA -.3568 FC3-3.3094 BSP 14638  
 BDE 2.6179 BRA .8235 BC3 3.0131 FSP -1358

MID-COURSE EXECUTION ACCURACY

SGT 4448.6 SGR 1422.0 SG3 398.6  
 RRT .9688 RRF .9890 RTF .9713  
 SGB 4670.4 R23 .1718 R13 .9754  
 SG1 4658.2 SG2 336.7 THA 17.30

ORBIT DETERMINATION ACCURACY

ST 3229.7 SR 1195.4 SS 1541.5  
 CRT .9952 CRS-1.0000 CST -.9952  
 LSA 3769.6 MSA 163.4 SSA 6.4  
 EL1 3442.1 EL2 109.2 ALF 20.24

LAUNCH DATE JAN 28 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 455.962

RL 147.33 LAL -.00 LOL 127.90 VL 27.463 GAL -.44 AZL 83.77 HCA 212.88 SMA 126.71 ECC .16290 INC 6.2301 V1 30.240  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.298 GAP 4.73 AZP 95.24 TAL 182.26 TAP 35.14 RCA 106.07 APO 147.35 V2 34.815  
 RC 128.306 GL 45.10 GP -39.21 ZAL 95.80 ZAP 129.50 ETS 319.97 ZAE 125.00 ETE 215.47 ZAC 114.39 ETC 183.47 CLP-145.17

PLANETOCENTRIC CONIC

C3 17.701 VHL 4.207 DLA 52.08 RAL 3.61 RAD 6567.7 VEL 11.793 PTH 2.09 VHP 5.019 DPA -32.00 RAP 33.24 ECC 1.2913  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.27 16 44 53 4286.60 -35.28 203.29 240.19 48.83 17 56 20 3686.6 -40.29 195.81  
 135.73 1 28 43 2728.74 -35.26 79.45 240.18 48.82 2 14 12 2128.7 -40.28 71.98  
 44.27 16 44 53 4286.60 -35.28 203.29 240.19 48.83 17 56 20 3686.6 -40.29 195.81  
 135.73 1 28 43 2728.74 -35.26 79.45 240.18 48.82 2 14 12 2128.7 -40.28 71.98  
 44.27 16 44 53 4286.60 -35.28 203.29 240.19 48.83 17 56 20 3686.6 -40.29 195.81  
 135.73 1 28 43 2728.74 -35.26 79.45 240.18 48.82 2 14 12 2128.7 -40.28 71.98

DIFFERENTIAL CORRECTIONS

TOE 2.4118 TRA -.6897 TC3-3.3297 BAU .8104  
 ROE .8035 RRA -.0711 RC3 -.7999 FAU .07646  
 FDE 2.6011 FRA -.1964 FC3-3.7395 BSP 14947  
 BOE 2.5421 BRA .6934 BC3 3.4244 FSP -1404

MID-COURSE EXECUTION ACCURACY

SGT 4579.7 SGR 1294.4 SG3 411.1  
 RRT .9651 RRF .9845 RTF .9690  
 SGB 4759.1 R23 .1696 R13 .9724  
 SG1 4747.9 SG2 327.0 THA 15.33

ORBIT DETERMINATION ACCURACY

ST 3317.4 SR 1095.5 SS 1537.7  
 CRT .9954 CRS -.9999 CST -.9948  
 LSA 3813.5 MSA 163.6 SSA 7.4  
 EL1 3492.2 EL2 99.5 ALF 18.21

LAUNCH DATE JAN 28 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 461.958

RL 147.33 LAL -.00 LOL 127.90 VL 27.434 GAL -.22 AZL 84.23 HCA 216.03 SMA 126.52 ECC .16451 INC 5.7707 V1 30.240  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.284 GAP 5.02 AZP 94.67 TAL 181.11 TAP 37.14 RCA 105.71 APO 147.34 V2 34.821  
 RC 130.653 GL 42.97 GP -35.89 ZAL 94.52 ZAP 132.78 ETS 320.17 ZAE 126.20 ETE 210.66 ZAC 115.54 ETC 182.75 CLP-146.97

PLANETOCENTRIC CONIC

C3 16.377 VHL 4.047 DLA 51.12 RAL 7.49 RAD 6567.7 VEL 11.737 PTH 2.07 VHP 4.990 DPA -28.56 RAP 32.53 ECC 1.2695  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.49 17 4 4 4260.15 -35.52 200.75 242.35 50.47 18 15 4 3660.2 -40.35 193.08  
 134.51 1 40 26 2719.36 -35.51 78.72 242.34 50.46 2 25 45 2119.4 -40.34 71.04  
 45.49 17 4 4 4260.15 -35.52 200.75 242.35 50.47 18 15 4 3660.2 -40.35 193.08  
 134.51 1 40 26 2719.36 -35.51 78.72 242.34 50.46 2 25 45 2119.4 -40.34 71.04  
 45.49 17 4 4 4260.15 -35.52 200.75 242.35 50.47 18 15 4 3660.2 -40.35 193.08  
 134.51 1 40 26 2719.36 -35.51 78.72 242.34 50.46 2 25 45 2119.4 -40.34 71.04

DIFFERENTIAL CORRECTIONS

TOE 2.3774 TRA -.5662 TC3-3.7468 BAU .8370  
 ROE .7100 RRA -.0322 RC3 -.7590 FAU .07706  
 FDE 2.4851 FRA -.0413 FC3-4.0736 BSP 15351  
 BDE 2.4812 BRA .5671 BC3 3.8229 FSP -1437

MID-COURSE EXECUTION ACCURACY

SGT 4707.1 SGR 1180.3 SG3 416.7  
 RRT .9610 RRF .9783 RTF .9674  
 SGB 4852.8 R23 .1607 R13 .9700  
 SG1 4842.5 SG2 317.3 THA 13.61

ORBIT DETERMINATION ACCURACY

ST 3388.9 SR 1005.6 SS 1517.7  
 CRT .9958 CRS -.9999 CST -.9945  
 LSA 3843.6 MSA 162.5 SSA 8.4  
 EL1 3533.9 EL2 88.6 ALF 16.47

LAUNCH DATE JAN 28 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 467.940

RL 147.33 LAL -.00 LOL 127.90 VL 27.405 GAL .02 AZL 84.62 HCA 219.19 SMA 126.33 ECC .16625 INC 5.3759 V1 30.240  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.269 GAP 5.31 AZP 94.17 TAL 179.92 TAP 39.11 RCA 105.33 APO 147.33 V2 34.829  
 RC 132.989 GL 40.92 GP -32.95 ZAL 93.03 ZAP 135.81 ETS 320.39 ZAE 127.08 ETE 208.06 ZAC 116.73 ETC 182.13 CLP-148.70

PLANETOCENTRIC CONIC

C3 15.364 VHL 3.920 DLA 50.23 RAL 11.36 RAD 6567.6 VEL 11.694 PTH 2.06 VHP 5.002 DPA -25.41 RAP 32.20 ECC 1.2529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.61 17 23 4 4237.36 -35.62 198.50 244.77 51.90 18 33 41 3637.4 -40.28 190.66  
 133.39 1 52 19 2713.18 -35.61 78.18 244.76 51.89 2 37 33 2113.2 -40.27 70.34  
 46.61 17 23 4 4237.36 -35.62 198.50 244.77 51.90 18 33 41 3637.4 -40.28 190.66  
 133.39 1 52 19 2713.18 -35.61 78.18 244.76 51.89 2 37 33 2113.2 -40.27 70.34  
 46.61 17 23 4 4237.36 -35.62 198.50 244.77 51.90 18 33 41 3637.4 -40.28 190.66  
 133.39 1 52 19 2713.18 -35.61 78.18 244.76 51.89 2 37 33 2113.2 -40.27 70.34

DIFFERENTIAL CORRECTIONS

TDE 2.3526 TRA -.4304 TC3-3.9909 BAU .8295  
 ROE .6382 RRA .0040 RC3 -.6176 FAU .06997  
 FDE 2.3670 FRA .1340 FC3-3.9428 BSP 15176  
 BDE 2.4376 BRA .4304 BC3 4.0384 FSP -1324

MID-COURSE EXECUTION ACCURACY

SGT 4751.9 SGR 1051.2 SG3 401.7  
 RRT .9438 RRF .9672 RTF .9626  
 SGB 4866.8 R23 .1637 R13 .9651  
 SG1 4854.9 SG2 340.2 THA 11.85

ORBIT DETERMINATION ACCURACY

ST 3452.8 SR 933.1 SS 1496.4  
 CRT .9960 CRS -.9997 CST -.9937  
 LSA 3873.4 MSA 166.6 SSA 9.5  
 EL1 3575.7 EL2 80.3 ALF 15.07

LAUNCH DATE JAN 28 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 473.909

RL 147.33 LAL -.00 LOL 127.90 VL 27.375 GAL .26 AZL 84.97 HCA 222.35 SMA 126.13 ECC .16812 INC 5.0310 V1 30.240  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.255 GAP 5.60 AZP 93.72 TAL 178.71 TAP 41.06 RCA 104.93 APO 147.34 V2 34.837  
 RC 135.313 GL 38.94 GP -30.36 ZAL 91.35 ZAP 138.59 ETS 320.61 ZAE 127.71 ETE 205.70 ZAC 118.00 ETC 181.59 CLP-150.37

PLANETOCENTRIC CONIC

C3 14.589 VHL 3.820 DLA 49.40 RAL 15.24 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 5.045 DPA -22.52 RAP 32.20 ECC 1.2401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.67 17 41 59 4217.64 -35.60 196.48 247.41 53.16 18 52 17 3617.6 -40.11 188.52  
 132.33 2 4 24 2709.76 -35.59 77.81 247.40 53.15 2 49 33 2109.8 -40.10 69.86  
 47.67 17 41 59 4217.64 -35.60 196.48 247.41 53.16 18 52 17 3617.6 -40.11 188.52  
 132.33 2 4 24 2709.76 -35.59 77.81 247.40 53.15 2 49 33 2109.8 -40.10 69.86  
 47.67 17 41 59 4217.64 -35.60 196.48 247.41 53.16 18 52 17 3617.6 -40.11 188.52  
 132.33 2 4 24 2709.76 -35.59 77.81 247.40 53.15 2 49 33 2109.8 -40.10 69.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3271 TRA -.2989 TC3-4.4852 BAU .8837 SGT 4939.6 SGR 994.7 SG3 412.3 ST 3498.4 SR 864.3 SS 1453.7  
 RDE .5759 RRA .0247 RC3 -.6411 FAU .07422 RRT .9473 RRF .9602 RTF .9639 CRT .9968 CRS -.9993 CST -.9935  
 FDE 2.2189 FRA .2670 FC3-4.4042 BSP 15844 SGB 5038.8 R23 .1356 R13 .9656 LSA 3882.3 MSA 162.2 SSA 10.4  
 BDE 2.3973 BRA .2999 BC3 4.5307 FSP -1393 SGI 5029.0 SG2 313.0 THA 10.84 EL1 3603.0 EL2 66.9 ALF 13.84

LAUNCH DATE JAN 28 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 479.862

RL 147.33 LAL -.00 LOL 127.90 VL 27.345 GAL .52 AZL 85.27 HCA 225.52 SMA 125.93 ECC .17015 INC 4.7254 V1 30.240  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.240 GAP 5.89 AZP 93.31 TAL 177.47 TAP 42.99 RCA 104.51 APO 147.36 V2 34.846  
 RC 137.625 GL 37.01 GP -28.07 ZAL 89.49 ZAP 141.15 ETS 320.80 ZAE 128.14 ETE 203.58 ZAC 119.33 ETC 181.13 CLP-151.96

PLANETOCENTRIC CONIC

C3 14.005 VHL 3.742 DLA 48.60 RAL 19.16 RAD 6567.6 VEL 11.636 PTH 2.04 VHP 5.112 DPA -19.86 RAP 32.47 ECC 1.2305  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.69 18 0 59 4200.41 -35.47 194.65 250.27 54.28 19 11 0 3600.4 -39.85 186.60  
 131.31 2 16 36 2708.93 -35.46 77.61 250.26 54.27 3 1 45 2108.9 -39.84 69.57  
 48.69 18 0 59 4200.41 -35.47 194.65 250.27 54.28 19 11 0 3600.4 -39.85 186.60  
 131.31 2 16 36 2708.93 -35.46 77.61 250.26 54.27 3 1 45 2108.9 -39.84 69.57  
 48.69 18 0 59 4200.41 -35.47 194.65 250.27 54.28 19 11 0 3600.4 -39.85 186.60  
 131.31 2 16 36 2708.93 -35.46 77.61 250.26 54.27 3 1 45 2108.9 -39.84 69.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3000 TRA -.1586 TC3-4.8068 BAU .9065 SGT 5047.6 SGR 921.1 SG3 404.9 ST 3524.7 SR 806.9 SS 1405.8  
 RDE .5266 RRA .0433 RC3 -.5798 FAU .07184 RRT .9385 RRF .9478 RTF .9629 CRT .9975 CRS -.9986 CST -.9929  
 FDE 2.0698 FRA .4025 FC3-4.4406 BSP 16217 SGB 5131.0 R23 .1176 R13 .9642 LSA 3876.2 MSA 160.8 SSA 11.4  
 BDE 2.3595 BRA .1644 BC3 4.8416 FSP -1377 SGI 5121.4 SG2 313.4 THA 9.75 EL1 3615.5 EL2 55.1 ALF 12.87

LAUNCH DATE JAN 28 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

DISTANCE 485.800

RL 147.33 LAL -.00 LOL 127.90 VL 27.314 GAL .79 AZL 85.55 HCA 228.69 SMA 125.73 ECC .17233 INC 4.4512 V1 30.240  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.226 GAP 6.19 AZP 92.94 TAL 176.21 TAP 44.89 RCA 104.06 APO 147.40 V2 34.855  
 RC 139.923 GL 35.11 GP -26.04 ZAL 87.48 ZAP 143.52 ETS 320.94 ZAE 128.43 ETE 201.68 ZAC 120.75 ETC 180.73 CLP-153.50

PLANETOCENTRIC CONIC

C3 13.580 VHL 3.685 DLA 47.83 RAL 23.09 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 5.199 DPA -17.41 RAP 32.96 ECC 1.2235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.70 18 20 8 4185.25 -35.24 192.96 253.32 55.29 19 29 53 3585.2 -39.50 184.86  
 130.30 2 28 53 2710.60 -35.23 77.58 253.31 55.28 3 14 4 2110.6 -39.49 69.47  
 49.70 18 20 8 4185.25 -35.24 192.96 253.32 55.29 19 29 53 3585.2 -39.50 184.86  
 130.30 2 28 53 2710.60 -35.23 77.58 253.31 55.28 3 14 4 2110.6 -39.49 69.47  
 49.70 18 20 8 4185.25 -35.24 192.96 253.32 55.29 19 29 53 3585.2 -39.50 184.86  
 130.30 2 28 53 2710.60 -35.23 77.58 253.31 55.28 3 14 4 2110.6 -39.49 69.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2688 TRA -.0118 TC3-5.0914 BAU .9292 SGT 5150.3 SGR 858.8 SG3 395.1 ST 3529.3 SR 757.7 SS 1349.9  
 RDE .4866 RRA .0585 RC3 -.5201 FAU .06907 RRT .9277 RRF .9331 RTF .9620 CRT .9983 CRS -.9975 CST -.9922  
 FDE 1.9172 FRA .5285 FC3-4.4035 BSP 16543 SGB 5221.4 R23 .0997 R13 .9630 LSA 3850.5 MSA 159.9 SSA 12.4  
 BDE 2.3204 BRA .0597 BC3 5.1179 FSP -1343 SGI 5211.8 SG2 316.9 THA 8.83 EL1 3609.4 EL2 43.2 ALF 12.10

LAUNCH DATE JAN 28 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC

DISTANCE 491.721

RL 147.33 LAL -.00 LOL 127.90 VL 27.282 GAL 1.07 AZL 85.80 HCA 231.85 SMA 125.53 ECC .17468 INC 4.2023 V1 30.240  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.212 GAP 6.49 AZP 92.60 TAL 174.92 TAP 46.77 RCA 103.60 APO 147.46 V2 34.865  
 RC 142.207 GL 33.25 GP -24.25 ZAL 85.33 ZAP 145.70 ETS 321.02 ZAE 128.62 ETE 200.00 ZAC 122.23 ETC 180.38 CLP-154.97

PLANETOCENTRIC CONIC

C3 13.293 VHL 3.646 DLA 47.05 RAL 27.05 RAD 6567.5 VEL 11.605 PTH 2.03 VHP 5.303 DPA -15.14 RAP 33.65 ECC 1.2188  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.71 18 39 28 4171.79 -34.92 191.40 256.54 56.20 19 49 0 3571.8 -39.07 183.25  
 129.29 2 41 9 2714.78 -34.91 77.71 256.53 56.19 3 26 23 2114.8 -39.06 69.57  
 50.71 18 39 28 4171.79 -34.92 191.40 256.54 56.20 19 49 0 3571.8 -39.07 183.25  
 129.29 2 41 9 2714.78 -34.91 77.71 256.53 56.19 3 26 23 2114.8 -39.06 69.57  
 50.71 18 39 28 4171.79 -34.92 191.40 256.54 56.20 19 49 0 3571.8 -39.07 183.25  
 129.29 2 41 9 2714.78 -34.91 77.71 256.53 56.19 3 26 23 2114.8 -39.06 69.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2351 TRA .1419 TC3-5.3313 BAU .9510 SGT 5249.5 SGR 807.5 SG3 384.1 ST 3515.7 SR 716.9 SS 1290.8  
 RDE .4551 RRA .0708 RC3 -.4631 FAU .06602 RRT .9148 RRF .9163 RTF .9616 CRT .9990 CRS -.9957 CST -.9915  
 FDE 1.7692 FRA .6435 FC3-4.2997 BSP 16854 SGB 5311.2 R23 .0823 R13 .9623 LSA 3809.8 MSA 159.1 SSA 13.4  
 BDE 2.2809 BRA .1586 BC3 5.3513 FSP -1302 SGI 5301.4 SG2 322.9 THA 8.04 EL1 3587.9 EL2 31.4 ALF 11.52

LAUNCH DATE JAN 28 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC DISTANCE 497.625  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.250 GAL 1.37 AZL 86.03 MCA 235.03 SMA 125.32 ECC .17720 INC 3.9739 V1 30.240  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.198 GAP 6.79 AZP 92.28 TAL 173.61 TAP 48.64 RCA 103.11 APO 147.53 V2 34.875  
 RC 144.478 GL 31.40 GP -22.66 ZAL 83.06 ZAP 147.73 ETS 321.03 ZAE 128.72 ETE 198.51 ZAC 123.79 ETC 180.06 CLP-156.38

PLANETOCENTRIC CONIC  
 C3 13.131 VHL 3.624 DLA 46.26 RAL 31.03 RAD 6567.5 VEL 11.598 PTH 2.03 VHP 5.421 DPA -13.03 RAP 34.51 ECC 1.2161  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.76 18 59 4 4159.63 -34.50 189.91 259.91 57.03 20 8 24 3559.6 -38.56 181.74  
 128.24 2 53 12 2721.62 -34.49 78.03 259.91 57.02 3 38 34 2121.6 -38.55 69.87  
 51.76 18 59 4 4159.63 -34.50 189.91 259.91 57.03 20 8 24 3559.6 -38.56 181.74  
 128.24 2 53 12 2721.62 -34.49 78.03 259.91 57.02 3 38 34 2121.6 -38.55 69.87  
 51.76 18 59 4 4159.63 -34.50 189.91 259.91 57.03 20 8 24 3559.6 -38.56 181.74  
 128.24 2 53 12 2721.62 -34.49 78.03 259.91 57.02 3 38 34 2121.6 -38.55 69.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1953 TRA .3031 TC3-5.5230 BAU .9722 SGT 5343.3 SGR 764.5 SG3 371.8 ST 3479.4 SR 681.8 SS 1225.7  
 RDE .4297 RRA .0810 RC3 -.4106 FAU .06286 RRT .9003 RRF .8975 RTF .9615 CRT .9995 CRS -.9931 CST -.9906  
 FDE 1.6219 FRA .7473 FC3-4.1443 BSP 17172 SGB 5397.7 R23 .0655 R13 .9620 LSA 3748.1 MSA 158.6 SSA 14.4  
 BOE 2.2370 BRA .3137 BC3 5.5382 FSP -1260 SG1 5387.6 SG2 330.0 THA 7.37 EL1 3545.5 EL2 20.4 ALF 11.08

LAUNCH DATE JAN 28 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC DISTANCE 503.511  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.218 GAL 1.68 AZL 86.24 MCA 238.20 SMA 125.12 ECC .17992 INC 3.7625 V1 30.240  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.185 GAP 7.10 AZP 91.98 TAL 172.28 TAP 50.48 RCA 102.60 APO 147.63 V2 34.885  
 RC 146.734 GL 29.57 GP -21.24 ZAL 80.69 ZAP 149.61 ETS 320.96 ZAE 128.77 ETE 197.19 ZAC 125.41 ETC 179.77 CLP-157.74

PLANETOCENTRIC CONIC  
 C3 13.085 VHL 3.617 DLA 45.44 RAL 35.00 RAD 6567.5 VEL 11.596 PTH 2.03 VHP 5.552 DPA -11.05 RAP 35.51 ECC 1.2153  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.85 19 18 56 4148.54 -33.98 188.47 263.41 57.81 20 28 4 3548.5 -37.95 180.30  
 127.15 3 5 2 2731.19 -33.97 78.52 263.40 57.79 3 50 34 2131.2 -37.94 70.35  
 52.85 19 18 56 4148.54 -33.98 188.47 263.41 57.81 20 28 4 3548.5 -37.95 180.30  
 127.15 3 5 2 2731.19 -33.97 78.52 263.40 57.79 3 50 34 2131.2 -37.94 70.35  
 52.85 19 18 56 4148.54 -33.98 188.47 263.41 57.81 20 28 4 3548.5 -37.95 180.30  
 127.15 3 5 2 2731.19 -33.97 78.52 263.40 57.79 3 50 34 2131.2 -37.94 70.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1523 TRA .4758 TC3-5.6496 BAU .9903 SGT 5429.6 SGR 729.6 SG3 358.7 ST 3426.4 SR 653.1 SS 1160.5  
 RDE .4104 RRA .0907 RC3 -.3597 FAU .05936 RRT .8835 RRF .8773 RTF .9614 CRT .9997 CRS -.9892 CST -.9895  
 FDE 1.4829 FRA .8460 FC3-3.9271 BSP 17415 SGB 5478.4 R23 .0526 R13 .9618 LSA 3672.6 MSA 159.2 SSA 15.3  
 BOE 2.1911 BRA .4844 BC3 5.6610 FSP -1211 SG1 5467.9 SG2 339.4 THA 6.80 EL1 3488.1 EL2 15.3 ALF 10.79

LAUNCH DATE JAN 28 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC DISTANCE 509.379  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.186 GAL 2.01 AZL 86.43 MCA 241.38 SMA 124.91 ECC .18283 INC 3.5651 V1 30.240  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.172 GAP 7.41 AZP 91.71 TAL 170.94 TAP 52.31 RCA 102.07 APO 147.74 V2 34.897  
 RC 148.977 GL 27.77 GP -19.97 ZAL 78.22 ZAP 151.37 ETS 320.79 ZAE 128.78 ETE 196.03 ZAC 127.10 ETC 179.50 CLP-159.05

PLANETOCENTRIC CONIC  
 C3 13.152 VHL 3.627 DLA 44.58 RAL 38.94 RAD 6567.5 VEL 11.599 PTH 2.03 VHP 5.695 DPA -9.21 RAP 36.65 ECC 1.2164  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.01 19 39 2 4138.30 -33.37 187.07 267.01 58.53 20 48 0 3538.3 -37.26 178.91  
 125.99 3 16 26 2743.64 -33.36 79.21 267.00 58.52 4 2 9 2143.6 -37.25 71.06  
 54.01 19 39 2 4138.30 -33.37 187.07 267.01 58.53 20 48 0 3538.3 -37.26 178.91  
 125.99 3 16 26 2743.64 -33.36 79.21 267.00 58.52 4 2 9 2143.6 -37.25 71.06  
 54.01 19 39 2 4138.30 -33.37 187.07 267.01 58.53 20 48 0 3538.3 -37.26 178.91  
 125.99 3 16 26 2743.64 -33.36 79.21 267.00 58.52 4 2 9 2143.6 -37.25 71.06

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.0998 TRA .6540 TC3-5.7327 BAU 1.0095 SGT 5513.5 SGR 700.8 SG3 345.3 ST 3348.2 SR 628.1 SS 1091.6  
 RDE .3954 RRA .0992 RC3 -.3161 FAU .05606 RRT .8656 RRF .8563 RTF .9616 CRT .9993 CRS -.9838 CST -.9883  
 FDE 1.3471 FRA .9328 FC3-3.6902 BSP 17718 SGB 5557.9 R23 .0409 R13 .9619 LSA 3573.6 MSA 160.5 SSA 16.1  
 BOE 2.1367 BRA .6615 BC3 5.7414 FSP -1167 SG1 5546.9 SG2 348.8 THA 6.30 EL1 3406.6 EL2 22.5 ALF 10.62

LAUNCH DATE JAN 28 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC DISTANCE 515.226  
 RL 147.33 LAL -.00 LOL 127.90 VL 27.153 GAL 2.36 AZL 86.62 MCA 244.55 SMA 124.70 ECC .18596 INC 3.3791 V1 30.240  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.158 GAP 7.74 AZP 91.45 TAL 169.58 TAP 54.13 RCA 101.51 APO 147.89 V2 34.908  
 RC 151.204 GL 25.97 GP -18.84 ZAL 75.69 ZAP 153.01 ETS 320.52 ZAE 128.76 ETE 195.00 ZAC 128.84 ETC 179.25 CLP-160.32

PLANETOCENTRIC CONIC  
 C3 13.331 VHL 3.651 DLA 43.68 RAL 42.85 RAD 6567.5 VEL 11.607 PTH 2.03 VHP 5.849 DPA -7.47 RAP 37.90 ECC 1.2194  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.24 19 59 25 4128.53 -32.67 185.68 270.68 59.22 21 8 13 3528.5 -36.48 177.55  
 124.76 3 27 12 2759.28 -32.66 80.12 270.68 59.20 4 13 11 2159.3 -36.47 71.99  
 55.24 19 59 25 4128.53 -32.67 185.68 270.68 59.22 21 8 13 3528.5 -36.48 177.55  
 124.76 3 27 12 2759.28 -32.66 80.12 270.68 59.20 4 13 11 2159.3 -36.47 71.99  
 55.24 19 59 25 4128.53 -32.67 185.68 270.68 59.22 21 8 13 3528.5 -36.48 177.55  
 124.76 3 27 12 2759.28 -32.66 80.12 270.68 59.20 4 13 11 2159.3 -36.47 71.99

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.0391 TRA .8422 TC3-5.7581 BAU 1.0274 SGT 5591.0 SGR 676.8 SG3 331.6 ST 3248.9 SR 606.3 SS 1020.5  
 RDE .3838 RRA .1076 RC3 -.2772 FAU .05276 RRT .8468 RRF .8346 RTF .9620 CRT .9981 CRS -.9762 CST -.9867  
 FDE 1.2154 FRA 1.0128 FC3-3.4264 BSP 18007 SGB 5631.8 R23 .0313 R13 .9622 LSA 3455.1 MSA 163.4 SSA 16.8  
 BOE 2.0749 BRA .8490 BC3 5.7647 FSP -1123 SG1 5620.4 SG2 358.1 THA 5.88 EL1 3304.8 EL2 36.4 ALF 10.55

LAUNCH DATE JAN 28 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 521.052

RL 147.33 LAL -.00 LOL 127.90 VL 27.120 GAL 2.72 AZL 86.80 HCA 247.73 SMA 124.49 ECC .18932 INC 3.2026 V1 30.240  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.146 GAP 8.07 A2P 91.21 TAL 168.21 TAP 55.94 RCA 100.92 APO 148.06 V2 34.920  
 RC 153.416 GL 24.20 GP -17.83 ZAL 73.12 ZAP 154.56 ETS 320.14 ZAE 128.73 ETE 194.10 ZAC 130.63 ETC 178.99 CLP-161.54

PLANETOCENTRIC CONIC

C3 13.626 VHL 3.691 DLA 42.74 RAL 46.69 RAD 6567.5 VEL 11.619 PTH 2.04 VHP 6.013 DPA -5.83 RAP 39.26 ECC 1.2242  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.54 20 20 1 4119.09 -31.87 184.28 274.41 59.87 21 28 40 3519.1 -35.61 176.19  
 123.46 3 37 14 2778.21 -31.86 81.26 274.41 59.85 4 23 32 2178.2 -35.59 73.16  
 56.54 20 20 1 4119.09 -31.87 184.28 274.41 59.87 21 28 40 3519.1 -35.61 176.19  
 123.46 3 37 14 2778.21 -31.86 81.26 274.41 59.85 4 23 32 2178.2 -35.59 73.16  
 56.54 20 20 1 4119.09 -31.87 184.28 274.41 59.87 21 28 40 3519.1 -35.61 176.19  
 123.46 3 37 14 2778.21 -31.86 81.26 274.41 59.85 4 23 32 2178.2 -35.59 73.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9714 TRA 1.0405 TC3-5.7271 BAU 1.0442 SGT 5663.5 SGR 657.3 SG3 317.8 ST 3132.9 SR 587.5 SS 950.4  
 RDE .3755 RRA .1159 RC3 -.2430 FAU .04953 RRT .8277 RRF .8132 RTF .9624 CRT .9957 CRS -.9658 CST -.9849  
 FDE 1.0909 FRA 1.0859 FC3-3.1468 BSP 18286 SGB 5701.5 R23 .0236 R13 .9626 LSA 3321.9 MSA 168.0 SSA 17.4  
 BDE 2.0069 BRA 1.0469 BC3 5.7322 FSP -1081 SG1 5689.7 SG2 367.2 THA 5.51 EL1 3187.1 EL2 53.3 ALF 10.58

LAUNCH DATE JAN 28 1969

FLIGHT TIME 184.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 526.854

RL 147.33 LAL -.00 LOL 127.90 VL 27.087 GAL 3.10 AZL 86.97 HCA 250.92 SMA 124.28 ECC .19293 INC 3.0338 V1 30.240  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.133 GAP 8.41 A2P 90.99 TAL 166.83 TAP 57.74 RCA 100.30 APO 148.26 V2 34.932  
 RC 155.612 GL 22.46 GP -16.92 ZAL 70.51 ZAP 156.01 ETS 319.63 ZAE 128.68 ETE 193.29 ZAC 132.48 ETC 178.74 CLP-162.73

PLANETOCENTRIC CONIC

C3 14.040 VHL 3.747 DLA 41.75 RAL 50.45 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.188 DPA -4.28 RAP 40.70 ECC 1.2311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.94 20 40 50 4109.76 -30.98 182.87 278.18 60.49 21 49 20 3509.8 -34.65 174.82  
 122.06 3 46 24 2800.66 -30.97 82.63 278.17 60.47 4 33 5 2200.7 -34.64 74.59  
 57.94 20 40 50 4109.76 -30.98 182.87 278.18 60.49 21 49 20 3509.8 -34.65 174.82  
 122.06 3 46 24 2800.66 -30.97 82.63 278.17 60.47 4 33 5 2200.7 -34.64 74.59  
 57.94 20 40 50 4109.76 -30.98 182.87 278.18 60.49 21 49 20 3509.8 -34.65 174.82  
 122.06 3 46 24 2800.66 -30.97 82.63 278.17 60.47 4 33 5 2200.7 -34.64 74.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8993 TRA 1.2523 TC3-5.6337 BAU 1.0582 SGT 5731.2 SGR 641.7 SG3 304.4 ST 3007.3 SR 571.6 SS 884.2  
 RDE .3704 RRA .1251 RC3 -.2121 FAU .04625 RRT .8086 RRF .7928 RTF .9628 CRT .9917 CRS -.9520 CST -.9828  
 FDE .9756 FRA 1.1564 FC3-2.8519 BSP 18462 SGB 5767.0 R23 .0185 R13 .9629 LSA 3181.4 MSA 175.0 SSA 17.7  
 BDE 1.9351 BRA 1.2586 BC3 5.6377 FSP -1031 SG1 5754.8 SG2 376.0 THA 5.20 EL1 3060.3 EL2 72.1 ALF 10.68

LAUNCH DATE JAN 28 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 532.631

RL 147.33 LAL -.00 LOL 127.90 VL 27.054 GAL 3.50 AZL 87.13 HCA 254.10 SMA 124.07 ECC .19682 INC 2.8713 V1 30.240  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.120 GAP 8.72 A2P 90.79 TAL 165.44 TAP 59.54 RCA 99.65 APO 148.49 V2 34.945  
 RC 157.792 GL 20.75 GP -16.10 ZAL 67.90 ZAP 157.37 ETS 318.99 ZAE 128.62 ETE 192.58 ZAC 134.37 ETC 178.47 CLP-163.88

PLANETOCENTRIC CONIC

C3 14.581 VHL 3.819 DLA 40.72 RAL 54.10 RAD 6567.6 VEL 11.660 PTH 2.05 VHP 6.374 DPA -2.81 RAP 42.23 ECC 1.2400  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.42 21 1 53 4100.20 -30.01 181.41 281.96 61.08 22 10 13 3500.2 -33.62 173.42  
 120.58 3 54 30 2826.97 -30.00 84.27 281.95 61.07 4 41 37 2227.0 -33.60 76.28  
 59.42 21 1 53 4100.20 -30.01 181.41 281.96 61.08 22 10 13 3500.2 -33.62 173.42  
 120.58 3 54 30 2826.97 -30.00 84.27 281.95 61.07 4 41 37 2227.0 -33.60 76.28  
 59.42 21 1 53 4100.20 -30.01 181.41 281.96 61.08 22 10 13 3500.2 -33.62 173.42  
 120.58 3 54 30 2826.97 -30.00 84.27 281.95 61.07 4 41 37 2227.0 -33.60 76.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8172 TRA 1.4720 TC3-5.4993 BAU 1.0726 SGT 5793.6 SGR 628.0 SG3 290.9 ST 2866.2 SR 556.7 SS 818.8  
 RDE .3672 RRA .1343 RC3 -.1864 FAU .04319 RRT .7901 RRF .7751 RTF .9633 CRT .9855 CRS -.9336 CST -.9804  
 FDE .8646 FRA 1.2186 FC3-2.5642 BSP 18716 SGB 5827.5 R23 .0141 R13 .9634 LSA 3026.7 MSA 184.3 SSA 17.9  
 BDE 1.8539 BRA 1.4781 BC3 5.5024 FSP -990 SG1 5814.9 SG2 383.6 THA 4.92 EL1 2918.3 EL2 92.7 ALF 10.85

LAUNCH DATE JAN 28 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 538.380

RL 147.33 LAL -.00 LOL 127.90 VL 27.021 GAL 3.92 AZL 87.29 HCA 257.29 SMA 123.87 ECC .20100 INC 2.7137 V1 30.240  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.108 GAP 9.14 A2P 90.60 TAL 164.04 TAP 61.33 RCA 98.97 APO 148.76 V2 34.957  
 RC 159.953 GL 19.07 GP -15.35 ZAL 65.30 ZAP 158.67 ETS 318.20 ZAE 128.56 ETE 191.95 ZAC 136.29 ETC 178.19 CLP-165.01

PLANETOCENTRIC CONIC

C3 15.260 VHL 3.906 DLA 39.65 RAL 57.64 RAD 6567.6 VEL 11.690 PTH 2.06 VHP 6.571 DPA -1.42 RAP 43.83 ECC 1.2511  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.00 21 23 8 4090.25 -28.97 179.91 285.75 61.65 22 31 19 3490.2 -32.51 171.98  
 119.00 4 1 27 2857.26 -28.96 86.19 285.74 61.63 4 49 4 2257.3 -32.50 78.26  
 61.00 21 23 8 4090.25 -28.97 179.91 285.75 61.65 22 31 19 3490.2 -32.51 171.98  
 119.00 4 1 27 2857.26 -28.96 86.19 285.74 61.63 4 49 4 2257.3 -32.50 78.26  
 61.00 21 23 8 4090.25 -28.97 179.91 285.75 61.65 22 31 19 3490.2 -32.51 171.98  
 119.00 4 1 27 2857.26 -28.96 86.19 285.74 61.63 4 49 4 2257.3 -32.50 78.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7287 TRA 1.7037 TC3-5.3196 BAU 1.0858 SGT 5851.1 SGR 616.5 SG3 277.9 ST 2718.9 SR 543.0 SS 757.7  
 RDE .3659 RRA .1443 RC3 -.1644 FAU .04024 RRT .7725 RRF .7547 RTF .9638 CRT .9764 CRS -.9098 CST -.9775  
 FDE .7608 FRA 1.2773 FC3-2.2831 BSP 18945 SGB 5883.5 R23 .0108 R13 .9639 LSA 2867.5 MSA 196.3 SSA 17.8  
 BDE 1.7670 BRA 1.7098 BC3 5.3222 FSP -949 SG1 5870.6 SG2 390.2 THA 4.67 EL1 2770.2 EL2 115.1 ALF 11.05

LAUNCH DATE JAN 28 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 544.098

RL 147.33 LAL -.00 LOL 127.90 VL 26.988 GAL 4.36 AZL 87.44 HCA 260.48 SMA 123.66 ECC .20549 INC 2.5600 V1 30.240  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.096 GAP 9.52 AZP 90.42 TAL 162.64 TAP 63.12 RCA 98.25 APO 149.07 V2 34.970  
 RC 162.097 GL 17.44 GP -14.68 ZAL 62.72 ZAP 159.89 ETS 317.24 ZAE 128.50 ETE 191.38 ZAC 138.25 ETC 177.89 CLP-166.10

PLANETOCENTRIC CONIC

C3 16.090 VHL 4.011 DLA 38.56 RAL 61.04 RAD 6567.6 VEL 11.725 PTH 2.07 VHP 6.781 DPA -.09 RAP 45.50 ECC 1.2648  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.66 21 44 37 4079.64 -27.85 178.35 289.52 62.19 22 52 36 3479.6 -31.34 170.48  
 117.34 4 7 8 2891.80 -27.84 88.40 289.52 62.18 4 55 19 2291.8 -31.33 80.53  
 62.66 21 44 37 4079.64 -27.85 178.35 289.52 62.19 22 52 36 3479.6 -31.34 170.48  
 117.34 4 7 8 2891.80 -27.84 88.40 289.52 62.18 4 55 19 2291.8 -31.33 80.53  
 62.66 21 44 37 4079.64 -27.85 178.35 289.52 62.19 22 52 36 3479.6 -31.34 170.48  
 117.34 4 7 8 2891.80 -27.84 88.40 289.52 62.18 4 55 19 2291.8 -31.33 80.53

DIFFERENTIAL CORRECTIONS

TDE 1.6339 TRA 1.9481 TC3-5.0997 BAU 1.0974  
 RDE .3663 RRA .1550 RC3 -.1453 FAU .03738  
 FDE .6637 FRA 1.3325 FC3-2.0115 BSP 19156  
 BDE 1.6745 BRA 1.9543 BC3 5.1018 FSP -910

MID-COURSE EXECUTION ACCURACY

SGT 5903.2 SGR 606.3 SG3 265.3  
 RRT .7560 RRF .7378 RTF .9642  
 SGB 5934.2 R23 .0085 R13 .9642  
 SG1 5921.0 SG2 395.7 THA 4.46

ORBIT DETERMINATION ACCURACY

ST 2569.3 SR 530.1 SS 701.6  
 CRT .9635 CRS -.8793 CST -.9743  
 LSA 2707.4 MSA 211.2 SSA 17.6  
 EL1 2619.8 EL2 139.2 ALF 11.28

LAUNCH DATE JAN 28 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 549.783

RL 147.33 LAL -.00 LOL 127.90 VL 26.954 GAL 4.83 AZL 87.59 HCA 263.67 SMA 123.45 ECC .21034 INC 2.4090 V1 30.240  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.084 GAP 9.92 AZP 90.27 TAL 161.23 TAP 64.91 RCA 97.48 APO 149.42 V2 34.983  
 RC 164.221 GL 15.85 GP -14.07 ZAL 60.18 ZAP 161.05 ETS 316.10 ZAE 128.43 ETE 190.88 ZAC 140.25 ETC 177.55 CLP-167.17

PLANETOCENTRIC CONIC

C3 17.085 VHL 4.133 DLA 37.44 RAL 64.30 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 7.003 DPA 1.17 RAP 47.24 ECC 1.2812  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.41 22 6 23 4067.96 -26.69 176.70 293.28 62.70 23 14 11 3468.0 -30.12 168.90  
 115.59 4 11 22 2930.99 -26.67 90.94 293.28 62.69 5 0 13 2331.0 -30.10 83.13  
 64.41 22 6 23 4067.96 -26.69 176.70 293.28 62.70 23 14 11 3468.0 -30.12 168.90  
 115.59 4 11 22 2930.99 -26.67 90.94 293.28 62.69 5 0 13 2331.0 -30.10 83.13  
 64.41 22 6 23 4067.96 -26.69 176.70 293.28 62.70 23 14 11 3468.0 -30.12 168.90  
 115.59 4 11 22 2930.99 -26.67 90.94 293.28 62.69 5 0 13 2331.0 -30.10 83.13

DIFFERENTIAL CORRECTIONS

TOE 1.5376 TRA 2.2092 TC3-4.8382 BAU 1.1055  
 RDE .3686 RRA .1670 RC3 -.1278 FAU .03451  
 FDE .5762 FRA 1.3873 FC3-1.7487 BSP 19269  
 BDE 1.5812 BRA 2.2156 BC3 4.8399 FSP -866

MID-COURSE EXECUTION ACCURACY

SGT 5951.1 SGR 597.7 SG3 253.3  
 RRT .7412 RRF .7231 RTF .9645  
 SGB 5981.1 R23 .0076 R13 .9645  
 SG1 5967.7 SG2 400.2 THA 4.28

ORBIT DETERMINATION ACCURACY

ST 2428.2 SR 518.4 SS 653.8  
 CRT .9459 CRS -.8422 CST -.9712  
 LSA 2557.3 MSA 228.5 SSA 17.2  
 EL1 2477.4 EL2 164.9 ALF 11.47

LAUNCH DATE JAN 28 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 555.429

RL 147.33 LAL -.00 LOL 127.90 VL 26.921 GAL 5.32 AZL 87.74 HCA 266.87 SMA 123.25 ECC .21557 INC 2.2597 V1 30.240  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.073 GAP 10.34 AZP 90.12 TAL 159.83 TAP 66.70 RCA 96.68 APO 149.82 V2 34.996  
 RC 166.326 GL 14.32 GP -13.52 ZAL 57.70 ZAP 162.14 ETS 314.76 ZAE 128.36 ETE 190.43 ZAC 142.27 ETC 177.18 CLP-168.23

PLANETOCENTRIC CONIC

C3 18.266 VHL 4.274 DLA 36.31 RAL 67.41 RAD 6567.7 VEL 11.817 PTH 2.09 VHP 7.238 DPA 2.38 RAP 49.03 ECC 1.3006  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.26 22 28 29 4054.90 -25.47 174.95 297.02 63.20 23 36 4 3454.9 -28.85 167.22  
 113.74 4 14 4 2975.10 -25.46 93.81 297.02 63.18 5 3 39 2375.1 -28.84 86.08  
 66.26 22 28 29 4054.90 -25.47 174.95 297.02 63.20 23 36 4 3454.9 -28.85 167.22  
 113.74 4 14 4 2975.10 -25.46 93.81 297.02 63.18 5 3 39 2375.1 -28.84 86.08  
 66.26 22 28 29 4054.90 -25.47 174.95 297.02 63.20 23 36 4 3454.9 -28.85 167.22  
 113.74 4 14 4 2975.10 -25.46 93.81 297.02 63.18 5 3 39 2375.1 -28.84 86.08

DIFFERENTIAL CORRECTIONS

TOE 1.4319 TRA 2.4799 TC3-4.5625 BAU 1.1145  
 RDE .3717 RRA .1794 RC3 -.1139 FAU .03191  
 FDE .4922 FRA 1.4364 FC3-1.5125 BSP 19476  
 BDE 1.4794 BRA 2.4864 BC3 4.5639 FSP -831

MID-COURSE EXECUTION ACCURACY

SGT 5993.0 SGR 588.9 SG3 241.6  
 RRT .7275 RRF .7093 RTF .9649  
 SGB 6021.9 R23 .0061 R13 .9649  
 SG1 6008.4 SG2 403.0 THA 4.11

ORBIT DETERMINATION ACCURACY

ST 2287.1 SR 506.2 SS 609.8  
 CRT .9221 CRS -.7963 CST -.9679  
 LSA 2407.7 MSA 248.1 SSA 16.7  
 EL1 2334.6 EL2 191.9 ALF 11.62

LAUNCH DATE JAN 28 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 561.032

RL 147.33 LAL -.00 LOL 127.90 VL 26.888 GAL 5.85 AZL 87.89 HCA 270.07 SMA 123.04 ECC .22122 INC 2.1112 V1 30.240  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.061 GAP 10.78 AZP 90.00 TAL 158.43 TAP 68.50 RCA 95.82 APO 150.26 V2 35.010  
 RC 168.410 GL 12.84 GP -13.02 ZAL 55.29 ZAP 163.18 ETS 313.20 ZAE 128.29 ETE 190.03 ZAC 144.31 ETC 176.76 CLP-169.26

PLANETOCENTRIC CONIC

C3 19.655 VHL 4.433 DLA 35.18 RAL 70.36 RAD 6567.8 VEL 11.876 PTH 2.11 VHP 7.489 DPA 3.52 RAP 50.87 ECC 1.3235  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.20 22 51 4 4039.88 -24.21 173.07 300.73 63.67 23 58 24 3439.9 -27.55 165.40  
 111.80 4 15 3 3024.64 -24.20 97.07 300.73 63.65 5 5 28 2424.6 -27.53 89.40  
 68.20 22 51 4 4039.88 -24.21 173.07 300.73 63.67 23 58 24 3439.9 -27.55 165.40  
 111.80 4 15 3 3024.64 -24.20 97.07 300.73 63.65 5 5 28 2424.6 -27.53 89.40  
 68.20 22 51 4 4039.88 -24.21 173.07 300.73 63.67 23 58 24 3439.9 -27.55 165.40  
 111.80 4 15 3 3024.64 -24.20 97.07 300.73 63.65 5 5 28 2424.6 -27.53 89.40

DIFFERENTIAL CORRECTIONS

TOE 1.3230 TRA 2.7661 TC3-4.2656 BAU 1.1212  
 RDE .3759 RRA .1928 RC3 -.1014 FAU .02939  
 FDE .4155 FRA 1.4843 FC3-1.2945 BSP 19645  
 BDE 1.3753 BRA 2.7729 BC3 4.2668 FSP -796

MID-COURSE EXECUTION ACCURACY

SGT 6029.6 SGR 580.5 SG3 230.4  
 RRT .7154 RRF .6973 RTF .9653  
 SGB 6057.5 R23 .0051 R13 .9653  
 SG1 6044.0 SG2 404.7 THA 3.96

ORBIT DETERMINATION ACCURACY

ST 2158.2 SR 494.3 SS 573.3  
 CRT .8913 CRS -.7427 CST -.9652  
 LSA 2271.1 MSA 269.1 SSA 16.2  
 EL1 2203.1 EL2 219.5 ALF 11.66



LAUNCH DATE JAN 28 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 566.587

RL 147.33 LAL -0.00 LOL 127.90 VL 26.855 GAL 6.40 AZL 88.04 HCA 273.27 SMA 122.84 ECC .22733 INC 1.9626 V1 30.240  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.050 GAP 11.24 AZP 89.89 TAL 157.04 TAP 70.30 RCA 94.92 APO 150.77 V2 35.023  
 RC 170.474 GL 11.43 GP -12.56 ZAL 52.96 ZAP 164.17 ETS 311.37 ZAE 128.22 ETE 189.67 ZAC 146.37 ETC 176.28 CLP-170.28

PLANETOCENTRIC CONIC

C3 21.280 VHL 4.613 DLA 34.05 RAL 73.16 RAD 6567.9 VEL 11.944 PTH 2.13 VHP 7.756 DPA 4.61 RAP 52.76 ECC 1.3502  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.26 23 14 18 4022.32 -22.93 171.00 304.42 64.12 24 21 20 3422.3 -26.22 163.40  
 109.74 4 14 10 3080.17 -22.92 100.74 304.41 64.10 5 5 30 2480.2 -26.21 93.14  
 70.26 23 14 18 4022.32 -22.93 171.00 304.42 64.12 24 21 20 3422.3 -26.22 163.40  
 109.74 4 14 10 3080.17 -22.92 100.74 304.41 64.10 5 5 30 2480.2 -26.21 93.14  
 110.00 4 38 57 3004.62 -25.05 95.93 305.49 65.94 5 29 1 2404.6 -28.07 88.07  
 110.00 3 52 37 3145.87 -20.84 104.73 303.28 62.27 4 45 3 2545.9 -24.38 97.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2097 TRA 3.0680 TC3-3.9568 BAU 1.1260 SGT 6060.9 SGR 572.1 SG3 219.8 ST 2042.8 SR 482.2 SS 543.5  
 RDE .3809 RRA .2072 RC3 -.0904 FAU .02697 RRT .7047 RRF .6866 RTF .9657 CRT .8524 CRS -.6817 CST -.9632  
 FDE .3444 FRA 1.5307 FC3-1.0973 BSP 19809 SGB 6087.8 R23 .0043 R13 .9657 LSA 2148.5 MSA 290.7 SSA 15.7  
 BOE 1.2682 BRA 3.0750 BC3 3.9578 FSP -763 SG1 6074.3 SG2 405.0 THA 3.82 EL1 2084.3 EL2 247.1 ALF 11.54

LAUNCH DATE JAN 28 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 572.086

RL 147.33 LAL -0.00 LOL 127.90 VL 26.822 GAL 6.99 AZL 88.19 HCA 276.47 SMA 122.64 ECC .23395 INC 1.8129 V1 30.240  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.039 GAP 11.74 AZP 89.80 TAL 155.66 TAP 72.12 RCA 93.95 APO 151.33 V2 35.036  
 RC 172.518 GL 10.08 GP -12.14 ZAL 50.71 ZAP 165.10 ETS 309.26 ZAE 128.15 ETE 189.34 ZAC 148.44 ETC 175.73 CLP-171.30

PLANETOCENTRIC CONIC

C3 23.173 VHL 4.814 DLA 32.93 RAL 75.80 RAD 6567.9 VEL 12.023 PTH 2.15 VHP 8.041 DPA 5.64 RAP 54.69 ECC 1.3814  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.45 23 38 29 4001.05 -21.63 168.68 308.07 64.55 24 45 10 3401.1 -24.87 161.13  
 107.55 4 11 4 3142.73 -21.62 104.91 308.06 64.54 5 3 27 2542.7 -24.86 97.37  
 72.45 23 38 29 4001.05 -21.63 168.68 308.07 64.55 24 45 10 3401.1 -24.87 161.13  
 107.55 4 11 4 3142.73 -21.62 104.91 308.06 64.54 5 3 27 2542.7 -24.86 97.37  
 110.00 5 36 17 2880.71 -28.23 87.71 311.12 69.87 6 24 18 2280.7 -30.70 79.38  
 110.00 3 16 23 3511.08 -15.31 114.36 304.50 59.06 4 11 34 2711.1 -19.30 107.51

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0933 TRA 3.3877 TC3-3.6412 BAU 1.1283 SGT 6087.6 SGR 563.5 SG3 209.8 ST 1944.5 SR 470.1 SS 520.5  
 RDE .3869 RRA .2224 RC3 -.0803 FAU .02465 RRT .6955 RRF .6776 RTF .9662 CRT .8049 CRS -.6153 CST -.9626  
 FDE .2795 FRA 1.5769 FC3 -.9208 BSP 19955 SGB 6113.6 R23 .0037 R13 .9662 LSA 2043.5 MSA 311.7 SSA 15.1  
 BOE 1.1597 BRA 3.3950 BC3 3.6420 FSP -730 SG1 6100.3 SG2 404.0 THA 3.70 EL1 1981.7 EL2 273.7 ALF 11.23

LAUNCH DATE JAN 28 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 577.522

RL 147.33 LAL -0.00 LOL 127.90 VL 26.790 GAL 7.61 AZL 88.34 HCA 279.67 SMA 122.44 ECC .24113 INC 1.6612 V1 30.240  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.028 GAP 12.26 AZP 89.72 TAL 154.29 TAP 73.96 RCA 92.92 APO 151.97 V2 35.050  
 RC 174.540 GL 8.79 GP -11.76 ZAL 48.55 ZAP 165.98 ETS 306.81 ZAE 128.07 ETE 189.05 ZAC 150.53 ETC 175.09 CLP-172.30

PLANETOCENTRIC CONIC

C3 25.375 VHL 5.037 DLA 31.83 RAL 78.29 RAD 6568.0 VEL 12.114 PTH 2.17 VHP 8.346 DPA 6.62 RAP 56.66 ECC 1.4176  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.83 0 8 3 3974.47 -20.32 165.98 311.69 64.96 1 14 18 3374.5 -23.52 158.50  
 105.17 4 5 18 3213.86 -20.30 109.68 311.68 64.95 4 58 51 2613.9 -23.51 102.20  
 74.83 0 8 3 3974.47 -20.32 165.98 311.69 64.96 1 14 18 3374.5 -23.52 158.50  
 105.17 4 5 18 3213.86 -20.30 109.68 311.68 64.95 4 58 51 2613.9 -23.51 102.20  
 110.00 6 11 50 2821.71 -29.54 83.62 315.70 71.96 6 58 51 2221.7 -31.72 75.09  
 110.00 3 0 42 3414.61 -11.61 120.09 306.74 57.62 3 57 36 2814.6 -15.80 113.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .9772 TRA 3.7296 TC3-3.3191 BAU 1.1263 SGT 6111.0 SGR 554.8 SG3 200.4 ST 1867.9 SR 458.0 SS 504.6  
 RDE .3937 RRA .2388 RC3 -.0707 FAU .02233 RRT .6879 RRF .6704 RTF .9667 CRT .7501 CRS -.5478 CST -.9638  
 FDE .2217 FRA 1.6243 FC3 -.7620 BSP 19993 SGB 6136.2 R23 .0035 R13 .9667 LSA 1960.6 MSA 330.5 SSA 14.6  
 BOE 1.0536 BRA 3.7372 BC3 3.3199 FSP -695 SG1 6123.0 SG2 401.9 THA 3.59 EL1 1900.0 EL2 297.8 ALF 10.69

LAUNCH DATE JAN 28 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 582.884

RL 147.33 LAL -0.00 LOL 127.90 VL 26.757 GAL 8.28 AZL 88.49 HCA 282.88 SMA 122.25 ECC .24893 INC 1.5065 V1 30.240  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.017 GAP 12.82 AZP 89.66 TAL 152.84 TAP 75.82 RCA 91.82 APO 152.68 V2 35.063  
 RC 176.542 GL 7.57 GP -11.41 ZAL 46.49 ZAP 166.79 ETS 303.99 ZAE 127.98 ETE 188.78 ZAC 152.62 ETC 174.34 CLP-173.30

PLANETOCENTRIC CONIC

C3 27.934 VHL 5.285 DLA 30.75 RAL 80.63 RAD 6568.1 VEL 12.219 PTH 2.20 VHP 8.674 DPA 7.55 RAP 58.66 ECC 1.4597  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.49 0 36 4 3939.51 -19.00 162.70 315.28 65.36 1 41 43 3339.5 -22.17 155.27  
 102.51 3 55 57 3296.48 -18.99 115.27 315.27 65.35 4 50 53 2696.5 -22.15 107.84  
 77.49 0 36 4 3939.51 -19.00 162.70 315.28 65.36 1 41 43 3339.5 -22.17 155.27  
 102.51 3 55 57 3296.48 -18.99 115.27 315.27 65.35 4 50 53 2696.5 -22.15 107.84  
 110.00 6 40 39 2782.17 -30.34 80.82 319.96 73.44 7 27 1 2182.2 -32.31 72.15  
 110.00 2 50 31 3501.81 -8.39 124.79 309.25 56.74 3 48 53 2901.8 -12.71 118.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .8537 TRA 4.0871 TC3-3.0080 BAU 1.1236 SGT 6127.4 SGR 545.1 SG3 191.4 ST 1804.9 SR 445.1 SS 492.8  
 RDE .4008 RRA .2557 RC3 -.0624 FAU .02022 RRT .6810 RRF .6637 RTF .9674 CRT .6870 CRS -.4772 CST -.9660  
 FDE .1666 FRA 1.6699 FC3 -.6267 BSP 20133 SGB 6151.6 R23 .0029 R13 .9674 LSA 1891.6 MSA 346.7 SSA 14.1  
 BOE .9431 BRA 4.0951 BC3 3.0086 FSP -667 SG1 6138.7 SG2 398.4 THA 3.48 EL1 1831.4 EL2 318.8 ALF 9.92

LAUNCH DATE JAN 28 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 588.160

RL 147.33 LAL -.00 LOL 127.90 VL 26.725 GAL 8.99 AZL 88.65 HCA 286.09 SMA 122.05 ECC .25744 INC 1.3476 V1 30.240  
 RP 108.04 LAP -1.29 LOP 54.00 VP 37.006 GAP 13.41 AZP 89.63 TAL 151.61 TAP 77.70 RCA 90.63 APO 153.48 V2 35.076  
 RC 178.523 GL 6.41 GP -11.09 ZAL 44.54 ZAP 167.55 ETS 300.75 ZAE 127.89 ETE 188.53 ZAC 154.71 ETC 173.45 CLP-174.30

PLANETOCENTRIC CONIC

C3 30.907 VHL 5.559 DLA 29.70 RAL 82.82 RAD 6568.2 VEL 12.340 PTH 2.23 VHP 9.027 DPA 8.43 RAP 60.70 ECC 1.5087  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.65 1 8 28 3889.51 -17.69 158.34 318.84 65.75 2 13 17 3289.5 -20.82 150.96  
 99.35 3 41 1 3397.11 -17.68 122.15 318.83 65.74 4 37 38 2797.1 -20.80 114.77  
 100.00 4 14 40 3289.56 -20.27 115.35 320.02 67.55 5 9 30 2689.6 -23.14 107.73  
 100.00 3 17 30 3472.29 -15.14 126.49 317.59 63.91 4 15 23 2872.3 -18.52 119.33  
 110.00 7 5 30 2753.99 -30.87 78.79 324.05 74.53 7 51 24 2154.0 -32.68 70.04  
 110.00 2 43 10 3580.62 -5.42 128.97 311.91 56.20 3 42 50 2980.6 -9.82 122.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7277 TRA 4.4673 TC3-2.7033 BAU 1.1172 SGT 6139.2 SGR 534.7 SG3 182.9 ST 1760.4 SR 431.9 SS 485.9  
 ROE .4084 RRA .2732 RC3 -.0546 FAU .01817 RRT .6751 RRF .6582 RTF .9683 CRT .6187 CRS -.4087 CST -.9695  
 FDE .1165 FRA 1.7167 FC3 -.5088 BSP 20237 SGB 6162.5 R23 .0024 R13 .9683 LSA 1841.9 MSA 358.9 SSA 13.6  
 BOE .8344 BRA 4.4757 BC3 2.7039 FSP -638 SG1 6149.9 SG2 393.7 THA 3.38 EL1 1781.3 EL2 335.4 ALF 8.95

LAUNCH DATE JAN 28 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC

DISTANCE 593.337

RL 147.33 LAL -.00 LOL 127.90 VL 26.693 GAL 9.76 AZL 88.82 HCA 289.30 SMA 121.86 ECC .26672 INC 1.1833 V1 30.240  
 RP 108.00 LAP -1.12 LOP 57.21 VP 36.995 GAP 14.05 AZP 89.61 TAL 150.31 TAP 79.61 RCA 89.36 APO 154.37 V2 35.089  
 RC 180.483 GL 5.32 GP -10.79 ZAL 42.69 ZAP 168.24 ETS 297.04 ZAE 127.78 ETE 188.30 ZAC 156.79 ETC 172.39 CLP-175.30

PLANETOCENTRIC CONIC

C3 34.366 VHL 5.862 DLA 28.68 RAL 84.87 RAD 6568.4 VEL 12.479 PTH 2.26 VHP 9.409 DPA 9.26 RAP 62.75 ECC 1.5656  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 85.25 1 53 20 3798.19 -16.39 151.00 322.36 66.13 2 56 38 3198.2 -19.48 143.66  
 94.75 3 12 30 3541.86 -16.38 132.22 322.36 66.12 4 11 31 2941.9 -19.47 124.88  
 100.00 5 5 38 3177.96 -23.00 108.19 325.16 70.36 5 58 36 2578.0 -25.47 100.26  
 100.00 2 42 53 3637.33 -9.99 136.03 319.14 61.68 3 43 30 3037.3 -13.69 129.21  
 110.00 7 27 29 2733.86 -31.23 77.33 328.01 75.33 8 13 3 2133.9 -32.92 68.52  
 110.00 2 37 31 3654.19 -2.62 132.82 314.66 55.91 3 38 25 3054.2 -7.08 126.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5989 TRA 4.8722 TC3-2.4086 BAU 1.1068 SGT 6146.5 SGR 523.5 SG3 174.9 ST 1732.4 SR 418.4 SS 483.0  
 ROE .4163 RRA .2914 RC3 -.0472 FAU .01618 RRT .6702 RRF .6536 RTF .9693 CRT .5476 CRS -.3440 CST -.9737  
 FDE .0705 FRA 1.7650 FC3 -.4077 BSP 20317 SGB 6168.8 R23 .0019 R13 .9693 LSA 1809.8 MSA 366.4 SSA 13.1  
 BOE .7294 BRA 4.8809 BC3 2.4091 FSP -611 SG1 6156.6 SG2 387.9 THA 3.28 EL1 1748.2 EL2 347.0 ALF 7.84

LAUNCH DATE JAN 28 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 26 1969

HELIOCENTRIC CONIC

DISTANCE 598.396

RL 147.33 LAL -.00 LOL 127.90 VL 26.662 GAL 10.58 AZL 88.99 HCA 292.51 SMA 121.68 ECC .27689 INC 1.0124 V1 30.240  
 RP 107.96 LAP -.94 LOP 60.42 VP 36.985 GAP 14.75 AZP 89.61 TAL 149.05 TAP 81.56 RCA 87.99 APO 155.37 V2 35.102  
 RC 182.422 GL 4.29 GP -10.52 ZAL 40.95 ZAP 168.86 ETS 292.80 ZAE 127.66 ETE 188.09 ZAC 158.86 ETC 171.11 CLP-176.32

PLANETOCENTRIC CONIC

C3 38.397 VHL 6.197 DLA 27.70 RAL 86.78 RAD 6568.5 VEL 12.640 PTH 2.29 VHP 9.823 DPA 10.03 RAP 64.82 ECC 1.6319  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 32 30 3528.91 -19.81 132.75 327.85 69.35 4 31 19 2928.9 -22.45 125.07  
 90.00 1 48 33 3867.19 -10.49 153.20 323.65 63.55 2 53 0 3267.2 -13.96 146.24  
 100.00 5 37 48 3124.99 -24.17 104.69 329.50 71.85 6 29 53 2525.0 -26.42 96.61  
 100.00 2 25 56 3746.34 -6.41 142.15 321.47 60.74 3 28 23 3146.3 -10.26 135.48  
 110.00 7 47 12 2719.99 -31.46 76.32 331.89 75.89 8 32 32 2120.0 -33.08 67.47  
 110.00 2 33 1 3724.10 .05 136.47 317.47 55.82 3 35 5 3124.1 -4.44 130.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .4703 TRA 5.3074 TC3-2.1230 BAU 1.0900 SGT 6150.7 SGR 511.6 SG3 167.5 ST 1720.5 SR 404.7 SS 483.8  
 ROE .4249 RRA .3102 RC3 -.0399 FAU .01419 RRT .6663 RRF .6504 RTF .9705 CRT .4776 CRS -.2865 CST -.9782  
 FDE .0296 FRA 1.8168 FC3 -.3201 BSP 20304 SGB 6171.9 R23 .0018 R13 .9705 LSA 1794.9 MSA 369.0 SSA 12.6  
 BOE .6338 BRA 5.3164 BC3 2.1233 FSP -582 SG1 6160.1 SG2 380.9 THA 3.18 EL1 1731.8 EL2 353.3 ALF 6.69

LAUNCH DATE JAN 28 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 28 1969

HELIOCENTRIC CONIC

DISTANCE 603.315

RL 147.33 LAL -.00 LOL 127.90 VL 26.631 GAL 11.47 AZL 89.17 HCA 295.73 SMA 121.49 ECC .28805 INC .8332 V1 30.240  
 RP 107.92 LAP -.75 LOP 63.64 VP 36.974 GAP 15.50 AZP 89.64 TAL 147.82 TAP 83.56 RCA 86.50 APO 156.49 V2 35.114  
 RC 184.340 GL 3.31 GP -10.28 ZAL 39.31 ZAP 169.39 ETS 288.00 ZAE 127.52 ETE 187.90 ZAC 160.91 ETC 169.53 CLP-177.34

PLANETOCENTRIC CONIC

C3 43.107 VHL 6.566 DLA 26.75 RAL 88.55 RAD 6568.6 VEL 12.825 PTH 2.33 VHP 10.274 DPA 10.76 RAP 66.91 ECC 1.7094  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 10 9 3457.05 -21.47 128.13 332.37 71.08 5 7 46 2857.0 -23.86 120.28  
 90.00 1 25 2 3997.46 -6.45 160.64 325.74 62.37 2 31 40 3397.5 -10.10 153.86  
 100.00 6 3 34 3091.43 -24.86 102.43 333.57 72.85 6 55 5 2491.4 -26.97 94.27  
 100.00 2 14 18 3838.31 -3.32 147.23 324.02 60.28 3 18 17 3238.3 -7.26 140.65  
 110.00 8 5 3 2711.27 -31.60 76.68 335.68 76.24 8 50 14 2111.3 -33.17 66.80  
 110.00 2 29 18 3791.24 2.62 139.97 320.33 55.90 3 32 30 3191.2 -1.88 133.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3333 TRA 5.7676 TC3-1.8572 BAU 1.0705 SGT 6148.3 SGR 498.3 SG3 160.4 ST 1717.3 SR 390.3 SS 486.7  
 ROE .4334 RRA .3290 RC3 -.0334 FAU .01235 RRT .6623 RRF .6471 RTF .9719 CRT .4076 CRS -.2317 CST -.9824  
 FDE -.0100 FRA 1.8696 FC3 -.2481 BSP 20385 SGB 6168.5 R23 .0013 R13 .9719 LSA 1789.8 MSA 367.5 SSA 12.2  
 BOE .5467 BRA 5.7770 BC3 1.8575 FSP -558 SG1 6157.2 SG2 372.8 THA 3.08 EL1 1725.0 EL2 354.8 ALF 5.53

LAUNCH DATE JAN 28 1969 FLIGHT TIME 214.00 ARRIVAL DATE AUG 30 1969

HELIOCENTRIC CONIC . . . . . DISTANCE 608.067  
 RL 147.33 LAL -.00 LOL 127.90 VL 26.600 GAL 12.43 AZL 89.36 HCA 298.95 SMA 121.31 ECC .30033 INC .6437 V1 30.240  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.964 GAP 16.32 AZP 89.69 TAL 146.65 TAP 85.60 RCA 84.88 APO 157.74 V2 35.126  
 RC 186.236 GL 2.40 GP -10.05 ZAL 37.80 ZAP 169.82 ETS 282.63 ZAE 127.35 ETE 187.71 ZAC 162.93 ETC 167.57 CLP-178.38

PLANETOCENTRIC CONIC  
 C3 48.629 VHL 6.973 CLA 25.84 RAL 90.19 RAD 6568.8 VEL 13.038 PTH 2.38 VHP 10.767 DPA 11.43 RAP 69.00 ECC 1.8003  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 37 48 3416.31 -22.34 125.47 336.46 72.14 5 34 44 2816.3 -24.58 117.51  
 90.00 1 10 27 4098.71 -3.23 166.33 328.19 61.85 2 18 45 3498.7 -6.97 159.64  
 100.00 6 25 28 3069.19 -25.30 100.92 337.46 73.53 7 16 38 2469.2 -27.32 92.70  
 100.00 2 5 27 3921.06 -.52 151.78 326.69 60.11 3 10 49 3321.1 -4.49 145.24  
 110.00 8 21 16 2706.90 -31.67 75.36 339.41 76.42 9 6 23 2106.9 -33.22 66.47  
 110.00 2 26 10 3856.13 5.08 143.37 323.21 56.15 3 30 26 3256.1 .60 137.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .1935 TRA 6.2614 TC3-1.6061 BAU 1.0443 SGT 6141.5 SGR 484.0 SG3 153.6 ST 1723.5 SR 375.5 SS 492.1  
 RDE .4421 RRA .3478 RC3 -.0272 FAU .01054 RRT .6587 RRF .6443 RTF .9735 CRT .3417 CRS -.1833 CST -.9862  
 FDE -.0464 FRA 1.9262 FC3 -.1876 BSP 20443 SGB 6160.5 R23 .0010 R13 .9735 LSA 1795.2 MSA 362.0 SSA 11.7  
 BOE .4826 BRA 6.2711 BC3 1.6063 FSP -.535 SG1 6149.8 SG2 363.6 THA 2.98 EL1 1728.5 EL2 351.9 ALF 4.44

LAUNCH DATE JAN 28 1969 FLIGHT TIME 216.00 ARRIVAL DATE SEP 1 1969

HELIOCENTRIC CONIC . . . . . DISTANCE 612.618  
 RL 147.33 LAL -.00 LOL 127.90 VL 26.570 GAL 13.47 AZL 89.56 HCA 302.17 SMA 121.13 ECC .31390 INC .4421 V1 30.240  
 RP 107.85 LAP -.37 LOP 70.07 VP 36.953 GAP 17.21 AZP 89.76 TAL 145.54 TAP 87.71 RCA 83.11 APO 159.16 V2 35.138  
 RC 188.109 GL 1.54 GP -9.84 ZAL 36.39 ZAP 170.15 ETS 276.68 ZAE 127.16 ETE 187.53 ZAC 164.90 ETC 165.09 CLP-179.44

PLANETOCENTRIC CONIC  
 C3 55.131 VHL 7.425 CLA 24.97 RAL 91.70 RAD 6569.0 VEL 13.285 PTH 2.43 VHP 11.309 DPA 12.05 RAP 71.09 ECC 1.9073  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 0 33 3390.32 -22.88 123.75 340.34 72.84 5 57 4 2790.3 -25.01 115.73  
 90.00 0 59 42 4187.02 -.38 171.26 330.80 61.69 2 9 29 3587.0 -4.16 164.62  
 100.00 6 44 37 3054.83 -25.57 99.95 341.22 73.97 7 35 32 2454.8 -27.53 91.69  
 100.00 1 58 20 3997.75 2.08 155.98 329.43 60.17 3 4 57 3397.8 -1.91 149.46  
 110.00 8 36 1 2706.26 -31.68 75.31 343.06 76.44 9 21 8 2106.3 -33.22 66.42  
 110.00 2 23 24 3919.08 7.46 146.70 326.11 56.54 3 28 43 3319.1 3.01 140.44

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE .0494 TRA 6.7926 TC3-1.3711 BAU 1.0107 SGT 6130.3 SGR 468.5 SG3 147.3 ST 1736.1 SR 360.5 SS 499.6  
 RDE .4511 RRA .3664 RC3 -.0215 FAU .00874 RRT .6552 RRF .6417 RTF .9753 CRT .2806 CRS -.1408 CST -.9895  
 FDE -.0802 FRA 1.9873 FC3 -.1372 BSP 20473 SGB 6148.1 R23 .0008 R13 .9753 LSA 1808.0 MSA 353.2 SSA 11.3  
 BOE .4538 BRA 6.8024 BC3 1.3712 FSP -.512 SG1 6138.0 SG2 353.5 THA 2.88 EL1 1739.2 EL2 345.4 ALF 3.47

LAUNCH DATE JAN 28 1969 FLIGHT TIME 218.00 ARRIVAL DATE SEP 3 1969

HELIOCENTRIC CONIC . . . . . DISTANCE 616.925  
 RL 147.33 LAL -.00 LOL 127.90 VL 26.541 GAL 14.62 AZL 89.77 HCA 305.39 SMA 120.96 ECC .32893 INC .2257 V1 30.240  
 RP 107.81 LAP -.18 LOP 73.29 VP 36.943 GAP 18.20 AZP 89.87 TAL 144.51 TAP 89.90 RCA 81.17 APO 160.75 V2 35.150  
 RC 189.959 GL .73 GP -9.64 ZAL 35.11 ZAP 170.34 ETS 270.23 ZAE 126.92 ETE 187.36 ZAC 166.81 ETC 161.90 CLP 179.46

PLANETOCENTRIC CONIC  
 C3 62.822 VHL 7.926 CLA 24.14 RAL 93.07 RAD 6569.2 VEL 13.571 PTH 2.48 VHP 11.907 DPA 12.63 RAP 73.16 ECC 2.0339  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 20 3 3373.71 -23.21 122.64 344.05 73.30 6 16 17 2773.7 -25.27 114.58  
 90.00 0 51 10 4267.42 2.21 175.74 333.48 61.76 2 2 17 3667.4 -1.58 169.11  
 100.00 7 1 34 3046.42 -25.73 99.37 344.86 74.24 7 52 20 2446.4 -27.64 91.09  
 100.00 1 52 20 4069.92 4.52 159.96 332.21 60.42 3 0 10 3469.9 .54 153.42  
 110.00 8 49 27 2708.86 -31.64 75.50 346.63 76.34 9 34 36 2108.9 -33.20 66.62  
 110.00 2 20 56 3980.26 9.74 149.97 329.01 57.07 3 27 16 3380.3 5.34 143.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.0952 TRA 7.3700 TC3-1.1485 BAU .9647 SGT 6116.1 SGR 451.9 SG3 141.4 ST 1753.7 SR 345.2 SS 509.2  
 RDE .4605 RRA .3845 RC3 -.0160 FAU .00688 RRT .6518 RRF .6395 RTF .9773 CRT .2266 CRS -.1054 CST -.9922  
 FDE -.1107 FRA 2.0552 FC3 -.0948 BSP 19572 SGB 6132.8 R23 .0007 R13 .9773 LSA 1826.7 MSA 342.0 SSA 10.8  
 BOE .4703 BRA 7.3801 BC3 1.1487 FSP -.488 SG1 6123.2 SG2 342.4 THA 2.77 EL1 1755.5 EL2 335.9 ALF 2.65

LAUNCH DATE JAN 28 1969 FLIGHT TIME 220.00 ARRIVAL DATE SEP 5 1969

HELIOCENTRIC CONIC . . . . . DISTANCE 620.932  
 RL 147.33 LAL -.00 LOL 127.90 VL 26.512 GAL 15.87 AZL 90.01 HCA 308.61 SMA 120.80 ECC .34564 INC .0000 V1 30.240  
 RP 107.78 LAP .01 LOP 76.52 VP 36.933 GAP 19.29 AZP 90.01 TAL 143.56 TAP 92.17 RCA 79.04 APO 162.55 V2 35.161  
 RC 191.786 GL -.03 GP -9.47 ZAL 33.95 ZAP 170.39 ETS 263.38 ZAE 126.65 ETE 187.19 ZAC 168.63 ETC 157.68 CLP 178.33

PLANETOCENTRIC CONIC  
 C3 71.972 VHL 8.484 CLA 23.36 RAL 94.31 RAD 6569.4 VEL 13.904 PTH 2.54 VHP 12.571 DPA 13.16 RAP 75.22 ECC 2.1845  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 37 4 3363.81 -23.40 121.98 347.62 73.58 6 33 8 2763.8 -25.43 113.90  
 90.00 0 44 2 4342.14 4.61 179.92 336.19 62.03 1 56 24 3742.1 .83 173.28  
 100.00 7 16 39 3042.73 -25.80 -99.12 348.37 74.35 8 7 22 2442.7 -27.70 90.83  
 100.00 1 47 8 4138.44 6.80 163.76 334.99 60.82 2 56 6 3538.4 2.86 157.18  
 110.00 9 1 39 2714.23 -31.56 75.90 350.10 76.12 9 46 53 2114.2 -33.14 67.03  
 110.00 2 18 37 4039.72 11.92 153.19 331.90 57.72 3 25 57 3439.7 7.58 146.79

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.2493 TRA 7.9894 TC3 -.9486 BAU .9128 SGT 6096.1 SGR 433.9 SG3 135.8 ST 1771.9 SR 329.5 SS 520.5  
 RDE .4699 RRA .4013 RC3 -.0112 FAU .00506 RRT .6474 RRF .6363 RTF .9793 CRT .1760 CRS -.0722 CST -.9943  
 FDE -.1409 FRA 2.1283 FC3 -.0609 BSP 20430 SGB 6111.5 R23 .0006 R13 .9793 LSA 1846.9 MSA 328.8 SSA 10.3  
 BOE .5319 BRA 7.9995 BC3 .9486 FSP -.469 SG1 6102.6 SG2 330.3 THA 2.65 EL1 1772.9 EL2 324.2 ALF 1.94

LAUNCH DATE JAN 29 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 9 1969

HELIOCENTRIC CONIC

DISTANCE 167.242

RL 147.35 LAL -.00 LOL 128.92 VL 24.121 GAL -.11 AZL 86.97 HCA 70.31 SMA 108.83 ECC .35401 INC 3.0315 V1 30.236
RP 107.93 LAP 2.85 LOP 199.20 VP 35.210 GAP -20.73 AZP 88.98 TAL 180.21 TAP 250.52 RCA 70.30 APO 147.35 V2 35.111
RC 42.394 GL 11.71 GP 7.27 ZAL 92.47 ZAP 12.29 ETS 218.17 ZAE 169.28 ETE 345.94 ZAC 120.15 ETC 161.17 CLP 9.93

PLANETOCENTRIC CONIC

C3 39.496 VHL 6.285 DLA 24.67 RAL 29.85 RAD 6568.5 VEL 12.683 PTH 2.30 VHP 12.980 DPA 15.52 RAP 25.05 ECC 1.6500
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 55 15 3288.46 -24.75 116.88 272.53 75.79 1 50 4 2688.5 -26.47 108.63
90.00 20 39 48 4121.90 -2.48 167.62 263.71 61.78 21 48 30 3521.9 -6.23 160.95
100.00 2 38 18 2956.23 -27.25 93.10 273.20 77.20 3 27 34 2356.2 -28.74 84.61
100.00 21 39 27 3929.36 -.24 152.23 262.47 60.11 22 44 56 3329.4 -4.21 145.70
110.00 4 28 21 2611.91 -32.97 68.26 274.51 80.43 5 11 53 2011.9 -33.94 59.15
110.00 22 5 53 3846.45 4.72 142.87 259.38 56.10 23 9 59 3246.4 .23 136.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3383 TRA -.7037 TC3 .1266 BAW .0673 SGT 786.7 SGR 430.2 SG3 61.2 ST 374.1 SR 418.2 SS 274.1
RDE -.4574 RRA .1039 RC3 -.0145 FAU .02171 RRT .1539 RRF -.1700 RTF -.6808 CRT .7796 CRS .8947 CST .9743
FDE .2481 FRA .3024 FC3 -.4759 B9P 2350 SGB 896.6 R23 -.0228 R13 -.6836 LSA 595.0 MSA 189.1 SSA 15.5
BOE .5689 BRA .7113 BC3 .1274 FSP -145 SG1 790.6 S62 423.0 THA 6.75 EL1 529.8 EL2 185.0 ALF 49.07

LAUNCH DATE JAN 29 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 11 1969

HELIOCENTRIC CONIC

DISTANCE 173.896

RL 147.35 LAL -.00 LOL 128.92 VL 24.479 GAL -.26 AZL 87.14 HCA 73.52 SMA 110.40 ECC .33474 INC 2.8640 V1 30.236
RP 107.97 LAP 2.75 LOP 202.42 VP 35.444 GAP -19.52 AZP 89.19 TAL 180.51 TAP 254.03 RCA 73.44 APO 147.35 V2 35.099
RC 42.534 GL 11.91 GP 7.65 ZAL 93.22 ZAP 11.17 ETS 225.21 ZAE 166.80 ETE 351.58 ZAC 121.35 ETC 160.53 CLP 8.17

PLANETOCENTRIC CONIC

C3 35.099 VHL 5.924 DLA 24.59 RAL 29.00 RAD 6568.4 VEL 12.509 PTH 2.26 VHP 12.300 DPA 16.44 RAP 26.27 ECC 1.5776
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 53 9 3254.18 -25.31 114.52 269.50 76.85 1 47 23 2654.2 -26.87 106.20
90.00 20 35 7 4096.53 -3.30 166.21 261.02 61.86 21 43 24 3496.5 -7.03 159.52
100.00 2 35 57 2922.72 -27.73 90.72 270.10 78.37 3 24 40 2322.7 -29.05 82.17
100.00 21 35 0 3903.23 -1.13 150.80 259.81 60.13 22 40 3 3303.2 -5.09 144.26
110.00 4 25 41 2579.41 -33.31 65.78 271.23 81.86 5 8 41 1979.4 -34.08 56.62
110.00 22 1 45 3819.30 3.69 141.44 256.81 55.99 23 5 25 3219.3 -.80 135.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3414 TRA -.6860 TC3 .1691 BAW .0795 SGT 825.5 SGR 433.8 SG3 68.1 ST 396.2 SR 422.6 SS 285.3
RDE -.4358 RRA .0961 RC3 -.0081 FAU .02300 RRT .1750 RRF -.1906 RTF -.7003 CRT .7911 CRS .8989 CST .9762
FDE .2576 FRA .3074 FC3 -.5674 B9P 2424 SGB 932.6 R23 -.0243 R13 -.7033 LSA 616.9 MSA 190.3 SSA 16.1
BOE .5536 BRA .6927 BC3 .1693 FSP -162 SG1 830.3 S62 424.7 THA 7.13 EL1 548.4 EL2 186.8 ALF 47.33

LAUNCH DATE JAN 29 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC

DISTANCE 180.574

RL 147.35 LAL -.00 LOL 128.92 VL 24.807 GAL -.41 AZL 87.30 HCA 76.74 SMA 111.91 ECC .31681 INC 2.7021 V1 30.236
RP 108.01 LAP 2.63 LOP 205.64 VP 35.659 GAP -18.37 AZP 89.38 TAL 180.89 TAP 257.62 RCA 76.45 APO 147.36 V2 35.086
RC 42.853 GL 12.07 GP 8.06 ZAL 94.10 ZAP 10.27 ETS 233.85 ZAE 164.29 ETE 355.65 ZAC 122.51 ETC 159.82 CLP 6.38

PLANETOCENTRIC CONIC

C3 31.297 VHL 5.594 DLA 24.42 RAL 28.03 RAD 6568.2 VEL 12.356 PTH 2.23 VHP 11.651 DPA 17.38 RAP 27.46 ECC 1.5151
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 52 13 3215.06 -25.88 111.80 266.39 78.10 1 45 48 2615.1 -27.27 103.40
90.00 20 28 17 4077.85 -3.90 165.16 258.18 61.93 21 36 15 3477.9 -7.62 158.46
100.00 2 34 30 2885.30 -28.21 88.05 266.90 79.69 3 22 35 2285.3 -29.35 79.43
100.00 21 28 42 3882.84 -1.82 149.68 257.03 60.16 22 33 24 3282.8 -5.77 143.13
110.00 4 23 29 2544.30 -33.62 63.09 267.84 83.43 5 5 54 1944.3 -34.16 53.88
110.00 21 56 11 3796.61 2.82 140.26 254.13 55.92 22 59 28 3196.6 -1.67 134.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3445 TRA -.6635 TC3 .2230 BAW .0933 SGT 862.4 SGR 437.7 SG3 75.6 ST 418.0 SR 427.0 SS 297.9
RDE -.4159 RRA .0895 RC3 .0008 FAU .02436 RRT .1998 RRF -.2180 RTF -.7215 CRT .8043 CRS .9060 CST .9773
FDE .2696 FRA .3079 FC3 -.6738 B9P 2564 SGB 967.1 R23 -.0278 R13 -.7249 LSA 640.0 MSA 189.6 SSA 16.6
BOE .5401 BRA .6695 BC3 .2230 FSP -181 SG1 868.2 S62 426.0 THA 7.64 EL1 567.5 EL2 186.9 ALF 45.76

LAUNCH DATE JAN 29 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC

DISTANCE 187.271

RL 147.35 LAL -.00 LOL 128.92 VL 25.109 GAL -.57 AZL 87.46 HCA 79.95 SMA 113.34 ECC .30017 INC 2.5446 V1 30.236
RP 108.05 LAP 2.51 LOP 208.86 VP 35.857 GAP -17.27 AZP 89.56 TAL 181.33 TAP 261.28 RCA 79.32 APO 147.37 V2 35.073
RC 43.347 GL 12.16 GP 8.52 ZAL 95.13 ZAP 9.66 ETS 244.09 ZAE 161.82 ETE 358.80 ZAC 123.62 ETC 159.05 CLP 4.58

PLANETOCENTRIC CONIC

C3 28.012 VHL 5.293 DLA 24.13 RAL 26.94 RAD 6568.1 VEL 12.222 PTH 2.20 VHP 11.032 DPA 18.35 RAP 28.62 ECC 1.4610
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 52 31 3171.22 -26.46 108.72 263.20 79.54 1 45 22 2571.2 -27.64 100.25
90.00 20 19 20 4066.17 -4.27 164.50 255.23 61.98 21 27 6 3466.2 -7.99 157.80
100.00 2 34 0 2844.03 -28.68 85.07 263.63 81.19 3 21 24 2244.0 -29.60 76.39
100.00 21 20 33 3868.58 -2.30 148.90 254.14 60.19 22 25 1 3268.6 -6.25 142.34
110.00 4 21 51 2506.60 -33.88 60.17 264.35 85.13 5 3 37 1906.6 -34.18 50.94
110.00 21 49 11 3778.78 2.14 139.32 251.37 55.88 22 52 9 3178.8 -2.35 133.12

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3470 TRA -.6408 TC3 .2829 BAW .1060 SGT 899.2 SGR 441.2 SG3 83.9 ST 439.6 SR 430.7 SS 307.5
RDE -.3969 RRA .0837 RC3 .0131 FAU .02592 RRT .2272 RRF -.2472 RTF -.7371 CRT .8168 CRS .9126 CST .9783
FDE .2796 FRA .3058 FC3 -.8010 B9P 2673 SGB 1001.6 R23 -.0319 R13 -.7409 LSA 661.5 MSA 188.2 SSA 17.3
BOE .5272 BRA .6462 BC3 .2832 FSP -206 SG1 906.4 S62 426.3 THA 8.18 EL1 586.6 EL2 186.2 ALF 44.29

LAUNCH DATE JAN 29 1969 FLIGHT TIME 78.00 ARRIVAL DATE APR 17 1969

Heliocentric Conic: RL 147.35 LAL -.00 LOL 128.92 VL 25.386 GAL -.74 AZL 87.61 HCA 83.16 SMA 114.71 ECC .28478 INC 2.3903 V1 30.236  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.038 GAP -16.22 AZP 89.71 TAL 181.85 TAP 265.01 RCA 82.05 APO 147.38 V2 35.060  
 RC 44.011 GL 12.18 GP 9.02 ZAL 96.28 ZAP 9.43 ETS 255.53 ZAE 159.43 ETE 1.39 ZAC 124.66 ETC 158.21 CLP 2.75

Distance 193.982

Planetary Corrections: C3 25.176 VHL 5.018 DLA 23.73 RAL 25.76 RAD 6568.0 VEL 12.106 PTH 2.17 VHP 10.442 DPA 19.35 RAP 29.74 ECC 1.4143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 54 3 3122.92 -27.01 105.29 259.95 81.17 1 46 6 2522.9 -27.96 96.75  
 90.00 20 8 23 4061.52 -4.42 164.24 252.20 62.00 21 16 4 3461.5 -8.13 157.53  
 100.00 2 34 30 2799.03 -29.11 81.79 260.29 82.87 3 21 9 2199.0 -29.79 73.05  
 100.00 21 10 36 3860.65 -2.57 148.46 251.18 60.21 22 14 57 3260.6 -6.51 141.90  
 110.00 4 20 51 2466.33 -34.07 57.04 260.80 86.98 5 1 57 1866.3 -34.11 47.80  
 110.00 21 40 45 3766.11 1.66 138.66 248.54 55.85 22 43 31 3166.1 -2.84 132.46

Differential Corrections: TDE -.3470 TRA -.6173 TC3 .3530 BAU .1192 SGT 935.7 SGR 444.9 SG3 93.1 ST 458.8 SR 434.0 SS 315.7  
 RDE -.3792 RRA .0784 RC3 .0295 FAU .02764 RRT .2565 RRF -.2798 RTF -.7533 CRT .8277 CRS .9186 CST .9790  
 FDE .2888 FRA .3030 FC3 -.9503 BSP 2808 SGB 1036.1 R23 -.0372 R13 -.7577 LSA 680.7 MSA 186.5 SSA 18.1  
 BDE .5140 BRA .6223 BC3 .3542 FSP -231 SG1 944.4 SG2 426.0 THA 8.75 EL1 603.8 EL2 185.1 ALF 43.08

LAUNCH DATE JAN 29 1969 FLIGHT TIME 80.00 ARRIVAL DATE APR 19 1969

Heliocentric Conic: RL 147.35 LAL -.00 LOL 128.92 VL 25.639 GAL -.90 AZL 87.76 HCA 86.36 SMA 116.01 ECC .27058 INC 2.2381 V1 30.236  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.204 GAP -15.22 AZP 89.86 TAL 182.43 TAP 268.80 RCA 84.62 APO 147.40 V2 35.047  
 RC 44.838 GL 12.12 GP 9.58 ZAL 97.55 ZAP 9.62 ETS 267.31 ZAE 157.15 ETE 3.62 ZAC 125.63 ETC 157.29 CLP .88

Distance 200.702

Planetary Corrections: C3 22.730 VHL 4.768 DLA 23.21 RAL 24.50 RAD 6567.9 VEL 12.005 PTH 2.14 VHP 9.880 DPA 20.38 RAP 30.82 ECC 1.3741  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 46 3070.61 -27.51 101.54 256.67 82.99 1 47 57 2470.6 -28.19 92.94  
 90.00 19 55 35 4063.77 -4.35 164.37 249.13 61.99 21 3 19 3463.8 -8.06 157.66  
 100.00 2 36 2 2750.54 -29.46 78.23 256.91 84.71 3 21 53 2150.5 -29.88 69.45  
 100.00 20 59 0 3859.07 -2.62 148.37 248.18 60.21 22 3 20 3259.1 -6.57 141.81  
 110.00 4 20 33 2423.57 -34.17 53.71 257.22 88.95 5 0 56 1823.6 -33.94 44.47  
 110.00 21 30 59 3758.81 1.38 138.28 245.68 55.84 22 33 38 3158.8 -3.11 132.08

Differential Corrections: TDE -.3459 TRA -.5929 TC3 .4315 BAU .1321 SGT 971.2 SGR 449.0 SG3 103.5 ST 476.5 SR 436.7 SS 321.8  
 RDE -.3626 RRA .0737 RC3 .0510 FAU .02959 RRT .2901 RRF -.3165 RTF -.7678 CRT .8383 CRS .9243 CST .9797  
 FDE .2969 FRA .2985 FC3-1.1271 BSP 2932 SGB 1070.0 R23 -.0427 R13 -.7729 LSA 697.9 MSA 184.1 SSA 18.9  
 BDE .5012 BRA .5975 BC3 .4346 FSP -261 SG1 982.0 SG2 425.0 THA 9.42 EL1 619.9 EL2 183.0 ALF 42.03

LAUNCH DATE JAN 29 1969 FLIGHT TIME 82.00 ARRIVAL DATE APR 21 1969

Heliocentric Conic: RL 147.35 LAL -.00 LOL 128.92 VL 25.871 GAL -1.07 AZL 87.91 HCA 89.57 SMA 117.23 ECC .25753 INC 2.0872 V1 30.236  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.356 GAP -14.26 AZP 89.98 TAL 183.08 TAP 272.65 RCA 87.04 APO 147.42 V2 35.033  
 RC 45.818 GL 11.97 GP 10.20 ZAL 98.92 ZAP 10.25 ETS 278.39 ZAE 155.02 ETE 5.64 ZAC 126.52 ETC 156.31 CLP -1.02

Distance 207.427

Planetary Corrections: C3 20.622 VHL 4.541 DLA 22.56 RAL 23.18 RAD 6567.8 VEL 11.916 PTH 2.12 VHP 9.344 DPA 21.45 RAP 31.83 ECC 1.3394  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 36 3014.79 -27.90 97.51 253.36 84.97 1 50 51 2414.8 -28.31 88.66  
 90.00 19 41 13 4072.62 -4.06 164.87 246.06 61.95 20 49 5 3472.6 -7.78 158.16  
 100.00 2 38 35 2698.89 -29.73 74.42 253.51 86.70 3 23 33 2098.9 -29.87 65.61  
 100.00 20 45 55 3863.76 -2.46 148.63 245.18 60.20 21 50 19 3263.8 -6.41 142.07  
 110.00 4 21 0 2378.44 -34.17 50.18 253.62 91.03 5 0 39 1778.4 -33.65 40.98  
 110.00 21 19 59 3756.97 1.31 138.19 242.82 55.84 22 22 36 3157.0 -3.18 131.98

Differential Corrections: TDE -.3423 TRA -.5673 TC3 .5235 BAU .1459 SGT 1006.7 SGR 453.8 SG3 115.1 ST 490.7 SR 438.9 SS 325.2  
 BDE .4875 BRA .5716 BC3 .5293 FSP -295 SG1 1019.9 SG2 423.3 THA 10.16 EL1 633.1 EL2 180.5 ALF 41.24

LAUNCH DATE JAN 29 1969 FLIGHT TIME 84.00 ARRIVAL DATE APR 23 1969

Heliocentric Conic: RL 147.35 LAL -.00 LOL 128.92 VL 26.082 GAL -1.23 AZL 88.06 HCA 92.77 SMA 118.38 ECC .24557 INC 1.9365 V1 30.236  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.494 GAP -13.35 AZP 90.09 TAL 183.78 TAP 276.55 RCA 89.31 APO 147.46 V2 35.020  
 RC 46.944 GL 11.72 GP 10.90 ZAL 100.39 ZAP 11.29 ETS 288.05 ZAE 153.05 ETE 7.53 ZAC 127.31 ETC 155.25 CLP -2.97

Distance 214.153

Planetary Corrections: C3 18.807 VHL 4.337 DLA 21.79 RAL 21.82 RAD 6567.8 VEL 11.840 PTH 2.10 VHP 8.835 DPA 22.56 RAP 32.77 ECC 1.3095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 5 28 2956.02 -28.18 93.23 250.06 87.10 1 54 44 2356.0 -28.29 84.56  
 90.00 19 25 30 4087.67 -3.58 165.71 243.03 61.89 20 33 37 3487.7 -7.31 159.02  
 100.00 2 42 6 2644.45 -29.87 70.38 250.13 88.82 3 26 10 2044.4 -29.71 61.57  
 100.00 20 31 33 3874.48 -2.10 149.22 242.21 60.17 21 36 8 3274.5 -6.05 142.66  
 110.00 4 22 15 2331.11 -34.05 46.49 250.04 93.21 5 1 6 1731.1 -33.23 37.35  
 110.00 21 7 53 3760.58 1.44 138.37 239.99 55.84 22 10 34 3160.6 -3.05 132.17

Differential Corrections: TDE -.3382 TRA -.5429 TC3 .6199 BAU .1584 SGT 1041.8 SGR 460.0 SG3 128.1 ST 503.6 SR 440.4 SS 326.0  
 RDE -.3327 RRA .0659 RC3 .1132 FAU .03422 RRT .3688 RRF -.4034 RTF -.7965 CRT .8562 CRS .9341 CST .9804  
 FDE .3082 FRA .2852 FC3-1.5754 BSP 3245 SGB 1138.9 R23 -.0562 R13 -.8032 LSA 722.2 MSA 178.1 SSA 20.9  
 BDE .4744 BRA .5469 BC3 .6301 FSP -334 SG1 1058.2 SG2 421.0 THA 11.01 EL1 645.0 EL2 177.6 ALF 40.54

LAUNCH DATE JAN 29 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 220.877

RL 147.35 LAL -0.00 LOL 128.92 VL 26.276 GAL -1.39 AZL 88.21 HCA 95.97 SMA 119.46 ECC .23464 INC 1.7851 V1 30.236  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.620 GAP -12.48 AZP 90.19 TAL 184.54 TAP 280.50 RCA 91.43 APO 147.49 V2 35.007  
 RC 48.205 GL 11.36 GP 11.67 ZAL 101.93 ZAP 12.67 ETS 296.05 ZAE 151.25 ETE 9.37 ZAC 127.98 ETC 154.11 CLP -4.97

PLANETOCENTRIC CONIC

C3 17.247 VHL 4.153 DLA 20.87 RAL 20.44 RAD 6567.7 VEL 11.774 PTH 2.08 VHP 8.351 OPA 23.72 RAP 33.63 ECC 1.2838  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 11 18 2894.81 -28.31 88.76 246.79 89.34 1 59 33 2294.8 -28.10 80.10  
 90.00 19 8 43 4108.50 -2.91 166.87 240.07 61.82 20 17 11 3508.5 -6.66 160.20  
 100.00 2 46 34 2587.60 -29.88 66.15 246.79 91.05 3 29 42 1987.6 -29.41 57.38  
 100.00 20 16 8 3890.94 -1.54 150.12 239.31 60.14 21 20 59 3290.9 -5.50 143.58  
 110.00 4 24 20 2281.76 -33.80 42.66 246.52 95.47 5 2 21 1681.8 -32.67 33.60  
 110.00 20 54 52 3769.55 1.79 138.84 237.23 55.86 21 57 41 3169.6 -2.70 132.64

DIFFERENTIAL CORRECTIONS

TDE -.3317 TRA -.5189 TC3 .7239 BAU .1708  
 RDE -.3191 RRA .0626 RC3 .1562 FAU .03695  
 FDE .3103 FRA .2772 FC3-1.8547 BSP 3375  
 BDE .4603 BRA .5226 BC3 .7406 FSP -377

MID-COURSE EXECUTION ACCURACY

SGT 1076.1 SGR 468.1 SG3 142.6  
 RRT .4141 RRF -.4536 RTF -.8084  
 SGB 1173.5 R23 -.0648 R13 -.8163  
 SG1 1096.4 SG2 418.2 THA 11.98

ORBIT DETERMINATION ACCURACY

ST 512.5 SR 441.1 SS 323.1  
 CRT .8634 CRS .9379 CST .9805  
 LSA 728.3 MSA 174.9 SSA 22.1  
 EL1 653.2 EL2 174.6 ALF 40.05

LAUNCH DATE JAN 29 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 227.594

RL 147.35 LAL -0.00 LOL 128.92 VL 26.451 GAL -1.54 AZL 88.37 HCA 99.17 SMA 120.47 ECC .22470 INC 1.6320 V1 30.236  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.733 GAP -11.64 AZP 90.26 TAL 185.33 TAP 284.49 RCA 93.40 APO 147.54 V2 34.994  
 RC 49.590 GL 10.88 GP 12.53 ZAL 103.53 ZAP 14.35 ETS 302.47 ZAE 149.63 ETE 11.21 ZAC 128.52 ETC 152.90 CLP -7.04

PLANETOCENTRIC CONIC

C3 15.909 VHL 3.989 DLA 19.83 RAL 19.08 RAD 6567.6 VEL 11.717 PTH 2.06 VHP 7.892 OPA 24.94 RAP 34.39 ECC 1.2618  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 18 1 2831.61 -28.27 84.13 243.59 91.66 2 5 13 2231.6 -27.74 75.51  
 90.00 18 51 8 4134.69 -2.07 168.34 237.24 61.75 20 0 2 3534.7 -5.83 161.68  
 100.00 2 51 57 2528.71 -29.72 61.78 243.52 93.34 3 34 6 1928.7 -28.94 53.06  
 100.00 19 59 53 3912.81 -.80 151.32 236.53 60.12 21 5 6 3312.8 -4.77 144.79  
 110.00 4 27 15 2230.59 -33.39 38.72 243.10 97.77 5 4 25 1630.6 -31.96 29.78  
 110.00 20 41 5 3783.70 2.33 139.58 234.58 55.89 21 44 9 3183.7 -2.16 133.38

DIFFERENTIAL CORRECTIONS

TDE -.3224 TRA -.4939 TC3 .8355 BAU .1832  
 RDE -.3060 RRA .0599 RC3 .2090 FAU .04001  
 FDE .3081 FRA .2666 FC3-2.1774 BSP 3519  
 BDE .4445 BRA .4975 BC3 .8613 FSP -425

MID-COURSE EXECUTION ACCURACY

SGT 1108.0 SGR 479.0 SG3 158.8  
 RRT .4630 RRF -.5076 RTF -.8199  
 SGB 1207.1 R23 -.0743 R13 -.8292  
 SG1 1153.5 SG2 415.0 THA 13.11

ORBIT DETERMINATION ACCURACY

ST 515.8 SR 440.5 SS 315.1  
 CRT .8691 CRS .9407 CST .9803  
 LSA 727.6 MSA 171.5 SSA 23.6  
 EL1 656.4 EL2 171.2 ALF 39.83

LAUNCH DATE JAN 29 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 234.303

RL 147.35 LAL -0.00 LOL 128.92 VL 26.611 GAL -1.69 AZL 88.52 HCA 102.36 SMA 121.40 ECC .21567 INC 1.4762 V1 30.236  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.836 GAP -10.84 AZP 90.32 TAL 186.15 TAP 288.51 RCA 95.22 APO 147.58 V2 34.980  
 RC 51.091 GL 10.27 GP 13.49 ZAL 105.17 ZAP 16.28 ETS 307.59 ZAE 148.20 ETE 13.10 ZAC 128.92 ETC 151.63 CLP -9.19

PLANETOCENTRIC CONIC

C3 14.761 VHL 3.842 DLA 18.65 RAL 17.76 RAD 6567.6 VEL 11.668 PTH 2.05 VHP 7.458 OPA 26.22 RAP 35.04 ECC 1.2429  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 25 36 2766.82 -28.05 79.41 240.49 94.02 2 11 43 2166.8 -27.20 70.84  
 90.00 18 32 59 4165.80 -1.07 170.07 234.55 61.70 19 42 25 3565.8 -4.84 163.43  
 100.00 2 58 13 2468.12 -29.40 57.30 240.36 95.68 3 39 22 1868.1 -28.30 48.67  
 100.00 19 43 2 3939.73 .11 152.80 233.90 60.11 20 48 42 3339.7 -3.87 146.27  
 110.00 4 31 1 2177.80 -32.84 34.70 239.81 100.08 5 7 19 1577.8 -31.10 25.91  
 110.00 20 26 44 3802.81 3.06 140.58 232.06 55.94 21 30 7 3202.8 -1.43 134.37

DIFFERENTIAL CORRECTIONS

TDE -.3107 TRA -.4706 TC3 .9488 BAU .1948  
 RDE -.2935 RRA .0575 RC3 .2729 FAU .04340  
 FDE .3015 FRA .2558 FC3-2.5456 BSP 3665  
 BDE .4274 BRA .4741 BC3 .9873 FSP -482

MID-COURSE EXECUTION ACCURACY

SGT 1137.9 SGR 493.6 SG3 176.9  
 RRT .5139 RRF -.5646 RTF -.8297  
 SGB 1240.4 R23 -.0858 R13 -.8408  
 SG1 1170.0 SG2 411.9 THA 14.39

ORBIT DETERMINATION ACCURACY

ST 514.3 SR 438.5 SS 302.3  
 CRT .8729 CRS .9421 CST .9797  
 LSA 720.6 MSA 168.3 SSA 25.2  
 EL1 654.7 EL2 168.1 ALF 39.80

LAUNCH DATE JAN 29 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 240.999

RL 147.35 LAL -0.00 LOL 128.92 VL 26.756 GAL -1.82 AZL 88.68 HCA 105.55 SMA 122.27 ECC .20752 INC 1.3168 V1 30.236  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.928 GAP -10.07 AZP 90.35 TAL 187.00 TAP 292.55 RCA 96.89 APO 147.64 V2 34.967  
 RC 52.697 GL 9.53 GP 14.57 ZAL 106.82 ZAP 18.44 ETS 311.65 ZAE 146.94 ETE 15.09 ZAC 129.14 ETC 150.29 CLP -11.42

PLANETOCENTRIC CONIC

C3 13.779 VHL 3.712 DLA 17.34 RAL 16.49 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 7.048 OPA 27.58 RAP 35.56 ECC 1.2268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 0 2700.74 -27.65 74.62 237.53 96.38 2 19 1 2100.7 -26.47 66.14  
 90.00 18 14 30 4201.47 .09 172.06 232.06 61.68 19 24 31 3601.5 -3.70 165.43  
 100.00 3 5 22 2406.09 -28.89 52.76 237.35 98.02 3 45 28 1806.1 -27.48 44.24  
 100.00 19 25 48 3971.35 1.18 154.54 231.45 60.13 20 32 0 3371.4 -2.80 148.01  
 110.00 4 35 40 2123.58 -32.12 30.63 236.68 102.39 5 11 3 1523.6 -30.08 22.01  
 110.00 20 12 0 3826.63 3.96 141.83 229.71 56.02 21 15 47 3226.6 -.52 135.62

DIFFERENTIAL CORRECTIONS

TDE -.2974 TRA -.4486 TC3 1.0611 BAU .2058  
 RDE -.2811 RRA .0552 RC3 .3496 FAU .04716  
 FDE .2896 FRA .2446 FC3-2.9630 BSP 3770  
 BDE .4093 BRA .4520 BC3 1.1172 FSP -541

MID-COURSE EXECUTION ACCURACY

SGT 1165.1 SGR 513.5 SG3 196.9  
 RRT .5665 RRF -.6234 RTF -.8378  
 SGB 1273.3 R23 -.0992 R13 -.8513  
 SG1 1205.8 SG2 408.9 THA 15.89

ORBIT DETERMINATION ACCURACY

ST 508.6 SR 434.8 SS 284.5  
 CRT .8752 CRS .9417 CST .9789  
 LSA 707.6 MSA 165.2 SSA 27.1  
 EL1 648.5 EL2 165.0 ALF 39.91

LAUNCH DATE JAN 29 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 247 682

RL 147.35 LAL -.00 LOL 128.92 VL 26.887 GAL -1.95 AZL 88.85 HCA 108.74 SMA 123.06 ECC .20018 INC 1.1524 V1 30.236  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.011 GAP -9.33 AZP 90.37 TAL 167.85 TAP 296.59 RCA 98.43 APO 147.70 V2 34.954  
 RC 54.398 GL 8.64 GP 15.78 ZAL 108.46 ZAP 20.81 ETS 314.91 ZAE 145.85 ETE 17.24 ZAC 129.18 ETC 148.91 CLP -13.74

PLANETOCENTRIC CONIC

C3 12.941 VHL 3.597 OLA 15.90 RAL 15.31 RAD 6567.5 VEL 11.590 PTH 2.03 VHP 6.662 DPA 29.01 RAP 35.91 ECC 1.2130  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 15 2633.56 -27.04 69.79 234.74 98.73 2 27 8 2033.6 -25.56 61.44  
 90.00 17 55 50 4241.42 1.38 174.29 229.78 61.71 19 6 32 3641.4 -2.42 167.66  
 100.00 3 13 24 2342.81 -28.21 48.18 234.52 100.33 3 52 27 1742.8 -26.49 39.80  
 100.00 19 8 22 4007.39 2.41 156.51 229.20 60.20 20 15 9 3407.4 -1.58 149.99  
 110.00 4 41 13 2068.06 -31.23 26.55 233.75 104.66 5 15 41 1468.1 -28.90 18.12  
 110.00 19 57 3 3854.91 5.04 143.31 227.57 56.15 21 1 18 3254.9 .56 137.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2788 TRA -.4245 TC3 1.1781 BAU .2177 SGT 1187.4 SGR 540.0 SG3 219.4 ST 492.3 SR 428.3 SS 258.4  
 RDE -.2683 RRA .0536 RC3 .4420 FAU .05140 RRT .6190 RRF -.6823 RTF -.8473 CRT .8747 CRS .9385 CST .9772  
 FDE .2685 FRA .2303 FC3-3.4385 BSP 3947 SGB 1304.4 R23 -.1117 R13 -.8636 LSA 682.2 MSA 161.9 SSA 29.5  
 BOE .3870 BRA .4279 BC3 1.2583 FSP -614 SG1 1239.5 SG2 406.3 THA 17.68 EL1 632.2 EL2 161.7 ALF 40.46

LAUNCH DATE JAN 29 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 5 1969

HELIOCENTRIC CONIC

DISTANCE 254.348

RL 147.35 LAL -.00 LOL 128.92 VL 27.005 GAL -2.07 AZL 89.02 HCA 111.93 SMA 123.79 ECC .19360 INC .9818 V1 30.236  
 RP 108.45 LAP .91 LOP 240.85 VP 37.085 GAP -8.62 AZP 90.37 TAL 188.70 TAP 300.63 RCA 99.83 APO 147.76 V2 34.942  
 RC 56.186 GL 7.60 GP 17.14 ZAL 110.07 ZAP 23.40 ETS 317.54 ZAE 144.92 ETE 19.58 ZAC 129.00 ETC 147.50 CLP -16.18

PLANETOCENTRIC CONIC

C3 12.228 VHL 3.497 OLA 14.33 RAL 14.24 RAD 6567.5 VEL 11.559 PTH 2.02 VHP 6.302 DPA 30.54 RAP 36.09 ECC 1.2012  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 53 21 2565.39 -26.25 64.96 232.16 101.03 2 36 7 1965.4 -24.46 56.75  
 90.00 17 37 11 4285.38 2.79 176.74 227.74 61.81 18 48 36 3685.4 -1.00 170.12  
 100.00 3 22 20 2278.40 -27.33 43.60 231.91 102.60 4 0 19 1678.4 -25.32 35.37  
 100.00 18 50 53 4047.59 3.76 158.73 227.20 60.32 19 58 20 3447.6 -.22 152.20  
 110.00 4 47 42 2011.32 -30.18 22.46 231.05 106.87 5 21 13 1411.3 -27.58 14.24  
 110.00 19 42 1 3887.44 6.27 145.02 225.65 56.33 20 46 48 3287.4 1.80 138.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2598 TRA -.4041 TC3 1.2832 BAU .2283 SGT 1205.6 SGR 574.9 SG3 244.0 ST 473.3 SR 418.8 SS 226.7  
 RDE -.2550 RRA .0518 RC3 .5506 FAU .05600 RRT .6687 RRF -.7387 RTF -.8536 CRT .8718 CRS .9300 CST .9747  
 FDE .2397 FRA .2175 FC3-3.9644 BSP 4065 SGB 1335.7 R23 -.1274 R13 -.8737 LSA 651.4 MSA 159.2 SSA 32.3  
 BOE .3641 BRA .4074 BC3 1.3963 FSP -691 SG1 1272.9 SG2 404.9 THA 19.77 EL1 611.7 EL2 158.7 ALF 41.00

LAUNCH DATE JAN 29 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 7 1969

HELIOCENTRIC CONIC

DISTANCE 260.996

RL 147.35 LAL -.00 LOL 128.92 VL 27.111 GAL -2.19 AZL 89.20 HCA 115.11 SMA 124.46 ECC .18772 INC .8035 V1 30.236  
 RP 108.49 LAP .73 LOP 244.03 VP 37.151 GAP -7.94 AZP 90.34 TAL 189.54 TAP 304.65 RCA 101.10 APO 147.82 V2 34.929  
 RC 58.051 GL 6.40 GP 18.67 ZAL 111.63 ZAP 26.21 ETS 319.71 ZAE 144.12 ETE 22.17 ZAC 128.58 ETC 146.08 CLP -18.74

PLANETOCENTRIC CONIC

C3 11.624 VHL 3.409 OLA 12.64 RAL 13.30 RAD 6567.4 VEL 11.533 PTH 2.01 VHP 5.966 DPA 32.18 RAP 36.05 ECC 1.1913  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 4 23 2496.22 -25.26 60.14 229.82 103.25 2 45 59 1896.2 -23.18 52.08  
 90.00 17 18 37 4333.23 4.33 179.42 225.96 61.99 18 30 51 3733.2 .55 172.78  
 100.00 3 32 14 2212.87 -26.28 39.01 229.53 104.79 4 9 7 1612.9 -23.99 30.96  
 100.00 18 33 27 4091.80 5.25 161.17 225.46 60.53 19 41 39 3491.8 1.28 154.62  
 110.00 4 55 10 1953.39 -28.97 18.39 228.61 109.00 5 27 43 1353.4 -26.10 10.38  
 110.00 19 27 1 3924.06 7.65 146.96 223.98 56.58 20 32 25 3324.1 3.20 140.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2389 TRA -.3852 TC3 1.3744 BAU .2381 SGT 1216.4 SGR 620.0 SG3 270.7 ST 449.0 SR 405.3 SS 188.0  
 RDE -.2405 RRA .0501 RC3 .6777 FAU .06095 RRT .7136 RRF -.7905 RTF -.8580 CRT .8657 CRS .9100 CST .9696  
 FDE .2002 FRA .2053 FC3-4.5393 BSP 4165 SGB 1365.3 R23 -.1442 R13 -.8833 LSA 612.7 MSA 156.7 SSA 35.7  
 BOE .3390 BRA .3885 BC3 1.5324 FSP -774 SG1 1303.8 SG2 405.3 THA 22.25 EL1 584.4 EL2 155.9 ALF 41.62

LAUNCH DATE JAN 29 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 9 1969

HELIOCENTRIC CONIC

DISTANCE 267.624

RL 147.35 LAL -.00 LOL 128.92 VL 27.206 GAL -2.29 AZL 89.38 HCA 118.29 SMA 125.06 ECC .18249 INC .6158 V1 30.236  
 RP 108.53 LAP .54 LOP 247.21 VP 37.209 GAP -7.29 AZP 90.29 TAL 190.35 TAP 308.64 RCA 102.24 APO 147.89 V2 34.917  
 RC 59.985 GL 5.03 GP 20.38 ZAL 113.11 ZAP 29.25 ETS 321.53 ZAE 143.43 ETE 25.07 ZAC 127.89 ETC 144.68 CLP -21.44

PLANETOCENTRIC CONIC

C3 11.115 VHL 3.334 OLA 10.82 RAL 12.50 RAD 6567.4 VEL 11.511 PTH 2.01 VHP 5.657 DPA 33.93 RAP 35.76 ECC 1.1829  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 16 26 2425.91 -24.07 55.33 227.73 105.38 2 56 51 1825.9 -21.73 47.44  
 90.00 17 0 14 4384.97 5.97 182.33 224.48 62.27 18 13 18 3785.0 2.22 175.67  
 100.00 3 43 11 2146.12 -25.04 34.44 227.42 106.89 4 18 57 1546.1 -22.49 26.57  
 100.00 18 16 9 4139.99 6.86 163.84 224.00 60.83 19 25 9 3540.0 2.92 157.27  
 110.00 5 3 41 1894.18 -27.59 14.33 226.45 111.04 5 35 16 1294.2 -24.48 6.55  
 110.00 19 12 8 3964.70 9.16 149.13 222.59 56.92 20 18 13 3364.7 4.75 142.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2158 TRA -.3684 TC3 1.4523 BAU .2483 SGT 1220.9 SGR 677.7 SG3 299.8 ST 419.2 SR 386.4 SS 142.7  
 RDE -.2242 RRA .0480 RC3 .8267 FAU .06631 RRT .7524 RRF -.8365 RTF -.8614 CRT .8548 CRS .8564 CST .9533  
 FDE .1473 FRA .1955 FC3-5.1652 BSP 4279 SGB 1396.4 R23 -.1606 R13 -.8933 LSA 565.6 MSA 154.7 SSA 39.9  
 BOE .3111 BRA .3715 BC3 1.6711 FSP -868 SG1 1335.4 SG2 408.2 THA 25.18 EL1 549.2 EL2 153.1 ALF 42.28

LAUNCH DATE JAN 29 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 11 1969

HELIOCENTRIC CONIC

DISTANCE 274.230

RL 147.35 LAL -.00 LOL 128.92 VL 27.291 GAL -2.38 AZL 89.58 HCA 121.47 SMA 125.61 ECC .17786 INC .4165 V1 30.236
RP 108.57 LAP .36 LOP 250.39 VP 37.260 GAP -6.67 AZP 90.22 TAL 191.12 TAP 312.60 RCA 103.27 APO 147.95 V2 34.906
RC 61.981 GL 3.48 GP 22.29 ZAL 114.50 ZAP 32.52 ETS 323.10 ZAE 142.79 ETE 28.33 ZAC 126.91 ETC 143.32 CLP -24.31

PLANETOCENTRIC CONIC

C3 10.691 VHL 3.270 OLA 8.87 RAL 11.87 RAD 6567.4 VEL 11.493 PTH 2.00 VHP 5.375 DPA 35.82 RAP 35.17 ECC 1.1759
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 29 36 2354.21 -22.69 50.53 225.93 107.41 3 8 50 1754.2 -20.10 42.81
90.00 16 42 0 4440.74 7.73 185.49 223.30 62.67 17 56 1 3840.7 4.01 178.79
100.00 3 55 16 2077.91 -23.61 29.88 225.61 108.89 4 29 54 1477.9 -20.81 22.20
100.00 17 59 1 4192.27 8.58 166.77 222.84 61.26 19 8 53 3592.3 4.68 160.15
110.00 5 13 22 1833.52 -26.04 10.30 224.58 112.97 5 43 55 1233.5 -22.70 2.73
110.00 18 57 25 4009.42 10.82 151.54 221.50 57.37 20 4 14 3409.4 6.44 145.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1889 TRA -.3515 TC3 1.5150 BAU .2595 SGT 1216.4 SGR 750.3 SG3 331.1 ST 381.3 SR 359.6 SS 93.4
RDE -.2044 RRA .0458 RC3 1.0005 FAU .07206 RRT .7846 RRF -.8754 RTF -.8644 CRT .8357 CRS .6539 CST .8574
FDE .0756 FRA .1859 FC3-5.8356 BSP 4430 SGB 1429.2 R23 -.1726 R13 -.9048 LSA 507.8 MSA 153.5 SSA 45.3
BDE .2783 BRA .3545 BC3 1.8156 FSP -972 SG1 1368.0 SG2 413.7 TMA 28.69 EL1 502.2 EL2 149.9 ALF 42.99

LAUNCH DATE JAN 29 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 13 1969

HELIOCENTRIC CONIC

DISTANCE 280.815

RL 147.35 LAL -.00 LOL 128.92 VL 27.366 GAL -2.46 AZL 89.80 HCA 124.65 SMA 126.10 ECC .17377 INC .2029 V1 30.236
RP 108.60 LAP .17 LOP 253.57 VP 37.304 GAP -6.06 AZP 90.12 TAL 191.85 TAP 316.50 RCA 104.19 APO 148.01 V2 34.894
RC 64.032 GL 1.73 GP 24.44 ZAL 115.76 ZAP 36.03 ETS 324.51 ZAE 142.16 ETE 31.99 ZAC 125.62 ETC 142.05 CLP -27.34

PLANETOCENTRIC CONIC

C3 10.343 VHL 3.216 OLA 6.79 RAL 11.42 RAD 6567.4 VEL 11.477 PTH 2.00 VHP 5.121 DPA 37.83 RAP 34.24 ECC 1.1702
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 44 4 2280.73 -21.12 45.72 224.44 109.32 3 22 5 1680.7 -18.29 38.18
90.00 16 23 56 4500.83 9.59 188.93 222.46 63.23 17 38 57 3900.8 5.92 182.17
100.00 4 8 39 2007.92 -21.99 25.31 224.10 110.77 4 42 7 1407.9 -18.97 17.82
100.00 17 42 2 4248.86 10.42 169.96 222.02 61.82 18 52 51 3648.9 6.57 163.29
110.00 5 24 18 1771.17 -24.32 6.27 223.04 114.80 5 53 49 1171.2 -20.77 358.92
110.00 18 42 52 4058.39 12.60 154.22 220.73 57.96 19 50 31 3458.4 8.28 147.79

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1633 TRA -.3394 TC3 1.5428 BAU .2701 SGT 1200.0 SGR 838.8 SG3 363.2 ST 344.9 SR 324.4 SS 71.5
RDE -.1812 RRA .0422 RC3 1.1979 FAU .07784 RRT .8071 RRF -.9067 RTF -.8630 CRT .8086 CRS -.1178 CST .2819
FDE -.0119 FRA .1842 FC3-6.5158 BSP 4530 SGB 1464.1 R23 -.1841 R13 -.9152 LSA 450.4 MSA 154.2 SSA 51.4
BDE .2439 BRA .3420 BC3 1.9532 FSP -1075 SG1 1401.4 SG2 424.1 TMA 32.81 EL1 450.3 EL2 146.1 ALF 42.83

LAUNCH DATE JAN 29 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 287.376

RL 147.35 LAL -.00 LOL 128.92 VL 27.432 GAL -2.53 AZL 90.03 HCA 127.83 SMA 126.53 ECC .17019 INC .0198 V1 30.236
RP 108.64 LAP -.02 LOP 256.74 VP 37.342 GAP -5.49 AZP 89.98 TAL 192.51 TAP 320.34 RCA 105.00 APO 148.07 V2 34.883
RC 66.131 GL -.22 GP 26.84 ZAL 116.87 ZAP 39.80 ETS 325.85 ZAE 141.47 ETE 36.10 ZAC 123.99 ETC 140.91 CLP -30.57

PLANETOCENTRIC CONIC

C3 10.067 VHL 3.173 OLA 4.55 RAL 11.16 RAD 6567.4 VEL 11.465 PTH 1.99 VHP 4.898 DPA 40.00 RAP 32.92 ECC 1.1657
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 0 3 2204.91 -19.33 40.87 223.29 111.10 3 36 48 1604.9 -16.29 33.51
90.00 16 5 55 4565.79 11.56 192.68 221.97 63.97 17 22 1 3965.8 7.96 185.85
100.00 4 23 32 1935.64 -20.17 20.71 222.93 112.54 4 55 48 1335.6 -16.95 13.40
100.00 17 25 7 4310.29 12.37 173.48 221.55 62.57 18 36 57 3710.3 8.60 166.72
110.00 5 36 41 1706.70 -22.42 2.23 221.83 116.51 6 5 8 1106.7 -18.68 355.09
110.00 18 28 27 4112.00 14.52 157.19 220.31 58.71 19 36 59 3512.0 10.27 150.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1371 TRA -.3291 TC3 1.5406 BAU .2822 SGT 1171.5 SGR 946.1 SG3 395.9 ST 306.8 SR 277.1 SS 117.3
RDE -.1523 RRA .0371 RC3 1.4226 FAU .08364 RRT .8215 RRF -.9313 RTF -.8591 CRT .7677 CRS -.7595 CST -.3716
FDE -.1207 FRA .1888 FC3-7.1927 BSP 4655 SGB 1505.8 R23 -.1884 R13 -.9268 LSA 395.2 MSA 158.8 SSA 57.1
BDE .2049 BRA .3312 BC3 2.0969 FSP -1183 SG1 1440.5 SG2 438.8 TMA 37.66 EL1 389.0 EL2 140.1 ALF 41.23

LAUNCH DATE JAN 29 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 293.913

RL 147.35 LAL -.00 LOL 128.92 VL 27.490 GAL -2.59 AZL 90.28 HCA 131.00 SMA 126.92 ECC .16706 INC .2757 V1 30.236
RP 108.67 LAP -.21 LOP 259.92 VP 37.375 GAP -4.93 AZP 89.82 TAL 193.12 TAP 324.11 RCA 105.72 APO 148.12 V2 34.873
RC 68.274 GL -2.42 GP 29.50 ZAL 117.82 ZAP 43.82 ETS 327.19 ZAE 140.65 ETE 40.65 ZAC 122.01 ETC 139.94 CLP -34.01

PLANETOCENTRIC CONIC

C3 9.860 VHL 3.140 OLA 2.16 RAL 11.12 RAD 6567.4 VEL 11.456 PTH 1.99 VHP 4.708 DPA 42.30 RAP 31.12 ECC 1.1623
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 17 49 2126.01 -17.33 35.95 222.49 112.75 3 53 15 1526.0 -14.09 28.76
90.00 15 47 49 4636.43 13.63 196.84 221.88 64.94 17 5 5 4036.4 10.14 189.89
100.00 4 40 10 1860.40 -18.14 16.04 222.12 114.17 5 11 11 1260.4 -14.73 8.92
100.00 17 8 9 4377.27 14.43 177.38 221.48 63.54 18 21 6 3777.3 10.77 170.51
110.00 5 50 43 1639.59 -20.32 358.15 220.99 118.10 6 18 3 1039.6 -16.41 351.22
110.00 18 14 6 4170.85 16.57 160.51 220.28 59.66 19 23 36 3570.8 12.42 153.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1096 TRA -.3196 TC3 1.5073 BAU .2971 SGT 1129.9 SGR 1074.8 SG3 428.3 ST 267.3 SR 213.3 SS 204.6
RDE -.1153 RRA .0303 RC3 1.6761 FAU .08926 RRT .8285 RRF -.9500 RTF -.8530 CRT .7022 CRS -.8912 CST -.5228
FDE -.2565 FRA .1994 FC3-7.8369 BSP 4851 SGB 1559.4 R23 -.1815 R13 -.9399 LSA 355.3 MSA 170.6 SSA 58.9
BDE .1590 BRA .3211 BC3 2.2541 FSP -1295 SG1 1491.3 SG2 456.0 TMA 43.27 EL1 317.1 EL2 128.0 ALF 36.04



LAUNCH DATE JAN 29 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 300.426

RL 147.35 LAL -.00 LOL 128.92 VL 27.540 GAL -2.64 AZL 90.55 HCA 134.17 SMA 127.26 ECC .16434 INC .5517 V1 30.236  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.403 GAP -4.39 AZP 89.62 TAL 193.64 TAP 327.81 RCA 106.34 APO 148.17 V2 34.862  
 RC 70.456 GL -4.87 GP 32.43 ZAL 118.57 ZAP 48.09 ETS 328.61 ZAE 139.60 ETE 45.64 ZAC 119.68 ETC 139.18 CLP -37.68

PLANETOCENTRIC CONIC

C3 9.724 VHL 3.118 DLA -.43 RAL 11.31 RAD 6567.4 VEL 11.450 PTH 1.99 VHP 4.555 DPA 44.73 RAP 28.78 ECC 1.1600  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 37 46 2043.07 -15.07 30.91 222.10 114.26 4 11 49 1443.1 -11.67 23.88  
 90.00 15 29 24 4713.88 15.81 201.47 222.22 66.20 16 47 58 4113.9 12.46 194.40  
 100.00 4 58 55 1781.34 -15.87 11.27 221.71 115.67 5 28 36 1181.3 -12.29 4.31  
 100.00 16 50 57 4450.85 16.62 181.75 221.84 64.79 18 5 7 3850.9 13.09 174.74  
 110.00 6 6 42 1569.16 -18.01 354.00 220.55 119.56 6 32 51 969.2 -13.94 347.25  
 110.00 17 59 39 4235.79 18.76 164.27 220.69 60.89 19 10 15 3635.8 14.74 157.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0864 TRA -.3142 TC3 1.4213 BAU .3136 SGT 1069.7 SGR 1222.8 SG3 457.0 ST 236.4 SR 132.9 SS 308.0  
 RDE -.0693 RRA .0193 RC3 1.9491 FAU .09398 RRT .8237 RRF -.9637 RTF -.8385 CRT .6156 CRS -.8843 CST -.5108  
 FDE -.4118 FRA .2245 FC3-8.3669 BSP 5038 SGB 1624.6 R23 -.1676 R13 -.9523 LSA 363.4 MSA 183.1 SSA 53.3  
 BOE .1107 BRA .3148 BC3 2.4123 FSP -1393 SGI 1552.8 SG2 477.7 TMA 49.62 EL1 .252.9 EL2 97.9 ALF 22.66

LAUNCH DATE JAN 29 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 306.913

RL 147.35 LAL -.00 LOL 128.92 VL 27.583 GAL -2.68 AZL 90.86 HCA 137.33 SMA 127.55 ECC .16200 INC .8584 V1 30.236  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.425 GAP -3.88 AZP 89.37 TAL 194.09 TAP 331.43 RCA 106.88 APO 148.21 V2 34.853  
 RC 72.672 GL -7.63 GP 35.64 ZAL 119.09 ZAP 52.57 ETS 330.20 ZAE 138.23 ETE 51.00 ZAC 116.99 ETC 138.69 CLP -41.60

PLANETOCENTRIC CONIC

C3 9.667 VHL 3.109 DLA -3.24 RAL 11.76 RAD 6567.3 VEL 11.448 PTH 1.99 VHP 4.443 DPA 47.27 RAP 25.83 ECC 1.1591  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 0 24 1954.85 -12.54 25.67 222.16 115.60 4 32 58 1354.8 -8.99 18.78  
 90.00 15 10 21 4799.78 18.10 206.74 223.08 67.84 16 30 20 4199.8 14.94 199.50  
 100.00 5 20 13 1697.33 -13.33 6.33 221.76 117.00 5 48 31 1097.3 -9.61 359.52  
 100.00 16 33 12 4532.53 18.92 186.73 222.71 66.41 17 48 44 3932.5 15.57 179.54  
 110.00 6 25 0 1494.55 -15.45 349.73 220.55 120.88 6 49 55 894.5 -11.24 343.15  
 110.00 17 44 55 4308.07 21.10 168.58 221.60 62.46 18 56 43 3708.1 17.24 161.57

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0673 TRA -.3108 TC3 1.2874 BAU .3337 SGT 992.7 SGR 1391.7 SG3 480.5 ST 213.5 SR 46.2 SS 425.2  
 RDE -.0107 RRA .0028 RC3 2.2377 FAU .09756 RRT .8060 RRF -.9736 RTF -.8141 CRT .3221 CRS -.2895 CST -.4465  
 FDE -.5893 FRA .2642 FC3-8.7370 BSP 5283 SGB 1709.4 R23 -.1443 R13 -.9642 LSA 438.5 MSA 185.6 SSA 43.0  
 BOE .0682 BRA .3108 BC3 2.5817 FSP -1475 SGI 1634.6 SG2 500.3 TMA 56.57 EL1 214.0 EL2 43.6 ALF 4.16

LAUNCH DATE JAN 29 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 313.376

RL 147.35 LAL -.00 LOL 128.92 VL 27.620 GAL -2.71 AZL 91.20 HCA 140.50 SMA 127.79 ECC .15999 INC 1.2041 V1 30.236  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.444 GAP -3.38 AZP 89.07 TAL 194.46 TAP 334.96 RCA 107.35 APO 148.24 V2 34.844  
 RC 74.919 GL -10.73 GP 39.12 ZAL 119.35 ZAP 57.24 ETS 332.03 ZAE 136.47 ETE 56.63 ZAC 113.97 ETC 138.50 CLP -45.77

PLANETOCENTRIC CONIC

C3 9.702 VHL 3.115 DLA -6.30 RAL 12.49 RAD 6567.4 VEL 11.450 PTH 1.99 VHP 4.377 DPA 49.89 RAP 22.15 ECC 1.1597  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 26 24 1859.65 -9.68 20.14 222.76 116.74 4 57 23 1259.7 -6.01 13.38  
 90.00 14 50 9 4896.40 20.47 212.84 224.52 69.99 16 11 46 4296.4 17.56 205.38  
 100.00 5 44 45 1606.89 -10.48 1.13 222.33 118.15 6 11 32 1006.9 -6.64 354.45  
 100.00 16 14 29 4624.39 21.32 192.49 224.17 68.53 17 31 34 4024.4 18.21 185.08  
 110.00 6 46 9 1414.67 -12.61 345.28 221.07 122.04 7 9 43 814.7 -8.29 338.85  
 110.00 17 29 35 4389.38 23.57 173.59 223.11 64.50 18 42 44 3789.4 19.94 166.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0548 TRA -.3080 TC3 1.1025 BAU .3577 SGT 898.2 SGR 1579.6 SG3 496.2 ST 199.5 SR 127.4 SS 553.6  
 RDE .0640 RRA -.0206 RC3 2.5278 FAU .09944 RRT .7693 RRF -.9807 RTF -.7727 CRT -.3515 CRS .9645 CST -.3832  
 FDE -.7849 FRA .3173 FC3-8.8729 BSP 5600 SGB 1817.1 R23 -.1142 R13 -.9745 LSA 572.8 MSA 182.6 SSA 32.8  
 BOE .0843 BRA .3087 BC3 2.7578 FSP -1532 SGI 1740.9 SG2 520.7 TMA 63.86 EL1 206.9 EL2 115.0 ALF 161.42

LAUNCH DATE JAN 29 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 319.813

RL 147.35 LAL -.00 LOL 128.92 VL 27.650 GAL -2.72 AZL 91.60 HCA 143.66 SMA 128.00 ECC .15828 INC 1.5993 V1 30.236  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.458 GAP -2.91 AZP 88.71 TAL 194.74 TAP 338.41 RCA 107.74 APO 148.26 V2 34.835  
 RC 77.194 GL -14.21 GP 42.84 ZAL 119.30 ZAP 62.01 ETS 334.19 ZAE 134.24 ETE 62.41 ZAC 110.66 ETC 138.65 CLP -50.20

PLANETOCENTRIC CONIC

C3 9.854 VHL 3.139 DLA -9.65 RAL 13.53 RAD 6567.4 VEL 11.456 PTH 1.99 VHP 4.363 DPA 52.52 RAP 17.68 ECC 1.1622  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 56 47 1755.17 -6.42 14.18 223.99 117.64 5 26 3 1155.2 -2.67 7.51  
 90.00 14 28 6 5007.04 22.87 220.06 226.67 72.84 15 51 33 4407.0 20.31 212.33  
 100.00 6 13 23 1508.05 -7.26 355.56 223.53 119.08 6 38 31 908.1 -3.32 348.98  
 100.00 15 54 11 4729.39 23.77 199.32 226.35 71.32 17 13 0 4129.4 21.00 191.62  
 110.00 7 10 50 1328.15 -9.44 340.58 222.20 123.01 7 32 58 728.2 -5.03 334.27  
 110.00 17 13 13 4482.05 26.16 179.55 225.35 67.17 18 27 55 3882.1 22.84 171.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0514 TRA -.3037 TC3 .8711 BAU .3866 SGT 789.9 SGR 1785.8 SG3 502.1 ST 193.7 SR 297.8 SS 691.2  
 RDE .1598 RRA -.0529 RC3 2.8019 FAU .09926 RRT .7016 RRF -.9858 RTF -.7017 CRT -.3733 CRS .9960 CST -.3709  
 FDE -.9939 FRA .3812 FC3-8.7203 BSP 6031 SGB 1952.7 R23 -.0813 R13 -.9825 LSA 755.9 MSA 179.0 SSA 24.5  
 BOE .1679 BRA .3083 BC3 2.9342 FSP -1563 SGI 1877.9 SG2 535.3 TMA 71.17 EL1 310.7 EL2 172.2 ALF 110.04

LAUNCH DATE JAN 29 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 326.224

RL 147.35 LAL -.00 LOL 128.92 VL 27.675 GAL -2.73 AZL 92.06 HCA 146.82 SMA 128.17 ECC .15685 INC 2.0583 V1 30.236  
 RP 108.81 LAP -1.13 LOP 275.76 VP 37.469 GAP -2.45 AZP 88.28 TAL 194.94 TAP 341.76 RCA 108.07 APO 148.28 V2 34.827  
 RC 79.493 GL -18.14 GP 46.79 ZAL 118.88 ZAP 66.80 ETS 336.75 ZAE 131.53 ETE 68.21 ZAC 107.12 ETC 139.19 CLP -54.88

PLANETOCENTRIC CONIC

C3 10.165 VHL 3.188 DLA -13.34 RAL 14.94 RAD 6567.4 VEL 11.470 PTH 1.99 VHP 4.410 DPA 55.11 RAP 12.33 ECC 1.1673  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 33 9 1637.89 -2.68 7.60 226.02 118.20 6 0 27 1037.9 1.11 .97  
 90.00 14 2 57 5136.68 25.20 228.85 229.69 76.64 15 28 34 4536.7 23.11 220.80  
 100.00 6 47 31 1397.92 -3.57 349.46 225.53 119.70 7 10 49 797.9 .41 342.93  
 100.00 15 31 15 4851.89 26.19 207.62 229.41 75.05 16 52 7 4251.9 23.88 199.58  
 110.00 7 40 7 1233.22 -5.88 335.53 224.10 123.73 8 0 40 633.2 -1.41 329.30  
 110.00 16 55 10 4589.34 28.79 186.78 228.51 70.72 18 11 39 3989.3 25.89 178.80

DIFFERENTIAL CORRECTIONS

TDE -.0644 TRA -.2982 TC3 .5892 BAW .4184  
 RDE .2792 RRA -.0995 RC3 3.0217 FAU .09632  
 FDE-1.1983 FRA .4608 FC3-8.2037 BSP 6511  
 BDE .2865 BRA .3143 BC3 3.0786 FSP -1545

MID-COURSE EXECUTION ACCURACY

SGT 676.6 SGR 1999.5 SG3 494.3  
 RRT .5670 RRF -.9893 RTF -.5644  
 SGB 2110.9 R23 -.0506 R13 -.9880  
 SGI 2038.9 SG2 546.6 THA 78.29

ORBIT DETERMINATION ACCURACY

ST 202.0 SR 508.1 SS 828.5  
 CRT -.4705 CRS .9991 CST -.4672  
 LSA 976.5 MSA 177.6 SSA 18.4  
 EL1 518.1 EL2 174.8 ALF 101.98

LAUNCH DATE JAN 29 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 332.609

RL 147.35 LAL -.00 LOL 128.92 VL 27.695 GAL -2.72 AZL 92.60 HCA 149.98 SMA 128.31 ECC .15567 INC 2.6016 V1 30.236  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.477 GAP -2.00 AZP 87.75 TAL 195.04 TAP 345.02 RCA 108.33 APO 148.28 V2 34.820  
 RC 81.813 GL -22.57 GP 50.92 ZAL 118.04 ZAP 71.52 ETS 339.80 ZAE 128.32 ETE 73.92 ZAC 103.41 ETC 140.14 CLP -59.81

PLANETOCENTRIC CONIC

C3 10.702 VHL 3.271 DLA -17.40 RAL 16.76 RAD 6567.4 VEL 11.493 PTH 2.00 VHP 4.531 DPA 57.60 RAP 6.01 ECC 1.1761  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 18 10 1501.64 1.72 360.00 229.14 118.27 6 43 11 901.6 5.48 353.34  
 90.00 13 32 29 5293.74 27.21 239.90 233.76 81.83 15 0 43 4693.7 25.79 231.52  
 100.00 7 29 25 1271.71 .70 342.53 228.58 119.88 7 50 37 671.7 4.67 335.99  
 100.00 15 3 55 4998.91 28.35 218.01 233.56 80.10 16 27 14 4398.9 26.69 209.60  
 110.00 8 15 30 1127.34 -1.86 329.98 226.98 124.14 8 34 18 527.3 2.64 323.78  
 110.00 16 34 19 4716.04 31.30 195.79 232.82 75.50 17 52 55 4116.0 28.99 187.35

DIFFERENTIAL CORRECTIONS

TDE -.0976 TRA -.2856 TC3 .2814 BAW .4540  
 RDE .4306 RRA -.1613 RC3 3.1606 FAU .09082  
 FDE-1.3929 FRA .5417 FC3-7.3466 BSP 7114  
 BDE .4415 BRA .3280 BC3 3.1731 FSP -1492

MID-COURSE EXECUTION ACCURACY

SGT 581.4 SGR 2220.9 SG3 473.6  
 RRT .3152 RRF -.9918 RTF -.3104  
 SGB 2295.8 R23 -.0238 R13 -.9915  
 SGI 2229.0 SG2 549.8 THA 84.98

ORBIT DETERMINATION ACCURACY

ST 232.4 SR 761.9 SS 963.8  
 CRT -.6476 CRS .9997 CST -.6458  
 LSA 1237.9 MSA 176.0 SSA 13.9  
 EL1 777.4 EL2 173.6 ALF 101.77

LAUNCH DATE JAN 29 1969

FLIGHT TIME 122.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 338.967

RL 147.35 LAL -.00 LOL 128.92 VL 27.710 GAL -2.71 AZL 93.26 HCA 153.13 SMA 128.41 ECC .15471 INC 3.2592 V1 30.236  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.482 GAP -1.58 AZP 87.09 TAL 195.06 TAP 348.19 RCA 108.54 APO 148.28 V2 34.813  
 RC 84.153 GL -27.54 GP 55.21 ZAL 116.72 ZAP 76.02 ETS 343.37 ZAE 124.64 ETE 79.50 ZAC 99.60 ETC 141.52 CLP -64.95

PLANETOCENTRIC CONIC

C3 11.584 VHL 3.403 DLA -21.86 RAL 19.09 RAD 6567.4 VEL 11.531 PTH 2.01 VHP 4.743 DPA 59.90 RAP 358.66 ECC 1.1906  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 17 34 1332.23 7.12 350.48 233.81 117.48 7 39 46 732.2 10.75 343.68  
 90.00 12 51 37 5495.77 28.30 254.56 239.02 89.08 14 23 13 4895.8 27.88 245.92  
 100.00 8 23 29 1119.43 5.84 334.14 233.11 119.37 8 42 9 519.4 9.71 327.49  
 100.00 14 28 22 5183.79 29.76 231.55 238.97 87.09 15 54 46 4583.8 29.04 222.82  
 110.00 8 59 37 1006.21 2.77 323.66 231.21 124.08 9 16 23 406.2 7.23 317.41  
 110.00 16 8 44 4869.78 33.35 207.30 238.56 82.02 17 29 54 4269.8 31.89 198.38

DIFFERENTIAL CORRECTIONS

TDE -.1626 TRA -.2639 TC3 -.0380 BAW .4898  
 RDE .6169 RRA -.2469 RC3 3.1624 FAU .08240  
 FDE-1.5533 FRA .6272 FC3-6.1586 BSP 7738  
 BDE .6380 BRA .3614 BC3 3.1626 FSP -1385

MID-COURSE EXECUTION ACCURACY

SGT 552.0 SGR 2431.6 SG3 438.1  
 RRT -.0936 RRF -.9936 RTF .1000  
 SGB 2493.5 R23 -.0020 R13 -.9936  
 SGI 2432.2 SG2 549.5 THA 91.28

ORBIT DETERMINATION ACCURACY

ST 309.2 SR 1049.2 SS 1081.9  
 CRT -.8173 CRS .9999 CST -.8172  
 LSA 1528.4 MSA 175.7 SSA 10.5  
 EL1 1080.1 EL2 173.1 ALF 103.91

LAUNCH DATE JAN 29 1969

FLIGHT TIME 124.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 345.299

RL 147.35 LAL -.00 LOL 128.92 VL 27.720 GAL -2.68 AZL 94.08 HCA 156.27 SMA 128.48 ECC .15394 INC 4.0767 V1 30.236  
 RP 108.87 LAP -1.64 LOP 285.25 VP 37.484 GAP -1.16 AZP 86.27 TAL 194.98 TAP 351.26 RCA 108.70 APO 148.26 V2 34.807  
 RC 86.508 GL -33.07 GP 59.64 ZAL 114.86 ZAP 80.18 ETS 347.54 ZAE 120.52 ETE 84.91 ZAC 95.75 ETC 143.36 CLP -70.29

PLANETOCENTRIC CONIC

C3 13.016 VHL 3.608 DLA -26.72 RAL 22.01 RAD 6567.5 VEL 11.593 PTH 2.03 VHP 5.072 DPA 61.97 RAP 350.23 ECC 1.2142  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 52 49 1067.80 15.04 335.09 241.20 114.28 9 10 37 467.8 18.19 327.84  
 90.00 11 39 40 5809.64 26.53 277.28 245.01 100.28 13 16 30 5209.6 27.68 268.80  
 100.00 9 42 22 907.79 12.70 322.18 240.04 117.29 9 57 30 307.8 16.26 315.20  
 100.00 13 32 49 5444.88 29.09 250.88 245.46 97.20 15 3 34 4844.9 29.78 242.14  
 110.00 9 57 36 839.98 8.30 315.95 237.42 123.28 10 11 56 260.0 12.63 309.52  
 110.00 15 34 4 5065.46 34.17 222.49 245.88 90.95 16 58 30 4465.5 33.93 213.26

DIFFERENTIAL CORRECTIONS

TDE -.2702 TRA -.2239 TC3 -.3266 BAW .5253  
 RDE .8482 RRA -.3598 RC3 3.0013 FAU .07184  
 FDE-1.6707 FRA .7021 FC3-4.7781 BSP 8432  
 BDE .8902 BRA .4238 BC3 3.0190 FSP -1243

MID-COURSE EXECUTION ACCURACY

SGT 631.0 SGR 2629.4 SG3 391.0  
 RRT -.5025 RRF -.9948 RTF .5092  
 SGB 2704.0 R23 .0149 R13 -.9948  
 SGI 2649.3 SG2 541.4 THA 97.18

ORBIT DETERMINATION ACCURACY

ST 445.5 SR 1362.3 SS 1175.2  
 CRT -.9155 CRS 1.0000 CST -.9163  
 LSA 1845.2 MSA 174.4 SSA 8.0  
 EL1 1423.0 EL2 171.5 ALF 106.92

LAUNCH DATE JAN 29 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 4 1969

MELIOCENTRIC CONIC

DISTANCE 351.601

RL 147.35 LAL -.00 LOL 128.92 VL 27.727 GAL -2.64 AZL 95.13 HCA 159.41 SMA 128.53 ECC .15336 INC 5.1273 V1 30.236  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.484 GAP -.77 AZP 85.20 TAL 194.82 TAP 354.23 RCA 108.82 APO 148.24 V2 34.802  
 RC 88.877 GL -39.13 GP 64.24 ZAL 112.45 ZAP 83.88 ETS 352.35 ZAE 116.00 ETE 90.24 ZAC 91.93 ETC 145.72 CLP -75.80

PLANETOCENTRIC CONIC

C3 15.386 VHL 3.922 DLA -31.90 RAL 25.66 RAD 6567.6 VEL 11.695 PTH 2.06 VHP 5.561 DPA 63.75 RAP 340.60 ECC 1.2532  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.67 8 30 57 1215.78 23.58 349.86 251.10 112.12 8 51 13 615.8 26.37 342.01  
 105.33 12 30 41 5735.41 23.60 270.89 251.10 112.11 14 6 17 5135.4 26.39 263.03  
 74.67 8 30 57 1215.78 23.58 349.86 251.10 112.12 8 51 13 615.8 26.37 342.01  
 105.33 12 30 41 5735.41 23.60 270.89 251.10 112.11 14 6 17 5135.4 26.39 263.03  
 110.00 11 26 16 647.44 15.99 304.29 247.10 120.62 11 37 4 47.4 19.94 297.39  
 110.00 14 34 33 5351.75 31.66 244.37 254.03 103.62 16 3 45 4751.7 33.21 235.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4406 TRA -.1552 TC3 -.5473 BAU .5559 SGT 818.5 SGR 2796.8 SG3 334.7 ST 648.7 SR 1675.1 SS 1228.7  
 RDE 1.1316 RRA -.5128 RC3 2.6468 FAU .05949 RRT -.7513 RRF -.9958 RTF .7573 CRT -.9602 CRS 1.0000 CST -.9613  
 FDE -1.7287 FRA .7653 FC3 -3.3475 BSP 9107 SGB 2914.1 R23 .0278 R13 -.9955 LSA 2169.5 MSA 172.7 SSA 6.1  
 BDE 1.2143 BRA .5358 BC3 2.7028 FSP -1066 SGI 2866.0 SG2 527.1 THA 102.84 EL1 1788.3 EL2 169.7 ALF 110.59

LAUNCH DATE JAN 29 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 6 1969

MELIOCENTRIC CONIC

DISTANCE 357.872

RL 147.35 LAL -.00 LOL 128.92 VL 27.729 GAL -2.58 AZL 96.54 HCA 162.54 SMA 128.55 ECC .15294 INC 6.5361 V1 30.236  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.481 GAP -.38 AZP 83.76 TAL 194.56 TAP 357.10 RCA 108.89 APO 148.21 V2 34.797  
 RC 91.256 GL -45.60 GP 69.07 ZAL 109.49 ZAP 86.99 ETS 357.97 ZAE 111.06 ETE 95.68 ZAC 88.14 ETC 148.78 CLP -81.54

PLANETOCENTRIC CONIC

C3 19.477 VHL 4.413 DLA -37.23 RAL 30.20 RAD 6567.8 VEL 11.868 PTH 2.11 VHP 6.286 DPA 65.16 RAP 329.63 ECC 1.3205  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.74 7 49 59 1449.98 25.57 9.22 261.16 118.04 8 14 9 850.0 29.11 1.56  
 115.26 13 47 54 5610.25 25.58 262.12 261.17 118.03 15 21 24 5010.2 29.12 254.46  
 64.74 7 49 59 1449.98 25.57 9.22 261.16 118.04 8 14 9 850.0 29.11 1.56  
 115.26 13 47 54 5610.25 25.58 262.12 261.17 118.03 15 21 24 5010.2 29.12 254.46  
 64.74 7 49 59 1449.98 25.57 9.22 261.16 118.04 8 14 9 850.0 29.11 1.56  
 115.26 13 47 54 5610.25 25.58 262.12 261.17 118.03 15 21 24 5010.2 29.12 254.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.7037 TRA -.0351 TC3 -.6577 BAU .5785 SGT 1083.9 SGR 2926.5 SG3 273.9 ST 913.9 SR 1954.2 SS 1234.1  
 RDE 1.4803 RRA -.7159 RC3 2.1221 FAU .04644 RRT -.8752 RRF -.9965 RTF .8806 CRT -.9802 CRS 1.0000 CST -.9814  
 FDE -1.7232 FRA .8059 FC3 -2.0641 BSP 9807 SGB 3120.8 R23 .0362 R13 -.9960 LSA 2479.7 MSA 167.3 SSA 4.7  
 BDE 1.6390 BRA .7168 BC3 2.2217 FSP -877 SGI 3080.8 SG2 498.1 THA 108.46 EL1 2151.1 EL2 164.3 ALF 114.78

LAUNCH DATE JAN 29 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 8 1969

MELIOCENTRIC CONIC

DISTANCE 364.107

RL 147.35 LAL -.00 LOL 128.92 VL 27.728 GAL -2.52 AZL 98.54 HCA 165.66 SMA 128.54 ECC .15266 INC 8.5359 V1 30.236  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.477 GAP -.02 AZP 81.73 TAL 194.21 TAP 359.87 RCA 108.92 APO 148.16 V2 34.793  
 RC 93.644 GL -52.24 GP 74.25 ZAL 106.08 ZAP 89.39 ETS 4.84 ZAE 105.64 ETE 101.77 ZAC 84.34 ETC 153.04 CLP -87.76

PLANETOCENTRIC CONIC

C3 27.049 VHL 5.201 DLA -42.42 RAL 35.78 RAD 6568.1 VEL 12.183 PTH 2.19 VHP 7.387 DPA 66.07 RAP 317.03 ECC 1.4452  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.99 7 36 13 1631.82 25.74 24.67 273.92 124.96 8 3 25 1031.8 30.12 17.51  
 123.01 14 46 7 5588.15 25.75 260.38 273.93 124.95 16 19 15 4988.2 30.14 253.22  
 56.99 7 36 13 1631.82 25.74 24.67 273.92 124.96 8 3 25 1031.8 30.12 17.51  
 123.01 14 46 7 5588.15 25.75 260.38 273.93 124.95 16 19 15 4988.2 30.14 253.22  
 56.99 7 36 13 1631.82 25.74 24.67 273.92 124.96 8 3 25 1031.8 30.12 17.51  
 123.01 14 46 7 5588.15 25.75 260.38 273.93 124.95 16 19 15 4988.2 30.14 253.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.1195 TRA .1829 TC3 -.6409 BAU .5833 SGT 1428.3 SGR 2991.7 SG3 212.9 ST 1236.2 SR 2140.1 SS 1184.8  
 RDE 1.8997 RRA -.9938 RC3 1.4803 FAU .03342 RRT -.9390 RRF -.9973 RTF .9438 CRT -.9898 CRS 1.0000 CST -.9909  
 FDE -1.6507 FRA .8284 FC3 -1.0696 BSP 10443 SGB 3315.2 R23 .0408 R13 -.9966 LSA 2736.4 MSA 155.9 SSA 3.5  
 BDE 2.2051 BRA 1.0105 BC3 1.6131 FSP -682 SGI 3284.9 SG2 447.4 THA 114.63 EL1 2466.8 EL2 153.1 ALF 119.88

LAUNCH DATE JAN 29 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 10 1969

MELIOCENTRIC CONIC

DISTANCE 370.291

RL 147.35 LAL -.00 LOL 128.92 VL 27.724 GAL -2.44 AZL 101.61 HCA 168.75 SMA 128.51 ECC .15250 INC 11.6107 V1 30.236  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.471 GAP .33 AZP 78.61 TAL 193.75 TAP 2.50 RCA 108.91 APO 148.11 V2 34.789  
 RC 96.038 GL -58.59 GP 80.03 ZAL 102.38 ZAP 91.01 ETS 14.68 ZAE 99.54 ETE 110.37 ZAC 80.41 ETC 160.36 CLP -95.86

PLANETOCENTRIC CONIC

C3 42.667 VHL 6.532 DLA -46.94 RAL 42.38 RAD 6568.6 VEL 12.808 PTH 2.33 VHP 9.163 DPA 66.18 RAP 302.48 ECC 1.7022  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.85 7 39 2 1808.21 22.96 38.36 289.05 132.14 8 9 10 1208.2 28.18 32.05  
 129.15 15 36 2 5641.13 22.97 262.78 289.06 132.14 17 10 3 5041.1 28.20 256.47  
 50.85 7 39 2 1808.21 22.96 38.36 289.05 132.14 8 9 10 1208.2 28.18 32.05  
 129.15 15 36 2 5641.13 22.97 262.78 289.06 132.14 17 10 3 5041.1 28.20 256.47  
 50.85 7 39 2 1808.21 22.96 38.36 289.05 132.14 8 9 10 1208.2 28.18 32.05  
 129.15 15 36 2 5641.13 22.97 262.78 289.06 132.14 17 10 3 5041.1 28.20 256.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.8340 TRA .6385 TC3 -.5091 BAU .5494 SGT 1924.4 SGR 2913.4 SG3 156.6 ST 1627.5 SR 2137.9 SS 1091.6  
 RDE 2.3626 RRA -1.3598 RC3 .8175 FAU .02118 RRT -.9770 RRF -.9980 RTF .9800 CRT -.9954 CRS .9999 CST -.9963  
 FDE -1.5277 FRA .8428 FC3 -.4297 BSP 10986 SGB 3491.6 R23 .0411 R13 -.9974 LSA 2897.4 MSA 126.8 SSA 2.5  
 BDE 2.9909 BRA 1.5023 BC3 .9631 FSP -500 SGI 3474.6 SG2 344.2 THA 123.20 EL1 2684.0 EL2 124.2 ALF 127.25

LAUNCH DATE JAN 29 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.718 GAL -2.33 AZL 106.94 HCA 171.78 SMA 128.46 ECC .15243 INC16.9435 V1 30.236
RP 108.94 LAP -2.39 LOP 301.05 VP 37.463 GAP .65 AZP 73.22 TAL 193.15 TAP 4.93 RCA 108.88 APO 148.05 V2 34.787
RC 98.436 GL -63.76 GP 86.72 ZAL 98.63 ZAP 91.79 ETS 38.95 ZAE 92.21 ETE 133.10 ZAC 75.95 ETC 182.46 CLP-123.07

DISTANCE 376.395

PLANETOCENTRIC CONIC

C3 80.973 VHL 8.998 DLA -49.94 RAL 49.51 RAD 6569.6 VEL 14.224 PTH 2.59 VHP 12.336 OPA 64.82 RAP 285.62 ECC 2.3326
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.97 7 54 21 1995.84 16.42 49.83 305.15 137.86 8 27 37 1395.8 22.27 44.46
133.03 16 17 33 5764.70 16.44 267.95 305.16 137.86 17 53 38 5164.7 22.28 262.58
46.97 7 54 21 1995.84 16.42 49.83 305.15 137.86 8 27 37 1395.8 22.27 44.46
133.03 16 17 33 5764.70 16.44 267.95 305.16 137.86 17 53 38 5164.7 22.28 262.58
46.97 7 54 21 1995.84 16.42 49.83 305.15 137.86 8 27 37 1395.8 22.27 44.46
133.03 16 17 33 5764.70 16.44 267.95 305.16 137.86 17 53 38 5164.7 22.28 262.58

DIFFERENTIAL CORRECTIONS

TDE-3.4902 TRA 1.9426 TC3 -.3080 BAU .4151
RDE 2.3195 RRA-1.4133 RC3 .2284 FAU .00990
FDE-1.4092 FRA .8825 FC3 -.1058 BSP 11446
BOE 4.1907 BRA 2.4023 BC3 .3835 FSP -350

MID-COURSE EXECUTION ACCURACY

SGT 2989.9 SGR 2075.0 SG3 109.4
RRT -.9989 RRF -.9987 RTF .9977
SGB 3639.4 R23 .0306 R13 -.9983
SG1 3638.6 SG2 78.5 THA 145.25

ORBIT DETERMINATION ACCURACY

ST 2295.9 SR 1535.4 SS 996.3
CRT -.9997 CRS 1.0000 CST -.9995
LSA 2936.0 MSA 36.4 SSA 1.7
EL1 2761.9 EL2 29.2 ALF 146.23

LAUNCH DATE JAN 29 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.708 GAL -2.19 AZL 118.19 HCA 174.67 SMA 128.40 ECC .15236 INC28.1929 V1 30.236
RP 108.94 LAP -2.52 LOP 304.22 VP 37.454 GAP .92 AZP 61.91 TAL 192.31 TAP 6.98 RCA 108.83 APO 147.96 V2 34.785
RC 100.837 GL -65.46 GP 82.36 ZAL 95.10 ZAP 91.72 ETS 140.63 ZAE 81.92 ETE 233.17 ZAC 69.82 ETC 283.14 CLP 103.07

DISTANCE 382.318

PLANETOCENTRIC CONIC

C3 206.762 VHL 14.379 DLA -49.53 RAL 55.08 RAD 6571.2 VEL 18.113 PTH 3.02 VHP 19.103 OPA 60.09 RAP 266.21 ECC 4.4028
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.50 8 18 16 2171.87 7.15 56.87 318.92 139.15 8 54 28 1571.9 13.16 51.93
132.50 16 38 6 660.72 7.17 297.90 318.94 139.15 16 49 7 60.7 13.18 292.96
47.50 8 18 16 2171.87 7.15 56.87 318.92 139.15 8 54 28 1571.9 13.16 51.93
132.50 16 38 6 660.72 7.17 297.90 318.94 139.15 16 49 7 60.7 13.18 292.96
47.50 8 18 16 2171.87 7.15 56.87 318.92 139.15 8 54 28 1571.9 13.16 51.93
132.50 16 38 6 660.72 7.17 297.90 318.94 139.15 16 49 7 60.7 13.18 292.96

DIFFERENTIAL CORRECTIONS

TOE -.4489 TRA 2.3060 TC3 -.0110 BAU .1176
RDE-6.4124 RRA 3.7253 RC3 .0411 FAU-.00335
FDE-1.4474 FRA 1.0740 FC3 .0140 BSP 11630
BOE 6.4281 BRA 4.3812 BC3 .0425 FSP -242

MID-COURSE EXECUTION ACCURACY

SGT 1427.4 SGR 3431.3 SG3 75.8
RRT .7537 RRF .9925 RTF .8272
SGB 3716.3 R23 -.0377 R13 .9991
SG1 3607.6 SG2 892.2 THA 71.41

ORBIT DETERMINATION ACCURACY

ST 460.9 SR 2645.6 SS 1006.4
CRT .6139 CRS -.9977 CST -.6661
LSA 2844.5 MSA 365.2 SSA .9
EL1 2661.0 EL2 361.7 ALF 83.78

LAUNCH DATE JAN 29 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.696 GAL -1.90 AZL 149.73 HCA 176.94 SMA 128.31 ECC .15195 INC59.7312 V1 30.236
RP 108.95 LAP -2.64 LOP 307.38 VP 37.444 GAP 1.01 AZP 30.30 TAL 190.71 TAP 7.66 RCA 108.82 APO 147.81 V2 34.784
RC 103.240 GL -55.68 GP 62.58 ZAL 92.26 ZAP 90.99 ETS 171.77 ZAE 61.86 ETE 262.89 ZAC 58.05 ETC 318.70 CLP 92.15

DISTANCE 387.566

PLANETOCENTRIC CONIC

C3 837.963 VHL 28.948 DLA -39.00 RAL 53.49 RAD 6572.8 VEL 30.972 PTH 3.47 VHP 37.182 OPA 44.93 RAP 244.63 ECC14.7907
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.98 9 9 8 2155.83 .10 48.61 323.34 129.00 9 45 4 1555.8 5.13 42.79
118.02 15 34 30 948.55 .12 317.06 323.36 129.00 15 50 18 348.6 5.14 311.24
61.98 9 9 8 2155.83 .10 48.61 323.34 129.00 9 45 4 1555.8 5.13 42.79
118.02 15 34 30 948.55 .12 317.06 323.36 129.00 15 50 18 348.6 5.14 311.24
61.98 9 9 8 2155.83 .10 48.61 323.34 129.00 9 45 4 1555.8 5.13 42.79
118.02 15 34 30 948.55 .12 317.06 323.36 129.00 15 50 18 348.6 5.14 311.24

DIFFERENTIAL CORRECTIONS

TDE 4.6013 TRA -.2331 TC3 -.0670 BAU 2.5171
RDE-9.8786 RRA 9.3322 RC3 .2145 FAU-.04182
FDE-2.0009 FRA 1.9226 FC3 .0432 BSP 10758
BOE10.8976 BRA 9.3351 BC3 .2247 FSP -188

MID-COURSE EXECUTION ACCURACY

SGT 991.7 SGR 3318.7 SG3 58.5
RRT -.7303 RRF 1.0000 RTF -.7244
SGB 3463.7 R23 -.0527 R13 .9986
SG1 3400.0 SG2 661.3 THA 102.80

ORBIT DETERMINATION ACCURACY

ST 911.0 SR 2081.6 SS 1357.2
CRT -.9460 CRS-1.0000 CST -.9442
LSA 2631.8 MSA 280.2 SSA .5
EL1 2255.8 EL2 272.5 ALF 112.84

LAUNCH DATE JAN 29 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.681 GAL -2.45 AZL 30.48 HCA 183.19 SMA 128.21 ECC .15512 INC59.5189 V1 30.236
RP 108.95 LAP -2.75 LOP 310.54 VP 37.433 GAP 2.23 AZP 149.48 TAL 193.55 TAP 16.74 RCA 108.33 APO 148.10 V2 34.783
RC 105.643 GL 55.69 GP -64.94 ZAL 92.79 ZAP 92.39 ETS 178.63 ZAE 65.92 ETE 89.49 ZAC 84.50 ETC 45.56 CLP 95.65

DISTANCE 397.081

PLANETOCENTRIC CONIC

C3 832.686 VHL 28.856 DLA 62.01 RAL 355.15 RAD 6572.8 VEL 30.886 PTH 3.46 VHP 34.823 OPA -69.19 RAP 166.07 ECC14.7039
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.21 15 34 32 5040.54 -.18 241.66 265.07 27.99 16 58 33 4440.5 -7.24 238.31
147.79 1 23 40 3351.20 -.17 102.00 265.05 27.99 2 19 31 2751.2 -7.23 98.65
32.21 15 34 32 5040.54 -.18 241.66 265.07 27.99 16 58 33 4440.5 -7.24 238.31
147.79 1 23 40 3351.20 -.17 102.00 265.05 27.99 2 19 31 2751.2 -7.23 98.65
32.21 15 34 32 5040.54 -.18 241.66 265.07 27.99 16 58 33 4440.5 -7.24 238.31
147.79 1 23 40 3351.20 -.17 102.00 265.05 27.99 2 19 31 2751.2 -7.23 98.65

DIFFERENTIAL CORRECTIONS

TDE-3.4712 TRA 2.2134 TC3 -.0992 BAU 2.6667
RD-15.0700 RRA 2.5160 RC3 -.2181 FAU-.04156
FDE 3.0667 FRA -.5349 FC3 .0432 BSP 11167
BOE15.4646 BRA 3.3510 BC3 .2395 FSP -193

MID-COURSE EXECUTION ACCURACY

SGT 1296.1 SGR 3416.2 SG3 60.1
RRT .8536 RRF -.9999 RTF -.8587
SGB 3653.8 R23 -.0499 R13 -.9987
SG1 3597.1 SG2 641.1 THA 71.44

ORBIT DETERMINATION ACCURACY

ST 744.5 SR 3009.5 SS 1843.6
CRT .9608 CRS 1.0000 CST .9621
LSA 3601.3 MSA 201.5 SSA .9
EL1 3093.7 EL2 200.8 ALF 76.57

LAUNCH DATE JAN 29 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 20 1969

MELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.665 GAL -2.17 AZL 59.10 MCA 185.57 SMA 128.10 ECC .15484 INC30.8985 V1 30.236  
 RP 108.95 LAP -2.86 LOP 313.70 VP 37.421 GAP 2.33 AZP 120.78 TAL 191.96 TAP 17.53 RCA 108.27 APO 147.94 V2 34.783  
 RC 108.045 GL 64.95 GP -81.92 ZAL 94.64 ZAP 94.80 ETS 192.86 ZAE 84.60 ETE 104.37 ZAC 96.17 ETC 61.61 CLP 126.56

DISTANCE 402.403

PLANETOCENTRIC CONIC

C3 245.568 VHL 15.671 CLA 65.50 RAL 334.49 RAD 6571.4 VEL 19.154 PTH 3.09 VHP 18.278 DPA -73.12 RAP 106.13 ECC 5.0414  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.10 14 2 27 4945.53 -7.05 241.35 241.27 24.70 15 24 52 4345.5 -14.30 238.33  
 151.90 0 10 55 3224.67 -7.04 96.97 241.25 24.70 1 4 39 2624.7 -14.29 93.95  
 28.10 14 2 27 4945.53 -7.05 241.35 241.27 24.70 15 24 52 4345.5 -14.30 238.33  
 151.90 0 10 55 3224.67 -7.04 96.97 241.25 24.70 1 4 39 2624.7 -14.29 93.95  
 28.10 14 2 27 4945.53 -7.05 241.35 241.27 24.70 15 24 52 4345.5 -14.30 238.33  
 151.90 0 10 55 3224.67 -7.04 96.97 241.25 24.70 1 4 39 2624.7 -14.29 93.95

DIFFERENTIAL CORRECTIONS

TDE 1.5005 TRA .9218 TC3 -.0260 BAU .3164  
 RDE -7.5961 RRA 3.1344 RC3 -.0928 FAU -.00318  
 FDE 1.8937 FRA -.7201 FC3 .0112 BSP 12917  
 BOE 7.7429 BRA 3.2671 BC3 .0964 FSP -269

MID-COURSE EXECUTION ACCURACY

SGT 984.0 SGR 3928.9 SG3 81.2  
 RRT .1931 RRF -.9985 RTF -.1504  
 SGB 4050.2 R23 -.0558 R13 -.9979  
 SG1 3933.8 SG2 964.3 THA 87.05

ORBIT DETERMINATION ACCURACY

ST 600.4 SR 2898.5 SS 1134.0  
 CRT -.7594 CRS .9998 CST -.7733  
 LSA 3146.2 MSA 385.8 SSA 1.4  
 EL1 2934.7 EL2 385.8 ALF 99.10

LAUNCH DATE JAN 29 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 22 1969

MELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.646 GAL -1.98 AZL 69.53 MCA 188.48 SMA 127.98 ECC .15521 INC20.4663 V1 30.236  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.408 GAP 2.57 AZP 110.26 TAL 190.91 TAP 19.38 RCA 108.11 APO 147.84 V2 34.784  
 RC 110.446 GL 64.99 GP -81.32 ZAL 96.35 ZAP 98.13 ETS 285.02 ZAE 94.47 ETE 196.67 ZAC 101.40 ETC 154.45 CLP-159.50

DISTANCE 408.270

PLANETOCENTRIC CONIC

C3 113.644 VHL 10.660 DLA 64.05 RAL 332.16 RAD 6570.2 VEL 15.329 PTH 2.74 VHP 12.050 DPA -68.59 RAP 76.99 ECC 2.8703  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.81 13 57 6 4807.89 -14.97 236.69 234.69 26.94 15 17 14 4207.9 -22.06 233.21  
 150.19 23 53 44 3099.42 -14.96 94.24 234.67 26.93 24 45 24 2499.4 -22.06 90.76  
 29.81 13 57 6 4807.89 -14.97 236.69 234.69 26.94 15 17 14 4207.9 -22.06 233.21  
 150.19 23 53 44 3099.42 -14.96 94.24 234.67 26.93 24 45 24 2499.4 -22.06 90.76  
 29.81 13 57 6 4807.89 -14.97 236.69 234.69 26.94 15 17 14 4207.9 -22.06 233.21  
 150.19 23 53 44 3099.42 -14.96 94.24 234.67 26.93 24 45 24 2499.4 -22.06 90.76

DIFFERENTIAL CORRECTIONS

TDE 5.0406 TRA -2.5898 TC3 -.2024 BAU .3079  
 RDE .0978 RRA .1854 RC3 -.0095 FAU .01291  
 FDE 1.7539 FRA -.7882 FC3 -.0983 BSP 14251  
 BOE 5.0415 BRA 2.5964 BC3 .2026 FSP -421

MID-COURSE EXECUTION ACCURACY

SGT 4200.3 SGR 234.5 SG3 118.1  
 RRT -.5816 RRF -.5194 RTF .9965  
 SGB 4206.8 R23 -.0754 R13 -.9964  
 SG1 4202.5 SG2 190.7 THA 178.14

ORBIT DETERMINATION ACCURACY

ST 2872.3 SR 86.2 SS 1027.0  
 CRT .3122 CRS -.3497 CST -.9992  
 LSA 3050.2 MSA 90.4 SSA 1.5  
 EL1 2872.4 EL2 81.9 ALF .54

LAUNCH DATE JAN 29 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 24 1969

MELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.626 GAL -1.82 AZL 74.59 MCA 191.52 SMA 127.84 ECC .15582 INC15.4147 V1 30.236  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.395 GAP 2.85 AZP 105.12 TAL 189.94 TAP 21.45 RCA 107.92 APO 147.76 V2 34.786  
 RC 112.844 GL 62.75 GP -74.57 ZAL 97.65 ZAP 102.00 ETS 313.07 ZAE 101.49 ETE 224.19 ZAC 104.57 ETC 182.73 CLP-141.39

DISTANCE 414.275

PLANETOCENTRIC CONIC

C3 68.153 VHL 8.255 DLA 62.12 RAL 335.18 RAD 6569.3 VEL 13.766 PTH 2.51 VHP 9.118 DPA -63.38 RAP 62.04 ECC 2.1216  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.09 14 14 35 4685.28 -21.44 231.33 233.20 30.16 15 32 40 4085.3 -28.29 227.19  
 147.91 0 4 19 2994.89 -21.43 91.52 233.18 30.16 0 54 14 2394.9 -28.28 87.39  
 32.09 14 14 35 4685.28 -21.44 231.33 233.20 30.16 15 32 40 4085.3 -28.29 227.19  
 147.91 0 4 19 2994.89 -21.43 91.52 233.18 30.16 0 54 14 2394.9 -28.28 87.39  
 32.09 14 14 35 4685.28 -21.44 231.33 233.20 30.16 15 32 40 4085.3 -28.29 227.19  
 147.91 0 4 19 2994.89 -21.43 91.52 233.18 30.16 0 54 14 2394.9 -28.28 87.39

DIFFERENTIAL CORRECTIONS

TDE 3.6189 TRA -1.9261 TC3 -.4893 BAU .4951  
 RDE 1.8628 RRA -.7226 RC3 -.2364 FAU .02435  
 FDE 1.9575 FRA -.8127 FC3 -.3093 BSP 13242  
 BOE 4.0702 BRA 2.0572 BC3 .5434 FSP -530

MID-COURSE EXECUTION ACCURACY

SGT 3889.9 SGR 1724.5 SG3 163.0  
 RRT .9880 RRF .9984 RTF .9907  
 SGB 4255.1 R23 .1021 R13 .9936  
 SG1 4248.1 SG2 243.6 THA 23.74

ORBIT DETERMINATION ACCURACY

ST 2654.1 SR 1332.3 SS 1107.7  
 CRT .9964 CRS -.9999 CST -.9976  
 LSA 3167.5 MSA 114.6 SSA 1.9  
 EL1 2968.0 EL2 101.3 ALF 26.61

LAUNCH DATE JAN 29 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 26 1969

MELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.605 GAL -1.66 AZL 77.54 MCA 194.61 SMA 127.69 ECC .15658 INC12.4645 V1 30.236  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.381 GAP 3.14 AZP 102.07 TAL 188.98 TAP 23.59 RCA 107.70 APO 147.69 V2 34.789  
 RC 115.239 GL 59.94 GP -67.94 ZAL 98.52 ZAP 106.21 ETS 317.51 ZAE 107.14 ETE 227.39 ZAC 106.84 ETC 187.01 CLP-138.04

DISTANCE 420.312

PLANETOCENTRIC CONIC

C3 47.349 VHL 6.881 DLA 60.20 RAL 339.46 RAD 6568.8 VEL 12.989 PTH 2.37 VHP 7.502 DPA -58.15 RAP 52.67 ECC 1.7793  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.37 14 37 18 4586.00 -26.13 226.00 233.16 33.61 15 53 44 3986.0 -32.70 221.17  
 145.63 0 15 45 2915.68 -26.12 88.94 233.14 33.61 1 4 20 2315.7 -32.69 84.11  
 34.37 14 37 18 4586.00 -26.13 226.00 233.16 33.61 15 53 44 3986.0 -32.70 221.17  
 145.63 0 15 45 2915.68 -26.12 88.94 233.14 33.61 1 4 20 2315.7 -32.69 84.11  
 34.37 14 37 18 4586.00 -26.13 226.00 233.16 33.61 15 53 44 3986.0 -32.70 221.17  
 145.63 0 15 45 2915.68 -26.12 88.94 233.14 33.61 1 4 20 2315.7 -32.69 84.11

DIFFERENTIAL CORRECTIONS

TDE 3.0440 TRA -1.5985 TC3 -.8396 BAU .6000  
 RDE 1.7899 RRA -.6380 RC3 -.4399 FAU .03628  
 FDE 2.1956 FRA -.8312 FC3 -.6634 BSP 13492  
 BOE 3.5313 BRA 1.7211 BC3 .9479 FSP -705

MID-COURSE EXECUTION ACCURACY

SGT 3864.1 SGR 1931.4 SG3 213.7  
 RRT .9835 RRF .9979 RTF .9856  
 SGB 4319.9 R23 .1221 R13 .9907  
 SG1 4308.5 SG2 313.8 THA 26.33

ORBIT DETERMINATION ACCURACY

ST 2659.1 SR 1524.6 SS 1215.7  
 CRT .9955 CRS -.9999 CST -.9966  
 LSA 3294.4 MSA 142.1 SSA 2.5  
 EL1 3062.6 EL2 125.6 ALF 29.77

LAUNCH DATE JAN 29 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 426.358

RL 147.35 LAL -.00 LOL 128.92 VL 27.581 GAL -1.49 AZL 79.47 HCA 197.72 SMA 127.54 ECC .15747 INC10.5300 V1 30.238  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.367 GAP 3.43 AZP 100.04 TAL 188.00 TAP 25.72 RCA 107.45 APO 147.62 V2 34.792  
 RC 117.630 GL 57.06 GP -61.81 ZAL 98.99 ZAP 110.57 ETS 318.54 ZAE 111.84 ETE 226.53 ZAC 108.61 ETC 187.54 CLP-138.06

PLANETOCENTRIC CONIC

C3 36.050 VHL 6.004 DLA 58.40 RAL 343.91 RAD 6568.4 VEL 12.547 PTH 2.27 VHP 6.531 DPA -53.02 RAP 46.25 ECC 1.5933  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.52 15 0 34 4506.90 -29.39 221.00 233.65 36.97 16 15 41 3906.9 -35.65 215.50  
 143.48 0 27 59 2857.33 -29.38 86.61 233.63 36.96 1 15 36 2257.3 -35.64 81.12  
 36.52 15 0 34 4506.90 -29.39 221.00 233.65 36.97 16 15 41 3906.9 -35.65 215.50  
 143.48 0 27 59 2857.33 -29.38 86.61 233.63 36.96 1 15 36 2257.3 -35.64 81.12  
 36.52 15 0 34 4506.90 -29.39 221.00 233.65 36.97 16 15 41 3906.9 -35.65 215.50  
 143.48 0 27 59 2857.33 -29.38 86.61 233.63 36.96 1 15 36 2257.3 -35.64 81.12

DIFFERENTIAL CORRECTIONS

TOE 2.7791 TRA-1.3907 TC3-1.2369 BAU .6629  
 ROE 1.5653 RRA -.4964 RC3 -.6016 FAU .04743  
 FDE 2.4012 FRA -.8088 FC3-1.1391 BSP 13764  
 BOE 3.1896 BRA 1.4766 BC3 1.3755 FSP -882

MID-COURSE EXECUTION ACCURACY

SGT 3956.7 SGR 1889.7 SG3 263.4  
 RRT .9797 RRF .9970 RTF .9817  
 SGB 4384.8 R23 .1396 R13 .9875  
 SG1 4371.3 SG2 343.1 THA 25.24

ORBIT DETERMINATION ACCURACY

ST 2759.1 SR 1518.3 SS 1317.0  
 CRT .9951 CRS -.9999 CST -.9961  
 LSA 3410.1 MSA 154.2 SSA 3.3  
 EL1 3146.5 EL2 132.2 ALF 28.76

LAUNCH DATE JAN 29 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 432.403

RL 147.35 LAL -.00 LOL 128.92 VL 27.557 GAL -1.31 AZL 80.84 HCA 200.85 SMA 127.37 ECC .15849 INC 9.1594 V1 30.236  
 RP 108.91 LAP -3.25 LOP 329.53 VP 37.353 GAP 3.71 AZP 98.57 TAL 186.99 TAP 27.84 RCA 107.18 APO 147.56 V2 34.796  
 RC 120.015 GL 54.28 GP -56.18 ZAL 99.08 ZAP 114.92 ETS 318.78 ZAE 115.74 ETE 224.35 ZAC 110.08 ETC 187.03 CLP-139.21

PLANETOCENTRIC CONIC

C3 29.180 VHL 5.402 DLA 56.77 RAL 348.25 RAD 6568.2 VEL 12.270 PTH 2.21 VHP 5.921 DPA -48.08 RAP 41.70 ECC 1.4802  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.50 15 23 6 4443.33 -31.61 216.44 234.47 40.05 16 37 9 3843.3 -37.58 210.37  
 141.50 0 40 2 2814.46 -31.60 84.60 234.46 40.05 1 26 56 2214.5 -37.57 78.53  
 38.50 15 23 6 4443.33 -31.61 216.44 234.47 40.05 16 37 9 3843.3 -37.58 210.37  
 141.50 0 40 2 2814.46 -31.60 84.60 234.46 40.05 1 26 56 2214.5 -37.57 78.53  
 38.50 15 23 6 4443.33 -31.61 216.44 234.47 40.05 16 37 9 3843.3 -37.58 210.37  
 141.50 0 40 2 2814.46 -31.60 84.60 234.46 40.05 1 26 56 2214.5 -37.57 78.53

DIFFERENTIAL CORRECTIONS

TDE 2.6318 TRA-1.2271 TC3-1.6603 BAU .7050  
 RDE 1.3489 RRA -.3686 RC3 -.7137 FAU .05696  
 FDE 2.5451 FRA -.7393 FC3-1.6901 BSP 13943  
 BOE 2.9573 BRA 1.2812 BC3 1.6072 FSP -1035

MID-COURSE EXECUTION ACCURACY

SGT 4080.4 SGR 1774.9 SG3 307.5  
 RRT .9763 RRF .9958 RTF .9783  
 SGB 4449.8 R23 .1543 R13 .9842  
 SG1 4435.7 SG2 353.1 THA 23.17

ORBIT DETERMINATION ACCURACY

ST 2881.5 SR 1446.8 SS 1398.6  
 CRT .9949 CRS -.9999 CST -.9958  
 LSA 3510.9 MSA 160.1 SSA 4.0  
 EL1 3221.6 EL2 131.0 ALF 26.59

LAUNCH DATE JAN 29 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 438.440

RL 147.35 LAL -.00 LOL 128.92 VL 27.531 GAL -1.13 AZL 81.87 HCA 203.99 SMA 127.20 ECC .15962 INC 8.1331 V1 30.236  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.338 GAP 4.00 AZP 97.44 TAL 185.94 TAP 29.93 RCA 106.89 APO 147.50 V2 34.800  
 RC 122.394 GL 51.64 GP -51.07 ZAL 98.84 ZAP 119.14 ETS 318.86 ZAE 118.93 ETE 221.60 ZAC 111.38 ETC 186.20 CLP-140.79

PLANETOCENTRIC CONIC

C3 24.663 VHL 4.966 DLA 55.30 RAL 352.42 RAD 6568.0 VEL 12.085 PTH 2.16 VHP 5.532 DPA -43.40 RAP 38.43 ECC 1.4059  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.29 15 44 41 4391.44 -33.12 212.35 235.58 42.82 16 57 52 3791.4 -38.79 205.80  
 139.71 0 51 46 2782.86 -33.11 82.90 235.57 42.81 1 38 9 2182.9 -38.78 76.35  
 40.29 15 44 41 4391.44 -33.12 212.35 235.58 42.82 16 57 52 3791.4 -38.79 205.80  
 139.71 0 51 46 2782.86 -33.11 82.90 235.57 42.81 1 38 9 2182.9 -38.78 76.35  
 40.29 15 44 41 4391.44 -33.12 212.35 235.58 42.82 16 57 52 3791.4 -38.79 205.80  
 139.71 0 51 46 2782.86 -33.11 82.90 235.57 42.81 1 38 9 2182.9 -38.78 76.35

DIFFERENTIAL CORRECTIONS

TDE 2.5360 TRA-1.0863 TC3-2.1009 BAU .7390  
 RDE 1.1608 RRA -.2651 RC3 -.7810 FAU .06461  
 FDE 2.6160 FRA -.6330 FC3-2.2679 BSP 14187  
 BOE 2.7891 BRA 1.1182 BC3 2.2414 FSP -1166

MID-COURSE EXECUTION ACCURACY

SGT 4214.4 SGR 1638.3 SG3 343.7  
 RRT .9733 RRF .9940 RTF .9754  
 SGB 4521.7 R23 .1652 R13 .9808  
 SG1 4508.0 SG2 351.7 THA 20.86

ORBIT DETERMINATION ACCURACY

ST 3000.2 SR 1349.2 SS 1454.6  
 CRT .9948 CRS -1.0000 CST -.9955  
 LSA 3593.1 MSA 162.9 SSA 4.8  
 EL1 3287.2 EL2 125.7 ALF 24.14

LAUNCH DATE JAN 29 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 444.667

RL 147.35 LAL -.00 LOL 128.92 VL 27.505 GAL -.93 AZL 82.67 HCA 207.14 SMA 127.02 ECC .16087 INC 7.3319 V1 30.236  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.323 GAP 4.29 AZP 96.53 TAL 184.86 TAP 32.00 RCA 106.58 APO 147.45 V2 34.805  
 RC 124.766 GL 49.16 GP -46.46 ZAL 98.29 ZAP 123.15 ETS 318.95 ZAE 121.49 ETE 218.64 ZAC 112.58 ETC 185.30 CLP-142.54

PLANETOCENTRIC CONIC

C3 21.520 VHL 4.639 DLA 53.99 RAL 356.47 RAD 6567.9 VEL 11.954 PTH 2.13 VHP 5.288 DPA -39.04 RAP 36.11 ECC 1.3542  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.90 16 5 24 4348.47 -34.12 208.72 236.97 45.25 17 17 52 3748.5 -39.54 201.78  
 138.10 1 3 18 2759.43 -34.11 81.49 236.96 45.25 1 49 18 2159.4 -39.53 74.55  
 41.90 16 5 24 4348.47 -34.12 208.72 236.97 45.25 17 17 52 3748.5 -39.54 201.78  
 138.10 1 3 18 2759.43 -34.11 81.49 236.96 45.25 1 49 18 2159.4 -39.53 74.55  
 41.90 16 5 24 4348.47 -34.12 208.72 236.97 45.25 17 17 52 3748.5 -39.54 201.78  
 138.10 1 3 18 2759.43 -34.11 81.49 236.96 45.25 1 49 18 2159.4 -39.53 74.55

DIFFERENTIAL CORRECTIONS

TDE 2.4695 TRA -.9558 TC3-2.5445 BAU .7681  
 RDE 1.0038 RRA -.1831 RC3 -.8075 FAU .07004  
 FDE 2.6226 FRA -.4991 FC3-2.8177 BSP 14439  
 BOE 2.6657 BRA .9732 BC3 2.6696 FSP -1263

MID-COURSE EXECUTION ACCURACY

SGT 4348.3 SGR 1498.8 SG3 370.9  
 RRT .9701 RRF .9913 RTF .9727  
 SGB 4599.3 R23 .1717 R13 .9774  
 SG1 4586.4 SG2 344.7 THA 18.60

ORBIT DETERMINATION ACCURACY

ST 3109.7 SR 1245.3 SS 1487.3  
 CRT .9948 CRS -1.0000 CST -.9952  
 LSA 3661.5 MSA 164.2 SSA 5.7  
 EL1 3347.8 EL2 118.1 ALF 21.75

LAUNCH DATE JAN 29 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.477 GAL -.72 AZL 83.31 HCA 210.29 SMA 126.83 ECC .16224 INC 6.6857 V1 30.236  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.308 GAP 4.58 AZP 95.78 TAL 183.75 TAP 34.04 RCA 106.26 APO 147.41 V2 34.811  
 RC 127.128 GL 46.82 GP -42.34 ZAL 97.46 ZAP 126.90 ETS 319.11 ZAE 123.49 ETE 215.66 ZAC 113.74 ETC 184.44 CLP-144.33

PLANETOCENTRIC CONIC

C3 19.243 VHL 4.387 DLA 52.82 RAL .42 RAD 6567.8 VEL 11.859 PTH 2.10 VHP 5.143 OPA -35.00 RAP 34.50 ECC 1.3167  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.35 16 25 26 4312.41 -34.78 205.52 238.64 47.38 17 37 18 3712.4 -39.96 198.26  
 136.65 1 14 49 2742.08 -34.77 80.35 238.63 47.37 2 0 31 2142.1 -39.95 73.09  
 43.35 16 25 26 4312.41 -34.78 205.52 238.64 47.38 17 37 18 3712.4 -39.96 198.26  
 136.65 1 14 49 2742.08 -34.77 80.35 238.63 47.37 2 0 31 2142.1 -39.95 73.09  
 43.35 16 25 26 4312.41 -34.78 205.52 238.64 47.38 17 37 18 3712.4 -39.96 198.26  
 136.65 1 14 49 2742.08 -34.77 80.35 238.63 47.37 2 0 31 2142.1 -39.95 73.09

DIFFERENTIAL CORRECTIONS

TDE 2.4186 TRA -.8316 TC3-2.9896 BAU .7966  
 RDE .8737 RRA -.1202 RC3 -.8060 FAU .07367  
 FDE 2.5747 FRA -.3525 FC3-3.3142 BSP 14771  
 BOE 2.5715 BRA .8402 BC3 3.0963 FSP -1337

MID-COURSE EXECUTION ACCURACY

SGT 4482.0 SGR 1367.4 SG3 389.7  
 RRT .9670 RRF .9877 RTF .9705  
 SGB 4686.0 R23 .1726 R13 .9744  
 SG1 4674.1 SG2 334.1 THA 16.52

ORBIT DETERMINATION ACCURACY

ST 3205.6 SR 1144.0 SS 1498.2  
 CRT .9949 CRS-1.0000 CST -.9949  
 LSA 3715.2 MSA 164.1 SSA 6.7  
 EL1 3401.9 EL2 108.7 ALF 19.57

LAUNCH DATE JAN 29 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.448 GAL -.51 AZL 83.85 HCA 213.44 SMA 126.64 ECC .16374 INC 6.1508 V1 30.236  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.294 GAP 4.86 AZP 95.14 TAL 182.60 TAP 36.04 RCA 105.91 APO 147.38 V2 34.818  
 RC 129.481 GL 44.60 GP -38.68 ZAL 96.39 ZAP 130.39 ETS 319.32 ZAE 125.03 ETE 212.78 ZAC 114.91 ETC 183.67 CLP-146.10

PLANETOCENTRIC CONIC

C3 17.544 VHL 4.189 DLA 51.77 RAL 4.32 RAD 6567.7 VEL 11.787 PTH 2.08 VHP 5.068 OPA -31.29 RAP 33.46 ECC 1.2887  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.66 16 44 58 4281.80 -35.20 202.69 240.58 49.23 17 56 20 3681.8 -40.17 195.18  
 135.34 1 26 25 2729.40 -35.18 79.43 240.57 49.21 2 11 54 2129.4 -40.16 71.93  
 44.66 16 44 58 4281.80 -35.20 202.69 240.58 49.23 17 56 20 3681.8 -40.17 195.18  
 135.34 1 26 25 2729.40 -35.18 79.43 240.57 49.21 2 11 54 2129.4 -40.16 71.93  
 44.66 16 44 58 4281.80 -35.20 202.69 240.58 49.23 17 56 20 3681.8 -40.17 195.18  
 135.34 1 26 25 2729.40 -35.18 79.43 240.57 49.21 2 11 54 2129.4 -40.16 71.93

DIFFERENTIAL CORRECTIONS

TDE 2.3807 TRA -.7036 TC3-3.4183 BAU .8223  
 RDE .7681 RRA -.0691 RC3 -.7784 FAU .07531  
 FDE 2.4906 FRA -.1915 FC3-3.7165 BSP 15039  
 BOE 2.5016 BRA .7070 BC3 3.5058 FSP -1372

MID-COURSE EXECUTION ACCURACY

SGT 4607.1 SGR 1246.0 SG3 400.4  
 RRT .9627 RRF .9827 RTF .9680  
 SGB 4772.6 R23 .1701 R13 .9712  
 SG1 4761.4 SG2 326.0 THA 14.66

ORBIT DETERMINATION ACCURACY

ST 3291.0 SR 1051.9 SS 1493.5  
 CRT .9951 CRS -.9999 CST -.9945  
 LSA 3760.4 MSA 164.4 SSA 7.7  
 EL1 3453.6 EL2 99.1 ALF 17.66

LAUNCH DATE JAN 29 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.419 GAL -.28 AZL 84.30 HCA 216.60 SMA 126.45 ECC .16536 INC 5.6980 V1 30.236  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.279 GAP 5.15 AZP 94.58 TAL 181.42 TAP 38.02 RCA 105.54 APO 147.36 V2 34.825  
 RC 131.823 GL 42.48 GP -35.44 ZAL 95.08 ZAP 133.61 ETS 319.56 ZAE 126.18 ETE 210.06 ZAC 116.12 ETC 182.99 CLP-147.84

PLANETOCENTRIC CONIC

C3 16.252 VHL 4.031 DLA 50.82 RAL 8.21 RAD 6567.7 VEL 11.732 PTH 2.07 VHP 5.045 OPA -27.90 RAP 32.88 ECC 1.2675  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.86 17 4 12 4255.65 -35.43 200.19 242.79 50.83 18 15 7 3655.6 -40.21 192.48  
 134.14 1 38 11 2720.37 -35.41 78.73 242.78 50.82 2 23 32 2120.4 -40.20 71.02  
 45.86 17 4 12 4255.65 -35.43 200.19 242.79 50.83 18 15 7 3655.6 -40.21 192.48  
 134.14 1 38 11 2720.37 -35.41 78.73 242.78 50.82 2 23 32 2120.4 -40.20 71.02  
 45.86 17 4 12 4255.65 -35.43 200.19 242.79 50.83 18 15 7 3655.6 -40.21 192.48  
 134.14 1 38 11 2720.37 -35.41 78.73 242.78 50.82 2 23 32 2120.4 -40.20 71.02

DIFFERENTIAL CORRECTIONS

TDE 2.3499 TRA -.5772 TC3-3.8273 BAU .8467  
 RDE .6822 RRA -.0314 RC3 -.7343 FAU .07543  
 FDE 2.3802 FRA -.0384 FC3-4.0183 BSP 15309  
 BOE 2.4469 BRA .5781 BC3 3.8971 FSP -1382

MID-COURSE EXECUTION ACCURACY

SGT 4729.0 SGR 1138.2 SG3 404.8  
 RRT .9581 RRF .9759 RTF .9663  
 SGB 4864.0 R23 .1603 R13 .9689  
 SG1 4853.6 SG2 317.7 THA 13.04

ORBIT DETERMINATION ACCURACY

ST 3363.8 SR 969.9 SS 1475.2  
 CRT .9955 CRS -.9998 CST -.9941  
 LSA 3795.4 MSA 163.0 SSA 8.7  
 EL1 3499.7 EL2 88.1 ALF 16.03

LAUNCH DATE JAN 29 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

RL 147.35 LAL -.00 LOL 128.92 VL 27.389 GAL -.04 AZL 84.69 HCA 219.76 SMA 126.25 ECC .16712 INC 5.3077 V1 30.236  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.264 GAP 5.44 AZP 94.08 TAL 180.21 TAP 39.97 RCA 105.15 APO 147.35 V2 34.833  
 RC 134.153 GL 40.43 GP -32.57 ZAL 93.56 ZAP 136.57 ETS 319.80 ZAE 127.03 ETE 207.56 ZAC 117.38 ETC 182.39 CLP-149.51

PLANETOCENTRIC CONIC

C3 15.261 VHL 3.907 DLA 49.94 RAL 12.10 RAD 6567.6 VEL 11.690 PTH 2.06 VHP 5.061 OPA -24.78 RAP 32.66 ECC 1.2512  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.97 17 23 15 4233.08 -35.51 197.96 245.24 52.24 18 33 48 3633.1 -40.14 190.10  
 133.03 1 50 10 2714.45 -35.50 78.20 245.23 52.23 2 35 25 2114.4 -40.12 70.35  
 46.97 17 23 15 4233.08 -35.51 197.96 245.24 52.24 18 33 48 3633.1 -40.14 190.10  
 133.03 1 50 10 2714.45 -35.50 78.20 245.23 52.23 2 35 25 2114.4 -40.12 70.35  
 46.97 17 23 15 4233.08 -35.51 197.96 245.24 52.24 18 33 48 3633.1 -40.14 190.10  
 133.03 1 50 10 2714.45 -35.50 78.20 245.23 52.23 2 35 25 2114.4 -40.12 70.35

DIFFERENTIAL CORRECTIONS

TDE 2.2898 TRA -.4833 TC3-4.2599 BAU .8809  
 RDE .5995 RRA -.0203 RC3 -.7034 FAU .07607  
 FDE 2.1968 FRA .0344 FC3-4.3153 BSP 16071  
 BOE 2.3670 BRA .4838 BC3 4.3176 FSP -1448

MID-COURSE EXECUTION ACCURACY

SGT 4854.9 SGR 1037.9 SG3 403.0  
 RRT .9591 RRF .9672 RTF .9696  
 SGB 4964.6 R23 .1199 R13 .9711  
 SG1 4956.2 SG2 287.7 THA 11.63

ORBIT DETERMINATION ACCURACY

ST 3376.1 SR 879.5 SS 1409.5  
 CRT .9966 CRS -.9997 CST -.9945  
 LSA 3759.8 MSA 148.2 SSA 9.7  
 EL1 3488.1 EL2 70.6 ALF 14.56

LAUNCH DATE JAN 29 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 14 1969

MELIOCENTRIC CONIC DISTANCE 474.409  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.358 GAL .21 AZL 85.03 HCA 222.92 SMA 126.05 ECC .16902 INC 4.9659 V1 30.236  
 RP 108.77 LAP -3.38 LOP 351.74 VP 37.249 GAP 5.73 AZP 93.64 TAL 178.97 TAP 41.90 RCA 104.75 APO 147.36 V2 34.841  
 RC 136.471 GL 38.45 GP -30.04 ZAL 91.85 ZAP 139.29 ETS 320.03 ZAE 127.65 ETE 205.29 ZAC 118.71 ETC 181.87 CLP-151.13

PLANETOCENTRIC CONIC  
 C3 14.502 VHL 3.808 DLA 49.12 RAL 16.01 RAD 6567.6 VEL 11.657 PTH 2.05 VHP 5.106 DPA -21.93 RAP 32.74 ECC 1.2387  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.02 17 42 18 4213.51 -35.48 195.96 247.94 53.48 18 52 31 3613.5 -39.96 187.99  
 131.98 2 2 22 2711.23 -35.47 77.85 247.93 53.47 2 47 34 2111.2 -39.95 69.88  
 48.02 17 42 18 4213.51 -35.48 195.96 247.94 53.48 18 52 31 3613.5 -39.96 187.99  
 131.98 2 2 22 2711.23 -35.47 77.85 247.93 53.47 2 47 34 2111.2 -39.95 69.88  
 48.02 17 42 18 4213.51 -35.48 195.96 247.94 53.48 18 52 31 3613.5 -39.96 187.99  
 131.98 2 2 22 2711.23 -35.47 77.85 247.93 53.47 2 47 34 2111.2 -39.95 69.88

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.2999 TRA -.3063 TC3-4.5663 BAU .8935 SGT 4956.3 SGR 964.7 SG3 399.9 ST 3468.3 SR 839.3 SS 1412.0  
 RDE .5577 RRA .0237 RC3 -.6210 FAU .07248 RRT .9432 RRF .9565 RTF .9627 CRT .9967 CRS -.9992 CST -.9931  
 FDE 2.1228 FRA .2633 FC3-4.3271 BSP 15831 SGB 5049.3 R23 .1349 R13 .9643 LSA 3834.2 MSA 162.4 SSA 10.7  
 BDE 2.3665 BRA .3073 BC3 4.6084 FSP -1344 SG1 5039.5 SG2 315.1 THA 10.44 EL1 3567.8 EL2 66.4 ALF 13.56

LAUNCH DATE JAN 29 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 16 1969

MELIOCENTRIC CONIC DISTANCE 480.354  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.327 GAL .47 AZL 85.34 HCA 226.09 SMA 125.85 ECC .17107 INC 4.6622 V1 30.236  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.235 GAP 6.02 AZP 93.24 TAL 177.71 TAP 43.80 RCA 104.32 APO 147.37 V2 34.850  
 RC 138.775 GL 36.52 GP -27.81 ZAL 89.96 ZAP 141.80 ETS 320.22 ZAE 128.08 ETE 203.24 ZAC 120.10 ETC 181.42 CLP-152.68

PLANETOCENTRIC CONIC  
 C3 13.929 VHL 3.732 DLA 48.34 RAL 19.96 RAD 6567.5 VEL 11.633 PTH 2.04 VHP 5.175 DPA -19.30 RAP 33.09 ECC 1.2292  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.03 18 1 26 4196.37 -35.35 194.14 250.84 54.58 19 11 22 3596.4 -39.69 186.08  
 130.97 2 14 43 2710.59 -35.34 77.67 250.83 54.57 2 59 53 2110.6 -39.68 69.61  
 49.03 18 1 26 4196.37 -35.35 194.14 250.84 54.58 19 11 22 3596.4 -39.69 186.08  
 130.97 2 14 43 2710.59 -35.34 77.67 250.83 54.57 2 59 53 2110.6 -39.68 69.61  
 49.03 18 1 26 4196.37 -35.35 194.14 250.84 54.58 19 11 22 3596.4 -39.69 186.08  
 130.97 2 14 43 2710.59 -35.34 77.67 250.83 54.57 2 59 53 2110.6 -39.68 69.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2695 TRA -.1650 TC3-4.8979 BAU .9182 SGT 5064.6 SGR 896.3 SG3 393.1 ST 3487.6 SR 785.2 SS 1362.7  
 RDE .5111 RRA .0420 RC3 -.5659 FAU .07038 RRT .9342 RRF .9436 RTF .9616 CRT .9974 CRS -.9985 CST -.9925  
 FDE 1.9759 FRA .3959 FC3-4.3745 BSP 16264 SGB 5143.3 R23 .1168 R13 .9629 LSA 3822.4 MSA 161.1 SSA 11.7  
 BDE 2.3263 BRA .1702 BC3 4.9305 FSP -1333 SG1 5133.6 SG2 315.4 THA 9.42 EL1 3574.5 EL2 54.7 ALF 12.66

LAUNCH DATE JAN 29 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 18 1969

MELIOCENTRIC CONIC DISTANCE 486.284  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.296 GAL .75 AZL 85.61 HCA 229.26 SMA 125.64 ECC .17327 INC 4.3892 V1 30.236  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.220 GAP 6.31 AZP 92.87 TAL 176.43 TAP 45.68 RCA 103.87 APO 147.41 V2 34.860  
 RC 141.067 GL 34.63 GP -25.83 ZAL 87.91 ZAP 144.11 ETS 320.36 ZAE 128.37 ETE 201.41 ZAC 121.56 ETC 181.03 CLP-154.17

PLANETOCENTRIC CONIC  
 C3 13.514 VHL 3.676 DLA 47.56 RAL 23.94 RAD 6567.5 VEL 11.615 PTH 2.04 VHP 5.264 DPA -16.87 RAP 33.65 ECC 1.2224  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.04 18 20 45 4181.21 -35.11 192.47 253.95 55.58 19 30 26 3581.2 -39.34 184.35  
 129.96 2 27 7 2712.50 -35.10 77.65 253.93 55.56 3 12 19 2112.5 -39.33 69.54  
 50.04 18 20 45 4181.21 -35.11 192.47 253.95 55.58 19 30 26 3581.2 -39.34 184.35  
 129.96 2 27 7 2712.50 -35.10 77.65 253.93 55.56 3 12 19 2112.5 -39.33 69.54  
 50.04 18 20 45 4181.21 -35.11 192.47 253.95 55.58 19 30 26 3581.2 -39.34 184.35  
 129.96 2 27 7 2712.50 -35.10 77.65 253.93 55.56 3 12 19 2112.5 -39.33 69.54

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2390 TRA -.0158 TC3-5.1782 BAU .9400 SGT 5164.6 SGR 838.2 SG3 383.6 ST 3491.6 SR 740.1 SS 1308.8  
 RDE .4741 RRA .0568 RC3 -.5078 FAU .06759 RRT .9229 RRF .9282 RTF .9609 CRT .9983 CRS -.9972 CST -.9918  
 FDE 1.8308 FRA .5187 FC3-4.3298 BSP 16588 SGB 5232.2 R23 .0986 R13 .9618 LSA 3798.2 MSA 159.8 SSA 12.7  
 BDE 2.2886 BRA .0589 BC3 5.2030 FSP -1302 SG1 5222.4 SG2 319.2 THA 8.55 EL1 3568.9 EL2 42.7 ALF 11.95

LAUNCH DATE JAN 29 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 20 1969

MELIOCENTRIC CONIC DISTANCE 492.198  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.263 GAL 1.04 AZL 85.86 HCA 232.43 SMA 125.43 ECC .17565 INC 4.1408 V1 30.236  
 RP 108.68 LAP -3.28 LOP 361.12 VP 37.206 GAP 6.61 AZP 92.53 TAL 175.12 TAP 47.55 RCA 103.40 APO 147.46 V2 34.870  
 RC 143.344 GL 32.76 GP -24.08 ZAL 85.72 ZAP 146.25 ETS 320.43 ZAE 128.56 ETE 199.79 ZAC 123.10 ETC 180.68 CLP-155.60

PLANETOCENTRIC CONIC  
 C3 13.234 VHL 3.638 DLA 46.79 RAL 27.94 RAD 6567.5 VEL 11.603 PTH 2.03 VHP 5.369 DPA -14.62 RAP 34.40 ECC 1.2178  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.06 18 40 17 4167.73 -34.78 190.90 257.22 56.48 19 49 45 3567.7 -38.91 182.74  
 128.94 2 39 30 2716.91 -34.77 77.81 257.21 56.46 3 24 47 2116.9 -38.90 69.65  
 51.06 18 40 17 4167.73 -34.78 190.90 257.22 56.48 19 49 45 3567.7 -38.91 182.74  
 128.94 2 39 30 2716.91 -34.77 77.81 257.21 56.46 3 24 47 2116.9 -38.90 69.65  
 51.06 18 40 17 4167.73 -34.78 190.90 257.22 56.48 19 49 45 3567.7 -38.91 182.74  
 128.94 2 39 30 2716.91 -34.77 77.81 257.21 56.46 3 24 47 2116.9 -38.90 69.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.2044 TRA .1357 TC3-5.4139 BAU .9612 SGT 5260.5 SGR 790.1 SG3 372.7 ST 3475.2 SR 702.3 SS 1250.7  
 RDE .4448 RRA .0689 RC3 -.4525 FAU .06453 RRT .9094 RRF .9107 RTF .9605 CRT .9990 CRS -.9953 CST -.9910  
 FDE 1.6884 FRA .6306 FC3-4.2214 BSP 16892 SGB 5319.6 R23 .0813 R13 .9612 LSA 3756.2 MSA 158.7 SSA 13.8  
 BDE 2.2488 BRA .1558 BC3 5.4328 FSP -1263 SG1 5309.6 SG2 325.5 THA 7.81 EL1 3545.3 EL2 30.8 ALF 11.41



LAUNCH DATE	JAN 29 1969		FLIGHT TIME 174.00		ARRIVAL DATE JUL 22 1969	
MELIOCENTRIC CONIC						
RL	147.35	LAL -0.00	LOL 128.92	VL 27.231	GAL 1.34	AZL 86.09
RP	108.65	LAP -3.23	LOP 4.45	VP 37.192	GAP 6.91	AZP 92.21
RC	145.608	GL 30.91	GP -22.52	ZAL 83.41	ZAP 148.23	ETS 320.42
DISTANCE 498.094						
PLANETOCENTRIC CONIC						
C3	13.079	VHL 3.617	DLA 45.99	RAL 31.95	RAD 6567.5	VEL 11.596
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH
52.11	19 0 6	4155.53	-34.36	189.41	260.64	57.30
127.89	2 51 43	2724.01	-34.34	78.14	260.63	57.29
52.11	19 0 6	4155.53	-34.36	189.41	260.64	57.30
127.89	2 51 43	2724.01	-34.34	78.14	260.63	57.29
52.11	19 0 6	4155.53	-34.36	189.41	260.64	57.30
127.89	2 51 43	2724.01	-34.34	78.14	260.63	57.29
DIFFERENTIAL CORRECTIONS						
TDE	2.1633	TRA .3028	TC3-5.6035	BAU .9823	SGT 5352.6	SGR 750.3
RDE	.4213	RRA .0793	RC3 -4.024	FAU .06144	RRT .8944	RRF .8915
FDE	1.5472	FRA .7328	FC3-4.0670	BSP 17220	SG8 5404.9	R23 .0650
BOE	2.2040	BRA .3130	BC3 5.6179	FSP -1225	SG1 5394.7	SG2 332.9
MID-COURSE EXECUTION ACCURACY						
ORBIT DETERMINATION ACCURACY						
ST 3435.7 SR 669.8 SS 1187.2						
CRT .9995 CRS -.9925 CST -.9900						
LSA 3692.8 MSA 158.2 SSA 14.7						
EL1 3500.4 EL2 20.0 ALF 11.03						
LAUNCH DATE	JAN 29 1969		FLIGHT TIME 176.00		ARRIVAL DATE JUL 24 1969	
MELIOCENTRIC CONIC						
RL	147.35	LAL -0.00	LOL 128.92	VL 27.198	GAL 1.66	AZL 86.30
RP	108.61	LAP -3.16	LOP 7.64	VP 37.178	GAP 7.22	AZP 91.92
RC	147.857	GL 29.08	GP -21.13	ZAL 80.99	ZAP 150.08	ETS 320.33
DISTANCE 503.973						
PLANETOCENTRIC CONIC						
C3	13.041	VHL 3.611	DLA 45.17	RAL 35.96	RAD 6567.5	VEL 11.594
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH
53.21	19 20 11	4144.37	-33.83	187.97	264.19	58.07
126.79	3 3 38	2733.90	-33.82	78.66	264.18	58.06
53.21	19 20 11	4144.37	-33.83	187.97	264.19	58.07
126.79	3 3 38	2733.90	-33.82	78.66	264.18	58.06
53.21	19 20 11	4144.37	-33.83	187.97	264.19	58.07
126.79	3 3 38	2733.90	-33.82	78.66	264.18	58.06
DIFFERENTIAL CORRECTIONS						
TDE	2.1194	TRA .4783	TC3-5.7247	BAU 1.0000	SGT 5437.0	SGR 718.1
RDE	.4036	RRA .0894	RC3 -.3533	FAU .05800	RRT .8772	RRF .8710
FDE	1.4142	FRA .8309	FC3-3.8504	BSP 17424	SG8 5484.2	R23 .0528
BOE	2.1575	BRA .4866	BC3 5.7355	FSP -1173	SG1 5473.5	SG2 342.5
MID-COURSE EXECUTION ACCURACY						
ORBIT DETERMINATION ACCURACY						
ST 3380.5 SR 643.3 SS 1123.8						
CRT .9997 CRS -.9883 CST -.9889						
LSA 3616.5 MSA 159.0 SSA 15.7						
EL1 3441.1 EL2 15.7 ALF 10.77						
LAUNCH DATE	JAN 29 1969		FLIGHT TIME 178.00		ARRIVAL DATE JUL 26 1969	
MELIOCENTRIC CONIC						
RL	147.35	LAL -0.00	LOL 128.92	VL 27.165	GAL 1.99	AZL 86.50
RP	108.58	LAP -3.09	LOP 10.82	VP 37.165	GAP 7.54	AZP 91.65
RC	150.092	GL 27.26	GP -19.89	ZAL 78.49	ZAP 151.80	ETS 320.14
DISTANCE 509.833						
PLANETOCENTRIC CONIC						
C3	13.116	VHL 3.622	DLA 44.31	RAL 39.95	RAD 6567.5	VEL 11.598
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH
54.38	19 40 32	4133.94	-33.21	186.56	267.84	58.80
125.62	3 15 5	2746.80	-33.20	79.39	267.83	58.78
54.38	19 40 32	4133.94	-33.21	186.56	267.84	58.80
125.62	3 15 5	2746.80	-33.20	79.39	267.83	58.78
54.38	19 40 32	4133.94	-33.21	186.56	267.84	58.80
125.62	3 15 5	2746.80	-33.20	79.39	267.83	58.78
DIFFERENTIAL CORRECTIONS						
TDE	2.0639	TRA .6583	TC3-5.8040	BAU 1.0192	SGT 5518.4	SGR 690.9
RDE	.3893	RRA .0980	RC3 -.3119	FAU .05482	RRT .8593	RRF .8496
FDE	1.2813	FRA .9159	FC3-3.6185	BSP 17743	SG8 5561.5	R23 .0407
BOE	2.1003	BRA .6655	BC3 5.8124	FSP -1133	SG1 5550.4	SG2 351.3
MID-COURSE EXECUTION ACCURACY						
ORBIT DETERMINATION ACCURACY						
ST 3296.8 SR 619.4 SS 1054.5						
CRT .9992 CRS -.9824 CST -.9875						
LSA 3512.6 MSA 160.4 SSA 16.5						
EL1 3354.4 EL2 23.7 ALF 10.63						
LAUNCH DATE	JAN 29 1969		FLIGHT TIME 180.00		ARRIVAL DATE JUL 28 1969	
MELIOCENTRIC CONIC						
RL	147.35	LAL -0.00	LOL 128.92	VL 27.132	GAL 2.34	AZL 86.68
RP	108.54	LAP -3.01	LOP 14.01	VP 37.152	GAP 7.86	AZP 91.40
RC	152.312	GL 25.46	GP -18.78	ZAL 75.92	ZAP 153.41	ETS 319.84
DISTANCE 515.672						
PLANETOCENTRIC CONIC						
C3	13.304	VHL 3.647	DLA 43.40	RAL 43.89	RAD 6567.5	VEL 11.606
LNCH AZMTH	LNCH TIME	L-I TIME	INJ LAT	INJ LONG	INJ RT ASC	INJ AZMTH
55.62	20 1 12	4123.95	-32.49	185.15	271.57	59.48
124.38	3 25 53	2762.97	-32.48	80.33	271.56	59.47
55.62	20 1 12	4123.95	-32.49	185.15	271.57	59.48
124.38	3 25 53	2762.97	-32.48	80.33	271.56	59.47
55.62	20 1 12	4123.95	-32.49	185.15	271.57	59.48
124.38	3 25 53	2762.97	-32.48	80.33	271.56	59.47
DIFFERENTIAL CORRECTIONS						
TDE	2.0020	TRA .8491	TC3-5.8224	BAU 1.0367	SGT 5594.7	SGR 669.0
RDE	.3789	RRA .1067	RC3 -.2746	FAU .05160	RRT .8405	RRF .8281
FDE	1.1555	FRA .9952	FC3-3.3581	BSP 18021	SG8 5634.5	R23 .0314
BOE	2.0376	BRA .8558	BC3 5.8288	FSP -1091	SG1 5623.0	SG2 360.6
MID-COURSE EXECUTION ACCURACY						
ORBIT DETERMINATION ACCURACY						
ST 3195.3 SR 599.2 SS 985.7						
CRT .9979 CRS -.9742 CST -.9859						
LSA 3393.1 MSA 163.5 SSA 17.2						
EL1 3250.7 EL2 38.2 ALF 10.60						

LAUNCH DATE JAN 29 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC DISTANCE 521.490  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.099 GAL 2.71 AZL 86.86 HCA 248.31 SMA 124.38 ECC .19045 INC 3.1388 V1 30.236  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.139 GAP 8.19 AZP 91.16 TAL 168.33 TAP 56.64 RCA 100.69 APO 148.07 V2 34.926  
 RC 154.516 GL 23.69 GP -17.79 ZAL 73.30 ZAP 154.92 ETS 319.43 ZAE 128.73 ETE 194.08 ZAC 131.68 ETC 179.28 CLP-162.03

PLANETOCENTRIC CONIC  
 C3 13.608 VHL 3.689 DLA 42.44 RAL 47.77 RAD 6567.5 VEL 11.619 PTH 2.04 VHP 6.083 DPA -5.40 RAP 40.22 ECC 1.2240  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.96 20 22 6 4114.21 -31.68 183.72 275.34 60.13 21 30 40 3514.2 -35.39 175.63  
 123.04 3 35 55 2782.55 -31.67 81.51 275.33 60.12 4 22 17 2182.5 -35.37 73.42  
 56.96 20 22 6 4114.21 -31.68 183.72 275.34 60.13 21 30 40 3514.2 -35.39 175.63  
 123.04 3 35 55 2782.55 -31.67 81.51 275.33 60.12 4 22 17 2182.5 -35.37 73.42  
 56.96 20 22 6 4114.21 -31.68 183.72 275.34 60.13 21 30 40 3514.2 -35.39 175.63  
 123.04 3 35 55 2782.55 -31.67 81.51 275.33 60.12 4 22 17 2182.5 -35.37 73.42

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.9321 TRA 1.0496 TC3-5.7841 BAU 1.0532 SGT 5665.4 SGR 650.7 SG3 309.2 ST 3075.8 SR 581.3 SS 916.8  
 RDE .3713 RRA .1155 RC3 -.2416 FAU .04845 RRT .8214 RRF .8068 RTF .9615 CRT .9953 CRS -.9630 CST -.9839  
 FDE 1.0349 FRA 1.0676 FC3-3.0820 BSP 18293 SGB 5702.7 R23 .0238 R13 .9617 LSA 3257.4 MSA 168.5 SSA 17.7  
 BOE 1.9674 BRA 1.0560 BC3 5.7892 FSP -1050 SG1 5690.7 SG2 369.5 THA 5.41 EL1 3129.8 EL2 55.4 ALF 10.66

LAUNCH DATE JAN 29 1969

FLIGHT TIME 184.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC DISTANCE 527.285  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.065 GAL 3.10 AZL 87.03 HCA 251.50 SMA 124.17 ECC .19411 INC 2.9689 V1 30.236  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.126 GAP 8.54 AZP 90.94 TAL 166.93 TAP 58.42 RCA 100.07 APO 148.27 V2 34.938  
 RC 156.704 GL 21.94 GP -16.89 ZAL 70.66 ZAP 156.35 ETS 318.89 ZAE 128.69 ETE 193.30 ZAC 133.56 ETC 179.02 CLP-163.19

PLANETOCENTRIC CONIC  
 C3 14.035 VHL 3.746 DLA 41.44 RAL 51.56 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.259 DPA -3.86 RAP 41.70 ECC 1.2310  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.38 20 43 13 4104.51 -30.78 182.28 279.15 60.75 21 51 38 3504.5 -34.41 174.23  
 121.62 3 45 1 2805.77 -30.77 82.94 279.14 60.74 4 31 47 2205.8 -34.40 74.90  
 58.38 20 43 13 4104.51 -30.78 182.28 279.15 60.75 21 51 38 3504.5 -34.41 174.23  
 121.62 3 45 1 2805.77 -30.77 82.94 279.14 60.74 4 31 47 2205.8 -34.40 74.90  
 58.38 20 43 13 4104.51 -30.78 182.28 279.15 60.75 21 51 38 3504.5 -34.41 174.23  
 121.62 3 45 1 2805.77 -30.77 82.94 279.14 60.74 4 31 47 2205.8 -34.40 74.90

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8580 TRA 1.2646 TC3-5.6814 BAU 1.0668 SGT 5731.7 SGR 636.3 SG3 296.3 ST 2947.9 SR 566.2 SS 852.6  
 RDE .3668 RRA .1251 RC3 -.2116 FAU .04523 RRT .8026 RRF .7867 RTF .9618 CRT .9909 CRS -.9480 CST -.9816  
 FDE .9238 FRA 1.1383 FC3-2.7900 BSP 18458 SGB 5766.9 R23 .0190 R13 .9620 LSA 3115.5 MSA 176.1 SSA 18.0  
 BOE 1.8939 BRA 1.2707 BC3 5.6854 FSP -1002 SG1 5754.5 SG2 378.1 THA 5.11 EL1 3000.9 EL2 74.7 ALF 10.78

LAUNCH DATE JAN 29 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC DISTANCE 533.053  
 RL 147.35 LAL -.00 LOL 128.92 VL 27.032 GAL 3.51 AZL 87.19 HCA 254.68 SMA 123.96 ECC .19804 INC 2.8051 V1 30.236  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.113 GAP 8.89 AZP 90.74 TAL 165.52 TAP 60.20 RCA 99.41 APO 148.51 V2 34.951  
 RC 158.875 GL 20.22 GP -16.08 ZAL 68.01 ZAP 157.69 ETS 318.21 ZAE 128.65 ETE 192.60 ZAC 135.47 ETC 178.74 CLP-164.33

PLANETOCENTRIC CONIC  
 C3 14.591 VHL 3.820 DLA 40.40 RAL 55.24 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 6.446 DPA -2.41 RAP 43.26 ECC 1.2401  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.89 21 4 35 4094.50 -29.79 180.79 282.97 61.35 22 12 50 3494.5 -33.36 172.79  
 120.11 3 53 2 2832.95 -29.78 84.65 282.97 61.34 4 40 15 2232.9 -33.35 76.66  
 59.89 21 4 35 4094.50 -29.79 180.79 282.97 61.35 22 12 50 3494.5 -33.36 172.79  
 120.11 3 53 2 2832.95 -29.78 84.65 282.97 61.34 4 40 15 2232.9 -33.35 76.66  
 59.89 21 4 35 4094.50 -29.79 180.79 282.97 61.35 22 12 50 3494.5 -33.36 172.79  
 120.11 3 53 2 2832.95 -29.78 84.65 282.97 61.34 4 40 15 2232.9 -33.35 76.66

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7733 TRA 1.4868 TC3-5.5387 BAU 1.0810 SGT 5792.7 SGR 623.5 SG3 283.4 ST 2804.1 SR 551.7 SS 788.7  
 RDE .3639 RRA .1347 RC3 -.1868 FAU .04225 RRT .7843 RRF .7672 RTF .9624 CRT .9842 CRS -.9281 CST -.9788  
 FDE .8162 FRA 1.2006 FC3-2.5070 BSP 18708 SGB 5826.1 R23 .0146 R13 .9625 LSA 2958.8 MSA 186.1 SSA 18.1  
 BOE 1.8103 BRA 1.4929 BC3 5.5418 FSP -963 SG1 5813.4 SG2 385.4 THA 4.85 EL1 2856.3 EL2 96.0 ALF 10.97

LAUNCH DATE JAN 29 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC DISTANCE 538.793  
 RL 147.35 LAL -.00 LOL 128.92 VL 26.998 GAL 3.93 AZL 87.35 HCA 257.87 SMA 123.75 ECC .20227 INC 2.6461 V1 30.236  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.101 GAP 9.26 AZP 90.56 TAL 164.11 TAP 61.98 RCA 98.72 APO 148.78 V2 34.964  
 RC 161.027 GL 18.54 GP -15.35 ZAL 65.37 ZAP 158.95 ETS 317.37 ZAE 128.60 ETE 191.99 ZAC 137.42 ETC 178.45 CLP-165.43

PLANETOCENTRIC CONIC  
 C3 15.287 VHL 3.910 DLA 39.32 RAL 58.80 RAD 6567.6 VEL 11.691 PTH 2.06 VHP 6.644 DPA -1.03 RAP 44.89 ECC 1.2516  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.50 21 26 12 4083.97 -28.73 179.24 286.80 61.92 22 34 16 3484.0 -32.24 171.31  
 118.50 3 59 49 2864.31 -28.72 86.64 286.79 61.91 4 47 33 2264.3 -32.23 78.71  
 61.50 21 26 12 4083.97 -28.73 179.24 286.80 61.92 22 34 16 3484.0 -32.24 171.31  
 118.50 3 59 49 2864.31 -28.72 86.64 286.79 61.91 4 47 33 2264.3 -32.23 78.71  
 61.50 21 26 12 4083.97 -28.73 179.24 286.80 61.92 22 34 16 3484.0 -32.24 171.31  
 118.50 3 59 49 2864.31 -28.72 86.64 286.79 61.91 4 47 33 2264.3 -32.23 78.71

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6817 TRA 1.7211 TC3-5.3502 BAU 1.0939 SGT 5848.4 SGR 612.5 SG3 270.8 ST 2654.3 SR 538.3 SS 729.2  
 RDE .3630 RRA .1451 RC3 -.1653 FAU .03937 RRT .7670 RRF .7491 RTF .9629 CRT .9742 CRS -.9020 CST -.9757  
 FDE .7153 FRA 1.2592 FC3-2.2296 BSP 18934 SGB 5880.4 R23 .0114 R13 .9629 LSA 2797.7 MSA 199.0 SSA 18.0  
 BOE 1.7204 BRA 1.7272 BC3 5.3527 FSP -924 SG1 5867.3 SG2 391.8 THA 4.61 EL1 2705.8 EL2 119.1 ALF 11.20

LAUNCH DATE JAN 29 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 544.502

RL 147.35 LAL -.00 LOC 128.92 VL 26.964 GAL 4.38 AZL 87.51 MCA 261.06 SMA 123.54 ECC .20682 INC 2.4907 V1 30.236  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.088 GAP 9.65 AZP 90.39 TAL 162.70 TAP 63.76 RCA 97.99 APO 149.09 V2 34.977  
 RC 163.161 GL 16.91 GP -14.69 ZAL 62.76 ZAP 160.15 ETS 316.37 ZAE 128.54 ETE 191.44 ZAC 139.40 ETC 178.13 CLP-166.51

PLANETOCENTRIC CONIC

C3 16.136 VHL 4.017 DLA 38.21 RAL 62.22 RAD 6567.6 VEL 11.727 PTH 2.07 VHP 6.855 DPA .29 RAP 46.59 ECC 1.2656  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.20 21 48 4 4072.58 -27.60 177.62 290.61 62.46 22 55 57 3472.6 -31.05 169.75  
 116.80 4 5 14 2900.18 -27.59 88.94 290.61 62.45 4 53 34 2300.2 -31.04 81.08  
 63.20 21 48 4 4072.58 -27.60 177.62 290.61 62.46 22 55 57 3472.6 -31.05 169.75  
 116.80 4 5 14 2900.18 -27.59 88.94 290.61 62.45 4 53 34 2300.2 -31.04 81.08  
 63.20 21 48 4 4072.58 -27.60 177.62 290.61 62.46 22 55 57 3472.6 -31.05 169.75  
 116.80 4 5 14 2900.18 -27.59 88.94 290.61 62.45 4 53 34 2300.2 -31.04 81.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5842 TRA 1.9679 TC3-5.1214 BAU 1.1053 SGT 5898.8 SGR 602.8 SG3 258.6 ST 2504.0 SR 525.6 SS 675.1  
 RDE .3636 RRA .1562 RC3 -.1467 FAU .03658 RRT .7509 RRF .7325 RTF .9633 CRT .9601 CRS -.8689 CST -.9722  
 FDE .6211 FRA 1.3142 FC3-1.9628 BSP 19149 SGB 5929.5 R23 .0089 R13 .9634 LSA 2637.3 MSA 214.8 SSA 17.7  
 BOE 1.6254 BRA 1.9741 BC3 5.1235 FSP -887 SG1 5916.2 SG2 396.9 THA 4.41 EL1 2554.5 EL2 144.0 ALF 11.43

LAUNCH DATE JAN 29 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 550.176

RL 147.35 LAL -.00 LOL 128.92 VL 26.931 GAL 4.86 AZL 87.66 MCA 264.26 SMA 123.33 ECC .21173 INC 2.3380 V1 30.236  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.076 GAP 10.05 AZP 90.23 TAL 161.28 TAP 65.54 RCA 97.22 APO 149.44 V2 34.990  
 RC 165.276 GL 15.32 GP -14.09 ZAL 60.20 ZAP 161.29 ETS 315.18 ZAE 128.49 ETE 190.95 ZAC 141.41 ETC 177.78 CLP-167.57

PLANETOCENTRIC CONIC

C3 17.155 VHL 4.142 DLA 37.08 RAL 65.50 RAD 6567.7 VEL 11.770 PTH 2.08 VHP 7.078 DPA 1.54 RAP 48.35 ECC 1.2823  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.00 22 10 15 4060.04 -26.42 175.90 294.41 62.98 23 17 55 3460.0 -29.81 168.11  
 115.00 4 9 11 2940.80 -26.40 91.58 294.40 62.97 4 58 12 2340.8 -29.80 83.78  
 65.00 22 10 15 4060.04 -26.42 175.90 294.41 62.98 23 17 55 3460.0 -29.81 168.11  
 115.00 4 9 11 2940.80 -26.40 91.58 294.40 62.97 4 58 12 2340.8 -29.80 83.78  
 65.00 22 10 15 4060.04 -26.42 175.90 294.41 62.98 23 17 55 3460.0 -29.81 168.11  
 115.00 4 9 11 2940.80 -26.40 91.58 294.40 62.97 4 58 12 2340.8 -29.80 83.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4848 TRA 2.2315 TC3-4.8529 BAU 1.1134 SGT 5945.5 SGR 594.5 SG3 247.1 ST 2362.3 SR 513.9 SS 629.2  
 RDE .3661 RRA .1686 RC3 -.1297 FAU .03380 RRT .7364 RRF .7182 RTF .9637 CRT .9409 CRS -.8285 CST -.9688  
 FDE .5361 FRA 1.3687 FC3-1.7057 BSP 19261 SGB 5975.1 R23 .0078 R13 .9637 LSA 2487.2 MSA 233.0 SSA 17.3  
 BOE 1.5293 BRA 2.2378 BC3 4.8546 FSP -845 SG1 5961.6 SG2 401.1 THA 4.23 EL1 2411.6 EL2 170.6 ALF 11.63

LAUNCH DATE JAN 29 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC

DISTANCE 555.812

RL 147.35 LAL -.00 LOL 128.92 VL 26.897 GAL 5.36 AZL 87.81 MCA 267.45 SMA 123.12 ECC .221703 INC 2.1868 V1 30.236  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.065 GAP 10.47 AZP 90.10 TAL 159.87 TAP 67.32 RCA 96.40 APO 149.85 V2 35.003  
 RC 167.370 GL 13.80 GP -13.55 ZAL 57.70 ZAP 162.37 ETS 313.78 ZAE 128.43 ETE 190.51 ZAC 143.45 ETC 177.38 CLP-168.61

PLANETOCENTRIC CONIC

C3 18.364 VHL 4.285 DLA 35.93 RAL 68.62 RAD 6567.7 VEL 11.821 PTH 2.09 VHP 7.315 DPA 2.73 RAP 50.17 ECC 1.3022  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.89 22 32 49 4045.91 -25.18 174.08 298.18 63.48 23 40 15 3445.9 -28.53 166.35  
 113.11 4 11 31 2986.60 -25.17 94.58 298.17 63.47 5 1 17 2386.6 -28.52 86.85  
 66.89 22 32 49 4045.91 -25.18 174.08 298.18 63.48 23 40 15 3445.9 -28.53 166.35  
 113.11 4 11 31 2986.60 -25.17 94.58 298.17 63.47 5 1 17 2386.6 -28.52 86.85  
 66.89 22 32 49 4045.91 -25.18 174.08 298.18 63.48 23 40 15 3445.9 -28.53 166.35  
 113.11 4 11 31 2986.60 -25.17 94.58 298.17 63.47 5 1 17 2386.6 -28.52 86.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3769 TRA 2.5056 TC3-4.5675 BAU 1.1217 SGT 5985.9 SGR 586.0 SG3 235.9 ST 2223.4 SR 501.9 SS 588.0  
 RDE .3693 RRA .1814 RC3 -.1157 FAU .03124 RRT .7231 RRF .7048 RTF .9641 CRT .9149 CRS -.7789 CST -.9653  
 FDE .4550 FRA 1.4187 FC3-1.4729 BSP 19454 SGB 6014.6 R23 .0063 R13 .9642 LSA 2340.2 MSA 253.6 SSA 16.8  
 BOE 1.4256 BRA 2.5122 BC3 4.5689 FSP -811 SG1 6001.0 SG2 403.7 THA 4.07 EL1 2270.7 EL2 198.4 ALF 11.76

LAUNCH DATE JAN 29 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC

DISTANCE 561.403

RL 147.35 LAL -.00 LOL 128.92 VL 26.864 GAL 5.89 AZL 87.96 MCA 270.65 SMA 122.92 ECC .22275 INC 2.0363 V1 30.236  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.053 GAP 10.91 AZP 89.98 TAL 158.46 TAP 69.11 RCA 95.54 APO 150.30 V2 35.016  
 RC 169.445 GL 12.33 GP -13.05 ZAL 55.27 ZAP 163.38 ETS 312.15 ZAE 128.37 ETE 190.11 ZAC 145.51 ETC 176.94 CLP-169.63

PLANETOCENTRIC CONIC

C3 19.786 VHL 4.448 DLA 34.79 RAL 71.58 RAD 6567.8 VEL 11.881 PTH 2.11 VHP 7.568 DPA 3.86 RAP 52.03 ECC 1.3256  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.89 22 55 57 4029.49 -23.92 172.09 301.92 63.95 24 3 7 3429.5 -27.22 164.42  
 111.11 4 12 0 3038.21 -23.90 97.98 301.91 63.94 5 2 38 2438.2 -27.20 90.32  
 68.89 22 55 57 4029.49 -23.92 172.09 301.92 63.95 24 3 7 3429.5 -27.22 164.42  
 111.11 4 12 0 3038.21 -23.90 97.98 301.91 63.94 5 2 38 2438.2 -27.20 90.32  
 68.89 22 55 57 4029.49 -23.92 172.09 301.92 63.95 24 3 7 3429.5 -27.22 164.42  
 111.11 4 12 0 3038.21 -23.90 97.98 301.91 63.94 5 2 38 2438.2 -27.20 90.32

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2647 TRA 2.7949 TC3-4.2636 BAU 1.1282 SGT 6021.4 SGR 577.7 SG3 225.1 ST 2096.7 SR 489.9 SS 553.9  
 RDE .3736 RRA .1952 RC3 -.1032 FAU .02878 RRT .7113 RRF .6929 RTF .9645 CRT .8811 CRS -.7209 CST -.9625  
 FDE .3802 FRA 1.4672 FC3-1.2590 BSP 19629 SGB 6049.0 R23 .0053 R13 .9646 LSA 2206.1 MSA 275.5 SSA 16.3  
 BOE 1.3187 BRA 2.8018 BC3 4.2649 FSP -778 SG1 6035.4 SG2 405.1 THA 3.92 EL1 2141.2 EL2 226.9 ALF 11.77

LAUNCH DATE JAN 29 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC

DISTANCE 566.945

RL 147.35 LAL -0.00 LOL 128.92 VL 26.830 GAL 6.45 AZL 88.11 HCA 273.85 SMA 122.72 ECC .22895 INC 1.8854 V1 30.236  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.041 GAP 11.38 AZP 89.87 TAL 157.06 TAP 70.91 RCA 94.62 APO 150.81 V2 35.030  
 RC 171.498 GL 10.92 GP -12.60 ZAL 52.92 ZAP 164.35 ETS 310.26 ZAE 128.30 ETE 189.76 ZAC 147.58 ETC 176.43 CLP-170.64

PLANETOCENTRIC CONIC

C3 21.450 VHL 4.631 OLA 33.65 RAL 74.38 RAD 6567.9 VEL 11.951 PTH 2.13 VHP 7.837 DPA 4.93 RAP 53.94 ECC 1.3530  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.02 23 19 52 4010.05 -22.62 169.89 305.63 64.40 24 26 42 3410.1 -25.88 162.29  
 108.98 4 10 28 3096.28 -22.61 101.84 305.63 64.39 5 2 4 2496.3 -25.87 94.24  
 71.02 23 19 52 4010.05 -22.62 169.89 305.63 64.40 24 26 42 3410.1 -25.88 162.29  
 108.98 4 10 28 3096.28 -22.61 101.84 305.63 64.39 5 2 4 2496.3 -25.87 94.24  
 110.00 5 2 28 2937.19 -26.84 91.52 307.68 67.99 5 51 26 2337.2 -29.58 83.40  
 110.00 3 30 57 3217.14 -18.52 108.97 303.36 60.74 4 24 34 2617.1 -22.27 101.84

DIFFERENTIAL CORRECTIONS

TDE 1.1489 TRA 3.1008 TC3-3.9478 BAU 1.1324  
 RDE .3787 RRA .2099 RC3 -.0919 FAU .02640  
 FDE .3114 FRA 1.5145 FC3-1.0656 BSP 19779  
 BDE 1.2097 BRA 3.1079 BC3 3.9489 FSP -745

MID-COURSE EXECUTION ACCURACY

SGT 6051.9 SGR 569.3 SG3 214.9  
 RRT .7009 RRF .6826 RTF .9650  
 SGB 6078.7 R23 .0045 R13 .9650  
 SG1 6065.1 SG2 405.2 THA 3.79

ORBIT DETERMINATION ACCURACY

ST 1985.7 SR 477.8 SS 526.8  
 CRT .8385 CRS -.6558 CST -.9608  
 LSA 2088.1 MSA 297.7 SSA 15.7  
 EL1 2026.4 EL2 255.1 ALF 11.59

LAUNCH DATE JAN 29 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 572.430

RL 147.35 LAL -0.00 LOL 128.92 VL 26.797 GAL 7.05 AZL 88.27 HCA 277.05 SMA 122.51 ECC .23566 INC 1.7333 V1 30.236  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.030 GAP 11.88 AZP 89.79 TAL 155.67 TAP 72.72 RCA 93.64 APO 151.39 V2 35.043  
 RC 173.532 GL 9.57 GP -12.19 ZAL 50.65 ZAP 165.26 ETS 308.07 ZAE 128.24 ETE 189.43 ZAC 149.67 ETC 175.84 CLP-171.64

PLANETOCENTRIC CONIC

C3 23.390 VHL 4.836 OLA 32.52 RAL 77.02 RAD 6567.9 VEL 12.032 PTH 2.15 VHP 8.125 DPA 5.95 RAP 55.89 ECC 1.3849  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.30 23 44 55 3986.31 -21.31 167.39 309.31 64.84 24 51 21 3386.3 -24.52 159.85  
 106.70 4 6 30 3162.03 -21.30 106.23 309.31 64.83 4 59 13 2562.0 -24.51 98.69  
 73.30 23 44 55 3986.31 -21.31 167.39 309.31 64.84 24 51 21 3386.3 -24.52 159.85  
 106.70 4 6 30 3162.03 -21.30 106.23 309.31 64.83 4 59 13 2562.0 -24.51 98.69  
 110.00 5 47 40 2850.06 -28.93 85.60 312.73 70.94 6 35 10 2250.1 -31.25 77.16  
 110.00 3 6 51 3346.28 -14.07 116.33 305.22 58.52 4 2 38 2746.3 -18.13 109.57

DIFFERENTIAL CORRECTIONS

TDE 1.0335 TRA 3.4277 TC3-3.6200 BAU 1.1323  
 RDE .3850 RRA .2258 RC3 -.0812 FAU .02403  
 FDE .2504 FRA 1.5632 FC3 -.8894 BSP 19825  
 BDE 1.1028 BRA 3.4352 BC3 3.6209 FSP -710

MID-COURSE EXECUTION ACCURACY

SGT 6078.9 SGR 561.1 SG3 205.4  
 RRT .6923 RRF .6744 RTF .9655  
 SGB 6104.8 R23 .0043 R13 .9655  
 SG1 6091.4 SG2 404.1 THA 3.67

ORBIT DETERMINATION ACCURACY

ST 1896.7 SR 465.9 SS 507.6  
 CRT .7878 CRS -.8879 CST -.9609  
 LSA 1992.6 MSA 318.6 SSA 15.2  
 EL1 1932.7 EL2 281.7 ALF 11.19

LAUNCH DATE JAN 29 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 577.850

RL 147.35 LAL -0.00 LOL 128.92 VL 26.764 GAL 7.68 AZL 88.42 HCA 280.26 SMA 122.32 ECC .24295 INC 1.5790 V1 30.236  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.019 GAP 12.40 AZP 89.72 TAL 154.29 TAP 74.55 RCA 92.60 APO 152.03 V2 35.056  
 RC 175.544 GL 8.30 GP -11.81 ZAL 48.49 ZAP 166.11 ETS 305.54 ZAE 128.16 ETE 189.14 ZAC 151.76 ETC 175.16 CLP-172.64

PLANETOCENTRIC CONIC

C3 25.647 VHL 5.064 OLA 31.41 RAL 79.51 RAD 6568.0 VEL 12.125 PTH 2.17 VHP 8.434 DPA 6.91 RAP 57.88 ECC 1.4221  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.80 0 15 40 3956.14 -19.99 164.44 312.96 65.25 1 21 36 3356.1 -23.16 156.95  
 104.20 3 59 32 3237.46 -19.98 111.31 312.95 65.24 4 53 29 2637.5 -23.15 103.83  
 75.80 0 15 40 3956.14 -19.99 164.44 312.96 65.25 1 21 36 3356.1 -23.16 156.95  
 104.20 3 59 32 3237.46 -19.98 111.31 312.95 65.24 4 53 29 2637.5 -23.15 103.83  
 110.00 6 20 41 2798.73 -30.01 81.99 317.19 72.81 7 7 20 2198.7 -32.07 73.39  
 110.00 2 53 41 3442.87 -10.57 121.62 307.62 57.30 3 51 4 2842.9 -14.81 115.08

DIFFERENTIAL CORRECTIONS

TDE .9100 TRA 3.7690 TC3-3.3003 BAU 1.1319  
 RDE .3915 RRA .2421 RC3 -.0719 FAU .02186  
 FDE .1919 FRA 1.6093 FC3 -.7379 BSP 19964  
 BDE .9906 BRA 3.7768 BC3 3.3011 FSP -681

MID-COURSE EXECUTION ACCURACY

SGT 6099.1 SGR 551.8 SG3 196.2  
 RRT .6844 RRF .6666 RTF .9661  
 SGB 6124.0 R23 .0035 R13 .9661  
 SG1 6110.8 SG2 401.6 THA 3.56

ORBIT DETERMINATION ACCURACY

ST 1821.2 SR 453.3 SS 492.7  
 CRT .7275 CRS -.5149 CST -.9623  
 LSA 1910.7 MSA 337.6 SSA 14.6  
 EL1 1851.7 EL2 305.9 ALF 10.55

LAUNCH DATE JAN 29 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 583.194

RL 147.35 LAL -0.00 LOL 128.92 VL 26.732 GAL 8.36 AZL 88.58 HCA 283.47 SMA 122.12 ECC .25087 INC 1.4213 V1 30.236  
 RP 108.06 LAP -1.38 LOP 52.39 VP 37.008 GAP 12.97 AZP 89.67 TAL 152.93 TAP 76.40 RCA 91.48 APO 152.75 V2 35.069  
 RC 177.535 GL 7.09 GP -11.46 ZAL 46.42 ZAP 166.90 ETS 302.63 ZAE 128.08 ETE 188.88 ZAC 153.86 ETC 174.35 CLP-173.63

PLANETOCENTRIC CONIC

C3 28.271 VHL 5.317 OLA 30.33 RAL 81.85 RAD 6568.1 VEL 12.233 PTH 2.20 VHP 8.765 DPA 7.83 RAP 59.90 ECC 1.4653  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.65 0 45 31 3915.40 -18.68 160.74 316.58 65.66 1 50 46 3315.4 -21.80 153.31  
 101.35 3 48 18 3326.58 -18.66 117.37 316.57 65.65 4 43 45 2726.6 -21.79 109.94  
 78.65 0 45 31 3915.40 -18.68 160.74 316.58 65.66 1 50 46 3315.4 -21.80 153.31  
 101.35 3 48 18 3326.58 -18.66 117.37 316.57 65.65 4 43 45 2726.6 -21.79 109.94  
 110.00 6 48 15 2763.10 -30.70 79.45 321.40 74.18 7 34 18 2163.1 -32.56 70.72  
 110.00 2 44 45 3526.88 -7.45 126.13 310.23 56.54 3 43 32 2926.9 -11.80 119.73

DIFFERENTIAL CORRECTIONS

TDE .7837 TRA 4.1310 TC3-2.9848 BAU 1.1284  
 RDE .3986 RRA .2592 RC3 -.0633 FAU .01977  
 FDE .1384 FRA 1.6559 FC3 -.6055 BSP 20089  
 BDE .8792 BRA 4.1391 BC3 2.9855 FSP -652

MID-COURSE EXECUTION ACCURACY

SGT 6114.5 SGR 542.0 SG3 187.5  
 RRT .6776 RRF .6601 RTF .9669  
 SGB 6138.4 R23 .0029 R13 .9669  
 SG1 6125.5 SG2 397.9 THA 3.45

ORBIT DETERMINATION ACCURACY

ST 1765.3 SR 440.3 SS 483.3  
 CRT .6601 CRS -.4424 CST -.9652  
 LSA 1849.0 MSA 353.2 SSA 14.1  
 EL1 1789.9 EL2 326.2 ALF 9.68

LAUNCH DATE JAN 29 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 588.450

RL 147.35 LAL -.00 LOL 128.92 VL 26.699 GAL 9.09 AZL 88.74 MCA 286.68 SMA 121.92 ECC .25951 INC 1.2593 V1 30.236  
 RP 108.02 LAP -1.21 LOP 55.60 VP 36.997 GAP 13.57 AZP 89.64 TAL 151.60 TAP 78.28 RCA 90.28 APO 153.56 V2 35.083  
 RC 179.506 GL 5.94 GP -11.15 ZAL 44.47 ZAP 167.64 ETS 299.30 ZAE 127.99 ETE 188.63 ZAC 155.96 ETC 173.38 CLP-174.62

PLANETOCENTRIC CONIC

C3 31.323 VHL 5.597 DLA 29.28 RAL 84.03 RAD 6568.2 VEL 12.357 PTH 2.23 VHP 9.122 DPA 8.69 RAP 61.95 ECC 1.5155  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.23 1 21 44 3853.19 -17.36 155.50 320.16 66.05 2 25 57 3253.2 -20.45 148.12  
 97.77 3 29 32 3440.15 -17.35 125.18 320.15 66.04 4 26 52 2840.1 -20.44 117.80  
 100.00 4 37 52 3221.15 -21.99 110.99 322.18 69.22 5 31 33 2621.2 -24.61 103.18  
 100.00 2 56 5 3547.42 -12.84 130.88 317.91 62.77 3 55 12 2947.4 -16.39 123.89  
 110.00 7 12 17 2737.46 -31.16 77.59 325.46 75.18 7 57 54 2137.5 -32.88 68.79  
 110.00 2 38 9 3603.87 -4.54 130.19 312.96 56.08 3 38 13 3003.9 -8.96 123.89

DIFFERENTIAL CORRECTIONS

TDE .6544 TRA 4.5156 TC3-2.6775 BAU 1.1214  
 RDE .4062 RRA .2769 RC3 -.0552 FAU .01776  
 FDE .0894 FRA 1.7037 FC3 -.4907 BSP 20189  
 BDE .7702 BRA 4.5241 BC3 2.6780 FSP -625

MID-COURSE EXECUTION ACCURACY

SGT 6125.3 SGR 531.4 SG3 179.3  
 RRT .6718 RRF .6546 RTF .9678  
 SGB 6148.3 R23 .0023 R13 .9678  
 SG1 6135.7 SG2 392.9 THA 3.35

ORBIT DETERMINATION ACCURACY

ST 1727.7 SR 427.1 SS 478.5  
 CRT .5879 CRS -.3726 CST -.9693  
 LSA 1806.5 MSA 364.2 SSA 13.6  
 EL1 1746.6 EL2 341.8 ALF 8.60

LAUNCH DATE JAN 29 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC

DISTANCE 593.603

RL 147.35 LAL -.00 LOL 128.92 VL 26.667 GAL 9.86 AZL 88.91 MCA 289.89 SMA 121.73 ECC .26895 INC 1.0916 V1 30.236  
 RP 107.98 LAP -1.03 LOP 58.81 VP 36.986 GAP 14.22 AZP 89.63 TAL 150.30 TAP 80.19 RCA 88.99 APO 154.47 V2 35.095  
 RC 181.455 GL 4.86 GP -10.86 ZAL 42.61 ZAP 168.30 ETS 295.49 ZAE 127.89 ETE 188.41 ZAC 158.05 ETC 172.22 CLP-175.62

PLANETOCENTRIC CONIC

C3 34.875 VHL 5.905 DLA 28.26 RAL 86.07 RAD 6568.4 VEL 12.500 PTH 2.26 VHP 9.509 DPA 9.50 RAP 64.01 ECC 1.5739  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 49 47 3621.78 -17.48 138.57 324.33 67.36 3 50 9 3021.8 -20.40 131.11  
 90.00 2 17 45 3725.70 -14.64 144.88 323.05 65.49 3 19 50 3125.7 -17.83 137.65  
 100.00 5 17 57 3144.04 -23.76 105.95 326.86 71.31 6 10 21 2544.0 -26.09 97.93  
 100.00 2 32 16 3678.67 -8.64 138.37 319.98 61.27 3 33 35 3078.7 -12.41 131.60  
 110.00 7 33 40 2719.21 -31.47 76.26 329.42 75.92 8 19 0 2119.2 -33.09 67.41  
 110.00 2 33 2 3676.26 -1.78 133.98 315.77 55.86 3 34 19 3076.3 -6.25 127.74

DIFFERENTIAL CORRECTIONS

TDE .5214 TRA 4.9248 TC3-2.3816 BAU 1.1106  
 RDE .4141 RRA .2952 RC3 -.0476 FAU .01582  
 FDE .0442 FRA 1.7530 FC3 -.3926 BSP 20282  
 BDE .6658 BRA 4.9336 BC3 2.3820 FSP -599

MID-COURSE EXECUTION ACCURACY

SGT 6131.4 SGR 519.9 SG3 171.6  
 RRT .6667 RRF .6499 RTF .9689  
 SGB 6153.4 R23 .0018 R13 .9690  
 SG1 6141.2 SG2 386.8 THA 3.25

ORBIT DETERMINATION ACCURACY

ST 1706.3 SR 413.4 SS 477.4  
 CRT .5133 CRS -.3070 CST -.9739  
 LSA 1781.2 MSA 370.4 SSA 13.1  
 EL1 1720.0 EL2 352.0 ALF 7.40

LAUNCH DATE JAN 29 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC

DISTANCE 598.636

RL 147.35 LAL -.00 LOL 128.92 VL 26.636 GAL 10.70 AZL 89.08 MCA 293.11 SMA 121.54 ECC .27928 INC .9167 V1 30.236  
 RP 107.94 LAP -.84 LOP 62.03 VP 36.975 GAP 14.92 AZP 89.64 TAL 149.03 TAP 82.14 RCA 87.60 APO 155.49 V2 35.108  
 RC 183.384 GL 3.84 GP -10.59 ZAL 40.87 ZAP 168.89 ETS 291.17 ZAE 127.77 ETE 188.20 ZAC 160.12 ETC 170.81 CLP-176.63

PLANETOCENTRIC CONIC

C3 39.017 VHL 6.246 DLA 27.27 RAL 87.97 RAD 6568.5 VEL 12.664 PTH 2.30 VHP 9.929 DPA 10.25 RAP 66.10 ECC 1.6421  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 48 43 3482.28 -20.90 129.77 329.72 70.45 4 46 45 2882.3 -23.38 121.97  
 90.00 1 33 58 3921.92 -8.82 156.34 324.35 62.98 2 39 20 3321.9 -12.37 149.47  
 100.00 5 47 23 3099.74 -24.69 102.99 331.10 72.60 6 39 3 2499.7 -26.84 94.85  
 100.00 2 17 59 3779.69 -5.29 144.00 322.45 60.54 3 20 59 3179.7 -9.18 137.36  
 110.00 7 52 56 2706.86 -31.67 75.35 333.29 76.42 8 38 3 2106.9 -33.22 66.47  
 110.00 2 28 56 3745.34 .86 137.58 318.63 55.83 3 31 21 3145.3 -3.63 131.37

DIFFERENTIAL CORRECTIONS

TDE .3892 TRA 5.3649 TC3-2.0949 BAU 1.0929  
 RDE .4226 RRA .3140 RC3 -.0402 FAU .01386  
 FDE .0041 FRA 1.8059 FC3 -.3075 BSP 20257  
 BDE .5745 BRA 5.3741 BC3 2.0953 FSP -571

MID-COURSE EXECUTION ACCURACY

SGT 6134.3 SGR 507.7 SG3 164.4  
 RRT .6626 RRF .6466 RTF .9702  
 SGB 6155.3 R23 .0016 R13 .9702  
 SG1 6143.6 SG2 379.7 THA 3.15

ORBIT DETERMINATION ACCURACY

ST 1700.7 SR 399.7 SS 479.7  
 CRT .4414 CRS -.2499 CST -.9788  
 LSA 1773.2 MSA 371.5 SSA 12.6  
 EL1 1710.3 EL2 356.6 ALF 6.19

LAUNCH DATE JAN 29 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC

DISTANCE 603.523

RL 147.35 LAL -.00 LOL 128.92 VL 26.604 GAL 11.60 AZL 89.27 MCA 296.32 SMA 121.36 ECC .29063 INC .7332 V1 30.236  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.964 GAP 15.68 AZP 89.67 TAL 147.81 TAP 84.13 RCA 86.09 APO 156.63 V2 35.120  
 RC 185.291 GL 2.89 GP -10.35 ZAL 39.25 ZAP 169.39 ETS 286.29 ZAE 127.63 ETE 188.00 ZAC 162.17 ETC 169.05 CLP-177.65

PLANETOCENTRIC CONIC

C3 43.862 VHL 6.623 DLA 26.33 RAL 89.73 RAD 6568.7 VEL 12.854 PTH 2.34 VHP 10.386 DPA 10.96 RAP 68.20 ECC 1.7219  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 21 19 3426.63 -22.13 126.15 334.04 71.87 5 18 26 2826.6 -24.40 118.21  
 90.00 1 15 25 4036.63 -5.21 162.85 326.69 62.13 2 22 42 3436.6 -8.90 156.11  
 100.00 6 11 43 3070.74 -25.27 101.03 335.11 73.48 7 2 53 2470.7 -27.29 92.81  
 100.00 2 7 43 3867.76 -2.33 148.85 325.09 60.19 3 12 11 3267.8 -6.28 142.29  
 110.00 8 10 23 2699.40 -31.79 74.80 337.08 76.72 8 55 23 2099.4 -33.29 65.90  
 110.00 2 25 31 3811.85 3.40 141.05 321.53 55.97 3 29 3 3211.8 -1.09 134.85

DIFFERENTIAL CORRECTIONS

TDE .2488 TRA 5.8310 TC3-1.8280 BAU 1.0721  
 RDE .4311 RRA .3327 RC3 -.0334 FAU .01203  
 FDE -.0345 FRA 1.8601 FC3 -.2374 BSP 20331  
 BDE .4978 BRA 5.8405 BC3 1.8283 FSP -547

MID-COURSE EXECUTION ACCURACY

SGT 6131.0 SGR 494.2 SG3 157.5  
 RRT .6585 RRF .6431 RTF .9717  
 SGB 6150.8 R23 .0012 R13 .9717  
 SG1 6139.6 SG2 371.4 THA 3.05

ORBIT DETERMINATION ACCURACY

ST 1703.7 SR 385.2 SS 484.2  
 CRT .3704 CRS -.1962 CST -.9831  
 LSA 1774.8 MSA 368.4 SSA 12.1  
 EL1 1710.0 EL2 356.5 ALF 5.00

LAUNCH DATE JAN 29 1969

FLIGHT TIME 214.00

ARRIVAL DATE AUG 31 1969

HELIOCENTRIC CONIC

DISTANCE 608.238

RL 147.35 LAL -.00 LOL 128.92 VL 26.574 GAL 12.58 AZL 89.46 HCA 299.54 SMA 121.18 ECC .30314 INC .5390 VI 30.236
RP 107.87 LAP -.47 LOP 68.46 VP 36.953 GAP 16.51 AZP 89.73 TAL 146.64 TAP 86.18 RCA 84.45 APO 157.91 V2 35.132
RC 187.175 GL 1.99 GP -10.12 ZAL 37.73 ZAP 169.79 ETS 280.86 ZAE 127.46 ETE 187.81 ZAC 164.18 ETC 166.84 CLP-178.69

PLANETOCENTRIC CONIC

C3 49.548 VHL 7.039 DLA 25.42 RAL 91.36 RAD 6568.8 VEL 13.073 PTH 2.39 VMP 10.887 DPA 11.61 RAP 70.30 ECC 1.8154
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 46 54 3392.52 -22.83 123.89 338.06 72.78 5 43 27 2792.5 -24.98 115.88
90.00 1 2 48 4131.85 -2.16 168.18 329.26 61.76 2 11 40 3531.8 -5.92 161.52
100.00 6 32 41 3051.49 -25.64 99.72 338.97 74.08 7 23 33 2451.5 -27.57 91.45
100.00 1 59 43 3948.11 .40 153.26 327.83 60.11 3 5 31 3348.1 -3.58 146.73
110.00 8 26 16 2696.13 -31.84 74.56 340.81 76.86 9 11 12 2096.1 -33.32 65.65
110.00 2 22 37 3876.23 5.85 144.43 324.45 56.26 3 27 14 3276.2 1.37 138.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1048 TRA 6.3310 TC3-1.5770 BAU 1.0448 SGT 6123.2 SGR 479.5 SG3 151.0 ST 1715.2 SR 370.5 SS 490.9
RDE .4399 RRA .3513 RC3 -.0271 FAU .01023 RRT .6546 RRF .6401 RTF .9734 CRT .3041 CRS -.1488 CST -.9870
FOE -.0704 FRA 1.9181 FC3 -.1788 BSP 20382 SGB 6141.9 R23 .0009 R13 .9734 LSA 1785.8 MSA 361.4 SSA 11.7
BOE .4522 BRA 6.3407 BC3 1.5773 FSP -925 SG1 6131.2 SG2 362.0 THA 2.94 EL1 1719.0 EL2 352.1 ALF 3.92

LAUNCH DATE JAN 29 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 2 1969

HELIOCENTRIC CONIC

DISTANCE 612.745

RL 147.35 LAL -.00 LOL 128.92 VL 26.543 GAL 13.65 AZL 89.67 HCA 302.76 SMA 121.00 ECC .31695 INC .3318 VI 30.236
RP 107.83 LAP -.28 LOP 71.68 VP 36.943 GAP 17.42 AZP 89.82 TAL 145.53 TAP 88.30 RCA 82.65 APO 159.35 V2 35.144
RC 189.037 GL 1.14 GP -9.91 ZAL 36.34 ZAP 170.08 ETS 274.88 ZAE 127.26 ETE 187.63 ZAC 166.14 ETC 163.99 CLP-179.75

PLANETOCENTRIC CONIC

C3 56.248 VHL 7.500 DLA 24.56 RAL 92.85 RAD 6569.0 VEL 13.327 PTH 2.44 VMP 11.438 DPA 12.22 RAP 72.39 ECC 1.9257
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 8 25 3370.47 -23.27 122.43 341.89 73.39 6 4 36 2770.5 -25.33 114.36
90.00 0 53 11 4216.76 .58 172.92 331.94 61.69 2 3 28 3616.8 -3.21 166.28
100.00 6 51 8 3039.33 -25.86 98.88 342.71 74.46 7 41 47 2439.3 -27.74 90.59
100.00 1 53 10 4023.13 2.94 157.38 330.63 60.24 3 0 13 3423.1 -1.05 150.86
110.00 8 40 43 2696.48 -31.84 74.59 344.46 76.84 9 25 40 2096.5 -33.32 65.67
110.00 2 20 4 3938.75 8.20 147.75 327.39 56.70 3 25 43 3338.8 3.76 141.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0438 TRA 6.8692 TC3-1.3423 BAU 1.0095 SGT 6111.1 SGR 463.7 SG3 144.9 ST 1732.3 SR 355.4 SS 499.5
RDE .4489 RRA .3696 RC3 -.0212 FAU .00845 RRT .6507 RRF .6372 RTF .9753 CRT .2433 CRS -.1073 CST -.9902
FOE -.1039 FRA 1.9808 FC3 -.1301 BSP 20413 SGB 6128.6 R23 .0007 R13 .9753 LSA 1803.6 MSA 351.5 SSA 11.2
BOE .4510 BRA 6.8791 BC3 1.3425 FSP -503 SG1 6118.5 SG2 351.7 THA 2.84 EL1 1734.5 EL2 344.2 ALF 2.97

LAUNCH DATE JAN 29 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 4 1969

HELIOCENTRIC CONIC

DISTANCE 616.999

RL 147.35 LAL -.00 LOL 128.92 VL 26.514 GAL 14.82 AZL 89.89 HCA 305.99 SMA 120.83 ECC .33227 INC .1086 VI 30.236
RP 107.79 LAP -.09 LOP 74.90 VP 36.932 GAP 18.43 AZP 89.94 TAL 144.50 TAP 90.49 RCA 80.68 APO 160.98 V2 35.155
RC 190.875 GL .35 GP -9.72 ZAL 35.07 ZAP 170.24 ETS 268.44 ZAE 127.03 ETE 187.46 ZAC 168.03 ETC 160.25 CLP 179.15

PLANETOCENTRIC CONIC

C3 64.185 VHL 8.012 DLA 23.74 RAL 94.21 RAD 6569.2 VEL 13.621 PTH 2.49 VMP 12.047 DPA 12.77 RAP 74.48 ECC 2.0563
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 27 3 3356.58 -23.54 121.50 345.58 73.79 6 23 0 2756.6 -25.54 113.40
90.00 0 45 24 4294.89 3.10 177.28 334.67 61.84 1 56 59 3694.9 -.69 170.65
100.00 7 7 31 3032.67 -25.98 98.43 346.34 74.67 7 58 4 2432.7 -27.83 90.11
100.00 1 47 37 4094.03 5.32 161.29 333.44 60.54 2 55 51 3494.0 1.36 154.75
110.00 8 53 52 2699.94 -31.78 74.84 348.03 76.70 9 38 52 2099.9 -33.29 65.94
110.00 2 17 46 3999.52 10.45 151.01 330.32 57.27 3 24 25 3399.5 6.06 144.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1933 TRA 7.4530 TC3-1.1226 BAU .9634 SGT 6095.8 SGR 446.8 SG3 139.2 ST 1753.1 SR 340.1 SS 510.1
RDE .4584 RRA .3872 RC3 -.0157 FAU .00661 RRT .6467 RRF .6345 RTF .9772 CRT .1899 CRS -.0729 CST -.9928
FOE -.1342 FRA 2.0504 FC3 -.0891 BSP 20339 SGB 6112.1 R23 .0007 R13 .9772 LSA 1825.9 MSA 339.3 SSA 10.7
BOE .4975 BRA 7.4630 BC3 1.1227 FSP -480 SG1 6102.6 SG2 340.4 THA 2.72 EL1 1754.3 EL2 333.7 ALF 2.19

LAUNCH DATE JAN 29 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 6 1969

HELIOCENTRIC CONIC

DISTANCE 620.941

RL 147.35 LAL -.00 LOL 128.92 VL 26.485 GAL 16.10 AZL 90.13 HCA 309.21 SMA 120.66 ECC .34932 INC .1318 VI 30.236
RP 107.76 LAP .10 LOP 78.13 VP 36.922 GAP 19.54 AZP 90.08 TAL 143.56 TAP 92.77 RCA 78.51 APO 162.81 V2 35.166
RC 192.690 GL -.39 GP -9.55 ZAL 33.92 ZAP 170.25 ETS 261.65 ZAE 126.75 ETE 187.29 ZAC 169.82 ETC 155.21 CLP 178.02

PLANETOCENTRIC CONIC

C3 73.639 VHL 8.581 DLA 22.96 RAL 95.43 RAD 6569.4 VEL 13.964 PTH 2.55 VMP 12.723 DPA 13.28 RAP 76.54 ECC 2.2119
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 43 24 3348.75 -23.68 120.97 349.12 74.01 6 39 13 2748.8 -25.65 112.85
90.00 0 38 49 4367.92 5.43 181.37 337.42 62.17 1 51 37 3767.9 1.67 174.72
100.00 7 22 8 3030.41 -26.02 98.27 349.84 74.75 8 12 39 2430.4 -27.86 89.95
100.00 1 42 46 4161.50 7.57 165.04 336.26 61.00 2 52 7 3561.5 3.64 158.45
110.00 9 5 48 2706.09 -31.69 75.30 351.50 76.45 9 50 54 2106.1 -33.22 66.41
110.00 2 15 35 4058.58 12.61 154.23 333.24 57.96 3 23 14 3458.6 8.28 147.80

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3529 TRA 8.0818 TC3 -.9222 BAU .9079 SGT 6074.7 SGR 428.3 SG3 133.8 ST 1774.4 SR 324.5 SS 522.4
RDE .4679 RRA .4034 RC3 -.0108 FAU .00480 RRT .6417 RRF .6308 RTF .9794 CRT .1401 CRS -.0409 CST -.9948
FOE -.1643 FRA 2.1254 FC3 -.0564 BSP 20362 SGB 6089.8 R23 .0006 R13 .9794 LSA 1849.5 MSA 325.4 SSA 10.3
BOE .5860 BRA 8.0919 BC3 .9222 FSP -461 SG1 6080.9 SG2 328.2 THA 2.60 EL1 1775.0 EL2 321.2 ALF 1.52

LAUNCH DATE JAN 30 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 10 1969

HELIOCENTRIC CONIC

DISTANCE 168.062

RL 147.37 LAL -.00 LOL 129.93 VL 24.260 GAL -.51 AZL 87.04 MCA 70.90 SMA 109.45 ECC .34656 INC 2.9646 V1 30.232  
 RP 107.95 LAP 2.80 LOP 200.81 VP 35.302 GAP -20.26 AZP 89.03 TAL 180.96 TAP 251.86 RCA 71.52 APO 147.38 V2 35.105  
 RC 42.442 GL 11.77 GP 7.54 ZAL 94.16 ZAP 11.91 ETS 221.17 ZAE 167.87 ETE 349.59 ZAC 120.92 ETC 160.75 CLP 9.26

PLANETOCENTRIC CONIC

C3 37.829 VHL 6.151 DLA 24.48 RAL 29.11 RAD 6568.5 VEL 12.617 PTH 2.29 VHP 12.723 DPA 16.13 RAP 25.82 ECC 1.6226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 51 36 3266.38 -25.11 115.36 271.00 76.47 1 46 3 2666.4 -26.73 107.06  
 90.00 20 29 41 4122.18 -2.47 167.64 262.18 61.78 21 38 24 3522.2 -6.23 160.97  
 100.00 2 34 4 2936.05 -27.54 91.67 271.61 77.90 3 23 0 2336.0 -28.93 83.14  
 100.00 21 29 55 3927.75 -.29 152.14 260.97 60.11 22 35 23 3327.8 -4.27 145.61  
 110.00 4 23 18 2594.26 -33.17 66.91 272.81 81.20 5 6 33 1994.3 -34.02 57.78  
 110.00 21 57 10 3842.30 4.56 142.65 257.95 56.09 23 1 12 3242.3 .08 136.43

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3386 TRA -.6865 TC3 .1448 BAU .0734 SGT 790.6 SGR 430.2 SG3 63.0 ST 379.4 SR 418.2 SS 270.9  
 RDE -.4477 RRA .1023 RC3 -.0107 FAU .02219 RRT .1636 RRF -.1782 RTF -.6824 CRT .7873 CRS .8984 CST .9750  
 FDE .2456 FRA .2920 FC3 -.5077 BSP 2239 SGB 900.0 R23 -.0223 R13 -.6854 LSA 597.6 MSA 186.9 SSA 15.8  
 BDE .5613 BRA .6941 BC3 .1452 FSP -145 SGI 794.9 SG2 422.1 THA 7.10 EL1 534.2 EL2 183.2 ALF 48.53

LAUNCH DATE JAN 30 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC

DISTANCE 174.727

RL 147.37 LAL -.00 LOL 129.93 VL 24.609 GAL -.64 AZL 87.20 MCA 74.12 SMA 111.01 ECC .32770 INC 2.7960 V1 30.232  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.531 GAP -19.07 AZP 89.23 TAL 181.32 TAP 255.43 RCA 74.63 APO 147.39 V2 35.092  
 RC 42.671 GL 11.94 GP 7.93 ZAL 95.01 ZAP 10.88 ETS 228.86 ZAE 165.36 ETE 354.16 ZAC 122.09 ETC 160.07 CLP 7.47

PLANETOCENTRIC CONIC

C3 33.655 VHL 5.801 DLA 24.33 RAL 28.17 RAD 6568.3 VEL 12.451 PTH 2.25 VHP 12.051 DPA 17.05 RAP 27.02 ECC 1.5539  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 50 14 3228.62 -25.69 112.74 267.88 77.66 1 44 2 2628.6 -27.13 104.37  
 90.00 20 23 34 4100.89 -3.16 166.45 259.37 61.84 21 31 55 3500.9 -6.90 159.77  
 100.00 2 32 16 2899.63 -28.04 89.08 268.42 79.18 3 20 36 2299.6 -29.24 80.48  
 100.00 21 24 13 3905.11 -1.06 150.90 258.20 60.12 22 29 18 3305.1 -5.03 144.36  
 110.00 4 20 55 2559.69 -33.49 64.27 269.43 82.74 5 3 35 1959.7 -34.14 55.09  
 110.00 21 52 3 3817.82 3.63 141.36 255.28 55.99 22 55 41 3217.8 -.86 135.16

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3402 TRA -.6629 TC3 .1925 BAU .0866 SGT 824.1 SGR 434.2 SG3 69.9 ST 399.3 SR 422.8 SS 281.0  
 RDE -.4269 RRA .0957 RC3 -.0033 FAU .02348 RRT .1852 RRF -.2017 RTF -.7018 CRT .7995 CRS .9050 CST .9760  
 FDE .2550 FRA .2909 FC3 -.6040 BSP 2387 SGB 931.5 R23 -.0253 R13 -.7051 LSA 618.0 MSA 186.7 SSA 16.4  
 BDE .5459 BRA .6698 BC3 .1925 FSP -165 SGI 829.4 SG2 423.9 THA 7.56 EL1 551.7 EL2 183.8 ALF 47.04

LAUNCH DATE JAN 30 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC

DISTANCE 181.414

RL 147.37 LAL -.00 LOL 129.93 VL 24.929 GAL -.79 AZL 87.37 MCA 77.33 SMA 112.50 ECC .31018 INC 2.6329 V1 30.232  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.741 GAP -17.93 AZP 89.42 TAL 181.75 TAP 259.08 RCA 77.61 APO 147.40 V2 35.080  
 RC 43.078 GL 12.06 GP 8.36 ZAL 95.99 ZAP 10.09 ETS 238.17 ZAE 162.87 ETE 357.61 ZAC 123.21 ETC 159.33 CLP 5.67

PLANETOCENTRIC CONIC

C3 30.055 VHL 5.482 DLA 24.09 RAL 27.12 RAD 6568.2 VEL 12.306 PTH 2.22 VHP 11.410 DPA 18.00 RAP 28.19 ECC 1.4946  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 50 3 3186.14 -26.27 109.77 264.68 79.04 1 43 9 2586.1 -27.52 101.32  
 90.00 20 15 20 4086.44 -3.62 165.64 256.43 61.90 21 23 26 3486.4 -7.35 158.95  
 100.00 2 31 24 2859.37 -28.52 86.18 265.13 80.63 3 19 3 2259.4 -29.52 77.52  
 100.00 21 16 40 3888.44 -1.63 149.99 255.33 60.15 22 21 28 3288.4 -5.59 143.44  
 110.00 4 19 3 2522.53 -33.78 61.40 265.94 84.41 5 1 6 1922.5 -34.18 52.18  
 110.00 21 45 29 3798.05 2.88 140.33 252.52 55.92 22 48 47 3198.0 -1.62 134.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3429 TRA -.6412 TC3 .2468 BAU .0992 SGT 860.5 SGR 438.0 SG3 77.6 ST 420.7 SR 426.8 SS 290.4  
 RDE -.4073 RRA .0898 RC3 .0072 FAU .02494 RRT .2103 RRF -.2284 RTF -.7183 CRT .8118 CRS .9114 CST .9770  
 FDE .2644 FRA .2890 FC3 -.7184 BSP 2475 SGB 965.6 R23 -.0292 R13 -.7221 LSA 639.2 MSA 186.1 SSA 17.1  
 BDE .5325 BRA .6475 BC3 .2469 FSP -185 SGI 867.0 SG2 425.0 THA 8.06 EL1 570.4 EL2 183.8 ALF 45.51

LAUNCH DATE JAN 30 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC

DISTANCE 188.117

RL 147.37 LAL -.00 LOL 129.93 VL 25.223 GAL -.94 AZL 87.53 MCA 80.54 SMA 113.93 ECC .29396 INC 2.4740 V1 30.232  
 RP 108.07 LAP 2.44 LOP 210.46 VP 35.933 GAP -16.85 AZP 89.59 TAL 182.25 TAP 262.79 RCA 80.44 APO 147.42 V2 35.067  
 RC 43.658 GL 12.11 GP 8.84 ZAL 97.11 ZAP 9.63 ETS 248.94 ZAE 160.44 ETE .38 ZAC 124.27 ETC 158.52 CLP 3.84

PLANETOCENTRIC CONIC

C3 26.950 VHL 5.191 DLA 23.72 RAL 25.95 RAD 6568.1 VEL 12.179 PTH 2.19 VHP 10.800 DPA 18.98 RAP 29.32 ECC 1.4435  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 51 4 3139.16 -26.84 106.45 261.42 80.62 1 43 23 2539.2 -27.86 97.93  
 90.00 20 5 2 4078.98 -3.86 165.22 253.40 61.93 21 13 1 3479.0 -7.59 158.52  
 100.00 2 31 29 2815.36 -28.96 82.99 261.78 82.26 3 18 25 2215.4 -29.73 74.27  
 100.00 21 7 18 3878.02 -1.98 149.41 252.36 60.17 22 11 56 3278.0 -5.94 142.86  
 110.00 4 17 47 2482.79 -34.00 58.32 262.37 86.22 4 59 10 1882.8 -34.15 49.08  
 110.00 21 37 29 3783.35 2.31 139.56 249.68 55.89 22 40 33 3183.4 -2.18 133.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.3431 TRA -.6176 TC3 .3116 BAU .1125 SGT 895.7 SGR 441.8 SG3 86.2 ST 439.7 SR 430.5 SS 298.4  
 RDE -.3890 RRA .0845 RC3 .0214 FAU .02658 RRT .2373 RRF -.2588 RTF -.7353 CRT .8229 CRS .9177 CST .9776  
 FDE .2732 FRA .2853 FC3 -.8538 BSP 2615 SGB 998.8 R23 -.0344 R13 -.7396 LSA 658.2 MSA 184.7 SSA 17.8  
 BDE .5187 BRA .6233 BC3 .3123 FSP -210 SGI 903.6 SG2 425.5 THA 8.60 EL1 587.5 EL2 183.1 ALF 44.26

LAUNCH DATE JAN 30 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC

DISTANCE 194.833

RL 147.37 LAL -0.00 LOL 129.93 VL 25.492 GAL -1.09 AZL 87.68 HCA 83.75 SMA 115.28 ECC .27899 INC 2.3181 V1 30.232  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.110 GAP -15.81 AZP 89.75 TAL 182.82 TAP 266.57 RCA 83.12 APO 147.44 V2 35.053  
 RC 44.405 GL 12.08 GP 9.37 ZAL 98.36 ZAP 9.58 ETS 260.58 ZAE 158.11 ETE 2.72 ZAC 125.27 ETC 157.64 CLP 1.98

PLANETOCENTRIC CONIC

C3 24.276 VHL 4.927 OLA 23.24 RAL 24.70 RAD 6568.0 VEL 12.069 PTH 2.16 VHP 10.218 DPA 19.99 RAP 30.41 ECC 1.3995  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 53 15 3088.08 -27.35 102.80 258.10 82.38 1 44 43 2488.1 -28.13 94.22  
 90.00 19 52 52 4078.45 -3.88 165.19 250.32 61.93 21 0 50 3478.5 -7.60 158.49  
 100.00 2 32 35 2767.82 -29.35 79.50 258.37 84.05 3 18 43 2167.8 -29.86 70.74  
 100.00 20 56 14 3873.94 -2.12 149.19 249.35 60.18 22 0 48 3273.9 -6.07 142.63  
 110.00 4 17 11 2440.56 -34.14 55.03 258.76 88.16 4 57 52 1840.6 -34.02 45.79  
 110.00 21 28 7 3773.96 1.96 139.07 246.80 55.87 22 31 1 3174.0 -2.54 132.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -0.3422 TRA -0.5931 TC3 .3859 BAU .1259 SGT 930.8 SGR 445.8 SG3 95.8 ST 457.4 SR 433.5 SS 304.5  
 RDE -0.3719 RRA .0798 RC3 .0400 FAU .02841 RRT .2683 RRF -.2928 RTF -.7521 CRT .8336 CRS .9234 CST .9783  
 FDE .2810 FRA .2807 FC3-1.0131 BSP 2772 SGB 1032.1 R23 -.0392 R13 -.7570 LSA 675.4 MSA 182.7 SSA 18.6  
 BOE .5054 BRA .5985 BC3 .3879 FSP -239 SG1 940.5 S62 425.1 THA 9.22 EL1 603.5 EL2 181.5 ALF 43.16

LAUNCH DATE JAN 30 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 201.557

RL 147.37 LAL -0.00 LOL 129.93 VL 25.739 GAL -1.25 AZL 87.84 HCA 86.95 SMA 116.56 ECC .26520 INC 2.1643 V1 30.232  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.272 GAP -14.83 AZP 89.88 TAL 183.46 TAP 270.41 RCA 85.64 APO 147.47 V2 35.040  
 RC 45.309 GL 11.96 GP 9.96 ZAL 99.71 ZAP 9.96 ETS 272.12 ZAE 155.91 ETE 4.80 ZAC 126.19 ETC 156.69 CLP .09

PLANETOCENTRIC CONIC

C3 21.974 VHL 4.688 OLA 22.63 RAL 23.38 RAD 6567.9 VEL 11.973 PTH 2.13 VHP 9.664 DPA 21.04 RAP 31.45 ECC 1.3616  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 34 3033.36 -27.79 98.85 254.76 84.31 1 47 7 2433.4 -28.28 90.22  
 90.00 19 39 1 4084.61 -3.68 165.54 247.22 61.90 20 47 6 3484.6 -7.41 158.84  
 100.00 2 34 40 2717.05 -29.65 75.76 254.94 86.00 3 19 57 2117.1 -29.89 66.96  
 100.00 20 43 36 3876.15 -2.04 149.31 246.31 60.17 21 48 12 3276.2 -6.00 142.76  
 110.00 4 17 18 2395.96 -34.18 51.55 255.12 90.22 4 57 14 1796.0 -33.77 42.33  
 110.00 21 17 28 3770.02 1.81 138.87 243.91 55.86 22 20 18 3170.0 -2.69 132.66

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -0.3372 TRA -0.5650 TC3 .4742 BAU .1406 SGT 963.0 SGR 450.4 SG3 106.6 ST 469.5 SR 436.0 SS 308.3  
 RDE -0.3559 RRA .0756 RC3 .0641 FAU .03048 RRT .3022 RRF -.3311 RTF -.7718 CRT .8429 CRS .9288 CST .9786  
 FDE .2873 FRA .2744 FC3-1.2007 BSP 2983 SGB 1063.1 R23 -.0436 R13 -.7774 LSA 687.6 MSA 179.9 SSA 19.4  
 BOE .4903 BRA .5701 BC3 .4786 FSP -269 SG1 974.9 S62 424.1 THA 9.95 EL1 615.2 EL2 179.0 ALF 42.49

LAUNCH DATE JAN 30 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 208.284

RL 147.37 LAL -0.00 LOL 129.93 VL 25.964 GAL -1.40 AZL 87.99 HCA 90.15 SMA 117.76 ECC .25256 INC 2.0115 V1 30.232  
 RP 108.19 LAP 2.01 LOP 220.09 VP 36.419 GAP -13.88 AZP 90.01 TAL 184.16 TAP 274.32 RCA 88.02 APO 147.50 V2 35.027  
 RC 46.364 GL 11.76 GP 10.62 ZAL 101.17 ZAP 10.77 ETS 282.61 ZAE 153.87 ETE 6.71 ZAC 127.02 ETC 155.67 CLP -1.85

PLANETOCENTRIC CONIC

C3 19.995 VHL 4.472 OLA 21.89 RAL 22.01 RAD 6567.8 VEL 11.890 PTH 2.11 VHP 9.136 DPA 22.12 RAP 32.42 ECC 1.3291  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 0 55 2975.58 -28.10 94.65 251.41 86.39 1 50 31 2375.6 -28.31 85.99  
 90.00 19 23 45 4097.10 -3.28 166.24 244.14 61.86 20 32 2 3497.1 -7.02 159.55  
 100.00 2 37 44 2663.44 -29.84 71.79 251.51 88.08 3 22 7 2063.4 -29.78 62.98  
 100.00 20 29 38 3884.48 -1.76 149.77 243.30 60.15 21 34 23 3284.5 -5.72 143.22  
 110.00 4 18 11 2349.14 -34.11 47.89 251.49 92.39 4 57 20 1749.1 -33.40 38.72  
 110.00 21 5 40 3771.54 1.86 138.95 241.04 55.86 22 8 31 3171.5 -2.63 132.74

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -0.3337 TRA -0.5417 TC3 .5653 BAU .1532 SGT 998.9 SGR 455.9 SG3 118.6 ST 483.1 SR 437.7 SS 308.3  
 RDE -0.3408 RRA .0722 RC3 .0947 FAU .03279 RRT .3402 RRF -.3735 RTF -.7841 CRT .8514 CRS .9336 CST .9787  
 FDE .2910 FRA .2655 FC3-1.4198 BSP 3099 SGB 1098.0 R23 -.0516 R13 -.7906 LSA 698.7 MSA 177.4 SSA 20.6  
 BOE .4769 BRA .5464 BC3 .5731 FSP -305 SG1 1013.5 S62 422.5 THA 10.71 EL1 627.4 EL2 176.8 ALF 41.69

LAUNCH DATE JAN 30 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 215.010

RL 147.37 LAL -0.00 LOL 129.93 VL 26.169 GAL -1.56 AZL 88.14 HCA 93.35 SMA 118.89 ECC .24100 INC 1.8587 V1 30.232  
 RP 108.23 LAP 1.86 LOP 223.29 VP 36.553 GAP -12.98 AZP 90.11 TAL 184.92 TAP 278.27 RCA 90.24 APO 147.54 V2 35.013  
 RC 47.558 GL 11.44 GP 11.35 ZAL 102.71 ZAP 11.97 ETS 291.55 ZAE 151.99 ETE 8.54 ZAC 127.74 ETC 154.57 CLP -3.83

PLANETOCENTRIC CONIC

C3 18.296 VHL 4.277 OLA 21.03 RAL 20.62 RAD 6567.7 VEL 11.819 PTH 2.09 VHP 8.635 DPA 23.25 RAP 33.31 ECC 1.3011  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 6 14 2915.26 -28.28 90.25 248.09 88.59 1 54 49 2315.3 -28.18 81.59  
 90.00 19 7 20 4115.51 -2.69 167.27 241.13 61.80 20 15 56 3515.5 -6.44 160.59  
 100.00 2 41 43 2607.36 -29.89 67.62 248.11 90.28 3 25 10 2007.4 -29.53 58.83  
 100.00 20 14 32 3898.63 -1.28 150.55 240.35 60.13 21 19 31 3298.6 -5.25 144.00  
 110.00 4 19 52 2300.32 -33.91 44.10 247.90 94.62 4 58 12 1700.3 -32.89 35.00  
 110.00 20 52 53 3778.44 2.13 139.31 238.23 55.88 21 55 52 3178.4 -2.37 133.10

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -0.3281 TRA -0.5174 TC3 .6640 BAU .1656 SGT 1033.0 SGR 462.9 SG3 132.1 ST 493.0 SR 438.6 SS 305.7  
 RDE -0.3267 RRA .0692 RC3 .1327 FAU .03535 RRT .3830 RRF -.4206 RTF -.7967 CRT .8590 CRS .9377 CST .9787  
 FDE .2929 FRA .2561 FC3-1.6729 BSP 3238 SGB 1132.0 R23 -.0593 R13 -.8043 LSA 705.8 MSA 174.3 SSA 21.8  
 BOE .4630 BRA .5220 BC3 .6772 FSP -346 SG1 1051.1 S62 420.2 THA 11.62 EL1 636.6 EL2 173.9 ALF 41.12



LAUNCH DATE JAN 30 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 26 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.356 GAL -1.71 AZL 88.29 HCA 96.55 SMA 119.95 ECC .23046 INC 1.7051 V1 30.232  
 RP 108.27 LAP 1.69 LOP 226.49 VP 36.675 GAP -12.12 AZP 90.19 TAL 185.71 TAP 282.27 RCA 92.30 APO 147.59 V2 35.000  
 RC 48.883 GL 11.01 GP 12.16 ZAL 104.32 ZAP 13.49 ETS 298.85 ZAE 150.29 ETE 10.36 ZAC 128.34 ETC 153.40 CLP -5.88

Distance 221.733

Planetocentric Conic  
 C3 16.839 VHL 4.104 DLA 20.02 RAL 19.23 RAD 6567.7 VEL 11.757 PTH 2.08 VHP 8.160 DPA 24.43 RAP 34.12 ECC 1.2771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 12 27 2852.89 -28.30 85.69 244.82 90.88 1 59 59 2252.9 -27.88 77.05  
 90.00 18 50 2 4139.39 -1.92 168.60 238.23 61.74 19 59 1 3539.4 -5.68 161.94  
 100.00 2 46 37 2549.22 -29.79 63.30 244.77 92.55 3 29 6 1949.2 -29.12 54.56  
 100.00 19 58 33 3918.28 -.62 151.62 237.51 60.11 21 3 51 3318.3 -4.59 145.09  
 110.00 4 22 21 2249.70 -33.56 40.18 244.41 96.91 4 59 51 1649.7 -32.24 31.20  
 110.00 20 39 18 3790.57 2.59 139.94 235.50 55.90 21 42 29 3190.6 -1.90 133.74

Differential Corrections  
 TOE -.3200 TRA -.4930 TC3 .7701 BAU .1780  
 RDE -.3134 RRA .0666 RC3 .1795 FAU .03823  
 FDE .2915 FRA .2451 FC3-1.9657 BSP 3370  
 BDE .4479 BRA .4975 BC3 .7908 FSP -390

Mid-Course Execution Accuracy  
 SGT 1065.8 SGR 472.1 SG3 147.2  
 RRT .4296 RRF -.4722 RTF -.8089  
 SGB 1165.7 R23 -.0681 R13 -.8178  
 SG1 1088.3 SG2 417.5 THA 12.67

Orbit Determination Accuracy  
 ST 498.3 SR 438.6 SS 299.1  
 CRT .8651 CRS .9410 CST .9783  
 LSA 707.3 MSA 171.2 SSA 23.2  
 EL1 641.5 EL2 170.9 ALF 40.79

LAUNCH DATE JAN 30 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 28 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.527 GAL -1.85 AZL 88.45 HCA 99.75 SMA 120.93 ECC .22089 INC 1.5496 V1 30.232  
 RP 108.31 LAP 1.53 LOP 229.68 VP 36.784 GAP -11.29 AZP 90.26 TAL 186.55 TAP 286.30 RCA 94.22 APO 147.64 V2 34.987  
 RC 50.327 GL 10.46 GP 13.07 ZAL 105.96 ZAP 15.28 ETS 304.69 ZAE 148.77 ETE 12.20 ZAC 128.80 ETC 152.16 CLP -7.99

Distance 228.448

Planetocentric Conic  
 C3 15.593 VHL 3.949 DLA 18.89 RAL 17.87 RAD 6567.6 VEL 11.704 PTH 2.06 VHP 7.709 DPA 25.68 RAP 34.82 ECC 1.2566  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 19 30 2788.90 -28.15 81.01 241.65 93.21 2 5 58 2188.9 -27.41 72.43  
 90.00 18 32 6 4168.31 -.98 170.21 235.47 61.70 19 41 34 3568.3 -4.76 163.57  
 100.00 2 52 23 2489.38 -29.53 58.87 241.54 94.86 3 33 52 1889.4 -28.54 50.21  
 100.00 19 41 54 3943.06 .23 152.98 234.80 60.11 20 47 37 3343.1 -3.75 146.46  
 110.00 4 25 40 2197.50 -33.06 36.19 241.03 99.23 5 2 18 1597.5 -31.43 27.35  
 110.00 20 25 6 3807.70 3.24 140.84 232.91 55.95 21 28 34 3207.7 -1.25 134.63

Differential Corrections  
 TOE -.3098 TRA -.4695 TC3 .8783 BAU .1896  
 RDE -.3006 RRA .0644 RC3 .2364 FAU .04143  
 FDE .2861 FRA .2330 FC3-2.3006 BSP 3495  
 BDE .4316 BRA .4739 BC3 .9095 FSP -.441

Mid-Course Execution Accuracy  
 SGT 1096.2 SGR 484.5 SG3 164.0  
 RRT .4790 RRF -.5274 RTF -.8192  
 SGB 1198.5 R23 -.0789 R13 -.8298  
 SG1 1124.5 SG2 414.6 THA 13.88

Orbit Determination Accuracy  
 ST 499.1 SR 437.1 SS 287.8  
 CRT .8696 CRS .9430 CST .9776  
 LSA 703.0 MSA 168.0 SSA 24.8  
 EL1 641.9 EL2 167.8 ALF 40.65

LAUNCH DATE JAN 30 1969

FLIGHT TIME 90.00

ARRIVAL DATE APR 30 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.681 GAL -1.99 AZL 88.61 HCA 102.94 SMA 121.84 ECC .21224 INC 1.3912 V1 30.232  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.883 GAP -10.50 AZP 90.31 TAL 187.41 TAP 290.35 RCA 95.98 APO 147.70 V2 34.974  
 RC 51.881 GL 9.78 GP 14.08 ZAL 107.64 ZAP 17.32 ETS 309.34 ZAE 147.44 ETE 14.12 ZAC 129.10 ETC 150.86 CLP -10.19

Distance 235.153

Planetocentric Conic  
 C3 14.527 VHL 3.811 DLA 17.63 RAL 16.55 RAD 6567.6 VEL 11.658 PTH 2.05 VHP 7.283 DPA 26.98 RAP 35.39 ECC 1.2391  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 27 21 2723.64 -27.81 76.27 238.60 95.57 2 12 45 2123.6 -26.75 67.77  
 90.00 18 13 46 4201.86 .10 172.08 232.88 61.68 19 23 47 3601.9 -3.69 165.45  
 100.00 2 59 0 2428.13 -29.09 54.37 238.44 97.19 3 39 28 1828.1 -27.79 45.81  
 100.00 19 24 48 3972.61 1.23 154.60 232.25 60.13 20 31 1 3372.6 -2.76 148.08  
 110.00 4 29 50 2143.93 -32.40 32.15 237.80 101.53 5 5 33 1543.9 -30.48 23.47  
 110.00 20 10 28 3829.57 4.08 141.98 230.48 56.03 21 14 17 3229.6 -.41 135.77

Differential Corrections  
 TOE -.2970 TRA -.4463 TC3 .9906 BAU .2013  
 RDE -.2880 RRA .0626 RC3 .3051 FAU .04502  
 FDE .2753 FRA .2191 FC3-2.6831 BSP 3633  
 BDE .4137 BRA .4507 BC3 1.0365 FSP -499

Mid-Course Execution Accuracy  
 SGT 1124.8 SGR 501.3 SG3 182.7  
 RRT .5310 RRF -.5854 RTF -.8291  
 SGB 1231.5 R23 -.0906 R13 -.8417  
 SG1 1160.6 SG2 411.7 THA 15.28

Orbit Determination Accuracy  
 ST 494.5 SR 434.0 SS 271.2  
 CRT .8724 CRS .9436 CST .9763  
 LSA 691.8 MSA 164.9 SSA 26.7  
 EL1 637.0 EL2 164.7 ALF 40.74

LAUNCH DATE JAN 30 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 2 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.821 GAL -2.12 AZL 88.77 HCA 106.13 SMA 122.68 ECC .20444 INC 1.2288 V1 30.232  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.972 GAP -9.74 AZP 90.34 TAL 188.29 TAP 294.42 RCA 97.60 APO 147.76 V2 34.961  
 RC 53.536 GL 8.96 GP 15.22 ZAL 109.31 ZAP 19.58 ETS 313.06 ZAE 146.28 ETE 16.17 ZAC 129.23 ETC 149.51 CLP -12.47

Distance 241.844

Planetocentric Conic  
 C3 13.618 VHL 3.690 DLA 16.25 RAL 15.32 RAD 6567.5 VEL 11.619 PTH 2.04 VHP 6.882 DPA 28.37 RAP 35.82 ECC 1.2241  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 36 1 2657.37 -27.28 71.49 235.72 97.91 2 20 18 2057.4 -25.90 63.10  
 90.00 17 55 13 4239.69 1.32 174.19 230.50 61.71 19 5 53 3639.7 -2.47 167.57  
 100.00 3 6 27 2365.73 -28.47 49.83 235.51 99.50 3 45 53 1765.7 -26.87 41.40  
 100.00 19 7 28 4006.57 2.38 156.47 229.92 60.19 20 14 15 3406.6 -1.61 149.95  
 110.00 4 34 51 2089.16 -31.59 28.09 234.77 103.81 5 9 40 1489.2 -29.36 19.59  
 110.00 19 55 34 3855.90 5.08 143.36 228.24 56.15 20 59 50 3255.9 .60 137.14

Differential Corrections  
 TOE -.2819 TRA -.4241 TC3 1.0990 BAU .2121  
 RDE -.2754 RRA .0613 RC3 .3869 FAU .04897  
 FDE .2581 FRA .2039 FC3-3.1131 BSP 3749  
 BDE .3941 BRA .4285 BC3 1.1651 FSP -562

Mid-Course Execution Accuracy  
 SGT 1148.9 SGR 523.7 SG3 203.5  
 RRT .5832 RRF -.6443 RTF -.8370  
 SGB 1262.6 R23 -.1044 R13 -.8525  
 SG1 1194.4 SG2 409.2 THA 16.93

Orbit Determination Accuracy  
 ST 484.3 SR 428.8 SS 248.9  
 CRT .8731 CRS .9420 CST .9742  
 LSA 673.3 MSA 161.8 SSA 29.0  
 EL1 626.3 EL2 161.7 ALF 41.02

LAUNCH DATE JAN 30 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 248.521

RL 147.37 LAL -.00 LOL 129.93 VL 26.947 GAL -2.24 AZL 88.94 HCA 109.32 SMA 123.46 ECC .19744 INC 1.0611 VI 30.232  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.052 GAP -9.01 AZP 90.35 TAL 189.16 TAP 298.48 RCA 99.08 APO 147.83 V2 34.948  
 RC 55.282 GL 8.00 GP 16.49 ZAL 110.96 ZAP 22.06 ETS 316.06 ZAE 145.28 ETE 18.39 ZAC 129.15 ETC 148.12 CLP -14.87

PLANETOCENTRIC CONIC

C3 12.845 VHL 3.584 OLA 14.74 RAL 14.18 RAD 6567.5 VEL 11.586 PTH 2.03 VHP 6.506 DPA 29.84 RAP 36.09 ECC 1.2114  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 45 30 2590.23 -26.56 66.71 233.04 100.20 2 28 40 1990.2 -24.88 58.45  
 90.00 17 36 39 4281.53 2.67 176.53 228.36 61.80 18 48 0 3681.5 -1.12 169.90  
 100.00 3 14 47 2302.31 -27.68 45.29 232.79 101.77 3 53 9 1702.3 -25.78 37.01  
 100.00 18 50 3 4044.68 3.67 158.56 227.80 60.31 19 57 28 3444.7 -.31 152.04  
 110.00 4 40 45 2033.31 -30.61 24.03 231.96 106.03 5 14 38 1433.3 -28.11 15.73  
 110.00 19 40 34 3886.45 6.23 144.97 226.22 56.32 20 45 21 3286.4 1.76 138.74

DIFFERENTIAL CORRECTIONS

TOE -.2624 TRA -.4012 TC3 1.2089 BAU .2237  
 RDE -.2621 RRA .0603 RC3 .4845 FAU .05339  
 FDE .2313 FRA .1870 FC3-3.5986 BSP 3918  
 BDE .3709 BRA .4057 BC3 1.3024 FSP -638

MID-COURSE EXECUTION ACCURACY

SGT 1169.0 SGR 553.3 SG3 226.7  
 RRT .6347 RRF -.7024 RTF -.8461  
 SGB 1293.4 R23 -.1173 R13 -.8648  
 SG1 1227.6 SG2 407.2 THA 18.88

ORBIT DETERMINATION ACCURACY

ST 465.0 SR 420.3 SS 218.6  
 CRT .8705 CRS .9358 CST .9707  
 LSA 643.7 MSA 158.9 SSA 31.7  
 EL1 606.3 EL2 158.6 ALF 41.68

LAUNCH DATE JAN 30 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 255.180

RL 147.37 LAL -.00 LOL 129.93 VL 27.060 GAL -2.35 AZL 89.11 HCA 112.51 SMA 124.16 ECC .19118 INC .8870 VI 30.232  
 RP 108.47 LAP .82 LOP 242.44 VP 37.123 GAP -8.31 AZP 90.34 TAL 190.03 TAP 302.54 RCA 100.43 APO 147.90 V2 34.936  
 RC 57.109 GL 6.89 GP 17.91 ZAL 112.56 ZAP 24.75 ETS 318.50 ZAE 144.43 ETE 20.84 ZAC 128.85 ETC 146.72 CLP -17.37

PLANETOCENTRIC CONIC

C3 12.190 VHL 3.491 OLA 13.11 RAL 13.16 RAD 6567.5 VEL 11.558 PTH 2.02 VHP 6.155 DPA 31.40 RAP 36.15 ECC 1.2006  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 55 50 2522.30 -25.65 61.95 230.58 102.42 2 37 52 1922.3 -23.68 53.83  
 90.00 17 18 10 4327.13 4.13 179.08 226.47 61.96 18 30 17 3727.1 .35 172.44  
 100.00 3 24 0 2237.98 -26.70 40.76 230.30 103.96 4 1 18 1638.0 -24.52 32.64  
 100.00 18 32 42 4086.68 5.08 160.88 225.95 60.50 19 40 49 3486.7 1.11 154.34  
 110.00 4 47 35 1976.44 -29.47 20.00 229.40 108.17 5 20 31 1376.4 -26.70 11.90  
 110.00 19 25 36 3920.98 7.53 146.80 224.44 56.56 20 30 57 3321.0 3.08 140.54

DIFFERENTIAL CORRECTIONS

TOE -.2425 TRA -.3819 TC3 1.3035 BAU .2337  
 RDE -.2480 RRA .0594 RC3 .5984 FAU .05816  
 FDE .1954 FRA .1714 FC3-4.1307 BSP 4031  
 BDE .3469 BRA .3865 BC3 1.4343 FSP -718

MID-COURSE EXECUTION ACCURACY

SGT 1183.6 SGR 591.9 SG3 252.0  
 RRT .6823 RRF -.7572 RTF -.8513  
 SGB 1323.3 R23 -.1337 R13 -.8747  
 SG1 1259.3 SG2 406.7 THA 21.15

ORBIT DETERMINATION ACCURACY

ST 443.2 SR 408.3 SS 182.6  
 CRT .8651 CRS .9205 CST .9644  
 LSA 608.9 MSA 156.4 SSA 35.0  
 EL1 582.1 EL2 156.0 ALF 42.29

LAUNCH DATE JAN 30 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 261.821

RL 147.37 LAL -.00 LOL 129.93 VL 27.162 GAL -2.45 AZL 89.30 HCA 115.69 SMA 124.81 ECC .18560 INC .7049 VI 30.232  
 RP 108.51 LAP .64 LOP 245.62 VP 37.185 GAP -7.65 AZP 90.31 TAL 190.88 TAP 306.56 RCA 101.64 APO 147.97 V2 34.923  
 RC 59.010 GL 5.62 GP 19.51 ZAL 114.09 ZAP 27.67 ETS 320.54 ZAE 143.70 ETE 23.56 ZAC 128.30 ETC 145.32 CLP -20.01

PLANETOCENTRIC CONIC

C3 11.637 VHL 3.411 OLA 11.36 RAL 12.27 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 5.830 DPA 33.08 RAP 35.99 ECC 1.1915  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 7 6 2453.51 -24.56 57.20 228.37 104.56 2 47 59 1853.5 -22.32 49.25  
 90.00 16 59 52 4376.41 5.70 181.85 224.86 62.22 18 12 49 3776.4 1.94 175.19  
 100.00 3 34 10 2172.68 -25.55 36.25 228.07 106.07 4 10 23 1572.7 -23.10 28.31  
 100.00 18 15 29 4132.47 6.61 163.42 224.36 60.78 19 24 22 3532.5 2.66 156.86  
 110.00 4 55 23 1918.55 -28.17 15.99 227.11 110.21 5 27 22 1318.5 -25.16 8.11  
 110.00 19 10 46 3959.37 8.97 148.85 222.92 56.87 20 16 45 3359.4 4.54 142.55

DIFFERENTIAL CORRECTIONS

TOE -.2203 TRA -.3640 TC3 1.3853 BAU .2438  
 RDE -.2323 RRA .0584 RC3 .7319 FAU .06335  
 FDE .1473 FRA .1562 FC3-4.7127 BSP 4138  
 BDE .3202 BRA .3687 BC3 1.5668 FSP -805

MID-COURSE EXECUTION ACCURACY

SGT 1191.3 SGR 641.5 SG3 279.6  
 RRT .7247 RRF -.8070 RTF -.8554  
 SGB 1353.1 R23 -.1503 R13 -.8847  
 SG1 1290.0 SG2 408.2 THA 23.86

ORBIT DETERMINATION ACCURACY

ST 415.6 SR 391.6 SS 139.7  
 CRT .8552 CRS .8796 CST .9480  
 LSA 566.0 MSA 154.2 SSA 39.1  
 EL1 550.1 EL2 153.4 ALF 43.01

LAUNCH DATE JAN 30 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 268.440

RL 147.37 LAL -.00 LOL 129.93 VL 27.253 GAL -2.55 AZL 89.49 HCA 118.87 SMA 125.39 ECC .18065 INC .5128 VI 30.232  
 RP 108.55 LAP .45 LOP 248.80 VP 37.241 GAP -7.00 AZP 90.25 TAL 191.69 TAP 310.56 RCA 102.74 APO 148.04 V2 34.911  
 RC 60.976 GL 4.18 GP 21.31 ZAL 115.53 ZAP 30.82 ETS 322.27 ZAE 143.06 ETE 26.61 ZAC 127.48 ETC 143.95 CLP -22.81

PLANETOCENTRIC CONIC

C3 11.174 VHL 3.343 OLA 9.50 RAL 11.55 RAD 6567.4 VEL 11.514 PTH 2.01 VHP 5.531 DPA 34.88 RAP 35.55 ECC 1.1839  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 19 23 2383.67 -23.28 52.49 226.44 106.59 2 59 7 1783.7 -20.79 44.70  
 90.00 16 41 48 4429.41 7.37 184.85 223.54 62.58 17 55 37 3829.4 3.64 178.16  
 100.00 3 45 23 2106.28 -24.22 31.76 226.12 108.07 4 20 30 1506.3 -21.52 24.00  
 100.00 17 58 28 4182.03 8.24 166.19 223.07 61.17 19 8 10 3582.0 4.33 159.59  
 110.00 5 4 15 1859.51 -26.72 12.01 225.11 112.16 5 35 14 1259.5 -23.47 4.35  
 110.00 18 56 6 4001.57 10.53 151.12 221.70 57.29 20 2 48 3401.6 6.14 144.77

DIFFERENTIAL CORRECTIONS

TOE -.1970 TRA -.3487 TC3 1.4479 BAU .2536  
 RDE -.2144 RRA .0571 RC3 .8862 FAU .06885  
 FDE .0857 FRA .1439 FC3-5.3338 BSP 4234  
 BDE .2911 BRA .3534 BC3 1.6976 FSP -899

MID-COURSE EXECUTION ACCURACY

SGT 1190.9 SGR 704.2 SG3 309.1  
 RRT .7601 RRF -.8502 RTF -.8574  
 SGB 1383.5 R23 -.1665 R13 -.8948  
 SG1 1320.5 SG2 412.7 THA 27.06

ORBIT DETERMINATION ACCURACY

ST 384.6 SR 369.0 SS 94.0  
 CRT .8396 CRS .7393 CST .8775  
 LSA 517.4 MSA 152.5 SSA 44.0  
 EL1 511.2 EL2 150.8 ALF 43.59

LAUNCH DATE JAN 30 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 275.038

RL 147.37 LAL -.00 LOL 129.93 VL 27.333 GAL -2.63 AZL 89.69 HCA 122.05 SMA 125.91 ECC .17629 INC .3085 V1 30.232  
 RP 108.58 LAP .26 LOP 251.98 VP 37.289 GAP -6.38 AZP 90.16 TAL 192.46 TAP 314.50 RCA 103.72 APO 148.11 V2 34.900  
 RC 63.000 GL 2.57 GP 23.31 ZAL 116.86 ZAP 34.20 ETS 323.80 ZAE 142.46 ETE 30.05 ZAC 126.35 ETC 142.66 CLP -25.76

PLANETOCENTRIC CONIC

C3 10.792 VHL 3.285 DLA 7.52 RAL 10.99 RAD 6567.4 VEL 11.497 PTH 2.00 VHP 5.260 DPA 36.80 RAP 34.80 ECC 1.1776  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 32 49 2312.49 -21.82 47.78 224.81 108.51 3 11 22 1712.5 -19.09 40.17  
 90.00 16 23 55 4486.31 9.14 188.09 222.55 63.08 17 38 42 3886.3 5.46 181.35  
 100.00 3 57 46 2038.49 -22.72 27.29 224.47 109.97 4 31 45 1438.5 -19.79 19.72  
 100.00 17 41 39 4235.54 9.99 169.21 222.10 61.68 18 52 15 3635.5 6.13 162.55  
 110.00 5 14 16 1799.12 -25.11 8.06 223.41 114.00 5 44 15 1199.1 -21.65 .62  
 110.00 18 41 39 4047.68 12.21 153.63 220.78 57.82 19 49 7 3447.7 7.88 147.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1704 TRA -.3335 TC3 1.4948 BAU .2649 SGT 1182.0 SGR 782.7 SG3 340.8 ST 346.7 SR 337.9 SS 62.5  
 RDE -.1926 RRA .0558 RC3 1.0656 FAU .07471 RRT .7889 RRF -.8864 RTF -.8593 CRT .8135 CRS .0730 CST .3863  
 FDE .0051 FRA .1326 FC3-5.9935 BSP 4381 SGB 1417.7 R23 -.1770 R13 -.9068 LSA 461.3 MSA 151.6 SSA 50.2  
 BDE .2572 BRA .3381 BC3 1.8357 FSP -1004 SG1 1354.1 SG2 419.9 THA 30.87 EL1 461.0 EL2 147.8 ALF 44.10

LAUNCH DATE JAN 30 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 281.613

RL 147.37 LAL -.00 LOL 129.93 VL 27.405 GAL -2.70 AZL 89.91 HCA 125.22 SMA 126.38 ECC .17245 INC .0887 V1 30.232  
 RP 108.62 LAP .07 LOP 255.16 VP 37.331 GAP -5.79 AZP 90.05 TAL 193.17 TAP 318.39 RCA 104.59 APO 148.18 V2 34.889  
 RC 65.076 GL .76 GP 25.55 ZAL 118.05 ZAP 37.83 ETS 325.21 ZAE 141.84 ETE 33.90 ZAC 124.91 ETC 141.47 CLP -28.91

PLANETOCENTRIC CONIC

C3 10.483 VHL 3.238 DLA 5.40 RAL 10.62 RAD 6567.4 VEL 11.484 PTH 2.00 VHP 5.019 DPA 38.86 RAP 33.69 ECC 1.1725  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 47 36 2239.53 -20.17 43.07 223.49 110.31 3 24 55 1639.5 -17.22 35.63  
 90.00 16 6 13 4547.47 11.01 191.62 221.89 63.75 17 22 0 3947.5 7.39 184.81  
 100.00 4 11 29 1968.94 -21.03 22.81 223.14 111.75 4 44 18 1368.9 -17.89 15.42  
 100.00 17 25 0 4293.29 11.83 172.50 221.46 62.35 18 36 34 3693.3 8.04 165.77  
 110.00 5 25 34 1737.08 -23.33 4.12 222.04 115.72 5 54 31 1137.1 -19.67 356.88  
 110.00 18 27 25 4097.91 14.02 156.40 220.19 58.50 19 35 43 3497.9 9.75 149.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1450 TRA -.3229 TC3 1.5055 BAU .2759 SGT 1160.0 SGR 877.5 SG3 373.0 ST 310.4 SR 297.0 SS 95.8  
 RDE -.1665 RRA .0529 RC3 1.2680 FAU .08056 RRT .8077 RRF -.9152 RTF -.8565 CRT .7753 CRS -.7239 CST -.3908  
 FDE -.0935 FRA .1293 FC3-6.6524 BSP 4494 SGB 1454.5 R23 -.1855 R13 -.9180 LSA 404.8 MSA 153.1 SSA 56.6  
 BDE .2208 BRA .3272 BC3 1.9684 FSP -1109 SG1 1388.9 SG2 432.1 THA 35.35 EL1 404.8 EL2 143.9 ALF 43.36

LAUNCH DATE JAN 30 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC

DISTANCE 288.164

RL 147.37 LAL -.00 LOL 129.93 VL 27.467 GAL -2.77 AZL 90.15 HCA 128.40 SMA 126.80 ECC .16909 INC .1460 V1 30.232  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.366 GAP -5.22 AZP 89.91 TAL 193.82 TAP 322.21 RCA 105.36 APO 148.24 V2 34.878  
 RC 67.198 GL -1.25 GP 28.04 ZAL 119.08 ZAP 41.72 ETS 326.58 ZAE 141.13 ETE 38.21 ZAC 123.12 ETC 140.43 CLP -32.25

PLANETOCENTRIC CONIC

C3 10.243 VHL 3.201 DLA 3.14 RAL 10.46 RAD 6567.4 VEL 11.473 PTH 1.99 VHP 4.810 DPA 41.05 RAP 32.15 ECC 1.1686  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 3 56 2164.17 -18.31 38.31 222.52 111.98 3 40 0 1564.2 -15.17 31.05  
 90.00 15 48 33 4613.50 12.97 195.48 221.60 64.60 17 5 27 4013.5 9.44 188.57  
 100.00 4 26 44 1897.07 -19.15 18.30 222.15 113.40 4 58 21 1297.1 -15.82 11.09  
 100.00 17 8 26 4355.82 13.78 176.12 221.19 63.21 18 21 2 3755.8 10.08 169.29  
 110.00 5 38 20 1672.96 -21.38 .16 221.02 117.33 6 6 13 1073.0 -17.55 353.13  
 110.00 18 13 19 4152.71 15.94 159.48 219.96 59.35 19 22 31 3552.7 11.76 152.87

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1200 TRA -.3144 TC3 1.4831 BAU .2885 SGT 1124.7 SGR 991.2 SG3 405.2 ST 274.9 SR 243.3 SS 171.4  
 RDE -.1342 RRA .0487 RC3 1.4962 FAU .08628 RRT .8177 RRF -.9376 RTF -.8500 CRT .7176 CRS -.8913 CST -.5812  
 FDE -.2131 FRA .1326 FC3-7.2921 BSP 4630 SGB 1499.2 R23 -.1862 R13 -.9302 LSA 367.8 MSA 158.5 SSA 61.0  
 BDE .1800 BRA .3181 BC3 2.1067 FSP -1217 SG1 1430.5 SG2 448.7 THA 40.60 EL1 340.7 EL2 136.7 ALF 40.17

LAUNCH DATE JAN 30 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC

DISTANCE 294.691

RL 147.37 LAL -.00 LOL 129.93 VL 27.522 GAL -2.82 AZL 90.40 HCA 131.57 SMA 127.16 ECC .16617 INC .4040 V1 30.232  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.397 GAP -4.67 AZP 89.73 TAL 194.39 TAP 325.96 RCA 106.03 APO 148.29 V2 34.867  
 RC 69.360 GL -3.50 GP 30.79 ZAL 119.93 ZAP 45.85 ETS 327.99 ZAE 140.24 ETE 42.96 ZAC 120.99 ETC 139.59 CLP -35.82

PLANETOCENTRIC CONIC

C3 10.072 VHL 3.174 DLA .72 RAL 10.51 RAD 6567.4 VEL 11.466 PTH 1.99 VHP 4.634 DPA 43.38 RAP 30.11 ECC 1.1658  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 22 7 2085.62 -16.24 33.48 221.92 113.52 3 56 53 1485.6 -12.93 26.37  
 90.00 15 30 46 4685.28 15.02 199.75 221.71 65.71 16 48 51 4085.3 11.62 192.73  
 100.00 4 43 48 1822.17 -17.06 13.72 221.53 114.92 5 14 10 1222.2 -13.56 6.68  
 100.00 16 51 47 4423.96 15.83 180.14 221.31 64.31 18 5 30 3824.0 12.25 173.19  
 110.00 5 52 48 1606.15 -19.24 356.16 220.37 118.82 6 19 35 1006.2 -15.24 349.32  
 110.00 17 59 15 4212.73 17.99 162.93 220.13 60.43 19 9 28 3612.7 13.92 156.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0965 TRA -.3088 TC3 1.4214 BAU .3034 SGT 1074.8 SGR 1124.8 SG3 435.6 ST 243.1 SR 173.9 SS 265.4  
 RDE -.0937 RRA .0414 RC3 1.7479 FAU .09154 RRT .8179 RRF -.9544 RTF -.8383 CRT .6301 CRS -.9128 CST -.5845  
 FDE -.3548 FRA .1481 FC3-7.8681 BSP 4787 SGB 1555.8 R23 -.1773 R13 -.9431 LSA 357.6 MSA 168.4 SSA 59.0  
 BDE .1345 BRA .3116 BC3 2.2530 FSP -1317 SG1 1483.4 SG2 468.9 THA 46.59 EL1 273.7 EL2 119.9 ALF 30.78

LAUNCH DATE JAN 30 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC

DISTANCE 301.192

RL 147.37 LAL -.00 LOL 129.93 VL 27.569 GAL -2.86 AZL 90.69 HCA 134.74 SMA 127.48 ECC .16364 INC .6885 V1 30.232  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.422 GAP -4.15 AZP 89.52 TAL 194.89 TAP 329.63 RCA 106.62 APO 148.34 V2 34.858  
 RC 71.560 GL -6.01 GP 33.81 ZAL 120.57 ZAP 50.21 ETS 329.52 ZAE 139.10 ETE 48.13 ZAC 118.50 ETC 138.98 CLP -39.63

PLANETOCENTRIC CONIC

C3 9.972 VHL 3.158 DLA -1.89 RAL 10.80 RAD 6567.4 VEL 11.461 PTH 1.99 VHP 4.497 DPA 45.81 RAP 27.50 ECC 1.1641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 42 36 2002.84 -13.93 28.50 221.72 114.90 4 15 58 1402.8 -10.46 21.54  
 90.00 15 12 36 4764.08 17.17 204.54 222.27 67.13 16 32 0 4164.1 13.92 197.36  
 100.00 5 3 3 1743.29 -14.74 9.02 221.32 116.30 5 32 7 1143.3 -11.09 2.13  
 100.00 16 34 49 4498.87 17.99 184.66 221.89 65.72 17 49 48 3898.9 14.56 177.55  
 110.00 6 9 17 1535.98 -16.88 352.08 220.13 120.17 6 34 53 936.0 -12.75 345.42  
 110.00 17 45 5 4278.94 20.17 166.82 220.75 61.80 18 56 24 3678.9 16.24 159.90

DIFFERENTIAL CORRECTIONS

TDE -.0743 TRA -.3035 TC3 1.3215 BAU .3220  
 RDE -.0415 RRA .0314 RC3 2.0218 FAU .09606  
 FDE -.5235 FRA .1709 FC3-8.3395 BSP 5036  
 BDE .0851 BRA .3051 BC3 2.4154 FSP -1416

MID-COURSE EXECUTION ACCURACY

SGT 1009.2 SGR 1280.4 SG3 463.2  
 RRT .8084 RRF -.9668 RTF -.8205  
 SGB 1630.3 R23 -.1564 R13 -.9564  
 SG1 1555.2 SG2 489.1 THA 53.28

ORBIT DETERMINATION ACCURACY

ST 214.8 SR 86.2 SS 375.9  
 CRT .4473 CRS -.8041 CST -.5232  
 LSA 402.7 MSA 173.7 SSA 50.3  
 EL1 218.7 EL2 75.7 ALF 11.58

LAUNCH DATE JAN 30 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC

DISTANCE 307.669

RL 147.37 LAL -.00 LOL 129.93 VL 27.609 GAL -2.89 AZL 91.01 HCA 137.90 SMA 127.75 ECC .16147 INC 1.0056 V1 30.232  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.443 GAP -3.64 AZP 89.25 TAL 195.31 TAP 333.21 RCA 107.12 APO 148.38 V2 34.848  
 RC 73.792 GL -8.82 GP 37.09 ZAL 120.96 ZAP 54.77 ETS 331.25 ZAE 137.62 ETE 53.63 ZAC 115.69 ETC 138.65 CLP -43.69

PLANETOCENTRIC CONIC

C3 9.952 VHL 3.155 DLA -4.71 RAL 11.34 RAD 6567.4 VEL 11.460 PTH 1.99 VHP 4.402 DPA 48.33 RAP 24.25 ECC 1.1638  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 5 53 1914.50 -11.34 23.31 222.00 116.12 4 37 47 1314.5 -7.74 16.48  
 90.00 14 53 40 4851.65 19.40 209.99 223.35 68.96 16 14 32 4251.6 16.37 202.63  
 100.00 5 25 0 1659.24 -12.15 4.12 221.58 117.52 5 52 39 1059.2 -8.37 357.37  
 100.00 16 17 14 4582.13 20.24 189.82 222.99 67.52 17 33 36 3982.1 17.02 182.51  
 110.00 6 28 10 1461.50 -14.29 347.87 220.34 121.39 6 52 32 861.5 -10.03 341.36  
 110.00 17 30 33 4352.64 22.48 171.30 221.90 63.54 18 43 6 3752.6 18.74 164.16

DIFFERENTIAL CORRECTIONS

TDE -.0595 TRA -.3017 TC3 1.1667 BAU .3434  
 RDE .0233 RRA .0148 RC3 2.3025 FAU .09905  
 FDE -.7067 FRA .2129 FC3-8.6160 BSP 5303  
 BDE .0639 BRA .3021 BC3 2.5812 FSP -1488

MID-COURSE EXECUTION ACCURACY

SGT 925.1 SGR 1453.6 SG3 483.8  
 RRT .7808 RRF -.9757 RTF -.7869  
 SGB 1723.0 R23 -.1294 R13 -.9679  
 SG1 1645.7 SG2 510.6 THA 60.45

ORBIT DETERMINATION ACCURACY

ST 198.4 SR 61.2 SS 494.1  
 CRT -.4066 CRS .7592 CST -.4496  
 LSA 505.4 MSA 174.0 SSA 39.4  
 EL1 200.1 EL2 55.5 ALF 172.25

LAUNCH DATE JAN 30 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 314.120

RL 147.37 LAL -.00 LOL 129.93 VL 27.643 GAL -2.91 AZL 91.36 HCA 141.07 SMA 127.98 ECC .15961 INC 1.3639 V1 30.232  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.460 GAP -3.15 AZP 88.94 TAL 195.64 TAP 336.71 RCA 107.55 APO 148.41 V2 34.839  
 RC 76.053 GL -11.98 GP 40.61 ZAL 121.06 ZAP 59.47 ETS 333.26 ZAE 135.72 ETE 59.36 ZAC 112.57 ETC 138.65 CLP -48.00

PLANETOCENTRIC CONIC

C3 10.030 VHL 3.167 DLA -7.79 RAL 12.18 RAD 6567.4 VEL 11.464 PTH 1.99 VHP 4.354 DPA 50.90 RAP 20.26 ECC 1.1651  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 32 45 1818.76 -8.42 17.79 222.82 117.14 5 3 4 1218.8 -4.71 11.07  
 90.00 14 33 27 4950.50 21.69 216.34 225.04 71.33 15 55 58 4350.5 18.94 208.75  
 100.00 5 50 20 1568.44 -9.24 358.95 222.38 118.56 6 16 29 968.4 -5.35 352.31  
 100.00 15 58 33 4676.04 22.57 195.82 224.71 69.86 17 16 29 4076.0 19.62 188.27  
 110.00 6 50 1 1381.58 -11.41 343.47 221.08 122.44 7 13 3 781.6 -7.05 337.09  
 110.00 17 15 21 4435.67 24.90 176.53 223.67 65.78 18 29 17 3835.7 21.41 169.12

DIFFERENTIAL CORRECTIONS

TDE -.0513 TRA -.2992 TC3 .9683 BAU .3698  
 RDE .1064 RRA -.0085 RC3 2.5824 FAU .10036  
 FDE -.9088 FRA .2666 FC3-8.6620 BSP 5692  
 BDE .1181 BRA .2994 BC3 2.7580 FSP -1543

MID-COURSE EXECUTION ACCURACY

SGT 826.6 SGR 1647.1 SG3 496.7  
 RRT .7300 RRF -.9821 RTF -.7321  
 SGB 1842.9 R23 -.0967 R13 -.9776  
 SG1 1766.0 SG2 527.0 THA 67.80

ORBIT DETERMINATION ACCURACY

ST 189.2 SR 198.8 SS 624.1  
 CRT -.4304 CRS .9868 CST -.3998  
 LSA 659.0 MSA 172.1 SSA 29.9  
 EL1 232.3 EL2 146.2 ALF 131.74

LAUNCH DATE JAN 30 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 320.545

RL 147.37 LAL -.00 LOL 129.93 VL 27.670 GAL -2.92 AZL 91.77 HCA 144.23 SMA 128.17 ECC .15805 INC 1.7746 V1 30.232  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.473 GAP -2.68 AZP 88.56 TAL 195.88 TAP 340.11 RCA 107.91 APO 148.43 V2 34.831  
 RC 78.340 GL -15.52 GP 44.36 ZAL 120.84 ZAP 64.25 ETS 335.63 ZAE 133.35 ETE 65.18 ZAC 109.19 ETC 139.01 CLP -52.58

PLANETOCENTRIC CONIC

C3 10.234 VHL 3.199 DLA -11.16 RAL 13.33 RAD 6567.4 VEL 11.473 PTH 1.99 VHP 4.361 DPA 53.45 RAP 15.47 ECC 1.1684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 4 20 1713.07 -5.09 11.81 224.31 117.89 5 32 53 1113.1 -1.32 5.16  
 90.00 14 11 6 5064.23 23.97 223.90 227.46 74.45 15 35 30 4464.2 21.60 216.02  
 100.00 6 20 4 1468.73 -5.95 353.37 223.84 119.35 6 44 33 868.7 -1.99 346.82  
 100.00 15 38 3 4783.81 24.91 202.97 227.16 72.92 16 57 46 4183.8 22.34 195.12  
 110.00 7 15 37 1294.78 -8.20 338.80 222.46 123.30 7 37 11 694.8 -3.76 332.52  
 110.00 16 58 59 4530.53 27.40 182.77 226.20 68.71 18 14 30 3930.5 24.26 175.01

DIFFERENTIAL CORRECTIONS

TDE -.0569 TRA -.2972 TC3 .7169 BAU .3995  
 RDE .2095 RRA -.0433 RC3 2.8304 FAU .09917  
 FDE -1.1115 FRA .3383 FC3-8.3888 BSP 6126  
 BDE .2171 BRA .3004 BC3 2.9197 FSP -1554

MID-COURSE EXECUTION ACCURACY

SGT 717.8 SGR 1851.1 SG3 497.5  
 RRT .6287 RRF -.9866 RTF -.6277  
 SGB 1985.4 R23 -.0648 R13 -.9845  
 SG1 1910.3 SG2 540.9 THA 75.08

ORBIT DETERMINATION ACCURACY

ST 192.6 SR 379.8 SS 755.8  
 CRT -.4599 CRS .9976 CST -.4416  
 LSA 850.1 MSA 171.6 SSA 22.5  
 EL1 392.3 EL2 165.5 ALF 106.06

LAUNCH DATE JAN 30 1969 FLIGHT TIME 118.00 ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC DISTANCE 326.945  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.693 GAL -2.92 AZL 92.25 HCA 147.38 SMA 128.32 ECC .15674 INC 2.2533 VI 30.232  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.482 GAP -2.23 AZP 88.10 TAL 196.04 TAP 343.42 RCA 108.21 APO 148.44 V2 34.824  
 RC 80.651 GL -19.50 GP 48.30 ZAL 120.23 ZAP 69.00 ETS 338.43 ZAE 130.50 ETE 70.97 ZAC 105.61 ETC 139.75 CLP -57.40

PLANETOCENTRIC CONIC  
 C3 10.611 VHL 3.257 DLA -14.85 RAL 14.86 RAD 6567.4 VEL 11.489 PTH 2.00 VHP 4.432 OPA 55.92 RAP 9.81 ECC 1.1746  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 42 24 1593.41 -1.25 5.11 226.66 118.29 6 8 58 993.4 2.54 358.49  
 90.00 13 45 11 5198.51 26.10 233.15 230.78 78.62 15 11 50 4598.5 24.27 224.96  
 100.00 6 55 44 1356.83 -2.18 347.20 226.14 119.82 7 18 21 756.8 1.80 340.68  
 100.00 15 14 33 4910.31 27.15 211.70 230.53 76.99 16 36 23 4310.3 25.09 203.50  
 110.00 7 46 4 1199.17 -4.59 333.74 224.64 123.91 8 6 3 599.2 -.11 327.53  
 110.00 16 40 42 4640.74 29.89 190.38 229.68 72.58 17 58 3 4040.7 27.22 182.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0802 TRA -.2920 TC3 .4253 BAU .4322 SGT 615.7 SGR 2060.1 SG3 485.0 ST 213.0 SR 599.0 SS 886.4  
 RDE .3377 RRA -.0924 RC3 3.0168 FAU .09525 RRT .4337 RRF -.9898 RTF -.4302 CRT -.5898 CRS .9993 CST -.5805  
 FDE-1.3067 FRA .4222 FC3-7.7711 BSP 6624 SGB 2150.1 R23 -.0355 R13 -.9891 LSA 1077.1 MSA 171.9 SSA 17.0  
 BDE .3471 BRA .3063 BC3 3.0466 FSP -1520 SG1 2078.6 SG2 549.8 THA 82.06 EL1 613.2 EL2 168.1 ALF 102.83

LAUNCH DATE JAN 30 1969 FLIGHT TIME 120.00 ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC DISTANCE 333.317  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.710 GAL -2.91 AZL 92.82 HCA 150.54 SMA 128.44 ECC .15567 INC 2.8220 VI 30.232  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.488 GAP -1.79 AZP 87.54 TAL 196.10 TAP 346.64 RCA 108.45 APO 148.44 V2 34.816  
 RC 82.981 GL -23.98 GP 52.40 ZAL 119.19 ZAP 73.62 ETS 341.72 ZAE 127.17 ETE 76.66 ZAC 101.90 ETC 140.91 CLP -62.47

PLANETOCENTRIC CONIC  
 C3 11.240 VHL 3.353 DLA -18.92 RAL 16.82 RAD 6567.4 VEL 11.516 PTH 2.01 VHP 4.579 OPA 58.26 RAP 3.22 ECC 1.1850  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 30 12 1452.20 3.31 357.23 230.17 118.14 6 54 24 852.2 7.04 350.55  
 90.00 13 13 0 5363.30 27.78 244.91 235.16 84.27 14 42 23 4763.3 26.70 236.41  
 100.00 7 39 58 1227.06 2.22 340.08 229.57 119.82 8 0 25 627.1 6.17 333.52  
 100.00 14 45 55 5063.67 29.02 222.70 235.00 82.49 16 10 19 4463.7 27.68 214.16  
 110.00 8 23 6 1091.89 -.50 328.13 227.87 124.18 8 41 18 491.9 3.99 321.92  
 110.00 16 19 16 4771.60 32.17 199.88 234.36 77.78 17 38 48 4171.6 30.16 191.25

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1269 TRA -.2787 TC3 .1170 BAU .4683 SGT 553.8 SGR 2273.4 SG3 460.0 ST 264.3 SR 858.8 SS 1012.4  
 RDE .4987 RRA -.1573 RC3 3.1145 FAU .08885 RRT .0970 RRF -.9921 RTF -.0915 CRT -.7569 CRS .9998 CST -.7528  
 FDE-1.4865 FRA .5068 FC3-6.8437 BSP 7245 SGB 2339.9 R23 -.0108 R13 -.9920 LSA 1342.7 MSA 171.6 SSA 13.0  
 BDE .5146 BRA .3201 BC3 3.1167 FSP -1452 SG1 2274.1 SG2 551.1 THA 88.56 EL1 882.7 EL2 168.1 ALF 103.62

LAUNCH DATE JAN 30 1969 FLIGHT TIME 122.00 ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC DISTANCE 339.664  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.723 GAL -2.88 AZL 93.51 HCA 153.69 SMA 128.53 ECC .15481 INC 3.5132 VI 30.232  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.492 GAP -1.37 AZP 86.85 TAL 196.07 TAP 349.76 RCA 108.63 APO 148.42 V2 34.810  
 RC 85.328 GL -28.99 GP 56.63 ZAL 117.64 ZAP 77.97 ETS 345.56 ZAE 123.41 ETE 82.18 ZAC 98.14 ETC 142.49 CLP -67.73

PLANETOCENTRIC CONIC  
 C3 12.254 VHL 3.501 DLA -23.38 RAL 19.29 RAD 6567.5 VEL 11.560 PTH 2.02 VHP 4.821 OPA 60.40 RAP 355.66 ECC 1.2017  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 35 16 1269.81 9.07 346.93 235.41 116.94 7 56 26 669.8 12.61 340.04  
 90.00 12 27 39 5581.85 28.24 260.85 240.65 92.24 14 0 41 4981.9 28.25 252.19  
 100.00 8 38 19 1066.28 7.60 331.19 234.63 119.00 8 56 6 466.3 11.41 324.47  
 100.00 14 7 17 5260.61 29.89 237.26 240.69 90.09 15 34 57 4660.6 29.58 228.47  
 110.00 9 9 44 967.79 4.24 321.65 232.56 123.95 9 25 52 367.8 8.67 315.36  
 110.00 15 52 21 4931.86 33.83 212.08 240.48 84.81 17 14 33 4331.9 32.75 203.02

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2092 TRA -.2542 TC3 -.1912 BAU .5039 SGT 583.6 SGR 2470.9 SG3 421.1 ST 368.4 SR 1146.2 SS 1118.1  
 RDE .6945 RRA -.2475 RC3 3.0696 FAU .07970 RRT -.3307 RRF -.9937 RTF .3371 CRT -.8796 CRS .9999 CST -.8786  
 FDE-1.6266 FRA .5948 FC3-5.6306 BSP 7880 SGB 2538.9 R23 .0091 R13 -.9937 LSA 1634.0 MSA 172.0 SSA 9.9  
 BDE .7253 BRA .3548 BC3 3.0756 FSP -1334 SG1 2478.9 SG2 549.0 THA 94.70 EL1 1192.1 EL2 168.5 ALF 106.12

LAUNCH DATE JAN 30 1969 FLIGHT TIME 124.00 ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC DISTANCE 345.983  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.731 GAL -2.85 AZL 94.38 HCA 156.83 SMA 128.58 ECC .15413 INC 4.3771 VI 30.232  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.492 GAP -.96 AZP 85.97 TAL 195.95 TAP 352.78 RCA 108.77 APO 148.40 V2 34.804  
 RC 87.691 GL -34.55 GP 61.00 ZAL 115.54 ZAP 81.94 ETS 349.99 ZAE 119.23 ETE 87.56 ZAC 94.37 ETC 144.53 CLP -73.19

PLANETOCENTRIC CONIC  
 C3 13.892 VHL 3.727 DLA -28.21 RAL 22.38 RAD 6567.5 VEL 11.631 PTH 2.04 VHP 5.188 OPA 62.29 RAP 347.07 ECC 1.2286  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 9 51 55 879.86 19.93 323.48 244.59 110.54 10 6 35 279.9 22.55 315.79  
 90.00 10 35 41 737.89 23.04 314.24 245.73 106.93 10 47 59 137.9 25.15 306.20  
 100.00 10 11 1 818.00 15.44 316.93 242.57 115.92 10 24 39 218.0 18.80 309.74  
 100.00 12 59 15 5563.01 27.78 259.41 247.06 101.50 14 31 58 4963.0 29.09 250.85  
 110.00 10 12 26 813.56 10.03 313.47 239.45 122.85 10 26 0 213.6 14.29 306.95  
 110.00 15 14 20 5140.22 33.93 228.32 248.06 94.39 16 40 0 4540.2 34.17 219.08

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3397 TRA -.2091 TC3 -.4574 BAU .5374 SGT 722.5 SGR 2647.9 SG3 371.6 ST 533.6 SR 1450.4 SS 1195.8  
 RDE .9342 RRA -.3681 RC3 2.8573 FAU .06850 RRT -.6492 RRF -.9948 RTF .6552 CRT -.9425 CRS 1.0000 CST -.9429  
 FDE-1.7190 FRA .6746 FC3-4.2689 BSP 8527 SGB 2744.7 R23 .0246 R13 -.9946 LSA 1946.4 MSA 172.0 SSA 7.6  
 BDE .9941 BRA .4234 BC3 2.8937 FSP -1179 SG1 2690.9 SG2 540.8 THA 100.47 EL1 1536.2 EL2 168.3 ALF 109.37

LAUNCH DATE JAN 30 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 352.272

RL 147.37 LAL -.00 LOL 129.93 VL 27.735 GAL -2.80 AZL 95.49 HCA 159.97 SMA 128.61 ECC .15362 INC 5.4947 V1 30.232  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.491 GAP -.57 AZP 84.84 TAL 195.74 TAP 355.71 RCA 108.86 APO 148.37 V2 34.799  
 RC 90.065 GL -40.61 GP 65.54 ZAL 112.88 ZAP 85.40 ETS 355.09 ZAE 114.66 ETE 92.89 ZAC 90.64 ETC 147.11 CLP -78.83

PLANETOCENTRIC CONIC

C3 16.605 VHL 4.075 DLA -33.32 RAL 26.23 RAD 6567.7 VEL 11.747 PTH 2.07 VHP 5.726 DPA 63.90 RAP 337.37 ECC 1.2733  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.65 8 9 37 1294.17 24.11 356.11 253.31 113.73 8 31 11 694.2 27.11 348.30  
 108.35 12 48 43 5691.66 24.13 267.78 253.32 113.72 14 23 35 5091.7 27.12 259.97  
 71.65 8 9 37 1294.17 24.11 356.11 253.31 113.73 8 31 11 694.2 27.11 348.30  
 108.35 12 48 43 5691.66 24.13 267.78 253.32 113.72 14 23 35 5091.7 27.12 259.97  
 110.00 12 0 50 5838.54 19.27 276.59 250.74 118.80 13 38 9 5238.5 22.96 269.40  
 110.00 13 56 40 5483.32 29.16 253.80 255.50 108.68 15 28 3 4883.3 31.43 245.33

DIFFERENTIAL CORRECTIONS

TOE -.5394 TRA -.1296 TC3 -.6402 BAU .5667  
 ROE 1.2290 RRA -.5261 RC3 2.4714 FAU .05609  
 FDE -1.7567 FRA .7353 FC3 -2.9245 BSP 9231  
 BDE 1.3422 BRA .5419 BC3 2.5529 FSP -1005

MID-COURSE EXECUTION ACCURACY

SGT 946.0 SGR 2797.7 SG3 315.2  
 RRT -.8193 RRF -.9958 RTF .8248  
 SGB 2953.3 R23 .0356 R13 -.9952  
 SG1 2906.8 SG2 522.1 TMA 106.02

ORBIT DETERMINATION ACCURACY

ST 761.4 SR 1749.5 SS 1236.2  
 CRT -.9716 CRS 1.0000 CST -.9725  
 LSA 2267.1 MSA 169.4 SSA 5.8  
 EL1 1900.8 EL2 165.8 ALF 113.11

LAUNCH DATE JAN 30 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 358.529

RL 147.37 LAL -.00 LOL 129.93 VL 27.736 GAL -2.74 AZL 97.01 HCA 163.10 SMA 128.62 ECC .15326 INC 7.0067 V1 30.232  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.487 GAP -.20 AZP 83.29 TAL 195.43 TAP 358.53 RCA 108.91 APO 148.33 V2 34.795  
 RC 92.449 GL -47.05 GP 70.33 ZAL 109.69 ZAP 88.23 ETS 1.05 ZAE 109.69 ETE 98.43 ZAC 86.94 ETC 150.45 CLP -84.75

PLANETOCENTRIC CONIC

C3 21.318 VHL 4.617 DLA -38.54 RAL 31.00 RAD 6567.9 VEL 11.946 PTH 2.13 VHP 6.520 DPA 65.15 RAP 326.35 ECC 1.3508  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.68 7 38 53 1501.66 25.67 13.52 263.88 119.80 8 3 54 901.7 29.43 5.97  
 117.32 13 57 31 5601.69 25.68 261.48 263.89 119.79 15 30 53 5001.7 29.44 253.93  
 62.68 7 38 53 1501.66 25.67 13.52 263.88 119.80 8 3 54 901.7 29.43 5.97  
 117.32 13 57 31 5601.69 25.68 261.48 263.89 119.79 15 30 53 5001.7 29.44 253.93  
 62.68 7 38 53 1501.66 25.67 13.52 263.88 119.80 8 3 54 901.7 29.43 5.97  
 117.32 13 57 31 5601.69 25.68 261.48 263.89 119.79 15 30 53 5001.7 29.44 253.93

DIFFERENTIAL CORRECTIONS

TOE -.8454 TRA .0092 TC3 -.7088 BAU .5853  
 ROE 1.5848 RRA -.7405 RC3 1.9275 FAU .04310  
 FDE -1.7288 FRA .7791 FC3 -1.7502 BSP 9870  
 BDE 1.7962 BRA .7405 BC3 2.0536 FSP -814

MID-COURSE EXECUTION ACCURACY

SGT 1236.6 SGR 2901.0 SG3 255.5  
 RRT -.9046 RRF -.9965 RTF .9098  
 SGB 3153.6 R23 .0428 R13 -.9958  
 SG1 3115.2 SG2 490.8 TMA 111.65

ORBIT DETERMINATION ACCURACY

ST 1049.3 SR 1998.7 SS 1226.8  
 CRT -.9850 CRS 1.0000 CST -.9861  
 LSA 2564.0 MSA 164.0 SSA 4.4  
 EL1 2251.7 EL2 160.6 ALF 117.50

LAUNCH DATE JAN 30 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 364.746

RL 147.37 LAL -.00 LOL 129.93 VL 27.733 GAL -2.67 AZL 99.18 HCA 166.21 SMA 128.60 ECC .15304 INC 9.1789 V1 30.232  
 RP 108.92 LAP -2.18 LOP 296.31 VP 37.482 GAP .16 AZP 81.08 TAL 195.03 TAP 1.24 RCA 108.92 APO 148.28 V2 34.791  
 RC 94.840 GL -53.59 GP 75.50 ZAL 106.07 ZAP 90.35 ETS 8.48 ZAE 104.22 ETE 104.90 ZAC 83.22 ETC 155.24 CLP -91.39

PLANETOCENTRIC CONIC

C3 30.152 VHL 5.491 DLA -43.53 RAL 36.83 RAD 6568.2 VEL 12.310 PTH 2.22 VHP 7.733 DPA 65.89 RAP 313.72 ECC 1.4962  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.44 7 30 12 1675.84 25.23 28.17 277.08 126.73 7 58 8 1075.8 29.82 21.20  
 124.56 14 52 40 5598.36 25.24 260.87 277.09 126.72 16 25 58 4998.4 29.84 253.90  
 55.44 7 30 12 1675.84 25.23 28.17 277.08 126.73 7 58 8 1075.8 29.82 21.20  
 124.56 14 52 40 5598.36 25.24 260.87 277.09 126.72 16 25 58 4998.4 29.84 253.90  
 55.44 7 30 12 1675.84 25.23 28.17 277.08 126.73 7 58 8 1075.8 29.82 21.20  
 124.56 14 52 40 5598.36 25.24 260.87 277.09 126.72 16 25 58 4998.4 29.84 253.90

DIFFERENTIAL CORRECTIONS

TOE -1.3297 TRA .2656 TC3 -.6517 BAU .5846  
 ROE 2.0071 RRA -1.0271 RC3 1.2955 FAU .03048  
 FDE -1.6423 FRA .8032 FC3 -.8753 BSP 10539  
 BDE 2.4076 BRA 1.0609 BC3 1.4501 FSP -631

MID-COURSE EXECUTION ACCURACY

SGT 1607.3 SGR 2931.7 SG3 197.0  
 RRT -.9526 RRF -.9973 RTF .9572  
 SGB 3343.4 R23 .0456 R13 -.9965  
 SG1 3315.3 SG2 432.2 TMA 118.10

ORBIT DETERMINATION ACCURACY

ST 1392.3 SR 2141.1 SS 1168.3  
 CRT -.9920 CRS 1.0000 CST -.9931  
 LSA 2804.5 MSA 150.3 SSA 3.3  
 EL1 2549.7 EL2 147.2 ALF 122.95

LAUNCH DATE JAN 30 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 370.911

RL 147.37 LAL -.00 LOL 129.93 VL 27.727 GAL -2.58 AZL 102.58 HCA 169.29 SMA 128.56 ECC .15292 INC 12.5770 V1 30.232  
 RP 108.93 LAP -2.32 LOP 299.47 VP 37.475 GAP .50 AZP 77.64 TAL 194.52 TAP 3.81 RCA 108.90 APO 148.22 V2 34.788  
 RC 97.236 GL -59.72 GP 81.34 ZAL 102.21 ZAP 91.67 ETS 19.92 ZAE 98.00 ETE 114.96 ZAC 79.29 ETC 164.17 CLP -101.13

PLANETOCENTRIC CONIC

C3 48.779 VHL 6.984 DLA -47.72 RAL 43.66 RAD 6568.8 VEL 13.044 PTH 2.38 VHP 9.711 DPA 65.77 RAP 299.09 ECC 1.8028  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.83 7 36 36 1850.74 21.70 41.18 292.43 133.61 8 7 27 1250.7 27.09 35.10  
 130.17 15 40 45 5665.83 21.71 263.89 292.45 133.61 17 15 10 5065.8 27.10 257.81  
 49.83 7 36 36 1850.74 21.70 41.18 292.43 133.61 8 7 27 1250.7 27.09 35.10  
 130.17 15 40 45 5665.83 21.71 263.89 292.45 133.61 17 15 10 5065.8 27.10 257.81  
 49.83 7 36 36 1850.74 21.70 41.18 292.43 133.61 8 7 27 1250.7 27.09 35.10  
 130.17 15 40 45 5665.83 21.71 263.89 292.45 133.61 17 15 10 5065.8 27.10 257.81

DIFFERENTIAL CORRECTIONS

TOE -2.1877 TRA .8219 TC3 -.4908 BAU .5371  
 ROE 2.4231 RRA -1.3800 RC3 .6614 FAU .01868  
 FDE -1.5142 FRA .8245 FC3 -.3316 BSP 11067  
 BDE 3.2646 BRA 1.6062 BC3 .8237 FSP -460

MID-COURSE EXECUTION ACCURACY

SGT 2167.0 SGR 2763.5 SG3 143.8  
 RRT -.9832 RRF -.9981 RTF .9859  
 SGB 3511.8 R23 .0442 R13 -.9974  
 SG1 3497.9 SG2 312.6 TMA 127.99

ORBIT DETERMINATION ACCURACY

ST 1819.9 SR 2051.1 SS 1072.6  
 CRT -.9966 CRS .9999 CST -.9974  
 LSA 2942.1 MSA 115.5 SSA 2.3  
 EL1 2739.8 EL2 112.6 ALF 131.57

LAUNCH DATE JAN 30 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

RL 147.37 LAL -.00 LOL 129.93 VL 27.719 GAL -2.46 AZL 108.63 HCA 172.30 SMA 128.50 ECC .15287 INC18.6313 V1 30.232  
 RP 108.94 LAP -2.45 LOP 302.63 VP 37.466 GAP .82 AZP 71.53 TAL 193.86 TAP 6.16 RCA 108.86 APO 148.14 V2 34.786  
 RC 99.636 GL -64.42 GP 87.64 ZAL 98.33 ZAP 92.14 ETS 54.02 ZAE 90.37 ETE 147.45 ZAC 74.68 ETC 196.20 CLP -155.28

DISTANCE 376.984

PLANETOCENTRIC CONIC

C3 96.212 VHL 9.809 DLA -50.16 RAL 50.80 RAD 6569.9 VEL 14.750 PTH 2.67 VHP 13.328 DPA 63.97 RAP 282.12 ECC 2.5834  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.69 7 54 40 2036.32 14.53 51.75 308.30 138.56 8 28 37 1436.3 20.45 46.53  
 133.31 16 19 40 5800.96 14.54 269.44 308.32 138.56 17 56 21 5201.0 20.46 264.22  
 46.69 7 54 40 2036.32 14.53 51.75 308.30 138.56 8 28 37 1436.3 20.45 46.53  
 133.31 16 19 40 5800.96 14.54 269.44 308.32 138.56 17 56 21 5201.0 20.46 264.22  
 46.69 7 54 40 2036.32 14.53 51.75 308.30 138.56 8 28 37 1436.3 20.45 46.53  
 133.31 16 19 40 5800.96 14.54 269.44 308.32 138.56 17 56 21 5201.0 20.46 264.22

DIFFERENTIAL CORRECTIONS

TOE-4.3289 TRA 2.4567 TC3 -.2601 BAU .3630  
 RDE 1.5653 RRA -.9517 RC3 .1095 FAU .00760  
 FDE-1.4110 FRA .8854 FC3 -.0684 BSP 11445  
 BOE 4.6032 BRA 2.6346 BC3 .2822 FSP -320

MID-COURSE EXECUTION ACCURACY

SGT 3416.5 SGR 1278.8 SG3 100.4  
 RRT -.9992 RRF -.9985 RTF .9982  
 SGB 3647.9 R23 .0220 R13 -.9983  
 SG1 3647.6 SG2 46.4 THA 159.49

ORBIT DETERMINATION ACCURACY

ST 2616.5 SR 950.7 SS 989.3  
 CRT -.9998 CRS 1.0000 CST -.9997  
 LSA 2954.3 MSA 27.3 SSA 1.4  
 EL1 2783.8 EL2 15.8 ALF 160.03

LAUNCH DATE JAN 30 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

RL 147.37 LAL -.00 LOL 129.93 VL 27.707 GAL -2.30 AZL 121.97 HCA 175.13 SMA 128.42 ECC .15278 INC31.9709 V1 30.232  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.456 GAP 1.06 AZP 58.12 TAL 192.92 TAP 8.04 RCA 108.80 APO 148.04 V2 34.784  
 RC 102.038 GL -64.86 GP 79.66 ZAL 94.75 ZAP 91.81 ETS 51.19 ZAE 79.12 ETE 242.98 ZAC 67.91 ETC 292.79 CLP 100.13

DISTANCE 382.833

PLANETOCENTRIC CONIC

C3 262.183 VHL 16.192 DLA -48.54 RAL 55.75 RAD 6571.5 VEL 19.583 PTH 3.11 VHP 21.335 DPA 58.12 RAP 262.61 ECC 5.3149  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.77 8 21 13 2195.20 5.34 57.12 321.00 138.32 8 57 48 1595.2 11.28 52.13  
 131.23 16 32 36 704.47 5.36 300.19 321.01 138.32 16 44 20 104.5 11.30 295.19  
 48.77 8 21 13 2195.20 5.34 57.12 321.00 138.32 8 57 48 1595.2 11.28 52.13  
 131.23 16 32 36 704.47 5.36 300.19 321.01 138.32 16 44 20 104.5 11.30 295.19  
 48.77 8 21 13 2195.20 5.34 57.12 321.00 138.32 8 57 48 1595.2 11.28 52.13  
 131.23 16 32 36 704.47 5.36 300.19 321.01 138.32 16 44 20 104.5 11.30 295.19

DIFFERENTIAL CORRECTIONS

TOE .7257 TRA 1.7845 TC3 -.0092 BAU .3205  
 RDE -7.1770 RRA 4.6344 RC3 .0910 FAU .00700  
 FDE -1.5203 FRA 1.1428 FC3 .0231 BSP 11777  
 BOE 7.2136 BRA 4.9661 BC3 .0914 FSP -230

MID-COURSE EXECUTION ACCURACY

SGT 988.2 SGR 3559.7 SG3 70.6  
 RRT .4837 RRF .9971 RTF .5474  
 SGB 3694.3 R23 -.0405 R13 .9991  
 SG1 3593.6 SG2 856.7 THA 81.89

ORBIT DETERMINATION ACCURACY

ST 384.5 SR 2646.1 SS 1047.6  
 CRT -.4321 CRS -.9990 CST .3923  
 LSA 2850.4 MSA 349.7 SSA .7  
 EL1 2651.4 EL2 346.0 ALF 93.65

LAUNCH DATE JAN 30 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

RL 147.37 LAL -.00 LOL 129.93 VL 27.694 GAL -1.95 AZL 160.13 HCA 177.13 SMA 128.33 ECC .15215 INC70.1289 V1 30.232  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.445 GAP 1.07 AZP 19.89 TAL 190.97 TAP 8.10 RCA 108.80 APO 147.85 V2 34.783  
 RC 104.441 GL -51.30 GP 56.79 ZAL 92.01 ZAP 90.93 ETS 173.28 ZAE 56.01 ETE 263.64 ZAC 54.34 ETC 321.74 CLP 91.69

DISTANCE 387.779

PLANETOCENTRIC CONIC

C31112.537 VHL 33.355 DLA -34.56 RAL 52.51 RAD 6573.0 VEL 35.126 PTH 3.52 VHP 42.597 DPA 39.56 RAP 241.61 ECC19.3095  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.31 9 40 11 2054.28 -.42 40.02 323.10 124.56 10 14 26 1454.3 4.11 33.84  
 110.69 14 47 45 1076.78 -.41 327.02 323.11 124.56 15 5 42 476.8 4.12 320.83  
 69.31 9 40 11 2054.28 -.42 40.02 323.10 124.56 10 14 26 1454.3 4.11 33.84  
 110.69 14 47 45 1076.78 -.41 327.02 323.11 124.56 15 5 42 476.8 4.12 320.83  
 69.31 9 40 11 2054.28 -.42 40.02 323.10 124.56 10 14 26 1454.3 4.11 33.84  
 110.69 14 47 45 1076.78 -.41 327.02 323.11 124.56 15 5 42 476.8 4.12 320.83

DIFFERENTIAL CORRECTIONS

TOE 5.2678 TRA -.5715 TC3 -.0776 BAU 3.3993  
 RD-10.2015 RRA10.3311 RC3 .2150 FAU-.05728  
 FDE-2.1338 FRA 2.2010 FC3 .0446 BSP 10158  
 BOE11.4813 BRA10.3469 BC3 .2285 FSP -182

MID-COURSE EXECUTION ACCURACY

SGT 1049.4 SGR 3125.8 SG3 56.9  
 RRT -.7881 RRF -.9999 RTF -.7821  
 SGB 3297.3 R23 -.0627 R13 .9980  
 SG1 3237.8 SG2 623.6 THA 105.41

ORBIT DETERMINATION ACCURACY

ST 905.7 SR 1868.3 SS 1441.5  
 CRT -.9511 CRS -1.0000 CST .9493  
 LSA 2513.8 MSA 264.4 SSA .5  
 EL1 2060.8 EL2 253.6 ALF 115.16

LAUNCH DATE JAN 30 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

RL 147.37 LAL -.00 LOL 129.93 VL 27.678 GAL -2.53 AZL 37.91 HCA 183.56 SMA 128.22 ECC .15561 INC52.0893 V1 30.232  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.434 GAP 2.33 AZP 142.04 TAL 193.95 TAP 17.51 RCA 108.27 APO 148.17 V2 34.783  
 RC 106.844 GL 58.59 GP -69.19 ZAL 93.26 ZAP 92.85 ETS 179.56 ZAE 70.36 ETE 91.04 ZAC 87.03 ETC 48.02 CLP 98.05

DISTANCE 397.470

PLANETOCENTRIC CONIC

C3 653.375 VHL 25.561 DLA 63.89 RAL 350.26 RAD 6572.6 VEL 27.833 PTH 3.41 VHP 30.708 DPA -72.00 RAP 155.35 ECC11.7529  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.99 15 5 49 5035.02 -1.06 242.59 259.75 26.11 16 29 44 4435.0 -8.24 239.46  
 150.01 1 5 33 3327.90 -1.06 100.34 259.73 26.11 2 1 1 2727.9 -8.23 97.21  
 29.99 15 5 49 5035.02 -1.06 242.59 259.75 26.11 16 29 44 4435.0 -8.24 239.46  
 150.01 1 5 33 3327.90 -1.06 100.34 259.73 26.11 2 1 1 2727.9 -8.23 97.21  
 29.99 15 5 49 5035.02 -1.06 242.59 259.75 26.11 16 29 44 4435.0 -8.24 239.46  
 150.01 1 5 33 3327.90 -1.06 100.34 259.73 26.11 2 1 1 2727.9 -8.23 97.21

DIFFERENTIAL CORRECTIONS

TOE-2.4172 TRA 2.0357 TC3 -.0899 BAU 1.9875  
 RD-13.5364 RRA 2.8962 RC3 -.2090 FAU-.03044  
 FDE 2.7457 FRA -.6076 FC3 .0403 BSP 11583  
 BOE13.7505 BRA 3.5400 BC3 .2275 FSP -201

MID-COURSE EXECUTION ACCURACY

SGT 1257.0 SGR 3539.1 SG3 62.1  
 RRT .8238 RRF -.9998 RTF -.8288  
 SGB 3755.7 R23 -.0470 R13 -.9987  
 SG1 3693.1 SG2 682.8 THA 73.10

ORBIT DETERMINATION ACCURACY

ST 624.9 SR 3066.5 SS 1651.5  
 CRT .9300 CRS 1.0000 CST .9317  
 LSA 3531.3 MSA 226.1 SSA 1.1  
 EL1 3121.4 EL2 225.7 ALF 79.21

LAUNCH DATE JAN 30 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 402.948

RL 147.37 LAL -.00 LOL 129.93 VL 27.660 GAL -2.27 AZL 61.43 HCA 186.09 SMA 128.10 ECC .15548 INC28.5700 V1 30.232
RP 108.94 LAP -2.91 LOP 315.28 VP 37.421 GAP 2.47 AZP 118.43 TAL 192.50 TAP 18.59 RCA 108.18 APO 148.01 V2 34.784
RC 109.246 GL 65.21 GP -82.75 ZAL 95.23 ZAP 95.54 ETS 201.98 ZAE 86.55 ETE 113.98 ZAC 97.07 ETC 71.91 CLP 139.82

PLANETOCENTRIC CONIC

C3 211.966 VHL 14.559 DLA 65.45 RAL 333.67 RAD 6571.2 VEL 18.256 PTH 3.03 VHP 16.922 DPA -72.79 RAP 98.91 ECC 4.4884
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
28.16 13 55 22 4924.30 -8.34 240.80 239.84 24.83 15 17 27 4324.3 -15.58 237.74
151.84 0 3 35 3203.82 -8.33 96.48 239.82 24.83 0 56 59 2603.8 -15.58 93.42
28.16 13 55 22 4924.30 -8.34 240.80 239.84 24.83 15 17 27 4324.3 -15.58 237.74
151.84 0 3 35 3203.82 -8.33 96.48 239.82 24.83 0 56 59 2603.8 -15.58 93.42
28.16 13 55 22 4924.30 -8.34 240.80 239.84 24.83 15 17 27 4324.3 -15.58 237.74
151.84 0 3 35 3203.82 -8.33 96.48 239.82 24.83 0 56 59 2603.8 -15.58 93.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5384 TRA .4068 TC3 -.0150 BAU .1631
ROE -6.5084 RRA 3.1322 RC3 -.0556 FAU .00004
FDE 1.8005 FRA -.7279 FC3 -.0002 BSP 12935
BOE 6.9859 BRA 3.1585 BC3 .0575 FSP -282

SGT 1071.6 SGR 3923.1 SG3 85.4
RRT -.3350 RRF -.9954 RTF .4173
SG8 4066.8 R23 -.0641 R13 -.9973
SG1 3940.6 SG2 1005.2 TMA 95.59

ST 1005.6 SR 2711.6 SS 1079.2
CRT -.9006 CRS .9987 CST -.9213
LSA 3059.0 MSA 414.1 SSA 1.5
EL1 2862.3 EL2 414.1 ALF 108.88

LAUNCH DATE JAN 30 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 408.840

RL 147.37 LAL -.00 LOL 129.93 VL 27.640 GAL -2.09 AZL 70.51 HCA 189.02 SMA 127.96 ECC .15590 INC19.4866 V1 30.232
RP 108.94 LAP -3.00 LOP 318.45 VP 37.408 GAP 2.72 AZP 109.26 TAL 191.45 TAP 20.47 RCA 108.01 APO 147.91 V2 34.785
RC 111.645 GL 64.62 GP -80.08 ZAL 96.98 ZAP 99.03 ETS 209.75 ZAE 95.69 ETE 204.75 ZAC 101.87 ETC 163.28 CLP-155.69

PLANETOCENTRIC CONIC

C3 104.010 VHL 10.199 DLA 63.74 RAL 332.71 RAD 6570.0 VEL 15.012 PTH 2.70 VHP 11.515 DPA -67.86 RAP 73.41 ECC 2.7117
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
30.17 13 56 12 4788.15 -16.04 235.88 234.56 27.41 15 16 0 4188.2 -23.10 232.31
149.83 23 51 9 3082.43 -16.03 93.85 234.54 27.41 24 42 31 2482.4 -23.09 90.27
30.17 13 56 12 4788.15 -16.04 235.88 234.56 27.41 15 16 0 4188.2 -23.10 232.31
149.83 23 51 9 3082.43 -16.03 93.85 234.54 27.41 24 42 31 2482.4 -23.09 90.27
30.17 13 56 12 4788.15 -16.04 235.88 234.56 27.41 15 16 0 4188.2 -23.10 232.31
149.83 23 51 9 3082.43 -16.03 93.85 234.54 27.41 24 42 31 2482.4 -23.09 90.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.6949 TRA -2.5298 TC3 -.2552 BAU .3600
ROE .6947 RRA -.1549 RC3 -.0435 FAU .01508
FDE 1.7313 FRA -.7970 FC3 -.1255 BSP 14260
BOE 4.7460 BRA 2.5346 BC3 .2589 FSP -439

SGT 4189.0 SGR 446.0 SG3 123.3
RRT .9140 RRF .9451 RTF .9955
SG8 4212.7 R23 .0828 R13 .9958
SG1 4208.9 SG2 180.1 TMA 5.57

ST 2808.2 SR 394.7 SS 1013.8
CRT .9800 CRS -.9884 CST -.9989
LSA 3010.3 MSA 88.4 SSA 1.4
EL1 2834.8 EL2 77.8 ALF 7.85

LAUNCH DATE JAN 30 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 414.847

RL 147.37 LAL -.00 LOL 129.93 VL 27.619 GAL -1.92 AZL 75.10 HCA 192.07 SMA 127.82 ECC .15653 INC14.8957 V1 30.232
RP 108.93 LAP -3.08 LOP 321.61 VP 37.394 GAP 3.00 AZP 104.58 TAL 190.46 TAP 22.53 RCA 107.81 APO 147.82 V2 34.787
RC 114.042 GL 62.21 GP -73.33 ZAL 98.29 ZAP 103.03 ETS 312.83 ZAE 102.40 ETE 224.15 ZAC 104.90 ETC 183.52 CLP-141.78

PLANETOCENTRIC CONIC

C3 64.330 VHL 8.021 DLA 61.75 RAL 336.02 RAD 6569.2 VEL 13.627 PTH 2.49 VHP 8.873 DPA -62.55 RAP 59.88 ECC 2.0587
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.53 14 15 5 4669.60 -22.17 230.47 233.39 30.74 15 32 55 4069.6 -28.98 226.22
147.47 0 2 40 2982.96 -22.16 91.18 233.37 30.74 0 52 23 2383.0 -28.97 86.94
32.53 14 15 5 4669.60 -22.17 230.47 233.39 30.74 15 32 55 4069.6 -28.98 226.22
147.47 0 2 40 2982.96 -22.16 91.18 233.37 30.74 0 52 23 2383.0 -28.97 86.94
32.53 14 15 5 4669.60 -22.17 230.47 233.39 30.74 15 32 55 4069.6 -28.98 226.22
147.47 0 2 40 2982.96 -22.16 91.18 233.37 30.74 0 52 23 2383.0 -28.97 86.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.4764 TRA -1.9036 TC3 -.5440 BAU .5167
ROE 1.7998 RRA -.6843 RC3 -.2548 FAU .02591
FOE 1.9458 FRA -.8120 FC3 -.3487 BSP 13057
BOE 3.9147 BRA 2.0228 BC3 .6008 FSP -535

SGT 3896.3 SGR 1698.9 SG3 167.2
RRT .9844 RRF .9978 RTF .9892
SG8 4250.6 R23 .1087 R13 .9926
SG1 4241.7 SG2 275.0 TMA 23.33

ST 2628.8 SR 1322.6 SS 1102.3
CRT .9952 CRS -.9998 CST -.9972
LSA 3139.8 MSA 128.8 SSA 2.1
EL1 2940.5 EL2 115.2 ALF 26.64

LAUNCH DATE JAN 30 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 420.878

RL 147.37 LAL -.00 LOL 129.93 VL 27.596 GAL -1.75 AZL 77.85 HCA 195.17 SMA 127.66 ECC .15732 INC12.1454 V1 30.232
RP 108.93 LAP -3.16 LOP 324.78 VP 37.379 GAP 3.28 AZP 101.73 TAL 189.47 TAP 24.64 RCA 107.58 APO 147.74 V2 34.790
RC 116.435 GL 59.35 GP -66.81 ZAL 99.17 ZAP 107.31 ETS 316.60 ZAE 107.85 ETE 226.56 ZAC 107.12 ETC 187.07 CLP-139.08

PLANETOCENTRIC CONIC

C3 45.500 VHL 6.745 DLA 59.81 RAL 340.33 RAD 6568.7 VEL 12.918 PTH 2.35 VHP 7.387 DPA -57.27 RAP 51.27 ECC 1.7488
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
34.84 14 38 1 4573.81 -26.59 225.14 233.41 34.22 15 54 15 3973.8 -33.10 220.20
145.16 0 14 5 2907.88 -26.57 88.66 233.39 34.22 1 2 33 2307.9 -33.09 83.72
34.84 14 38 1 4573.81 -26.59 225.14 233.41 34.22 15 54 15 3973.8 -33.10 220.20
145.16 0 14 5 2907.88 -26.57 88.66 233.39 34.22 1 2 33 2307.9 -33.09 83.72
34.84 14 38 1 4573.81 -26.59 225.14 233.41 34.22 15 54 15 3973.8 -33.10 220.20
145.16 0 14 5 2907.88 -26.57 88.66 233.39 34.22 1 2 33 2307.9 -33.09 83.72

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.9724 TRA -1.6051 TC3 -.9085 BAU .6170
ROE 1.6910 RRA -.6010 RC3 -.4512 FAU .03772
FDE 2.1647 FRA -.8296 FC3 -.7177 BSP 13496
BOE 3.4198 BRA 1.7139 BC3 1.0144 FSP -714

SGT 3902.1 SGR 1861.2 SG3 216.5
RRT .9810 RRF .9974 RTF .9844
SG8 4323.2 R23 .1281 R13 .9896
SG1 4310.8 SG2 327.0 TMA 25.23

ST 2652.8 SR 1468.4 SS 1203.9
CRT .9947 CRS -.9999 CST -.9962
LSA 3259.0 MSA 149.4 SSA 2.7
EL1 3029.3 EL2 131.9 ALF 28.90



LAUNCH DATE JAN 30 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 426.918

RL 147.37 LAL -.00 LOL 129.93 VL 27.572 GAL -1.58 AZL 79.69 MCA 198.29 SMA 127.50 ECC .15824 INC10.3121 V1 30.232  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.365 GAP 3.57 AZP 99.80 TAL 188.46 TAP 26.75 RCA 107.32 APO 147.67 V2 34.794  
 RC 118.823 GL 56.47 GP -60.78 ZAL 99.64 ZAP 111.69 ETS 317.60 ZAE 112.39 ETE 225.56 ZAC 108.89 ETC 187.52 CLP-139.22

PLANETOCENTRIC CONIC

C3 35.030 VML 5.919 DLA 58.01 RAL 344.74 RAD 6568.4 VEL 12.506 PTH 2.26 VHP 6.483 DPA -52.13 RAP 45.35 ECC 1.5765  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.00 15 1 10 4497.25 -29.65 220.17 233.93 37.56 16 16 8 3897.2 -35.85 214.58  
 143.00 0 26 7 2852.47 -29.63 86.39 233.91 37.55 1 13 40 2252.5 -35.84 80.80  
 37.00 15 1 10 4497.25 -29.65 220.17 233.93 37.56 16 16 8 3897.2 -35.85 214.58  
 143.00 0 26 7 2852.47 -29.63 86.39 233.91 37.55 1 13 40 2252.5 -35.84 80.80  
 37.00 15 1 10 4497.25 -29.65 220.17 233.93 37.56 16 16 8 3897.2 -35.85 214.58  
 143.00 0 26 7 2852.47 -29.63 86.39 233.91 37.55 1 13 40 2252.5 -35.84 80.80

DIFFERENTIAL CORRECTIONS

TDE 2.7316 TRA-1.4034 TC3-1.3124 BAU .6765  
 RDE 1.4773 RRA -.4691 RC3 -.6033 FAU .04844  
 FDE 2.3493 FRA -.8020 FC3-1.1972 BSP 13764  
 BDE 3.1055 BRA 1.4797 BC3 1.4444 FSP -883

MID-COURSE EXECUTION ACCURACY

SGT 3997.8 SGR 1813.8 SG3 263.9  
 RRT .9777 RRF .9965 RTF .9806  
 SGB 4390.0 R23 .1449 R13 .9864  
 SG1 4376.2 SG2 348.3 TMA 24.08

ORBIT DETERMINATION ACCURACY

ST 2754.4 SR 1453.2 SS 1297.7  
 CRT .9945 CRS -.9999 CST -.9958  
 LSA 3370.1 MSA 158.5 SSA 3.4  
 EL1 3111.3 EL2 135.1 ALF 27.74

LAUNCH DATE JAN 30 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 432.955

RL 147.37 LAL -.00 LOL 129.93 VL 27.546 GAL -1.40 AZL 81.00 MCA 201.42 SMA 127.32 ECC .15927 INC 8.9984 V1 30.232  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.350 GAP 3.86 AZP 98.39 TAL 187.42 TAP 28.84 RCA 107.05 APO 147.60 V2 34.798  
 RC 121.206 GL 53.70 GP -55.26 ZAL 99.73 ZAP 116.02 ETS 317.91 ZAE 116.14 ETE 223.37 ZAC 110.40 ETC 187.04 CLP-140.35

PLANETOCENTRIC CONIC

C3 28.562 VML 5.344 DLA 56.38 RAL 349.03 RAD 6568.1 VEL 12.245 PTH 2.20 VHP 5.912 DPA -47.20 RAP 41.15 ECC 1.4701  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.97 15 23 35 4435.38 -31.74 215.66 234.77 40.61 16 37 30 3835.4 -37.64 209.50  
 141.03 0 37 57 2811.70 -31.72 84.43 234.75 40.61 1 24 49 2211.7 -37.63 78.28  
 38.97 15 23 35 4435.38 -31.74 215.66 234.77 40.61 16 37 30 3835.4 -37.64 209.50  
 141.03 0 37 57 2811.70 -31.72 84.43 234.75 40.61 1 24 49 2211.7 -37.63 78.28  
 38.97 15 23 35 4435.38 -31.74 215.66 234.77 40.61 16 37 30 3835.4 -37.64 209.50  
 141.03 0 37 57 2811.70 -31.72 84.43 234.75 40.61 1 24 49 2211.7 -37.63 78.28

DIFFERENTIAL CORRECTIONS

TDE 2.5929 TRA-1.2420 TC3-1.7412 BAU .7175  
 RDE 1.2754 RRA -.3492 RC3 -.7066 FAU .05747  
 FDE 2.4736 FRA -.7283 FC3-1.7418 BSP 13975  
 BDE 2.8895 BRA 1.2901 BC3 1.8791 FSP -1028

MID-COURSE EXECUTION ACCURACY

SGT 4120.1 SGR 1702.2 SG3 305.3  
 RRT .9743 RRF .9951 RTF .9773  
 SGB 4457.8 R23 .1591 R13 .9829  
 SG1 4443.6 SG2 355.3 TMA 22.07

ORBIT DETERMINATION ACCURACY

ST 2872.4 SR 1382.5 SS 1372.0  
 CRT .9943 CRS -.9999 CST -.9954  
 LSA 3466.6 MSA 163.4 SSA 4.2  
 EL1 3185.0 EL2 132.7 ALF 25.62

LAUNCH DATE JAN 30 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 438.984

RL 147.37 LAL -.00 LOL 129.93 VL 27.519 GAL -1.21 AZL 81.99 MCA 204.56 SMA 127.15 ECC .16042 INC 8.0064 V1 30.232  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.335 GAP 4.14 AZP 97.29 TAL 186.35 TAP 30.91 RCA 106.75 APO 147.54 V2 34.803  
 RC 123.581 GL 51.08 GP -50.25 ZAL 99.47 ZAP 120.20 ETS 318.07 ZAE 119.21 ETE 220.68 ZAC 111.74 ETC 186.26 CLP-141.88

PLANETOCENTRIC CONIC

C3 24.260 VML 4.925 DLA 54.93 RAL 353.18 RAD 6568.0 VEL 12.068 PTH 2.16 VHP 5.547 DPA -42.56 RAP 38.16 ECC 1.3993  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.75 15 45 3 4384.68 -33.15 211.61 235.90 43.34 16 58 8 3784.7 -38.77 204.99  
 139.25 0 49 33 2781.53 -33.14 82.78 235.88 43.33 1 35 55 2181.5 -38.76 76.17  
 40.75 15 45 3 4384.68 -33.15 211.61 235.90 43.34 16 58 8 3784.7 -38.77 204.99  
 139.25 0 49 33 2781.53 -33.14 82.78 235.88 43.33 1 35 55 2181.5 -38.76 76.17  
 40.75 15 45 3 4384.68 -33.15 211.61 235.90 43.34 16 58 8 3784.7 -38.77 204.99  
 139.25 0 49 33 2781.53 -33.14 82.78 235.88 43.33 1 35 55 2181.5 -38.76 76.17

DIFFERENTIAL CORRECTIONS

TDE 2.5010 TRA-1.1018 TC3-2.1848 BAU .7510  
 RDE 1.1002 RRA -.2522 RC3 -.7671 FAU .06458  
 FDE 2.5288 FRA -.6208 FC3-2.3046 BSP 14225  
 BDE 2.7323 BRA 1.1303 BC3 2.3155 FSP -1149

MID-COURSE EXECUTION ACCURACY

SGT 4251.0 SGR 1571.6 SG3 338.9  
 RRT .9713 RRF .9931 RTF .9744  
 SGB 4532.2 R23 .1690 R13 .9795  
 SG1 4518.5 SG2 351.8 TMA 19.88

ORBIT DETERMINATION ACCURACY

ST 2985.9 SR 1289.2 SS 1421.9  
 CRT .9943 CRS -1.0000 CST -.9951  
 LSA 3545.7 MSA 165.3 SSA 5.0  
 EL1 3249.9 EL2 126.5 ALF 23.27

LAUNCH DATE JAN 30 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 445.003

RL 147.37 LAL -.00 LOL 129.93 VL 27.492 GAL -1.01 AZL 82.77 MCA 207.71 SMA 126.96 ECC .16169 INC 7.2269 V1 30.232  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.320 GAP 4.43 AZP 96.41 TAL 185.24 TAP 32.95 RCA 106.43 APO 147.49 V2 34.808  
 RC 125.948 GL 48.61 GP -45.75 ZAL 98.91 ZAP 124.15 ETS 318.24 ZAE 121.67 ETE 217.80 ZAC 113.00 ETC 185.42 CLP-143.57

PLANETOCENTRIC CONIC

C3 21.242 VML 4.609 DLA 53.63 RAL 357.20 RAD 6567.9 VEL 11.942 PTH 2.13 VHP 5.319 DPA -38.23 RAP 36.05 ECC 1.3496  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.34 16 5 41 4342.55 -34.10 208.03 237.31 45.73 17 18 3 3742.6 -39.46 201.04  
 137.66 1 1 2 2759.08 -34.09 81.42 237.30 45.72 1 47 1 2159.1 -39.45 74.42  
 42.34 16 5 41 4342.55 -34.10 208.03 237.31 45.73 17 18 3 3742.6 -39.46 201.04  
 137.66 1 1 2 2759.08 -34.09 81.42 237.30 45.72 1 47 1 2159.1 -39.45 74.42  
 42.34 16 5 41 4342.55 -34.10 208.03 237.31 45.73 17 18 3 3742.6 -39.46 201.04  
 137.66 1 1 2 2759.08 -34.09 81.42 237.30 45.72 1 47 1 2159.1 -39.45 74.42

DIFFERENTIAL CORRECTIONS

TDE 2.4361 TRA -.9705 TC3-2.6317 BAU .7803  
 RDE .9539 RRA -.1747 RC3 -.7902 FAU .06962  
 FDE 2.5242 FRA -.4870 FC3-2.8373 BSP 14503  
 BDE 2.6162 BRA .9861 BC3 2.7478 FSP -1241

MID-COURSE EXECUTION ACCURACY

SGT 4381.4 SGR 1439.1 SG3 363.8  
 RRT .9680 RRF .9902 RTF .9716  
 SGB 4611.7 R23 .1746 R13 .9761  
 SG1 4598.8 SG2 343.9 TMA 17.74

ORBIT DETERMINATION ACCURACY

ST 3090.2 SR 1191.2 SS 1449.5  
 CRT .9943 CRS -1.0000 CST -.9948  
 LSA 3611.3 MSA 166.0 SSA 6.0  
 EL1 3309.7 EL2 118.3 ALF 21.00

LAUNCH DATE JAN 30 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 7 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.463 GAL -.80 AZL 83.40 HCA 210.86 SMA 126.77 ECC .16308 INC 6.5950 V1 30.232  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.304 GAP 4.71 AZP 95.67 TAL 184.10 TAP 34.96 RCA 106.10 APO 147.44 V2 34.815  
 RC 128.306 GL 46.29 GP -41.73 ZAL 98.07 ZAP 127.85 ETS 318.45 ZAE 123.59 ETE 214.90 ZAC 114.23 ETC 184.61 CLP-145.29

Distance 451.010

Planetcocentric Conic  
 C3 19.040 VHL 4.363 DLA 52.48 RAL 1.15 RAD 6567.8 VEL 11.850 PTH 2.10 VHP 5.185 DPA -34.24 RAP 34.62 ECC 1.3133  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.78 16 25 41 4307.04 -34.72 204.87 239.02 47.82 17 37 28 3707.0 -39.85 197.57  
 136.22 1 12 31 2742.44 -34.71 80.31 239.00 47.81 1 58 13 2142.4 -39.84 73.01  
 43.78 16 25 41 4307.04 -34.72 204.87 239.02 47.82 17 37 28 3707.0 -39.85 197.57  
 136.22 1 12 31 2742.44 -34.71 80.31 239.00 47.81 1 58 13 2142.4 -39.84 73.01  
 43.78 16 25 41 4307.04 -34.72 204.87 239.02 47.82 17 37 28 3707.0 -39.85 197.57  
 136.22 1 12 31 2742.44 -34.71 80.31 239.00 47.81 1 58 13 2142.4 -39.84 73.01

Differential Corrections  
 TOE 2.3876 TRA -.8431 TC3-3.0750 BAU .8078 SGT 4509.4 SGR 1314.0 SG3 380.6 ST 3183.3 SR 1097.3 SS 1458.4  
 RDE .8336 RRA -.1137 RC3 -.7841 FAU .07271 RRT .9643 RRF .9862 RTF .9691 CRT .9945 CRS -1.0000 CST -.9945  
 FDE 2.4728 FRA -.3381 FC3-3.3063 BSP 14788 SGB 4696.9 R23 .1755 R13 .9728 LSA 3665.6 MSA 166.1 SSA 6.9  
 BOE 2.5290 BRA .8508 BC3 3.1734 FSP -1301 SGI 4685.0 SG2 334.9 THA 15.78 EL1 3365.3 EL2 109.1 ALF 18.94

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 30 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 9 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.434 GAL -.58 AZL 83.93 HCA 214.01 SMA 126.57 ECC .16459 INC 6.0697 V1 30.232  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.289 GAP 5.00 AZP 95.04 TAL 182.92 TAP 36.94 RCA 105.74 APO 147.41 V2 34.821  
 RC 130.653 GL 44.07 GP -38.15 ZAL 96.97 ZAP 131.26 ETS 318.70 ZAE 125.06 ETE 212.11 ZAC 115.46 ETC 183.88 CLP-147.01

Distance 457.005

Planetcocentric Conic  
 C3 17.389 VHL 4.170 DLA 51.44 RAL 5.06 RAD 6567.7 VEL 11.780 PTH 2.08 VHP 5.118 DPA -30.58 RAP 33.72 ECC 1.2862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.07 16 45 13 4276.89 -35.11 202.08 241.00 49.63 17 56 30 3676.9 -40.03 194.54  
 134.93 1 24 10 2730.19 -35.09 79.42 240.98 49.62 2 9 40 2130.2 -40.02 71.89  
 45.07 16 45 13 4276.89 -35.11 202.08 241.00 49.63 17 56 30 3676.9 -40.03 194.54  
 134.93 1 24 10 2730.19 -35.09 79.42 240.98 49.62 2 9 40 2130.2 -40.02 71.89  
 45.07 16 45 13 4276.89 -35.11 202.08 241.00 49.63 17 56 30 3676.9 -40.03 194.54  
 134.93 1 24 10 2730.19 -35.09 79.42 240.98 49.62 2 9 40 2130.2 -40.02 71.89

Differential Corrections  
 TOE 2.3518 TRA -.7151 TC3-3.5009 BAU .8325 SGT 4631.6 SGR 1199.7 SG3 389.9 ST 3267.0 SR 1012.4 SS 1453.2  
 RDE .7360 RRA -.0660 RC3 -.7539 FAU .07394 RRT .9598 RRF .9806 RTF .9668 CRT .9948 CRS -.9999 CST -.9941  
 FDE 2.3894 FRA -.1827 FC3-3.6815 BSP 15042 SGB 4784.4 R23 .1712 R13 .9699 LSA 3712.5 MSA 165.7 SSA 7.9  
 BOE 2.4643 BRA .7181 BC3 3.5812 FSP -1329 SGI 4773.3 SG2 326.8 THA 14.03 EL1 3418.8 EL2 99.0 ALF 17.15

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 30 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 11 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.403 GAL -.34 AZL 84.38 HCA 217.17 SMA 126.37 ECC .16624 INC 5.6235 V1 30.232  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.274 GAP 5.28 AZP 94.49 TAL 181.72 TAP 38.89 RCA 105.37 APO 147.38 V2 34.829  
 RC 132.989 GL 41.96 GP -34.99 ZAL 95.64 ZAP 134.42 ETS 318.97 ZAE 126.18 ETE 209.49 ZAC 116.73 ETC 183.23 CLP-148.68

Distance 462.986

Planetcocentric Conic  
 C3 16.129 VHL 4.016 DLA 50.51 RAL 8.96 RAD 6567.6 VEL 11.727 PTH 2.07 VHP 5.100 DPA -27.22 RAP 33.25 ECC 1.2654  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.25 17 4 29 4251.00 -35.32 199.61 243.24 51.21 18 15 20 3651.0 -40.06 191.88  
 133.75 1 36 0 2721.52 -35.31 78.74 243.23 51.20 2 21 22 2121.5 -40.05 71.01  
 46.25 17 4 29 4251.00 -35.32 199.61 243.24 51.21 18 15 20 3651.0 -40.06 191.88  
 133.75 1 36 0 2721.52 -35.31 78.74 243.23 51.20 2 21 22 2121.5 -40.05 71.01  
 46.25 17 4 29 4251.00 -35.32 199.61 243.24 51.21 18 15 20 3651.0 -40.06 191.88  
 133.75 1 36 0 2721.52 -35.31 78.74 243.23 51.20 2 21 22 2121.5 -40.05 71.01

Differential Corrections  
 TOE 2.3195 TRA -.5880 TC3-3.9237 BAU .8601 SGT 4756.3 SGR 1100.7 SG3 394.5 ST 3334.1 SR 935.7 SS 1432.9  
 RDE .6556 RRA -.0302 RC3 -.7175 FAU .07436 RRT .9552 RRF .9735 RTF .9651 CRT .9952 CRS -.9998 CST -.9937  
 FDE 2.2784 FRA -.0335 FC3-3.9916 BSP 15380 SGB 4882.0 R23 .1607 R13 .9675 LSA 3744.0 MSA 164.1 SSA 8.9  
 BOE 2.4104 BRA .5887 BC3 3.9888 FSP -1345 SGI 4871.6 SG2 318.1 THA 12.52 EL1 3461.8 EL2 88.0 ALF 15.62

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 30 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 13 1969

Heliocentric Conic  
 RL 147.37 LAL -.00 LOL 129.93 VL 27.373 GAL -.10 AZL 84.76 HCA 220.33 SMA 126.17 ECC .16802 INC 5.2376 V1 30.232  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.259 GAP 5.57 AZP 94.00 TAL 180.49 TAP 40.82 RCA 104.97 APO 147.37 V2 34.837  
 RC 135.313 GL 39.92 GP -32.20 ZAL 94.09 ZAP 137.31 ETS 319.23 ZAE 127.00 ETE 207.08 ZAC 118.05 ETC 182.66 CLP-150.30

Distance 468.953

Planetcocentric Conic  
 C3 15.159 VHL 3.894 DLA 49.65 RAL 12.87 RAD 6567.6 VEL 11.685 PTH 2.06 VHP 5.119 DPA -24.15 RAP 33.13 ECC 1.2495  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.35 17 23 37 4228.68 -35.39 197.40 245.74 52.59 18 34 5 3628.7 -39.98 189.53  
 132.65 1 48 5 2715.84 -35.38 78.24 245.73 52.58 2 33 21 2115.8 -39.97 70.36  
 47.35 17 23 37 4228.68 -35.39 197.40 245.74 52.59 18 34 5 3628.7 -39.98 189.53  
 132.65 1 48 5 2715.84 -35.38 78.24 245.73 52.58 2 33 21 2115.8 -39.97 70.36  
 47.35 17 23 37 4228.68 -35.39 197.40 245.74 52.59 18 34 5 3628.7 -39.98 189.53  
 132.65 1 48 5 2715.84 -35.38 78.24 245.73 52.58 2 33 21 2115.8 -39.97 70.36

Differential Corrections  
 TOE 2.2799 TRA -.4673 TC3-4.3244 BAU .8869 SGT 4870.6 SGR 1008.3 SG3 392.3 ST 3371.6 SR 862.7 SS 1390.0  
 RDE .5861 RRA -.0068 RC3 -.6703 FAU .07361 RRT .9505 RRF .9641 RTF .9648 CRT .9960 CRS -.9996 CST -.9935  
 FDE 2.1341 FRA .0910 FC3-4.2037 BSP 15918 SGB 4973.9 R23 .1395 R13 .9666 LSA 3744.1 MSA 159.0 SSA 10.0  
 BOE 2.3540 BRA .4673 BC3 4.3760 FSP -1372 SGI 4964.4 SG2 307.4 THA 11.17 EL1 3479.4 EL2 75.1 ALF 14.30

Mid-Course Execution Accuracy  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 30 1969 FLIGHT TIME 166.00 ARRIVAL DATE JUL 15 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.341 GAL .16 AZL 85.10 HCA 223.49 SMA 125.97 ECC .16994 INC 4.8988 V1 30.232  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.244 GAP 5.85 AZP 93.56 TAL 179.23 TAP 42.73 RCA 104.56 APO 147.37 V2 34.846  
 RC 137.625 GL 37.95 GP -29.73 ZAL 92.34 ZAP 139.98 ETS 319.46 ZAE 127.60 ETE 204.89 ZAC 119.44 ETC 182.16 CLP-151.87

Distance 474.906

Planetocentric Conic: C3 14.416 VHL 3.797 OLA 48.84 RAL 16.81 RAD 6567.6 VEL 11.653 PTH 2.05 VHP 5.168 DPA -21.32 RAP 33.31 ECC 1.2372  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.39 17 42 46 4209.22 -35.36 195.42 248.48 53.81 18 52 56 3609.2 -39.80 187.43  
 131.61 2 0 23 2712.88 -35.35 77.90 248.47 53.80 2 45 36 2112.9 -39.79 69.92  
 48.39 17 42 46 4209.22 -35.36 195.42 248.48 53.81 18 52 56 3609.2 -39.80 187.43  
 131.61 2 0 23 2712.88 -35.35 77.90 248.47 53.80 2 45 36 2112.9 -39.79 69.92  
 48.39 17 42 46 4209.22 -35.36 195.42 248.48 53.81 18 52 56 3609.2 -39.80 187.43  
 131.61 2 0 23 2712.88 -35.35 77.90 248.47 53.80 2 45 36 2112.9 -39.79 69.92

Differential Corrections: TOE 2.2669 TRA -.3150 TC3-4.6551 BAU .9047 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5386 RRA .0221 RC3 -.6037 FAU .07096 RRT .9393 RRF .9525 RTF .9617 CRT .9966 CRS -.9991 CST -.9927  
 FDE 2.0227 FRA .2570 FC3-4.2616 BSP 15916 SGB 5058.9 R23 .1326 R13 .9632 LSA 3776.3 MSA 161.9 SSA 11.0  
 BDE 2.3300 BRA .3158 BC3 4.6941 FSP -1309 SG1 5049.1 SG2 315.6 THA 10.05 EL1 3523.8 EL2 65.7 ALF 13.30

LAUNCH DATE JAN 30 1969 FLIGHT TIME 168.00 ARRIVAL DATE JUL 17 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.309 GAL .43 AZL 85.40 HCA 226.66 SMA 125.76 ECC .17201 INC 4.5971 V1 30.232  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.229 GAP 6.14 AZP 93.16 TAL 177.95 TAP 44.61 RCA 104.13 APO 147.39 V2 34.855  
 RC 139.923 GL 36.02 GP -27.55 ZAL 90.42 ZAP 142.43 ETS 319.65 ZAE 128.02 ETE 202.92 ZAC 120.88 ETC 181.72 CLP-153.38

Distance 480.844

Planetocentric Conic: C3 13.855 VHL 3.722 OLA 48.06 RAL 20.79 RAD 6567.5 VEL 11.629 PTH 2.04 VHP 5.239 DPA -18.73 RAP 33.73 ECC 1.2280  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.40 18 2 3 4192.15 -35.22 193.62 251.44 54.90 19 11 55 3592.2 -39.53 185.55  
 130.60 2 12 51 2712.45 -35.20 77.74 251.43 54.89 2 58 4 2112.5 -39.52 69.67  
 49.40 18 2 3 4192.15 -35.22 193.62 251.44 54.90 19 11 55 3592.2 -39.53 185.55  
 130.60 2 12 51 2712.45 -35.20 77.74 251.43 54.89 2 58 4 2112.5 -39.52 69.67  
 49.40 18 2 3 4192.15 -35.22 193.62 251.44 54.90 19 11 55 3592.2 -39.53 185.55  
 130.60 2 12 51 2712.45 -35.20 77.74 251.43 54.89 2 58 4 2112.5 -39.52 69.67

Differential Corrections: TOE 2.2376 TRA -.1700 TC3-4.9827 BAU .9285 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4960 RRA .0407 RC3 -.5501 FAU .06879 RRT .9294 RRF .9389 RTF .9603 CRT .9974 CRS -.9983 CST -.9920  
 FDE 1.8847 FRA .3903 FC3-4.2986 BSP 16309 SGB 5151.2 R23 .1161 R13 .9615 LSA 3766.7 MSA 161.2 SSA 12.0  
 BDE 2.2919 BRA .1749 BC3 5.0129 FSP -1293 SG1 5141.4 SG2 317.7 THA 9.10 EL1 3531.3 EL2 54.2 ALF 12.47

LAUNCH DATE JAN 30 1969 FLIGHT TIME 170.00 ARRIVAL DATE JUL 19 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.277 GAL .71 AZL 85.67 HCA 229.83 SMA 125.55 ECC .17424 INC 4.3252 V1 30.232  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.214 GAP 6.44 AZP 92.79 TAL 176.64 TAP 46.47 RCA 103.67 APO 147.42 V2 34.865  
 RC 142.207 GL 34.12 GP -25.61 ZAL 88.33 ZAP 144.69 ETS 319.78 ZAE 128.31 ETE 201.16 ZAC 122.40 ETC 181.33 CLP-154.83

Distance 486.767

Planetocentric Conic: C3 13.448 VHL 3.667 OLA 47.29 RAL 24.80 RAD 6567.5 VEL 11.612 PTH 2.03 VHP 5.329 DPA -16.33 RAP 34.35 ECC 1.2213  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.40 18 21 31 4177.05 -34.98 191.95 254.59 55.87 19 31 8 3577.1 -39.17 183.82  
 129.60 2 25 23 2714.54 -34.97 77.74 254.58 55.86 3 10 38 2114.5 -39.16 69.61  
 50.40 18 21 31 4177.05 -34.98 191.95 254.59 55.87 19 31 8 3577.1 -39.17 183.82  
 129.60 2 25 23 2714.54 -34.97 77.74 254.58 55.86 3 10 38 2114.5 -39.16 69.61  
 50.40 18 21 31 4177.05 -34.98 191.95 254.59 55.87 19 31 8 3577.1 -39.17 183.82  
 129.60 2 25 23 2714.54 -34.97 77.74 254.58 55.86 3 10 38 2114.5 -39.16 69.61

Differential Corrections: TOE 2.2089 TRA -.0182 TC3-5.2637 BAU .9505 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4625 RRA .0556 RC3 -.4956 FAU .06611 RRT .9177 RRF .9231 RTF .9597 CRT .9982 CRS -.9970 CST -.9913  
 FDE 1.7494 FRA .5116 FC3-4.2560 BSP 16588 SGB 5242.8 R23 .0981 R13 .9606 LSA 3746.3 MSA 159.9 SSA 13.1  
 BDE 2.2568 BRA .0585 BC3 5.2870 FSP -1257 SG1 5232.9 SG2 322.0 THA 8.29 EL1 3527.9 EL2 42.2 ALF 11.82

LAUNCH DATE JAN 30 1969 FLIGHT TIME 172.00 ARRIVAL DATE JUL 21 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.244 GAL 1.00 AZL 85.92 HCA 233.00 SMA 125.34 ECC .17663 INC 4.0775 V1 30.232  
 RP 108.66 LAP -3.26 LOP 362.86 VP 37.200 GAP 6.73 AZP 92.46 TAL 175.32 TAP 48.32 RCA 103.20 APO 147.48 V2 34.875  
 RC 144.478 GL 32.25 GP -23.90 ZAL 86.11 ZAP 146.79 ETS 319.85 ZAE 128.51 ETE 199.59 ZAC 123.98 ETC 180.99 CLP-156.22

Distance 492.673

Planetocentric Conic: C3 13.177 VHL 3.630 OLA 46.51 RAL 28.84 RAD 6567.5 VEL 11.600 PTH 2.03 VHP 5.435 DPA -14.10 RAP 35.16 ECC 1.2169  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.42 18 41 15 4163.53 -34.64 190.39 257.91 56.76 19 50 38 3563.5 -38.73 182.22  
 128.58 2 37 53 2719.22 -34.63 77.91 257.91 56.75 3 23 13 2119.2 -38.72 69.75  
 51.42 18 41 15 4163.53 -34.64 190.39 257.91 56.76 19 50 38 3563.5 -38.73 182.22  
 128.58 2 37 53 2719.22 -34.63 77.91 257.91 56.75 3 23 13 2119.2 -38.72 69.75  
 51.42 18 41 15 4163.53 -34.64 190.39 257.91 56.76 19 50 38 3563.5 -38.73 182.22  
 128.58 2 37 53 2719.22 -34.63 77.91 257.91 56.75 3 23 13 2119.2 -38.72 69.75

Differential Corrections: TOE 2.1713 TRA .1379 TC3-5.5002 BAU .9721 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4347 RRA .0672 RC3 -.4435 FAU .06319 RRT .9040 RRF .9049 RTF .9594 CRT .9990 CRS -.9949 CST -.9904  
 FDE 1.6090 FRA .6191 FC3-4.1513 BSP 16949 SGB 5328.1 R23 .0800 R13 .9601 LSA 3698.7 MSA 158.5 SSA 14.1  
 BDE 2.2144 BRA .1534 BC3 5.5180 FSP -1227 SG1 5318.0 SG2 327.8 THA 7.58 EL1 3498.7 EL2 30.2 ALF 11.33

LAUNCH DATE JAN 30 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 23 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.211 GAL 1.31 AZL 86.15 MCA 236.17 SMA 125.12 ECC .17921 INC 3.8495 V1 30.232  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.186 GAP 7.03 AZP 92.15 TAL 173.97 TAP 50.14 RCA 102.70 APO 147.55 V2 34.885  
 RC 146.734 GL 30.40 GP -22.38 ZAL 83.75 ZAP 148.73 ETS 319.82 ZAE 128.63 ETE 198.20 ZAC 125.62 ETC 180.67 CLP-157.57

Distance 498.562

Planetary Conic: C3 13.029 VHL 3.610 OLA 45.72 RAL 32.89 RAD 6567.5 VEL 11.594 PTH 2.03 VHP 5.556 DPA -12.03 RAP 36.13 ECC 1.2144  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.47 19 1 15 4151.29 -34.20 188.90 261.39 57.58 20 10 27 3551.3 -38.20 180.72  
 127.53 2 50 13 2726.60 -34.19 78.26 261.38 57.58 3 35 40 2126.6 -38.19 70.09  
 52.47 19 1 15 4151.29 -34.20 188.90 261.39 57.58 20 10 27 3551.3 -38.20 180.72  
 127.53 2 50 13 2726.60 -34.19 78.26 261.38 57.58 3 35 40 2126.6 -38.19 70.09  
 52.47 19 1 15 4151.29 -34.20 188.90 261.39 57.58 20 10 27 3551.3 -38.20 180.72  
 127.53 2 50 13 2726.60 -34.19 78.26 261.38 57.58 3 35 40 2126.6 -38.19 70.09

Differential Corrections: TOE 2.1295 TRA .3031 TC3-5.6828 BAU .9923 MGR 5360.2 SGR 736.3 SG3 350.4  
 RDE .4131 RRA .0777 RC3 -.3944 FAU .06006 RRT .8883 RRF .8851 RTF .9593 CRT .9995 CRS -.9918 CST -.9894  
 FDE 1.4741 FRA .7193 FC3-3.9909 BSP 17248 SGB 5410.5 R23 .0644 R13 .9598 LSA 3634.6 MSA 157.9 SSA 15.1  
 BDE 2.1692 BRA .3129 BC3 5.6965 FSP -1188 SG1 5400.1 SG2 335.6 THA 6.98 EL1 3452.0 EL2 19.7 ALF 10.98

Orbit Determination Accuracy: ST 3388.8 SR 657.8 SS 1148.3  
 CRT .9995 CRS -.9918 CST -.9894  
 LSA 3634.6 MSA 157.9 SSA 15.1  
 EL1 3452.0 EL2 19.7 ALF 10.98

LAUNCH DATE JAN 30 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 25 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.178 GAL 1.64 AZL 86.36 MCA 239.35 SMA 124.91 ECC .18198 INC 3.6377 V1 30.232  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.172 GAP 7.34 AZP 91.86 TAL 172.61 TAP 51.96 RCA 102.18 APO 147.64 V2 34.897  
 RC 148.977 GL 28.56 GP -21.02 ZAL 81.29 ZAP 150.54 ETS 319.71 ZAE 128.70 ETE 196.97 ZAC 127.32 ETC 180.38 CLP-158.86

Distance 504.433

Planetary Conic: C3 12.998 VHL 3.605 OLA 44.89 RAL 36.95 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 5.688 DPA -10.10 RAP 37.23 ECC 1.2139  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.59 19 21 36 4139.94 -33.67 187.44 264.99 58.35 20 30 36 3539.9 -37.58 179.26  
 126.41 3 2 12 2736.93 -33.66 78.82 264.98 58.34 3 47 49 2136.9 -37.57 70.64  
 53.59 19 21 36 4139.94 -33.67 187.44 264.99 58.35 20 30 36 3539.9 -37.58 179.26  
 126.41 3 2 12 2736.93 -33.66 78.82 264.98 58.34 3 47 49 2136.9 -37.57 70.64  
 53.59 19 21 36 4139.94 -33.67 187.44 264.99 58.35 20 30 36 3539.9 -37.58 179.26  
 126.41 3 2 12 2736.93 -33.66 78.82 264.98 58.34 3 47 49 2136.9 -37.57 70.64

Differential Corrections: TOE 2.0844 TRA .4810 TC3-5.8013 BAU 1.0100 MGR 5443.9 SGR 706.8 SG3 338.6  
 RDE .3968 RRA .0881 RC3 -.3477 FAU .05673 RRT .8709 RRF .8645 RTF .9592 CRT .9997 CRS -.9873 CST -.9882  
 FDE 1.3466 FRA .8163 FC3-3.7784 BSP 17466 SGB 5489.6 R23 .0525 R13 .9596 LSA 3556.6 MSA 158.8 SSA 16.1  
 BDE 2.1218 BRA .4890 BC3 5.8118 FSP -1140 SG1 5478.7 SG2 345.2 THA 6.48 EL1 3390.3 EL2 16.2 ALF 10.76

Orbit Determination Accuracy: ST 3330.6 SR 633.4 SS 1086.6  
 CRT .9997 CRS -.9873 CST -.9882  
 LSA 3556.6 MSA 158.8 SSA 16.1  
 EL1 3390.3 EL2 16.2 ALF 10.76

LAUNCH DATE JAN 30 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 27 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.144 GAL 1.98 AZL 86.56 MCA 242.53 SMA 124.70 ECC .18496 INC 3.4392 V1 30.232  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.158 GAP 7.66 AZP 91.59 TAL 171.23 TAP 53.76 RCA 101.63 APO 147.76 V2 34.908  
 RC 151.204 GL 26.74 GP -19.80 ZAL 78.75 ZAP 152.22 ETS 319.50 ZAE 128.74 ETE 195.88 ZAC 129.08 ETC 180.11 CLP-160.12

Distance 510.285

Planetary Conic: C3 13.082 VHL 3.617 OLA 44.02 RAL 40.97 RAD 6567.5 VEL 11.596 PTH 2.03 VHP 5.832 DPA -8.29 RAP 38.45 ECC 1.2153  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.77 19 42 13 4129.34 -33.04 186.02 268.69 59.07 20 51 3 3529.3 -36.86 177.85  
 125.23 3 13 42 2750.28 -33.03 79.58 268.68 59.06 3 59 32 2150.3 -36.85 71.41  
 54.77 19 42 13 4129.34 -33.04 186.02 268.69 59.07 20 51 3 3529.3 -36.86 177.85  
 125.23 3 13 42 2750.28 -33.03 79.58 268.68 59.06 3 59 32 2150.3 -36.85 71.41  
 54.77 19 42 13 4129.34 -33.04 186.02 268.69 59.07 20 51 3 3529.3 -36.86 177.85  
 125.23 3 13 42 2750.28 -33.03 79.58 268.68 59.06 3 59 32 2150.3 -36.85 71.41

Differential Corrections: TOE 2.0274 TRA .6635 TC3-5.8740 BAU 1.0287 MGR 5523.2 SGR 681.6 SG3 326.1  
 RDE .3836 RRA .0970 RC3 -.3081 FAU .05362 RRT .8529 RRF .8429 RTF .9596 CRT .9991 CRS -.9809 CST -.9867  
 FDE 1.2185 FRA .9001 FC3-3.5487 BSP 17765 SGB 5565.1 R23 .0405 R13 .9599 LSA 3450.8 MSA 160.3 SSA 16.9  
 BDE 2.0634 BRA .6705 BC3 5.8820 FSP -1101 SG1 5553.8 SG2 353.9 THA 6.03 EL1 3300.9 EL2 25.0 ALF 10.66

Orbit Determination Accuracy: ST 3244.0 SR 611.1 SS 1018.6  
 CRT .9991 CRS -.9809 CST -.9867  
 LSA 3450.8 MSA 160.3 SSA 16.9  
 EL1 3300.9 EL2 25.0 ALF 10.66

LAUNCH DATE JAN 30 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 29 1969

Heliocentric Conic: RL 147.37 LAL -.00 LOL 129.93 VL 27.111 GAL 2.33 AZL 86.75 MCA 245.71 SMA 124.48 ECC .18816 INC 3.2518 V1 30.232  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.145 GAP 7.98 AZP 91.34 TAL 169.84 TAP 55.55 RCA 101.06 APO 147.91 V2 34.920  
 RC 153.416 GL 24.94 GP -18.72 ZAL 76.13 ZAP 153.80 ETS 319.17 ZAE 128.74 ETE 194.92 ZAC 130.89 ETC 179.84 CLP-161.33

Distance 516.117

Planetary Conic: C3 13.279 VHL 3.644 OLA 43.10 RAL 44.95 RAD 6567.5 VEL 11.605 PTH 2.03 VHP 5.988 DPA -6.58 RAP 39.78 ECC 1.2185  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.04 20 3 9 4119.09 -32.31 184.58 272.46 59.76 21 11 48 3519.1 -36.05 176.45  
 123.96 3 24 31 2767.02 -32.30 80.56 272.45 59.74 4 10 38 2167.0 -36.04 72.43  
 56.04 20 3 9 4119.09 -32.31 184.58 272.46 59.76 21 11 48 3519.1 -36.05 176.45  
 123.96 3 24 31 2767.02 -32.30 80.56 272.45 59.74 4 10 38 2167.0 -36.04 72.43  
 56.04 20 3 9 4119.09 -32.31 184.58 272.46 59.76 21 11 48 3519.1 -36.05 176.45  
 123.96 3 24 31 2767.02 -32.30 80.56 272.45 59.74 4 10 38 2167.0 -36.04 72.43

Differential Corrections: TOE 1.9635 TRA .8565 TC3-5.8859 BAU 1.0461 MGR 5597.7 SGR 661.2 SG3 313.5  
 RDE .3740 RRA .1060 RC3 -.2721 FAU .05048 RRT .8340 RRF .8214 RTF .9600 CRT .9976 CRS -.9720 CST -.9849  
 FDE 1.0969 FRA .9784 FC3-3.2909 BSP 18040 SGB 5636.6 R23 .0314 R13 .9602 LSA 3328.9 MSA 163.7 SSA 17.6  
 BDE 1.9988 BRA .8630 BC3 5.8922 FSP -1061 SG1 5624.9 SG2 363.0 THA 5.65 EL1 3194.1 EL2 40.0 ALF 10.66

Orbit Determination Accuracy: ST 3139.0 SR 592.0 SS 951.0  
 CRT .9976 CRS -.9720 CST -.9849  
 LSA 3328.9 MSA 163.7 SSA 17.6  
 EL1 3194.1 EL2 40.0 ALF 10.66

LAUNCH DATE JAN 30 1969

FLIGHT TIME 182.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 521.926

RL 147.37 LAL -0.00 LOL 129.93 VL 27.077 GAL 2.71 AZL 86.93 MCA 248.89 SMA 124.27 ECC .19160 INC 3.0734 V1 30.232  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.131 GAP 8.32 AZP 91.11 TAL 168.44 TAP 57.33 RCA 100.46 APO 148.08 V2 34.932  
 RC 155.612 GL 23.16 GP -17.74 ZAL 73.48 ZAP 155.29 ETS 318.73 ZAE 128.73 ETE 194.06 ZAC 132.74 ETC 179.57 CLP-J62.51

PLANETOCENTRIC CONIC

C3 13.595 VHL 3.687 DLA 42.13 RAL 48.86 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 6.154 DPA -4.97 RAP 41.20 ECC 1.2237  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.39 20 24 21 4109.03 -31.48 183.13 276.28 60.41 21 32 50 3509.0 -35.15 175.04  
 122.61 3 34 32 2787.29 -31.47 81.79 276.27 60.39 4 20 59 2187.3 -35.14 73.70  
 57.39 20 24 21 4109.03 -31.48 183.13 276.28 60.41 21 32 50 3509.0 -35.15 175.04  
 122.61 3 34 32 2787.29 -31.47 81.79 276.27 60.39 4 20 59 2187.3 -35.14 73.70  
 57.39 20 24 21 4109.03 -31.48 183.13 276.28 60.41 21 32 50 3509.0 -35.15 175.04  
 122.61 3 34 32 2787.29 -31.47 81.79 276.27 60.39 4 20 59 2187.3 -35.14 73.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8915 TRA 1.0597 TC3-5.8405 BAU 1.0624 SGT 5667.4 SGR 644.4 SG3 300.9 ST 3016.6 SR 575.2 SS 883.9  
 RDE .3672 RRA .1152 RC3 -.2405 FAU .04740 RRT .8151 RRF .8003 RTF .9605 CRT .9948 CRS -.9598 CST -.9828  
 FDE .9809 FRA 1.0510 FC3-3.0188 BSP 18305 SGB 5703.9 R23 .0241 R13 .9607 LSA 3191.1 MSA 169.2 SSA 18.1  
 BDE 1.9268 BRA 1.0660 BC3 5.8454 FSP -1021 SG1 5691.8 SG2 371.7 THA 5.32 EL1 3070.4 EL2 57.7 ALF 10.74

LAUNCH DATE JAN 30 1969

FLIGHT TIME 184.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 527.712

RL 147.37 LAL -0.00 LOL 129.93 VL 27.043 GAL 3.10 AZL 87.17 MCA 252.07 SMA 124.05 ECC .19530 INC 2.9024 V1 30.232  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.118 GAP 8.66 AZP 90.89 TAL 167.02 TAP 59.10 RCA 99.83 APO 148.28 V2 34.945  
 RC 157.792 GL 21.41 GP -16.86 ZAL 70.80 ZAP 156.68 ETS 318.15 ZAE 128.71 ETE 193.30 ZAC 134.64 ETC 179.29 CLP-163.65

PLANETOCENTRIC CONIC

C3 14.033 VHL 3.746 DLA 41.12 RAL 52.68 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.330 DPA -3.45 RAP 42.71 ECC 1.2310  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.84 20 45 48 4098.87 -30.56 181.65 280.13 61.03 21 54 7 3498.9 -34.16 173.61  
 121.16 3 43 33 2811.36 -30.55 83.28 280.12 61.02 4 30 24 2211.4 -34.15 75.24  
 58.84 20 45 48 4098.87 -30.56 181.65 280.13 61.03 21 54 7 3498.9 -34.16 173.61  
 121.16 3 43 33 2811.36 -30.55 83.28 280.12 61.02 4 30 24 2211.4 -34.15 75.24  
 58.84 20 45 48 4098.87 -30.56 181.65 280.13 61.03 21 54 7 3498.9 -34.16 173.61  
 121.16 3 43 33 2811.36 -30.55 83.28 280.12 61.02 4 30 24 2211.4 -34.15 75.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8151 TRA 1.2770 TC3-5.7294 BAU 1.0757 SGT 5732.0 SGR 631.1 SG3 288.5 ST 2886.0 SR 560.7 SS 821.4  
 RDE .3632 RRA .1252 RC3 -.2114 FAU .04426 RRT .7964 RRF .7805 RTF .9609 CRT .9900 CRS -.9436 CST -.9802  
 FDE .8736 FRA 1.1210 FC3-2.7306 BSP 18466 SGB 5766.6 R23 .0195 R13 .9610 LSA 3047.3 MSA 177.3 SSA 18.4  
 BDE 1.8511 BRA 1.2831 BC3 5.7333 FSP -975 SG1 5754.1 SG2 380.2 THA 5.03 EL1 2938.9 EL2 77.6 ALF 10.90

LAUNCH DATE JAN 30 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 533.472

RL 147.37 LAL -0.00 LOL 129.93 VL 27.009 GAL 3.51 AZL 87.26 MCA 255.26 SMA 123.84 ECC .19928 INC 2.7373 V1 30.232  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.106 GAP 9.02 AZP 90.70 TAL 165.61 TAP 60.87 RCA 99.16 APO 148.52 V2 34.957  
 RC 159.953 GL 19.69 GP -16.07 ZAL 68.11 ZAP 158.00 ETS 317.43 ZAE 128.67 ETE 192.63 ZAC 136.58 ETC 179.01 CLP-164.76

PLANETOCENTRIC CONIC

C3 14.604 VHL 3.822 DLA 40.06 RAL 56.39 RAD 6567.6 VEL 11.661 PTH 2.05 VHP 6.518 DPA -2.00 RAP 44.30 ECC 1.2403  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.39 21 7 31 4088.35 -29.56 180.12 284.00 61.63 22 15 39 3488.3 -33.10 172.13  
 119.61 3 51 26 2839.52 -29.55 85.06 283.99 61.61 4 38 45 2239.5 -33.09 77.07  
 60.39 21 7 31 4088.35 -29.56 180.12 284.00 61.63 22 15 39 3488.3 -33.10 172.13  
 119.61 3 51 26 2839.52 -29.55 85.06 283.99 61.61 4 38 45 2239.5 -33.09 77.07  
 60.39 21 7 31 4088.35 -29.56 180.12 284.00 61.63 22 15 39 3488.3 -33.10 172.13  
 119.61 3 51 26 2839.52 -29.55 85.06 283.99 61.61 4 38 45 2239.5 -33.09 77.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7276 TRA 1.5017 TC3-5.5777 BAU 1.0896 SGT 5791.0 SGR 618.9 SG3 276.1 ST 2739.4 SR 546.6 SS 758.8  
 RDE .3607 RRA .1352 RC3 -.1874 FAU .04136 RRT .7785 RRF .7612 RTF .9615 CRT .9826 CRS -.9218 CST -.9772  
 FDE .7689 FRA 1.1828 FC3-2.4517 BSP 18713 SGB 5824.0 R23 .0149 R13 .9616 LSA 2888.4 MSA 188.1 SSA 18.4  
 BDE 1.7649 BRA 1.5077 BC3 5.5808 FSP -938 SG1 5811.1 SG2 387.2 THA 4.78 EL1 2791.6 EL2 99.5 ALF 11.11

LAUNCH DATE JAN 30 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 539.203

RL 147.37 LAL -0.00 LOL 129.93 VL 26.975 GAL 3.95 AZL 87.42 MCA 258.45 SMA 123.63 ECC .20356 INC 2.5769 V1 30.232  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.093 GAP 9.39 AZP 90.52 TAL 164.18 TAP 62.63 RCA 98.46 APO 148.80 V2 34.970  
 RC 162.097 GL 18.01 GP -15.35 ZAL 65.44 ZAP 159.24 ETS 316.55 ZAE 128.63 ETE 192.02 ZAC 138.55 ETC 178.70 CLP-165.85

PLANETOCENTRIC CONIC

C3 15.318 VHL 3.914 DLA 38.97 RAL 59.97 RAD 6567.6 VEL 11.692 PTH 2.06 VHP 6.718 DPA -.63 RAP 45.96 ECC 1.2521  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.03 21 29 29 4077.15 -28.48 178.52 287.86 62.20 22 37 26 3477.1 -31.96 170.59  
 117.97 3 58 1 2872.05 -28.47 87.13 287.85 62.19 4 45 53 2272.1 -31.95 79.21  
 62.03 21 29 29 4077.15 -28.48 178.52 287.86 62.20 22 37 26 3477.1 -31.96 170.59  
 117.97 3 58 1 2872.05 -28.47 87.13 287.85 62.19 4 45 53 2272.1 -31.95 79.21  
 62.03 21 29 29 4077.15 -28.48 178.52 287.86 62.20 22 37 26 3477.1 -31.96 170.59  
 117.97 3 58 1 2872.05 -28.47 87.13 287.85 62.19 4 45 53 2272.1 -31.95 79.21

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6335 TRA 1.7386 TC3-5.3801 BAU 1.1023 SGT 5845.5 SGR 608.6 SG3 264.0 ST 2588.3 SR 533.6 SS 701.2  
 RDE .3601 RRA .1459 RC3 -.1666 FAU .03855 RRT .7615 RRF .7434 RTF .9620 CRT .9718 CRS -.8934 CST -.9737  
 FDE .6712 FRA 1.2414 FC3-2.1790 BSP 18936 SGB 5877.1 R23 .0116 R13 .9621 LSA 2726.6 MSA 201.9 SSA 18.2  
 BDE 1.6728 BRA 1.7447 BC3 5.3826 FSP -901 SG1 5863.9 SG2 393.2 THA 4.55 EL1 2639.8 EL2 123.4 ALF 11.35

LAUNCH DATE JAN 30 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 544.903

RL 147.37 LAL -.00 LOL 129.93 VL 26.941 GAL 4.40 AZL 87.58 MCA 261.64 SMA 123.42 ECC .20817 INC 2.4200 V1 30.232  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.081 GAP 9.77 AZP 90.35 TAL 162.75 TAP 64.40 RCA 97.73 APO 149.11 V2 34.983  
 RC 164.221 GL 16.37 GP -14.70 ZAL 62.80 ZAP 160.41 ETS 315.50 ZAE 128.59 ETE 191.49 ZAC 140.55 ETC 178.36 CLP-166.91

PLANETOCENTRIC CONIC

C3 16.188 VHL 4.023 DLA 37.84 RAL 63.41 RAD 6567.6 VEL 11.729 PTH 2.07 VHP 6.929 DPA .67 RAP 47.69 ECC 1.2664  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.77 21 51 44 4065.03 -27.34 176.84 291.71 62.75 22 59 29 3465.0 -30.76 168.98  
 116.23 4 3 12 2909.19 -27.32 89.53 291.70 62.73 4 51 41 2309.2 -30.74 81.67  
 63.77 21 51 44 4065.03 -27.34 176.84 291.71 62.75 22 59 29 3465.0 -30.76 168.98  
 116.23 4 3 12 2909.19 -27.32 89.53 291.70 62.73 4 51 41 2309.2 -30.74 81.67  
 63.77 21 51 44 4065.03 -27.34 176.84 291.71 62.75 22 59 29 3465.0 -30.76 168.98  
 116.23 4 3 12 2909.19 -27.32 89.53 291.70 62.73 4 51 41 2309.2 -30.74 81.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5336 TRA 1.9885 TC3-5.1421 BAU 1.1133 SGT 5894.8 SGR 599.3 SG3 252.3 ST 2437.6 SR 521.1 SS 649.5  
 RDE .3610 RRA .1575 RC3 -1.1482 FAU .03583 RRT .7458 RRF .7273 RTF .9625 CRT .9563 CRS -.8573 CST -.9698  
 FDE .5802 FRA 1.2969 FC3-1.9160 BSP 19135 SGB 5925.2 R23 .0092 R13 .9626 LSA 2566.6 MSA 218.7 SSA 17.9  
 BOE 1.5755 BRA 1.9947 BC3 5.1442 FSP -864 SG1 5911.8 SG2 398.1 THA 4.36 EL1 2488.3 EL2 149.2 ALF 11.60

LAUNCH DATE JAN 30 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 550.567

RL 147.37 LAL -.00 LOL 129.93 VL 26.907 GAL 4.89 AZL 87.73 MCA 264.84 SMA 123.21 ECC .21314 INC 2.2655 V1 30.232  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.068 GAP 10.18 AZP 90.20 TAL 161.33 TAP 66.17 RCA 96.95 APO 149.47 V2 34.996  
 RC 166.326 GL 14.79 GP -14.11 ZAL 60.21 ZAP 161.53 ETS 314.26 ZAE 128.55 ETE 191.01 ZAC 142.59 ETC 177.99 CLP-167.96

PLANETOCENTRIC CONIC

C3 17.232 VHL 4.151 DLA 36.70 RAL 66.70 RAD 6567.7 VEL 11.773 PTH 2.08 VHP 7.154 DPA 1.90 RAP 49.47 ECC 1.2836  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.61 22 14 21 4051.55 -26.14 175.06 295.54 63.27 23 21 52 3451.5 -29.50 167.27  
 114.39 4 6 49 2951.35 -26.13 92.28 295.53 63.26 4 56 0 2351.4 -29.49 84.48  
 65.61 22 14 21 4051.55 -26.14 175.06 295.54 63.27 23 21 52 3451.5 -29.50 167.27  
 114.39 4 6 49 2951.35 -26.13 92.28 295.53 63.26 4 56 0 2351.4 -29.49 84.48  
 65.61 22 14 21 4051.55 -26.14 175.06 295.54 63.27 23 21 52 3451.5 -29.50 167.27  
 114.39 4 6 49 2951.35 -26.13 92.28 295.53 63.26 4 56 0 2351.4 -29.49 84.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4317 TRA 2.2554 TC3-4.8636 BAU 1.1209 SGT 5940.0 SGR 591.4 SG3 241.2 ST 2297.0 SR 509.6 SS 606.1  
 RDE .3636 RRA .1703 RC3 -.1312 FAU .03308 RRT .7316 RRF .7133 RTF .9628 CRT .9352 CRS -.8135 CST -.9662  
 FDE .4979 FRA 1.3520 FC3-1.6620 BSP 19247 SGB 5969.3 R23 .0083 R13 .9629 LSA 2417.9 MSA 237.9 SSA 17.4  
 BOE 1.4771 BRA 2.2618 BC3 4.8654 FSP -825 SG1 5955.8 SG2 402.1 THA 4.18 EL1 2346.2 EL2 176.6 ALF 11.79

LAUNCH DATE JAN 30 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 556.191

RL 147.37 LAL -.00 LOL 129.93 VL 26.873 GAL 5.40 AZL 87.89 MCA 268.04 SMA 123.00 ECC .21851 INC 2.1125 V1 30.232  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.056 GAP 10.60 AZP 90.07 TAL 159.90 TAP 67.94 RCA 96.12 APO 149.88 V2 35.010  
 RC 168.410 GL 13.27 GP -13.57 ZAL 57.69 ZAP 162.58 ETS 312.80 ZAE 128.50 ETE 190.58 ZAC 144.64 ETC 177.58 CLP-168.98

PLANETOCENTRIC CONIC

C3 18.470 VHL 4.298 DLA 35.54 RAL 69.83 RAD 6567.7 VEL 11.826 PTH 2.09 VHP 7.393 DPA 3.08 RAP 51.31 ECC 1.3040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.56 22 37 27 4036.11 -24.89 173.13 299.34 63.77 23 44 43 3436.1 -28.20 165.41  
 112.44 4 8 41 2999.09 -24.88 95.41 299.34 63.76 4 58 40 2399.1 -28.19 87.69  
 67.56 22 37 27 4036.11 -24.89 173.13 299.34 63.77 23 44 43 3436.1 -28.20 165.41  
 112.44 4 8 41 2999.09 -24.88 95.41 299.34 63.76 4 58 40 2399.1 -28.19 87.69  
 67.56 22 37 27 4036.11 -24.89 173.13 299.34 63.77 23 44 43 3436.1 -28.20 165.41  
 112.44 4 8 41 2999.09 -24.88 95.41 299.34 63.76 4 58 40 2399.1 -28.19 87.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3208 TRA 2.5323 TC3-4.5703 BAU 1.1289 SGT 5978.8 SGR 583.0 SG3 230.3 ST 2159.6 SR 497.4 SS 567.1  
 RDE .3669 RRA .1835 RC3 -.1173 FAU .03058 RRT .7186 RRF .7001 RTF .9633 CRT .9067 CRS -.7596 CST -.9626  
 FDE .4189 FRA 1.4021 FC3-1.4334 BSP 19431 SGB 6007.2 R23 .0067 R13 .9634 LSA 2272.7 MSA 259.5 SSA 16.9  
 BOE 1.3708 BRA 2.5389 BC3 4.5718 FSP -792 SG1 5993.5 SG2 404.4 THA 4.03 EL1 2206.6 EL2 205.4 ALF 11.90

LAUNCH DATE JAN 30 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 561.771

RL 147.37 LAL -.00 LOL 129.93 VL 26.839 GAL 5.94 AZL 88.04 MCA 271.24 SMA 122.79 ECC .22431 INC 1.9599 V1 30.232  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.044 GAP 11.05 AZP 89.96 TAL 158.48 TAP 69.72 RCA 95.25 APO 150.34 V2 35.023  
 RC 170.474 GL 11.80 GP -13.08 ZAL 55.24 ZAP 163.58 ETS 311.11 ZAE 128.44 ETE 190.19 ZAC 146.71 ETC 177.11 CLP-169.99

PLANETOCENTRIC CONIC

C3 19.927 VHL 4.464 DLA 34.39 RAL 72.79 RAD 6567.8 VEL 11.887 PTH 2.11 VHP 7.648 DPA 4.19 RAP 53.19 ECC 1.3279  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.62 23 1 11 4018.14 -23.61 171.03 303.11 64.24 24 8 9 3418.1 -26.88 163.37  
 110.38 4 8 38 3052.91 -23.60 98.97 303.11 64.23 4 59 31 2452.9 -26.86 91.31  
 69.62 23 1 11 4018.14 -23.61 171.03 303.11 64.24 24 8 9 3418.1 -26.88 163.37  
 110.38 4 8 38 3052.91 -23.60 98.97 303.11 64.23 4 59 31 2452.9 -26.86 91.31  
 69.62 23 1 11 4018.14 -23.61 171.03 303.11 64.24 24 8 9 3418.1 -26.88 163.37  
 110.38 4 8 38 3052.91 -23.60 98.97 303.11 64.23 4 59 31 2452.9 -26.86 91.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2057 TRA 2.8247 TC3-4.2594 BAU 1.1350 SGT 6013.1 SGR 574.7 SG3 220.0 ST 2036.0 SR 485.4 SS 535.5  
 RDE .3713 RRA .1976 RC3 -.1048 FAU .02817 RRT .7071 RRF .6885 RTF .9638 CRT .8696 CRS -.6972 CST -.9598  
 FDE .3462 FRA 1.4509 FC3-1.2240 BSP 19603 SGB 6040.5 R23 .0055 R13 .9638 LSA 2141.9 MSA 282.2 SSA 16.3  
 BOE 1.2616 BRA 2.8316 BC3 4.2607 FSP -760 SG1 6026.9 SG2 405.5 THA 3.88 EL1 2079.8 EL2 234.6 ALF 11.87

LAUNCH DATE JAN 30 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 567.299

RL 147.37 LAL -.00 LOL 129.93 VL 26.805 GAL 6.51 AZL 88.19 MCA 274.44 SMA 122.59 ECC .23059 INC 1.8068 V1 30.232  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.033 GAP 11.52 AZP 89.86 TAL 157.07 TAP 71.51 RCA 94.32 APO 150.86 V2 35.036  
 RC 172.518 GL 10.40 GP -12.64 ZAL 52.87 ZAP 164.52 ETS 309.14 ZAE 128.39 ETE 189.84 ZAC 148.80 ETC 176.56 CLP-170.99

PLANETOCENTRIC CONIC

C3 21.631 VHL 4.651 DLA 33.24 RAL 75.60 RAD 6567.9 VEL 11.959 PTH 2.13 VHP 7.919 DPA 5.25 RAP 55.12 ECC 1.3560  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.82 23 25 50 3996.61 -22.31 168.68 306.85 64.70 24 32 26 3396.6 -25.53 161.09  
 108.18 4 6 21 3113.77 -22.29 103.03 306.85 64.69 4 58 15 2513.8 -25.51 95.43  
 71.82 23 25 50 3996.61 -22.31 168.68 306.85 64.70 24 32 26 3396.6 -25.53 161.09  
 108.18 4 6 21 3113.77 -22.29 103.03 306.85 64.69 4 58 15 2513.8 -25.51 95.43  
 110.00 5 18 25 2892.68 -27.94 88.52 309.48 69.46 6 6 38 2292.7 -30.48 80.24  
 110.00 3 16 52 3265.70 -16.88 111.78 303.83 59.82 4 11 18 2665.7 -20.76 104.80

DIFFERENTIAL CORRECTIONS

TDE 1.0869 TRA 3.1338 TC3-3.9368 BAU 1.1388  
 RDE .3765 RRA .2127 RC3 -.0934 FAU .02584  
 FDE .2794 FRA 1.4989 FC3-1.0342 BSP 19756  
 BOE 1.1503 BRA 3.1410 BC3 3.9379 FSP -728

MID-COURSE EXECUTION ACCURACY

SGT 6042.2 SGR 566.4 SG3 210.2  
 RRT .6969 RRF .6784 RTF .9643  
 SGB 6068.7 R23 .0047 R13 .9643  
 SG1 6055.1 SG2 405.3 THA 3.75

ORBIT DETERMINATION ACCURACY

ST 1929.4 SR 473.2 SS 511.1  
 CRT .8230 CRS -.6278 CST -.9583  
 LSA 2028.4 MSA 305.0 SSA 15.7  
 EL1 1969.0 EL2 263.4 ALF 11.62

LAUNCH DATE JAN 30 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 572.770

RL 147.37 LAL -.00 LOL 129.93 VL 26.772 GAL 7.11 AZL 88.35 MCA 277.64 SMA 122.39 ECC .23740 INC 1.6523 V1 30.232  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.021 GAP 12.02 AZP 89.78 TAL 155.67 TAP 73.32 RCA 93.33 APO 151.44 V2 35.050  
 RC 174.540 GL 9.07 GP -12.23 ZAL 50.60 ZAP 165.41 ETS 306.87 ZAE 128.33 ETE 189.52 ZAC 150.90 ETC 175.94 CLP-171.98

PLANETOCENTRIC CONIC

C3 23.619 VHL 4.860 DLA 32.10 RAL 78.24 RAD 6568.0 VEL 12.041 PTH 2.15 VHP 8.210 DPA 6.25 RAP 57.09 ECC 1.3887  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.21 23 51 52 3969.92 -20.99 165.97 310.56 65.14 24 58 2 3369.9 -24.16 158.44  
 105.79 4 1 25 3183.18 -20.97 107.68 310.55 65.12 4 54 28 2583.2 -24.15 100.15  
 74.21 23 51 52 3969.92 -20.99 165.97 310.56 65.14 24 58 2 3369.9 -24.16 158.44  
 105.79 4 1 25 3183.18 -20.97 107.68 310.55 65.12 4 54 28 2583.2 -24.15 100.15  
 110.00 5 58 3 2822.37 -29.53 83.66 314.27 71.94 6 45 6 2222.4 -31.71 75.13  
 110.00 2 58 20 3378.73 -12.91 118.12 306.00 58.07 3 54 38 2778.7 -17.03 111.45

DIFFERENTIAL CORRECTIONS

TDE .9686 TRA 3.4644 TC3-3.6036 BAU 1.1382  
 RDE .3828 RRA .2288 RC3 -.0825 FAU .02352  
 FDE .2199 FRA 1.5481 FC3 -.8620 BSP 19792  
 BOE 1.0415 BRA 3.4720 BC3 3.6046 FSP -694

MID-COURSE EXECUTION ACCURACY

SGT 6067.9 SGR 558.1 SG3 201.0  
 RRT .6885 RRF .6703 RTF .9648  
 SGB 6093.6 R23 .0043 R13 .9649  
 SG1 6080.1 SG2 404.0 THA 3.64

ORBIT DETERMINATION ACCURACY

ST 1845.9 SR 461.3 SS 494.3  
 CRT .7678 CRS -.5562 CST -.9590  
 LSA 1938.5 MSA 326.0 SSA 15.2  
 EL1 1880.4 EL2 290.1 ALF 11.13

LAUNCH DATE JAN 30 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC

DISTANCE 578.174

RL 147.37 LAL -.00 LOL 129.93 VL 26.739 GAL 7.76 AZL 88.50 MCA 280.85 SMA 122.19 ECC .24480 INC 1.4953 V1 30.232  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.010 GAP 12.55 AZP 89.72 TAL 154.29 TAP 75.14 RCA 92.28 APO 152.10 V2 35.063  
 RC 176.542 GL 7.80 GP -11.86 ZAL 48.42 ZAP 166.24 ETS 304.26 ZAE 128.26 ETE 189.23 ZAC 153.00 ETC 175.20 CLP-172.97

PLANETOCENTRIC CONIC

C3 25.934 VHL 5.092 DLA 30.99 RAL 80.73 RAD 6568.0 VEL 12.137 PTH 2.18 VHP 8.521 DPA 7.20 RAP 59.10 ECC 1.4268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.86 0 24 1 3935.46 -19.66 162.72 314.23 65.55 1 29 37 3335.5 -22.80 155.23  
 103.14 3 53 1 3263.62 -19.65 113.13 314.23 65.55 4 47 25 2663.6 -22.79 105.64  
 76.86 0 24 1 3935.46 -19.66 162.72 314.23 65.55 1 29 37 3335.5 -22.80 155.23  
 103.14 3 53 1 3263.62 -19.65 113.13 314.23 65.55 4 47 25 2663.6 -22.79 105.64  
 110.00 6 29 8 2776.94 -30.44 80.44 318.65 73.64 7 15 25 2176.9 -32.38 71.76  
 110.00 2 47 4 3470.14 -9.56 123.10 308.53 57.02 3 44 54 2870.1 -13.84 116.61

DIFFERENTIAL CORRECTIONS

TDE .8418 TRA 3.8092 TC3-3.2801 BAU 1.1375  
 RDE .3893 RRA .2454 RC3 -.0730 FAU .02140  
 FDE .1628 FRA 1.5950 FC3 -.7143 BSP 19940  
 BOE .9275 BRA 3.8171 BC3 3.2809 FSP -666

MID-COURSE EXECUTION ACCURACY

SGT 6086.9 SGR 548.7 SG3 192.1  
 RRT .6807 RRF .6627 RTF .9655  
 SGB 6111.6 R23 .0035 R13 .9656  
 SG1 6098.4 SG2 401.2 THA 3.53

ORBIT DETERMINATION ACCURACY

ST 1776.6 SR 448.5 SS 481.9  
 CRT .7027 CRS -.4802 CST -.9610  
 LSA 1863.0 MSA 344.8 SSA 14.6  
 EL1 1805.3 EL2 314.0 ALF 10.38

LAUNCH DATE JAN 30 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC

DISTANCE 583.500

RL 147.37 LAL -.00 LOL 129.93 VL 26.706 GAL 8.45 AZL 88.67 MCA 284.06 SMA 121.99 ECC .25284 INC 1.3348 V1 30.232  
 RP 108.04 LAP -1.29 LOP 54.00 VP 36.998 GAP 13.12 AZP 89.68 TAL 152.93 TAP 76.99 RCA 91.15 APO 152.83 V2 35.076  
 RC 178.523 GL 6.60 GP -11.52 ZAL 46.35 ZAP 167.01 ETS 301.27 ZAE 128.19 ETE 188.97 ZAC 155.11 ETC 174.33 CLP-173.96

PLANETOCENTRIC CONIC

C3 28.625 VHL 5.350 DLA 29.90 RAL 83.06 RAD 6568.1 VEL 12.247 PTH 2.20 VHP 8.857 DPA 8.10 RAP 61.14 ECC 1.4711  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.97 0 56 19 3886.95 -18.34 158.46 317.87 65.96 2 1 6 3286.9 -21.44 151.03  
 100.03 3 39 18 3361.25 -18.33 119.79 317.87 65.95 4 35 19 2761.2 -21.42 112.36  
 79.97 0 56 19 3886.95 -18.34 158.46 317.87 65.96 2 1 6 3286.9 -21.44 151.03  
 100.03 3 39 18 3361.25 -18.33 119.79 317.87 65.95 4 35 19 2761.2 -21.42 112.36  
 110.00 6 55 37 2744.67 -31.04 78.12 322.83 74.90 7 41 22 2144.7 -32.80 69.34  
 110.00 2 39 11 3551.52 -6.52 127.43 311.23 56.37 3 38 22 2951.5 -10.90 121.07

DIFFERENTIAL CORRECTIONS

TDE .7125 TRA 4.1753 TC3-2.9609 BAU 1.1334  
 RDE .3964 RRA .2627 RC3 -.0642 FAU .01934  
 FDE .1107 FRA 1.6425 FC3 -.5850 BSP 20052  
 BOE .8153 BRA 4.1836 BC3 2.9616 FSP -639

MID-COURSE EXECUTION ACCURACY

SGT 6101.3 SGR 538.7 SG3 183.7  
 RRT .6740 RRF .6562 RTF .9664  
 SGB 6125.0 R23 .0028 R13 .9664  
 SG1 6112.1 SG2 397.2 THA 3.42

ORBIT DETERMINATION ACCURACY

ST 1727.9 SR 435.5 SS 474.8  
 CRT .6308 CRS -.4057 CST -.9647  
 LSA 1808.7 MSA 359.4 SSA 14.1  
 EL1 1750.4 EL2 333.5 ALF 9.38

LAUNCH DATE JAN 30 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.673 GAL 9.18 AZL 88.83 HCA 287.27 SMA 121.79 ECC .26162 INC 1.1696 V1 30.232  
 RP 108.00 LAP -1.12 LOP 57.21 VP 36.987 GAP 13.73 AZP 89.65 TAL 151.59 TAP 78.86 RCA 89.93 APO 153.66 V2 35.089  
 RC 180.483 GL 5.47 GP -11.21 ZAL 44.39 ZAP 167.72 ETS 297.85 ZAE 128.10 ETE 188.73 ZAC 157.21 ETC 173.28 CLP-174.94

DISTANCE 588.735

PLANETOCENTRIC CONIC  
 C3 31.757 VHL 5.635 DLA 28.85 RAL 85.24 RAD 6568.3 VEL 12.375 PTH 2.23 VHP 9.218 DPA 8.94 RAP 63.20 ECC 1.5226  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 84.25 1 38 48 3804.49 -17.03 151.76 321.48 66.36 2 42 13 3204.5 -20.08 144.37  
 95.75 3 14 12 3495.77 -17.01 129.13 321.47 66.35 4 12 28 2895.8 -20.07 121.74  
 100.00 4 54 9 3174.58 -23.08 107.97 324.02 70.46 5 47 4 2574.6 -25.53 100.03  
 100.00 2 41 32 3600.91 -11.15 133.96 318.55 62.09 3 41 33 3000.9 -14.80 127.07  
 110.00 7 18 55 2721.34 -31.44 76.42 326.87 75.83 8 4 16 2121.3 -33.06 67.57  
 110.00 2 33 16 3626.92 -3.66 131.40 314.03 55.99 3 33 43 3026.9 -8.10 125.12

MID-COURSE EXECUTION ACCURACY  
 SGT 6110.8 SGR 527.9 SG3 175.8  
 RRT .6681 RRF .6507 RTF .9674  
 SGB 6133.6 R23 .0023 R13 .9674  
 SG1 6121.0 SG2 392.1 THA 3.32

ORBIT DETERMINATION ACCURACY  
 ST 1697.6 SR 422.1 SS 472.0  
 CRT .5548 CRS -.3352 CST -.9694  
 LSA 1773.8 MSA 369.2 SSA 13.5  
 EL1 1714.4 EL2 347.8 ALF 8.19

DIFFERENTIAL CORRECTIONS  
 TDE .5799 TRA 4.5643 TC3-2.6507 BAU 1.1256  
 RDE .4039 RRA .2805 RC3 -.0558 FAU .01735  
 FDE .0629 FRA 1.6912 FC3 -.4731 BSP 20145  
 BDE .7067 BRA 4.5729 BC3 2.6512 FSP -612

LAUNCH DATE JAN 30 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 26 1969

HELIOCENTRIC CONIC  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.641 GAL 9.97 AZL 89.00 HCA 290.48 SMA 121.60 ECC .27121 INC .9984 V1 30.232  
 RP 107.96 LAP -.94 LOP 60.42 VP 36.976 GAP 14.39 AZP 89.65 TAL 150.28 TAP 80.77 RCA 88.62 APO 154.58 V2 35.102  
 RC 182.422 GL 4.41 GP -10.92 ZAL 42.54 ZAP 168.36 ETS 293.95 ZAE 128.00 ETE 188.50 ZAC 159.31 ETC 172.00 CLP-175.94

DISTANCE 593.865

PLANETOCENTRIC CONIC  
 C3 35.406 VHL 5.950 DLA 27.83 RAL 87.27 RAD 6568.4 VEL 12.521 PTH 2.27 VHP 9.610 DPA 9.73 RAP 65.28 ECC 1.5827  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 20 50 3527.25 -19.85 132.65 326.78 69.38 4 19 37 2927.3 -22.48 124.96  
 90.00 1 48 23 3827.86 -11.68 150.91 323.13 64.02 2 52 11 3227.9 -15.08 143.89  
 100.00 5 29 1 3114.01 -24.40 103.95 328.50 72.17 6 20 55 2514.0 -26.61 95.85  
 100.00 2 22 53 3716.33 -7.40 140.48 320.87 60.96 3 24 49 3116.3 -11.22 133.77  
 110.00 7 39 45 2704.86 -31.71 75.21 330.82 76.50 8 24 50 2104.9 -33.24 66.31  
 110.00 2 28 38 3698.24 -.94 135.12 316.89 55.83 3 30 17 3098.2 -5.42 128.90

MID-COURSE EXECUTION ACCURACY  
 SGT 6115.8 SGR 516.2 SG3 168.4  
 RRT .6630 RRF .6460 RTF .9686  
 SGB 6137.5 R23 .0017 R13 .9686  
 SG1 6125.4 SG2 385.8 THA 3.22

ORBIT DETERMINATION ACCURACY  
 ST 1683.4 SR 408.4 SS 472.7  
 CRT .4775 CRS -.2698 CST -.9745  
 LSA 1756.1 MSA 373.8 SSA 13.0  
 EL1 1695.1 EL2 356.4 ALF 6.92

DIFFERENTIAL CORRECTIONS  
 TDE .4436 TRA 4.9781 TC3-2.3530 BAU 1.1140  
 RDE .4119 RRA .2988 RC3 -.0479 FAU .01544  
 FDE .0188 FRA 1.7415 FC3 -.3776 BSP 20236  
 BDE .6053 BRA 4.9871 BC3 2.3535 FSP -587

LAUNCH DATE JAN 30 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 28 1969

HELIOCENTRIC CONIC  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.609 GAL 10.83 AZL 89.18 HCA 293.70 SMA 121.41 ECC .28172 INC .8197 V1 30.232  
 RP 107.92 LAP -.75 LOP 63.64 VP 36.965 GAP 15.10 AZP 89.67 TAL 149.01 TAP 82.71 RCA 87.21 APO 155.62 V2 35.114  
 RC 184.340 GL 3.40 GP -10.66 ZAL 40.80 ZAP 168.92 ETS 289.54 ZAE 127.88 ETE 188.30 ZAC 161.38 ETC 170.43 CLP-176.94

DISTANCE 598.869

PLANETOCENTRIC CONIC  
 C3 39.664 VHL 6.298 DLA 26.84 RAL 89.16 RAD 6568.5 VEL 12.690 PTH 2.31 VHP 10.036 DPA 10.47 RAP 67.38 ECC 1.6528  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 2 11 3444.41 -21.75 127.31 331.47 71.40 4 59 36 2844.4 -24.09 119.42  
 90.00 1 22 6 3968.10 -7.38 158.97 325.19 62.58 2 28 14 3368.1 -10.99 152.16  
 100.00 5 56 24 3076.23 -25.16 101.40 332.65 73.31 6 47 40 2476.2 -27.21 93.20  
 100.00 2 10 35 3811.51 -4.23 145.76 323.47 60.38 3 14 6 3211.5 -8.14 139.15  
 110.00 7 58 34 2693.95 -31.88 74.40 334.68 76.95 8 43 28 2093.9 -33.34 65.48  
 110.00 2 24 54 3766.56 1.67 138.69 319.80 55.85 3 27 40 3166.6 -2.82 132.48

MID-COURSE EXECUTION ACCURACY  
 SGT 6117.7 SGR 503.7 SG3 161.4  
 RRT .6587 RRF .6425 RTF .9699  
 SGB 6138.4 R23 .0015 R13 .9699  
 SG1 6126.7 SG2 378.4 THA 3.12

ORBIT DETERMINATION ACCURACY  
 ST 1684.1 SR 394.6 SS 476.6  
 CRT .4036 CRS -.2130 CST -.9795  
 LSA 1754.8 MSA 373.2 SSA 12.6  
 EL1 1691.9 EL2 359.3 ALF 5.66

DIFFERENTIAL CORRECTIONS  
 TDE .3072 TRA 5.4231 TC3-2.0659 BAU 1.0957  
 RDE .4204 RRA .3176 RC3 -.0403 FAU .01352  
 FDE -.0206 FRA 1.7955 FC3 -.2952 BSP 20222  
 BDE .5207 BRA 5.4324 BC3 2.0663 FSP -560

LAUNCH DATE JAN 30 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 30 1969

HELIOCENTRIC CONIC  
 RL 147.37 LAL -.00 LOL 129.93 VL 26.578 GAL 11.74 AZL 89.37 HCA 296.92 SMA 121.23 ECC .29327 INC .6319 V1 30.232  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.954 GAP 15.87 AZP 89.71 TAL 147.79 TAP 84.71 RCA 85.68 APO 156.78 V2 35.126  
 RC 186.236 GL 2.46 GP -10.41 ZAL 39.18 ZAP 169.39 ETS 284.60 ZAE 127.74 ETE 188.10 ZAC 163.43 ETC 168.46 CLP-177.96

DISTANCE 603.724

PLANETOCENTRIC CONIC  
 C3 44.649 VHL 6.682 DLA 25.90 RAL 90.91 RAD 6568.7 VEL 12.885 PTH 2.35 VHP 10.500 DPA 11.16 RAP 69.49 ECC 1.7348  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 31 33 3399.15 -22.70 124.33 335.66 72.60 5 28 12 2799.1 -24.87 116.33  
 90.00 1 6 42 4073.06 -4.05 164.89 327.68 61.95 2 14 35 3473.1 -7.77 158.19  
 100.00 6 19 31 3051.06 -25.64 99.69 336.63 74.09 7 10 22 2451.1 -27.58 91.42  
 100.00 2 1 25 3896.38 -1.36 150.42 326.19 60.14 3 6 21 3296.4 -5.32 143.88  
 110.00 8 15 39 2887.72 -31.97 73.94 338.48 77.21 9 0 27 2087.7 -33.40 65.00  
 110.00 2 21 47 3832.48 4.19 142.13 322.74 56.04 3 25 39 3232.5 -3.30 135.92

MID-COURSE EXECUTION ACCURACY  
 SGT 6113.5 SGR 489.9 SG3 154.8  
 RRT .6544 RRF .6389 RTF .9715  
 SGB 6133.1 R23 .0010 R13 .9715  
 SG1 6121.9 SG2 369.9 THA 3.01

ORBIT DETERMINATION ACCURACY  
 ST 1693.2 SR 380.1 SS 482.4  
 CRT .3319 CRS -.1603 CST -.9840  
 LSA 1763.0 MSA 368.5 SSA 12.1  
 EL1 1698.1 EL2 357.5 ALF 4.46

DIFFERENTIAL CORRECTIONS  
 TDE .1632 TRA 5.8953 TC3-1.7984 BAU 1.0737  
 RDE .4289 RRA .3362 RC3 -.0334 FAU .01172  
 FDE -.0587 FRA 1.8510 FC3 -.2272 BSP 20285  
 BDE .4589 BRA 5.9048 BC3 1.7987 FSP -538



LAUNCH DATE JAN 30 1969

FLIGHT TIME 214.00

ARRIVAL DATE SEP 1 1969

Heliocentric Conic

DISTANCE 608.401

RL 147.37 LAL -.00 LOL 129.93 VL 26.547 GAL 12.74 AZL 89.57 MCA 300.14 SMA 121.05 ECC .30600 INC .4327 V1 30.232  
 RP 107.85 LAP -.37 LOP 70.07 VP 36.943 GAP 16.72 AZP 89.78 TAL 146.62 TAP 86.76 RCA 84.01 APO 158.09 V2 35.138  
 RC 188.109 GL 1.58 GP -10.19 ZAL 37.67 ZAP 169.76 ETS 279.11 ZAE 127.57 ETE 187.91 ZAC 165.43 ETC 165.94 CLP -178.99

Planetocentric Conic

C3 50.505 VHL 7.107 OLA 25.00 RAL 92.52 RAD 6568.9 VEL 13.110 PTH 2.39 VHP 11.009 DPA 11.79 RAP 71.60 ECC 1.8312  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 55 30 3370.28 -23.27 122.41 339.63 73.40 5 51 41 2770.3 -25.33 114.35  
 90.00 0 55 38 4163.63 -1.14 169.95 330.35 61.70 2 5 1 3563.6 -4.91 163.31  
 100.00 6 39 40 3034.47 -25.95 98.55 340.47 74.62 7 30 14 2434.5 -27.81 90.24  
 100.00 1 54 9 3974.67 1.30 154.72 328.99 60.13 3 0 24 3374.7 -2.69 148.20  
 110.00 8 31 12 2685.52 -32.00 73.78 342.20 77.30 9 15 57 2085.5 -33.42 64.83  
 110.00 2 19 7 3896.38 6.61 145.50 325.70 56.39 3 24 3 3296.4 2.14 139.26

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .0147 TRA 6.4014 TC3 -1.5474 BAU 1.0449 SGT 6104.5 SGR 474.9 SG3 148.5 ST 1709.7 SR 365.4 SS 490.3  
 RDE .4377 RRA .3546 RC3 -.0269 FAU .00994 RRT .6501 RRF .6356 RTF .9733 CRT .2656 CRS -.1142 CST -.9878  
 FDE -.0940 FRA 1.9105 FC3 -.1703 BSP 20335 SGB 6123.0 R23 .0008 R13 .9733 LSA 1779.6 MSA 360.2 SSA 11.6  
 BDE .4380 BRA 6.4112 BC3 1.5476 FSP -516 SG1 6112.4 SG2 360.4 THA 2.91 EL1 1712.6 EL2 351.7 ALF 3.39

LAUNCH DATE JAN 30 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 3 1969

Heliocentric Conic

DISTANCE 612.862

RL 147.37 LAL -.00 LOL 129.93 VL 26.516 GAL 13.83 AZL 89.78 MCA 303.36 SMA 120.87 ECC .32007 INC .2200 V1 30.232  
 RP 107.81 LAP -.18 LOP 73.29 VP 36.932 GAP 17.64 AZP 89.88 TAL 145.52 TAP 88.88 RCA 82.18 APO 159.56 V2 35.150  
 RC 189.959 GL .75 GP -9.99 ZAL 36.29 ZAP 170.01 ETS 275.11 ZAE 127.37 ETE 187.73 ZAC 167.38 ETC 162.63 CLP 179.94

Planetocentric Conic

C3 57.413 VHL 7.577 OLA 24.14 RAL 94.00 RAD 6569.0 VEL 13.371 PTH 2.44 VHP 11.569 DPA 12.38 RAP 73.70 ECC 1.9449  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 15 58 3351.59 -23.63 121.16 343.43 73.93 6 11 50 2751.6 -25.61 113.05  
 90.00 0 46 58 4245.70 1.51 174.53 333.09 61.72 1 57 43 3645.7 -2.28 167.90  
 100.00 6 57 28 3024.34 -26.13 97.85 344.19 74.94 7 47 52 2424.3 -27.94 89.52  
 100.00 1 48 9 4048.18 3.78 158.76 331.84 60.33 2 55 37 3448.2 -.20 152.23  
 110.00 8 45 21 2686.82 -31.99 73.87 345.85 77.24 9 30 8 2086.8 -33.41 64.93  
 110.00 2 16 45 3958.47 8.93 148.80 328.68 56.87 3 22 44 3358.5 4.51 142.50

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1381 TRA 6.9464 TC3 -1.3131 BAU 1.0080 SGT 6091.2 SGR 458.7 SG3 142.5 ST 1731.0 SR 350.3 SS 500.0  
 RDE .4466 RRA .3725 RC3 -.0209 FAU .00817 RRT .6458 RRF .6323 RTF .9753 CRT .2056 CRS -.0742 CST -.9909  
 FDE -.1271 FRA 1.9747 FC3 -.1232 BSP 20357 SGB 6108.5 R23 .0005 R13 .9753 LSA 1802.0 MSA 349.1 SSA 11.1  
 BDE .4677 BRA 6.9564 BC3 1.3132 FSP -495 SG1 6098.4 SG2 349.8 THA 2.79 EL1 1732.6 EL2 342.5 ALF 2.48

LAUNCH DATE JAN 30 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 5 1969

Heliocentric Conic

DISTANCE 617.060

RL 147.37 LAL -.00 LOL 129.93 VL 26.487 GAL 15.02 AZL 90.01 MCA 306.58 SMA 120.70 ECC .33569 INC .0000 V1 30.232  
 RP 107.78 LAP .01 LOP 76.52 VP 36.921 GAP 18.66 AZP 90.01 TAL 144.50 TAP 91.08 RCA 80.18 APO 161.22 V2 35.161  
 RC 191.786 GL -.03 GP -9.80 ZAL 35.03 ZAP 170.13 ETS 266.69 ZAE 127.13 ETE 187.55 ZAC 169.24 ETC 158.18 CLP 178.85

Planetocentric Conic

C3 65.605 VHL 8.100 OLA 23.32 RAL 95.35 RAD 6569.2 VEL 13.673 PTH 2.50 VHP 12.189 DPA 12.91 RAP 75.79 ECC 2.0797  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 33 49 3340.14 -23.84 120.39 347.08 74.26 6 29 29 2740.1 -25.78 112.25  
 90.00 0 39 50 4321.83 3.96 178.79 335.88 61.94 1 51 51 3721.8 .18 172.15  
 100.00 7 13 20 3019.29 -26.22 -97.50 347.80 75.10 8 3 39 2419.3 -28.01 89.16  
 100.00 1 43 0 4117.91 6.12 162.61 334.69 60.68 2 51 38 3517.9 2.17 156.06  
 110.00 8 58 13 2691.14 -31.92 74.19 349.42 77.06 9 43 4 2091.1 -33.37 65.26  
 110.00 2 14 36 4018.83 11.16 152.06 331.64 57.48 3 21 35 3418.8 6.79 145.69

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2929 TRA 7.5368 TC3 -1.0944 BAU .9599 SGT 6074.1 SGR 441.5 SG3 137.0 ST 1754.9 SR 335.1 SS 511.6  
 RDE .4563 RRA .3896 RC3 -.0153 FAU .00634 RRT .6413 RRF .6291 RTF .9773 CRT .1530 CRS -.0409 CST -.9934  
 FDE -.1573 FRA 2.0460 FC3 -.0836 BSP 20284 SGB 6090.1 R23 .0006 R13 .9773 LSA 1827.7 MSA 336.1 SSA 10.7  
 BDE .5422 BRA 7.5469 BC3 1.0945 FSP -472 SG1 6080.7 SG2 338.4 THA 2.68 EL1 1755.6 EL2 331.0 ALF 1.74

LAUNCH DATE JAN 30 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 7 1969

Heliocentric Conic

DISTANCE 620.935

RL 147.37 LAL -.00 LOL 129.93 VL 26.458 GAL 16.32 AZL 90.26 MCA 309.81 SMA 120.53 ECC .35308 INC .2579 V1 30.232  
 RP 107.75 LAP .20 LOP 79.74 VP 36.911 GAP 19.80 AZP 90.17 TAL 143.57 TAP 93.37 RCA 77.97 APO 163.09 V2 35.172  
 RC 193.588 GL -.75 GP -9.62 ZAL 33.89 ZAP 170.11 ETS 259.97 ZAE 126.85 ETE 187.38 ZAC 170.97 ETC 152.04 CLP 177.71

Planetocentric Conic

C3 75.376 VHL 8.682 OLA 22.55 RAL 96.55 RAD 6569.5 VEL 14.026 PTH 2.56 VHP 12.878 DPA 13.40 RAP 77.86 ECC 2.2405  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 49 33 3334.21 -23.95 119.99 350.60 74.43 6 45 7 2734.2 -25.86 111.84  
 90.00 0 33 43 4393.34 6.24 182.81 338.67 62.32 1 46 57 3793.3 2.48 176.14  
 100.00 7 27 30 3018.38 -26.24 97.44 351.29 75.13 8 17 48 2418.4 -28.02 89.09  
 100.00 1 38 28 4184.39 8.32 166.32 337.54 61.19 2 48 12 3584.4 4.41 159.72  
 110.00 9 9 53 2698.06 -31.81 74.71 352.88 76.78 9 54 51 2098.1 -33.30 65.79  
 110.00 2 12 34 4077.47 13.29 155.27 334.59 58.21 3 20 31 3477.5 8.99 148.81

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.4580 TRA 8.1756 TC3 -.8955 BAU .9025 SGT 6053.1 SGR 422.7 SG3 131.7 ST 1779.1 SR 319.5 SS 524.8  
 RDE .4660 RRA .4050 RC3 -.0104 FAU .00453 RRT .6355 RRF .6248 RTF .9795 CRT .1042 CRS -.0098 CST -.9953  
 FDE -.1874 FRA 2.1231 FC3 -.0520 BSP 20309 SGB 6067.9 R23 .0006 R13 .9795 LSA 1854.5 MSA 321.5 SSA 10.2  
 BDE .6534 BRA 8.1857 BC3 .8956 FSP -454 SG1 6059.1 SG2 326.0 THA 2.55 EL1 1779.5 EL2 317.7 ALF 1.11

LAUNCH DATE JAN 31 1969 FLIGHT TIME 70.00 ARRIVAL DATE APR 11 1969

MELIOCENTRIC CONIC DISTANCE 168.888  
 RL 147.39 LAL -.00 LOL 130.95 VL 24.399 GAL -.90 AZL 87.10 MCA 71.50 SMA 110.08 ECC .33922 INC 2.8962 V1 30.228  
 RP 107.97 LAP 2.75 LOP 202.42 VP 35.395 GAP -19.80 AZP 89.08 TAL 181.76 TAP 253.25 RCA 72.74 APO 147.42 V2 35.099  
 RC 42.534 GL 11.81 GP 7.81 ZAL 95.93 ZAP 11.57 ETS 224.45 ZAE 166.44 ETE 352.51 ZAC 121.66 ETC 160.31 CLP 8.56

PLANETOCENTRIC CONIC  
 C3 36.280 VHL 6.023 DLA 24.24 RAL 28.30 RAD 6568.4 VEL 12.556 PTH 2.28 VHP 12.468 DPA 16.74 RAP 26.58 ECC 1.5971  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 48 24 3242.04 -25.49 113.68 269.39 77.23 1.42 26 2642.0 -27.00 105.33  
 90.00 20 18 33 4125.40 -2.37 167.82 260.57 61.77 21 27 19 3525.4 -6.12 161.15  
 100.00 2 30 10 2913.94 -27.85 90.10 269.96 78.67 3 18 44 2313.9 -29.13 81.53  
 100.00 21 19 29 3928.73 -.26 152.20 259.40 60.11 22 24 57 3328.7 -4.24 145.67  
 110.00 4 18 26 2575.23 -33.35 65.46 271.04 82.04 5 1 21 1975.2 -34.09 56.30  
 110.00 21 47 42 3840.20 4.48 142.54 256.44 56.08 22 51 42 3240.2 -1.00 136.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3361 TRA -.6640 TC3 .1653 BAU .0802 SGT 788.5 SGR 430.2 SG3 64.6 ST 381.3 SR 418.0 SS 264.5  
 RDE -.4382 RRA .1019 RC3 -.0065 FAU .02265 RRT .1711 RRF -.1862 RTF -.6813 CRT .7943 CRS .9036 CST .9746  
 FDE .2408 FRA .2750 FC3 -.5406 BSP 2203 SGB 898.2 R23 -.0233 R13 -.6846 LSA 596.7 MSA 183.8 SSA 16.1  
 BOE .5522 BRA .6718 BC3 .1654 FSP -149 SG1 793.3 SG2 421.3 THA 7.44 EL1 536.2 EL2 180.6 ALF 48.30

LAUNCH DATE JAN 31 1969 FLIGHT TIME 72.00 ARRIVAL DATE APR 13 1969

MELIOCENTRIC CONIC DISTANCE 175.563  
 RL 147.39 LAL -.00 LOL 130.95 VL 24.739 GAL -1.02 AZL 87.27 MCA 74.71 SMA 111.63 ECC .32078 INC 2.7266 V1 30.228  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.618 GAP -18.62 AZP 89.28 TAL 182.17 TAP 256.88 RCA 75.82 APO 147.44 V2 35.086  
 RC 42.853 GL 11.94 GP 8.22 ZAL 96.87 ZAP 10.62 ETS 232.81 ZAE 163.94 ETE 356.32 ZAC 122.79 ETC 159.60 CLP 6.76

PLANETOCENTRIC CONIC  
 C3 32.323 VHL 5.685 DLA 24.02 RAL 27.27 RAD 6568.3 VEL 12.397 PTH 2.24 VHP 11.804 DPA 17.67 RAP 27.75 ECC 1.5320  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 47 45 3200.91 -26.08 110.81 266.19 78.56 1 41 6 2600.9 -27.40 102.39  
 90.00 20 11 1 4108.25 -2.92 166.86 257.65 61.82 21 19 29 3508.2 -6.67 160.18  
 100.00 2 28 56 2874.68 -28.34 87.29 266.67 80.08 3 16 51 2274.7 -29.42 78.65  
 100.00 21 12 31 3909.71 -.91 151.15 256.53 60.12 22 17 41 3309.7 -4.88 144.62  
 110.00 4 16 21 2538.61 -33.66 68.65 267.56 83.68 4 58 40 1938.6 -34.17 53.44  
 110.00 21 41 36 3818.54 3.66 141.40 253.69 55.99 22 45 14 3218.5 -.83 135.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3374 TRA -.6409 TC3 .2163 BAU .0935 SGT 822.2 SGR 434.4 SG3 71.7 ST 400.8 SR 422.5 SS 273.4  
 RDE -.4180 RRA .0958 RC3 .0023 FAU .02403 RRT .1935 RRF -.2107 RTF -.7007 CRT .8062 CRS .9100 CST .9755  
 FDE .2495 FRA .2730 FC3 -.6437 BSP 2337 SGB 929.9 R23 -.0267 R13 -.7044 LSA 616.4 MSA 183.5 SSA 16.7  
 BOE .5372 BRA .6480 BC3 .2163 FSP -169 SG1 828.0 SG2 423.1 THA 7.92 EL1 553.5 EL2 181.0 ALF 46.87

LAUNCH DATE JAN 31 1969 FLIGHT TIME 74.00 ARRIVAL DATE APR 15 1969

MELIOCENTRIC CONIC DISTANCE 182.258  
 RL 147.39 LAL -.00 LOL 130.95 VL 25.051 GAL -1.16 AZL 87.44 MCA 77.92 SMA 113.11 ECC .30368 INC 2.5623 V1 30.228  
 RP 108.05 LAP 2.51 LOP 208.86 VP 35.822 GAP -17.50 AZP 89.46 TAL 182.66 TAP 260.58 RCA 78.76 APO 147.46 V2 35.073  
 RC 43.347 GL 12.02 GP 8.68 ZAL 97.96 ZAP 9.97 ETS 242.75 ZAE 161.48 ETE 359.31 ZAC 123.87 ETC 158.82 CLP 4.93

PLANETOCENTRIC CONIC  
 C3 28.917 VHL 5.377 DLA 23.70 RAL 26.14 RAD 6568.2 VEL 12.259 PTH 2.21 VHP 11.171 DPA 18.63 RAP 28.90 ECC 1.4759  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 48 17 3155.24 -26.66 107.59 262.91 80.07 1 40 52 2555.2 -27.76 99.09  
 90.00 20 1 25 4098.01 -3.25 166.29 254.63 61.85 21 9 43 3498.0 -6.99 159.60  
 100.00 2 28 38 2831.65 -28.81 84.17 263.30 81.65 3 15 50 2231.7 -29.66 75.47  
 100.00 21 3 44 3896.83 -1.34 150.45 253.57 60.13 22 8 41 3296.8 -5.31 143.90  
 110.00 4 14 50 2499.40 -33.92 59.61 263.98 85.46 4 56 30 1899.4 -34.17 50.38  
 110.00 21 34 2 3801.85 3.02 140.53 250.85 55.93 22 37 24 3201.8 -1.47 134.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3360 TRA -.6153 TC3 .2782 BAU .1077 SGT 854.6 SGR 438.4 SG3 79.7 ST 417.6 SR 426.4 SS 280.9  
 RDE -.3991 RRA .0905 RC3 .0144 FAU .02558 RRT .2174 RRF -.2385 RTF -.7211 CRT .8168 CRS .9163 CST .9759  
 FDE .2575 FRA .2689 FC3 -.7658 BSP 2520 SGB 960.5 R23 -.0310 R13 -.7253 LSA 633.6 MSA 182.5 SSA 17.4  
 BOE .5217 BRA .6219 BC3 .2786 FSP -193 SG1 861.6 SG2 424.4 THA 8.42 EL1 568.9 EL2 180.6 ALF 45.73

LAUNCH DATE JAN 31 1969 FLIGHT TIME 76.00 ARRIVAL DATE APR 17 1969

MELIOCENTRIC CONIC DISTANCE 188.968  
 RL 147.39 LAL -.00 LOL 130.95 VL 25.337 GAL -1.30 AZL 87.60 MCA 81.13 SMA 114.52 ECC .28789 INC 2.4020 V1 30.228  
 RP 108.09 LAP 2.37 LOP 212.07 VP 36.010 GAP -16.43 AZP 89.63 TAL 183.22 TAP 264.35 RCA 81.55 APO 147.48 V2 35.060  
 RC 44.011 GL 12.02 GP 9.18 ZAL 99.18 ZAP 9.68 ETS 253.94 ZAE 159.10 ETE 361.78 ZAC 124.89 ETC 157.08 CLP 3.08

PLANETOCENTRIC CONIC  
 C3 25.986 VHL 5.098 DLA 23.25 RAL 24.90 RAD 6568.1 VEL 12.139 PTH 2.18 VHP 10.569 DPA 19.62 RAP 30.00 ECC 1.4277  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 49 58 3105.40 -27.19 104.04 259.58 81.77 1 41 43 2505.4 -28.05 95.48  
 90.00 19 49 53 4094.69 -3.36 166.10 251.54 61.87 20 58 8 3494.7 -7.09 159.42  
 100.00 2 29 19 2785.07 -29.22 80.77 259.88 83.40 3 15 44 2185.1 -29.83 72.02  
 100.00 20 53 13 3890.25 -1.57 150.09 250.54 60.14 21 58 4 3290.2 -5.53 143.54  
 110.00 4 13 57 2457.70 -34.09 56.37 260.34 87.37 4 54 55 1857.7 -34.08 47.12  
 110.00 21 25 4 3790.38 2.58 139.93 247.95 55.90 22 28 15 3190.4 -1.91 133.73

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE -.3369 TRA -.5925 TC3 .3450 BAU .1203 SGT 890.2 SGR 442.4 SG3 88.7 ST 436.8 SR 429.8 SS 287.0  
 RDE -.3814 RRA .0858 RC3 .0305 FAU .02730 RRT .2468 RRF -.2701 RTF -.7367 CRT .8282 CRS .9223 CST .9767  
 FDE .2649 FRA .2639 FC3 -.9096 BSP 2622 SGB 994.1 R23 -.0357 R13 -.7415 LSA 651.8 MSA 181.0 SSA 18.3  
 BOE .5089 BRA .5987 BC3 .3463 FSP -217 SG1 898.8 SG2 424.6 THA 9.02 EL1 585.9 EL2 179.6 ALF 44.45

LAUNCH DATE JAN 31 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 19 1969

MELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 25.599 GAL -1.45 AZL 87.76 HCA 84.33 SMA 115.85 ECC .27334 INC 2.2446 V1 30.228  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.182 GAP -15.41 AZP 89.78 TAL 183.85 TAP 268.18 RCA 84.18 APO 147.51 V2 35.047  
 RC 44.838 GL 11.94 GP 9.74 ZAL 100.51 ZAP 9.81 ETS 265.60 ZAE 156.85 ETE 3.94 ZAC 125.84 ETC 157.06 CLP 1.19

DISTANCE 195.689

PLANETOCENTRIC CONIC  
 C3 23.467 VHL 4.844 DLA 22.68 RAL 23.59 RAD 6568.0 VEL 12.035 PTH 2.15 VHP 9.995 DPA 20.64 RAP 31.05 ECC 1.3862  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 52 46 3051.83 -27.65 100.19 256.20 83.65 1 43 38 2451.8 -28.24 91.57  
 90.00 19 36 37 4098.11 -3.25 166.29 248.41 61.85 20 44 55 3498.1 -6.99 159.61  
 100.00 2 30 58 2735.21 -29.55 77.10 256.41 85.30 3 16 33 2135.2 -29.89 68.31  
 100.00 20 41 6 3889.97 -1.58 150.07 247.49 60.15 21 45 56 3290.0 -5.54 143.52  
 110.00 4 13 45 2413.62 -34.18 52.93 256.66 89.41 4 53 59 1813.6 -33.88 43.70  
 110.00 21 14 48 3784.32 2.35 139.61 245.04 55.89 22 17 52 3184.3 -2.14 133.41

DIFFERENTIAL CORRECTIONS  
 TOE -.3359 TRA -.5689 TC3 .4218 BAU .1333 SGT 925.6 SGR 446.9 SG3 98.6 ST 453.7 SR 432.8 SS 291.6  
 ROE -.3650 RRA .0817 RC3 .0514 FAU .02921 RRT .2792 RRF -.3061 RTF -.7526 CRT .8384 CRS .9281 CST .9771  
 FOE .2717 FRA .2573 FC3-1.0777 BSP 2743 SGB 1027.9 R23 -.0416 R13 -.7580 LSA 667.7 MSA 179.0 SSA 19.2  
 BOE .4960 BRA .5748 BC3 .4249 FSP -245 SG1 936.2 SG2 424.3 TMA 9.69 EL1 601.3 EL2 178.0 ALF 43.39

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 31 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 21 1969

MELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 25.838 GAL -1.59 AZL 87.91 HCA 87.54 SMA 117.11 ECC .25997 INC 2.0891 V1 30.228  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.339 GAP -14.43 AZP 89.91 TAL 184.54 TAP 272.08 RCA 86.66 APO 147.55 V2 35.033  
 RC 45.818 GL 11.77 GP 10.36 ZAL 101.95 ZAP 10.38 ETS 276.73 ZAE 154.73 ETE 5.89 ZAC 126.70 ETC 156.07 CLP -.73

DISTANCE 202.415

PLANETOCENTRIC CONIC  
 C3 21.305 VHL 4.616 DLA 21.99 RAL 22.22 RAD 6567.9 VEL 11.945 PTH 2.13 VHP 9.449 DPA 21.70 RAP 32.05 ECC 1.3506  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 56 37 2995.05 -28.01 96.07 252.82 85.68 1 46 32 2395.0 -28.32 87.42  
 90.00 19 21 50 4108.00 -2.93 166.85 245.30 61.82 20 30 18 3508.0 -6.67 160.17  
 100.00 2 33 34 2682.42 -29.79 73.19 252.94 87.34 3 18 16 2082.4 -29.84 64.39  
 100.00 20 27 33 3895.87 -1.38 150.39 244.44 60.14 21 32 29 3295.9 -5.34 143.85  
 110.00 4 14 17 2367.31 -34.15 49.31 252.99 91.55 4 53 45 1767.3 -33.56 40.12  
 110.00 21 3 19 3783.74 2.33 139.58 242.13 55.89 22 6 23 3183.7 -2.16 133.38

DIFFERENTIAL CORRECTIONS  
 TOE -.3305 TRA -.5422 TC3 .5112 BAU .1473 SGT 958.0 SGR 452.0 SG3 109.8 ST 464.7 SR 434.9 SS 292.3  
 ROE -.3494 RRA .0782 RC3 .0783 FAU .03141 RRT .3142 RRF -.3458 RTF -.7700 CRT .8469 CRS .9352 CST .9770  
 FOE .2755 FRA .2484 FC3-1.2764 BSP 2926 SGB 1059.3 R23 -.0474 R13 -.7762 LSA 677.5 MSA 176.3 SSA 20.2  
 BOE .4810 BRA .5478 BC3 .5171 FSP -278 SG1 971.0 SG2 423.4 TMA 10.44 EL1 611.7 EL2 175.7 ALF 42.76

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 31 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 23 1969

MELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 26.057 GAL -1.74 AZL 88.07 HCA 90.74 SMA 118.29 ECC .24774 INC 1.9344 V1 30.228  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.482 GAP -13.50 AZP 90.02 TAL 185.30 TAP 276.04 RCA 88.99 APO 147.60 V2 35.020  
 RC 46.944 GL 11.50 GP 11.05 ZAL 103.49 ZAP 11.37 ETS 286.56 ZAE 152.78 ETE 7.74 ZAC 127.47 ETC 155.01 CLP -2.70

DISTANCE 209.144

PLANETOCENTRIC CONIC  
 C3 19.450 VHL 4.410 DLA 21.16 RAL 20.81 RAD 6567.8 VEL 11.867 PTH 2.11 VHP 8.930 CPA 22.80 RAP 32.97 ECC 1.3201  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 1 25 2935.63 -28.24 91.74 249.44 87.84 1 50 21 2335.6 -28.24 83.07  
 90.00 19 5 48 4123.93 -2.42 167.74 242.24 61.78 20 14 32 3523.9 -6.17 161.07  
 100.00 2 37 6 2627.11 -29.89 69.09 249.49 89.50 3 20 53 2027.1 -29.64 60.29  
 100.00 20 12 49 3907.68 -0.98 151.04 241.44 60.12 21 17 56 3307.7 -4.94 144.50  
 110.00 4 15 35 2318.99 -34.00 45.55 249.35 93.77 4 54 14 1719.0 -33.10 36.42  
 110.00 20 50 49 3788.56 2.51 139.83 239.26 55.90 21 53 58 3188.6 -1.98 133.63

DIFFERENTIAL CORRECTIONS  
 TOE -.3251 TRA -.5172 TC3 .6051 BAU .1600 SGT 991.2 SGR 458.2 SG3 122.3 ST 474.8 SR 436.2 SS 289.9  
 ROE -.3348 RRA .0753 RC3 .1118 FAU .03383 RRT .3541 RRF -.3898 RTF -.7840 CRT .8548 CRS .9376 CST .9769  
 FOE .2772 FRA .2380 FC3-1.5056 BSP 3075 SGB 1092.0 R23 -.0542 R13 -.7913 LSA 684.9 MSA 173.5 SSA 21.4  
 BOE .4667 BRA .5226 BC3 .6154 FSP -316 SG1 1007.3 SG2 421.7 TMA 11.30 EL1 621.0 EL2 173.1 ALF 42.16

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 31 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 25 1969

MELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 26.256 GAL -1.88 AZL 88.22 HCA 93.94 SMA 119.40 ECC .23658 INC 1.7796 V1 30.228  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.612 GAP -12.61 AZP 90.12 TAL 186.10 TAP 280.04 RCA 91.15 APO 147.65 V2 35.007  
 RC 48.205 GL 11.12 GP 11.81 ZAL 105.09 ZAP 12.71 ETS 294.77 ZAE 150.99 ETE 9.53 ZAC 128.12 ETC 153.88 CLP -4.73

DISTANCE 215.870

PLANETOCENTRIC CONIC  
 C3 17.862 VHL 4.226 DLA 20.20 RAL 19.40 RAD 6567.7 VEL 11.800 PTH 2.09 VHP 8.438 DPA 23.95 RAP 33.81 ECC 1.2940  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 7 8 2874.07 -28.32 87.24 246.11 90.10 1 55 2 2274.1 -28.00 78.59  
 90.00 18 48 49 4145.48 -1.72 168.84 239.28 61.73 19 57 54 3545.3 -5.49 162.28  
 100.00 2 41 29 2569.69 -29.85 64.83 246.09 91.75 3 24 19 1969.7 -29.28 56.07  
 100.00 19 57 6 3925.09 -0.38 152.00 238.53 60.11 21 2 32 3325.1 -4.36 145.46  
 110.00 4 17 40 2268.89 -33.71 41.66 245.78 96.05 4 55 29 1668.9 -32.50 32.64  
 110.00 20 37 27 3788.66 2.90 140.36 236.48 55.93 21 40 46 3198.7 -1.59 134.16

DIFFERENTIAL CORRECTIONS  
 TOE -.3176 TRA -.4925 TC3 .7068 BAU .1727 SGT 1023.9 SGR 466.2 SG3 136.3 ST 480.9 SR 436.4 SS 283.9  
 ROE -.3211 RRA .0729 RC3 .1534 FAU .03656 RRT .3980 RRF -.4387 RTF -.7972 CRT .8612 CRS .9413 CST .9763  
 FOE .2760 FRA .2258 FC3-1.7718 BSP 3223 SGB 1125.1 R23 -.0623 R13 -.8057 LSA 687.6 MSA 170.5 SSA 22.8  
 BOE .4516 BRA .4978 BC3 .7233 FSP -359 SG1 1044.0 SG2 419.5 TMA 12.28 EL1 626.7 EL2 170.2 ALF 41.78

MID-COURSE EXECUTION ACCURACY  
 ORBIT DETERMINATION ACCURACY

LAUNCH DATE JAN 31 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 222.591

RL 147.39 LAL -.00 LOL 130.95 VL 26.437 GAL -2.02 AZL 88.38 MCA 97.14 SMA 120.43 ECC .22644 INC 1.6237 V1 30.228
RP 108.29 LAP 1.61 LOP 228.09 VP 36.729 GAP -11.76 AZP 90.20 TAL 186.94 TAP 284.08 RCA 93.16 APO 147.71 V2 34.994
RC 49.590 GL 10.62 GP 12.67 ZAL 106.75 ZAP 14.36 ETS 301.42 ZAE 149.40 ETE 11.34 ZAC 128.64 ETC 152.68 CLP -6.82

PLANETOCENTRIC CONIC

C3 16.504 VHL 4.062 DLA 19.12 RAL 18.00 RAD 6567.7 VEL 11.743 PTH 2.07 VHP 7.970 DPA 25.15 RAP 34.56 ECC 1.2716
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 13 41 2810.85 -28.22 82.62 242.87 92.42 2 0 32 2210.8 -27.59 74.01
90.00 18 31 7 4172.19 -.86 170.43 236.44 61.69 19 40 39 3572.2 -4.64 163.79
100.00 2 46 48 2510.55 -29.64 60.43 242.78 94.05 3 28 39 1910.5 -28.77 51.74
100.00 19 40 40 3947.72 .38 153.24 235.75 60.11 20 46 28 3347.7 -3.60 146.71
110.00 4 20 33 2217.22 -33.27 37.70 242.32 98.36 4 57 31 1617.2 -31.75 28.79
110.00 20 23 24 3813.81 3.48 141.16 233.82 55.97 21 26 58 3213.8 -1.01 134.95

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3083 TRA -.4685 TC3 .8122 BAU .1848 SGT 1055.3 SGR 476.8 SG3 152.0 ST 483.2 SR 435.5 SS 273.7
RDE -.3080 RRA .0710 RC3 .2040 FAU .03959 RRT .4455 RRF -.4917 RTF -.8088 CRT .8662 CRS .9440 CST .9753
FDE .2713 FRA .2122 FC3-2.0767 BSP 3356 SGB 1158.0 R23 -.0719 R13 -.8189 LSA 685.2 MSA 167.4 SSA 24.4
BOE .4358 BRA .4739 BC3 .8374 FSP -405 SG1 1080.3 SG2 417.0 THA 13.42 EL1 628.7 EL2 167.3 ALF 41.57

LAUNCH DATE JAN 31 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 29 1969

HELIOCENTRIC CONIC

DISTANCE 229.303

RL 147.39 LAL -.00 LOL 130.95 VL 26.601 GAL -2.16 AZL 88.53 MCA 100.33 SMA 121.40 ECC .21726 INC 1.4658 V1 30.228
RP 108.33 LAP 1.44 LOP 231.28 VP 36.835 GAP -10.94 AZP 90.26 TAL 187.82 TAP 288.15 RCA 95.02 APO 147.77 V2 34.980
RC 51.091 GL 10.00 GP 13.62 ZAL 108.44 ZAP 16.27 ETS 306.74 ZAE 147.98 ETE 13.20 ZAC 129.02 ETC 151.42 CLP -8.98

PLANETOCENTRIC CONIC

C3 15.344 VHL 3.917 DLA 17.90 RAL 16.64 RAD 6567.6 VEL 11.693 PTH 2.06 VHP 7.529 DPA 26.42 RAP 35.19 ECC 1.2525
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 21 1 2746.35 -27.95 77.92 239.74 94.75 2 6 48 2146.4 -26.99 69.38
90.00 18 12 57 4203.63 .16 172.18 233.77 61.68 19 23 1 3603.6 -3.63 165.55
100.00 2 52 55 2450.02 -29.27 55.97 239.60 96.37 3 33 45 1850.0 -28.08 47.37
100.00 19 23 44 3975.19 1.32 154.75 233.13 60.13 20 30 0 3375.2 -2.67 148.22
110.00 4 24 15 2164.24 -32.67 33.68 239.00 100.67 5 0 20 1564.2 -30.85 24.93
110.00 20 8 53 3833.74 4.23 142.20 231.31 56.05 21 12 47 3233.7 -.25 135.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2967 TRA -.4453 TC3 .9182 BAU .1960 SGT 1083.7 SGR 490.9 SG3 169.3 ST 480.6 SR 433.0 SS 258.5
RDE -.2952 RRA .0695 RC3 .2649 FAU .04294 RRT .4955 RRF -.5477 RTF -.8187 CRT .8695 CRS .9454 CST .9736
FDE .2617 FRA .1969 FC3-2.4225 BSP 3478 SGB 1189.7 R23 -.0831 R13 -.8307 LSA 676.5 MSA 164.4 SSA 26.2
BOE .4186 BRA .4507 BC3 .9557 FSP -458 SG1 1115.2 SG2 414.3 THA 14.73 EL1 625.7 EL2 164.3 ALF 41.57

LAUNCH DATE JAN 31 1969

FLIGHT TIME 90.00

ARRIVAL DATE MAY 1 1969

HELIOCENTRIC CONIC

DISTANCE 236.004

RL 147.39 LAL -.00 LOL 130.95 VL 26.750 GAL -2.28 AZL 88.70 MCA 103.52 SMA 122.28 ECC .20897 INC 1.3047 V1 30.228
RP 108.38 LAP 1.27 LOP 234.47 VP 36.931 GAP -10.16 AZP 90.31 TAL 188.71 TAP 292.23 RCA 96.73 APO 147.84 V2 34.967
RC 52.697 GL 9.24 GP 14.69 ZAL 110.13 ZAP 18.42 ETS 310.98 ZAE 146.74 ETE 15.17 ZAC 129.23 ETC 150.10 CLP -11.23

PLANETOCENTRIC CONIC

C3 14.357 VHL 3.789 DLA 16.57 RAL 15.35 RAD 6567.6 VEL 11.651 PTH 2.05 VHP 7.112 DPA 27.75 RAP 35.69 ECC 1.2363
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 29 8 2680.89 -27.49 73.18 236.77 97.09 2 13 49 2080.9 -26.22 64.75
90.00 17 54 32 4239.39 1.31 174.18 231.30 61.71 19 5 11 3639.4 -2.48 167.55
100.00 2 59 50 2388.39 -28.72 51.48 236.58 98.67 3 39 39 1788.4 -27.22 42.99
100.00 19 6 31 4007.13 2.40 156.50 230.70 60.19 20 13 18 3407.1 -1.59 149.98
110.00 4 28 47 2110.12 -31.92 29.64 235.87 102.95 5 3 57 1510.1 -29.80 21.06
110.00 19 54 4 3858.16 5.16 143.48 228.98 56.16 20 58 22 3258.2 .68 137.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2828 TRA -.4228 TC3 1.0252 BAU .2072 SGT 1109.7 SGR 509.7 SG3 188.7 ST 472.7 SR 428.6 SS 238.0
RDE -.2826 RRA .0685 RC3 .3380 FAU .04669 RRT .5474 RRF -.6061 RTF -.8277 CRT .8707 CRS .9447 CST .9710
FDE .2462 FRA .1802 FC3-2.8157 BSP 3599 SGB 1221.2 R23 -.0958 R13 -.8422 LSA 661.0 MSA 161.5 SSA 28.4
BOE .3998 BRA .4284 BC3 1.0795 FSP -517 SG1 1149.7 SG2 411.8 THA 16.25 EL1 617.3 EL2 161.4 ALF 41.78

LAUNCH DATE JAN 31 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 3 1969

HELIOCENTRIC CONIC

DISTANCE 242.691

RL 147.39 LAL -.00 LOL 130.95 VL 26.885 GAL -2.41 AZL 88.86 MCA 106.71 SMA 123.10 ECC .20152 INC 1.1394 V1 30.228
RP 108.42 LAP 1.09 LOP 237.66 VP 37.016 GAP -9.41 AZP 90.33 TAL 189.61 TAP 296.32 RCA 98.29 APO 147.91 V2 34.954
RC 54.398 GL 8.35 GP 15.88 ZAL 111.81 ZAP 20.78 ETS 314.39 ZAE 145.68 ETE 17.28 ZAC 129.25 ETC 148.74 CLP -13.58

PLANETOCENTRIC CONIC

C3 13.517 VHL 3.677 DLA 15.11 RAL 14.15 RAD 6567.5 VEL 11.615 PTH 2.04 VHP 6.720 DPA 29.16 RAP 36.04 ECC 1.2225
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 38 2 2614.68 -26.84 68.45 233.99 99.38 2 21 37 2014.7 -25.27 60.13
90.00 17 36 3 4279.15 2.59 176.40 229.05 61.79 18 47 22 3679.1 -1.20 169.77
100.00 3 7 35 2325.87 -27.99 46.97 233.75 100.94 3 46 21 1725.9 -26.20 38.63
100.00 18 49 11 4043.19 3.62 158.48 228.48 60.31 19 56 34 3443.2 -.36 151.96
110.00 4 34 9 2055.04 -31.00 25.60 232.95 105.18 5 8 24 1455.0 -28.61 17.22
110.00 19 39 7 3886.78 6.24 144.99 226.86 56.32 20 43 54 3286.8 1.78 138.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2663 TRA -.4014 TC3 1.1289 BAU .2180 SGT 1131.9 SGR 534.8 SG3 210.3 ST 459.0 SR 421.5 SS 211.4
RDE -.2696 RRA .0678 RC3 .4247 FAU .05085 RRT .5991 RRF -.6647 RTF -.8356 CRT .8695 CRS .9406 CST .9669
FDE .2234 FRA .1625 FC3-3.2568 BSP 3722 SGB 1251.9 R23 -.1100 R13 -.8534 LSA 637.9 MSA 158.7 SSA 31.0
BOE .3789 BRA .4071 BC3 1.2061 FSP -584 SG1 1182.9 SG2 409.7 THA 18.04 EL1 602.6 EL2 158.6 ALF 42.20

LAUNCH DATE JAN 31 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 5 1969

MELIOCENTRIC CONIC

DISTANCE 249.361

RL 147.39 LAL -.00 LOL 130.95 VL 27.006 GAL -2.52 AZL 89.03 HCA 109.90 SMA 123.85 ECC .19486 INC .9686 V1 30.228
RP 108.45 LAP .91 LOP 240.85 VP 37.092 GAP -8.70 AZP 90.33 TAL 190.51 TAP 300.41 RCA 99.72 APO 147.99 V2 34.942
RC 56.186 GL 7.32 GP 17.22 ZAL 113.46 ZAP 23.36 ETS 317.16 ZAE 144.77 ETE 19.60 ZAC 129.06 ETC 147.35 CLP -16.04

PLANETOCENTRIC CONIC

C3 12.806 VHL 3.578 DLA 13.55 RAL 13.06 RAD 6567.5 VEL 11.584 PTH 2.03 VHP 6.353 DPA 30.67 RAP 36.20 ECC 1.2107
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 47 44 2547.82 -26.01 63.73 231.42 101.60 2 30 12 1947.8 -24.15 55.55
90.00 17 17 39 4322.62 3.99 178.83 227.05 61.94 18 29 42 3722.6 .20 172.19
100.00 3 16 11 2262.57 -27.09 42.48 231.15 103.14 3 53 54 1662.6 -25.02 34.30
100.00 18 31 53 4083.10 4.96 160.69 226.52 60.48 19 39 56 3483.1 .99 154.15
110.00 4 40 23 1999.10 -29.94 21.59 230.27 107.33 5 13 42 1399.1 -27.28 13.41
110.00 19 24 10 3919.34 7.47 146.71 224.97 56.55 20 29 30 3319.3 3.02 140.45

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2477 TRA -.3814 TC3 1.2243 BAU .2282 SGT 1148.8 SGR 567.6 SG3 234.0 ST 439.9 SR 411.2 SS 178.3
ROE -.2559 RRA .0675 RC3 .5265 FAU .05540 RRT .6485 RRF -.7216 RTF -.8418 CRT .8652 CRS .9295 CST .9595
FOE .1915 FRA .1438 FC3-3.7457 BSP 3830 SGB 1281.4 R23 -.1259 R13 -.8638 LSA 607.4 MSA 156.1 SSA 34.2
BOE .3562 BRA .3873 BC3 1.3327 FSP -658 SG1 1214.4 SG2 408.7 THA 20.15 EL1 581.6 EL2 155.9 ALF 42.77

LAUNCH DATE JAN 31 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 7 1969

MELIOCENTRIC CONIC

DISTANCE 256.013

RL 147.39 LAL -.00 LOL 130.95 VL 27.115 GAL -2.62 AZL 89.21 HCA 113.08 SMA 124.54 ECC .18891 INC .7909 V1 30.228
RP 108.49 LAP .73 LOP 244.03 VP 37.160 GAP -8.01 AZP 90.31 TAL 191.39 TAP 304.47 RCA 101.01 APO 148.07 V2 34.929
RC 58.051 GL 6.14 GP 18.72 ZAL 115.04 ZAP 26.17 ETS 319.44 ZAE 144.00 ETE 22.16 ZAC 128.63 ETC 145.96 CLP -18.62

PLANETOCENTRIC CONIC

C3 12.205 VHL 3.494 DLA 11.87 RAL 12.10 RAD 6567.5 VEL 11.558 PTH 2.02 VHP 6.012 DPA 32.27 RAP 36.15 ECC 1.2009
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 58 17 2480.31 -25.00 59.04 229.10 103.74 2 39 38 1880.3 -22.87 51.02
90.00 16 59 26 4369.65 5.49 181.47 225.32 62.18 18 12 15 3769.6 1.72 174.82
100.00 3 25 40 2198.52 -26.02 38.02 228.80 105.25 4 2 18 1598.5 -23.68 30.01
100.00 18 14 44 4126.67 6.41 163.10 224.82 60.74 19 23 31 3526.7 2.47 156.54
110.00 4 47 32 1942.31 -28.72 17.62 227.86 109.39 5 19 55 1342.3 -25.81 9.65
110.00 19 9 21 3955.64 8.83 148.65 223.34 56.84 20 15 17 3355.6 4.40 142.36

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2251 TRA -.3612 TC3 1.3144 BAU .2390 SGT 1160.2 SGR 610.3 SG3 260.2 ST 412.3 SR 396.3 SS 137.6
ROE -.2406 RRA .0676 RC3 .6463 FAU .06043 RRT .6946 RRF -.7748 RTF -.8485 CRT .8560 CRS .8986 CST .9417
FOE .1472 FRA .1237 FC3-4.2865 BSP 3984 SGB 1311.0 R23 -.1402 R13 -.8757 LSA 566.5 MSA 153.6 SSA 38.1
BOE .3295 BRA .3675 BC3 1.4647 FSP -743 SG1 1245.5 SG2 409.0 THA 22.65 EL1 551.0 EL2 153.3 ALF 43.68

LAUNCH DATE JAN 31 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 9 1969

MELIOCENTRIC CONIC

DISTANCE 262.646

RL 147.39 LAL -.00 LOL 130.95 VL 27.212 GAL -2.72 AZL 89.40 HCA 116.26 SMA 125.16 ECC .18364 INC .6047 V1 30.228
RP 108.53 LAP .54 LOP 247.21 VP 37.220 GAP -7.35 AZP 90.27 TAL 192.24 TAP 308.51 RCA 102.18 APO 148.14 V2 34.917
RC 59.985 GL 4.81 GP 20.40 ZAL 116.53 ZAP 29.19 ETS 321.36 ZAE 143.34 ETE 25.02 ZAC 127.95 ETC 144.59 CLP -21.35

PLANETOCENTRIC CONIC

C3 11.701 VHL 3.421 DLA 10.08 RAL 11.29 RAD 6567.4 VEL 11.536 PTH 2.01 VHP 5.697 DPA 33.99 RAP 35.85 ECC 1.1926
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 9 46 2412.07 -23.82 54.39 227.04 105.78 2 49 58 1812.1 -21.43 46.54
90.00 16 41 27 4420.14 7.08 184.32 223.88 62.51 17 55 7 3820.1 3.35 177.64
100.00 3 36 6 2133.65 -24.79 33.60 226.73 107.27 4 11 40 1533.6 -22.19 25.77
100.00 17 57 49 4175.80 7.97 165.73 223.40 61.10 19 7 23 3573.8 4.06 159.13
110.00 4 55 40 1884.65 -27.35 13.69 225.73 111.35 5 27 5 1284.6 -24.20 5.94
110.00 18 54 44 3995.56 10.31 150.79 221.99 57.23 20 1 19 3395.6 5.91 144.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2029 TRA -.3447 TC3 1.3832 BAU .2488 SGT 1164.0 SGR 664.7 SG3 288.4 ST 383.7 SR 376.6 SS 94.1
ROE -.2237 RRA .0675 RC3 .7847 FAU .06578 RRT .7342 RRF -.8223 RTF -.8515 CRT .8423 CRS .7968 CST .8805
FOE .0918 FRA .1057 FC3-4.8672 BSP 4087 SGB 1340.4 R23 -.1567 R13 -.8859 LSA 522.6 MSA 151.6 SSA 42.8
BOE .3020 BRA .3512 BC3 1.5903 FSP -833 SG1 1275.6 SG2 411.8 THA 25.61 EL1 516.0 EL2 150.9 ALF 44.37

LAUNCH DATE JAN 31 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 11 1969

MELIOCENTRIC CONIC

DISTANCE 269.257

RL 147.39 LAL -.00 LOL 130.95 VL 27.299 GAL -2.80 AZL 89.59 HCA 119.44 SMA 125.72 ECC .17897 INC .4079 V1 30.228
RP 108.57 LAP .36 LOP 250.39 VP 37.272 GAP -6.71 AZP 90.20 TAL 193.05 TAP 312.50 RCA 103.22 APO 148.22 V2 34.906
RC 61.981 GL 3.32 GP 22.27 ZAL 117.92 ZAP 32.45 ETS 323.03 ZAE 142.74 ETE 28.24 ZAC 126.98 ETC 143.28 CLP -24.23

PLANETOCENTRIC CONIC

C3 11.282 VHL 3.359 DLA 8.18 RAL 10.64 RAD 6567.4 VEL 11.518 PTH 2.01 VHP 5.410 DPA 35.82 RAP 35.26 ECC 1.1857
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 22 17 2342.87 -22.46 49.78 225.27 107.71 3 1 20 1742.9 -19.83 42.09
90.00 16 23 45 4474.18 8.77 187.40 222.74 62.97 17 38 19 3874.2 5.07 180.67
100.00 3 47 35 2067.76 -23.38 29.21 224.94 109.17 4 22 3 1467.8 -20.55 21.56
100.00 17 41 8 4224.52 9.63 168.58 222.28 61.56 18 51 32 3624.5 5.76 161.94
110.00 5 4 51 1825.96 -25.84 9.80 223.89 113.20 5 35 17 1226.0 -22.47 2.26
110.00 18 40 21 4039.09 11.90 153.16 220.93 57.72 19 47 40 3439.1 7.55 146.76

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1787 TRA -.3304 TC3 1.4332 BAU .2589 SGT 1159.4 SGR 732.8 SG3 318.6 ST 350.6 SR 349.8 SS 58.3
ROE -.2038 RRA .0672 RC3 .9447 FAU .07148 RRT .7663 RRF -.8630 RTF -.8529 CRT .8199 CRS .2827 CST .4934
FOE .0200 FRA .0905 FC3-5.4846 BSP 4194 SGB 1371.6 R23 -.1714 R13 -.8968 LSA 473.1 MSA 150.2 SSA 48.6
BOE .2710 BRA .3372 BC3 1.7166 FSP -930 SG1 1306.4 SG2 417.8 THA 29.10 EL1 472.5 EL2 148.6 ALF 44.92

LAUNCH DATE JAN 31 1969 FLIGHT TIME 102.00 ARRIVAL DATE MAY 13 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.376 GAL -2.88 AZL 89.80 HCA 122.62 SMA 126.22 ECC .17486 INC .1986 V1 30.228  
 RP 108.60 LAP .17 LOP 253.57 VP 37.318 GAP -6.11 AZP 90.11 TAL 193.81 TAP 316.43 RCA 104.15 APO 148.29 V2 34.894  
 RC 64.032 GL 1.65 GP 24.37 ZAL 119.18 ZAP 35.95 ETS 324.54 ZAE 142.16 ETE 31.86 ZAC 125.71 ETC 142.06 CLP -27.29

Planetary Centric Conic: C3 10.940 VHL 3.308 DLA 6.16 RAL 10.16 RAD 6567.4 VEL 11.503 PTH 2.00 VHP 5.151 DPA 37.78 RAP 34.33 ECC 1.1800  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 35 59 2272.34 -20.93 45.17 223.81 109.52 3 13 52 1672.3 -18.08 37.66  
 90.00 16 6 16 4532.01 10.54 -190.72 221.93 63.57 17 21 48 3932.0 6.91 183.93  
 100.00 4 0 15 2000.54 -21.81 24.83 223.46 110.96 4 33 36 1400.5 -18.77 17.36  
 100.00 17 24 41 4279.05 11.38 171.68 221.49 62.17 18 36 0 3679.0 7.57 164.97  
 110.00 5 15 12 1766.01 -24.17 5.94 222.38 114.94 5 44 38 1166.0 -20.61 358.61  
 110.00 18 26 14 4086.35 13.60 155.76 220.19 58.33 19 34 20 3486.3 9.32 149.28

Differential Corrections: TOE -.1543 TRA -.3187 TC3 1.4565 BAU .2694 SGT 1143.7 SGR 816.4 SG3 350.1 ST 316.3 SR 314.6 SS 77.8  
 RDE -.1800 RRA .0663 RC3 1.1271 FAU .07733 RRT .7899 RRF -.8963 RTF -.8513 CRT .7863 CRS -.6495 CST -.3851  
 FDE -.0685 FRA .0793 FC3-6.1194 BSP 4300 SGB 1405.2 R23 -.1827 R13 -.9081 LSA 423.8 MSA 149.7 SSA 55.2  
 BDE .2371 BRA .3255 BC3 1.8417 FSP -1032 SGI 1338.5 SG2 427.8 THA 33.25 ELI 421.6 EL2 145.8 ALF 44.81

LAUNCH DATE JAN 31 1969 FLIGHT TIME 104.00 ARRIVAL DATE MAY 15 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.443 GAL -2.94 AZL 90.05 HCA 125.80 SMA 126.67 ECC .17126 INC .0185 V1 30.228  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.357 GAP -5.52 AZP 89.99 TAL 194.51 TAP 320.30 RCA 104.97 APO 148.36 V2 34.883  
 RC 66.131 GL -1.21 GP 26.69 ZAL 120.29 ZAP 39.70 ETS 325.96 ZAE 141.53 ETE 35.92 ZAC 124.11 ETC 140.96 CLP -30.55

Planetary Centric Conic: C3 10.668 VHL 3.266 DLA 4.02 RAL 9.88 RAD 6567.4 VEL 11.492 PTH 2.00 VHP 4.922 DPA 39.87 RAP 33.02 ECC 1.1756  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 51 3 2199.99 -19.21 40.56 222.67 111.21 3 27 43 1600.0 -16.16 33.21  
 90.00 15 48 57 4594.07 12.40 194.34 221.46 64.34 17 5 31 3994.1 8.84 187.46  
 100.00 4 14 17 1931.54 -20.07 20.45 222.31 112.63 4 46 29 1331.5 -16.83 13.16  
 100.00 17 8 24 4337.75 13.22 175.07 221.04 62.95 18 20 42 3737.8 9.49 168.27  
 110.00 5 26 51 1704.42 -22.35 2.09 221.19 116.56 5 55 16 1104.4 -18.60 354.96  
 110.00 18 12 19 4137.64 15.42 158.63 219.78 59.11 19 21 17 3537.6 11.21 152.05

Differential Corrections: TOE -.1281 TRA -.3081 TC3 1.4554 BAU .2816 SGT 1117.1 SGR 918.1 SG3 382.6 ST 278.9 SR 267.5 SS 146.0  
 RDE -.1505 RRA .0648 RC3 1.3348 FAU .08328 RRT .8059 RRF -.9229 RTF -.8482 CRT .7311 CRS -.8805 CST -.6342  
 FDE -.1793 FRA .0723 FC3-6.7385 BSP 4453 SGB 1446.0 R23 -.1854 R13 -.9211 LSA 379.5 MSA 151.3 SSA 61.3  
 BDE .1977 BRA .3148 BC3 1.9748 FSP -1142 SGI 1377.1 SG2 440.9 THA 38.12 ELI 359.6 EL2 141.5 ALF 43.38

LAUNCH DATE JAN 31 1969 FLIGHT TIME 106.00 ARRIVAL DATE MAY 17 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.502 GAL -3.00 AZL 90.27 HCA 128.97 SMA 127.06 ECC .16813 INC .2681 V1 30.228  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.391 GAP -4.96 AZP 89.83 TAL 195.13 TAP 324.10 RCA 105.70 APO 148.42 V2 34.873  
 RC 68.274 GL -2.28 GP 29.27 ZAL 121.23 ZAP 43.70 ETS 327.38 ZAE 140.79 ETE 40.43 ZAC 122.17 ETC 140.04 CLP -34.02

Planetary Centric Conic: C3 10.462 VHL 3.235 DLA 1.75 RAL 9.80 RAD 6567.4 VEL 11.483 PTH 2.00 VHP 4.727 DPA 42.09 RAP 31.25 ECC 1.1722  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 7 45 2125.18 -17.30 35.90 221.88 112.77 3 43 10 1525.2 -14.07 28.71  
 90.00 15 31 39 4661.01 14.34 198.30 221.36 65.32 16 49 20 4061.0 10.89 191.32  
 100.00 4 29 54 1860.18 -18.14 16.03 221.50 114.18 5 0 54 1260.2 -14.72 8.91  
 100.00 16 52 11 4401.24 15.16 178.79 220.96 63.92 18 5 32 3801.2 11.53 171.88  
 110.00 5 40 0 1640.74 -20.36 358.22 220.35 118.07 6 7 21 1040.7 -16.45 351.28  
 110.00 17 58 34 4193.44 17.34 161.81 219.75 60.07 19 8 27 3593.4 13.23 155.11

Differential Corrections: TOE -.1044 TRA -.3016 TC3 1.4144 BAU .2951 SGT 1075.6 SGR 1038.3 SG3 414.1 ST 246.3 SR 207.2 SS 232.3  
 RDE -.1142 RRA .0611 RC3 1.5654 FAU .08891 RRT .8113 RRF -.9432 RTF -.8390 CRT .6477 CRS -.9172 CST -.6508  
 FDE -.3101 FRA .0759 FC3-7.3573 BSP 4599 SGB 1495.1 R23 -.1816 R13 -.9341 LSA 359.4 MSA 156.4 SSA 62.9  
 BDE .1548 BRA .3077 BC3 2.1097 FSP -1247 SGI 1422.9 SG2 458.9 THA 43.75 ELI 293.3 EL2 132.6 ALF 37.49

LAUNCH DATE JAN 31 1969 FLIGHT TIME 108.00 ARRIVAL DATE MAY 19 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.553 GAL -3.04 AZL 90.53 HCA 132.14 SMA 127.40 ECC .16541 INC .5337 V1 30.228  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.419 GAP -4.42 AZP 89.64 TAL 195.68 TAP 327.82 RCA 106.33 APO 148.48 V2 34.862  
 RC 70.456 GL -4.58 GP 32.11 ZAL 121.96 ZAP 47.93 ETS 328.88 ZAE 139.84 ETE 45.38 ZAC 119.88 ETC 139.33 CLP -37.72

Planetary Centric Conic: C3 10.325 VHL 3.213 DLA -.69 RAL 9.95 RAD 6567.4 VEL 11.477 PTH 1.99 VHP 4.566 DPA 44.43 RAP 28.96 ECC 1.1699  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 26 22 2047.03 -15.18 31.14 221.47 114.19 4 0 29 1447.0 -11.79 24.11  
 90.00 15 14 11 4733.82 16.36 202.69 221.67 66.56 16 33 4 4133.8 13.05 195.57  
 100.00 4 47 23 1785.67 -16.00 11.53 221.07 115.59 5 17 9 1185.7 -12.43 4.56  
 100.00 16 35 50 4470.40 17.18 182.93 221.29 65.16 17 50 21 3870.4 13.69 175.88  
 110.00 5 54 54 1574.36 -18.18 354.30 219.89 119.46 6 21 8 974.4 -14.12 347.54  
 110.00 17 44 49 4254.50 19.38 165.37 220.12 61.27 18 55 44 3654.5 15.39 158.52

Differential Corrections: TOE -.0837 TRA -.2981 TC3 1.3314 BAU .3108 SGT 1018.3 SGR 1177.6 SG3 443.0 ST 219.9 SR 131.7 SS 330.0  
 RDE -.0693 RRA .0542 RC3 1.8160 FAU .09387 RRT .8053 RRF -.9583 RTF -.8223 CRT .5082 CRS -.8861 CST -.6020  
 FDE -.4605 FRA .0926 FC3-7.8710 BSP 4772 SGB 1556.8 R23 -.1681 R13 -.9473 LSA 380.7 MSA 162.5 SSA 57.0  
 BDE .1087 BRA .3030 BC3 2.2518 FSP -1344 SGI 1480.9 SG2 480.1 THA 50.13 ELI 232.9 EL2 107.1 ALF 21.75

LAUNCH DATE JAN 31 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 21 1969

MELIOCENTRIC CONIC DISTANCE 301.958  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.597 GAL -3.08 AZL 90.83 HCA 135.30 SMA 127.70 ECC .16306 INC .8271 V1 30.228  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.442 GAP -3.90 AZP 89.41 TAL 196.15 TAP 331.45 RCA 106.88 APO 148.52 V2 34.853  
 RC 72.672 GL -7.14 GP 35.19 ZAL 122.48 ZAP 52.38 ETS 830.53 ZAE 138.60 ETE 50.72 ZAC 117.27 ETC 138.89 CLP -41.67

PLANETOCENTRIC CONIC  
 C3 10.260 VHL 3.203 DLA -3.31 RAL 10.33 RAD 6567.4 VEL 11.474 PTH 1.99 VHP 4.445 DPA 46.86 RAP 26.07 ECC 1.1688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 47 22 1964.43 -12.82 26.23 221.47 115.47 4 20 7 1364.4 -9.29 19.33  
 90.00 14 56 14 4813.87 18.46 207.62 222.45 68.14 16 16 28 4213.9 15.33 200.34  
 100.00 5 7 10 1707.02 -13.63 6.89 221.06 116.86 5 35 37 1107.0 -9.92 .07  
 100.00 16 19 8 4546.51 19.30 187.59 222.08 66.72 17 34 54 3946.5 15.98 180.37  
 110.00 6 11 52 1504.49 -15.80 350.29 219.84 120.72 6 36 56 904.5 -11.61 343.69  
 110.00 17 30 55 4321.81 21.53 169.41 220.96 62.78 18 42 57 3721.8 17.71 162.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0651 TRA -.2948 TC3 1.2116 BAU .3308 SGT 946.1 SGR 1338.6 SG3 468.3 ST 198.0 SR 51.0 SS 442.2  
 RDE -.0116 RRA .0443 RC3 2.0856 FAU .09796 RRT .7876 RRF -.9695 RTF -.7974 CRT -.0426 CRS -.3186 CST -.5212  
 FDE -.6365 FRA .1180 FC3-8.2658 BSP 5050 SGB 1639.2 R23 -.1430 R13 -.9605 LSA 456.2 MSA 164.6 SSA 46.5  
 BOE .0661 BRA .2982 BC3 2.4120 FSP -1437 SG1 1561.1 SG2 499.8 THA 57.10 EL1 198.1 EL2 51.0 ALF 179.33

LAUNCH DATE JAN 31 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 23 1969

MELIOCENTRIC CONIC DISTANCE 308.423  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.634 GAL -3.10 AZL 91.16 HCA 138.47 SMA 127.95 ECC .16105 INC 1.1551 V1 30.228  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.461 GAP -3.40 AZP 89.14 TAL 196.53 TAP 335.00 RCA 107.34 APO 148.56 V2 34.844  
 RC 74.919 GL -9.99 GP 38.53 ZAL 122.73 ZAP 57.00 ETS 332.41 ZAE 136.98 ETE 56.35 ZAC 114.33 ETC 138.74 CLP -45.87

PLANETOCENTRIC CONIC  
 C3 10.278 VHL 3.206 DLA -6.14 RAL 10.98 RAD 6567.4 VEL 11.475 PTH 1.99 VHP 4.368 DPA 49.34 RAP 22.52 ECC 1.1692  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 11 21 1875.96 -10.18 21.08 221.96 116.57 4 42 36 1276.0 -6.53 14.30  
 90.00 14 37 26 4903.07 20.62 213.27 223.75 70.15 15 59 9 4303.1 17.73 205.79  
 100.00 5 29 46 1622.96 -11.00 2.04 221.53 117.97 5 56 49 1023.0 -7.17 355.34  
 100.00 16 1 42 4631.30 21.49 192.94 223.41 68.70 17 18 53 4031.3 18.40 185.50  
 110.00 6 31 20 1430.19 -13.17 346.13 220.25 121.83 6 55 10 830.2 -8.87 339.68  
 110.00 17 16 37 4396.83 23.79 174.06 222.33 64.70 18 29 54 3796.8 20.18 166.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0553 TRA -.2952 TC3 1.0366 BAU .3536 SGT 856.2 SGR 1514.9 SG3 485.6 ST 188.5 SR 116.5 SS 559.9  
 RDE .0595 RRA .0271 RC3 2.3556 FAU .10028 RRT .7459 RRF -.9775 RTF -.7504 CRT -.5436 CRS .9407 CST -.4586  
 FDE -.8237 FRA .1645 FC3-8.4469 BSP 5337 SGB 1740.2 R23 -.1132 R13 -.9714 LSA 577.8 MSA 165.6 SSA 36.0  
 BOE .0813 BRA .2964 BC3 2.5736 FSP -1498 SG1 1660.6 SG2 520.2 THA 64.45 EL1 201.9 EL2 91.3 ALF 156.30

LAUNCH DATE JAN 31 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 25 1969

MELIOCENTRIC CONIC DISTANCE 314.862  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.665 GAL -3.11 AZL 91.53 HCA 141.63 SMA 128.16 ECC .15935 INC 1.5267 V1 30.228  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.476 GAP -2.92 AZP 88.80 TAL 196.82 TAP 338.45 RCA 107.74 APO 148.58 V2 34.835  
 RC 77.194 GL -13.19 GP 42.09 ZAL 122.68 ZAP 61.73 ETS 334.61 ZAE 134.94 ETE 62.15 ZAC 111.13 ETC 138.93 CLP -50.34

PLANETOCENTRIC CONIC  
 C3 10.400 VHL 3.225 DLA -9.23 RAL 11.92 RAD 6567.4 VEL 11.480 PTH 2.00 VHP 4.339 DPA 51.83 RAP 18.23 ECC 1.1712  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 39 7 1779.62 -7.19 15.57 223.01 117.46 5 8 47 1179.6 -3.46 8.88  
 90.00 14 17 9 5004.14 22.81 219.87 225.69 72.76 15 40 33 4404.1 20.24 212.14  
 100.00 5 55 57 1531.77 -8.04 356.89 222.96 118.89 6 21 29 931.8 -4.12 350.29  
 100.00 15 43 0 4727.23 23.73 199.18 225.37 71.26 17 1 47 4127.2 20.95 191.49  
 110.00 6 53 55 1350.26 -10.26 341.77 221.21 122.79 7 16 25 750.3 -5.87 335.44  
 110.00 17 1 32 4481.50 26.14 179.51 224.36 67.15 18 16 13 3881.5 22.82 171.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0550 TRA -.2953 TC3 .8165 BAU .3808 SGT 754.7 SGR 1706.7 SG3 493.7 ST 187.7 SR 269.3 SS 685.0  
 RDE .1489 RRA .0018 RC3 2.6141 FAU .10062 RRT .6680 RRF -.9832 RTF -.6687 CRT -.4897 CRS .9926 CST -.4536  
 FDE -1.0220 FRA .2255 FC3-8.3764 BSP 5715 SGB 1866.1 R23 -.0802 R13 -.9800 LSA 740.7 MSA 166.1 SSA 27.3  
 BOE .1587 BRA .2953 BC3 2.7387 FSP -1531 SG1 1787.4 SG2 536.2 THA 71.86 EL1 292.0 EL2 150.1 ALF 116.76

LAUNCH DATE JAN 31 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 27 1969

MELIOCENTRIC CONIC DISTANCE 321.276  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.690 GAL -3.12 AZL 91.95 HCA 144.79 SMA 128.33 ECC .15791 INC 1.9537 V1 30.228  
 RP 108.81 LAP -1.13 LOP 275.76 VP 37.487 GAP -2.45 AZP 88.40 TAL 197.02 TAP 341.81 RCA 108.07 APO 148.60 V2 34.827  
 RC 79.493 GL -16.78 GP 45.84 ZAL 122.28 ZAP 66.49 ETS 337.20 ZAE 132.43 ETE 67.99 ZAC 107.70 ETC 139.49 CLP -55.06

PLANETOCENTRIC CONIC  
 C3 10.658 VHL 3.265 DLA -12.60 RAL 13.19 RAD 6567.4 VEL 11.491 PTH 2.00 VHP 4.368 DPA 54.28 RAP 13.13 ECC 1.1754  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 11 58 1672.56 -3.79 9.54 224.77 118.08 5 39 50 1072.6 -.01 2.90  
 90.00 13 54 24 5121.12 24.95 227.77 228.38 76.16 15 19 46 4521.1 22.80 219.76  
 100.00 6 26 49 1431.06 -4.69 351.29 224.28 119.56 6 50 40 831.1 -.72 344.75  
 100.00 15 22 14 4837.85 25.94 206.65 228.10 74.60 16 42 52 4237.9 23.57 198.65  
 110.00 7 20 25 1263.16 -7.01 337.12 222.84 123.54 7 41 29 663.2 -2.56 330.87  
 110.00 16 45 7 4578.52 28.54 186.04 227.17 70.34 18 1 26 3978.5 25.59 178.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0682 TRA -.2931 TC3 .5575 BAU .4124 SGT 651.6 SGR 1911.3 SG3 491.0 ST 198.6 SR 462.0 SS 814.5  
 RDE .2611 RRA -.0337 RC3 2.8405 FAU .09869 RRT .5237 RRF -.9873 RTF -.5215 CRT -.5597 CRS .9982 CST -.5358  
 FDE -1.2231 FRA .2982 FC3-8.0165 BSP 6212 SGB 2019.4 R23 -.0485 R13 -.9861 LSA 942.4 MSA 166.2 SSA 20.8  
 BOE .2699 BRA .2950 BC3 2.8947 FSP -1536 SG1 1944.2 SG2 545.7 THA 79.00 EL1 476.9 EL2 159.4 ALF 105.27

LAUNCH DATE JAN 31 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 327.663

RL 147.39 LAL -.00 LOL 130.95 VL 27.710 GAL -3.11 AZL 92.45 HCA 147.95 SMA 128.47 ECC .15673 INC 2.4528 V1 30.228
RP 108.83 LAP -1.30 LOP 278.92 VP 37.495 GAP -2.01 AZP 87.92 TAL 197.13 TAP 345.08 RCA 108.34 APO 148.60 V2 34.820
RC 81.813 GL -20.81 GP 49.76 ZAL 121.48 ZAP 71.17 ETS 340.24 ZAE 129.46 ETE 73.77 ZAC 104.11 ETC 140.43 CLP -60.03

PLANETOCENTRIC CONIC

C3 11.105 VHL 3.332 DLA -16.31 RAL 14.83 RAD 6567.4 VEL 11.511 PTH 2.00 VHP 4.462 DPA 56.62 RAP 7.19 ECC 1.1828
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 51 55 1550.09 .15 2.70 227.43 118.32 6 17 45 950.1 3.94 356.06
90.00 13 27 35 5260.42 26.86 237.52 231.99 80.68 14 55 15 4660.4 25.30 229.20
100.00 7 4 7 1317.13 -.84 345.02 226.88 119.88 7 26 4 717.1 3.14 338.50
100.00 14 58 4 4968.62 27.98 215.83 231.76 79.02 16 20 53 4368.6 26.18 207.49
110.00 7 52 6 1166.79 -3.36 332.04 225.31 124.04 8 11 33 566.8 1.13 325.84
110.00 16 26 34 4691.72 30.87 194.02 230.98 74.54 17 44 45 4091.7 28.44 185.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1026 TRA -.2876 TC3 .2619 BAU .4462 SGT 571.9 SGR 2115.0 SG3 474.2 ST 234.6 SR 688.5 SS 938.0
ROE .3980 RRA -.0851 RC3 2.9940 FAU .09388 RRT .2532 RRF -.9902 RTF -.2487 CRT -.7016 CRS .9995 CST -.6902
FOE -1.4075 FRA .3856 FC3 -7.3190 BSP 6747 SGB 2191.0 R23 -.0210 R13 -.9900 LSA 1175.0 MSA 167.4 SSA 15.8
BOE .4110 BRA .3000 BC3 3.0054 FSP -1490 SG1 2120.3 SG2 551.9 THA 85.80 EL1 709.0 EL2 162.3 ALF 104.20

LAUNCH DATE JAN 31 1969

FLIGHT TIME 120.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 334.024

RL 147.39 LAL -.00 LOL 130.95 VL 27.725 GAL -3.09 AZL 93.05 HCA 151.10 SMA 128.57 ECC .15576 INC 3.0481 V1 30.228
RP 108.85 LAP -1.47 LOP 282.08 VP 37.499 GAP -1.58 AZP 87.33 TAL 197.15 TAP 348.25 RCA 108.55 APO 148.60 V2 34.813
RC 84.153 GL -25.34 GP 53.81 ZAL 120.22 ZAP 75.67 ETS 343.78 ZAE 126.03 ETE 79.41 ZAC 100.43 ETC 141.79 CLP -65.22

PLANETOCENTRIC CONIC

C3 11.832 VHL 3.440 DLA -20.38 RAL 16.92 RAD 6567.5 VEL 11.542 PTH 2.01 VHP 4.636 DPA 58.81 RAP .38 ECC 1.1947
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 42 53 1402.74 4.89 354.46 231.36 117.93 7 6 16 802.7 8.59 347.74
90.00 12 53 16 5434.14 28.15 250.06 236.65 86.83 14 23 50 4834.1 27.42 241.47
100.00 7 50 58 1183.06 3.70 337.66 230.71 119.68 8 10 41 583.1 7.63 331.07
100.00 14 27 52 5129.05 29.50 227.50 236.53 84.97 15 53 21 4529.1 28.50 214.84
110.00 8 30 54 1057.90 .80 326.36 228.90 124.17 8 48 32 457.9 5.28 320.14
110.00 16 4 26 4826.97 32.90 204.04 236.02 80.14 17 24 53 4227.0 31.19 195.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1637 TRA -.2729 TC3 -.0423 BAU .4826 SGT 557.1 SGR 2317.9 SG3 445.4 ST 309.1 SR 951.2 SS 1053.8
ROE .5677 RRA -.1539 RC3 3.0504 FAU .08664 RRT -.1443 RRF -.9923 RTF .1502 CRT -.8367 CRS .9998 CST -.8320
FOE -1.5702 FRA .4744 FC3 -6.3393 BSP 7379 SGB 2383.9 R23 .0015 R13 -.9923 LSA 1443.1 MSA 167.8 SSA 12.2
BOE .5908 BRA .3133 BC3 3.0507 FSP -1409 SG1 2319.4 SG2 551.0 THA 92.11 EL1 986.8 EL2 163.2 ALF 105.65

LAUNCH DATE JAN 31 1969

FLIGHT TIME 122.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 340.358

RL 147.39 LAL -.00 LOL 130.95 VL 27.735 GAL -3.06 AZL 93.78 HCA 154.25 SMA 128.64 ECC .15498 INC 3.7750 V1 30.228
RP 108.87 LAP -1.64 LOP 285.25 VP 37.501 GAP -1.16 AZP 86.60 TAL 197.07 TAP 351.32 RCA 108.71 APO 148.58 V2 34.807
RC 86.508 GL -30.39 GP 57.99 ZAL 118.45 ZAP 79.86 ETS 347.87 ZAE 122.18 ETE 84.89 ZAC 96.72 ETC 143.56 CLP -70.61

PLANETOCENTRIC CONIC

C3 12.991 VHL 3.604 DLA -24.82 RAL 19.54 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 4.909 DPA 60.78 RAP 352.66 ECC 1.2138
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 7 55 24 1201.93 11.13 343.01 237.25 116.20 8 15 26 601.9 14.57 336.02
90.00 12 1 39 5674.71 27.80 267.61 242.27 95.60 13 36 14 5074.7 28.29 258.98
100.00 8 54 33 1010.98 9.41 328.08 236.35 118.50 9 11 24 411.0 13.15 321.28
100.00 13 45 11 5340.89 29.73 243.22 242.44 93.22 15 14 12 4740.9 29.86 234.42
110.00 9 20 19 930.15 5.66 319.67 234.06 123.77 9 35 49 330.2 10.06 313.34
110.00 15 35 55 4994.48 34.11 216.95 242.48 87.68 16 59 9 4394.5 33.42 207.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2646 TRA -.2451 TC3 -.3349 BAU .5173 SGT 647.7 SGR 2499.7 SG3 403.5 ST 440.0 SR 1235.9 SS 1147.1
ROE .7721 RRA -.2491 RC3 2.9596 FAU .07680 RRT -.5213 RRF -.9937 RTF .5273 CRT -.9192 CRS .9999 CST -.9180
FOE -1.6895 FRA .5659 FC3 -5.1176 BSP 8000 SGB 2582.2 R23 .0197 R13 -.9936 LSA 1734.4 MSA 169.0 SSA 9.4
BOE .8162 BRA .3495 BC3 2.9785 FSP -1279 SG1 2523.5 SG2 547.5 THA 98.08 EL1 1301.6 EL2 164.5 ALF 108.43

LAUNCH DATE JAN 31 1969

FLIGHT TIME 124.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 346.664

RL 147.39 LAL -.00 LOL 130.95 VL 27.741 GAL -3.01 AZL 94.69 HCA 157.39 SMA 128.68 ECC .15439 INC 4.6884 V1 30.228
RP 108.89 LAP -1.80 LOP 288.41 VP 37.501 GAP -.76 AZP 85.67 TAL 196.90 TAP 354.29 RCA 108.82 APO 148.55 V2 34.802
RC 88.877 GL -35.98 GP 62.29 ZAL 116.12 ZAP 83.62 ETS 352.56 ZAE 117.96 ETE 90.24 ZAC 93.04 ETC 145.79 CLP -76.17

PLANETOCENTRIC CONIC

C3 14.858 VHL 3.855 DLA -29.62 RAL 22.80 RAD 6567.6 VEL 11.672 PTH 2.05 VHP 5.314 DPA 62.52 RAP 343.98 ECC 1.2445
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
80.94 8 57 21 1063.31 22.16 337.83 247.02 110.17 9 15 4 463.3 24.71 329.98
99.06 11 25 45 5872.23 22.17 280.54 247.03 110.15 13 3 37 5272.2 24.72 272.69
100.00 10 58 47 670.46 19.61 307.96 245.94 113.02 11 9 57 70.5 22.56 300.40
100.00 12 7 0 5740.31 24.76 271.71 247.98 107.30 13 42 41 5140.3 26.90 263.56
110.00 10 28 48 765.01 11.81 310.83 241.70 122.31 10 41 33 165.0 15.99 304.22
110.00 14 53 29 5218.53 33.36 234.36 250.18 97.92 16 20 27 4618.5 34.10 225.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.4192 TRA -.1933 TC3 -.5726 BAU .5496 SGT 832.1 SGR 2658.7 SG3 352.6 ST 631.1 SR 1530.6 SS 1211.5
ROE 1.0206 RRA -.3756 RC3 2.7070 FAU .06524 RRT -.7477 RRF -.9948 RTF .7533 CRT -.9598 CRS 1.0000 CST -.9599
FOE -1.7600 FRA .6470 FC3 -3.8011 BSP 8644 SGB 2785.9 R23 .0335 R13 -.9944 LSA 2044.5 MSA 169.1 SSA 7.2
BOE 1.1034 BRA .4224 BC3 2.7669 FSP -1118 SG1 2733.6 SG2 537.3 THA 103.71 EL1 1647.3 EL2 164.7 ALF 111.82



LAUNCH DATE JAN 31 1969 FLIGHT TIME 126.00 ARRIVAL DATE JUN 6 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.743 GAL -2.96 AZL 95.88 HCA 160.53 SMA 128.70 ECC .15395 INC 5.8785 V1 30.228  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.498 GAP -.38 AZP 84.46 TAL 196.64 TAP 357.17 RCA 108.89 APO 148.51 V2 34.797  
 RC 91.256 GL -42.04 GP 66.77 ZAL 113.22 ZAP 86.83 ETS 357.94 ZAE 113.36 ETE 95.58 ZAC 89.40 ETC 148.58 CLP -81.94

Planetocentric Conic: C3 17.957 VHL 4.238 DLA -34.66 RAL 26.86 RAD 6567.7 VEL 11.804 PTH 2.09 VHP 5.904 DPA 63.98 RAP 334.24 ECC 1.2955  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.11 7 52 50 1359.10 24.50 1.37 255.62 115.33 8 15 29 759.1 27.70 353.62  
 110.89 13 2 37 5662.92 24.51 265.73 255.62 115.32 14 37 0 5062.9 27.71 257.98  
 69.11 7 52 50 1359.10 24.50 1.37 255.62 115.33 8 15 29 759.1 27.70 353.62  
 110.89 13 2 37 5662.92 24.51 265.73 255.62 115.32 14 37 0 5062.9 27.71 257.98  
 69.11 7 52 50 1359.10 24.50 1.37 255.62 115.33 8 15 29 759.1 27.70 353.62  
 110.89 13 2 37 5662.92 24.51 265.73 255.62 115.32 14 37 0 5062.9 27.71 257.98

Differential Corrections: TOE -0.6515 TRA -1.022 TC3 -.7181 BAU .5767 SGT 1083.8 SGR 2787.3 SG3 296.4 ST 882.6 SR 1810.5 SS 1238.3  
 RDE 1.3237 RRA -.5409 RC3 2.2926 FAU .05276 RRT -.8639 RRF -.9958 RTF .8691 CRT -.9790 CRS 1.0000 CST -.9797  
 FDE-1.7760 FRA .7086 FC3-2.5435 BSP 9337 SGB 2990.6 R23 .0431 R13 -.9950 LSA 2358.5 MSA 166.5 SSA 5.5  
 BOE 1.4754 BRA .5504 BC3 2.4025 FSP -945 SG1 2945.7 SG2 516.6 THA 109.18 EL1 2007.6 EL2 162.3 ALF 115.69

LAUNCH DATE JAN 31 1969 FLIGHT TIME 128.00 ARRIVAL DATE JUN 8 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.742 GAL -2.89 AZL 97.50 HCA 163.65 SMA 128.69 ECC .15365 INC 7.5036 V1 30.228  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.493 GAP -.01 AZP 82.80 TAL 196.29 TAP 359.94 RCA 108.92 APO 148.46 V2 34.793  
 RC 93.644 GL -48.44 GP 71.52 ZAL 109.81 ZAP 89.39 ETS 4.26 ZAE 108.35 ETE 101.26 ZAC 85.79 ETC 152.23 CLP -88.08

Planetocentric Conic: C3 23.384 VHL 4.836 DLA -39.76 RAL 31.86 RAD 6567.9 VEL 12.032 PTH 2.15 VHP 6.774 DPA 65.09 RAP 323.21 ECC 1.3848  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.84 7 29 37 1549.07 25.61 17.44 266.67 121.52 7 55 26 949.1 29.58 10.02  
 119.16 14 5 45 5599.13 25.62 261.23 266.68 121.51 15 39 5 4999.1 29.59 253.80  
 60.84 7 29 37 1549.07 25.61 17.44 266.67 121.52 7 55 26 949.1 29.58 10.02  
 119.16 14 5 45 5599.13 25.62 261.23 266.68 121.51 15 39 5 4999.1 29.59 253.80  
 60.84 7 29 37 1549.07 25.61 17.44 266.67 121.52 7 55 26 949.1 29.58 10.02  
 119.16 14 5 45 5599.13 25.62 261.23 266.68 121.51 15 39 5 4999.1 29.59 253.80

Differential Corrections: TOE-1.0050 TRA .0578 TC3 -.7456 BAU .5918 SGT 1394.9 SGR 2865.1 SG3 238.2 ST 1191.2 SR 2029.6 SS 1217.4  
 RDE 1.6863 RRA -.7635 RC3 1.7400 FAU .03997 RRT -.9252 RRF -.9965 RTF .9302 CRT -.9884 CRS 1.0000 CST -.9894  
 FDE-1.7305 FRA .7530 FC3-1.4799 BSP 9990 SGB 3186.6 R23 .0488 R13 -.9956 LSA 2644.7 MSA 160.2 SSA 4.2  
 BOE 1.9630 BRA .7657 BC3 1.8930 FSP -760 SG1 3150.0 SG2 481.6 THA 114.87 EL1 2348.1 EL2 156.5 ALF 120.27

LAUNCH DATE JAN 31 1969 FLIGHT TIME 130.00 ARRIVAL DATE JUN 10 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.737 GAL -2.81 AZL 99.87 HCA 166.75 SMA 128.66 ECC .15347 INC 9.8677 V1 30.228  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.486 GAP .35 AZP 80.39 TAL 195.84 TAP 2.59 RCA 108.91 APO 148.40 V2 34.789  
 RC 96.038 GL -54.86 GP 76.71 ZAL 105.99 ZAP 91.21 ETS 12.37 ZAE 102.82 ETE 108.23 ZAC 82.12 ETC 157.67 CLP -95.28

Planetocentric Conic: C3 33.704 VHL 5.806 DLA -44.53 RAL 37.94 RAD 6568.3 VEL 12.453 PTH 2.25 VHP 8.109 DPA 65.66 RAP 310.54 ECC 1.5547  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.07 7 25 18 1718.14 24.54 31.42 280.26 128.40 7 53 56 1118.1 29.34 24.65  
 125.93 14 58 32 5612.11 24.56 261.54 280.28 128.40 16 32 5 5012.1 29.35 254.77  
 54.07 7 25 18 1718.14 24.54 31.42 280.26 128.40 7 53 56 1118.1 29.34 24.65  
 125.93 14 58 32 5612.11 24.56 261.54 280.28 128.40 16 32 5 5012.1 29.35 254.77  
 54.07 7 25 18 1718.14 24.54 31.42 280.26 128.40 7 53 56 1118.1 29.34 24.65  
 125.93 14 58 32 5612.11 24.56 261.54 280.28 128.40 16 32 5 5012.1 29.35 254.77

Differential Corrections: TOE-1.5676 TRA -.3604 TC3 -.6506 BAU .5829 SGT 1792.5 SGR 2851.0 SG3 182.0 ST 1554.5 SR 2118.8 SS 1149.7  
 RDE 2.0998 RRA-1.0587 RC3 1.1181 FAU .02766 RRT -.9623 RRF -.9973 RTF .9670 CRT -.9937 CRS .9999 CST -.9947  
 FDE-1.6298 FRA .7813 FC3 -.7104 BSP 10585 SGB 3367.7 R23 .0500 R13 -.9964 LSA 2864.7 MSA 144.5 SSA 3.1  
 BOE 2.6204 BRA 1.1184 BC3 1.2936 FSP -581 SG1 3342.0 SG2 415.7 THA 121.72 EL1 2624.1 EL2 141.2 ALF 126.21

LAUNCH DATE JAN 31 1969 FLIGHT TIME 132.00 ARRIVAL DATE JUN 12 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.729 GAL -2.72 AZL 103.64 HCA 169.82 SMA 128.61 ECC .15339 INC 13.6357 V1 30.228  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.478 GAP .68 AZP 76.57 TAL 195.27 TAP 5.10 RCA 108.88 APO 148.33 V2 34.787  
 RC 98.436 GL -60.76 GP 82.61 ZAL 101.97 ZAP 92.23 ETS 25.96 ZAE 96.46 ETE 120.32 ZAC 78.17 ETC 168.77 CLP-107.62

Planetocentric Conic: C3 56.000 VHL 7.483 DLA -48.38 RAL 44.97 RAD 6569.0 VEL 13.318 PTH 2.43 VHP 10.317 DPA 65.30 RAP 295.82 ECC 1.9216  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.98 7 35 0 1892.12 20.30 43.76 295.77 134.91 8 6 32 1292.1 25.83 37.89  
 131.02 15 44 56 5692.93 20.31 265.07 295.78 134.91 17 19 49 5092.9 25.84 259.21  
 48.98 7 35 0 1892.12 20.30 43.76 295.77 134.91 8 6 32 1292.1 25.83 37.89  
 131.02 15 44 56 5692.93 20.31 265.07 295.78 134.91 17 19 49 5092.9 25.84 259.21  
 48.98 7 35 0 1892.12 20.30 43.76 295.77 134.91 8 6 32 1292.1 25.83 37.89  
 131.02 15 44 56 5692.93 20.31 265.07 295.78 134.91 17 19 49 5092.9 25.84 259.21

Differential Corrections: TOE-2.6024 TRA 1.0452 TC3 -.4627 BAU .5183 SGT 2429.3 SGR 2558.9 SG3 132.0 ST 2025.1 SR 1914.4 SS 1053.8  
 RDE 2.4218 RRA-1.3760 RC3 .5150 FAU .01626 RRT -.9876 RRF -.9981 RTF .9901 CRT -.9974 CRS .9999 CST -.9982  
 FDE-1.4998 FRA .8117 FC3 -.2514 BSP 11061 SGB 3528.4 R23 .0466 R13 -.9974 LSA 2977.6 MSA 103.2 SSA 2.2  
 BOE 3.5549 BRA 1.7280 BC3 .6923 FSP -420 SG1 3517.5 SG2 277.2 THA 133.49 EL1 2785.0 EL2 99.8 ALF 136.61

LAUNCH DATE JAN 31 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

DISTANCE 377.563

RL 147.39 LAL -.00 LOL 130.95 VL 27.719 GAL -2.59 AZL 110.55 MCA 172.81 SMA 128.53 ECC .15336 INC20.5482 V1 30.228
RP 108.94 LAP -2.52 LOP 304.22 VP 37.469 GAP .98 AZP 69.60 TAL 194.55 TAP 7.36 RCA 108.82 APO 148.25 V2 34.785
RC 100.837 GL -64.92 GP 87.43 ZAL 97.99 ZAP 92.42 ETS 74.01 ZAE 88.45 ETE 166.70 ZAC 73.35 ETC 214.89 CLP 160.34

PLANETOCENTRIC CONIC

C3 115.164 VHL 10.731 DLA -50.20 RAL 52.06 RAD 6570.2 VEL 15.379 PTH 2.75 VMP 14.460 DPA 63.00 RAP 278.71 ECC 2.8953
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.65 7 55 37 2074.41 12.60 53.38 311.31 139.01 8 30 12 1474.4 18.57 48.27
133.35 16 20 56 5838.31 12.61 271.00 311.33 139.01 17 58 14 5238.3 18.59 265.89
46.65 7 55 37 2074.41 12.60 53.38 311.31 139.01 8 30 12 1474.4 18.57 48.27
133.35 16 20 56 5838.31 12.61 271.00 311.33 139.01 17 58 14 5238.3 18.59 265.89
46.65 7 55 37 2074.41 12.60 53.38 311.31 139.01 8 30 12 1474.4 18.57 48.27
133.35 16 20 56 5838.31 12.61 271.00 311.33 139.01 17 58 14 5238.3 18.59 265.89

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.0602 TRA 2.9011 TC3 -.1919 BAU .2966 SGT 3650.1 SGR 139.7 SG3 92.3 ST 2797.5 SR 82.7 SS 988.4
RDE -.1417 RRA -.1337 RC3 .0171 FAU .00531 RRT -.1581 RRF -.1950 RTF .9983 CRT .7781 CRS -.7623 CST -.9997
FDE-1.4210 FRA .8961 FC3 -.0399 BSP 11456 SGB 3652.7 R23 .0375 R13 -.9984 LSA 2967.6 MSA 57.0 SSA 1.6
BOE 5.0622 BRA 2.9042 BC3 .1926 FSP -295 SGT 3650.1 SGT 137.9 TMA 179.65 EL1 2798.3 EL2 52.0 ALF 1.32

LAUNCH DATE JAN 31 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

DISTANCE 383.320

RL 147.39 LAL -.00 LOL 130.95 VL 27.706 GAL -2.40 AZL 126.49 MCA 175.56 SMA 128.44 ECC .15321 INC36.4918 V1 30.228
RP 108.95 LAP -2.64 LOP 307.38 VP 37.458 GAP 1.20 AZP 53.59 TAL 193.48 TAP 9.04 RCA 108.77 APO 148.12 V2 34.784
RC 103.240 GL -63.82 GP 76.63 ZAL 94.38 ZAP 91.83 ETS 158.10 ZAE 76.00 ETE 249.14 ZAC 65.75 ETC 298.97 CLP 97.96

PLANETOCENTRIC CONIC

C3 336.541 VHL 18.345 DLA -47.13 RAL 56.22 RAD 6571.9 VEL 21.397 PTH 3.21 VMP 23.987 DPA 55.75 RAP 259.12 ECC 6.5386
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.60 8 25 30 2209.63 3.73 56.75 322.74 137.02 9 2 19 1609.6 9.55 51.65
129.40 16 24 12 750.20 3.74 302.85 322.75 137.02 16 36 43 150.2 9.57 297.75
50.60 8 25 30 2209.63 3.73 56.75 322.74 137.02 9 2 19 1609.6 9.55 51.65
129.40 16 24 12 750.20 3.74 302.85 322.75 137.02 16 36 43 150.2 9.57 297.75
50.60 8 25 30 2209.63 3.73 56.75 322.74 137.02 9 2 19 1609.6 9.55 51.65
129.40 16 24 12 750.20 3.74 302.85 322.75 137.02 16 36 43 150.2 9.57 297.75

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6362 TRA 1.3528 TC3 -.0177 BAU .6136 SGT 806.9 SGR 3573.5 SG3 66.4 ST 543.9 SR 2584.6 SS 1101.2
RDE-7.9093 RRA 5.9198 RC3 .1352 FAU-.01170 RRT .0968 RRF .9988 RTF .1448 CRT -.7972 CRS -.9996 CST .7793
FDE-1.6106 FRA 1.2416 FC3 .0301 BSP 11460 SGB 3663.5 R23 -.0432 R13 .9990 LSA 2842.8 MSA 327.8 SSA .5
BOE 8.0767 BRA 5.6831 BC3 .1364 FSP -212 SGT 3574.4 SGT 802.9 TMA 88.68 EL1 2621.3 EL2 323.8 ALF 99.67

LAUNCH DATE JAN 31 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

DISTANCE 387.878

RL 147.39 LAL -.00 LOL 130.95 VL 27.691 GAL -1.97 AZL 171.56 MCA 177.22 SMA 128.34 ECC .15229 INC81.5534 V1 30.228
RP 108.95 LAP -2.75 LOP 310.54 VP 37.447 GAP 1.10 AZP 8.45 TAL 191.10 TAP 8.32 RCA 108.80 APO 147.88 V2 34.783
RC 105.643 GL -46.27 GP 50.58 ZAL 91.80 ZAP 90.85 ETS 174.37 ZAE 49.73 ETE 263.90 ZAC 50.47 ETC 325.25 CLP 91.34

PLANETOCENTRIC CONIC

C31435.246 VHL 37.885 DLA -29.49 RAL 51.47 RAD 6573.2 VEL 39.453 PTH 3.56 VMP 48.153 DPA 33.64 RAP 239.12 ECC24.6205
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
81.39 10 55 11 1803.34 -.68 20.84 322.66 119.49 11 25 14 1203.3 3.25 14.29
98.61 13 16 37 1346.55 -.67 347.30 322.67 119.49 13 39 4 746.5 3.27 340.75
100.00 12 46 15 1443.79 -5.12 351.99 320.15 119.49 13 10 18 843.8 -1.15 345.45
100.00 14 8 15 1181.32 3.76 337.56 325.18 119.68 14 27 56 581.3 7.68 330.97
110.00 12 21 25 1522.04 -16.40 351.29 313.55 120.42 12 46 47 922.0 -12.24 344.65
110.00 16 49 34 675.84 15.00 305.90 331.84 121.08 17 0 50 75.8 19.01 299.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 5.7489 TRA -.8738 TC3 -.0864 BAU 4.3033 SGT 1099.1 SGR 2888.8 SG3 55.7 ST 870.9 SR 1605.1 SS 1483.7
RDE-9.9105 RRA10.9802 RC3 .2069 FAU-.07547 RRT -.8251 RRF .9999 RTF -.8183 CRT -.9516 CRS-1.0000 CST .9492
FDE-2.1954 FRA 2.4893 FC3 .0455 BSP 9153 SGB 3090.8 R23 -.0757 R13 .9971 LSA 2339.3 MSA 253.0 SSA .5
BOE11.4572 BRA11.0149 BC3 .2243 FSP -173 SGT 3033.7 SGT 591.2 TMA 108.14 EL1 1810.6 EL2 237.3 ALF 117.83

LAUNCH DATE JAN 31 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

DISTANCE 397.908

RL 147.39 LAL -.00 LOL 130.95 VL 27.674 GAL -2.62 AZL 43.91 MCA 183.97 SMA 128.22 ECC .15617 INC46.0914 V1 30.228
RP 108.95 LAP -2.86 LOP 313.70 VP 37.434 GAP 2.45 AZP 136.02 TAL 194.39 TAP 18.36 RCA 108.20 APO 148.25 V2 34.783
RC 108.045 GL 60.74 GP -72.68 ZAL 93.77 ZAP 93.39 ETS 181.08 ZAE 74.10 ETE 93.14 ZAC 89.15 ETC 50.95 CLP 101.45

PLANETOCENTRIC CONIC

C3 521.152 VHL 22.829 DLA 65.08 RAL 346.06 RAD 6572.4 VEL 25.347 PTH 3.35 VMP 27.307 DPA -73.83 RAP 143.78 ECC-9.5768
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
28.59 14 41 52 5023.82 -2.08 243.00 255.10 24.94 16 5 36 4423.8 -9.33 240.01
151.41 0 48 5 3306.41 -2.08 99.17 255.08 24.93 1 43 11 2706.4 -9.32 96.18
28.59 14 41 52 5023.82 -2.08 243.00 255.10 24.94 16 5 36 4423.8 -9.33 240.01
151.41 0 48 5 3306.41 -2.08 99.17 255.08 24.93 1 43 11 2706.4 -9.32 96.18
28.59 14 41 52 5023.82 -2.08 243.00 255.10 24.94 16 5 36 4423.8 -9.33 240.01
151.41 0 48 5 3306.41 -2.08 99.17 255.08 24.93 1 43 11 2706.4 -9.32 96.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.4325 TRA 1.8289 TC3 -.0781 BAU 1.4588 SGT 1201.5 SGR 3634.6 SG3 64.6 ST 486.0 SR 3052.4 SS 1481.3
RD-11.9593 RRA 3.1017 RC3 -.1942 FAU-.02197 RRT .7806 RRF -.9997 RTF -.7832 CRT .8497 CRS 1.0000 CST .8515
FDE 2.4583 FRA -.6499 FC3 .0365 BSP 11823 SGB 3828.0 R23 -.0474 R13 -.9986 LSA 3418.1 MSA 254.1 SSA 1.2
BOE12.0448 BRA 3.6008 BC3 .2094 FSP -208 SGT 3758.5 SGT 726.2 TMA 74.96 EL1 3080.4 EL2 253.9 ALF 82.24

LAUNCH DATE JAN 31 1969 FLIGHT TIME 142.00 ARRIVAL DATE JUN 22 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.654 GAL -2.38 AZL 63.41 MCA 186.61 SMA 128.09 ECC .15617 INC26.5903 V1 30.228  
 RP 108.94 LAP -2.95 LOP 316.87 VP 37.421 GAP 2.62 AZP 116.44 TAL 193.04 TAP 19.65 RCA 108.09 APO 148.09 V2 34.784  
 RC 110.446 GL 65.29 GP -82.98 ZAL 95.84 ZAP 96.32 ETS 215.18 ZAE 88.32 ETE 127.64 ZAC 97.88 ETC 86.28 CLP 154.15

Distance 403.499

Planeto-centric Conic: C3 185.341 VHL 13.614 DLA 65.31 RAL 333.22 RAD 6571.0 VEL 17.512 PTH 2.97 VHP 15.777 DPA -72.29 RAP 92.51 ECC 4.0503  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.33 13 50 3 4902.83 -9.62 240.16 238.76 25.07 15 11 45 4302.8 -16.84 237.04  
 151.67 23 53 33 3183.54 -9.61 96.03 238.74 25.07 24 46 36 2583.5 -16.84 92.92  
 28.33 13 50 3 4902.83 -9.62 240.16 238.76 25.07 15 11 45 4302.8 -16.84 237.04  
 151.67 23 53 33 3183.54 -9.61 96.03 238.74 25.07 24 46 36 2583.5 -16.84 92.92  
 28.33 13 50 3 4902.83 -9.62 240.16 238.76 25.07 15 11 45 4302.8 -16.84 237.04  
 151.67 23 53 33 3183.54 -9.61 96.03 238.74 25.07 24 46 36 2583.5 -16.84 92.92

Differential Corrections: TDE 3.5839 TRA -.3283 TC3 -.0159 BAU .0551 SGT 1544.8 SGR 3777.3 SG3 89.8 ST 1511.6 SR 2391.9 SS 1035.8  
 RDE -5.2468 RRA 3.0416 RC3 -.0156 FAU .00295 RRT -.7442 RRF -.9875 RTF .8367 CRT -.9846 CRS .9953 CST -.9733  
 FDE 1.7264 FRA -.7361 FC3 -.0138 BSP 13024 SGB 4080.9 R23 -.0720 R13 -.9966 LSA 2984.1 MSA 417.2 SSA 1.6  
 BOE 6.3540 BRA 3.0593 BC3 .0222 FSP -297 SG1 3960.5 SG2 984.1 THA 108.08 EL1 2798.5 EL2 417.2 ALF 121.67

LAUNCH DATE JAN 31 1969 FLIGHT TIME 144.00 ARRIVAL DATE JUN 24 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.633 GAL -2.20 AZL 71.39 MCA 189.57 SMA 127.95 ECC .15663 INC18.6061 V1 30.228  
 RP 108.94 LAP -3.04 LOP 320.03 VP 37.407 GAP 2.88 AZP 108.36 TAL 191.98 TAP 21.56 RCA 107.91 APO 147.99 V2 34.786  
 RC 112.844 GL 64.19 GP -78.80 ZAL 97.62 ZAP 99.98 ETS 297.50 ZAE 96.86 ETE 209.82 ZAC 102.31 ETC 169.12 CLP-153.16

Distance 409.410

Planeto-centric Conic: C3 95.770 VHL 9.786 DLA 63.41 RAL 333.35 RAD 6569.9 VEL 14.735 PTH 2.67 VHP 11.044 DPA -67.07 RAP 70.14 ECC 2.5761  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.56 13 55 46 4768.96 -17.06 235.05 234.53 27.92 15 15 15 4169.0 -24.08 231.37  
 149.44 23 48 51 3066.31 -17.04 93.47 234.51 27.92 24 39 57 2466.3 -24.07 89.79  
 30.56 13 55 46 4768.96 -17.06 235.05 234.53 27.92 15 15 15 4169.0 -24.08 231.37  
 149.44 23 48 51 3066.31 -17.04 93.47 234.51 27.92 24 39 57 2466.3 -24.07 89.79  
 30.56 13 55 46 4768.96 -17.06 235.05 234.53 27.92 15 15 15 4169.0 -24.08 231.37  
 149.44 23 48 51 3066.31 -17.04 93.47 234.51 27.92 24 39 57 2466.3 -24.07 89.79

Differential Corrections: TDE 4.3710 TRA -2.4498 TC3 -.3049 BAU .4019 SGT 4143.8 SGR 760.6 SG3 128.1 ST 2733.7 SR 620.2 SS 1003.6  
 RDE 1.0356 RRA -.3330 RC3 -.0744 FAU .01702 RRT .9626 RRF .9636 RTF .9943 CRT .9892 CRS -.9958 CST -.9985  
 FDE 1.7141 FRA -.8019 FC3 -.1539 BSP 14087 SGB 4213.0 R23 .0892 R13 .9951 LSA 2975.8 MSA 99.8 SSA 1.6  
 BOE 4.4920 BRA 2.4723 BC3 .3139 FSP -451 SG1 4208.1 SG2 202.8 THA 10.04 EL1 2801.8 EL2 88.7 ALF 12.66

LAUNCH DATE JAN 31 1969 FLIGHT TIME 146.00 ARRIVAL DATE JUN 26 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.611 GAL -2.03 AZL 75.59 MCA 192.63 SMA 127.79 ECC .15729 INC14.4123 V1 30.228  
 RP 108.93 LAP -3.12 LOP 323.20 VP 37.392 GAP 3.15 AZP 104.08 TAL 190.97 TAP 23.60 RCA 107.69 APO 147.89 V2 34.789  
 RC 115.239 GL 61.64 GP -72.09 ZAL 98.95 ZAP 104.08 ETS 312.48 ZAE 103.29 ETE 223.97 ZAC 105.23 ETC 184.19 CLP-142.27

Distance 415.416

Planeto-centric Conic: C3 60.908 VHL 7.804 DLA 61.36 RAL 336.90 RAD 6569.1 VEL 13.501 PTH 2.47 VHP 8.653 DPA -61.68 RAP 57.89 ECC 2.0024  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 32.99 14 15 46 4654.40 -22.85 229.59 233.60 31.35 15 33 20 4054.4 -29.61 225.23  
 147.01 0 1 5 2971.73 -22.84 90.85 233.58 31.34 0 50 36 2371.7 -29.60 86.50  
 32.99 14 15 46 4654.40 -22.85 229.59 233.60 31.35 15 33 20 4054.4 -29.61 225.23  
 147.01 0 1 5 2971.73 -22.84 90.85 233.58 31.34 0 50 36 2371.7 -29.60 86.50  
 32.99 14 15 46 4654.40 -22.85 229.59 233.60 31.35 15 33 20 4054.4 -29.61 225.23  
 147.01 0 1 5 2971.73 -22.84 90.85 233.58 31.34 0 50 36 2371.7 -29.60 86.50

Differential Corrections: TDE 3.3361 TRA -1.8969 TC3 -.6093 BAU .5457 SGT 3917.0 SGR 1673.8 SG3 171.8 ST 2599.8 SR 1299.4 SS 1092.4  
 RDE 1.7214 RRA -.6577 RC3 -.2791 FAU .02789 RRT .9817 RRF .9972 RTF .9880 CRT .9943 CRS -.9997 CST -.9967  
 FDE 1.9227 FRA -.8203 FC3 -.3964 BSP 13281 SGB 4259.7 R23 .1143 R13 .9918 LSA 3101.9 MSA 138.5 SSA 2.2  
 BOE 3.7540 BRA 2.0077 BC3 .6701 FSP -560 SG1 4249.5 SG2 294.2 THA 22.87 EL1 2903.8 EL2 124.4 ALF 26.48

LAUNCH DATE JAN 31 1969 FLIGHT TIME 148.00 ARRIVAL DATE JUN 28 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 27.587 GAL -1.85 AZL 78.16 MCA 195.73 SMA 127.63 ECC .15809 INC11.8406 V1 30.228  
 RP 108.92 LAP -3.19 LOP 326.36 VP 37.377 GAP 3.43 AZP 101.41 TAL 189.95 TAP 25.68 RCA 107.45 APO 147.81 V2 34.792  
 RC 117.630 GL 58.75 GP -65.68 ZAL 99.83 ZAP 108.41 ETS 315.74 ZAE 108.54 ETE 225.74 ZAC 107.42 ETC 187.16 CLP-140.09

Distance 421.443

Planeto-centric Conic: C3 43.794 VHL 6.618 DLA 59.40 RAL 341.21 RAD 6568.7 VEL 12.851 PTH 2.34 VHP 7.282 DPA -56.36 RAP 49.99 ECC 1.7207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.33 14 38 51 4561.90 -27.01 224.27 233.69 34.84 15 54 53 3961.9 -33.46 219.22  
 144.67 0 12 27 2900.57 -26.99 88.39 233.67 34.84 1 0 47 2300.6 -33.45 83.34  
 35.33 14 38 51 4561.90 -27.01 224.27 233.69 34.84 15 54 53 3961.9 -33.46 219.22  
 144.67 0 12 27 2900.57 -26.99 88.39 233.67 34.84 1 0 47 2300.6 -33.45 83.34  
 35.33 14 38 51 4561.90 -27.01 224.27 233.69 34.84 15 54 53 3961.9 -33.46 219.22  
 144.67 0 12 27 2900.57 -26.99 88.39 233.67 34.84 1 0 47 2300.6 -33.45 83.34

Differential Corrections: TDE 2.9027 TRA -1.6112 TC3 -.9790 BAU .6337 SGT 3937.6 SGR 1792.3 SG3 219.0 ST 2644.5 SR 1412.5 SS 1190.7  
 RDE 1.5968 RRA -.5663 RC3 -.4616 FAU .03911 RRT .9785 RRF .9969 RTF .9833 CRT .9939 CRS -.9998 CST -.9958  
 FDE 2.1304 FRA -.8268 FC3 -.7732 BSP 13499 SGB 4326.4 R23 .1342 R13 .9886 LSA 3222.1 MSA 155.8 SSA 2.9  
 BOE 3.3129 BRA 1.7078 BC3 1.0824 FSP -722 SG1 4313.2 SG2 337.5 THA 24.16 EL1 2995.0 EL2 137.1 ALF 28.03

LAUNCH DATE JAN 31 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 427.475

RL 147.39 LAL -.00 LOL 130.95 VL 27.561 GAL -1.67 AZL 79.90 HCA 198.85 SMA 127.46 ECC .15903 INC10.1001 V1 30.228
RP 108.91 LAP -3.25 LOP 329.53 VP 37.362 GAP 3.72 AZP 99.57 TAL 188.91 TAP 27.77 RCA 107.19 APO 147.73 V2 34.796
RC 120.015 GL 55.87 GP -59.76 ZAL 100.30 ZAP 112.81 ETS 316.72 ZAE 112.92 ETE 224.62 ZAC 109.21 ETC 187.53 CLP-140.33

PLANETOCENTRIC CONIC

C3 34.069 VHL 5.837 DLA 57.60 RAL 345.59 RAD 6568.3 VEL 12.468 PTH 2.26 VHP 6.441 DPA -51.21 RAP 44.53 ECC 1.5607
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
37.49 15 1 56 4487.68 -29.88 219.34 234.22 38.16 16 16 43 3887.7 -36.03 213.65
142.51 0 24 16 2848.01 -29.87 86.18 234.21 38.16 1 11 44 2248.0 -36.02 80.50
37.49 15 1 56 4487.68 -29.88 219.34 234.22 38.16 16 16 43 3887.7 -36.03 213.65
142.51 0 24 16 2848.01 -29.87 86.18 234.21 38.16 1 11 44 2248.0 -36.02 80.50
37.49 15 1 56 4487.68 -29.88 219.34 234.22 38.16 16 16 43 3887.7 -36.03 213.65
142.51 0 24 16 2848.01 -29.87 86.18 234.21 38.16 1 11 44 2248.0 -36.02 80.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6826 TRA-1.4159 TC3-1.3896 BAU .6901 SGT 4036.7 SGR 1740.4 SG3 264.0 ST 2746.3 SR 1390.7 SS 1277.5
RDE 1.3947 RRA -.4429 RC3 -.6035 FAU .04937 RRT .9754 RRF .9960 RTF .9795 CRT .9938 CRS -.9999 CST -.9954
FDE 2.2955 FRA -.7940 FC3-1.2545 BSP 13803 SGB 4396.0 R23 .1504 R13 .9852 LSA 3328.9 MSA 162.9 SSA 3.6
BOE 3.0234 BRA 1.4835 BC3 1.5150 FSP -885 SG1 4381.7 SG2 353.2 THA 22.97 EL1 3075.2 EL2 138.0 ALF 26.77

LAUNCH DATE JAN 31 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC

DISTANCE 433.504

RL 147.39 LAL -.00 LOL 130.95 VL 27.535 GAL -1.49 AZL 81.16 HCA 201.99 SMA 127.28 ECC .16008 INC 8.8393 V1 30.228
RP 108.89 LAP -3.30 LOP 332.70 VP 37.347 GAP 4.00 AZP 98.21 TAL 187.84 TAP 29.83 RCA 106.90 APO 147.65 V2 34.800
RC 122.394 GL 53.11 GP -54.35 ZAL 100.38 ZAP 117.12 ETS 317.09 ZAE 116.54 ETE 222.43 ZAC 110.75 ETC 187.08 CLP-141.45

PLANETOCENTRIC CONIC

C3 27.971 VHL 5.289 DLA 55.99 RAL 349.84 RAD 6568.1 VEL 12.221 PTH 2.20 VHP 5.906 DPA -46.30 RAP 40.67 ECC 1.4603
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
39.45 15 24 12 4427.46 -31.84 214.86 235.08 41.18 16 37 59 3827.5 -37.69 208.63
140.55 0 35 56 2809.20 -31.83 84.28 235.06 41.18 1 22 45 2209.2 -37.68 78.05
39.45 15 24 12 4427.46 -31.84 214.86 235.08 41.18 16 37 59 3827.5 -37.69 208.63
140.55 0 35 56 2809.20 -31.83 84.28 235.06 41.18 1 22 45 2209.2 -37.68 78.05
39.45 15 24 12 4427.46 -31.84 214.86 235.08 41.18 16 37 59 3827.5 -37.69 208.63
140.55 0 35 56 2809.20 -31.83 84.28 235.06 41.18 1 22 45 2209.2 -37.68 78.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5519 TRA-1.2560 TC3-1.8230 BAU .7301 SGT 4156.7 SGR 1631.9 SG3 302.8 ST 2859.9 SR 1320.4 SS 1344.4
RDE 1.2037 RRA -.3307 RC3 -.6990 FAU .05791 RRT .9722 RRF .9944 RTF .9762 CRT .9937 CRS -.9999 CST -.9951
FDE 2.4007 FRA -.7165 FC3-1.7923 BSP 13998 SGB 4465.6 R23 .1638 R13 .9817 LSA 3420.8 MSA 166.4 SSA 4.4
BOE 2.8224 BRA 1.2988 BC3 1.9524 FSP -1020 SG1 4451.3 SG2 356.7 THA 21.03 EL1 3147.1 EL2 134.2 ALF 24.69

LAUNCH DATE JAN 31 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC

DISTANCE 439.526

RL 147.39 LAL -.00 LOL 130.95 VL 27.507 GAL -1.29 AZL 82.12 HCA 205.13 SMA 127.09 ECC .16125 INC 7.8797 V1 30.228
RP 108.88 LAP -3.34 LOP 335.87 VP 37.331 GAP 4.28 AZP 97.14 TAL 186.74 TAP 31.87 RCA 106.60 APO 147.59 V2 34.805
RC 124.766 GL 50.50 GP -49.44 ZAL 100.11 ZAP 121.25 ETS 317.32 ZAE 119.49 ETE 219.79 ZAC 112.14 ETC 186.35 CLP-142.93

PLANETOCENTRIC CONIC

C3 23.871 VHL 4.886 DLA 54.55 RAL 353.96 RAD 6568.0 VEL 12.052 PTH 2.15 VHP 5.565 DPA -41.69 RAP 37.94 ECC 1.3929
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
41.22 15 45 33 4377.91 -33.17 210.87 236.23 43.86 16 58 31 3777.9 -38.74 204.18
138.78 0 47 24 2780.37 -33.16 82.68 236.22 43.86 1 33 45 2180.4 -38.73 76.00
41.22 15 45 33 4377.91 -33.17 210.87 236.23 43.86 16 58 31 3777.9 -38.74 204.18
138.78 0 47 24 2780.37 -33.16 82.68 236.22 43.86 1 33 45 2180.4 -38.73 76.00
41.22 15 45 33 4377.91 -33.17 210.87 236.23 43.86 16 58 31 3777.9 -38.74 204.18
138.78 0 47 24 2780.37 -33.16 82.68 236.22 43.86 1 33 45 2180.4 -38.73 76.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4648 TRA-1.1152 TC3-2.2673 BAU .7623 SGT 4283.3 SGR 1506.4 SG3 333.7 ST 2969.3 SR 1232.1 SS 1389.0
RDE 1.0431 RRA -.2390 RC3 -.7517 FAU .06442 RRT .9690 RRF .9922 RTF .9732 CRT .9937 CRS -.9999 CST -.9948
FDE 2.4427 FRA -.6060 FC3-2.3365 BSP 14243 SGB 4540.5 R23 .1730 R13 .9781 LSA 3497.9 MSA 167.8 SSA 5.3
BOE 2.6764 BRA 1.1405 BC3 2.3887 FSP -1130 SG1 4526.8 SG2 352.2 THA 18.94 EL1 3212.2 EL2 127.3 ALF 22.45

LAUNCH DATE JAN 31 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC

DISTANCE 445.537

RL 147.39 LAL -.00 LOL 130.95 VL 27.478 GAL -1.09 AZL 82.88 HCA 208.27 SMA 126.90 ECC .16254 INC 7.1210 V1 30.228
RP 108.86 LAP -3.37 LOP 339.04 VP 37.316 GAP 4.56 AZP 96.28 TAL 185.61 TAP 33.88 RCA 106.27 APO 147.53 V2 34.811
RC 127.128 GL 48.05 GP -45.04 ZAL 99.53 ZAP 125.15 ETS 317.56 ZAE 121.84 ETE 216.98 ZAC 113.45 ETC 185.56 CLP-144.56

PLANETOCENTRIC CONIC

C3 20.970 VHL 4.579 DLA 53.27 RAL 357.96 RAD 6567.9 VEL 11.931 PTH 2.12 VHP 5.352 DPA -37.41 RAP 36.03 ECC 1.3451
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
42.80 16 6 7 4336.53 -34.06 207.33 237.68 46.22 17 18 24 3736.5 -39.37 200.28
137.20 0 58 48 2758.92 -34.05 81.36 237.66 46.21 1 44 47 2158.9 -39.36 74.31
42.80 16 6 7 4336.53 -34.06 207.33 237.68 46.22 17 18 24 3736.5 -39.37 200.28
137.20 0 58 48 2758.92 -34.05 81.36 237.66 46.21 1 44 47 2158.9 -39.36 74.31
42.80 16 6 7 4336.53 -34.06 207.33 237.68 46.22 17 18 24 3736.5 -39.37 200.28
137.20 0 58 48 2758.92 -34.05 81.36 237.66 46.21 1 44 47 2158.9 -39.36 74.31

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4020 TRA -.9846 TC3-2.7179 BAU .7921 SGT 4412.6 SGR 1382.0 SG3 356.7 ST 3069.2 SR 1140.3 SS 1412.8
RDE .9073 RRA -.1666 RC3 -.7718 FAU .06909 RRT .9657 RRF .9890 RTF .9705 CRT .9938 CRS -1.0000 CST -.9945
FDE 2.4294 FRA -.4745 FC3-2.8522 BSP 14523 SGB 4624.0 R23 .1772 R13 .9749 LSA 3562.0 MSA 167.8 SSA 6.2
BOE 2.5677 BRA .9986 BC3 2.8254 FSP -1213 SG1 4611.2 SG2 343.3 THA 16.92 EL1 3272.0 EL2 118.6 ALF 20.29

LAUNCH DATE JAN 31 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 8 1969

Heliocentric Conic

RL 147.39 LAL -.00 LOL 130.95 VL 27.449 GAL -.87 AZL 83.50 HCA 211.43 SMA 126.70 ECC .16394 INC 6.5029 VI 30.228  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.300 GAP 4.85 AZP 95.56 TAL 184.44 TAP 35.87 RCA 105.93 APO 147.48 V2 34.818  
 RC 129.481 GL 45.73 GP -41.11 ZAL 98.67 ZAP 128.77 ETS 317.82 ZAE 123.69 ETE 214.18 ZAC 114.74 ETC 184.80 CLP-146.22

Planetocentric Conic

C3 18.841 VHL 4.341 DLA 52.13 RAL 1.90 RAD 6567.8 VEL 11.842 PTH 2.10 VHP 5.228 DPA -33.47 RAP 34.77 ECC 1.3101  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.21 16 26 5 4301.62 -34.64 204.21 239.41 48.26 17 37 46 3701.6 -39.73 196.86  
 135.79 1 10 18 2742.90 -34.63 80.28 239.40 48.25 1 56 1 2142.9 -39.72 72.94  
 44.21 16 26 5 4301.62 -34.64 204.21 239.41 48.26 17 37 46 3701.6 -39.73 196.86  
 135.79 1 10 18 2742.90 -34.63 80.28 239.40 48.25 1 56 1 2142.9 -39.72 72.94  
 44.21 16 26 5 4301.62 -34.64 204.21 239.41 48.26 17 37 46 3701.6 -39.73 196.86  
 135.79 1 10 18 2742.90 -34.63 80.28 239.40 48.25 1 56 1 2142.9 -39.72 72.94

Differential Corrections

TDE 2.3575 TRA -.8533 TC3-3.1569 BAU .8179  
 RDE .7967 RRA -.1072 RC3 -.7608 FAU .07164  
 FDE 2.3770 FRA -.3227 FC3-3.2920 BSP 14762  
 BDE 2.4885 BRA .8600 BC3 3.2473 FSP -1261

Mid-Course Execution Accuracy

SGT 4534.4 SGR 1263.0 SG3 371.6  
 RRT .9613 RRF .9844 RTF .9677  
 SGB 4707.0 R23 .1782 R13 .9713  
 SG1 4695.0 SG2 336.0 THA 15.07

Orbit Determination Accuracy

ST 3161.3 SR 1054.1 SS 1420.9  
 CRT .9940 CRS-1.0000 CST -.9941  
 LSA 3618.8 MSA 168.1 SSA 7.2  
 EL1 3330.6 EL2 109.4 ALF 18.36

LAUNCH DATE JAN 31 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 10 1969

Heliocentric Conic

RL 147.39 LAL -.00 LOL 130.95 VL 27.419 GAL -.64 AZL 84.01 HCA 214.58 SMA 126.50 ECC .16547 INC 5.9868 VI 30.228  
 RP 108.82 LAP -3.39 LOP 345.38 VP 37.285 GAP 5.13 AZP 94.93 TAL 183.24 TAP 37.82 RCA 105.57 APO 147.44 V2 34.825  
 RC 131.823 GL 43.53 GP -37.63 ZAL 97.55 ZAP 132.13 ETS 318.10 ZAE 125.11 ETE 211.48 ZAC 116.04 ETC 184.10 CLP-147.88

Planetocentric Conic

C3 17.236 VHL 4.152 DLA 51.11 RAL 5.82 RAD 6567.7 VEL 11.774 PTH 2.08 VHP 5.168 DPA -29.85 RAP 34.01 ECC 1.2837  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.49 16 45 38 4271.82 -35.01 201.45 241.43 50.04 17 56 50 3671.8 -39.89 193.87  
 134.51 1 21 57 2731.19 -34.99 79.43 241.42 50.03 2 7 28 2131.2 -39.88 71.86  
 45.49 16 45 38 4271.82 -35.01 201.45 241.43 50.04 17 56 50 3671.8 -39.89 193.87  
 134.51 1 21 57 2731.19 -34.99 79.43 241.42 50.03 2 7 28 2131.2 -39.88 71.86  
 45.49 16 45 38 4271.82 -35.01 201.45 241.43 50.04 17 56 50 3671.8 -39.89 193.87  
 134.51 1 21 57 2731.19 -34.99 79.43 241.42 50.03 2 7 28 2131.2 -39.88 71.86

Differential Corrections

TDE 2.3190 TRA -.7254 TC3-3.5908 BAU .8446  
 RDE .7044 RRA -.0626 RC3 -.7346 FAU .07290  
 FDE 2.2873 FRA -.1725 FC3-3.6615 BSP 15086  
 BDE 2.4236 BRA .7281 BC3 3.6652 FSP -1293

Mid-Course Execution Accuracy

SGT 4655.6 SGR 1155.9 SG3 380.1  
 RRT .9569 RRF .9785 RTF .9654  
 SGB 4796.9 R23 .1725 R13 .9684  
 SG1 4785.8 SG2 326.7 THA 13.43

Orbit Determination Accuracy

ST 3237.2 SR 973.2 SS 1411.0  
 CRT .9944 CRS -.9999 CST -.9937  
 LSA 3659.2 MSA 166.9 SSA 8.2  
 EL1 3378.9 EL2 98.9 ALF 16.66

LAUNCH DATE JAN 31 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 12 1969

Heliocentric Conic

RL 147.39 LAL -.00 LOL 130.95 VL 27.388 GAL -.40 AZL 84.45 HCA 217.74 SMA 126.30 ECC .16713 INC 5.5470 VI 30.228  
 RP 108.79 LAP -3.39 LOP 348.56 VP 37.269 GAP 5.41 AZP 94.39 TAL 182.02 TAP 39.76 RCA 105.19 APO 147.41 V2 34.833  
 RC 134.153 GL 41.43 GP -34.54 ZAL 96.19 ZAP 135.21 ETS 318.39 ZAE 126.18 ETE 208.95 ZAC 117.37 ETC 183.48 CLP-149.50

Planetocentric Conic

C3 16.007 VHL 4.001 DLA 50.19 RAL 9.73 RAD 6567.6 VEL 11.721 PTH 2.07 VHP 5.155 DPA -26.54 RAP 33.65 ECC 1.2634  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.66 17 4 57 4246.22 -35.20 199.00 243.72 51.59 18 15 43 3646.2 -39.91 191.25  
 133.34 1 33 51 2722.87 -35.19 78.77 243.71 51.58 2 19 14 2122.9 -39.90 71.01  
 46.66 17 4 57 4246.22 -35.20 199.00 243.72 51.59 18 15 43 3646.2 -39.91 191.25  
 133.34 1 33 51 2722.87 -35.19 78.77 243.71 51.58 2 19 14 2122.9 -39.90 71.01  
 46.66 17 4 57 4246.22 -35.20 199.00 243.72 51.59 18 15 43 3646.2 -39.91 191.25  
 133.34 1 33 51 2722.87 -35.19 78.77 243.71 51.58 2 19 14 2122.9 -39.90 71.01

Differential Corrections

TDE 2.2885 TRA -.5969 TC3-4.0071 BAU .8703  
 RDE .6305 RRA -.0286 RC3 -.6950 FAU .07287  
 FDE 2.1805 FRA -.0272 FC3-3.9412 BSP 15435  
 BDE 2.3738 BRA .5976 BC3 4.0670 FSP -1309

Mid-Course Execution Accuracy

SGT 4775.4 SGR 1062.3 SG3 383.5  
 RRT .9516 RRF .9707 RTF .9637  
 SGB 4892.1 R23 .1610 R13 .9661  
 SG1 4881.7 SG2 319.3 THA 12.00

Orbit Determination Accuracy

ST 3303.2 SR 903.2 SS 1391.5  
 CRT .9949 CRS -.9998 CST -.9933  
 LSA 3692.7 MSA 165.0 SSA 9.2  
 EL1 3423.3 EL2 87.8 ALF 15.23

LAUNCH DATE JAN 31 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 14 1969

Heliocentric Conic

RL 147.39 LAL -.00 LOL 130.95 VL 27.356 GAL -.15 AZL 84.83 HCA 220.90 SMA 126.09 ECC .16893 INC 5.1656 VI 30.228  
 RP 108.77 LAP -3.38 LOP 351.74 VP 37.254 GAP 5.69 AZP 93.91 TAL 180.76 TAP 41.66 RCA 104.79 APO 147.39 V2 34.841  
 RC 136.471 GL 39.40 GP -31.82 ZAL 94.61 ZAP 138.05 ETS 318.67 ZAE 126.98 ETE 206.62 ZAC 118.75 ETC 182.93 CLP-151.07

Planetocentric Conic

C3 15.059 VHL 3.881 DLA 49.34 RAL 13.66 RAD 6567.6 VEL 11.681 PTH 2.05 VHP 5.178 DPA -23.50 RAP 33.63 ECC 1.2478  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.75 17 24 10 4224.06 -35.27 196.82 246.27 52.95 18 34 34 3624.1 -39.81 188.93  
 132.25 1 46 1 2717.48 -35.26 78.28 246.25 52.94 2 31 19 2117.5 -39.80 70.39  
 47.75 17 24 10 4224.06 -35.27 196.82 246.27 52.95 18 34 34 3624.1 -39.81 188.93  
 132.25 1 46 1 2717.48 -35.26 78.28 246.25 52.94 2 31 19 2117.5 -39.80 70.39  
 47.75 17 24 10 4224.06 -35.27 196.82 246.27 52.95 18 34 34 3624.1 -39.81 188.93  
 132.25 1 46 1 2717.48 -35.26 78.28 246.25 52.94 2 31 19 2117.5 -39.80 70.39

Differential Corrections

TDE 2.2553 TRA -.4638 TC3-4.4106 BAU .8976  
 RDE .5681 RRA -.0009 RC3 -.6518 FAU .07219  
 FDE 2.0906 FRA .1170 FC3-4.1500 BSP 15916  
 BDE 2.3257 BRA .4638 BC3 4.4585 FSP -1326

Mid-Course Execution Accuracy

SGT 4889.8 SGR 979.6 SG3 382.6  
 RRT .9451 RRF .9609 RTF .9619  
 SGB 4986.9 R23 .1472 R13 .9637  
 SG1 4977.0 SG2 314.5 THA 10.76

Orbit Determination Accuracy

ST 3346.3 SR 839.0 SS 1355.7  
 CRT .9955 CRS -.9995 CST -.9927  
 LSA 3703.1 MSA 163.8 SSA 10.3  
 EL1 3449.0 EL2 76.8 ALF 14.02

LAUNCH DATE JAN 31 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.324 GAL .11 AZL 85.17 HCA 224.07 SMA 125.88 ECC .17087 INC 4.8298 V1 30.228  
 RP 108.74 LAP -3.36 LOP 354.91 VP 37.239 GAP 5.98 AZP 93.47 TAL 179.48 TAP 43.55 RCA 104.37 APO 147.39 V2 34.850  
 RC 138.775 GL 37.42 GP -29.41 ZAL 92.83 ZAP 140.65 ETS 318.91 ZAE 127.56 ETE 204.51 ZAC 120.19 ETC 182.44 CLP-152.59

DISTANCE 475.401

PLANETOCENTRIC CONIC  
 C3 14.331 VHL 3.786 DLA 48.54 RAL 17.63 RAD 6567.6 VEL 11.650 PTH 2.05 VHP 5.229 DPA -20.71 RAP 33.89 ECC 1.2358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.78 17 43 25 4204.74 -35.22 194.86 249.05 54.15 18 53 30 3604.7 -39.62 186.85  
 131.22 1 58 26 2714.74 -35.21 77.97 249.04 54.14 2 43 41 2114.7 -39.61 69.97  
 48.78 17 43 25 4204.74 -35.22 194.86 249.05 54.15 18 53 30 3604.7 -39.62 186.85  
 131.22 1 58 26 2714.74 -35.21 77.97 249.04 54.14 2 43 41 2114.7 -39.61 69.97  
 48.78 17 43 25 4204.74 -35.22 194.86 249.05 54.15 18 53 30 3604.7 -39.62 186.85  
 131.22 1 58 26 2714.74 -35.21 77.97 249.04 54.14 2 43 41 2114.7 -39.61 69.97

DIFFERENTIAL CORRECTIONS  
 TDE 2.2405 TRA -.3179 TC3-4.7298 BAU .9130 MTC-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .5240 RRA .0228 RC3 -.5812 FAU .06905 SGT 4985.0 SGR 908.5 SG3 376.4 ST 3399.7 SR 793.4 SS 1331.7  
 FDE 1.9429 FRA .2615 FC3-4.1716 BSP 15993 RRT .9334 RRF .9483 RTF .9599 CRT .9964 CRS -.9990 CST -.9922  
 BOE 2.3009 BRA .3187 BC3 4.7654 FSP -1271 SGB 5067.1 R23 .1351 R13 .9615 LSA 3732.8 MSA 163.3 SSA 11.3  
 SG1 5056.9 SG2 321.3 THA 9.69 EL1 3490.4 EL2 65.7 ALF 13.09

LAUNCH DATE JAN 31 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.291 GAL .38 AZL 85.47 HCA 227.23 SMA 125.67 ECC .17296 INC 4.5301 V1 30.228  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.223 GAP 6.27 AZP 93.08 TAL 178.18 TAP 45.41 RCA 103.93 APO 147.40 V2 34.860  
 RC 141.067 GL 35.50 GP -27.28 ZAL 90.87 ZAP 143.05 ETS 319.10 ZAE 127.98 ETE 202.61 ZAC 121.69 ETC 182.02 CLP-154.06

DISTANCE 481.332

PLANETOCENTRIC CONIC  
 C3 13.781 VHL 3.712 DLA 47.76 RAL 21.64 RAD 6567.5 VEL 11.626 PTH 2.04 VHP 5.303 DPA -18.15 RAP 34.38 ECC 1.2268  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.78 18 2 50 4187.74 -35.08 193.07 252.05 55.22 19 12 38 3587.7 -39.35 184.98  
 130.22 2 11 0 2714.54 -35.06 77.82 252.04 55.21 2 56 15 2114.5 -39.34 69.74  
 49.78 18 2 50 4187.74 -35.08 193.07 252.05 55.22 19 12 38 3587.7 -39.35 184.98  
 130.22 2 11 0 2714.54 -35.06 77.82 252.04 55.21 2 56 15 2114.5 -39.34 69.74  
 49.78 18 2 50 4187.74 -35.08 193.07 252.05 55.22 19 12 38 3587.7 -39.35 184.98  
 130.22 2 11 0 2714.54 -35.06 77.82 252.04 55.21 2 56 15 2114.5 -39.34 69.74

DIFFERENTIAL CORRECTIONS  
 TDE 2.2083 TRA -.1741 TC3-5.0672 BAU .9388 MTC-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4828 RRA .0394 RC3 -.5357 FAU .06732 RRT .9247 RRF .9341 RTF .9593 ST 3412.3 SR 745.7 SS 1280.9  
 FDE 1.8023 FRA .3845 FC3-4.2287 BSP 16339 SGB 5162.6 R23 .1144 R13 .9605 CRT .9973 CRS -.9981 CST -.9916  
 BOE 2.2605 BRA .1785 BC3 5.0954 FSP -1255 SG1 5152.7 SG2 319.6 THA 8.80 LSA 3716.8 MSA 160.9 SSA 12.4  
 EL1 3492.4 EL2 53.6 ALF 12.30

LAUNCH DATE JAN 31 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.258 GAL .67 AZL 85.74 HCA 230.40 SMA 125.45 ECC .17522 INC 4.2595 V1 30.228  
 RP 108.68 LAP -3.28 LOP 371.27 VP 37.209 GAP 6.56 AZP 92.72 TAL 176.85 TAP 47.25 RCA 103.47 APO 147.44 V2 34.870  
 RC 143.344 GL 33.60 GP -25.39 ZAL 88.75 ZAP 145.27 ETS 319.22 ZAE 128.27 ETE 200.91 ZAC 123.25 ETC 181.63 CLP-155.47

DISTANCE 487.247

PLANETOCENTRIC CONIC  
 C3 13.384 VHL 3.658 DLA 47.00 RAL 25.69 RAD 6567.5 VEL 11.609 PTH 2.03 VHP 5.394 DPA -15.78 RAP 35.07 ECC 1.2203  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.78 18 22 28 4172.65 -34.83 191.41 255.25 56.18 19 32 1 3572.6 -38.99 183.27  
 129.22 2 23 40 2716.87 -34.82 77.84 255.24 56.17 3 8 56 2116.9 -38.98 69.70  
 50.78 18 22 28 4172.65 -34.83 191.41 255.25 56.18 19 32 1 3572.6 -38.99 183.27  
 129.22 2 23 40 2716.87 -34.82 77.84 255.24 56.17 3 8 56 2116.9 -38.98 69.70  
 50.78 18 22 28 4172.65 -34.83 191.41 255.25 56.18 19 32 1 3572.6 -38.99 183.27  
 129.22 2 23 40 2716.87 -34.82 77.84 255.24 56.17 3 8 56 2116.9 -38.98 69.70

DIFFERENTIAL CORRECTIONS  
 TDE 2.1750 TRA -.0226 TC3-5.3485 BAU .9609 MTC-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4507 RRA .0536 RC3 -.4834 FAU .06466 RRT .9123 RRF .9174 RTF .9586 ST 3408.5 SR 706.9 SS 1228.2  
 FDE 1.6671 FRA .5008 FC3-4.1822 BSP 16657 SGB 5249.7 R23 .0962 R13 .9595 CRT .9982 CRS -.9967 CST -.9908  
 BOE 2.2212 BRA .0582 BC3 5.3703 FSP -1224 SG1 5239.7 SG2 324.0 THA 8.03 LSA 3687.8 MSA 159.3 SSA 13.4  
 EL1 3480.7 EL2 41.5 ALF 11.70

LAUNCH DATE JAN 31 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC  
 RL 147.39 LAL -.00 LOL 130.95 VL 27.225 GAL .97 AZL 85.99 HCA 233.57 SMA 125.24 ECC .17764 INC 4.0124 V1 30.228  
 RP 108.65 LAP -3.23 LOP 4.45 VP 37.194 GAP 6.86 AZP 92.39 TAL 175.51 TAP 49.08 RCA 102.99 APO 147.49 V2 34.880  
 RC 145.608 GL 31.72 GP -23.72 ZAL 86.48 ZAP 147.32 ETS 319.27 ZAE 128.47 ETE 199.40 ZAC 124.87 ETC 181.29 CLP-156.83

DISTANCE 493.145

PLANETOCENTRIC CONIC  
 C3 13.121 VHL 3.622 DLA 46.23 RAL 29.77 RAD 6567.5 VEL 11.598 PTH 2.03 VHP 5.502 DPA -13.58 RAP 35.94 ECC 1.2159  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.80 18 42 24 4159.08 -34.48 189.84 258.63 57.07 19 51 43 3559.1 -38.54 181.67  
 128.20 2 36 15 2721.84 -34.47 78.03 258.62 57.05 3 21 37 2121.8 -38.53 69.87  
 51.80 18 42 24 4159.08 -34.48 189.84 258.63 57.07 19 51 43 3559.1 -38.54 181.67  
 128.20 2 36 15 2721.84 -34.47 78.03 258.62 57.05 3 21 37 2121.8 -38.53 69.87  
 51.80 18 42 24 4159.08 -34.48 189.84 258.63 57.07 19 51 43 3559.1 -38.54 181.67  
 128.20 2 36 15 2721.84 -34.47 78.03 258.62 57.05 3 21 37 2121.8 -38.53 69.87

DIFFERENTIAL CORRECTIONS  
 TDE 2.1373 TRA .1363 TC3-5.5849 BAU .9826 MTC-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4251 RRA .0655 RC3 -.4345 FAU .06184 RRT .8983 RRF .8988 RTF .9584 ST 3384.1 SR 673.9 SS 1170.5  
 FDE 1.5332 FRA .6074 FC3-4.0804 BSP 16982 SGB 5335.7 R23 .0785 R13 .9590 CRT .9990 CRS -.9944 CST -.9899  
 BOE 2.1791 BRA .1512 BC3 5.6018 FSP -1191 SG1 5325.5 SG2 330.1 THA 7.37 LSA 3640.2 MSA 158.0 SSA 14.5  
 EL1 3450.4 EL2 29.6 ALF 11.25

LAUNCH DATE JAN 31 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC

DISTANCE 499.027

RL 147.39 LAL -.00 LOL 130.95 VL 27.191 GAL 1.26 AZL 86.22 HCA 236.75 SMA 125.02 ECC .18025 INC 3.7846 V1 30.228  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.180 GAP 7.16 AZP 92.08 TAL 174.14 TAP 50.89 RCA 102.49 APO 147.56 V2 34.891  
 RC 147.857 GL 29.87 GP -22.23 ZAL 84.08 ZAP 149.22 ETS 319.23 ZAE 128.60 ETE 198.05 ZAC 126.56 ETC 180.98 CLP-158.14

PLANETOCENTRIC CONIC

C3 12.981 VHL 3.603 DLA 45.43 RAL 33.86 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 5.623 DPA -11.53 RAP 36.95 ECC 1.2136  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.86 19 2 37 4146.76 -34.04 188.35 262.15 57.88 20 11 44 3546.8 -38.00 180.16  
 127.14 2 48 41 2729.53 -34.03 78.41 262.14 57.87 3 34 11 2129.5 -37.99 70.23  
 52.86 19 2 37 4146.76 -34.04 188.35 262.15 57.88 20 11 44 3546.8 -38.00 180.16  
 127.14 2 48 41 2729.53 -34.03 78.41 262.14 57.87 3 34 11 2129.5 -37.99 70.23  
 52.86 19 2 37 4146.76 -34.04 188.35 262.15 57.88 20 11 44 3546.8 -38.00 180.16  
 127.14 2 48 41 2729.53 -34.03 78.41 262.14 57.87 3 34 11 2129.5 -37.99 70.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0985 TRA .3082 TC3-5.7530 BAU 1.0006 SGT 5367.5 SGR 724.0 SG3 340.6 ST 3346.1 SR 647.6 SS 1113.7  
 RDE .4059 RRA .0772 RC3 -.3851 FAU .05859 RRT .8817 RRF .8789 RTF .9579 CRT .9995 CRS -.9910 CST -.9888  
 FDE 1.4081 FRA .7119 FC3-3.9074 BSP 17185 SGB 5416.1 R23 .0654 R13 .9584 LSA 3582.0 MSA 158.1 SSA 15.5  
 BOE 2.1374 BRA .3178 BC3 5.7659 FSP -1144 SGI 5405.5 SG2 339.2 THA 6.81 EL1 3408.1 EL2 19.4 ALF 10.95

LAUNCH DATE JAN 31 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 26 1969

HELIOCENTRIC CONIC

DISTANCE 504.891

RL 147.39 LAL -.00 LOL 130.95 VL 27.157 GAL 1.61 AZL 86.43 HCA 239.92 SMA 124.81 ECC .18305 INC 3.5726 V1 30.228  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.165 GAP 7.47 AZP 91.79 TAL 172.76 TAP 52.69 RCA 101.96 APO 147.65 V2 34.902  
 RC 150.092 GL 28.03 GP -20.90 ZAL 81.58 ZAP 150.99 ETS 319.10 ZAE 128.68 ETE 196.86 ZAC 128.29 ETC 180.68 CLP-159.41

PLANETOCENTRIC CONIC

C3 12.958 VHL 3.600 DLA 44.60 RAL 37.95 RAD 6567.5 VEL 11.591 PTH 2.03 VHP 5.756 DPA -9.61 RAP 38.10 ECC 1.2133  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.99 19 23 11 4135.31 -33.50 186.89 265.80 58.64 20 32 7 3535.3 -37.37 178.71  
 126.01 3 0 45 2740.22 -33.49 78.99 265.79 58.63 3 46 25 2140.2 -37.36 70.81  
 53.99 19 23 11 4135.31 -33.50 186.89 265.80 58.64 20 32 7 3535.3 -37.37 178.71  
 126.01 3 0 45 2740.22 -33.49 78.99 265.79 58.63 3 46 25 2140.2 -37.36 70.81  
 53.99 19 23 11 4135.31 -33.50 186.89 265.80 58.64 20 32 7 3535.3 -37.37 178.71  
 126.01 3 0 45 2740.22 -33.49 78.99 265.79 58.63 3 46 25 2140.2 -37.36 70.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0486 TRA .4847 TC3-5.8760 BAU 1.0197 SGT 5449.9 SGR 695.9 SG3 329.1 ST 3279.2 SR 623.9 SS 1050.0  
 RDE .3902 RRA .0869 RC3 -.3423 FAU .05549 RRT .8644 RRF .8578 RTF .9581 CRT .9996 CRS -.9862 CST -.9875  
 FDE 1.2816 FRA .8029 FC3-3.7073 BSP 17484 SGB 5494.1 R23 .0521 R13 .9585 LSA 3495.6 MSA 158.6 SSA 16.4  
 BOE 2.0854 BRA .4924 BC3 5.8859 FSP -1107 SGI 5483.1 SG2 347.8 THA 6.32 EL1 3338.0 EL2 16.8 ALF 10.77

LAUNCH DATE JAN 31 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 28 1969

HELIOCENTRIC CONIC

DISTANCE 510.735

RL 147.39 LAL -.00 LOL 130.95 VL 27.123 GAL 1.96 AZL 86.63 HCA 243.10 SMA 124.59 ECC .18606 INC 3.3738 V1 30.228  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.151 GAP 7.18 AZP 91.53 TAL 171.37 TAP 54.47 RCA 101.41 APO 147.77 V2 34.914  
 RC 152.312 GL 26.21 GP -19.71 ZAL 78.99 ZAP 152.64 ETS 318.86 ZAE 128.73 ETE 195.81 ZAC 130.09 ETC 180.40 CLP-160.63

PLANETOCENTRIC CONIC

C3 13.050 VHL 3.612 DLA 43.72 RAL 42.01 RAD 6567.5 VEL 11.595 PTH 2.03 VHP 5.901 DPA -7.82 RAP 39.36 ECC 1.2148  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.19 19 44 5 4124.44 -32.85 185.44 269.55 59.36 20 52 50 3524.4 -36.64 177.28  
 124.81 3 12 16 2754.14 -32.84 79.79 269.54 59.34 3 58 10 2154.1 -36.63 71.63  
 55.19 19 44 5 4124.44 -32.85 185.44 269.55 59.36 20 52 50 3524.4 -36.64 177.28  
 124.81 3 12 16 2754.14 -32.84 79.79 269.54 59.34 3 58 10 2154.1 -36.63 71.63  
 55.19 19 44 5 4124.44 -32.85 185.44 269.55 59.36 20 52 50 3524.4 -36.64 177.28  
 124.81 3 12 16 2754.14 -32.84 79.79 269.54 59.34 3 58 10 2154.1 -36.63 71.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9904 TRA .6701 TC3-5.9415 BAU 1.0380 SGT 5527.7 SGR 672.8 SG3 317.2 ST 3190.1 SR 603.2 SS 983.9  
 RDE .3782 RRA .0962 RC3 -.3039 FAU .05242 RRT .8462 RRF .8362 RTF .9584 CRT .9990 CRS -.9792 CST -.9858  
 FDE 1.1587 FRA .8865 FC3-3.4775 BSP 17770 SGB 5568.5 R23 .0408 R13 .9587 LSA 3388.6 MSA 160.4 SSA 17.3  
 BOE 2.0260 BRA .6770 BC3 5.9493 FSP -1069 SGI 5557.1 SG2 356.6 THA 5.90 EL1 3246.5 EL2 26.5 ALF 10.70

LAUNCH DATE JAN 31 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 30 1969

HELIOCENTRIC CONIC

DISTANCE 516.559

RL 147.39 LAL -.00 LOL 130.95 VL 27.089 GAL 2.32 AZL 86.81 HCA 246.28 SMA 124.37 ECC .18930 INC 3.1857 V1 30.228  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.138 GAP 8.10 AZP 91.28 TAL 169.96 TAP 56.24 RCA 100.83 APO 147.92 V2 34.926  
 RC 154.516 GL 24.40 GP -18.64 ZAL 76.34 ZAP 154.19 ETS 318.50 ZAE 128.74 ETE 194.87 ZAC 131.93 ETC 180.13 CLP-161.82

PLANETOCENTRIC CONIC

C3 13.257 VHL 3.641 DLA 42.79 RAL 46.03 RAD 6567.5 VEL 11.604 PTH 2.03 VHP 6.057 DPA -6.13 RAP 40.73 ECC 1.2182  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.47 20 5 17 4113.97 -32.11 183.99 273.36 60.04 21 13 51 3514.0 -35.82 175.86  
 123.53 3 23 7 2771.42 -32.10 80.82 273.36 60.03 4 9 18 2171.4 -35.81 72.69  
 56.47 20 5 17 4113.97 -32.11 183.99 273.36 60.04 21 13 51 3514.0 -35.82 175.86  
 123.53 3 23 7 2771.42 -32.10 80.82 273.36 60.03 4 9 18 2171.4 -35.81 72.69  
 56.47 20 5 17 4113.97 -32.11 183.99 273.36 60.04 21 13 51 3514.0 -35.82 175.86  
 123.53 3 23 7 2771.42 -32.10 80.82 273.36 60.03 4 9 18 2171.4 -35.81 72.69

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9240 TRA .8652 TC3-5.9468 BAU 1.0551 SGT 5600.1 SGR 653.8 SG3 305.0 ST 3081.1 SR 585.1 SS 917.2  
 RDE .3693 RRA .1055 RC3 -.2696 FAU .04936 RRT .8274 RRF .8146 RTF .9589 CRT .9973 CRS -.9696 CST -.9839  
 FDE 1.0408 FRA .9635 FC3-3.2236 BSP 18049 SGB 5638.2 R23 .0316 R13 .9592 LSA 3263.3 MSA 164.1 SSA 18.0  
 BOE 1.9591 BRA .8716 BC3 5.9529 FSP -1031 SGI 5626.3 SG2 365.5 THA 5.54 EL1 3135.9 EL2 41.9 ALF 10.73

LAUNCH DATE JAN 31 1969

FLIGHT TIME 182.00

ARRIVAL DATE AUG 1 1969

HELIOCENTRIC CONIC

DISTANCE 522.360

RL 147.39 LAL -.00 LOL 130.95 VL 27.055 GAL 2.70 AZL 86.99 MCA 249.47 SMA 124.16 ECC .19277 INC 3.0064 V1 30.228  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.124 GAP 8.44 AZP 91.06 TAL 168.54 TAP 58.01 RCA 100.22 APO 148.09 V2 34.938  
 RC 156.704 GL 22.62 GP -17.69 ZAL 73.64 ZAP 155.64 ETS 318.02 ZAE 128.74 ETE 194.04 ZAC 133.81 ETC 179.85 CLP-162.98

PLANETOCENTRIC CONIC

C3 13.584 VML 3.686 DLA 41.81 RAL 49.97 RAD 6567.5 VEL 11.618 PTH 2.04 VHP 6.224 DPA -4.53 RAP 42.18 ECC 1.2236  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.85 20 26 47 4103.52 -31.27 182.51 277.23 60.69 21 35 11 3503.5 -34.90 174.42  
 122.15 3 33 4 2792.46 -31.25 82.10 277.22 60.68 4 19 36 2192.5 -34.89 74.01  
 57.85 20 26 47 4103.52 -31.27 182.51 277.23 60.69 21 35 11 3503.5 -34.90 174.42  
 122.15 3 33 4 2792.46 -31.25 82.10 277.22 60.68 4 19 36 2192.5 -34.89 74.01  
 57.85 20 26 47 4103.52 -31.27 182.51 277.23 60.69 21 35 11 3503.5 -34.90 174.42  
 122.15 3 33 4 2792.46 -31.25 82.10 277.22 60.68 4 19 36 2192.5 -34.89 74.01

DIFFERENTIAL CORRECTIONS

TOE 1.8500 TRA 1.0708 TC3-5.8926 BAU 1.0710  
 RDE .3632 RRA .1150 RC3 -.2390 FAU .04634  
 FDE .9289 FRA 1.0354 FC3-2.9536 BSP 18300  
 BOE 1.8853 BRA 1.0769 BC3 5.8974 FSP -992

MID-COURSE EXECUTION ACCURACY

SGT 5667.9 SGR 638.2 SG3 292.8  
 RRT .8085 RRF .7936 RTF .9595  
 SGB 5703.8 R23 .0247 R13 .9596  
 SG1 5691.5 SG2 374.1 THA 5.22

ORBIT DETERMINATION ACCURACY

ST 2955.9 SR 569.2 SS 851.8  
 CRT .9942 CRS -.9563 CST -.9815  
 LSA 3123.7 MSA 170.0 SSA 18.4  
 EL1 3009.6 EL2 60.2 ALF 10.84

LAUNCH DATE JAN 31 1969

FLIGHT TIME 184.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 528.138

RL 147.39 LAL -.00 LOL 130.95 VL 27.020 GAL 3.10 AZL 87.17 MCA 252.65 SMA 123.94 ECC .19652 INC 2.8344 V1 30.228  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.111 GAP 8.78 AZP 90.85 TAL 167.12 TAP 59.77 RCA 99.58 APO 148.30 V2 34.951  
 RC 158.875 GL 20.86 GP -16.82 ZAL 70.92 ZAP 157.01 ETS 317.41 ZAE 128.73 ETE 193.30 ZAC 135.73 ETC 179.57 CLP-164.10

PLANETOCENTRIC CONIC

C3 14.036 VML 3.746 DLA 40.78 RAL 53.82 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.402 DPA -3.02 RAP 43.73 ECC 1.2310  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.33 20 48 33 4092.94 -30.33 180.99 281.12 61.32 21 56 46 3492.9 -33.90 172.95  
 120.67 3 42 0 2817.37 -30.32 83.65 281.12 61.31 4 28 57 2217.4 -33.89 75.62  
 59.33 20 48 33 4092.94 -30.33 180.99 281.12 61.32 21 56 46 3492.9 -33.90 172.95  
 120.67 3 42 0 2817.37 -30.32 83.65 281.12 61.31 4 28 57 2217.4 -33.89 75.62  
 59.33 20 48 33 4092.94 -30.33 180.99 281.12 61.32 21 56 46 3492.9 -33.90 172.95  
 120.67 3 42 0 2817.37 -30.32 83.65 281.12 61.31 4 28 57 2217.4 -33.89 75.62

DIFFERENTIAL CORRECTIONS

TOE 1.7716 TRA 1.2905 TC3-5.7730 BAU 1.0840  
 RDE .3597 RRA 1.1254 RC3 -.2110 FAU .04329  
 FDE .8250 FRA 1.1048 FC3-2.6700 BSP 18461  
 BOE 1.8077 BRA 1.2966 BC3 5.7768 FSP -949

MID-COURSE EXECUTION ACCURACY

SGT 5731.1 SGR 625.8 SG3 280.9  
 RRT .7902 RRF .7741 RTF .9599  
 SGB 5765.2 R23 .0199 R13 .9600  
 SG1 5752.5 SG2 382.2 THA 4.95

ORBIT DETERMINATION ACCURACY

ST 2822.9 SR 555.3 SS 790.6  
 CRT .9890 CRS -.9387 CST -.9787  
 LSA 2978.2 MSA 178.7 SSA 18.7  
 EL1 2875.8 EL2 80.7 ALF 11.02

LAUNCH DATE JAN 31 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 533.889

RL 147.39 LAL -.00 LOL 130.95 VL 26.986 GAL 3.52 AZL 87.33 MCA 255.84 SMA 123.73 ECC .20054 INC 2.6681 V1 30.228  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.098 GAP 9.14 AZP 90.65 TAL 165.68 TAP 61.53 RCA 98.91 APO 148.54 V2 34.964  
 RC 161.027 GL 19.14 GP -16.04 ZAL 68.20 ZAP 158.30 ETS 316.65 ZAE 128.71 ETE 192.65 ZAC 137.70 ETC 179.27 CLP-165.19

PLANETOCENTRIC CONIC

C3 14.622 VML 3.824 DLA 39.71 RAL 57.55 RAD 6567.6 VEL 11.662 PTH 2.05 VHP 6.590 DPA -1.60 RAP 45.35 ECC 1.2406  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.91 21 10 37 4081.79 -29.31 179.41 285.03 61.92 22 18 39 3481.8 -32.82 171.43  
 119.09 3 49 42 2846.62 -29.30 85.51 285.02 61.90 4 37 9 2246.6 -32.81 77.52  
 60.91 21 10 37 4081.79 -29.31 179.41 285.03 61.92 22 18 39 3481.8 -32.82 171.43  
 119.09 3 49 42 2846.62 -29.30 85.51 285.02 61.90 4 37 9 2246.6 -32.81 77.52  
 60.91 21 10 37 4081.79 -29.31 179.41 285.03 61.92 22 18 39 3481.8 -32.82 171.43  
 119.09 3 49 42 2846.62 -29.30 85.51 285.02 61.90 4 37 9 2246.6 -32.81 77.52

DIFFERENTIAL CORRECTIONS

TOE 1.6812 TRA 1.5177 TC3-5.6131 BAU 1.0979  
 RDE .3576 RRA .1357 RC3 -.1879 FAU .04047  
 FDE .7234 FRA 1.1664 FC3-2.3959 BSP 18705  
 BOE 1.7188 BRA 1.5237 BC3 5.6163 FSP -913

MID-COURSE EXECUTION ACCURACY

SGT 5788.9 SGR 614.4 SG3 269.0  
 RRT .7725 RRF .7551 RTF .9605  
 SGB 5821.4 R23 .0153 R13 .9606  
 SG1 5808.4 SG2 388.9 THA 4.71

ORBIT DETERMINATION ACCURACY

ST 2673.6 SR 541.6 SS 729.7  
 CRT .9809 CRS -.9148 CST -.9753  
 LSA 2817.3 MSA 190.3 SSA 18.7  
 EL1 2726.0 EL2 103.3 ALF 11.26

LAUNCH DATE JAN 31 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 539.611

RL 147.39 LAL -.00 LOL 130.95 VL 26.951 GAL 3.96 AZL 87.49 MCA 259.03 SMA 123.51 ECC .20487 INC 2.5063 V1 30.228  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.085 GAP 9.51 AZP 90.48 TAL 164.25 TAP 63.28 RCA 98.21 APO 148.82 V2 34.977  
 RC 163.161 GL 17.46 GP -15.34 ZAL 65.50 ZAP 159.52 ETS 315.73 ZAE 128.68 ETE 192.06 ZAC 139.69 ETC 178.94 CLP-166.26

PLANETOCENTRIC CONIC

C3 15.354 VML 3.918 DLA 38.60 RAL 61.15 RAD 6567.6 VEL 11.694 PTH 2.06 VHP 6.791 DPA -.24 RAP 47.03 ECC 1.2527  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.59 21 32 56 4069.99 -28.22 177.76 288.93 62.49 22 40 46 3470.0 -31.66 169.84  
 117.41 3 56 6 2880.28 -28.21 87.66 288.92 62.48 4 44 6 2280.3 -31.65 79.74  
 62.59 21 32 56 4069.99 -28.22 177.76 288.93 62.49 22 40 46 3470.0 -31.66 169.84  
 117.41 3 56 6 2880.28 -28.21 87.66 288.92 62.48 4 44 6 2280.3 -31.65 79.74  
 62.59 21 32 56 4069.99 -28.22 177.76 288.93 62.49 22 40 46 3470.0 -31.66 169.84  
 117.41 3 56 6 2880.28 -28.21 87.66 288.92 62.48 4 44 6 2280.3 -31.65 79.74

DIFFERENTIAL CORRECTIONS

TOE 1.5848 TRA 1.7573 TC3-5.4058 BAU 1.1102  
 RDE .3573 RRA .1469 RC3 -.1675 FAU .03772  
 FDE .6290 FRA 1.2249 FC3-2.1269 BSP 18921  
 BOE 1.6246 BRA 1.7635 BC3 5.4084 FSP -878

MID-COURSE EXECUTION ACCURACY

SGT 5842.0 SGR 604.7 SG3 257.4  
 RRT .7559 RRF .7377 RTF .9611  
 SGB 5873.2 R23 .0121 R13 .9612  
 SG1 5859.9 SG2 394.7 THA 4.49

ORBIT DETERMINATION ACCURACY

ST 2521.8 SR 528.9 SS 674.4  
 CRT .9690 CRS -.8840 CST -.9715  
 LSA 2655.5 MSA 205.0 SSA 18.4  
 EL1 2573.5 EL2 128.0 ALF 11.52



LAUNCH DATE JAN 31 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 9 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 26.917 GAL 4.43 AZL 87.65 HCA 262.23 SMA 123.30 ECC .20954 INC 2.3478 V1 30.228  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.073 GAP 9.90 AZP 90.32 TAL 162.81 TAP 65.03 RCA 97.46 APO 149.14 V2 34.990  
 RC 165.276 GL 15.83 GP -14.70 ZAL 62.84 ZAP 160.67 ETS 314.63 ZAE 128.65 ETE 191.54 ZAC 141.71 ETC 178.59 CLP-167.31

Distance 545.301

Planetary Conic: C3 16.246 VHL 4.031 DLA 37.46 RAL 64.60 RAD 6567.7 VEL 11.732 PTH 2.07 VHP 7.004 DPA 1.05 RAP 48.78 ECC 1.2674  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.38 21 55 37 4056.97 -27.06 176.02 292.81 63.04 23 3 14 3457.0 -30.44 168.17  
 115.62 4 0 59 2918.88 -27.05 90.16 292.81 63.03 4 49 38 2318.9 -30.43 82.31  
 64.38 21 55 37 4056.97 -27.06 176.02 292.81 63.04 23 3 14 3457.0 -30.44 168.17  
 115.62 4 0 59 2918.88 -27.05 90.16 292.81 63.03 4 49 38 2318.9 -30.43 82.31  
 64.38 21 55 37 4056.97 -27.06 176.02 292.81 63.04 23 3 14 3457.0 -30.44 168.17  
 115.62 4 0 59 2918.88 -27.05 90.16 292.81 63.03 4 49 38 2318.9 -30.43 82.31

Differential Corrections: TDE 1.4821 TRA 2.0099 TC3-5.1590 BAU 1.1210 RDE .3584 RRA .1588 RC3 -.1495 FAU .03506 FDE .5404 FRA 1.2804 FC3-1.8682 BSP 19123 BDE 1.5248 BRA 2.0162 BC3 5.1612 FSP -843

Mid-Course Execution Accuracy: SGT 5889.9 SGR 595.8 SG3 246.1 RRT .7405 RRF .7218 RTF .9616 SGB 5919.9 R23 .0096 R13 .9617 SG1 5906.4 SG2 399.3 THA 4.30

Orbit Determination Accuracy: ST 2370.7 SR 516.5 SS 624.6 CRT .9521 CRS -.8444 CST -.9673 LSA 2495.4 MSA 222.8 SSA 18.0 EL1 2421.4 EL2 154.7 ALF 11.77

LAUNCH DATE JAN 31 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 11 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 26.882 GAL 4.92 AZL 87.81 HCA 265.42 SMA 123.09 ECC .21458 INC 2.1916 V1 30.228  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.060 GAP 10.31 AZP 90.18 TAL 161.37 TAP 66.79 RCA 96.68 APO 149.50 V2 35.003  
 RC 167.370 GL 14.25 GP -14.12 ZAL 60.22 ZAP 161.76 ETS 313.33 ZAE 128.61 ETE 191.07 ZAC 143.76 ETC 178.20 CLP-168.34

Distance 550.955

Planetary Conic: C3 17.316 VHL 4.161 DLA 36.30 RAL 67.90 RAD 6567.7 VEL 11.777 PTH 2.08 VHP 7.230 DPA 2.27 RAP 50.59 ECC 1.2850  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.27 22 18 43 4042.36 -25.84 174.16 296.68 63.56 23 26 5 3442.4 -29.17 166.37  
 113.73 4 4 13 2962.78 -25.83 93.03 296.67 63.55 4 53 36 2362.8 -29.16 85.25  
 66.27 22 18 43 4042.36 -25.84 174.16 296.68 63.56 23 26 5 3442.4 -29.17 166.37  
 113.73 4 4 13 2962.78 -25.83 93.03 296.67 63.55 4 53 36 2362.8 -29.16 85.25  
 66.27 22 18 43 4042.36 -25.84 174.16 296.68 63.56 23 26 5 3442.4 -29.17 166.37  
 113.73 4 4 13 2962.78 -25.83 93.03 296.67 63.55 4 53 36 2362.8 -29.16 85.25

Differential Corrections: TDE 1.3774 TRA 2.2796 TC3-4.8723 BAU 1.1283 RDE .3611 RRA .1720 RC3 -.1328 FAU .03238 FDE .4605 FRA 1.3356 FC3-1.6190 BSP 19229 BDE 1.4239 BRA 2.2860 BC3 4.8741 FSP -804

Mid-Course Execution Accuracy: SGT 5933.7 SGR 588.1 SG3 235.4 RRT .7267 RRF .7082 RTF .9620 SGB 5962.8 R23 .0086 R13 .9620 SG1 5949.1 SG2 403.0 THA 4.14

Orbit Determination Accuracy: ST 2230.9 SR 505.0 SS 583.5 CRT .9288 CRS -.7967 CST -.9634 LSA 2348.0 MSA 243.2 SSA 17.5 EL1 2280.0 EL2 183.1 ALF 11.95

LAUNCH DATE JAN 31 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 13 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 26.848 GAL 5.44 AZL 87.96 HCA 268.62 SMA 122.88 ECC .22002 INC 2.0367 V1 30.228  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.048 GAP 10.73 AZP 90.05 TAL 159.93 TAP 68.55 RCA 95.84 APO 149.91 V2 35.016  
 RC 169.445 GL 12.73 GP -13.59 ZAL 57.67 ZAP 162.79 ETS 311.81 ZAE 128.57 ETE 190.64 ZAC 145.83 ETC 177.76 CLP-169.35

Distance 556.568

Planetary Conic: C3 18.584 VHL 4.311 DLA 35.14 RAL 71.04 RAD 6567.8 VEL 11.831 PTH 2.10 VHP 7.471 DPA 3.43 RAP 52.45 ECC 1.3058  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 68.27 22 42 21 4025.53 -24.59 172.13 300.51 64.07 23 49 27 3425.5 -27.86 164.41  
 111.73 4 5 36 3012.55 -24.57 96.31 300.50 64.05 4 55 48 2412.5 -27.85 88.59  
 68.27 22 42 21 4025.53 -24.59 172.13 300.51 64.07 23 49 27 3425.5 -27.86 164.41  
 111.73 4 5 36 3012.55 -24.57 96.31 300.50 64.05 4 55 48 2412.5 -27.85 88.59  
 68.27 22 42 21 4025.53 -24.59 172.13 300.51 64.07 23 49 27 3425.5 -27.86 164.41  
 111.73 4 5 36 3012.55 -24.57 96.31 300.50 64.05 4 55 48 2412.5 -27.85 88.59

Differential Corrections: TDE 1.2636 TRA 2.5595 TC3-4.5711 BAU 1.1361 RDE .3646 RRA .1856 RC3 -.1188 FAU .02994 FDE .3839 FRA 1.3861 FC3-1.3946 BSP 19413 BDE 1.3152 BRA 2.5662 BC3 4.5726 FSP -773

Mid-Course Execution Accuracy: SGT 5971.3 SGR 579.9 SG3 225.0 RRT .7140 RRF .6953 RTF .9625 SGB 5999.4 R23 .0070 R13 .9626 SG1 5985.7 SG2 405.0 THA 3.98

Orbit Determination Accuracy: ST 2095.7 SR 492.9 SS 547.1 CRT .8974 CRS -.7384 CST -.9596 LSA 2205.3 MSA 265.7 SSA 17.0 EL1 2142.4 EL2 212.7 ALF 12.04

LAUNCH DATE JAN 31 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 15 1969

Heliocentric Conic: RL 147.39 LAL -.00 LOL 130.95 VL 26.814 GAL 5.98 AZL 88.12 HCA 271.82 SMA 122.67 ECC .22590 INC 1.8821 V1 30.228  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.036 GAP 11.18 AZP 89.94 TAL 158.50 TAP 70.33 RCA 94.96 APO 150.38 V2 35.030  
 RC 171.498 GL 11.27 GP -13.11 ZAL 55.20 ZAP 163.77 ETS 310.05 ZAE 128.52 ETE 190.26 ZAC 147.92 ETC 177.26 CLP-170.35

Distance 562.135

Planetary Conic: C3 20.076 VHL 4.481 DLA 33.97 RAL 74.01 RAD 6567.8 VEL 11.894 PTH 2.11 VHP 7.728 DPA 4.53 RAP 54.36 ECC 1.3304  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 70.40 23 6 45 4005.77 -23.29 169.90 304.31 64.54 24 13 31 3405.8 -26.52 162.25  
 109.60 4 4 55 3068.84 -23.28 100.05 304.31 64.53 4 56 4 2468.8 -26.51 92.40  
 70.40 23 6 45 4005.77 -23.29 169.90 304.31 64.54 24 13 31 3405.8 -26.52 162.25  
 109.60 4 4 55 3068.84 -23.28 100.05 304.31 64.53 4 56 4 2468.8 -26.51 92.40  
 110.00 4 36 11 2973.43 -25.90 93.91 305.60 66.86 5 25 44 2373.4 -28.79 85.93  
 110.00 3 38 35 3149.17 -20.73 104.93 302.93 62.19 4 31 4 2549.2 -24.28 97.59

Differential Corrections: TDE 1.1460 TRA 2.8553 TC3-4.2523 BAU 1.1416 RDE .3690 RRA .2001 RC3 -.1062 FAU .02757 FDE .3131 FRA 1.4354 FC3-1.1890 BSP 19579 BDE 1.2039 BRA 2.8623 BC3 4.2536 FSP -742

Mid-Course Execution Accuracy: SGT 6004.2 SGR 571.7 SG3 215.0 RRT .7028 RRF .6839 RTF .9630 SGB 6031.4 R23 .0057 R13 .9631 SG1 6017.7 SG2 405.8 THA 3.85

Orbit Determination Accuracy: ST 1976.1 SR 480.8 SS 518.1 CRT .8567 CRS -.6712 CST -.9569 LSA 2078.7 MSA 289.3 SSA 16.4 EL1 2019.2 EL2 242.7 ALF 11.95

LAUNCH DATE JAN 31 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC

DISTANCE 567.650

RL 147.39 LAL -.00 LOL 130.95 VL 26.780 GAL 6.56 AZL 88.27 HCA 275.03 SMA 122.46 ECC .23227 INC 1.7268 VI 30.228
RP 108.14 LAP -1.72 LOP 45.98 VP 37.024 GAP 11.66 AZP 89.85 TAL 157.09 TAP 72.11 RCA 94.02 APO 150.91 V2 35.043
RC 173.532 GL 9.88 GP -12.67 ZAL 52.82 ZAP 164.69 ETS 308.02 ZAE 128.48 ETE 189.92 ZAC 150.02 ETC 176.69 CLP-171.34

PLANETOCENTRIC CONIC

C3 21.823 VHL 4.671 DLA 32.81 RAL 76.82 RAD 6567.9 VEL 11.967 PTH 2.13 VHP 8.002 DPA 5.57 RAP 56.31 ECC 1.3591
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
72.68 23 32 15 3981.79 -21.98 167.38 308.08 65.00 24 38 37 3381.8 -25.16 159.78
107.32 4 1 48 3132.85 -21.97 104.33 308.07 64.99 4 54 1 2532.9 -25.15 96.74
72.68 23 32 15 3981.79 -21.98 167.38 308.08 65.00 24 38 37 3381.8 -25.16 159.78
107.32 4 1 48 3132.85 -21.97 104.33 308.07 64.99 4 54 1 2532.9 -25.15 96.74
110.00 5 31 37 2856.46 -28.78 86.04 311.14 70.71 6 19 13 2256.5 -31.14 77.63
110.00 3 5 33 3306.18 -15.48 114.08 304.44 59.14 4 0 39 2706.2 -19.46 107.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.0242 TRA 3.1673 TC3-3.9242 BAU 1.1452 SGT 6032.1 SGR 563.3 SG3 205.6 ST 1874.3 SR 468.6 SS 496.3
ROE .3742 RRA .2154 RC3 -.0948 FAU .02530 RRT .6928 RRF .6740 RTF .9636 CRT .8057 CRS -.5975 CST -.9559
FDE .2481 FRA 1.4837 FC3-1.0037 BSP 19727 SGB 6056.3 R23 .0047 R13 .9636 LSA 1970.0 MSA 312.6 SSA 15.7
BOE 1.0904 BRA 3.1747 BC3 3.9254 FSP -712 SGI 6044.7 SG2 405.4 THA 3.72 EL1 1912.7 EL2 272.0 ALF 11.63

LAUNCH DATE JAN 31 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 19 1969

HELIOCENTRIC CONIC

DISTANCE 573.107

RL 147.39 LAL -.00 LOL 130.95 VL 26.746 GAL 7.18 AZL 88.43 HCA 278.23 SMA 122.26 ECC .23917 INC 1.5699 VI 30.228
RP 108.10 LAP -1.55 LOP 49.18 VP 37.012 GAP 12.16 AZP 89.78 TAL 155.68 TAP 73.91 RCA 93.02 APO 151.50 V2 35.056
RC 175.544 GL 8.56 GP -12.27 ZAL 50.54 ZAP 165.56 ETS 305.67 ZAE 128.42 ETE 189.61 ZAC 152.13 ETC 176.01 CLP-172.32

PLANETOCENTRIC CONIC

C3 23.861 VHL 4.885 DLA 31.67 RAL 79.46 RAD 6568.0 VEL 12.051 PTH 2.15 VHP 8.295 DPA 6.55 RAP 58.30 ECC 1.3927
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
75.18 0 3 22 3951.68 -20.66 164.42 311.81 65.44 1 9 13 3351.7 -23.79 156.89
104.82 3 55 42 3206.39 -20.64 109.28 311.81 65.43 4 49 9 2606.4 -23.78 101.75
75.18 0 3 22 3951.68 -20.66 164.42 311.81 65.44 1 9 13 3351.7 -23.79 156.89
104.82 3 55 42 3206.39 -20.64 109.28 311.81 65.43 4 49 9 2606.4 -23.78 101.75
110.00 6 7 43 2796.80 -30.05 81.86 315.77 72.89 6 54 20 2196.8 -32.10 73.24
110.00 2 50 31 3409.27 -11.80 119.80 306.83 57.68 3 47 20 2809.3 -15.98 113.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .9026 TRA 3.5014 TC3-3.5859 BAU 1.1442 SGT 6056.5 SGR 555.0 SG3 196.7 ST 1796.6 SR 456.5 SS 482.1
ROE .3805 RRA .2318 RC3 -.0836 FAU .02302 RRT .6845 RRF .6661 RTF .9642 CRT .7456 CRS -.5224 CST -.9572
FDE .1902 FRA 1.5336 FC3 -.8351 BSP 19769 SGB 6081.8 R23 .0044 R13 .9642 LSA 1886.0 MSA 333.6 SSA 15.2
BOE .9795 BRA 3.5091 BC3 3.5868 FSP -679 SGI 6068.4 SG2 403.8 THA 3.60 EL1 1829.5 EL2 298.8 ALF 11.03

LAUNCH DATE JAN 31 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 21 1969

HELIOCENTRIC CONIC

DISTANCE 578.493

RL 147.39 LAL -.00 LOL 130.95 VL 26.713 GAL 7.83 AZL 88.59 HCA 281.44 SMA 122.06 ECC .24668 INC 1.4102 VI 30.228
RP 108.06 LAP -1.38 LOP 52.39 VP 37.000 GAP 12.70 AZP 89.72 TAL 154.29 TAP 75.73 RCA 91.95 APO 152.17 V2 35.069
RC 177.535 GL 7.31 GP -11.90 ZAL 48.36 ZAP 166.36 ETS 302.98 ZAE 128.36 ETE 189.32 ZAC 154.25 ETC 175.22 CLP-173.30

PLANETOCENTRIC CONIC

C3 26.234 VHL 5.122 DLA 30.55 RAL 81.94 RAD 6568.1 VEL 12.149 PTH 2.18 VHP 8.610 DPA 7.49 RAP 60.33 ECC 1.4317
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
78.02 0 33 21 3911.64 -19.33 160.77 315.51 65.87 1 38 33 3311.6 -22.42 153.29
101.98 3 45 30 3293.14 -19.31 115.18 315.51 65.85 4 40 23 2693.1 -22.41 107.70
78.02 0 33 21 3911.64 -19.33 160.77 315.51 65.87 1 38 33 3311.6 -22.42 153.29
101.98 3 45 30 3293.14 -19.31 115.18 315.51 65.85 4 40 23 2693.1 -22.41 107.70
110.00 6 37 15 2756.15 -30.83 78.95 320.09 74.45 7 23 11 2156.1 -32.65 70.20
110.00 2 40 47 3496.63 -8.58 124.51 309.47 56.78 3 39 4 2896.6 -12.89 118.07

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .7731 TRA 3.8503 TC3-3.2577 BAU 1.1428 SGT 6074.6 SGR 545.4 SG3 188.2 ST 1734.8 SR 443.7 SS 472.2
ROE .3871 RRA .2486 RC3 -.0740 FAU .02094 RRT .6768 RRF .6585 RTF .9650 CRT .6757 CRS -.4439 CST -.9600
FDE .1347 FRA 1.5812 FC3 -.6909 BSP 19906 SGB 6099.0 R23 .0035 R13 .9650 LSA 1818.0 MSA 351.8 SSA 14.6
BOE .8646 BRA 3.8583 BC3 3.2586 FSP -652 SGI 6085.8 SG2 400.8 THA 3.49 EL1 1761.4 EL2 322.2 ALF 10.15

LAUNCH DATE JAN 31 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 23 1969

HELIOCENTRIC CONIC

DISTANCE 583.801

RL 147.39 LAL -.00 LOL 130.95 VL 26.680 GAL 8.53 AZL 88.75 HCA 284.65 SMA 121.86 ECC .25485 INC 1.2469 VI 30.228
RP 108.02 LAP -1.21 LOP 55.60 VP 36.989 GAP 13.27 AZP 89.68 TAL 152.92 TAP 77.57 RCA 90.80 APO 152.92 V2 35.083
RC 179.506 GL 6.12 GP -11.57 ZAL 46.28 ZAP 167.11 ETS 299.90 ZAE 128.29 ETE 189.06 ZAC 156.36 ETC 174.27 CLP-174.28

PLANETOCENTRIC CONIC

C3 28.996 VHL 5.385 DLA 29.46 RAL 84.27 RAD 6568.2 VEL 12.263 PTH 2.21 VHP 8.949 DPA 8.36 RAP 62.38 ECC 1.4772
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
81.50 1 9 1 3852.42 -18.00 155.74 319.17 66.27 2 13 13 3252.4 -21.06 148.31
98.50 3 28 23 3402.21 -17.99 122.67 319.17 66.26 4 25 6 2802.2 -21.04 115.25
100.00 4 22 32 3228.90 -21.80 111.49 320.83 69.02 5 16 21 2628.9 -24.46 103.70
100.00 2 57 33 3500.95 -14.27 128.18 317.35 63.45 3 55 54 2901.0 -17.72 121.00
110.00 7 2 46 2726.82 -31.35 76.82 324.23 75.61 7 48 13 2126.8 -33.00 67.99
110.00 2 33 48 3575.80 -5.60 128.71 312.25 56.22 3 33 24 2975.8 -10.00 122.38

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE .6407 TRA 4.2206 TC3-2.9553 BAU 1.1381 SGT 6087.8 SGR 535.3 SG3 180.1 ST 1693.5 SR 430.6 SS 467.3
ROE .3942 RRA .2661 RC3 -.0648 FAU .01892 RRT .6702 RRF .6521 RTF .9659 CRT .5993 CRS -.3681 CST -.9644
FDE .0840 FRA 1.6297 FC3 -.5648 BSP 20015 SGB 6111.3 R23 .0028 R13 .9659 LSA 1771.5 MSA 365.4 SSA 14.0
BOE .7522 BRA 4.2289 BC3 2.9360 FSP -626 SGI 6098.4 SG2 396.6 THA 3.39 EL1 1713.9 EL2 340.6 ALF 9.02

LAUNCH DATE JAN 31 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 25 1969

HELIOCENTRIC CONIC

DISTANCE 589.015

RL 147.39 LAL -.00 LOL 130.95 VL 26.647 GAL 9.28 AZL 88.92 HCA 287.86 SMA 121.66 ECC .26376 INC 1.0784 V1 30.228  
 RP 107.98 LAP -1.03 LOP 58.81 VP 36.977 GAP 13.89 AZP 89.67 TAL 151.58 TAP 79.44 RCA 89.57 APO 153.75 V2 35.095  
 RC 181.455 GL 5.00 GP -11.26 ZAL 44.32 ZAP 167.79 ETS 296.39 ZAE 128.21 ETE 188.82 ZAC 158.47 ETC 173.13 CLP-175.26

PLANETOCENTRIC CONIC

C3 32.212 VML 5.676 DLA 28.41 RAL 86.44 RAD 6568.3 VEL 12.393 PTH 2.24 VHP 9.315 DPA 9.19 RAP 64.46 ECC 1.5301  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 87.63 2 7 33 3717.89 -16.69 145.25 322.80 66.67 3 9 31 3117.9 -19.70 137.87  
 92.37 2 47 10 3589.53 -16.67 135.85 322.79 66.66 3 46 59 2989.5 -19.69 128.47  
 100.00 5 7 41 3136.73 -23.92 105.47 325.74 71.52 5 59 57 2536.7 -26.22 97.42  
 100.00 2 29 44 3645.92 -9.71 136.52 319.33 61.59 3 30 30 3045.9 -13.43 129.71  
 110.00 7 25 24 2705.62 -31.69 75.26 328.26 76.47 8 10 30 2105.6 -33.23 66.37  
 110.00 2 28 30 3649.80 -2.79 132.59 315.11 55.92 3 29 20 3049.8 -7.24 126.34

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .5046 TRA 4.6137 TC3-2.6229 BAU 1.1298 SGT 6096.2 SGR 524.2 SG3 172.4 ST 1670.7 SR 417.2 SS 466.5  
 RDE .4017 RRA .2840 RC3 -.0563 FAU .01697 RRT .6643 RRF .6466 RTF .9670 CRT .5196 CRS -.2968 CST -.9697  
 FDE .0371 FRA 1.6792 FC3 -.4561 BSP 20110 SGB 6118.7 R23 .0021 R13 .9670 LSA 1744.4 MSA 373.7 SSA 13.5  
 BDE .6450 BRA 4.6225 BC3 2.6235 FSP -601 SG1 6106.2 SG2 391.2 THA 3.28 EL1 1685.3 EL2 353.3 ALF 7.73

LAUNCH DATE JAN 31 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 27 1969

HELIOCENTRIC CONIC

DISTANCE 594.120

RL 147.39 LAL -.00 LOL 130.95 VL 26.614 GAL 10.09 AZL 89.10 HCA 291.08 SMA 121.47 ECC .27351 INC .9037 V1 30.228  
 RP 107.94 LAP -.84 LOP 62.03 VP 36.966 GAP 14.56 AZP 89.68 TAL 150.27 TAP 81.34 RCA 88.25 APO 154.69 V2 35.108  
 RC 183.384 GL 3.95 GP -10.98 ZAL 42.47 ZAP 168.41 ETS 292.41 ZAE 128.11 ETE 188.60 ZAC 160.57 ETC 171.72 CLP-176.25

PLANETOCENTRIC CONIC

C3 35.960 VML 5.997 DLA 27.39 RAL 88.46 RAD 6568.4 VEL 12.543 PTH 2.27 VHP 9.712 DPA 9.96 RAP 66.56 ECC 1.5918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 39 3 3474.05 -21.09 129.24 328.70 70.65 4 36 57 2874.0 -23.54 121.42  
 90.00 1 31 49 3888.91 -9.83 154.45 323.75 63.31 2 36 38 3288.9 -13.34 147.53  
 100.00 5 39 12 3086.74 -24.96 102.11 330.08 72.99 6 30 39 2486.7 -27.05 93.94  
 100.00 2 14 21 3751.46 -6.24 142.43 321.82 60.71 3 16 52 3151.5 -10.10 135.77  
 110.00 7 45 43 2690.80 -31.93 74.17 332.20 77.08 8 30 34 2090.8 -33.37 65.24  
 110.00 2 24 19 3720.16 -.10 136.27 318.03 55.82 3 26 19 3120.2 -4.59 130.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .3695 TRA 5.0368 TC3-2.3186 BAU 1.1149 SGT 6101.9 SGR 512.7 SG3 165.3 ST 1666.0 SR 403.7 SS 469.4  
 RDE .4100 RRA .3027 RC3 -.0478 FAU .01500 RRT .6595 RRF .6425 RTF .9682 CRT .4420 CRS -.2349 CST -.9753  
 FDE -.0043 FRA 1.7323 FC3 -.3611 BSP 20086 SGB 6123.4 R23 .0019 R13 .9682 LSA 1736.9 MSA 376.3 SSA 13.0  
 BDE .5519 BRA 5.0459 BC3 2.3191 FSP -572 SG1 6111.3 SG2 384.8 THA 3.18 EL1 1675.9 EL2 360.0 ALF 6.41

LAUNCH DATE JAN 31 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 29 1969

HELIOCENTRIC CONIC

DISTANCE 599.096

RL 147.39 LAL -.00 LOL 130.95 VL 26.582 GAL 10.95 AZL 89.28 HCA 294.29 SMA 121.28 ECC .28419 INC .7211 V1 30.228  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.954 GAP 15.28 AZP 89.70 TAL 149.00 TAP 83.29 RCA 86.81 APO 155.75 V2 35.120  
 RC 185.291 GL 2.96 GP -10.72 ZAL 40.73 ZAP 168.94 ETS 287.92 ZAE 127.99 ETE 188.39 ZAC 162.64 ETC 169.97 CLP-177.25

PLANETOCENTRIC CONIC

C3 40.339 VML 6.351 DLA 26.41 RAL 90.34 RAD 6568.6 VEL 12.716 PTH 2.31 VHP 10.144 DPA 10.68 RAP 68.67 ECC 1.6639  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 14 3 3411.65 -22.44 125.16 333.14 72.26 5 10 55 2811.6 -24.66 117.19  
 90.00 1 11 48 4009.38 -6.08 161.31 326.10 62.29 2 18 38 3409.4 -9.74 154.55  
 100.00 6 4 57 3054.14 -25.59 99.90 334.18 73.99 6 55 51 2454.1 -27.54 91.64  
 100.00 2 3 36 3842.13 -3.19 147.44 324.52 60.26 3 7 38 3242.1 -7.13 140.86  
 110.00 8 4 7 2681.26 -32.07 73.46 336.06 77.47 8 48 48 2081.3 -33.46 64.51  
 110.00 2 20 55 3787.77 2.48 139.79 320.98 55.90 3 24 3 3187.8 -2.01 133.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2252 TRA 5.4829 TC3-2.0351 BAU 1.0977 SGT 6101.0 SGR 499.6 SG3 158.5 ST 1671.0 SR 389.6 SS 474.3  
 RDE .4182 RRA .3211 RC3 -.0403 FAU .01318 RRT .6546 RRF .6382 RTF .9697 CRT .3649 CRS -.1764 CST -.9804  
 FDE -.0446 FRA 1.7858 FC3 -.2829 BSP 20168 SGB 6121.4 R23 .0014 R13 .9697 LSA 1740.3 MSA 374.3 SSA 12.5  
 BDE .4750 BRA 5.4923 BC3 2.0355 FSP -550 SG1 6109.8 SG2 377.1 THA 3.08 EL1 1677.3 EL2 361.3 ALF 5.10

LAUNCH DATE JAN 31 1969

FLIGHT TIME 212.00

ARRIVAL DATE AUG 31 1969

HELIOCENTRIC CONIC

DISTANCE 603.918

RL 147.39 LAL -.00 LOL 130.95 VL 26.551 GAL 11.89 AZL 89.47 HCA 297.51 SMA 121.10 ECC .29595 INC .5287 V1 30.228  
 RP 107.87 LAP -.47 LOP 68.46 VP 36.943 GAP 16.06 AZP 89.76 TAL 147.77 TAP 85.28 RCA 85.26 APO 156.93 V2 35.132  
 RC 187.175 GL 2.04 GP -10.48 ZAL 39.11 ZAP 169.38 ETS 282.91 ZAE 127.85 ETE 188.20 ZAC 164.68 ETC 167.73 CLP-178.26

PLANETOCENTRIC CONIC

C3 45.469 VML 6.743 DLA 25.47 RAL 92.08 RAD 6568.7 VEL 12.916 PTH 2.35 VHP 10.615 DPA 11.34 RAP 70.79 ECC 1.7483  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 41 4 3373.88 -23.20 122.65 337.25 73.30 5 37 18 2773.9 -25.27 114.59  
 90.00 0 58 39 4107.47 -2.95 166.82 328.72 61.82 2 7 7 3507.5 -6.69 160.14  
 100.00 6 27 2 3032.26 -25.99 98.40 338.13 74.69 7 17 34 2432.3 -27.84 90.08  
 100.00 1 55 23 3924.32 -.41 151.96 327.32 60.11 3 0 47 3324.3 -4.38 145.42  
 110.00 8 20 50 2676.22 -32.14 73.09 339.86 77.68 9 5 26 2076.2 -33.50 64.12  
 110.00 2 18 4 3853.13 4.97 143.22 323.97 56.14 3 22 17 3253.1 .49 137.00

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .0769 TRA 5.9602 TC3-1.7678 BAU 1.0748 SGT 6095.4 SGR 485.4 SG3 152.1 ST 1685.6 SR 375.1 SS 481.4  
 RDE .4268 RRA .3395 RC3 -.0333 FAU .01140 RRT .6500 RRF .6344 RTF .9714 CRT .2928 CRS -.1249 CST -.9849  
 FDE -.0821 FRA 1.8425 FC3 -.2171 BSP 20232 SGB 6114.7 R23 .0009 R13 .9714 LSA 1754.5 MSA 368.0 SSA 12.0  
 BDE .4336 BRA 5.9699 BC3 1.7681 FSP -528 SG1 6103.6 SG2 368.4 THA 2.97 EL1 1689.4 EL2 357.9 ALF 3.90

LAUNCH DATE JAN 31 1969

FLIGHT TIME 214.00

ARRIVAL DATE SEP 2 1969

HELIOCENTRIC CONIC

DISTANCE 608.555

RL 147.39 LAL -.00 LOL 130.95 VL 26.520 GAL 12.90 AZL 89.68 HCA 300.73 SMA 120.91 ECC .30891 INC .3245 V1 30.228  
 RP 107.83 LAP -.28 LOP 71.68 VP 36.932 GAP 16.92 AZP 89.83 TAL 146.61 TAP 87.34 RCA 83.56 APO 158.27 V2 35.144  
 RC 189.037 GL 1.17 GP -10.26 ZAL 37.62 ZAP 169.72 ETS 277.38 ZAE 127.68 ETE 188.01 ZAC 166.68 ETC 164.82 CLP -179.30

PLANETOCENTRIC CONIC

C3 51.501 VHL 7.176 DLA 24.57 RAL 93.68 RAD 6568.9 VEL 13.148 PTH 2.40 VHP 11.132 DPA 11.96 RAP 72.91 ECC 1.8476  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 3 41 3349.31 -23.67 121.01 341.17 73.99 5 59 30 2749.3 -25.64 112.89  
 90.00 0 48 49 4194.32 -.14 171.66 331.47 61.68 1 58 44 3594.3 -3.93 165.03  
 100.00 6 46 25 3018.07 -26.24 97.42 341.95 75.14 7 36 43 2418.1 -28.02 89.07  
 100.00 1 48 46 4000.79 2.18 156.15 330.17 60.18 2 55 27 3400.8 -1.80 149.63  
 110.00 8 36 3 2675.07 -32.16 73.00 343.59 77.73 9 20 38 2075.1 -33.51 64.03  
 110.00 2 15 37 3916.56 7.37 146.57 326.97 56.53 3 20 54 3316.6 2.91 140.31

DIFFERENTIAL CORRECTIONS

TDE -.0757 TRA 6.4728 TC3-1.5171 BAU 1.0447  
 RDE .4356 RRA .3576 RC3 -.0267 FAU .00964  
 FDE -.1170 FRA 1.9033 FC3 -.1621 BSP 20272  
 BDE .4422 BRA 6.4826 BC3 1.5173 FSP -507

MID-COURSE EXECUTION ACCURACY

SGT 6085.6 SGR 470.1 SG3 146.0  
 RRT .6454 RRF .6308 RTF .9732  
 SGB 6103.7 R23 .0006 R13 .9732  
 SGI 6093.1 SG2 358.7 THA 2.86

ORBIT DETERMINATION ACCURACY

ST 1707.0 SR 360.3 SS 490.5  
 CRT .2270 CRS -.0802 CST -.9887  
 LSA 1776.4 MSA 358.3 SSA 11.5  
 EL1 1709.1 EL2 350.5 ALF 2.86

LAUNCH DATE JAN 31 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 4 1969

HELIOCENTRIC CONIC

DISTANCE 612.968

RL 147.39 LAL -.00 LOL 130.95 VL 26.489 GAL 14.01 AZL 89.89 HCA 303.96 SMA 120.74 ECC .32325 INC .1056 V1 30.228  
 RP 107.79 LAP -.09 LOP 74.90 VP 36.921 GAP 17.86 AZP 89.94 TAL 145.51 TAP 89.46 RCA 81.71 APO 159.77 V2 35.155  
 RC 190.875 GL .36 GP -10.06 ZAL 36.24 ZAP 169.94 ETS 271.37 ZAE 127.48 ETE 187.83 ZAC 168.60 ETC 160.93 CLP 179.64

PLANETOCENTRIC CONIC

C3 58.625 VHL 7.657 DLA 23.72 RAL 95.15 RAD 6569.1 VEL 13.416 PTH 2.45 VHP 11.702 DPA 12.52 RAP 75.02 ECC 1.9648  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 23 13 3333.56 -23.97 119.94 344.94 74.45 6 18 47 2733.6 -25.87 111.79  
 90.00 0 40 58 4273.96 2.42 176.11 334.27 61.78 1 52 12 3674.0 -1.37 169.48  
 100.00 7 3 38 3009.80 -26.38 96.84 345.66 75.41 7 53 48 2409.8 -28.13 88.48  
 100.00 1 43 14 4072.95 4.62 160.12 333.06 60.43 2 51 7 3473.0 .65 153.59  
 110.00 8 49 55 2677.29 -32.13 73.17 347.24 77.64 9 34 32 2077.3 -33.49 64.20  
 110.00 2 13 27 3978.22 9.67 149.86 329.97 57.05 3 19 45 3378.2 5.26 143.54

DIFFERENTIAL CORRECTIONS

TDE -.2333 TRA 7.0247 TC3-1.2831 BAU 1.0058  
 RDE .4448 RRA .3751 RC3 -.0206 FAU .00789  
 FDE -.1498 FRA 1.9692 FC3 -.1165 BSP 20276  
 BDE .5023 BRA 7.0347 BC3 1.2832 FSP -486

MID-COURSE EXECUTION ACCURACY

SGT 6071.0 SGR 453.6 SG3 140.2  
 RRT .6406 RRF .6271 RTF .9753  
 SGB 6087.9 R23 .0004 R13 .9753  
 SGI 6078.0 SG2 347.9 THA 2.75

ORBIT DETERMINATION ACCURACY

ST 1732.3 SR 345.3 SS 501.2  
 CRT .1678 CRS -.0415 CST -.9917  
 LSA 1803.1 MSA 346.2 SSA 11.1  
 EL1 1733.3 EL2 340.2 ALF 1.99

LAUNCH DATE JAN 31 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 6 1969

HELIOCENTRIC CONIC

DISTANCE 617.109

RL 147.39 LAL -.00 LOL 130.95 VL 26.460 GAL 15.22 AZL 90.13 HCA 307.18 SMA 120.57 ECC .33917 INC .1284 V1 30.228  
 RP 107.76 LAP -.10 LOP 78.13 VP 36.910 GAP 18.90 AZP 90.08 TAL 144.49 TAP 91.67 RCA 79.67 APO 161.46 V2 35.166  
 RC 192.690 GL -.40 GP -9.87 ZAL 34.99 ZAP 170.02 ETS 264.98 ZAE 127.24 ETE 187.65 ZAC 170.42 ETC 155.55 CLP 178.54

PLANETOCENTRIC CONIC

C3 67.083 VHL 8.190 DLA 22.91 RAL 96.47 RAD 6569.3 VEL 13.727 PTH 2.51 VHP 12.333 DPA 13.04 RAP 77.11 ECC 2.1040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 40 22 3324.31 -24.13 119.32 348.57 74.72 6 35 47 2724.3 -26.00 111.15  
 90.00 0 34 25 4348.32 4.81 180.27 337.11 62.06 1 46 53 3748.3 1.03 173.63  
 100.00 7 19 1 3006.28 -26.44 96.60 349.25 75.53 8 9 7 2406.3 -28.17 88.22  
 100.00 1 38 28 4141.58 6.91 163.93 335.96 60.84 2 47 30 3541.6 2.97 157.36  
 110.00 9 2 31 2682.46 -32.05 73.55 350.80 77.42 9 47 13 2082.5 -33.45 64.60  
 110.00 2 11 27 4038.17 11.87 153.11 332.97 57.71 3 18 45 3438.2 7.52 146.71

DIFFERENTIAL CORRECTIONS

TDE -.3928 TRA 7.6250 TC3-1.0665 BAU .9566  
 RDE .4545 RRA .3916 RC3 -.0149 FAU .00607  
 FDE -.1799 FRA 2.0422 FC3 -.0783 BSP 20225  
 BDE .6007 BRA 7.6350 BC3 1.0666 FSP -465

MID-COURSE EXECUTION ACCURACY

SGT 6054.7 SGR 436.0 SG3 134.9  
 RRT .6354 RRF .6234 RTF .9774  
 SGB 6070.4 R23 .0005 R13 .9774  
 SGI 6061.1 SG2 336.3 THA 2.63

ORBIT DETERMINATION ACCURACY

ST 1759.6 SR 330.2 SS 513.6  
 CRT .1165 CRS -.0095 CST -.9940  
 LSA 1832.6 MSA 332.4 SSA 10.6  
 EL1 1760.0 EL2 327.9 ALF 1.30

LAUNCH DATE JAN 31 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 8 1969

HELIOCENTRIC CONIC

DISTANCE 620.913

RL 147.39 LAL -.00 LOL 130.95 VL 26.431 GAL 16.56 AZL 90.39 HCA 310.41 SMA 120.40 ECC .35692 INC .3852 V1 30.228  
 RP 107.73 LAP -.29 LOP 81.35 VP 36.900 GAP 20.06 AZP 90.25 TAL 143.57 TAP 93.98 RCA 77.43 APO 163.37 V2 35.177  
 RC 194.480 GL -1.11 GP -9.70 ZAL 33.87 ZAP 169.96 ETS 258.32 ZAE 126.95 ETE 187.47 ZAC 172.08 ETC 147.90 CLP 177.39

PLANETOCENTRIC CONIC

C3 77.185 VHL 8.786 DLA 22.14 RAL 97.66 RAD 6569.5 VEL 14.090 PTH 2.57 VHP 13.036 DPA 13.50 RAP 79.18 ECC 2.2703  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 55 32 3320.13 -24.21 119.04 352.07 74.84 6 50 52 2720.1 -26.06 110.85  
 90.00 0 28 46 4418.41 7.03 184.22 339.93 62.50 1 42 24 3818.4 3.29 177.54  
 100.00 7 32 45 3006.65 -26.44 96.63 352.72 75.52 8 22 51 2406.7 -28.17 88.25  
 100.00 1 34 13 4207.12 9.06 167.60 338.84 61.39 2 44 21 3607.1 5.18 160.97  
 110.00 9 13 55 2690.14 -31.94 74.12 354.26 77.11 9 58 45 2090.1 -33.38 65.19  
 110.00 2 9 33 4096.39 13.96 156.32 335.95 58.48 3 17 49 3496.4 9.69 149.82

DIFFERENTIAL CORRECTIONS

TDE -.5633 TRA 8.2711 TC3 -.8688 BAU .8966  
 RDE .4643 RRA .4063 RC3 -.0100 FAU .00426  
 FDE -.2100 FRA 2.1213 FC3 -.0478 BSP 20236  
 BDE .7299 BRA 8.2810 BC3 .8689 FSP -447

MID-COURSE EXECUTION ACCURACY

SGT 6031.5 SGR 416.9 SG3 129.8  
 RRT .6289 RRF .6184 RTF .9797  
 SGB 6045.9 R23 .0006 R13 .9797  
 SGI 6037.2 SG2 323.8 THA 2.50

ORBIT DETERMINATION ACCURACY

ST 1785.9 SR 314.7 SS 527.7  
 CRT .0689 CRS .0204 CST -.9958  
 LSA 1861.7 MSA 317.3 SSA 10.1  
 EL1 1786.0 EL2 313.9 ALF .72

LAUNCH DATE FEB 1 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 12 1969

HELIOCENTRIC CONIC DISTANCE 169.721  
 RL 147.41 LAL -.00 LOL 131.96 VL 24.537 GAL -1.29 AZL 87.17 HCA 72.09 SMA 110.73 ECC .33198 INC 2.8263 V1 30.224  
 RP 107.99 LAP 2.69 LOP 204.03 VP 35.487 GAP -19.34 AZP 89.13 TAL 182.60 TAP 254.69 RCA 73.97 APO 147.49 V2 35.092  
 RC 42.671 GL 11.82 GP 8.09 ZAL 97.78 ZAP 11.25 ETS 228.02 ZAE 165.02 ETE 354.91 ZAC 122.37 ETC 159.85 CLP 7.85

PLANETOCENTRIC CONIC  
 C3 34.848 VHL 5.903 OLA 23.94 RAL 27.42 RAD 6568.4 VEL 12.499 PTH 2.26 VHP 12.214 DPA 17.35 RAP 27.31 ECC 1.5735  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 45 38 3215.54 -25.88 111.83 267.73 78.08 1 39 14 2615.5 -27.26 103.44  
 90.00 20 6 25 4131.56 -2.17 168.16 258.88 61.76 21 15 17 3531.6 -5.93 161.50  
 100.00 2 26 37 2889.97 -28.16 88.38 268.24 79.53 3 14 47 2290.0 -29.32 79.77  
 100.00 21 8 8 3932.36 -.14 152.40 257.75 60.11 22 13 40 3332.4 -4.11 145.87  
 110.00 4 13 44 2554.84 -33.54 63.90 269.20 82.95 4 56 19 1954.8 -34.15 54.71  
 110.00 21 37 30 3840.25 4.48 142.54 254.87 56.08 22 41 30 3240.2 -.00 136.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3315 TRA -.6400 TC3 .1893 BAU .0882 SGT 784.5 SGR 430.3 SG3 66.4 ST 381.0 SR 417.7 SS 257.2  
 RDE -.4291 RRA .1020 RC3 -.0016 FAU .02319 RRT .1777 RRF -.1944 RTF -.6831 CRT .8004 CRS .9088 CST .9738  
 FDE .2355 FRA .2577 FC3 -.5761 BSP 2205 SGB 894.8 R23 -.0244 R13 -.6867 LSA 594.0 MSA 180.6 SSA 16.4  
 BOE .5422 BRA .6481 BC3 .1893 FSP -154 SG1 789.7 SG2 420.6 THA 7.79 EL1 536.7 EL2 177.8 ALF 48.28

LAUNCH DATE FEB 1 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 14 1969

HELIOCENTRIC CONIC DISTANCE 176.405  
 RL 147.41 LAL -.00 LOL 131.96 VL 24.868 GAL -1.41 AZL 87.34 HCA 75.30 SMA 112.26 ECC .31397 INC 2.6557 V1 30.224  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.705 GAP -18.18 AZP 89.33 TAL 183.07 TAP 258.37 RCA 77.01 APO 147.51 V2 35.080  
 RC 43.078 GL 11.92 GP 8.52 ZAL 98.82 ZAP 10.42 ETS 237.05 ZAE 162.54 ETE 358.17 ZAC 123.47 ETC 159.11 CLP 6.02

PLANETOCENTRIC CONIC  
 C3 31.102 VHL 5.577 OLA 23.65 RAL 26.31 RAD 6568.2 VEL 12.348 PTH 2.23 VHP 11.558 DPA 18.29 RAP 28.46 ECC 1.5119  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 45 41 3171.21 -26.46 108.72 264.45 79.54 1 38 32 2571.2 -27.64 100.25  
 90.00 19 57 31 4118.56 -2.59 167.44 255.87 61.79 21 6 10 3518.6 -6.34 160.77  
 100.00 2 25 57 2847.95 -28.64 85.35 264.87 81.05 3 13 25 2248.0 -29.58 76.68  
 100.00 20 59 57 3917.05 -.66 151.56 254.80 60.11 22 5 14 3317.1 -4.63 145.02  
 110.00 4 11 59 2516.19 -33.82 60.91 265.62 84.70 4 53 56 1916.2 -34.18 51.69  
 110.00 21 30 24 3821.58 3.77 141.56 252.04 56.00 22 34 5 3221.6 -.72 135.35

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3324 TRA -.6166 TC3 .2431 BAU .1011 SGT 817.5 SGR 434.6 SG3 73.7 ST 399.6 SR 422.1 SS 264.8  
 RDE -.4096 RRA .0965 RC3 .0085 FAU .02462 RRT .2010 RRF -.2203 RTF -.7018 CRT .8120 CRS .9153 CST .9745  
 FDE .2434 FRA .2537 FC3 -.6853 BSP 2341 SGB 925.9 R23 -.0284 R13 -.7059 LSA 612.6 MSA 180.0 SSA 17.1  
 BOE .5275 BRA .6241 BC3 .2432 FSP -174 SG1 823.9 SG2 422.5 THA 8.29 EL1 553.4 EL2 177.9 ALF 46.93

LAUNCH DATE FEB 1 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 16 1969

HELIOCENTRIC CONIC DISTANCE 183.108  
 RL 147.41 LAL -.00 LOL 131.96 VL 25.172 GAL -1.53 AZL 87.51 HCA 78.51 SMA 113.72 ECC .29732 INC 2.4903 V1 30.224  
 RP 108.07 LAP 2.44 LOP 210.46 VP 35.904 GAP -17.07 AZP 89.50 TAL 183.62 TAP 262.13 RCA 79.91 APO 147.53 V2 35.067  
 RC 43.658 GL 11.95 GP 9.00 ZAL 100.01 ZAP 9.91 ETS 247.56 ZAE 160.12 ETE .81 ZAC 124.51 ETC 158.29 CLP 4.17

PLANETOCENTRIC CONIC  
 C3 27.883 VHL 5.280 OLA 23.25 RAL 25.10 RAD 6568.1 VEL 12.217 PTH 2.20 VHP 10.934 DPA 19.25 RAP 29.58 ECC 1.4589  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 46 53 3122.62 -27.02 105.27 261.09 81.18 1 38 55 2522.6 -27.96 96.73  
 90.00 19 46 39 4112.46 -2.78 167.10 252.78 61.81 20 55 11 3512.5 -6.53 160.42  
 100.00 2 26 13 2802.33 -29.08 82.03 261.42 82.75 3 12 55 2202.3 -29.78 73.30  
 100.00 20 50 0 3907.98 -.96 151.06 251.77 60.12 21 55 8 3308.0 -4.93 144.52  
 110.00 4 10 50 2475.02 -34.03 57.72 261.97 86.58 4 52 5 1875.0 -34.13 48.47  
 110.00 21 21 52 3808.06 3.26 140.85 249.13 55.95 22 25 20 3208.1 -1.23 134.65

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3323 TRA -.5926 TC3 .3065 BAU .1145 SGT 851.2 SGR 438.9 SG3 82.0 ST 417.3 SR 425.9 SS 270.9  
 RDE -.3914 RRA .0917 RC3 .0224 FAU .02625 RRT .2275 RRF -.2496 RTF -.7203 CRT .8231 CRS .9215 CST .9750  
 FDE .2504 FRA .2484 FC3 -.8150 BSP 2478 SGB 957.7 R23 -.0326 R13 -.7249 LSA 629.8 MSA 178.9 SSA 17.9  
 BOE .5134 BRA .5996 BC3 .3073 FSP -198 SG1 858.9 SG2 423.5 THA 8.86 EL1 569.3 EL2 177.3 ALF 45.71

LAUNCH DATE FEB 1 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 18 1969

HELIOCENTRIC CONIC DISTANCE 189.824  
 RL 147.41 LAL -.00 LOL 131.96 VL 25.450 GAL -1.66 AZL 87.67 HCA 81.72 SMA 115.11 ECC .28195 INC 2.3286 V1 30.224  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.087 GAP -16.01 AZP 89.66 TAL 184.24 TAP 265.96 RCA 82.66 APO 147.57 V2 35.053  
 RC 44.405 GL 11.90 GP 9.53 ZAL 101.32 ZAP 9.80 ETS 259.02 ZAE 157.81 ETE 3.06 ZAC 125.48 ETC 157.41 CLP 2.29

PLANETOCENTRIC CONIC  
 C3 25.120 VHL 5.012 OLA 22.72 RAL 23.79 RAD 6568.0 VEL 12.104 PTH 2.17 VHP 10.340 DPA 20.25 RAP 30.65 ECC 1.4134  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 49 11 3070.20 -27.51 101.51 257.69 83.00 1 40 21 2470.2 -28.19 92.91  
 90.00 19 33 58 4113.15 -2.76 167.13 249.64 61.81 20 42 31 3513.1 -6.51 160.46  
 100.00 2 27 27 2753.37 -29.45 78.44 257.93 84.60 3 13 20 2153.4 -29.88 69.66  
 100.00 20 38 23 3905.21 -1.06 150.91 248.69 60.12 21 43 29 3305.2 -5.03 144.37  
 110.00 4 10 21 2431.45 -34.16 54.32 258.26 88.58 4 50 52 1831.4 -33.98 45.08  
 110.00 21 11 59 3799.90 2.95 140.43 246.19 55.93 22 15 19 3199.9 -1.55 134.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.3309 TRA -.5683 TC3 .3784 BAU .1278 SGT 884.9 SGR 443.3 SG3 91.3 ST 433.4 SR 429.1 SS 274.6  
 RDE -.3743 RRA .0876 RC3 .0406 FAU .02807 RRT .2570 RRF -.2823 RTF -.7374 CRT .8333 CRS .9271 CST .9754  
 FDE .2559 FRA .2414 FC3 -.9674 BSP 2617 SGB 989.7 R23 -.0375 R13 -.7427 LSA 644.7 MSA 177.2 SSA 18.8  
 BOE .4995 BRA .5751 BC3 .3806 FSP -224 SG1 894.4 SG2 423.8 THA 9.48 EL1 583.9 EL2 176.1 ALF 44.65

LAUNCH DATE FEB 1 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 20 1969

HELIOCENTRIC CONIC

DISTANCE 196.549

RL 147.41 LAL -.00 LOL 131.96 VL 25.705 GAL -1.80 AZL 87.83 HCA 84.92 SMA 116.43 ECC .26783 INC 2.1697 V1 30.224
RP 108.15 LAP 2.16 LOP 216.88 VP 36.254 GAP -15.00 AZP 89.81 TAL 184.93 TAP 269.85 RCA 85.24 APO 147.61 V2 35.040
RC 45.309 GL 11.77 GP 10.12 ZAL 102.74 ZAP 10.12 ETS 270.51 ZAE 155.63 ETE 5.07 ZAC 126.37 ETC 156.46 CLP .38

PLANETOCENTRIC CONIC

C3 22.751 VHL 4.770 DLA 22.06 RAL 22.43 RAD 6567.9 VEL 12.005 PTH 2.14 VHP 9.775 DPA 21.29 RAP 31.66 ECC 1.3744
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 52 32 3014.46 -27.91 97.48 254.27 84.99 1 42 46 2414.5 -28.31 88.84
90.00 19 19 42 4120.38 -2.53 167.54 246.50 61.79 20 28 23 3520.4 -6.28 160.87
100.00 2 29 37 2701.42 -29.72 74.60 254.42 86.60 3 14 38 2101.4 -29.87 65.80
100.00 20 25 18 3908.64 -.94 151.10 245.62 60.12 21 30 27 3308.6 -4.91 144.56
110.00 4 10 33 2385.65 -34.18 50.74 254.55 90.70 4 50 19 1785.6 -33.70 41.53
110.00 21 0 52 3797.19 2.84 140.29 243.25 55.92 22 4 9 3197.2 -1.65 134.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3294 TRA -.5447 TC3 .4575 BAU .1405 SGT 919.4 SGR 448.2 SG3 101.6 ST 449.0 SR 431.7 SS 276.6
RDE -.3583 RRA .0841 RC3 .0639 FAU .03009 RRT .2911 RRF -.3198 RTF -.7524 CRT .8431 CRS .9327 CST .9755
FOE .2607 FRA .2325 FC3-1.1451 BSP 2671 SGB 1022.9 R23 -.0435 R13 -.7585 LSA 658.4 MSA 175.0 SSA 19.9
BOE .4867 BRA .5511 BC3 .4619 FSP -254 SG1 931.1 SG2 423.4 THA 10.21 EL1 598.0 EL2 174.3 ALF 43.67

LAUNCH DATE FEB 1 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 203.278

RL 147.41 LAL -.00 LOL 131.96 VL 25.937 GAL -1.93 AZL 87.99 HCA 88.13 SMA 117.66 ECC .25490 INC 2.0125 V1 30.224
RP 108.19 LAP 2.01 LOP 220.09 VP 36.406 GAP -14.04 AZP 89.93 TAL 185.68 TAP 273.80 RCA 87.67 APO 147.66 V2 35.027
RC 46.364 GL 11.54 GP 10.77 ZAL 104.26 ZAP 10.88 ETS 281.11 ZAE 153.60 ETE 6.94 ZAC 127.18 ETC 155.44 CLP -1.58

PLANETOCENTRIC CONIC

C3 20.722 VHL 4.552 DLA 21.78 RAL 21.01 RAD 6567.8 VEL 11.921 PTH 2.12 VHP 9.237 DPA 22.36 RAP 32.61 ECC 1.3410
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 56 51 2955.95 -28.18 93.22 250.85 87.10 1 46 7 2355.9 -28.28 84.56
90.00 19 4 7 4133.79 -2.10 168.29 243.40 61.75 20 13 1 3533.8 -5.86 161.63
100.00 2 32 42 2646.89 -29.87 70.56 250.92 88.73 3 16 49 2046.9 -29.72 61.75
100.00 20 10 57 3918.08 -.62 151.61 242.58 60.11 21 16 15 3318.1 -4.59 145.08
110.00 4 11 29 2337.82 -34.07 47.01 250.85 92.91 4 50 27 1737.8 -33.30 37.86
110.00 20 48 39 3799.92 2.95 140.43 240.35 55.93 21 51 59 3199.9 -1.54 134.22

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3234 TRA -.5189 TC3 .5468 BAU .1537 SGT 951.2 SGR 453.9 SG3 113.1 ST 458.4 SR 433.4 SS 274.9
RDE -.3433 RRA .0812 RC3 .0933 FAU .03236 RRT .3273 RRF -.3610 RTF -.7686 CRT .8508 CRS .9375 CST .9751
FOE .2626 FRA .2217 FC3-1.3521 BSP 2893 SGB 1054.0 R23 -.0502 R13 -.7756 LSA 665.9 MSA 172.5 SSA 21.0
BOE .4717 BRA .5253 BC3 .5547 FSP -288 SG1 965.6 SG2 422.5 THA 11.01 EL1 607.0 EL2 172.0 ALF 43.11

LAUNCH DATE FEB 1 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 210.007

RL 147.41 LAL -.00 LOL 131.96 VL 26.149 GAL -2.07 AZL 88.14 HCA 91.33 SMA 118.83 ECC .24308 INC 1.8560 V1 30.224
RP 108.23 LAP 1.86 LOP 223.29 VP 36.545 GAP -13.12 AZP 90.04 TAL 186.48 TAP 277.81 RCA 89.94 APO 147.71 V2 35.013
RC 47.558 GL 11.20 GP 11.49 ZAL 105.86 ZAP 12.03 ETS 290.24 ZAE 151.74 ETE 8.73 ZAC 127.88 ETC 154.35 CLP -3.59

PLANETOCENTRIC CONIC

C3 18.986 VHL 4.357 DLA 20.36 RAL 19.58 RAD 6567.8 VEL 11.848 PTH 2.10 VHP 8.726 DPA 23.48 RAP 33.49 ECC 1.3125
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 2 5 2895.21 -28.31 88.78 247.47 89.32 1 50 20 2295.2 -28.10 80.12
90.00 18 47 28 4152.95 -1.48 169.36 240.37 61.72 19 56 41 3553.0 -5.25 162.71
100.00 2 36 40 2590.18 -29.88 .66.34 247.46 90.95 3 19 50 1990.2 -29.43 57.57
100.00 19 55 34 3933.21 -.11 152.44 239.61 60.11 21 1 7 3333.2 -4.09 145.91
110.00 4 13 12 2288.19 -33.84 43.16 247.21 95.18 4 51 20 1688.2 -32.75 34.09
110.00 20 35 32 3807.96 3.25 140.85 237.51 55.95 21 39 0 3208.0 -1.24 134.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3170 TRA -.4945 TC3 .6423 BAU .1663 SGT 983.9 SGR 460.9 SG3 126.1 ST 466.2 SR 434.2 SS 269.8
RDE -.3292 RRA .0789 RC3 1.300 FAU .03493 RRT .3684 RRF -.4069 RTF -.7824 CRT .8576 CRS .9415 CST .9744
FOE .2618 FRA .2091 FC3-1.5928 BSP 3032 SGB 1086.5 R23 -.0579 R13 -.7907 LSA 670.3 MSA 169.8 SSA 22.4
BOE .4570 BRA .5008 BC3 .6553 FSP -327 SG1 1001.7 SG2 420.9 THA 11.93 EL1 614.1 EL2 169.5 ALF 42.63

LAUNCH DATE FEB 1 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 216.733

RL 147.41 LAL -.00 LOL 131.96 VL 26.342 GAL -2.21 AZL 88.30 HCA 94.52 SMA 119.91 ECC .23234 INC 1.6992 V1 30.224
RP 108.27 LAP 1.69 LOP 226.49 VP 36.671 GAP -12.24 AZP 90.13 TAL 187.33 TAP 281.85 RCA 92.05 APO 147.77 V2 35.000
RC 48.883 GL 10.75 GP 12.30 ZAL 107.52 ZAP 13.52 ETS 297.75 ZAE 150.06 ETE 10.51 ZAC 128.46 ETC 153.18 CLP -5.66

PLANETOCENTRIC CONIC

C3 17.504 VHL 4.184 DLA 19.32 RAL 18.16 RAD 6567.7 VEL 11.785 PTH 2.08 VHP 8.242 DPA 24.64 RAP 34.28 ECC 1.2881
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 8 8 2832.73 -28.27 84.22 244.16 91.62 1 55 21 2232.7 -27.75 75.59
90.00 18 30 2 4177.41 -.69 170.72 237.47 61.69 19 39 40 3577.4 -4.47 164.08
100.00 2 41 29 2531.71 -29.73 62.00 244.09 93.23 3 23 41 1931.7 -28.97 53.28
100.00 19 39 22 3953.67 .59 153.57 236.76 60.11 20 45 16 3353.7 -3.40 147.04
110.00 4 15 40 2237.03 -33.45 39.21 243.68 97.48 4 52 57 1637.0 -32.06 30.26
110.00 20 21 40 3821.12 3.75 141.54 234.78 56.00 21 25 21 3221.1 -.73 135.33

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3089 TRA -.4708 TC3 .7415 BAU .1783 SGT 1015.3 SGR 470.1 SG3 140.6 ST 470.4 SR 433.9 SS 261.0
RDE -.3158 RRA .0771 RC3 .1747 FAU .03776 RRT .4133 RRF -.4571 RTF -.7945 CRT .8631 CRS .9448 CST .9731
FOE .2580 FRA .1950 FC3-1.8678 BSP 3154 SGB 1118.8 R23 -.0672 R13 -.8042 LSA 670.2 MSA 167.0 SSA 23.9
BOE .4418 BRA .4771 BC3 .7618 FSP -369 SG1 1037.4 SG2 418.9 THA 12.98 EL1 617.8 EL2 166.8 ALF 42.32

LAUNCH DATE FEB 1 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 223.452

RL 147.41 LAL -.00 LOL 131.96 VL 26.517 GAL -2.34 AZL 88.46 MCA 97.72 SMA 120.93 ECC .22259 INC 1.5411 V1 30.224
RP 108.31 LAP 1.53 LOP 229.68 VP 36.784 GAP -11.40 AZP 90.21 TAL 188.22 TAP 285.94 RCA 94.01 APO 147.84 V2 34.987
RC 50.327 GL 10.19 GP 13.20 ZAL 109.22 ZAP 15.29 ETS 303.80 ZAE 148.56 ETE 12.32 ZAC 128.90 ETC 151.95 CLP -7.79

PLANETOCENTRIC CONIC

C3 16.240 VHL 4.030 DLA 18.15 RAL 16.76 RAD 6567.7 VEL 11.731 PTH 2.07 VHP 7.784 DPA 25.87 RAP 34.96 ECC 1.2673
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 14 59 2768.95 -28.06 79.56 240.95 93.94 2 1 8 2169.0 -27.22 71.00
90.00 18 12 4 4206.72 .26 172.36 234.72 61.68 19 22 11 3606.7 -3.53 165.72
100.00 2 47 7 2471.84 -29.42 57.58 240.82 95.54 3 28 19 1871.8 -28.34 48.94
100.00 19 22 37 3979.06 1.45 154.96 234.06 60.14 20 28 56 3379.1 -2.54 148.44
110.00 4 18 56 2184.56 -32.92 35.21 240.27 99.79 4 55 21 1584.6 -31.21 26.40
110.00 20 7 17 3839.11 4.44 142.48 232.19 56.07 21 11 16 3239.1 -.05 136.27

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2979 TRA -.4467 TC3 .8450 BAU .1901 SGT 1044.0 SGR 482.1 SG3 156.8 ST 469.1 SR 432.0 SS 247.1
RDE -.3029 RRA .0759 RC3 .2290 FAU .04095 RRT .4614 RRF -.5112 RTF -.8059 CRT .8669 CRS .9469 CST .9711
FDE .2495 FRA .1783 FC3-2.1831 BSP 3288 SGB 1149.9 R23 -.0774 R13 -.8175 LSA 663.4 MSA 164.0 SSA 25.7
BDE .4248 BRA .4531 BC3 .8755 FSP -418 SG1 1071.8 SG2 416.6 THA 14.22 EL1 616.3 EL2 163.9 ALF 42.28

LAUNCH DATE FEB 1 1969

FLIGHT TIME 88.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC

DISTANCE 230.161

RL 147.41 LAL -.00 LOL 131.96 VL 26.676 GAL -2.46 AZL 88.62 MCA 100.91 SMA 121.86 ECC .21379 INC 1.3808 V1 30.224
RP 108.36 LAP 1.36 LOP 232.88 VP 36.886 GAP -10.60 AZP 90.26 TAL 189.13 TAP 290.04 RCA 95.81 APO 147.92 V2 34.974
RC 51.881 GL 9.49 GP 14.20 ZAL 110.94 ZAP 17.31 ETS 308.64 ZAE 147.25 ETE 14.22 ZAC 129.18 ETC 150.67 CLP -10.01

PLANETOCENTRIC CONIC

C3 15.164 VHL 3.894 DLA 16.87 RAL 15.42 RAD 6567.6 VEL 11.685 PTH 2.06 VHP 7.351 DPA 27.16 RAP 35.52 ECC 1.2496
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 22 35 2704.22 -27.67 74.87 237.89 96.26 2 7 39 2104.2 -26.52 66.39
90.00 17 53 47 4240.45 1.34 174.24 232.16 61.71 19 4 27 3640.4 -2.45 167.61
100.00 2 53 32 2410.90 -28.94 53.11 237.71 97.84 3 33 43 1810.9 -27.55 44.58
100.00 19 5 31 4009.00 2.46 156.60 231.54 60.20 20 12 20 3409.0 -1.52 150.08
110.00 4 23 0 2131.01 -32.22 31.19 237.04 102.08 4 58 31 1531.0 -30.22 22.54
110.00 19 52 33 3861.65 5.29 143.67 229.78 56.18 20 56 54 3261.7 .82 137.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2830 TRA -.4220 TC3 .9537 BAU .2024 SGT 1070.6 SGR 498.0 SG3 175.0 ST 460.2 SR 428.1 SS 227.2
RDE -.2899 RRA .0753 RC3 .2945 FAU .04455 RRT .5119 RRF -.5682 RTF -.8180 CRT .8682 CRS .9473 CST .9676
FDE .2345 FRA .1591 FC3-2.5433 BSP 3456 SGB 1180.7 R23 -.0878 R13 -.8317 LSA 648.0 MSA 160.9 SSA 27.9
BDE .4052 BRA .4286 BC3 .9982 FSP -475 SG1 1105.7 SG2 414.2 THA 15.64 EL1 607.6 EL2 160.9 ALF 42.61

LAUNCH DATE FEB 1 1969

FLIGHT TIME 90.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC

DISTANCE 236.857

RL 147.41 LAL -.00 LOL 131.96 VL 26.819 GAL -2.58 AZL 88.78 MCA 104.10 SMA 122.73 ECC .20588 INC 1.2171 V1 30.224
RP 108.40 LAP 1.18 LOP 236.07 VP 36.978 GAP -9.83 AZP 90.30 TAL 190.06 TAP 294.16 RCA 97.46 APO 148.00 V2 34.961
RC 53.536 GL 8.67 GP 15.32 ZAL 112.65 ZAP 19.57 ETS 312.51 ZAE 146.11 ETE 16.24 ZAC 129.29 ETC 149.34 CLP -12.32

PLANETOCENTRIC CONIC

C3 14.250 VHL 3.775 DLA 15.46 RAL 14.17 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 6.943 DPA 28.52 RAP 35.94 ECC 1.2345
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 30 56 2638.81 -27.10 70.17 235.01 98.55 2 14 55 2038.8 -25.64 61.80
90.00 17 35 24 4278.19 2.56 176.34 229.82 61.79 18 46 42 3678.2 -1.23 169.71
100.00 3 0 45 2349.15 -28.28 48.64 234.79 100.10 3 39 54 1749.2 -26.60 40.24
100.00 18 48 16 4043.08 3.61 158.48 229.23 60.31 19 55 39 3443.1 -.37 151.95
110.00 4 27 52 2076.60 -31.38 27.17 234.02 104.32 5 2 28 1476.6 -29.09 18.71
110.00 19 37 39 3888.40 6.31 145.08 227.56 56.33 20 42 27 3288.4 1.84 138.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2678 TRA -.4002 TC3 1.0552 BAU .2132 SGT 1094.2 SGR 519.2 SG3 195.1 ST 449.0 SR 422.0 SS 202.5
RDE -.2770 RRA .0751 RC3 .3718 FAU .04849 RRT .5635 RRF -.6268 RTF -.8264 CRT .8677 CRS .9447 CST .9624
FDE .2137 FRA .1392 FC3-2.9460 BSP 3572 SGB 1211.1 R23 -.1013 R13 -.8430 LSA 628.3 MSA 158.2 SSA 30.4
BDE .3853 BRA .4072 BC3 1.1188 FSP -537 SG1 1138.8 SG2 412.1 THA 17.30 EL1 595.5 EL2 158.1 ALF 42.96

LAUNCH DATE FEB 1 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC

DISTANCE 243.539

RL 147.41 LAL -.00 LOL 131.96 VL 26.949 GAL -2.69 AZL 88.95 MCA 107.29 SMA 123.53 ECC .19878 INC 1.0488 V1 30.224
RP 108.43 LAP 1.00 LOP 239.26 VP 37.060 GAP -9.09 AZP 90.31 TAL 190.98 TAP 298.27 RCA 98.97 APO 148.08 V2 34.948
RC 55.282 GL 7.71 GP 16.58 ZAL 114.33 ZAP 22.04 ETS 315.65 ZAE 145.14 ETE 18.44 ZAC 129.21 ETC 147.97 CLP -14.73

PLANETOCENTRIC CONIC

C3 13.476 VHL 3.671 DLA 13.95 RAL 13.01 RAD 6567.5 VEL 11.613 PTH 2.03 VHP 6.560 DPA 29.97 RAP 36.18 ECC 1.2218
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 40 3 2572.88 -26.34 65.49 232.34 100.78 2 22 55 1972.9 -24.59 57.26
90.00 17 17 4 4319.62 3.89 178.66 227.71 61.93 18 29 4 3719.6 .11 172.03
100.00 3 8 46 2286.76 -27.46 44.19 232.09 102.31 3 46 53 1686.8 -25.48 35.94
100.00 18 31 2 4080.98 4.89 160.57 227.16 60.47 19 39 3 3481.0 .92 154.03
110.00 4 33 33 2021.44 -30.38 23.18 231.23 106.48 5 7 15 1421.4 -27.82 14.92
110.00 19 22 44 3919.06 7.46 146.70 225.58 56.54 20 28 3 3319.1 3.01 140.44

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2503 TRA -.3796 TC3 1.1509 BAU .2235 SGT 1113.2 SGR 547.0 SG3 217.3 ST 432.2 SR 413.1 SS 172.2
RDE -.2636 RRA .0752 RC3 .4627 FAU .05282 RRT .6141 RRF -.6848 RTF -.8336 CRT .8644 CRS .9365 CST .9535
FDE .1850 FRA .1183 FC3-3.3934 BSP 3687 SGB 1240.4 R23 -.1160 R13 -.8541 LSA 601.5 MSA 155.5 SSA 33.4
BDE .3635 BRA .3869 BC3 1.2405 FSP -606 SG1 1170.4 SG2 410.6 THA 19.25 EL1 577.3 EL2 155.5 ALF 43.50

LAUNCH DATE FEB 1 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC

DISTANCE 250.203

RL 147.41 LAL -.00 LOL 131.96 VL 27.065 GAL -2.80 AZL 89.13 HCA 110.48 SMA 124.25 ECC .19245 INC .8747 V1 30.224  
 RP 108.47 LAP .82 LOP 242.44 VP 37.133 GAP -8.38 AZP 90.31 TAL 191.89 TAP 302.37 RCA 100.34 APO 148.16 V2 34.936  
 RC 57.109 GL 6.62 GP 17.98 ZAL 115.95 ZAP 24.73 ETS 318.22 ZAE 144.32 ETE 20.85 ZAC 128.90 ETC 146.60 CLP -17.27

PLANETOCENTRIC CONIC

C3 12.823 VHL 3.581 DLA 12.33 RAL 11.98 RAD 6567.5 VEL 11.585 PTH 2.03 VHP 6.204 DPA 31.50 RAP 36.24 ECC 1.2110  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 49 57 2506.50 -25.42 60.85 229.91 102.93 2 31 43 1906.5 -23.38 52.77  
 90.00 16 58 55 4364.51 5.32 181.18 225.87 62.15 18 11 40 3764.5 1.56 174.53  
 100.00 3 17 36 2223.79 -26.46 39.77 229.62 104.43 3 54 40 1623.8 -24.22 31.69  
 100.00 18 13 57 4122.46 6.27 162.87 225.35 60.71 19 22 39 3522.5 2.32 156.31  
 110.00 4 40 7 1965.63 -29.24 19.24 228.70 108.56 5 12 52 1365.6 -26.42 11.19  
 110.00 19 7 56 3953.39 8.74 148.53 223.84 56.82 20 13 49 3353.4 4.32 142.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2310 TRA -.3607 TC3 1.2379 BAU .2336  
 RDE -.2491 RRA .0757 RC3 .5694 FAU .05759  
 FDE .1467 FRA .0968 FC3-3.8884 BSP 3798  
 BDE .3397 BRA .3685 BC3 1.3626 FSP -683

SGT 1127.6 SGR 583.5 SG3 241.9  
 RRT .6621 RRF -.7405 RTF -.8394  
 SGB 1269.7 R23 -.1321 R13 -.8648  
 SG1 1201.5 SG2 410.4 THA 21.55

ST 410.7 SR 400.5 SS 136.0  
 CRT .8574 CRS .9137 CST .9349  
 LSA 568.1 MSA 153.2 SSA 37.1  
 EL1 552.9 EL2 153.1 ALF 44.16

LAUNCH DATE FEB 1 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 256.847

RL 147.41 LAL -.00 LOL 131.96 VL 27.169 GAL -2.89 AZL 89.31 HCA 113.66 SMA 124.91 ECC .18682 INC .6934 V1 30.224  
 RP 108.51 LAP .64 LOP 245.62 VP 37.197 GAP -7.70 AZP 90.28 TAL 192.78 TAP 306.44 RCA 101.58 APO 148.25 V2 34.923  
 RC 59.010 GL 5.38 GP 19.55 ZAL 117.49 ZAP 27.64 ETS 320.36 ZAE 143.62 ETE 23.55 ZAC 128.34 ETC 145.23 CLP -19.93

PLANETOCENTRIC CONIC

C3 12.274 VHL 3.503 DLA 10.61 RAL 11.08 RAD 6567.5 VEL 11.561 PTH 2.02 VHP 5.873 DPA 33.14 RAP 36.06 ECC 1.2020  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 0 42 2439.62 -24.32 56.26 227.73 104.97 2 41 22 1839.6 -22.02 48.34  
 90.00 16 41 1 4412.72 6.85 183.90 224.31 62.46 17 54 34 3812.7 3.11 177.22  
 100.00 3 27 20 2160.22 -25.31 35.40 227.43 106.46 4 3 20 1560.2 -22.81 27.49  
 100.00 17 57 5 4167.35 7.76 165.37 223.81 61.04 19 6 32 3567.4 3.84 158.78  
 110.00 4 47 34 1909.13 -27.95 15.35 226.44 110.53 5 19 23 1309.1 -24.90 7.50  
 110.00 18 53 20 3991.21 10.15 150.56 222.37 57.18 19 59 51 3391.2 5.75 144.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2076 TRA -.3415 TC3 1.3168 BAU .2442  
 RDE -.2326 RRA .0767 RC3 .6940 FAU .06283  
 FDE .0942 FRA .0732 FC3-4.4314 BSP 3946  
 BDE .3117 BRA .3500 BC3 1.4885 FSP -771

SGT 1135.5 SGR 630.4 SG3 268.8  
 RRT .7058 RRF -.7917 RTF -.8453  
 SGB 1298.8 R23 -.1463 R13 -.8769  
 SG1 1231.8 SG2 411.7 THA 24.28

ST 380.9 SR 382.6 SS 93.2  
 CRT .8441 CRS .8332 CST .8733  
 LSA 525.0 MSA 150.9 SSA 41.6  
 EL1 518.4 EL2 150.7 ALF 45.16

LAUNCH DATE FEB 1 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 263.471

RL 147.41 LAL -.00 LOL 131.96 VL 27.262 GAL -2.98 AZL 89.50 HCA 116.84 SMA 125.51 ECC .18184 INC .5032 V1 30.224  
 RP 108.55 LAP .45 LOP 248.80 VP 37.254 GAP -7.05 AZP 90.23 TAL 193.63 TAP 310.47 RCA 102.69 APO 148.33 V2 34.911  
 RC 60.976 GL 3.99 GP 21.31 ZAL 118.94 ZAP 30.77 ETS 322.19 ZAE 143.01 ETE 26.56 ZAC 127.52 ETC 143.91 CLP -22.75

PLANETOCENTRIC CONIC

C3 11.816 VHL 3.437 DLA 8.79 RAL 10.34 RAD 6567.5 VEL 11.541 PTH 2.01 VHP 5.569 DPA 34.90 RAP 35.61 ECC 1.1945  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 12 23 2372.10 -23.05 51.71 225.84 106.91 2 51 56 1772.1 -20.52 43.96  
 90.00 16 23 26 4464.20 8.46 186.83 223.04 62.88 17 37 50 3864.2 4.76 180.11  
 100.00 3 38 1 2095.95 -24.00 31.07 225.51 108.37 4 12 57 1496.0 -21.27 23.34  
 100.00 17 40 30 4215.58 9.34 168.08 222.57 61.48 18 50 45 3615.6 5.46 161.44  
 110.00 4 56 0 1851.89 -26.52 11.51 224.47 112.40 5 26 52 1251.9 -23.25 3.88  
 110.00 18 39 0 4032.41 11.66 152.79 221.18 57.64 19 46 12 3432.4 7.30 146.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1850 TRA -.3265 TC3 1.3726 BAU .2540  
 RDE -.2141 RRA .0776 RC3 .8373 FAU .06837  
 FDE .0302 FRA .0527 FC3-5.0095 BSP 4047  
 BDE .2830 BRA .3356 BC3 1.6079 FSP -863

SGT 1135.3 SGR 689.8 SG3 297.7  
 RRT .7422 RRF -.8368 RTF -.8473  
 SGB 1328.4 R23 -.1623 R13 -.8876  
 SG1 1261.6 SG2 416.0 THA 27.51

ST 351.0 SR 359.5 SS 56.8  
 CRT .8248 CRS .4413 CST .5520  
 LSA 480.8 MSA 149.1 SSA 47.1  
 EL1 479.9 EL2 148.6 ALF 45.82

LAUNCH DATE FEB 1 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 270.073

RL 147.41 LAL -.00 LOL 131.96 VL 27.345 GAL -3.06 AZL 89.70 HCA 120.02 SMA 126.05 ECC .17745 INC .3020 V1 30.224  
 RP 108.58 LAP .26 LOP 251.98 VP 37.304 GAP -6.43 AZP 90.15 TAL 194.44 TAP 314.45 RCA 103.68 APO 148.41 V2 34.900  
 RC 63.000 GL 2.44 GP 23.27 ZAL 120.26 ZAP 34.15 ETS 323.81 ZAE 142.45 ETE 29.96 ZAC 126.40 ETC 142.66 CLP -25.73

PLANETOCENTRIC CONIC

C3 11.438 VHL 3.382 DLA 6.86 RAL 9.77 RAD 6567.4 VEL 11.525 PTH 2.01 VHP 5.293 DPA 36.77 RAP 34.86 ECC 1.1882  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 25 8 2303.66 -21.63 47.20 224.24 108.74 3 3 32 1703.7 -18.87 39.62  
 90.00 16 6 8 4519.09 10.15 189.98 222.08 63.42 17 21 27 3919.1 6.50 183.20  
 100.00 3 49 45 2030.73 -22.54 26.78 223.89 110.18 4 23 36 1430.7 -19.58 19.23  
 100.00 17 24 12 4267.25 11.01 171.01 221.63 62.03 18 35 19 3667.2 7.18 164.31  
 110.00 5 5 29 1793.71 -24.95 7.71 222.81 114.16 5 35 23 1193.7 -21.48 .29  
 110.00 18 24 57 4077.03 13.27 155.24 220.30 58.21 19 32 54 3477.0 8.97 148.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1614 TRA -.3140 TC3 1.4060 BAU .2639  
 RDE -.1922 RRA .0782 RC3 1.0009 FAU .07415  
 FDE -.0503 FRA .0352 FC3-5.6119 BSP 4147  
 BDE .2510 BRA .3236 BC3 1.7259 FSP -961

SGT 1125.3 SGR 763.0 SG3 328.1  
 RRT .7704 RRF -.8746 RTF -.8469  
 SGB 1359.6 R23 -.1759 R13 -.8988  
 SG1 1291.8 SG2 423.8 THA 31.33

ST 318.4 SR 328.7 SS 65.6  
 CRT .7946 CRS -.5551 CST -.3758  
 LSA 434.8 MSA 147.8 SSA 53.5  
 EL1 433.5 EL2 146.6 ALF 46.14



LAUNCH DATE FEB 1 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC DISTANCE 276.652  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.417 GAL -3.13 AZL 89.91 HCA 123.19 SMA 126.53 ECC .17359 INC .0862 V1 30.224  
 RP 108.62 LAP .07 LOP 255.16 VP 37.347 GAP -5.83 AZP 90.05 TAL 195.18 TAP 318.37 RCA 104.56 APO 148.49 V2 34.889  
 RC 65.076 GL .72 GP 25.45 ZAL 121.44 ZAP 37.77 ETS 325.31 ZAE 141.89 ETE 33.78 ZAC 124.98 ETC 141.52 CLP -28.90

PLANETOCENTRIC CONIC  
 C3 11.133 VHL 3.337 DLA 4.83 RAL 9.38 RAD 6567.4 VEL 11.512 PTH 2.01 VHP 5.046 DPA 38.76 RAP 33.75 ECC 1.1832  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 39 5 2233.89 -20.03 42.71 222.95 110.44 3 16 19 1633.9 -17.07 35.29  
 90.00 15 49 4 4577.67 11.91 193.38 221.45 64.12 17 5 22 3977.7 8.33 186.52  
 100.00 4 2 42 1964.20 -20.91 22.51 222.59 111.86 4 35 26 1364.2 -17.76 15.13  
 100.00 17 8 9 4322.60 12.75 174.19 221.02 62.73 18 20 11 3722.6 9.00 167.41  
 110.00 5 16 9 1734.32 -23.25 3.95 221.47 115.80 5 45 4 1134.3 -19.58 356.72  
 110.00 18 11 11 4125.24 14.98 157.93 219.73 58.91 19 19 56 3525.2 10.75 151.38

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1374 TRA -.3038 TC3 1.4136 BAU .2748 SGT 1104.4 SGR 852.7 SG3 359.8 ST 284.8 SR 288.5 SS 124.2  
 RDE -.1658 RRA .0782 RC3 1.1874 FAU .08009 RRT .7901 RRF -.9055 RTF -.8438 CRT .7481 CRS -.8559 CST -.6783  
 FDE -.1490 FRA .0222 FC3-6.2280 BSP 4256 SGB 1395.3 R23 -.1843 R13 -.9109 LSA 393.0 MSA 147.4 SSA 60.1  
 BDE .2153 BRA .3137 BC3 1.8462 FSP -1064 SG1 1325.6 SG2 435.5 THA 35.84 EL1 379.0 EL2 143.9 ALF 45.50

LAUNCH DATE FEB 1 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 16 1969

HELIOCENTRIC CONIC DISTANCE 283.207  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.481 GAL -3.18 AZL 90.14 HCA 126.37 SMA 126.95 ECC .17023 INC .1420 V1 30.224  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.383 GAP -5.25 AZP 89.92 TAL 195.86 TAP 322.22 RCA 105.34 APO 148.56 V2 34.878  
 RC 67.198 GL -1.18 GP 27.86 ZAL 122.46 ZAP 41.63 ETS 326.76 ZAE 141.24 ETE 38.05 ZAC 123.22 ETC 140.53 CLP -32.28

PLANETOCENTRIC CONIC  
 C3 10.896 VHL 3.301 DLA 2.67 RAL 9.19 RAD 6567.4 VEL 11.501 PTH 2.00 VHP 4.831 DPA 40.88 RAP 32.22 ECC 1.1793  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 54 27 2162.25 -18.27 38.19 221.99 112.02 3 30 29 1562.2 -15.12 30.93  
 90.00 15 32 9 4640.46 13.75 197.07 221.16 65.00 16 49 30 4040.5 10.27 190.13  
 100.00 4 17 3 1895.86 -19.12 18.23 221.61 113.43 4 48 38 1295.9 -15.79 11.02  
 100.00 16 52 15 4382.08 14.58 177.66 220.75 63.61 18 5 17 3782.1 10.92 170.78  
 110.00 5 28 9 1673.30 -21.39 .18 220.46 117.32 5 56 2 1073.3 -17.56 353.15  
 110.00 17 57 38 4177.40 16.79 160.89 219.51 59.78 19 7 16 3577.4 12.65 154.23

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.1127 TRA -.2953 TC3 1.3943 BAU .2876 SGT 1071.8 SGR 960.9 SG3 392.0 ST 250.4 SR 236.0 SS 203.6  
 RDE -.1330 RRA .0775 RC3 1.3981 FAU .08603 RRT .8016 RRF -.9298 RTF -.8380 CRT .6717 CRS -.9097 CST -.7102  
 FDE -.2699 FRA .0144 FC3-6.8357 BSP 4422 SGB 1439.5 R23 -.1834 R13 -.9246 LSA 365.4 MSA 148.8 SSA 64.4  
 BDE .1743 BRA .3053 BC3 1.9745 FSP -1175 SG1 1367.2 SG2 450.3 THA 41.11 EL1 314.7 EL2 139.1 ALF 42.47

LAUNCH DATE FEB 1 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 18 1969

HELIOCENTRIC CONIC DISTANCE 289.737  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.537 GAL -3.23 AZL 90.39 HCA 129.54 SMA 127.32 ECC .16730 INC .3918 V1 30.224  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.415 GAP -4.70 AZP 89.75 TAL 196.46 TAP 325.99 RCA 106.02 APO 148.62 V2 34.867  
 RC 69.360 GL -3.29 GP 30.53 ZAL 123.30 ZAP 45.73 ETS 328.25 ZAE 140.45 ETE 42.77 ZAC 121.14 ETC 139.74 CLP -35.88

PLANETOCENTRIC CONIC  
 C3 10.724 VHL 3.275 DLA .39 RAL 9.20 RAD 6567.4 VEL 11.494 PTH 2.00 VHP 4.649 DPA 43.12 RAP 30.21 ECC 1.1765  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 11 30 2088.03 -16.31 33.62 221.38 113.47 3 46 18 1488.0 -13.00 26.51  
 90.00 15 15 14 4708.17 15.66 201.13 221.26 66.10 16 33 42 4108.2 12.30 194.06  
 100.00 4 33 1 1825.07 -17.14 13.90 220.99 114.87 5 3 26 1225.1 -13.65 6.85  
 100.00 16 36 24 4446.37 16.49 181.48 220.86 64.71 17 50 30 3846.4 12.95 174.48  
 110.00 5 41 40 1610.20 -19.37 356.40 219.80 118.73 6 8 30 1010.2 -15.38 349.55  
 110.00 17 44 14 4234.03 18.70 164.17 219.67 60.85 18 54 48 3634.0 14.68 157.37

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0912 TRA -.2910 TC3 1.3338 BAU .3018 SGT 1023.6 SGR 1086.9 SG3 422.5 ST 222.4 SR 170.1 SS 293.7  
 RDE -.0928 RRA .0744 RC3 1.6289 FAU .09147 RRT .8014 RRF -.9482 RTF -.8247 CRT .5495 CRS -.9017 CST -.6701  
 FDE -.4095 FRA .0191 FC3-7.3847 BSP 4571 SGB 1493.1 R23 -.1749 R13 -.9382 LSA 370.9 MSA 152.4 SSA 62.2  
 BDE .1301 BRA .3004 BC3 2.1053 FSP -1275 SG1 1417.3 SG2 469.6 THA 47.14 EL1 249.8 EL2 126.5 ALF 31.85

LAUNCH DATE FEB 1 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 20 1969

HELIOCENTRIC CONIC DISTANCE 296.242  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.584 GAL -3.27 AZL 90.67 HCA 132.71 SMA 127.64 ECC .16477 INC .6653 V1 30.224  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.440 GAP -4.17 AZP 89.55 TAL 196.97 TAP 329.68 RCA 106.61 APO 148.68 V2 34.858  
 RC 71.560 GL -5.63 GP 33.43 ZAL 123.92 ZAP 50.06 ETS 329.85 ZAE 139.42 ETE 47.91 ZAC 118.71 ETC 139.18 CLP -39.72

PLANETOCENTRIC CONIC  
 C3 10.619 VHL 3.259 DLA -2.06 RAL 9.44 RAD 6567.4 VEL 11.489 PTH 2.00 VHP 4.504 DPA 45.45 RAP 27.66 ECC 1.1748  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 30 33 2010.31 -14.15 28.95 221.15 114.79 4 4 4 1410.3 -10.69 21.98  
 90.00 14 58 5 4781.90 17.64 205.64 221.77 67.48 16 17 47 4181.9 14.43 198.43  
 100.00 4 50 56 1751.01 -14.97 9.47 220.75 116.18 5 20 7 1151.0 -11.33 2.57  
 100.00 16 20 23 4516.43 18.48 185.73 221.40 66.08 17 35 39 3916.4 15.09 178.58  
 110.00 5 56 59 1544.26 -17.17 352.56 219.53 120.02 6 22 43 944.3 -13.05 345.87  
 110.00 17 30 49 4295.95 20.71 167.84 220.24 62.18 18 42 25 3695.9 16.83 160.87

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0730 TRA -.2893 TC3 1.2326 BAU .3189 SGT 959.6 SGR 1231.9 SG3 449.7 ST 200.9 SR 91.0 SS 394.4  
 RDE -.0427 RRA .0681 RC3 1.8777 FAU .09612 RRT .7882 RRF -.9618 RTF -.8022 CRT .2757 CRS -.7623 CST -.5990  
 FDE -.5697 FRA .0363 FC3-7.8365 BSP 4776 SGB 1561.5 R23 -.1562 R13 -.9517 LSA 420.8 MSA 155.9 SSA 53.4  
 BDE .0846 BRA .2972 BC3 2.2461 FSP -1370 SG1 1482.4 SG2 490.8 THA 53.88 EL1 202.9 EL2 86.7 ALF 8.72

LAUNCH DATE FEB 1 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 22 1969

HELIOCENTRIC CONIC DISTANCE 302.722  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.625 GAL -3.29 AZL 90.97 HCA 135.87 SMA 127.92 ECC .16260 INC .9682 V1 30.224  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.462 GAP -3.65 AZP 89.30 TAL 197.41 TAP 333.28 RCA 107.12 APO 148.72 V2 34.848  
 RC 73.792 GL -8.23 GP 36.59 ZAL 124.30 ZAP 54.59 ETS 331.63 ZAE 138.07 ETE 53.40 ZAC 115.97 ETC 138.91 CLP -43.81

PLANETOCENTRIC CONIC  
 C3 10.588 VHL 3.254 DLA -4.68 RAL 9.92 RAD 6567.4 VEL 11.488 PTH 2.00 VHP 4.400 DPA 47.85 RAP 24.49 ECC 1.1743  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 52 6 1927.91 -11.74 24.09 221.35 115.95 4 24 14 1327.9 -8.16 17.24  
 90.00 14 40 22 4863.12 19.68 210.72 222.76 69.22 16 1 25 4263.1 16.68 203.33  
 100.00 5 11 15 1672.61 -12.57 4.89 220.93 117.35 5 39 7 1072.6 -8.80 358.12  
 100.00 16 3 54 4593.66 20.54 190.54 222.40 67.79 17 20 28 3993.7 17.35 183.20  
 110.00 6 14 26 1474.75 -14.76 348.61 219.67 121.19 6 39 1 874.8 -10.52 342.08  
 110.00 17 17 12 4364.27 22.83 172.02 221.29 63.84 18 29 56 3764.3 19.12 164.84

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0590 TRA -.2884 TC3 1.0921 BAU .3401 SGT 880.6 SGR 1396.8 SG3 472.3 ST 186.0 SR 63.4 SS 506.7  
 RDE .0207 RRA .0580 RC3 2.1398 FAU .09965 RRT .7591 RRF -.9719 RTF -.7666 CRT -.6439 CRS .6364 CST -.5187  
 FDE -.7512 FRA .0657 FC3-8.1479 BSP 5062 SGB 1651.3 R23 -.1277 R13 -.9644 LSA 518.4 MSA 157.4 SSA 42.5  
 BDE .0625 BRA .2942 BC3 2.4024 FSP -1452 SG1 1570.6 SG2 509.9 THA 61.10 EL1 190.7 EL2 47.3 ALF 166.80

LAUNCH DATE FEB 1 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC DISTANCE 309.175  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.659 GAL -5.31 AZL 91.51 HCA 139.04 SMA 128.15 ECC .16075 INC 1.3074 V1 30.224  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.479 GAP -3.16 AZP 89.01 TAL 197.75 TAP 336.78 RCA 107.55 APO 148.75 V2 34.839  
 RC 76.053 GL -11.13 GP 39.96 ZAL 124.40 ZAP 59.25 ETS 333.69 ZAE 136.32 ETE 59.14 ZAC 112.94 ETC 138.95 CLP -48.16

PLANETOCENTRIC CONIC  
 C3 10.645 VHL 3.263 DLA -7.52 RAL 10.67 RAD 6567.4 VEL 11.491 PTH 2.00 VHP 4.340 DPA 50.28 RAP 20.64 ECC 1.1752  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 16 47 1839.26 -9.05 18.97 222.05 116.95 4 47 26 1239.3 -5.36 12.23  
 90.00 14 21 39 4953.92 21.76 216.56 224.29 71.42 15 44 12 4353.9 19.02 208.96  
 100.00 5 34 31 1588.50 -9.89 .08 221.60 118.35 6 0 59 988.5 -6.03 353.43  
 100.00 15 46 36 4679.91 22.66 196.07 223.95 69.96 17 4 36 4079.9 19.72 188.51  
 110.00 6 34 30 1400.67 -12.10 344.51 220.28 122.22 6 57 51 800.7 -7.76 338.10  
 110.00 17 3 6 4440.52 25.03 176.84 222.90 65.92 18 17 6 3840.5 21.57 169.41

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0547 TRA -.2905 TC3 .9012 BAU .3646 SGT 787.3 SGR 1576.2 SG3 486.4 ST 182.7 SR 180.4 SS 623.2  
 RDE .0984 RRA .0403 RC3 2.3985 FAU .10133 RRT .6986 RRF -.9790 RTF -.7014 CRT -.5793 CRS .9739 CST -.4825  
 FDE -.9412 FRA .1160 FC3-8.2413 BSP 5390 SGB 1761.9 R23 -.0958 R13 -.9746 LSA 654.2 MSA 159.1 SSA 32.8  
 BDE .1126 BRA .2933 BC3 2.5622 FSP -1505 SG1 1680.8 SG2 528.3 THA 68.54 EL1 228.2 EL2 117.8 ALF 135.63

LAUNCH DATE FEB 1 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC DISTANCE 315.603  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.687 GAL -3.32 AZL 91.69 HCA 142.20 SMA 128.34 ECC .15919 INC 1.6925 V1 30.224  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.492 GAP -2.69 AZP 88.66 TAL 198.00 TAP 340.19 RCA 107.91 APO 148.78 V2 34.831  
 RC 78.340 GL -14.38 GP 43.54 ZAL 124.19 ZAP 63.99 ETS 336.09 ZAE 134.14 ETE 65.00 ZAC 109.66 ETC 139.33 CLP -52.78

PLANETOCENTRIC CONIC  
 C3 10.811 VHL 3.288 DLA -10.61 RAL 11.71 RAD 6567.4 VEL 11.498 PTH 2.00 VHP 4.332 DPA 52.69 RAP 16.06 ECC 1.1779  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 45 31 1742.22 -6.01 13.45 223.33 117.72 5 14 33 1142.2 -2.26 6.79  
 90.00 14 1 14 5057.28 23.84 223.43 226.46 74.25 15 25 31 4457.3 21.45 215.57  
 100.00 6 1 34 1496.86 -6.89 354.94 222.86 119.16 6 26 31 896.9 -2.95 348.37  
 100.00 15 27 52 4777.88 24.79 202.57 226.15 72.74 16 47 29 4177.9 22.19 194.73  
 110.00 6 57 49 1320.72 -9.17 340.18 221.47 123.08 7 19 49 720.7 -4.75 333.88  
 110.00 16 48 6 4526.78 27.30 182.52 225.17 68.59 18 3 33 3926.8 24.15 174.77

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0622 TRA -.2924 TC3 .6659 BAU .3930 SGT 687.2 SGR 1766.7 SG3 490.2 ST 190.1 SR 343.3 SS 744.0  
 RDE .1947 RRA .0134 RC3 2.6363 FAU .10078 RRT .5848 RRF -.9842 RTF -.5842 CRT -.5705 CRS .9950 CST -.5225  
 FDE -1.1356 FRA .1833 FC3-8.0702 BSP 5794 SGB 1895.6 R23 -.0629 R13 -.9822 LSA 825.2 MSA 160.8 SSA 25.1  
 BDE .2044 BRA .2927 BC3 2.7191 FSP -1525 SG1 1816.4 SG2 542.2 THA 75.90 EL1 363.7 EL2 147.3 ALF 111.16

LAUNCH DATE FEB 1 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC DISTANCE 322.005  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.709 GAL -3.31 AZL 92.14 HCA 145.36 SMA 128.50 ECC .15788 INC 2.1364 V1 30.224  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.501 GAP -2.23 AZP 88.24 TAL 198.15 TAP 343.51 RCA 108.21 APO 148.79 V2 34.824  
 RC 80.651 GL -18.01 GP 47.28 ZAL 123.61 ZAP 68.71 ETS 338.90 ZAE 131.50 ETE 70.85 ZAC 106.20 ETC 140.09 CLP -57.64

PLANETOCENTRIC CONIC  
 C3 11.125 VHL 3.335 DLA -13.99 RAL 13.09 RAD 6567.4 VEL 11.511 PTH 2.01 VHP 4.382 DPA 55.02 RAP 10.69 ECC 1.1831  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 19 42 1633.57 -2.54 7.36 225.35 118.21 5 46 55 1033.6 1.25 .73  
 90.00 13 38 2 5177.67 25.81 231.69 229.41 77.94 15 4 19 4577.7 23.89 223.55  
 100.00 6 33 38 1395.02 -3.48 349.30 224.83 119.71 6 56 53 795.0 .51 342.78  
 100.00 15 6 46 4891.45 26.86 210.37 229.15 76.35 16 28 18 4291.5 24.71 202.23  
 110.00 7 25 16 1233.28 -5.89 335.54 223.34 123.73 7 45 49 633.3 -1.41 329.31  
 110.00 16 31 37 4625.96 29.58 189.34 228.27 72.04 17 48 43 4026.0 26.84 181.22

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.0850 TRA -.2908 TC3 .3979 BAU .4258 SGT 597.4 SGR 1967.3 SG3 483.0 ST 212.7 SR 543.5 SS 867.5  
 RDE .3146 RRA -.0239 RC3 2.8349 FAU .09791 RRT .3785 RRF -.9879 RTF -.3753 CRT -.6618 CRS .9986 CST -.6375  
 FDE -1.3286 FRA .2605 FC3-7.6196 BSP 6310 SGB 2056.0 R23 -.0327 R13 -.9873 LSA 1032.8 MSA 161.9 SSA 19.2  
 BDE .3259 BRA .2918 BC3 2.8627 FSP -1514 SG1 1981.3 SG2 549.0 THA 82.89 EL1 563.0 EL2 154.0 ALF 105.73

LAUNCH DATE FEB 1 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 328.380

RL 147.41 LAL -.00 LOL 131.96 VL 27.727 GAL -3.30 AZL 92.66 HCA 148.51 SMA 128.62 ECC .15680 INC 2.6571 V1 30.224  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.507 GAP -1.79 AZP 87.73 TAL 198.21 TAP 346.72 RCA 108.45 APO 148.78 V2 34.816  
 RC 82.981 GL -22.09 GP 51.17 ZAL 122.62 ZAP 73.31 ETS 342.18 ZAE 128.40 ETE 76.60 ZAC 102.62 ETC 141.23 CLP -62.75

PLANETOCENTRIC CONIC

C3 11.647 VHL 3.413 DLA -17.70 RAL 14.85 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 4.500 DPA 57.22 RAP 4.51 ECC 1.1917  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 1 43 1507.78 1.52 .34 228.34 118.28 6 26 51 907.8 5.29 353.69  
 90.00 13 10 5 5322.51 27.47 241.96 233.29 82.83 14 38 47 4722.5 26.19 233.53  
 100.00 7 12 42 1278.71 .46 342.92 227.75 119.89 7 34 1 678.7 4.44 336.38  
 100.00 14 41 47 5026.80 28.66 220.02 233.10 81.12 16 5 34 4426.8 27.14 211.55  
 110.00 7 58 14 1136.05 -2.19 330.44 226.10 124.12 8 17 10 536.0 2.30 324.23  
 110.00 16 12 44 4742.24 31.73 197.71 232.40 76.56 17 31 46 4142.2 29.56 189.18

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1318 TRA -.2852 TC3 .1008 BAU .4601 SGT 553.4 SGR 2162.8 SG3 462.1 ST 267.7 SR 775.0 SS 983.1  
 RDE .4595 RRA -.0785 RC3 2.9532 FAU .09221 RRT .0314 RRF -.9905 RTF -.0262 CRT -.7919 CRS .9995 CST -.7808  
 FDE-1.4998 FRA .3531 FC3-6.8536 BSP 6861 SGB 2232.4 R23 -.0070 R13 -.9905 LSA 1269.5 MSA 163.9 SSA 14.8  
 BOE .4781 BRA .2958 BC3 2.9549 FSP -1454 SG1 2162.8 SG2 553.1 THA 89.51 EL1 804.7 EL2 157.5 ALF 105.93

LAUNCH DATE FEB 1 1969

FLIGHT TIME 120.00

ARRIVAL DATE JUN 1 1969

HELIOCENTRIC CONIC

DISTANCE 334.728

RL 147.41 LAL -.00 LOL 131.96 VL 27.739 GAL -3.27 AZL 93.28 HCA 151.66 SMA 128.70 ECC .15593 INC 3.2804 V1 30.224  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.510 GAP -1.37 AZP 87.11 TAL 198.18 TAP 349.84 RCA 108.63 APO 148.77 V2 34.810  
 RC 85.328 GL -26.65 GP 55.16 ZAL 121.15 ZAP 77.68 ETS 345.97 ZAE 124.88 ETE 82.19 ZAC 98.98 ETC 142.77 CLP -68.06

PLANETOCENTRIC CONIC

C3 12.480 VHL 3.533 DLA -21.76 RAL 17.07 RAD 6567.5 VEL 11.570 PTH 2.02 VHP 4.701 DPA 59.25 RAP 357.52 ECC 1.2054  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 56 24 1352.70 6.48 351.64 232.71 117.63 7 18 57 752.7 10.13 344.86  
 90.00 12 33 6 5506.74 28.31 255.36 238.18 89.48 14 4 53 4906.7 27.94 246.72  
 100.00 8 2 30 1139.38 5.17 355.25 231.99 119.48 8 21 29 539.4 9.06 328.62  
 100.00 14 9 41 5195.30 29.80 232.40 238.14 87.53 15 36 17 4595.3 29.14 223.66  
 110.00 8 38 54 1025.26 2.05 324.66 230.05 124.13 8 56 0 425.3 6.51 318.42  
 110.00 15 49 46 4882.18 33.46 208.25 237.77 82.57 17 11 9 4282.2 32.07 199.30

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2089 TRA -.2687 TC3 -.1955 BAU .4964 SGT 595.0 SGR 2352.9 SG3 429.7 ST 366.8 SR 1037.7 SS 1087.9  
 RDE .6368 RRA -.1510 RC3 2.9688 FAU .08418 RRT -.3685 RRF -.9924 RTF .3744 CRT -.8904 CRS .9998 CST -.8860  
 FDE-1.6437 FRA .4453 FC3-5.8396 BSP 7499 SGB 2427.0 R23 .0134 R13 -.9923 LSA 1538.7 MSA 164.9 SSA 11.4  
 BOE .6701 BRA .3083 BC3 2.9752 FSP -1360 SG1 2363.7 SG2 550.6 THA 95.63 EL1 1089.0 EL2 159.1 ALF 107.87

LAUNCH DATE FEB 1 1969

FLIGHT TIME 122.00

ARRIVAL DATE JUN 3 1969

HELIOCENTRIC CONIC

DISTANCE 341.049

RL 147.41 LAL -.00 LOL 131.96 VL 27.747 GAL -3.23 AZL 94.05 HCA 154.81 SMA 128.76 ECC .15524 INC 4.0450 V1 30.224  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.511 GAP -.96 AZP 86.34 TAL 198.06 TAP 352.87 RCA 108.77 APO 148.74 V2 34.804  
 RC 87.691 GL -31.74 GP 59.27 ZAL 119.16 ZAP 81.68 ETS 350.31 ZAE 120.97 ETE 87.62 ZAC 95.35 ETC 144.72 CLP -73.56

PLANETOCENTRIC CONIC

C3 13.799 VHL 3.715 DLA -26.19 RAL 19.84 RAD 6567.5 VEL 11.627 PTH 2.04 VHP 5.006 DPA 61.07 RAP 349.70 ECC 1.2271  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 19 37 1123.27 13.46 338.40 239.37 115.15 8 38 21 523.3 16.74 331.26  
 90.00 11 31 59 5779.57 26.88 275.14 243.78 99.26 13 8 18 5179.6 27.88 266.62  
 100.00 9 12 46 951.63 11.32 324.71 238.28 117.85 9 28 38 351.6 14.96 317.81  
 100.00 13 21 31 5426.45 29.24 249.53 244.15 96.50 14 51 57 4826.4 29.83 240.78  
 110.00 9 31 27 892.99 7.07 317.71 235.72 123.53 9 46 20 293.0 11.43 311.33  
 110.00 15 19 19 5057.85 34.18 221.90 244.51 90.60 16 43 37 4457.9 33.88 212.67

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3294 TRA -.2367 TC3 -.4675 BAU .5309 SGT 737.8 SGR 2520.8 SG3 385.9 ST 522.7 SR 1318.8 SS 1170.6  
 RDE .8499 RRA -.2508 RC3 2.8394 FAU .07386 RRT -.6578 RRF -.9938 RTF .6634 CRT -.9444 CRS .9999 CST -.9431  
 FDE-1.7441 FRA .5388 FC3-4.6341 BSP 8139 SGB 2626.5 R23 .0297 R13 -.9934 LSA 1831.7 MSA 166.3 SSA 8.8  
 BOE .9115 BRA .3449 BC3 2.8776 FSP -1225 SG1 2569.3 SG2 545.2 THA 101.42 EL1 1409.4 EL2 160.8 ALF 110.80

LAUNCH DATE FEB 1 1969

FLIGHT TIME 124.00

ARRIVAL DATE JUN 5 1969

HELIOCENTRIC CONIC

DISTANCE 347.342

RL 147.41 LAL -.00 LOL 131.96 VL 27.751 GAL -3.18 AZL 95.01 HCA 157.95 SMA 128.78 ECC .15472 INC 5.0115 V1 30.224  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.509 GAP -.56 AZP 85.35 TAL 197.84 TAP 355.79 RCA 108.86 APO 148.71 V2 34.799  
 RC 90.065 GL -37.35 GP 63.50 ZAL 116.60 ZAP 85.22 ETS 355.24 ZAE 116.71 ETE 92.93 ZAC 91.75 ETC 147.13 CLP -79.24

PLANETOCENTRIC CONIC

C3 15.920 VHL 3.990 DLA -30.95 RAL 23.28 RAD 6567.6 VEL 11.718 PTH 2.06 VHP 5.452 DPA 62.66 RAP 340.98 ECC 1.2620  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.96 8 25 39 1173.23 22.72 346.27 248.96 111.59 8 45 12 573.2 25.45 338.45  
 103.04 11 53 23 5793.38 22.74 274.89 248.96 111.58 13 29 57 5193.4 25.46 267.07  
 76.96 8 25 39 1173.23 22.72 346.27 248.96 111.59 8 45 12 573.2 25.45 338.45  
 103.04 11 53 23 5793.38 22.74 274.89 248.96 111.58 13 29 57 5193.4 25.46 267.07  
 110.00 10 47 22 712.20 13.71 307.93 244.21 121.62 10 59 14 112.2 17.80 301.19  
 110.00 14 30 51 5302.41 32.39 240.71 252.20 101.57 15 59 13 4702.4 33.65 231.70

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5099 TRA -.1773 TC3 -.6744 BAU .5615 SGT 956.0 SGR 2659.9 SG3 334.1 ST 737.8 SR 1600.6 SS 1222.0  
 RDE 1.1057 RRA -.3830 RC3 2.5507 FAU .06201 RRT -.8131 RRF -.9948 RTF .8183 CRT -.9708 CRS 1.0000 CST -.9709  
 FDE-1.7927 FRA .6208 FC3-3.3722 BSP 8780 SGB 2826.5 R23 .0420 R13 -.9941 LSA 2138.2 MSA 166.5 SSA 6.8  
 BOE 1.2176 BRA .4220 BC3 2.6383 FSP -1062 SG1 2775.8 SG2 533.3 THA 106.93 EL1 1755.1 EL2 161.3 ALF 114.33

LAUNCH DATE FEB 1 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 7 1969

HELIOCENTRIC CONIC

DISTANCE 353.605

RL 147.41 LAL -.00 LOL 131.96 VL 27.751 GAL -3.12 AZL 96.28 HCA 161.08 SMA 128.78 ECC .15434 INC 6.2800 V1 30.224
RP 108.91 LAP -2.03 LOP 293.15 VP 37.505 GAP -.18 AZP 84.06 TAL 197.54 TAP 358.62 RCA 108.91 APO 148.66 V2 34.795
RC 92.449 GL -43.41 GP 67.93 ZAL 113.47 ZAP 88.18 ETS .90 ZAE 112.08 ETE 98.30 ZAC 88.21 ETC 150.13 CLP -85.14

PLANETOCENTRIC CONIC

C3 19.455 VHL 4.411 DLA -35.92 RAL 27.54 RAD 6567.8 VEL 11.867 PTH 2.11 VHP 6.096 DPA 63.99 RAP 331.24 ECC 1.3202
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.91 7 39 7 1415.50 24.75 5.97 258.00 116.91 8 2 42 815.5 28.15 358.30
113.09 13 13 53 5644.19 24.76 264.38 258.01 116.90 14 47 58 5044.2 28.16 256.71
66.91 7 39 7 1415.50 24.75 5.97 258.00 116.91 8 2 42 815.5 28.15 358.30
113.09 13 13 53 5644.19 24.76 264.38 258.01 116.90 14 47 58 5044.2 28.16 256.71
66.91 7 39 7 1415.50 24.75 5.97 258.00 116.91 8 2 42 815.5 28.15 358.30
113.09 13 13 53 5644.19 24.76 264.38 258.01 116.90 14 47 58 5044.2 28.16 256.71

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.7776 TRA -.0730 TC3 -.7814 BAU .5860 SGT 1228.4 SGR 2766.1 SG3 278.4 ST 1010.9 SR 1858.9 SS 1236.3
RDE 1.4155 RRA -.5559 RC3 2.1133 FAU .04952 RRT -.8940 RRF -.9957 RTF .8990 CRT -.9839 CRS 1.0000 CST -.9846
FDE -1.7887 FRA .6840 FC3 -2.2034 BSP 9454 SGB 3026.6 R23 .0502 R13 -.9947 LSA 2445.2 MSA 163.7 SSA 5.2
BDE 1.6150 BRA .5607 BC3 2.2531 FSP -888 SG1 2983.3 SG2 510.3 THA 112.34 EL1 2110.0 EL2 159.0 ALF 118.32

LAUNCH DATE FEB 1 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 359.832

RL 147.41 LAL -.00 LOL 131.96 VL 27.747 GAL -3.05 AZL 98.03 HCA 164.20 SMA 128.76 ECC .15410 INC 8.0290 V1 30.224
RP 108.92 LAP -2.18 LOP 296.31 VP 37.499 GAP .18 AZP 82.27 TAL 197.14 TAP 1.34 RCA 108.92 APO 148.60 V2 34.791
RC 94.840 GL -49.76 GP 72.66 ZAL 109.84 ZAP 90.46 ETS 7.61 ZAE 107.03 ETE 104.16 ZAC 84.69 ETC 154.13 CLP -91.54

PLANETOCENTRIC CONIC

C3 25.705 VHL 5.070 DLA -40.88 RAL 32.78 RAD 6568.0 VEL 12.128 PTH 2.17 VHP 7.046 DPA 64.97 RAP 320.20 ECC 1.4230
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
59.18 7 21 51 1593.31 25.39 21.06 269.51 123.19 7 48 25 993.3 29.57 13.78
120.82 14 12 57 5601.39 25.41 261.27 269.52 123.18 15 46 19 5001.4 29.58 253.99
59.18 7 21 51 1593.31 25.39 21.06 269.51 123.19 7 48 25 993.3 29.57 13.78
120.82 14 12 57 5601.39 25.41 261.27 269.52 123.18 15 46 19 5001.4 29.58 253.99
59.18 7 21 51 1593.31 25.39 21.06 269.51 123.19 7 48 25 993.3 29.57 13.78
120.82 14 12 57 5601.39 25.41 261.27 269.52 123.18 15 46 19 5001.4 29.58 253.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.1833 TRA .1120 TC3 -.7687 BAU .5961 SGT 1556.9 SGR 2813.2 SG3 221.7 ST 1338.4 SR 2041.5 SS 1203.9
RDE 1.7787 RRA -.7878 RC3 1.5552 FAU .03691 RRT -.9394 RRF -.9965 RTF .9445 CRT -.9907 CRS 1.0000 CST -.9917
FDE -1.7254 FRA .7304 FC3 -1.2432 BSP 10071 SGB 3215.2 R23 -.0547 R13 -.9953 LSA 2717.3 MSA 156.8 SSA 3.9
BDE 2.1364 BRA .7957 BC3 1.7348 FSP -707 SG1 3180.4 SG2 472.1 THA 118.14 EL1 2436.3 EL2 152.6 ALF 123.15

LAUNCH DATE FEB 1 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 366.016

RL 147.41 LAL -.00 LOL 131.96 VL 27.741 GAL -2.96 AZL 100.61 HCA 167.30 SMA 128.71 ECC .15397 INC10.6082 V1 30.224
RP 108.93 LAP -2.32 LOP 299.47 VP 37.491 GAP .52 AZP 79.65 TAL 196.64 TAP 3.93 RCA 108.90 APO 148.53 V2 34.788
RC 97.236 GL -56.07 GP 77.87 ZAL 105.84 ZAP 91.99 ETS 16.54 ZAE 101.43 ETE 111.79 ZAC 81.06 ETC 160.37 CLP -99.51

PLANETOCENTRIC CONIC

C3 37.783 VHL 6.147 DLA -45.44 RAL 39.10 RAD 6568.5 VEL 12.616 PTH 2.29 VHP 8.517 DPA 65.38 RAP 307.47 ECC 1.6218
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
52.85 7 21 24 1758.97 23.71 34.43 283.46 129.97 7 50 43 1159.0 28.69 27.86
127.15 15 3 51 5628.98 23.72 262.35 283.47 129.96 16 37 40 5029.0 28.70 255.78
52.85 7 21 24 1758.97 23.71 34.43 283.46 129.97 7 50 43 1159.0 28.69 27.86
127.15 15 3 51 5628.98 23.72 262.35 283.47 129.96 16 37 40 5029.0 28.70 255.78
52.85 7 21 24 1758.97 23.71 34.43 283.46 129.97 7 50 43 1159.0 28.69 27.86
127.15 15 3 51 5628.98 23.72 262.35 283.47 129.96 16 37 40 5029.0 28.70 255.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -1.8377 TRA .4682 TC3 -.6404 BAU .5798 SGT 1985.2 SGR 2749.5 SG3 168.2 ST 1723.3 SR 2072.8 SS 1130.7
RDE 2.1744 RRA -1.0857 RC3 .9526 FAU .02504 RRT -.9693 RRF -.9973 RTF .9741 CRT -.9948 CRS .9999 CST -.9959
FDE -1.6157 FRA .7617 FC3 -.5738 BSP 10676 SGB 3391.3 R23 .0540 R13 -.9963 LSA 2919.8 MSA 138.5 SSA 2.9
BDE 2.8470 BRA 1.1824 BC3 1.1479 FSP -538 SG1 3367.8 SG2 398.2 THA 125.56 EL1 2692.2 EL2 134.9 ALF 129.71

LAUNCH DATE FEB 1 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 372.136

RL 147.41 LAL -.00 LOL 131.96 VL 27.731 GAL -2.85 AZL 104.80 HCA 170.36 SMA 128.65 ECC .15391 INC14.8018 V1 30.224
RP 108.94 LAP -2.45 LOP 302.63 VP 37.482 GAP .85 AZP 75.40 TAL 196.01 TAP 6.37 RCA 108.85 APO 148.45 V2 34.786
RC 99.636 GL -61.70 GP 83.81 ZAL 101.67 ZAP 92.71 ETS 33.08 ZAE 94.90 ETE 126.74 ZAC 77.06 ETC 174.46 CLP -116.06

PLANETOCENTRIC CONIC

C3 64.582 VHL 8.036 DLA -48.91 RAL 46.31 RAD 6569.2 VEL 13.636 PTH 2.49 VHP 10.990 DPA 64.75 RAP 292.63 ECC 2.0629
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.30 7 34 7 1932.37 18.78 46.10 299.04 136.03 8 6 20 1332.4 24.43 40.43
131.70 15 48 38 5722.07 18.79 266.32 299.06 136.03 17 24 0 5122.1 24.45 260.64
48.30 7 34 7 1932.37 18.78 46.10 299.04 136.03 8 6 20 1332.4 24.43 40.43
131.70 15 48 38 5722.07 18.79 266.32 299.06 136.03 17 24 0 5122.1 24.45 260.64
48.30 7 34 7 1932.37 18.78 46.10 299.04 136.03 8 6 20 1332.4 24.43 40.43
131.70 15 48 38 5722.07 18.79 266.32 299.06 136.03 17 24 0 5122.1 24.45 260.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -3.0941 TRA 1.3103 TC3 -.4283 BAU .4952 SGT 2713.0 SGR 2279.3 SG3 121.4 ST 2246.9 SR 1713.7 SS 1037.8
RDE 2.3260 RRA -1.3262 RC3 .3815 FAU .01401 RRT -.9905 RRF -.9981 RTF .9930 CRT -.9980 CRS .9999 CST -.9987
FDE -1.4886 FRA .8022 FC3 -.1878 BSP 11110 SGB 3543.4 R23 .0486 R13 -.9974 LSA 3009.0 MSA 90.6 SSA 2.0
BDE 3.8709 BRA 1.8643 BC3 .5735 FSP -386 SG1 3535.2 SG2 240.8 THA 140.01 EL1 2824.5 EL2 86.7 ALF 142.68

LAUNCH DATE FEB 1 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 378.132

RL 147.41 LAL -0.00 LOL 131.96 VL 27.719 GAL -2.72 AZL 112.74 HCA 173.32 SMA 128.57 ECC .15388 INC22.7425 V1 30.224  
 RP 108.94 LAP -2.58 LOP 305.80 VP 37.472 GAP 1.14 AZP 67.40 TAL 195.22 TAP 8.53 RCA 108.78 APO 148.35 V2 34.784  
 RC 102.038 GL -65.23 GP 86.14 ZAL 97.60 ZAP 92.62 ETS 96.86 ZAE 86.43 ETE 188.80 ZAC 71.94 ETC 236.48 CLP 132.80

PLANETOCENTRIC CONIC

C3 138.980 VHL 11.789 DLA -50.03 RAL 53.28 RAD 6570.5 VEL 16.134 PTH 2.84 VHP 15.758 OPA 61.87 RAP 275.37 ECC 3.2873  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 46.86 7 57 14 2109.42 10.69 54.69 314.17 139.18 8 32 24 1509.4 16.68 49.66  
 133.14 16 21 10 5876.59 10.70 272.64 314.18 139.17 17 59 6 5276.6 16.70 267.61  
 46.86 7 57 14 2109.42 10.69 54.69 314.17 139.18 8 32 24 1509.4 16.68 49.66  
 133.14 16 21 10 5876.59 10.70 272.64 314.18 139.17 17 59 6 5276.6 16.70 267.61  
 46.86 7 57 14 2109.42 10.69 54.69 314.17 139.18 8 32 24 1509.4 16.68 49.66  
 133.14 16 21 10 5876.59 10.70 272.64 314.18 139.17 17 59 6 5276.6 16.70 267.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-4.7900 TRA 3.0671 TC3 -.1122 BAU .2132 SGT 3297.5 SGR 1572.2 SG3 85.2 ST 2429.9 SR 1404.3 SS 994.7  
 RDE-2.8533 RRA .9764 RC3 -.0241 FAU .00295 RRT .9562 RRF .9580 RTF .9993 CRT .9913 CRS -.9915 CST -1.0000  
 FDE-1.4411 FRA -9163 FC3 -.0184 BSP 11498 SGB 3653.2 R23 -.0448 R13 .9984 LSA 2973.1 MSA 163.0 SSA 1.4  
 BDE 5.5754 BRA 3.2187 BC3 .1148 FSP -273 SG1 3629.1 SG2 418.2 THA 24.86 EL1 2801.9 EL2 160.4 ALF 29.92

LAUNCH DATE FEB 1 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 383.769

RL 147.41 LAL -0.00 LOL 131.96 VL 27.705 GAL -2.50 AZL 131.93 HCA 175.96 SMA 128.47 ECC .15365 INC41.9345 V1 30.224  
 RP 108.95 LAP -2.70 LOP 308.96 VP 37.460 GAP 1.32 AZP 48.14 TAL 194.00 TAP 9.96 RCA 108.73 APO 148.20 V2 34.783  
 RC 104.441 GL -62.22 GP 73.17 ZAL 93.99 ZAP 91.81 ETS 162.97 ZAE 72.46 ETE 253.26 ZAC 63.27 ETC 303.35 CLP 96.26

PLANETOCENTRIC CONIC

C3 437.046 VHL 20.906 DLA -45.22 RAL 56.47 RAD 6572.2 VEL 23.629 PTH 3.30 VHP 27.143 DPA 52.90 RAP 255.75 ECC 8.1927  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.15 8 31 47 2212.30 2.34 55.56 324.12 135.17 9 8 40 1612.3 7.99 50.29  
 126.85 16 12 1 800.00 2.36 306.10 324.14 135.17 16 25 21 200.0 8.01 300.83  
 53.15 8 31 47 2212.30 2.34 55.56 324.12 135.17 9 8 40 1612.3 7.99 50.29  
 126.85 16 12 1 800.00 2.36 306.10 324.14 135.17 16 25 21 200.0 8.01 300.83  
 53.15 8 31 47 2212.30 2.34 55.56 324.12 135.17 9 8 40 1612.3 7.99 50.29  
 126.85 16 12 1 800.00 2.36 306.10 324.14 135.17 16 25 21 200.0 8.01 300.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4564 TRA .9717 TC3 -.0303 BAU 1.0018 SGT 782.4 SGR 3529.9 SG3 62.9 ST 682.7 SR 2497.0 SS 1170.8  
 RDE-8.6869 RRA 6.4484 RC3 .1688 FAU-.01764 RRT -.2693 RRF .9994 RTF -.2373 CRT -.8902 CRS -.9998 CST .8808  
 FDE-1.7253 FRA 1.3715 FC3 .0349 BSP 11191 SGB 3615.6 R23 -.0464 R13 .9989 LSA 2824.5 MSA 306.6 SSA .4  
 BDE 9.0275 BRA 6.5212 BC3 .1715 FSP -199 SG1 3536.5 SG2 752.1 THA 93.58 EL1 2571.0 EL2 302.1 ALF 103.87

LAUNCH DATE FEB 1 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 393.891

RL 147.41 LAL -0.00 LOL 131.96 VL 27.688 GAL -3.17 AZL 3.21 HCA 182.81 SMA 128.35 ECC .15824 INC86.7851 V1 30.224  
 RP 108.95 LAP -2.81 LOP 312.12 VP 37.448 GAP 2.71 AZP 176.79 TAL 197.28 TAP 20.09 RCA 108.04 APO 148.66 V2 34.783  
 RC 106.844 GL 43.86 GP -49.80 ZAL 92.56 ZAP 92.09 ETS 178.12 ZAE 50.83 ETE 90.38 ZAC 73.04 ETC 45.01 CLP 93.23

PLANETOCENTRIC CONIC

C31587.162 VHL 39.839 DLA 54.48 RAL 13.48 RAD 6573.2 VEL 41.333 PTH 3.57 VHP 48.781 DPA -59.33 RAP 193.21 ECC27.1207  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.30 16 59 44 5020.39 1.29 236.78 284.41 35.53 18 23 25 4420.4 -5.22 232.54  
 138.70 2 1 8 3423.84 1.30 108.70 284.40 35.53 2 58 12 2823.8 -5.21 104.46  
 41.30 16 59 44 5020.39 1.29 236.78 284.41 35.53 18 23 25 4420.4 -5.22 232.54  
 138.70 2 1 8 3423.84 1.30 108.70 284.40 35.53 2 58 12 2823.8 -5.21 104.46  
 41.30 16 59 44 5020.39 1.29 236.78 284.41 35.53 18 23 25 4420.4 -5.22 232.54  
 138.70 2 1 8 3423.84 1.30 108.70 284.40 35.53 2 58 12 2823.8 -5.21 104.46

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-5.7019 TRA 2.2992 TC3 -.1104 BAU 4.8763 SGT 1330.7 SGR 2808.3 SG3 55.7 ST 838.0 SR 2304.0 SS 2236.3  
 RC-16.0167 RRA .1798 RC3 -.2015 FAU-.08400 RRT .8904 RRF -1.0000 RTF -.8911 CRT .9801 CRS 1.0000 CST .9804  
 FDE 3.6885 FRA -.0529 FC3 .0458 BSP 9079 SGB 3107.6 R23 -.0781 R13 -.9969 LSA 3314.5 MSA 160.5 SSA .7  
 BDE17.0014 BRA 2.3062 BC3 .2298 FSP -173 SG1 3057.4 SG2 556.4 THA 66.29 EL1 2446.7 EL2 156.5 ALF 70.29

LAUNCH DATE FEB 1 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 398.380

RL 147.41 LAL -0.00 LOL 131.96 VL 27.669 GAL -2.71 AZL 48.76 HCA 184.41 SMA 128.22 ECC .15680 INC41.2363 V1 30.224  
 RP 108.94 LAP -2.91 LOP 315.28 VP 37.434 GAP 2.58 AZP 131.15 TAL 194.86 TAP 19.27 RCA 108.12 APO 148.33 V2 34.784  
 RC 109.246 GL 62.30 GP -75.53 ZAL 94.34 ZAP 93.98 ETS 183.44 ZAE 77.29 ETE 96.04 ZAC 90.94 ETC 54.63 CLP 106.14

PLANETOCENTRIC CONIC

C3 423.420 VHL 20.577 DLA 65.77 RAL 342.64 RAD 6572.2 VEL 23.339 PTH 3.29 VHP 24.514 DPA -74.86 RAP 132.07 ECC 7.9684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 27.78 14 22 27 5008.82 -3.20 243.06 251.21 24.27 15 45 56 4408.8 -10.49 240.14  
 152.22 0 32 24 3285.69 -3.20 98.32 251.19 24.27 1 27 9 2685.7 -10.48 95.40  
 27.78 14 22 27 5008.82 -3.20 243.06 251.21 24.27 15 45 56 4408.8 -10.49 240.14  
 152.22 0 32 24 3285.69 -3.20 98.32 251.19 24.27 1 27 9 2685.7 -10.48 95.40  
 27.78 14 22 27 5008.82 -3.20 243.06 251.21 24.27 15 45 56 4408.8 -10.49 240.14  
 152.22 0 32 24 3285.69 -3.20 98.32 251.19 24.27 1 27 9 2685.7 -10.48 95.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5169 TRA 1.5940 TC3 -.0640 BAU 1.0482 SGT 1122.6 SGR 3714.8 SG3 67.4 ST 355.1 SR 2993.4 SS 1338.3  
 RD-10.4901 RRA 3.2141 RC3 -.1738 FAU-.01535 RRT .7117 RRF -.9996 RTF -.7078 CRT .5955 CRS 1.0000 CST .5949  
 FDE 2.2146 FRA -.6765 FC3 .0314 BSP 12167 SGB 3880.7 R23 -.0507 R13 -.9984 LSA 3285.8 MSA 284.7 SSA 1.3  
 BDE10.5028 BRA 3.5877 BC3 .1852 FSP -220 SG1 3803.5 SG2 770.2 THA 77.33 EL1 3000.9 EL2 284.5 ALF 85.92

LAUNCH DATE FEB 1 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 23 1969

MELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.649 GAL -2.49 AZL 65.11 HCA 187.14 SMA 128.08 ECC .15690 INC24.8859 V1 30.224  
 RP 108.94 LAP -3.00 LOP 318.45 VP 37.420 GAP 2.77 AZP 114.72 TAL 193.57 TAP 20.71 RCA 107.99 APO 148.18 V2 34.785  
 RC 111.645 GL 65.23 GP -82.68 ZAL 96.48 ZAP 97.14 ETS 232.27 ZAE 89.95 ETE 145.16 ZAC 98.62 ETC 104.51 CLP 167.38

PLANETOCENTRIC CONIC  
 C3 163.887 VHL 12.802 CLA 65.09 RAL 333.07 RAD 6570.8 VEL 16.888 PTH 2.91 VHP 14.800 CPA -71.66 RAP 86.84 ECC 3.6972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 28.58 13 46 6 4881.39 -10.87 239.46 237.97 25.40 15 7 27 4281.4 -18.07 236.27  
 151.42 23 48 27 3163.89 -10.86 95.62 237.95 25.40 24 41 10 2563.9 -18.06 92.44  
 28.58 13 46 6 4881.39 -10.87 239.46 237.97 25.40 15 7 27 4281.4 -18.07 236.27  
 151.42 23 48 27 3163.89 -10.86 95.62 237.95 25.40 24 41 10 2563.9 -18.06 92.44  
 28.58 13 46 6 4881.39 -10.87 239.46 237.97 25.40 15 7 27 4281.4 -18.07 236.27  
 151.42 23 48 27 3163.89 -10.86 95.62 237.95 25.40 24 41 10 2563.9 -18.06 92.44

MID-COURSE EXECUTION ACCURACY  
 SGT 2387.2 SGR 3320.4 SG3 94.1  
 RRT -.9034 RRF -.9742 RTF .9752  
 SGB 4089.5 R23 -.0771 R13 -.9962  
 SG1 4000.2 SG2 849.8 THA 124.80

ORBIT DETERMINATION ACCURACY  
 ST 2020.4 SR 1901.8 SS 1001.9  
 CRT -.9643 CRS .9872 CST -.9342  
 LSA 2926.7 MSA 370.5 SSA 1.7  
 EL1 2749.9 EL2 370.1 ALF 136.79

LAUNCH DATE FEB 1 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 25 1969

MELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.626 GAL -2.31 AZL 72.19 HCA 190.13 SMA 127.93 ECC .15739 INC17.8089 V1 30.224  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.406 GAP 3.03 AZP 107.55 TAL 192.50 TAP 22.63 RCA 107.79 APO 148.06 V2 34.787  
 RC 114.042 GL 63.72 GP -77.51 ZAL 98.29 ZAP 100.95 ETS 300.50 ZAE 97.97 ETE 213.10 ZAC 102.76 ETC 173.19 CLP-151.48

PLANETOCENTRIC CONIC  
 C3 88.656 VHL 9.416 DLA 63.04 RAL 334.07 RAD 6569.7 VEL 14.491 PTH 2.63 VHP 10.626 CPA -66.23 RAP 67.16 ECC 2.4590  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 30.99 13 55 43 4750.34 -18.01 234.19 234.56 28.47 15 14 54 4150.3 -25.00 230.41  
 149.01 23 46 47 3051.04 -18.00 93.10 234.54 28.47 24 37 38 2451.0 -24.99 89.32  
 30.99 13 55 43 4750.34 -18.01 234.19 234.56 28.47 15 14 54 4150.3 -25.00 230.41  
 149.01 23 46 47 3051.04 -18.00 93.10 234.54 28.47 24 37 38 2451.0 -24.99 89.32  
 30.99 13 55 43 4750.34 -18.01 234.19 234.56 28.47 15 14 54 4150.3 -25.00 230.41  
 149.01 23 46 47 3051.04 -18.00 93.10 234.54 28.47 24 37 38 2451.0 -24.99 89.32

MID-COURSE EXECUTION ACCURACY  
 SGT 4109.5 SGR 963.0 SG3 133.0  
 RRT .9696 RRF .9893 RTF .9932  
 SGB 4220.9 R23 .0951 R13 .9944  
 SG1 4214.6 SG2 229.7 THA 12.84

ORBIT DETERMINATION ACCURACY  
 ST 2660.4 SR 762.4 SS 992.9  
 CRT .9903 CRS -.9971 CST -.9980  
 LSA 2938.0 MSA 113.0 SSA 1.8  
 EL1 2765.6 EL2 101.7 ALF 15.87

LAUNCH DATE FEB 1 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 27 1969

MELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.602 GAL -2.13 AZL 76.04 HCA 193.19 SMA 127.77 ECC .15807 INC13.9597 V1 30.224  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.391 GAP 3.30 AZP 103.61 TAL 191.46 TAP 24.66 RCA 107.57 APO 147.96 V2 34.790  
 RC 116.435 GL 61.05 GP -70.86 ZAL 99.62 ZAP 105.14 ETS 312.07 ZAE 104.14 ETE 223.71 ZAC 105.58 ETC 184.78 CLP-142.83

PLANETOCENTRIC CONIC  
 C3 57.827 VHL 7.604 DLA 60.95 RAL 337.80 RAD 6569.1 VEL 13.386 PTH 2.45 VHP 8.454 CPA -60.76 RAP 56.06 ECC 1.9517  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 33.47 14 16 37 4639.64 -23.49 228.69 233.84 31.97 15 33 56 4039.6 -30.20 224.22  
 146.53 23 55 37 2961.17 -23.48 90.54 233.82 31.96 24 44 58 2361.2 -30.19 86.06  
 33.47 14 16 37 4639.64 -23.49 228.69 233.84 31.97 15 33 56 4039.6 -30.20 224.22  
 146.53 23 55 37 2961.17 -23.48 90.54 233.82 31.96 24 44 58 2361.2 -30.19 86.06  
 33.47 14 16 37 4639.64 -23.49 228.69 233.84 31.97 15 33 56 4039.6 -30.20 224.22  
 146.53 23 55 37 2961.17 -23.48 90.54 233.82 31.96 24 44 58 2361.2 -30.19 86.06

MID-COURSE EXECUTION ACCURACY  
 SGT 3933.4 SGR 1636.3 SG3 175.6  
 RRT .9784 RRF .9966 RTF .9867  
 SGB 4260.1 R23 .1209 R13 .9908  
 SG1 4248.6 SG2 313.2 THA 22.28

ORBIT DETERMINATION ACCURACY  
 ST 2578.3 SR 1272.9 SS 1084.0  
 CRT .9932 CRS -.9995 CST -.9962  
 LSA 3069.4 MSA 148.3 SSA 2.4  
 EL1 2872.3 EL2 133.4 ALF 26.18

LAUNCH DATE FEB 1 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 29 1969

MELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.577 GAL -1.95 AZL 78.45 HCA 196.30 SMA 127.59 ECC .15890 INC11.5485 V1 30.224  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.376 GAP 3.58 AZP 101.10 TAL 190.42 TAP 26.72 RCA 107.32 APO 147.87 V2 34.794  
 RC 118.823 GL 58.13 GP -64.56 ZAL 100.51 ZAP 109.52 ETS 314.93 ZAE 109.21 ETE 224.95 ZAC 107.75 ETC 187.28 CLP-141.08

PLANETOCENTRIC CONIC  
 C3 42.216 VHL 6.497 DLA 58.98 RAL 342.12 RAD 6568.6 VEL 12.790 PTH 2.33 VHP 7.188 CPA -55.42 RAP 48.81 ECC 1.6948  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 35.83 14 39 48 4550.25 -27.39 223.39 233.98 35.48 15 55 38 3950.2 -33.79 218.23  
 144.17 0 10 51 2893.73 -27.38 88.13 233.96 35.47 0 59 4 2293.7 -33.78 82.97  
 35.83 14 39 48 4550.25 -27.39 223.39 233.98 35.48 15 55 38 3950.2 -33.79 218.23  
 144.17 0 10 51 2893.73 -27.38 88.13 233.96 35.47 0 59 4 2293.7 -33.78 82.97  
 35.83 14 39 48 4550.25 -27.39 223.39 233.98 35.48 15 55 38 3950.2 -33.79 218.23  
 144.17 0 10 51 2893.73 -27.38 88.13 233.96 35.47 0 59 4 2293.7 -33.78 82.97

MID-COURSE EXECUTION ACCURACY  
 SGT 3970.9 SGR 1724.7 SG3 221.1  
 RRT .9759 RRF .9963 RTF .9820  
 SGB 4329.3 R23 .1403 R13 .9874  
 SG1 4315.4 SG2 346.5 THA 23.13

ORBIT DETERMINATION ACCURACY  
 ST 2635.2 SR 1358.1 SS 1176.9  
 CRT .9931 CRS -.9998 CST -.9954  
 LSA 3185.5 MSA 161.6 SSA 3.0  
 EL1 2961.2 EL2 141.7 ALF 27.17

LAUNCH DATE FEB 1 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 428.030

RL 147.41 LAL -.00 LOL 131.96 VL 27.551 GAL -1.77 AZL 80.11 HCA 199.42 SMA 127.42 ECC .15985 INC 9.8933 V1 30.224  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.360 GAP 3.86 A2P 99.34 TAL 189.35 TAP 28.77 RCA 107.05 APO 147.78 V2 34.798  
 RC 121.206 GL 55.24 GP -58.74 ZAL 100.96 ZAP 113.92 ETS 315.89 ZAE 113.44 ETE 223.72 ZAC 109.55 ETC 187.58 CLP-141.40

PLANETOCENTRIC CONIC

C3 33.164 VHL 5.759 DLA 57.19 RAL 346.46 RAD 6568.3 VEL 12.431 PTH 2.25 VHP 6.404 DPA -50.27 RAP 43.79 ECC 1.5458  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 37.99 15 2 48 4478.23 -30.09 218.49 234.54 38.77 16 17 26 3878.2 -36.18 212.70  
 142.01 0 22 28 2843.87 -30.07 85.98 234.52 38.77 1 9 52 2243.9 -36.17 80.20  
 37.99 15 2 48 4478.23 -30.09 218.49 234.54 38.77 16 17 26 3878.2 -36.18 212.70  
 142.01 0 22 28 2843.87 -30.07 85.98 234.52 38.77 1 9 52 2243.9 -36.17 80.20  
 37.99 15 2 48 4478.23 -30.09 218.49 234.54 38.77 16 17 26 3878.2 -36.18 212.70  
 142.01 0 22 28 2843.87 -30.07 85.98 234.52 38.77 1 9 52 2243.9 -36.17 80.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.6329 TRA-1.4270 TC3-1.4679 BAU .7036 SGT 4072.5 SGR 1669.4 SG3 263.8 ST 2735.4 SR 1330.2 SS 1256.2  
 RDE 1.3167 RRA -.4178 RC3 -.6029 FAU .05023 RRT .9731 RRF .9953 RTF .9783 CRT .9931 CRS -.9998 CST -.9950  
 FDE 2.2398 FRA -.7844 FC3-1.3112 BSP 13816 SGB 4401.4 R23 .1559 R13 .9840 LSA 3286.6 MSA 166.9 SSA 3.8  
 BDE 2.9438 BRA 1.4869 BC3 1.5869 FSP -884 SG1 4386.9 SG2 357.2 THA 21.90 EL1 3038.4 EL2 140.6 ALF 25.84

LAUNCH DATE FEB 1 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 434.052

RL 147.41 LAL -.00 LOL 131.96 VL 27.523 GAL -1.57 AZL 81.32 HCA 202.55 SMA 127.23 ECC .16092 INC 8.6820 V1 30.224  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.344 GAP 4.14 A2P 98.03 TAL 188.26 TAP 30.81 RCA 106.76 APO 147.70 V2 34.803  
 RC 123.581 GL 52.50 GP -53.43 ZAL 101.03 ZAP 118.21 ETS 316.32 ZAE 116.93 ETE 221.53 ZAC 111.12 ETC 187.15 CLP-142.51

PLANETOCENTRIC CONIC

C3 27.407 VHL 5.235 DLA 55.58 RAL 350.67 RAD 6568.1 VEL 12.198 PTH 2.19 VHP 5.904 DPA -45.38 RAP 40.26 ECC 1.4510  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.94 15 24 57 4419.53 -31.93 214.05 235.41 41.76 16 38 37 3819.5 -37.72 207.74  
 140.06 0 33 56 2806.96 -31.91 84.14 235.40 41.75 1 20 43 2207.0 -37.71 77.83  
 39.94 15 24 57 4419.53 -31.93 214.05 235.41 41.76 16 38 37 3819.5 -37.72 207.74  
 140.06 0 33 56 2806.96 -31.91 84.14 235.40 41.75 1 20 43 2207.0 -37.71 77.83  
 39.94 15 24 57 4419.53 -31.93 214.05 235.41 41.76 16 38 37 3819.5 -37.72 207.74  
 140.06 0 33 56 2806.96 -31.91 84.14 235.40 41.75 1 20 43 2207.0 -37.71 77.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5112 TRA-1.2683 TC3-1.9034 BAU .7417 SGT 4190.0 SGR 1563.7 SG3 299.9 ST 2846.0 SR 1262.2 SS 1317.4  
 RDE 1.1411 RRA -.3121 RC3 -.6889 FAU .05817 RRT .9698 RRF .9936 RTF .9749 CRT .9931 CRS -.9999 CST -.9947  
 FDE 2.3295 FRA -.7021 FC3-1.8375 BSP 14022 SGB 4472.3 R23 .1687 R13 .9803 LSA 3376.3 MSA 169.7 SSA 4.6  
 BDE 2.7583 BRA 1.3061 BC3 2.0242 FSP -1010 SG1 4457.9 SG2 358.7 THA 20.03 EL1 3110.4 EL2 135.7 ALF 23.82

LAUNCH DATE FEB 1 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 440.065

RL 147.41 LAL -.00 LOL 131.96 VL 27.494 GAL -1.37 AZL 82.25 HCA 205.69 SMA 127.04 ECC .16210 INC 7.7530 V1 30.224  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.328 GAP 4.42 A2P 96.99 TAL 187.13 TAP 32.82 RCA 106.44 APO 147.63 V2 34.808  
 RC 125.948 GL 49.91 GP -48.64 ZAL 100.76 ZAP 122.29 ETS 316.62 ZAE 119.76 ETE 218.93 ZAC 112.56 ETC 186.46 CLP-143.94

PLANETOCENTRIC CONIC

C3 23.495 VHL 4.847 DLA 54.16 RAL 354.76 RAD 6568.0 VEL 12.036 PTH 2.15 VHP 5.584 DPA -40.81 RAP 37.76 ECC 1.3867  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 41.70 15 46 12 4371.07 -33.17 210.10 236.59 44.40 16 59 3 3771.1 -38.69 203.36  
 138.30 0 45 18 2779.46 -33.16 82.58 236.58 44.39 1 31 37 2179.5 -38.68 75.84  
 41.70 15 46 12 4371.07 -33.17 210.10 236.59 44.40 16 59 3 3771.1 -38.69 203.36  
 138.30 0 45 18 2779.46 -33.16 82.58 236.58 44.39 1 31 37 2179.5 -38.68 75.84  
 41.70 15 46 12 4371.07 -33.17 210.10 236.59 44.40 16 59 3 3771.1 -38.69 203.36  
 138.30 0 45 18 2779.46 -33.16 82.58 236.58 44.39 1 31 37 2179.5 -38.68 75.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4263 TRA-1.1288 TC3-2.3530 BAU .7745 SGT 4315.2 SGR 1444.7 SG3 328.6 ST 2949.2 SR 1177.6 SS 1355.8  
 RDE .9893 RRA -.2264 RC3 -.7374 FAU .06431 RRT .9666 RRF .9911 RTF .9719 CRT .9931 CRS -.9999 CST -.9944  
 FDE 2.3572 FRA -.5913 FC3-2.3696 BSP 14304 SGB 4550.6 R23 .1769 R13 .9767 LSA 3448.7 MSA 170.3 SSA 5.5  
 BDE 2.6203 BRA 1.1513 BC3 2.4658 FSP -1115 SG1 4536.9 SG2 352.4 THA 18.04 EL1 3173.0 EL2 128.1 ALF 21.67

LAUNCH DATE FEB 1 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 446.068

RL 147.41 LAL -.00 LOL 131.96 VL 27.465 GAL -1.16 AZL 82.99 HCA 208.84 SMA 126.84 ECC .16341 INC 7.0141 V1 30.224  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.312 GAP 4.70 A2P 96.15 TAL 185.97 TAP 34.81 RCA 106.11 APO 147.57 V2 34.815  
 RC 128.306 GL 47.47 GP -44.33 ZAL 100.16 ZAP 126.13 ETS 316.91 ZAE 122.02 ETE 216.20 ZAC 113.94 ETC 185.72 CLP-145.51

PLANETOCENTRIC CONIC

C3 20.706 VHL 4.550 DLA 52.89 RAL 358.75 RAD 6567.8 VEL 11.920 PTH 2.12 VHP 5.386 DPA -36.58 RAP 36.05 ECC 1.3408  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.26 16 6 43 4330.43 -34.01 206.61 238.06 46.71 17 18 53 3730.4 -39.27 199.51  
 136.74 0 56 38 2758.93 -34.00 81.30 238.05 46.70 1 42 36 2158.9 -39.26 74.20  
 43.26 16 6 43 4330.43 -34.01 206.61 238.06 46.71 17 18 53 3730.4 -39.27 199.51  
 136.74 0 56 38 2758.93 -34.00 81.30 238.05 46.70 1 42 36 2158.9 -39.26 74.20  
 43.26 16 6 43 4330.43 -34.01 206.61 238.06 46.71 17 18 53 3730.4 -39.27 199.51  
 136.74 0 56 38 2758.93 -34.00 81.30 238.05 46.70 1 42 36 2158.9 -39.26 74.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3656 TRA -.9979 TC3-2.8047 BAU .8039 SGT 4441.3 SGR 1326.6 SG3 349.6 ST 3044.5 SR 1091.2 SS 1375.4  
 RDE .8629 RRA -.1584 RC3 -.7534 FAU .06853 RRT .9632 RRF .9875 RTF .9693 CRT .9933 CRS -.9999 CST -.9941  
 FDE 2.3353 FRA -.4608 FC3-2.8653 BSP 14593 SGB 4635.2 R23 .1798 R13 .9734 LSA 3510.3 MSA 169.6 SSA 6.4  
 BDE 2.5181 BRA 1.0104 BC3 2.9042 FSP -1191 SG1 4622.5 SG2 342.6 THA 16.14 EL1 3231.9 EL2 118.8 ALF 19.62

LAUNCH DATE FEB 1 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 452.060

RL 147.41 LAL -.00 LOL 131.96 VL 27.434 GAL -.94 AZL 83.59 HCA 212.00 SMA 126.64 ECC .16483 INC 6.4093 V1 30.224  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.296 GAP 4.98 AZP 95.44 TAL 184.77 TAP 36.77 RCA 105.76 APO 147.51 V2 34.821  
 RC 130.653 GL 45.16 GP -40.50 ZAL 99.28 ZAP 129.69 ETS 317.22 ZAE 123.80 ETE 213.47 ZAC 115.28 ETC 185.00 CLP-147.12

PLANETOCENTRIC CONIC

C3 18.646 VHL 4.318 DLA 51.77 RAL 2.69 RAD 6567.8 VEL 11.833 PTH 2.10 VHP 5.272 DPA -32.68 RAP 34.95 ECC 1.3069  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.66 16 26 39 4296.04 -34.56 203.52 239.84 48.72 17 38 15 3696.0 -39.60 196.14  
 135.34 1 8 6 2743.60 -34.55 80.26 239.82 48.71 1 53 49 2143.6 -39.59 72.88  
 44.66 16 26 39 4296.04 -34.56 203.52 239.84 48.72 17 38 15 3696.0 -39.60 196.14  
 135.34 1 8 6 2743.60 -34.55 80.26 239.82 48.71 1 53 49 2143.6 -39.59 72.88  
 44.66 16 26 39 4296.04 -34.56 203.52 239.84 48.72 17 38 15 3696.0 -39.60 196.14  
 135.34 1 8 6 2743.60 -34.55 80.26 239.82 48.71 1 53 49 2143.6 -39.59 72.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3231 TRA -.8654 TC3-3.2433 BAU .8292 SGT 4559.6 SGR 1214.4 SG3 362.8 ST 3133.5 SR 1011.4 SS 1381.4  
 RDE .7605 RRA -.1023 RC3 -.7400 FAU .07070 RRT .9585 RRF .9826 RTF .9664 CRT .9935 CRS-1.0000 CST -.9937  
 FDE 2.2798 FRA -.3114 FC3-3.2827 BSP 14798 SGB 4718.6 R23 .1796 R13 .9699 LSA 3566.7 MSA 169.4 SSA 7.4  
 BDE 2.4445 BRA .8714 BC3 3.3266 FSP -1229 SG1 4706.7 SG2 335.4 THA 14.40 EL1 -3290.9 EL2 109.4 ALF 17.80

LAUNCH DATE FEB 1 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

DISTANCE 458.039

RL 147.41 LAL -.00 LOL 131.96 VL 27.403 GAL -.71 AZL 84.10 HCA 215.15 SMA 126.43 ECC .16638 INC 5.9023 V1 30.224  
 RP 108.80 LAP -3.39 LOP 346.97 VP 37.280 GAP 5.26 AZP 94.83 TAL 183.55 TAP 38.70 RCA 105.40 APO 147.47 V2 34.829  
 RC 132.989 GL 42.97 GP -37.10 ZAL 98.13 ZAP 132.97 ETS 317.53 ZAE 125.16 ETE 210.86 ZAC 116.64 ETC 184.33 CLP-148.72

PLANETOCENTRIC CONIC

C3 17.086 VHL 4.134 DLA 50.76 RAL 6.60 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 5.219 DPA -29.11 RAP 34.32 ECC 1.2812  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 45.93 16 46 12 4266.64 -34.90 200.80 241.89 50.46 17 57 19 3666.6 -39.73 193.19  
 134.07 1 19 47 2732.33 -34.89 79.44 241.88 50.45 2 5 20 2132.3 -39.72 71.83  
 45.93 16 46 12 4266.64 -34.90 200.80 241.89 50.46 17 57 19 3666.6 -39.73 193.19  
 134.07 1 19 47 2732.33 -34.89 79.44 241.88 50.45 2 5 20 2132.3 -39.72 71.83  
 45.93 16 46 12 4266.64 -34.90 200.80 241.89 50.46 17 57 19 3666.6 -39.73 193.19  
 134.07 1 19 47 2732.33 -34.89 79.44 241.88 50.45 2 5 20 2132.3 -39.72 71.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2862 TRA -.7367 TC3-3.6755 BAU .8552 SGT 4677.7 SGR 1113.6 SG3 370.2 ST 3207.0 SR 937.1 SS 1370.9  
 RDE .6753 RRA -.0601 RC3 -.7121 FAU .07162 RRT .9537 RRF .9760 RTF .9642 CRT .9940 CRS -.9999 CST -.9933  
 FDE 2.1911 FRA -.1650 FC3-3.6291 BSP 15123 SGB 4808.5 R23 .1727 R13 .9670 LSA 3607.5 MSA 167.8 SSA 8.4  
 BDE 2.3838 BRA .7391 BC3 3.7439 FSP -1257 SG1 4797.4 SG2 326.7 THA 12.85 EL1 3339.7 EL2 98.6 ALF 16.21

LAUNCH DATE FEB 1 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

DISTANCE 464.005

RL 147.41 LAL -.00 LOL 131.96 VL 27.371 GAL -.46 AZL 84.53 HCA 218.31 SMA 126.22 ECC .16805 INC 5.4688 V1 30.224  
 RP 108.78 LAP -3.39 LOP 350.15 VP 37.264 GAP 5.54 AZP 94.30 TAL 182.30 TAP 40.61 RCA 105.01 APO 147.43 V2 34.837  
 RC 135.313 GL 40.88 GP -34.10 ZAL 96.74 ZAP 135.99 ETS 317.84 ZAE 126.19 ETE 208.42 ZAC 118.03 ETC 183.73 CLP-150.29

PLANETOCENTRIC CONIC

C3 15.887 VHL 3.986 DLA 49.85 RAL 10.53 RAD 6567.6 VEL 11.716 PTH 2.06 VHP 5.211 DPA -25.84 RAP 34.08 ECC 1.2615  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.09 17 5 33 4241.31 -35.08 198.38 244.22 51.98 18 16 15 3641.3 -39.74 190.60  
 132.91 1 31 45 2724.37 -35.07 78.80 244.21 51.97 2 17 10 2124.4 -39.73 71.02  
 47.09 17 5 33 4241.31 -35.08 198.38 244.22 51.98 18 16 15 3641.3 -39.74 190.60  
 132.91 1 31 45 2724.37 -35.07 78.80 244.21 51.97 2 17 10 2124.4 -39.73 71.02  
 47.09 17 5 33 4241.31 -35.08 198.38 244.22 51.98 18 16 15 3641.3 -39.74 190.60  
 132.91 1 31 45 2724.37 -35.07 78.80 244.21 51.97 2 17 10 2124.4 -39.73 71.02

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2564 TRA -.6044 TC3-4.0913 BAU .8807 SGT 4793.1 SGR 1025.5 SG3 372.8 ST 3270.1 SR 872.2 SS 1350.6  
 RDE .6065 RRA -.0265 RC3 -.6733 FAU .07143 RRT .9476 RRF .9676 RTF .9622 CRT .9946 CRS -.9998 CST -.9928  
 FDE 2.0859 FRA -.0184 FC3-3.8923 BSP 15459 SGB 4901.6 R23 .1619 R13 .9644 LSA 3640.2 MSA 166.3 SSA 9.5  
 BDE 2.3365 BRA .6050 BC3 4.1463 FSP -1269 SG1 4891.0 SG2 321.0 THA 11.51 EL1 3383.3 EL2 87.8 ALF 14.87

LAUNCH DATE FEB 1 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

DISTANCE 469.957

RL 147.41 LAL -.00 LOL 131.96 VL 27.339 GAL -.21 AZL 84.91 HCA 221.47 SMA 126.01 ECC .16987 INC 5.0918 V1 30.224  
 RP 108.75 LAP -3.37 LOP 353.32 VP 37.249 GAP 5.82 AZP 93.82 TAL 181.02 TAP 42.50 RCA 104.60 APO 147.41 V2 34.846  
 RC 137.625 GL 38.85 GP -31.44 ZAL 95.13 ZAP 138.77 ETS 318.13 ZAE 126.97 ETE 206.18 ZAC 119.47 ETC 183.20 CLP-151.82

PLANETOCENTRIC CONIC

C3 14.960 VHL 3.868 DLA 49.02 RAL 14.48 RAD 6567.6 VEL 11.677 PTH 2.05 VHP 5.237 DPA -22.85 RAP 34.15 ECC 1.2462  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 48.16 17 24 51 4219.33 -35.13 196.22 246.81 53.32 18 35 11 3619.3 -39.63 188.31  
 131.84 1 44 0 2719.27 -35.12 78.34 246.80 53.31 2 29 20 2119.3 -39.62 70.42  
 48.16 17 24 51 4219.33 -35.13 196.22 246.81 53.32 18 35 11 3619.3 -39.63 188.31  
 131.84 1 44 0 2719.27 -35.12 78.34 246.80 53.31 2 29 20 2119.3 -39.62 70.42  
 48.16 17 24 51 4219.33 -35.13 196.22 246.81 53.32 18 35 11 3619.3 -39.63 188.31  
 131.84 1 44 0 2719.27 -35.12 78.34 246.80 53.31 2 29 20 2119.3 -39.62 70.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2271 TRA -.4676 TC3-4.4825 BAU .9052 SGT 4901.3 SGR 948.0 SG3 371.2 ST 3316.0 SR 814.8 SS 1318.7  
 RDE .5499 RRA .0002 RC3 -.6267 FAU .07029 RRT .9401 RRF .9570 RTF .9604 CRT .9953 CRS -.9995 CST -.9923  
 FDE 1.9653 FRA .1233 FC3-4.0674 BSP 15809 SGB 4992.2 R23 .1476 R13 .9622 LSA 3656.7 MSA 164.6 SSA 10.5  
 BDE 2.2940 BRA .4676 BC3 4.5261 FSP -1268 SG1 4982.1 SG2 317.9 THA 10.35 EL1 3413.8 EL2 76.5 ALF 13.75



LAUNCH DATE FEB 1 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 17 1969

Heliocentric Conic

DISTANCE 475.894

RL 147.41 LAL -.00 LOL 131.96 VL 27.306 GAL .06 AZL 85.24 HCA 224.64 SMA 125.79 ECC .17183 INC 4.7590 V1 30.224  
 RP 108.72 LAP -3.34 LOP 356.50 VP 37.233 GAP 6.11 AZP 93.39 TAL 179.72 TAP 44.36 RCA 104.18 APO 147.41 V2 34.855  
 RC 139.923 GL 36.88 GP -29.09 ZAL 93.32 ZAP 141.32 ETS 318.37 ZAE 127.53 ETE 204.14 ZAC 120.96 ETC 182.73 CLP-153.29

Planetocentric Conic

C3 14.247 VHL 3.775 DLA 48.22 RAL 18.48 RAD 6567.6 VEL 11.646 PTH 2.04 VHP 5.291 DPA -20.10 RAP 34.49 ECC 1.2345  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.18 17 44 14 4200.12 -35.08 194.28 249.64 54.50 18 54 14 3600.1 -39.44 186.26  
 130.82 1 56 31 2716.77 -35.07 78.04 249.63 54.49 2 41 48 2116.8 -39.43 70.03  
 49.18 17 44 14 4200.12 -35.08 194.28 249.64 54.50 18 54 14 3600.1 -39.44 186.26  
 130.82 1 56 31 2716.77 -35.07 78.04 249.63 54.49 2 41 48 2116.8 -39.43 70.03  
 49.18 17 44 14 4200.12 -35.08 194.28 249.64 54.50 18 54 14 3600.1 -39.44 186.26  
 130.82 1 56 31 2716.77 -35.07 78.04 249.63 54.49 2 41 48 2116.8 -39.43 70.03

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2090 TRA -.3225 TC3-4.8168 BAU .9237 SGT 5000.5 SGR 883.4 SG3 365.9 ST 3362.1 SR 772.3 SS 1293.2  
 RDE .5086 RRA .0227 RC3 -.5645 FAU .06758 RRT .9283 RRF .9438 RTF .9585 CRT .9962 CRS -.9989 CST -.9917  
 FDE 1.8589 FRA .2624 FC3-4.1066 BSP 15773 SGB 5078.0 R23 .1354 R13 .9600 LSA 3680.4 MSA 164.0 SSA 11.6  
 BDE 2.2667 BRA .3233 BC3 4.8498 FSP -1190 SG1 5067.6 SG2 324.2 THA 9.35 EL1 3449.1 EL2 65.5 ALF 12.89

LAUNCH DATE FEB 1 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 19 1969

Heliocentric Conic

DISTANCE 481.817

RL 147.41 LAL -.00 LOL 131.96 VL 27.273 GAL .34 AZL 85.54 HCA 227.81 SMA 125.58 ECC .17394 INC 4.4613 V1 30.224  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.218 GAP 6.39 AZP 93.00 TAL 178.40 TAP 46.20 RCA 103.73 APO 147.42 V2 34.865  
 RC 142.207 GL 34.96 GP -27.01 ZAL 91.32 ZAP 143.66 ETS 318.55 ZAE 127.95 ETE 202.31 ZAC 122.51 ETC 182.31 CLP-154.72

Planetocentric Conic

C3 13.709 VHL 3.703 DLA 47.46 RAL 22.52 RAD 6567.5 VEL 11.623 PTH 2.04 VHP 5.366 DPA -17.56 RAP 35.05 ECC 1.2256  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.18 18 3 47 4183.16 -34.92 192.50 252.69 55.55 19 13 30 3583.2 -39.16 184.40  
 129.82 2 9 11 2716.83 -34.91 77.91 252.68 55.54 2 54 28 2116.8 -39.15 69.82  
 50.18 18 3 47 4183.16 -34.92 192.50 252.69 55.55 19 13 30 3583.2 -39.16 184.40  
 129.82 2 9 11 2716.83 -34.91 77.91 252.68 55.54 2 54 28 2116.8 -39.15 69.82  
 50.18 18 3 47 4183.16 -34.92 192.50 252.69 55.55 19 13 30 3583.2 -39.16 184.40  
 129.82 2 9 11 2716.83 -34.91 77.91 252.68 55.54 2 54 28 2116.8 -39.15 69.82

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1751 TRA -.1758 TC3-5.1511 BAU .9489 SGT 5103.0 SGR 827.6 SG3 359.7 ST 3369.9 SR 727.3 SS 1241.1  
 RDE .4696 RRA .0393 RC3 -.5209 FAU .06581 RRT .9190 RRF .9289 RTF .9577 CRT .9972 CRS -.9979 CST -.9910  
 FDE 1.7203 FRA .3844 FC3-4.1559 BSP 16284 SGB 5169.7 R23 .1150 R13 .9588 LSA 3660.5 MSA 161.6 SSA 12.7  
 BDE 2.2252 BRA .1801 BC3 5.1773 FSP -1202 SG1 5159.6 SG2 322.7 THA 8.51 EL1 3447.1 EL2 53.3 ALF 12.15

LAUNCH DATE FEB 1 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 21 1969

Heliocentric Conic

DISTANCE 487.725

RL 147.41 LAL -.00 LOL 131.96 VL 27.239 GAL .63 AZL 85.81 HCA 230.98 SMA 125.36 ECC .17622 INC 4.1919 V1 30.224  
 RP 108.66 LAP -3.26 LOP 359.68 VP 37.203 GAP 6.68 AZP 92.64 TAL 177.05 TAP 48.03 RCA 103.27 APO 147.45 V2 34.875  
 RC 144.478 GL 33.06 GP -25.17 ZAL 89.16 ZAP 145.83 ETS 318.67 ZAE 128.24 ETE 200.67 ZAC 124.12 ETC 181.94 CLP-156.09

Planetocentric Conic

C3 13.322 VHL 3.650 DLA 46.70 RAL 26.60 RAD 6567.5 VEL 11.606 PTH 2.03 VHP 5.460 DPA -15.22 RAP 35.81 ECC 1.2192  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.18 18 23 35 4168.09 -34.67 190.84 255.93 56.50 19 33 3 3568.1 -38.79 182.70  
 128.82 2 21 57 2719.40 -34.66 77.95 255.92 56.49 3 7 16 2119.4 -38.78 69.81  
 51.18 18 23 35 4168.09 -34.67 190.84 255.93 56.50 19 33 3 3568.1 -38.79 182.70  
 128.82 2 21 57 2719.40 -34.66 77.95 255.92 56.49 3 7 16 2119.4 -38.78 69.81  
 51.18 18 23 35 4168.09 -34.67 190.84 255.93 56.50 19 33 3 3568.1 -38.79 182.70  
 128.82 2 21 57 2719.40 -34.66 77.95 255.92 56.49 3 7 16 2119.4 -38.78 69.81

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1419 TRA -.0241 TC3-5.4324 BAU .9711 SGT 5199.4 SGR 780.8 SG3 351.1 ST 3364.5 SR 691.4 SS 1189.1  
 RDE .4398 RRA .0525 RC3 -.4717 FAU .06324 RRT .9065 RRF .9116 RTF .9573 CRT .9982 CRS -.9963 CST -.9902  
 FDE 1.5902 FRA .4948 FC3-4.1096 BSP 16688 SGB 5257.7 R23 .0955 R13 .9582 LSA 3631.3 MSA 159.2 SSA 13.8  
 BDE 2.1866 BRA .0578 BC3 5.4528 FSP -1187 SG1 5247.5 SG2 326.6 THA 7.78 EL1 3434.6 EL2 41.0 ALF 11.59

LAUNCH DATE FEB 1 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 23 1969

Heliocentric Conic

DISTANCE 493.616

RL 147.41 LAL -.00 LOL 131.96 VL 27.205 GAL .94 AZL 86.05 HCA 234.15 SMA 125.14 ECC .17867 INC 3.9455 V1 30.224  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.188 GAP 6.98 AZP 92.31 TAL 175.69 TAP 49.84 RCA 102.78 APO 147.50 V2 34.885  
 RC 146.734 GL 31.18 GP -23.53 ZAL 86.85 ZAP 147.84 ETS 318.70 ZAE 128.44 ETE 199.21 ZAC 125.78 ETC 181.59 CLP-157.42

Planetocentric Conic

C3 13.067 VHL 3.615 DLA 45.92 RAL 30.71 RAD 6567.5 VEL 11.595 PTH 2.03 VHP 5.568 DPA -13.04 RAP 36.72 ECC 1.2150  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.20 18 43 42 4154.48 -34.32 189.28 259.36 57.37 19 52 56 3554.5 -38.34 181.11  
 127.80 2 34 39 2724.65 -34.31 78.17 259.35 57.36 3 20 4 2124.7 -38.33 70.00  
 52.20 18 43 42 4154.48 -34.32 189.28 259.36 57.37 19 52 56 3554.5 -38.34 181.11  
 127.80 2 34 39 2724.65 -34.31 78.17 259.35 57.36 3 20 4 2124.7 -38.33 70.00  
 52.20 18 43 42 4154.48 -34.32 189.28 259.36 57.37 19 52 56 3554.5 -38.34 181.11  
 127.80 2 34 39 2724.65 -34.31 78.17 259.35 57.36 3 20 4 2124.7 -38.33 70.00

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1047 TRA .1379 TC3-5.6602 BAU .9916 SGT 5289.0 SGR 742.4 SG3 341.4 ST 3339.7 SR 661.7 SS 1134.2  
 RDE .4165 RRA .0646 RC3 -.4233 FAU .06034 RRT .8916 RRF .8925 RTF .9570 CRT .9990 CRS -.9939 CST -.9892  
 FDE 1.4637 FRA .6007 FC3-3.9979 BSP 16969 SGB 5340.9 R23 .0791 R13 .9576 LSA 3585.0 MSA 158.0 SSA 14.9  
 BDE 2.1456 BRA .1523 BC3 5.6760 FSP -1150 SG1 5330.4 SG2 333.6 THA 7.16 EL1 3404.5 EL2 29.1 ALF 11.20

LAUNCH DATE FEB 1 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC

DISTANCE 499.490

RL 147.41 LAL -.00 LOL 131.96 VL 27.171 GAL 1.26 AZL 86.28 MCA 237.32 SMA 124.92 ECC .18130 INC 3.7180 V1 30.224  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.173 GAP 7.28 AZP 92.01 TAL 174.31 TAP 51.63 RCA 102.27 APO 147.57 V2 34.897  
 RC 148.977 GL 29.33 GP -22.08 ZAL 84.41 ZAP 149.70 ETS 318.64 ZAE 128.58 ETE 197.91 ZAC 127.51 ETC 181.28 CLP-158.70

PLANETOCENTRIC CONIC

C3 12.935 VHL 3.597 DLA 45.12 RAL 34.84 RAD 6567.5 VEL 11.590 PTH 2.03 VHP 5.690 DPA -11.02 RAP 37.79 ECC 1.2129  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.27 19 4 9 4142.01 -33.87 187.78 262.93 58.18 20 13 11 3542.0 -37.79 179.59  
 126.73 2 47 8 2732.76 -33.85 78.58 262.92 58.17 3 32 41 2132.8 -37.78 70.39  
 53.27 19 4 9 4142.01 -33.87 187.78 262.93 58.18 20 13 11 3542.0 -37.79 179.59  
 126.73 2 47 8 2732.76 -33.85 78.58 262.92 58.17 3 32 41 2132.8 -37.78 70.39  
 53.27 19 4 9 4142.01 -33.87 187.78 262.93 58.18 20 13 11 3542.0 -37.79 179.59  
 126.73 2 47 8 2732.76 -33.85 78.58 262.92 58.17 3 32 41 2132.8 -37.78 70.39

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.0601 TRA .3077 TC3-5.8388 BAU 1.0118 SGT 5375.2 SGR 710.8 SG3 330.9 ST 3290.9 SR 636.0 SS 1074.2  
 RDE .3979 RRA .0755 RC3 -.3793 FAU .05742 RRT .8754 RRF .8720 RTF .9569 CRT .9995 CRS -.9902 CST -.9880  
 FDE 1.3380 FRA .6982 FC3-3.8430 BSP 17285 SGB 5422.0 R23 .0640 R13 .9574 LSA 3516.2 MSA 157.6 SSA 15.9  
 BDE 2.0982 BRA .3168 BC3 5.8511 FSP -1117 SG1 5411.2 SG2 341.3 THA 6.63 EL1 3351.7 EL2 19.1 ALF 10.93

LAUNCH DATE FEB 1 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 505.346

RL 147.41 LAL -.00 LOL 131.96 VL 27.136 GAL 1.59 AZL 86.49 MCA 240.50 SMA 124.70 ECC .18413 INC 3.5060 V1 30.224  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.159 GAP 7.59 AZP 91.73 TAL 172.91 TAP 53.41 RCA 101.74 APO 147.66 V2 34.908  
 RC 151.204 GL 27.48 GP -20.78 ZAL 81.86 ZAP 151.43 ETS 318.49 ZAE 128.67 ETE 196.76 ZAC 129.28 ETC 180.98 CLP-159.94

PLANETOCENTRIC CONIC

C3 12.921 VHL 3.595 DLA 44.29 RAL 38.97 RAD 6567.5 VEL 11.589 PTH 2.03 VHP 5.824 DPA -9.12 RAP 38.98 ECC 1.2126  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.41 19 24 58 4130.37 -33.31 186.31 266.63 58.94 20 33 48 3530.4 -37.15 178.12  
 125.59 2 59 15 2743.90 -33.30 79.19 266.62 58.93 3 44 59 2143.9 -37.14 71.01  
 54.41 19 24 58 4130.37 -33.31 186.31 266.63 58.94 20 33 48 3530.4 -37.15 178.12  
 125.59 2 59 15 2743.90 -33.30 79.19 266.62 58.93 3 44 59 2143.9 -37.14 71.01  
 54.41 19 24 58 4130.37 -33.31 186.31 266.63 58.94 20 33 48 3530.4 -37.15 178.12  
 125.59 2 59 15 2743.90 -33.30 79.19 266.62 58.93 3 44 59 2143.9 -37.14 71.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 2.0116 TRA .4893 TC3-5.9490 BAU 1.0293 SGT 5455.1 SGR 685.4 SG3 319.9 ST 3225.5 SR 614.7 SS 1013.9  
 RDE .3839 RRA .0859 RC3 -.3370 FAU .05427 RRT .8576 RRF .8508 RTF .9569 CRT .9996 CRS -.9849 CST -.9866  
 FDE 1.2188 FRA .7908 FC3-3.6367 BSP 17498 SGB 5498.0 R23 .0519 R13 .9573 LSA 3432.9 MSA 158.5 SSA 16.9  
 BDE 2.0479 BRA .4968 BC3 5.9586 FSP -1074 SG1 5486.9 SG2 350.4 THA 6.18 EL1 3283.5 EL2 17.6 ALF 10.78

LAUNCH DATE FEB 1 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 511.182

RL 147.41 LAL -.00 LOL 131.96 VL 27.102 GAL 1.94 AZL 86.69 MCA 243.68 SMA 124.48 ECC .18718 INC 3.3067 V1 30.224  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.145 GAP 7.90 AZP 91.47 TAL 171.50 TAP 55.18 RCA 101.18 APO 147.78 V2 34.920  
 RC 153.416 GL 25.66 GP -19.61 ZAL 79.23 ZAP 153.05 ETS 318.22 ZAE 128.72 ETE 195.74 ZAC 131.11 ETC 180.70 CLP-161.14

PLANETOCENTRIC CONIC

C3 13.021 VHL 3.609 DLA 43.40 RAL 43.07 RAD 6567.5 VEL 11.593 PTH 2.03 VHP 5.970 DPA -7.34 RAP 40.28 ECC 1.2143  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.62 19 46 6 4119.34 -32.65 184.84 270.42 59.65 20 54 46 3519.3 -36.41 176.68  
 124.38 3 10 49 2758.29 -32.64 80.03 270.41 59.64 3 56 47 2158.3 -36.40 71.86  
 55.62 19 46 6 4119.34 -32.65 184.84 270.42 59.65 20 54 46 3519.3 -36.41 176.68  
 124.38 3 10 49 2758.29 -32.64 80.03 270.41 59.64 3 56 47 2158.3 -36.40 71.86  
 55.62 19 46 6 4119.34 -32.65 184.84 270.42 59.65 20 54 46 3519.3 -36.41 176.68  
 124.38 3 10 49 2758.29 -32.64 80.03 270.41 59.64 3 56 47 2158.3 -36.40 71.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.9519 TRA .6767 TC3-6.0081 BAU 1.0472 SGT 5531.1 SGR 664.1 SG3 308.4 ST 3133.5 SR 595.5 SS 949.5  
 RDE .3729 RRA .0955 RC3 -.3001 FAU .05126 RRT .8392 RRF .8291 RTF .9574 CRT .9989 CRS -.9774 CST -.9849  
 FDE 1.1009 FRA .8729 FC3-3.4077 BSP 17788 SGB 5570.9 R23 .0410 R13 .9576 LSA 3324.0 MSA 160.4 SSA 17.7  
 BDE 1.9872 BRA .6834 BC3 6.0156 FSP -1039 SG1 5559.3 SG2 359.3 THA 5.78 EL1 3189.5 EL2 28.0 ALF 10.75

LAUNCH DATE FEB 1 1969

FLIGHT TIME 180.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 516.998

RL 147.41 LAL -.00 LOL 131.96 VL 27.067 GAL 2.31 AZL 86.88 MCA 246.86 SMA 124.26 ECC .19045 INC 3.1180 V1 30.224  
 RP 108.48 LAP -2.87 LOP 18.79 VP 37.131 GAP 8.23 AZP 91.23 TAL 170.08 TAP 56.94 RCA 100.60 APO 147.93 V2 34.932  
 RC 155.612 GL 23.85 GP -18.57 ZAL 76.54 ZAP 154.57 ETS 317.84 ZAE 128.75 ETE 194.83 ZAC 132.98 ETC 180.41 CLP-162.30

PLANETOCENTRIC CONIC

C3 13.239 VHL 3.639 DLA 42.46 RAL 47.12 RAD 6567.5 VEL 11.603 PTH 2.03 VHP 6.127 DPA -5.67 RAP 41.68 ECC 1.2179  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.93 20 7 35 4108.53 -31.90 183.37 274.28 60.34 21 16 4 3508.5 -35.57 175.23  
 123.07 3 21 38 2776.26 -31.88 81.10 274.27 60.32 4 7 54 2176.3 -35.56 72.97  
 56.93 20 7 35 4108.53 -31.90 183.37 274.28 60.34 21 16 4 3508.5 -35.57 175.23  
 123.07 3 21 38 2776.26 -31.88 81.10 274.27 60.32 4 7 54 2176.3 -35.56 72.97  
 56.93 20 7 35 4108.53 -31.90 183.37 274.28 60.34 21 16 4 3508.5 -35.57 175.23  
 123.07 3 21 38 2776.26 -31.88 81.10 274.27 60.32 4 7 54 2176.3 -35.56 72.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.8835 TRA .8741 TC3-6.0079 BAU 1.0644 SGT 5602.8 SGR 646.6 SG3 296.9 ST 3021.1 SR 578.3 SS 883.8  
 RDE .3648 RRA .1050 RC3 -.2678 FAU .04833 RRT .8208 RRF .8077 RTF .9580 CRT .9970 CRS -.9669 CST -.9827  
 FDE .9866 FRA .9490 FC3-3.1603 BSP 18058 SGB 5640.0 R23 .0315 R13 .9582 LSA 3196.1 MSA 164.4 SSA 18.3  
 BDE 1.9185 BRA .8804 BC3 6.0139 FSP -1003 SG1 5628.0 SG2 367.7 THA 5.43 EL1 3075.6 EL2 44.0 ALF 10.81

LAUNCH DATE FEB 1 1969 FLIGHT TIME 182.00 ARRIVAL DATE AUG 2 1969

MELIOCENTRIC CONIC DISTANCE 522.792  
 RL 147.41 LAL -.00 LOL 131.96 VL 27.032 GAL 2.70 AZL 87.06 HCA 250.05 SMA 124.04 ECC .19397 INC 2.9379 V1 30.224  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.117 GAP 8.56 AZP 91.00 TAL 168.64 TAP 58.69 RCA 99.98 APO 148.10 V2 34.945  
 RC 157.792 GL 22.06 GP -17.63 ZAL 73.80 ZAP 155.99 ETS 317.32 ZAE 128.76 ETE 194.02 ZAC 134.89 ETC 180.13 CLP-163.44

PLANETOCENTRIC CONIC  
 C3 13.577 VHL 3.685 DLA 41.47 RAL 51.09 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 6.294 DPA -4.09 RAP 43.18 ECC 1.2234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.34 20 29 24 4097.68 -31.04 181.85 278.19 60.99 21 37 42 3497.7 -34.64 173.76  
 121.66 3 31 31 2798.08 -31.03 82.44 278.18 60.98 4 18 9 2198.1 -34.63 74.36  
 58.34 20 29 24 4097.68 -31.04 181.85 278.19 60.99 21 37 42 3497.7 -34.64 173.76  
 121.66 3 31 31 2798.08 -31.03 82.44 278.18 60.98 4 18 9 2198.1 -34.63 74.36  
 58.34 20 29 24 4097.68 -31.04 181.85 278.19 60.99 21 37 42 3497.7 -34.64 173.76  
 121.66 3 31 31 2798.08 -31.03 82.44 278.18 60.98 4 18 9 2198.1 -34.63 74.36

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.8074 TRA 1.0822 TC3-5.9442 BAU 1.0798 SGT 5668.5 SGR 632.2 SG3 285.1 ST 2893.1 SR 563.2 SS 819.8  
 RDE .3592 RRA .1149 RC3 -.2380 FAU .04535 RRT .8020 RRF .7868 RTF .9585 CRT .9935 CRS -.9524 CST -.9801  
 FDE .8783 FRA 1.0203 FC3-2.8920 BSP 18303 SGB 5703.6 R23 .0248 R13 .9586 LSA 3054.5 MSA 170.9 SSA 18.8  
 BDE 1.8428 BRA 1.0883 BC3 5.9490 FSP -965 SG1 5691.2 SG2 376.1 THA 5.13 EL1 2946.7 EL2 62.8 ALF 10.95

LAUNCH DATE FEB 1 1969 FLIGHT TIME 184.00 ARRIVAL DATE AUG 4 1969

MELIOCENTRIC CONIC DISTANCE 528.561  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.997 GAL 3.11 AZL 87.24 HCA 253.23 SMA 123.83 ECC .19775 INC 2.7648 V1 30.224  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.104 GAP 8.91 AZP 90.80 TAL 167.20 TAP 60.44 RCA 99.34 APO 148.31 V2 34.957  
 RC 159.953 GL 20.30 GP -16.78 ZAL 71.04 ZAP 157.33 ETS 316.67 ZAE 128.76 ETE 193.30 ZAC 136.84 ETC 179.83 CLP-164.54

PLANETOCENTRIC CONIC  
 C3 14.043 VHL 3.747 DLA 40.43 RAL 54.96 RAD 6567.6 VEL 11.637 PTH 2.04 VHP 6.473 DPA -2.60 RAP 44.75 ECC 1.2311  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.85 20 51 30 4086.57 -30.09 180.29 282.13 61.61 21 59 37 3486.6 -33.62 172.26  
 120.15 3 40 19 2823.96 -30.08 84.06 282.12 61.60 4 27 23 2224.0 -33.61 76.03  
 59.85 20 51 30 4086.57 -30.09 180.29 282.13 61.61 21 59 37 3486.6 -33.62 172.26  
 120.15 3 40 19 2823.96 -30.08 84.06 282.12 61.60 4 27 23 2224.0 -33.61 76.03  
 59.85 20 51 30 4086.57 -30.09 180.29 282.13 61.61 21 59 37 3486.6 -33.62 172.26  
 120.15 3 40 19 2823.96 -30.08 84.06 282.12 61.60 4 27 23 2224.0 -33.61 76.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.7263 TRA 1.3040 TC3-5.8171 BAU 1.0928 SGT 5730.1 SGR 620.6 SG3 273.6 ST 2757.0 SR 549.9 SS 760.2  
 RDE .3562 RRA 1.255 RC3 -.2111 FAU .04238 RRT .7838 RRF .7675 RTF .9590 CRT .9878 CRS -.9332 CST -.9771  
 FDE .7777 FRA 1.0887 FC3-2.6128 BSP 18468 SGB 5763.6 R23 .0201 R13 .9591 LSA 2906.7 MSA 180.2 SSA 19.0  
 BDE 1.7627 BRA 1.3100 BC3 5.8209 FSP -924 SG1 5750.8 SG2 384.0 THA 4.87 EL1 2810.1 EL2 83.9 ALF 11.16

LAUNCH DATE FEB 1 1969 FLIGHT TIME 186.00 ARRIVAL DATE AUG 6 1969

MELIOCENTRIC CONIC DISTANCE 534.303  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.962 GAL 3.53 AZL 87.40 HCA 256.42 SMA 123.61 ECC .20182 INC 2.5973 V1 30.224  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.090 GAP 9.27 AZP 90.61 TAL 165.76 TAP 62.18 RCA 98.86 APO 148.56 V2 34.970  
 RC 162.097 GL 18.58 GP -16.02 ZAL 68.29 ZAP 158.60 ETS 315.87 ZAE 128.75 ETE 192.66 ZAC 138.82 ETC 179.52 CLP-165.62

PLANETOCENTRIC CONIC  
 C3 14.645 VHL 3.827 DLA 39.34 RAL 58.72 RAD 6567.6 VEL 11.663 PTH 2.05 VHP 6.663 DPA -1.19 RAP 46.40 ECC 1.2410  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 61.46 21 13 55 4074.86 -29.05 178.67 286.07 62.21 22 21 50 3474.9 -32.52 170.69  
 118.54 3 47 52 2854.25 -29.04 85.99 286.06 62.20 4 35 26 2254.3 -32.51 78.01  
 61.46 21 13 55 4074.86 -29.05 178.67 286.07 62.21 22 21 50 3474.9 -32.52 170.69  
 118.54 3 47 52 2854.25 -29.04 85.99 286.06 62.20 4 35 26 2254.3 -32.51 78.01  
 61.46 21 13 55 4074.86 -29.05 178.67 286.07 62.21 22 21 50 3474.9 -32.52 170.69  
 118.54 3 47 52 2854.25 -29.04 85.99 286.06 62.20 4 35 26 2254.3 -32.51 78.01

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.6338 TRA 1.5341 TC3-5.6471 BAU 1.1063 SGT 5786.6 SGR 610.1 SG3 262.2 ST 2606.6 SR 536.6 SS 701.5  
 RDE .3545 RRA 1.1363 RC3 -.1885 FAU .03962 RRT .7665 RRF .7489 RTF .9596 CRT .9790 CRS -.9072 CST -.9733  
 FDE .6797 FRA 1.1506 FC3-2.3419 BSP 18701 SGB 5818.7 R23 .0157 R13 .9597 LSA 2745.3 MSA 192.7 SSA 18.9  
 BDE 1.6719 BRA 1.5402 BC3 5.6502 FSP -890 SG1 5805.6 SG2 390.5 THA 4.64 EL1 2659.1 EL2 107.3 ALF 11.41

LAUNCH DATE FEB 1 1969 FLIGHT TIME 188.00 ARRIVAL DATE AUG 8 1969

MELIOCENTRIC CONIC DISTANCE 540.016  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.927 GAL 3.98 AZL 87.57 HCA 259.62 SMA 123.39 ECC .20621 INC 2.4342 V1 30.224  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.077 GAP 9.64 AZP 90.44 TAL 164.31 TAP 63.92 RCA 97.95 APO 148.84 V2 34.983  
 RC 164.221 GL 16.90 GP -15.33 ZAL 65.56 ZAP 159.79 ETS 314.90 ZAE 128.73 ETE 192.09 ZAC 140.84 ETC 179.19 CLP-166.67

PLANETOCENTRIC CONIC  
 C3 15.396 VHL 3.924 DLA 38.22 RAL 62.34 RAD 6567.6 VEL 11.695 PTH 2.06 VHP 6.865 DPA .15 RAP 48.11 ECC 1.2534  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.18 21 36 38 4062.25 -27.94 176.96 290.01 62.79 22 44 20 3462.2 -31.35 169.05  
 116.82 3 54 1 2889.24 -27.93 88.24 290.00 62.78 4 42 10 2289.2 -31.34 80.33  
 63.18 21 36 38 4062.25 -27.94 176.96 290.01 62.79 22 44 20 3462.2 -31.35 169.05  
 116.82 3 54 1 2889.24 -27.93 88.24 290.00 62.78 4 42 10 2289.2 -31.34 80.33  
 63.18 21 36 38 4062.25 -27.94 176.96 290.01 62.79 22 44 20 3462.2 -31.35 169.05  
 116.82 3 54 1 2889.24 -27.93 88.24 290.00 62.78 4 42 10 2289.2 -31.34 80.33

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 1.5349 TRA 1.7764 TC3-5.4297 BAU 1.1181 SGT 5837.9 SGR 600.8 SG3 251.0 ST 2453.7 SR 524.1 SS 648.0  
 RDE .3545 RRA 1.1479 RC3 -.1685 FAU .03692 RRT .7502 RRF .7318 RTF .9602 CRT .9659 CRS -.8733 CST -.9691  
 FDE .5879 FRA 1.2090 FC3-2.0761 BSP 18915 SGB 5868.7 R23 .0124 R13 .9603 LSA 2583.0 MSA 208.4 SSA 18.6  
 BDE 1.5753 BRA 1.7826 BC3 5.4323 FSP -856 SG1 5855.3 SG2 396.1 THA 4.43 EL1 2505.6 EL2 132.9 ALF 11.69

LAUNCH DATE FEB 1 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.892 GAL 4.45 AZL 87.73 HCA 262.81 SMA 123.18 ECC .21094 INC 2.2742 V1 30.224  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.065 GAP 10.03 AZP 90.28 TAL 162.86 TAP 65.67 RCA 97.20 APO 149.16 V2 34.996  
 RC 166.326 GL 15.27 GP -14.70 ZAL 62.86 ZAP 160.92 ETS 313.75 ZAE 128.71 ETE 191.58 ZAC 142.88 ETC 178.82 CLP-167.70

DISTANCE 545.696

PLANETOCENTRIC CONIC  
 C3 16.310 VHL 4.039 DLA 37.07 RAL 65.80 RAD 6567.7 VEL 11.734 PTH 2.07 VHP 7.079 DPA 1.42 RAP 49.89 ECC 1.2684  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.01 21 59 45 4048.26 -26.77 175.15 293.93 63.34 23 7 13 3448.3 -30.11 167.30  
 114.99 3 58 34 2929.39 -26.76 90.85 293.92 63.33 4 47 23 2329.4 -30.11 83.00  
 65.01 21 59 45 4048.26 -26.77 175.15 293.93 63.34 23 7 13 3448.3 -30.11 167.30  
 114.99 3 58 34 2929.39 -26.76 90.85 293.92 63.33 4 47 23 2329.4 -30.11 83.00  
 65.01 21 59 45 4048.26 -26.77 175.15 293.93 63.34 23 7 13 3448.3 -30.11 167.30  
 114.99 3 58 34 2929.39 -26.76 90.85 293.92 63.33 4 47 23 2329.4 -30.11 83.00

DIFFERENTIAL CORRECTIONS  
 TDE 1.4299 TRA 2.0320 TC3-5.1734 BAU 1.1286 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3558 RRA .1602 RC3 -.1508 FAU .03432 SGT 5884.7 SGR 592.3 SG3 240.2 ST 2303.4 SR 512.0 SS 600.7  
 FDE .5022 FRA 1.2647 FC3-1.8215 BSP 19107 RRT .7352 RRF .7163 RTF .9607 CRT .9473 CRS -.8302 CST -.9645  
 BDE 1.4735 BRA 2.0383 BC3 5.1756 FSP -822 SGB 5914.4 R23 .0099 R13 .9608 LSA 2424.1 MSA 227.4 SSA 18.2  
 SGI 5900.8 SG2 400.4 THA 4.25 ELI 2354.1 EL2 160.5 ALF 11.95

LAUNCH DATE FEB 1 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.858 GAL 4.95 AZL 87.88 HCA 266.01 SMA 122.96 ECC .21604 INC 2.1164 V1 30.224  
 RP 108.24 LAP -2.11 LOP 37.97 VP 37.052 GAP 10.44 AZP 90.15 TAL 161.41 TAP 67.41 RCA 96.40 APO 149.53 V2 35.010  
 RC 168.410 GL 13.70 GP -14.13 ZAL 60.22 ZAP 161.99 ETS 312.40 ZAE 128.68 ETE 191.12 ZAC 144.94 ETC 178.41 CLP-168.72

DISTANCE 551.340

PLANETOCENTRIC CONIC  
 C3 17.406 VHL 4.172 DLA 35.90 RAL 69.11 RAD 6567.7 VEL 11.781 PTH 2.08 VHP 7.307 DPA 2.63 RAP 51.72 ECC 1.2865  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 66.95 22 23 21 4032.40 -25.54 173.19 297.82 63.87 23 30 34 3432.4 -28.83 165.41  
 113.05 4 1 21 2975.15 -25.53 93.86 297.82 63.86 4 50 57 2375.2 -28.82 86.07  
 66.95 22 23 21 4032.40 -25.54 173.19 297.82 63.87 23 30 34 3432.4 -28.83 165.41  
 113.05 4 1 21 2975.15 -25.53 93.86 297.82 63.86 4 50 57 2375.2 -28.82 86.07  
 66.95 22 23 21 4032.40 -25.54 173.19 297.82 63.87 23 30 34 3432.4 -28.83 165.41  
 113.05 4 1 21 2975.15 -25.53 93.86 297.82 63.86 4 50 57 2375.2 -28.82 86.07

DIFFERENTIAL CORRECTIONS  
 TDE 1.3222 TRA 2.3045 TC3-4.8785 BAU 1.1357 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3587 RRA .1737 RC3 -.1343 FAU .03171 SGT 5927.1 SGR 584.7 SG3 229.9 ST 2164.6 SR 500.4 SS 561.8  
 FDE .4244 FRA 1.3199 FC3-1.5770 BSP 19212 RRT .7216 RRF .7029 RTF .9612 CRT .9216 CRS -.7781 CST -.9604  
 BDE 1.3699 BRA 2.3110 BC3 4.8803 FSP -786 SGB 5955.9 R23 .0087 R13 .9612 LSA 2278.0 MSA 248.8 SSA 17.6  
 SGI 5942.2 SG2 403.8 THA 4.09 ELI 2213.6 EL2 189.9 ALF 12.12

LAUNCH DATE FEB 1 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.823 GAL 5.48 AZL 88.04 HCA 269.21 SMA 122.75 ECC .22155 INC 1.9596 V1 30.224  
 RP 108.20 LAP -1.96 LOP 41.17 VP 37.040 GAP 10.87 AZP 90.03 TAL 159.96 TAP 69.17 RCA 95.56 APO 149.95 V2 35.023  
 RC 170.474 GL 12.19 GP -13.61 ZAL 57.65 ZAP 163.00 ETS 310.82 ZAE 128.64 ETE 190.71 ZAC 147.03 ETC 177.94 CLP-169.72

DISTANCE 556.941

PLANETOCENTRIC CONIC  
 C3 18.706 VHL 4.325 DLA 34.72 RAL 72.26 RAD 6567.8 VEL 11.836 PTH 2.10 VHP 7.549 DPA 3.77 RAP 53.61 ECC 1.3078  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.01 22 47 35 4014.06 -24.27 171.06 301.69 64.37 23 54 29 3414.1 -27.51 163.34  
 110.99 4 2 12 3027.09 -24.26 97.29 301.68 64.36 4 52 39 2427.1 -27.50 89.58  
 69.01 22 47 35 4014.06 -24.27 171.06 301.69 64.37 23 54 29 3414.1 -27.51 163.34  
 110.99 4 2 12 3027.09 -24.26 97.29 301.68 64.36 4 52 39 2427.1 -27.50 89.58  
 69.01 22 47 35 4014.06 -24.27 171.06 301.69 64.37 23 54 29 3414.1 -27.51 163.34  
 110.99 4 2 12 3027.09 -24.26 97.29 301.68 64.36 4 52 39 2427.1 -27.50 89.58

DIFFERENTIAL CORRECTIONS  
 TDE 1.2058 TRA 2.5872 TC3-4.5697 BAU 1.1432 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3622 RRA .1876 RC3 -.1204 FAU .02932 SGT 5963.6 SGR 576.7 SG3 219.8 ST 2032.4 SR 488.4 SS 528.0  
 FDE .3499 FRA 1.3706 FC3-1.3568 BSP 19393 RRT .7093 RRF .6903 RTF .9617 CRT .8870 CRS -.7150 CST -.9565  
 BDE 1.2590 BRA 2.5940 BC3 4.5712 FSP -755 SGB 5991.4 R23 .0071 R13 .9618 LSA 2138.5 MSA 272.4 SSA 17.0  
 SGI 5977.7 SG2 405.6 THA 3.94 ELI 2078.6 EL2 220.5 ALF 12.17

LAUNCH DATE FEB 1 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC  
 RL 147.41 LAL -.00 LOL 131.96 VL 26.789 GAL 6.03 AZL 88.20 HCA 272.41 SMA 122.54 ECC .22751 INC 1.8030 V1 30.224  
 RP 108.16 LAP -1.80 LOP 44.37 VP 37.027 GAP 11.32 AZP 89.92 TAL 158.52 TAP 70.93 RCA 94.66 APO 150.42 V2 35.036  
 RC 172.518 GL 10.74 GP -13.13 ZAL 55.17 ZAP 163.96 ETS 308.99 ZAE 128.61 ETE 190.33 ZAC 149.13 ETC 177.41 CLP-170.71

DISTANCE 562.496

PLANETOCENTRIC CONIC  
 C3 20.235 VHL 4.498 DLA 33.54 RAL 75.23 RAD 6567.8 VEL 11.900 PTH 2.11 VHP 7.808 DPA 4.86 RAP 55.54 ECC 1.3330  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.22 23 12 42 3992.25 -22.97 168.68 305.52 64.85 24 19 15 3392.2 -26.16 161.03  
 108.78 4 0 49 3086.11 -22.95 101.22 305.51 64.84 4 52 15 2486.1 -26.15 93.57  
 71.22 23 12 42 3992.25 -22.97 168.68 305.52 64.85 24 19 15 3392.2 -26.16 161.03  
 108.78 4 0 49 3086.11 -22.95 101.22 305.51 64.84 4 52 15 2486.1 -26.15 93.57  
 110.00 4 58 18 2910.16 -27.52 89.71 307.67 68.87 5 46 48 2310.2 -30.13 81.49  
 110.00 3 18 20 3216.20 -18.55 108.91 303.09 60.76 4 11 56 2616.2 -22.30 101.79

DIFFERENTIAL CORRECTIONS  
 TDE 1.0856 TRA 2.8865 TC3-4.2430 BAU 1.1482 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3667 RRA .2025 RC3 -.1076 FAU .02698 SGT 5995.2 SGR 568.6 SG3 210.2 ST 1917.4 SR 476.3 SS 502.0  
 FDE .2815 FRA 1.4205 FC3-1.1545 BSP 19547 RRT .6983 RRF .6792 RTF .9623 CRT .8422 CRS -.6434 CST -.9541  
 BDE 1.1459 BRA 2.8936 BC3 4.2443 FSP -725 SGB 6022.1 R23 .0059 R13 .9623 LSA 2016.7 MSA 296.7 SSA 16.4  
 SGI 6008.4 SG2 406.1 THA 3.81 ELI 1959.6 EL2 251.3 ALF 12.02

LAUNCH DATE FEB 1 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 18 1969

Heliocentric Conic: RL 147.41 LAL -0.00 LOL 131.96 VL 26.754 GAL 6.62 AZL 88.35 HCA 275.61 SMA 122.34 ECC .23397 INC 1.6455 V1 30.224  
 RP 108.12 LAP -1.64 LOP 47.58 VP 37.015 GAP 11.80 AZP 89.84 TAL 157.09 TAP 72.71 RCA 93.71 APO 150.96 V2 35.050  
 RC 174.540 GL 9.36 GP -12.70 ZAL 52.77 ZAP 164.86 ETS 806.89 ZAE 128.57 ETE 190.00 ZAC 151.25 ETC 176.79 CLP-171.68

Distance 567.998

Planetary Conic: C3 22.025 VHL 4.693 DLA 32.38 RAL 78.04 RAD 6567.9 VEL 11.975 PTH 2.13 VHP 8.085 DPA 5.88 RAP 57.51 ECC 1.3625  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.60 23 39 9 3965.48 -21.65 165.96 309.31 65.31 24 45 15 3365.5 -24.79 158.37  
 106.40 3 56 45 3153.62 -21.63 105.75 309.31 65.30 4 49 19 2553.6 -24.78 98.17  
 73.60 23 39 9 3965.48 -21.65 165.96 309.31 65.31 24 45 15 3365.5 -24.79 158.37  
 106.40 3 56 45 3153.62 -21.63 105.75 309.31 65.30 4 49 19 2553.6 -24.78 98.17  
 110.00 5 43 15 2824.87 -29.47 83.84 312.71 71.84 6 30 20 2224.9 -31.67 75.32  
 110.00 2 55 46 3342.23 -14.21 116.10 305.15 58.58 3 51 28 2742.2 -18.27 109.33

Differential Corrections: TOE .9610 TRA 3.2021 TC3-3.9089 BAU 1.1513 RDE .3720 RRA .2181 RC3 -.0960 FAU .02476 FDE .2181 FRA 1.4695 FC3 -.9732 BSP 19696 BOE 1.0305 BRA 3.2096 BC3 3.9101 FSP -697

Mid-Course Execution Accuracy: SGT 6022.1 SGR 560.2 SG3 201.1 RRT .6886 RRF .6695 RTF .9629 SGB 6048.1 R23 .0048 R13 .9629 SG1 6034.5 S62 405.4 THA 3.68

Orbit Determination Accuracy: ST 1821.3 SR 464.0 SS 482.8 CRT .7864 CRS -.5653 CST -.9535 LSA 1913.8 MSA 320.3 SSA 15.8 EL1 1858.4 EL2 280.8 ALF 11.60

LAUNCH DATE FEB 1 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 20 1969

Heliocentric Conic: RL 147.41 LAL -0.00 LOL 131.96 VL 26.720 GAL 7.25 AZL 88.51 HCA 278.82 SMA 122.13 ECC .24097 INC 1.4862 V1 30.224  
 RP 108.08 LAP -1.47 LOP 50.79 VP 37.003 GAP 12.31 AZP 89.77 TAL 155.68 TAP 74.50 RCA 92.70 APO 151.56 V2 35.063  
 RC 176.542 GL 8.05 GP -12.31 ZAL 50.48 ZAP 165.70 ETS 304.46 ZAE 128.52 ETE 189.69 ZAC 153.37 ETC 176.07 CLP-172.66

Distance 573.439

Planetary Conic: C3 24.115 VHL 4.911 DLA 31.23 RAL 80.68 RAD 6568.0 VEL 12.062 PTH 2.16 VHP 8.381 DPA 6.85 RAP 59.52 ECC 1.3969  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 76.24 0 11 37 3931.23 -20.31 162.71 313.07 65.75 1 17 8 3331.2 -23.41 155.18  
 103.76 3 49 17 3232.03 -20.30 111.06 313.07 65.74 4 43 9 2632.0 -23.40 103.53  
 76.24 0 11 37 3931.23 -20.31 162.71 313.07 65.75 1 17 8 3331.2 -23.41 155.18  
 103.76 3 49 17 3232.03 -20.30 111.06 313.07 65.74 4 43 9 2632.0 -23.40 103.53  
 110.00 6 16 50 2772.86 -30.52 80.15 317.23 73.80 7 3 3 2172.9 -32.43 71.46  
 110.00 2 43 14 3438.40 -10.73 121.38 307.70 57.35 3 40 33 2838.4 -14.96 114.83

Differential Corrections: TOE .8363 TRA 3.5393 TC3-3.5660 BAU 1.1500 RDE .3783 RRA .2348 RC3 -.0846 FAU .02252 FDE .1616 FRA 1.5197 FC3 -.8087 BSP 19739 BOE .9179 BRA 3.5471 BC3 3.5670 FSP -665

Mid-Course Execution Accuracy: SGT 6044.9 SGR 551.7 SG3 192.5 RRT .6803 RRF .6617 RTF .9635 SGB 6070.0 R23 .0044 R13 .9636 SG1 6056.6 S62 403.6 THA 3.57

Orbit Determination Accuracy: ST 1749.9 SR 451.8 SS 471.0 CRT .7213 CRS -.4869 CST -.9557 LSA 1836.2 MSA 341.2 SSA 15.2 EL1 1781.0 EL2 307.5 ALF 10.88

LAUNCH DATE FEB 1 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 22 1969

Heliocentric Conic: RL 147.41 LAL -0.00 LOL 131.96 VL 26.687 GAL 7.91 AZL 88.68 HCA 282.03 SMA 121.93 ECC .24859 INC 1.3239 V1 30.224  
 RP 108.04 LAP -1.29 LOP 54.00 VP 36.991 GAP 12.85 AZP 89.72 TAL 154.28 TAP 76.31 RCA 91.62 APO 152.24 V2 35.076  
 RC 178.523 GL 6.81 GP -11.94 ZAL 48.29 ZAP 166.48 ETS 301.69 ZAE 128.46 ETE 189.41 ZAC 155.49 ETC 175.22 CLP-173.63

Distance 578.809

Planetary Conic: C3 26.549 VHL 5.153 DLA 30.11 RAL 83.15 RAD 6568.1 VEL 12.162 PTH 2.18 VHP 8.699 DPA 7.77 RAP 61.56 ECC 1.4369  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 79.32 0 43 53 3884.01 -18.98 158.54 316.79 66.18 1 48 37 3284.0 -22.04 151.06  
 100.68 3 36 47 3326.70 -18.97 117.52 316.79 66.17 4 32 13 2726.7 -22.03 110.05  
 79.32 0 43 53 3884.01 -18.98 158.54 316.79 66.18 1 48 37 3284.0 -22.04 151.06  
 100.68 3 36 47 3326.70 -18.97 117.52 316.79 66.17 4 32 13 2726.7 -22.03 110.05  
 110.00 6 45 4 2736.20 -31.19 77.50 321.50 75.24 7 30 40 2136.2 -32.90 68.70  
 110.00 2 34 47 3522.51 -7.61 125.89 310.44 56.57 3 33 29 2922.5 -11.96 119.49

Differential Corrections: TOE .7039 TRA 3.8922 TC3-3.2333 BAU 1.1479 RDE .3849 RRA .2518 RC3 -.0747 FAU .02047 FDE .1076 FRA 1.5682 FC3 -.6676 BSP 19865 BOE .8023 BRA 3.9003 BC3 3.2341 FSP -639

Mid-Course Execution Accuracy: SGT 6061.8 SGR 542.1 SG3 184.3 RRT .6728 RRF .6542 RTF .9644 SGB 6085.9 R23 .0035 R13 .9644 SG1 6072.8 S62 400.3 THA 3.46

Orbit Determination Accuracy: ST 1695.7 SR 438.9 SS 463.6 CRT .6463 CRS -.4063 CST -.9593 LSA 1776.0 MSA 358.6 SSA 14.6 EL1 1720.2 EL2 330.1 ALF 9.86

LAUNCH DATE FEB 1 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 24 1969

Heliocentric Conic: RL 147.41 LAL -0.00 LOL 131.96 VL 26.653 GAL 8.62 AZL 88.84 HCA 285.24 SMA 121.73 ECC .25689 INC 1.1576 V1 30.224  
 RP 108.00 LAP -1.12 LOP 57.21 VP 36.979 GAP 13.43 AZP 89.70 TAL 152.91 TAP 78.15 RCA 90.46 APO 153.00 V2 35.089  
 RC 180.483 GL 5.64 GP -11.61 ZAL 46.21 ZAP 167.21 ETS 298.52 ZAE 128.39 ETE 189.15 ZAC 157.61 ETC 174.18 CLP-174.60

Distance 584.097

Planetary Conic: C3 29.384 VHL 5.421 DLA 29.02 RAL 85.47 RAD 6568.2 VEL 12.278 PTH 2.21 VHP 9.042 DPA 8.62 RAP 63.63 ECC 1.4836  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 83.38 1 24 51 3807.64 -17.65 152.27 320.48 66.59 2 28 19 3207.6 -20.67 144.85  
 96.62 3 14 18 3453.63 -17.64 126.31 320.47 66.58 4 11 52 2853.6 -20.66 118.88  
 100.00 4 41 37 3173.35 -23.11 107.88 322.77 70.49 5 34 30 2573.4 -25.56 99.94  
 100.00 2 40 13 3563.16 -12.35 131.79 317.87 62.56 3 39 36 2963.2 -15.93 124.83  
 110.00 7 9 45 2709.50 -31.63 75.55 325.62 76.31 7 54 54 2109.5 -33.19 66.67  
 110.00 2 28 35 3599.77 -4.69 129.97 313.29 56.10 3 28 35 2999.8 -9.11 123.67

Differential Corrections: TOE .5683 TRA 4.2664 TC3-2.9080 BAU 1.1427 RDE .3920 RRA .2694 RC3 -.0654 FAU .01850 FDE .0580 FRA 1.6173 FC3 -.5449 BSP 19975 BOE .6904 BRA 4.2749 BC3 2.9087 FSP -613

Mid-Course Execution Accuracy: SGT 6074.0 SGR 531.7 SG3 176.5 RRT .6661 RRF .6478 RTF .9654 SGB 6097.2 R23 .0027 R13 .9654 SG1 6084.3 S62 395.9 THA 3.35

Orbit Determination Accuracy: ST 1662.3 SR 425.7 SS 460.9 CRT .5655 CRS -.3294 CST -.9645 LSA 1737.5 MSA 370.9 SSA 14.0 EL1 1680.4 EL2 347.3 ALF 8.61

LAUNCH DATE FEB 1 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 26 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.620 GAL 9.39 AZL 89.01 HCA 288.45 SMA 121.53 ECC .26594 INC .9859 V1 30.224  
 RP 107.96 LAP -.94 LOP 60.42 VP 36.967 GAP 14.06 AZP 89.69 TAL 151.56 TAP 80.02 RCA 89.21 APO 153.85 V2 35.102  
 RC 182.422 GL 4.53 GP -11.31 ZAL 44.24 ZAP 167.87 ETS 294.93 ZAE 128.31 ETE 188.91 ZAC 159.73 ETC 172.93 CLP-175.58

Distance 589.289

Planeto-centric Conic: C3 32.686 VHL 5.717 OLA 27.96 RAL 87.64 RAD 6568.3 VEL 12.412 PTH 2.24 VHP 9.413 DPA 9.43 RAP 65.72 ECC 1.5379  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 7 40 3529.20 -19.81 132.77 325.59 69.34 4 6 29 2929.2 -22.44 125.09  
 90.00 1 48 45 3785.59 -12.92 148.44 322.54 64.58 2 51 50 3185.6 -16.24 141.33  
 100.00 5 19 35 3103.90 -24.61 103.27 327.38 72.47 6 11 19 2503.9 -26.77 95.14  
 100.00 2 19 31 3686.11 -8.40 138.78 320.18 61.21 3 20 57 3086.1 -12.18 132.03  
 110.00 7 31 45 2690.25 -31.93 74.13 329.64 77.10 8 16 35 2090.3 -33.38 65.20  
 110.00 2 23 50 3672.53 -1.92 133.78 316.21 55.86 3 25 3 3072.5 -6.39 127.54

Differential Corrections: TOE .4292 TRA 4.6644 TC3-2.5933 BAU 1.1335 SGT 6081.6 SGR 520.5 SG3 169.2 ST 1647.3 SR 412.3 SS 462.0  
 RDE .3996 RRA .2875 RC3 -.0566 FAU .01658 RRT .6603 RRF .6423 RTF .9666 CRT .4827 CRS -.2584 CST -.9703  
 FDE .0123 FRA 1.6679 FC3 -.4390 BSP 20062 SGB 6103.8 R23 .0020 R13 .9666 LSA 1718.8 MSA 377.5 SSA 13.5  
 BDE .5865 BRA 4.6733 BC3 2.5939 FSP -588 SG1 6091.3 SG2 390.3 THA 3.25 EL1 1659.9 EL2 358.3 ALF 7.23

LAUNCH DATE FEB 1 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 28 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.587 GAL 10.20 AZL 89.19 HCA 291.67 SMA 121.34 ECC .27585 INC .8076 V1 30.224  
 RP 107.92 LAP -.75 LOP 63.64 VP 36.956 GAP 14.73 AZP 89.70 TAL 150.25 TAP 81.92 RCA 87.87 APO 154.81 V2 35.114  
 RC 184.340 GL 3.50 GP -11.03 ZAL 42.39 ZAP 168.45 ETS 290.86 ZAE 128.22 ETE 188.69 ZAC 161.83 ETC 171.37 CLP-176.56

Distance 594.370

Planeto-centric Conic: C3 36.539 VHL 6.045 OLA 26.94 RAL 89.65 RAD 6568.4 VEL 12.566 PTH 2.28 VHP 9.815 DPA 10.18 RAP 67.83 ECC 1.6013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 53 37 3432.53 -22.00 126.53 330.47 71.71 4 50 50 2832.5 -24.30 118.62  
 90.00 1 18 52 3938.50 -8.30 157.29 324.54 62.83 2 24 30 3338.5 -11.88 150.44  
 100.00 5 48 42 3061.54 -25.45 100.40 331.63 73.76 6 39 44 2461.5 -27.43 92.16  
 100.00 2 6 28 3784.72 -5.13 144.27 322.82 60.51 3 9 32 3184.7 -9.02 137.65  
 110.00 7 51 35 2677.01 -32.13 73.15 333.58 77.65 8 36 12 2077.0 -33.50 64.18  
 110.00 2 20 4 3742.02 .73 137.41 319.18 55.82 3 22 26 3142.0 -3.75 131.20

Differential Corrections: TOE .2903 TRA 5.0918 TC3-2.2879 BAU 1.1178 SGT 6085.8 SGR 508.6 SG3 162.3 ST 1649.4 SR 398.7 SS 466.4  
 RDE .4079 RRA .3061 RC3 -.0479 FAU .01464 RRT .6553 RRF .6381 RTF .9679 CRT .4031 CRS -.1971 CST -.9762  
 FDE -.0284 FRA 1.7218 FC3 -.3469 BSP 20039 SGB 6107.0 R23 .0017 R13 .9679 LSA 1718.7 MSA 378.3 SSA 13.0  
 BDE .5006 BRA 5.1010 BC3 2.2884 FSP -561 SG1 6094.9 SG2 383.6 THA 3.15 EL1 1657.6 EL2 363.1 ALF 5.85

LAUNCH DATE FEB 1 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 30 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.555 GAL 11.08 AZL 89.38 HCA 294.89 SMA 121.15 ECC .28672 INC .6210 V1 30.224  
 RP 107.88 LAP -.56 LOP 66.85 VP 36.944 GAP 15.46 AZP 89.74 TAL 148.98 TAP 83.86 RCA 86.41 APO 155.89 V2 35.126  
 RC 186.236 GL 2.53 GP -10.77 ZAL 40.66 ZAP 168.95 ETS 286.30 ZAE 128.10 ETE 188.49 ZAC 163.90 ETC 169.39 CLP-177.55

Distance 599.316

Planeto-centric Conic: C3 41.042 VHL 6.406 OLA 25.96 RAL 91.52 RAD 6568.6 VEL 12.744 PTH 2.32 VHP 10.253 DPA 10.88 RAP 69.96 ECC 1.6755  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 24 49 3382.33 -23.04 123.22 334.76 73.06 5 21 11 2782.3 -25.14 115.18  
 90.00 1 2 34 4047.43 -4.87 163.45 327.07 62.07 2 10 2 3447.4 -8.57 156.73  
 100.00 6 13 6 3033.22 -25.97 98.46 335.69 74.66 7 3 39 2433.2 -27.83 90.15  
 100.00 1 56 58 3871.77 -2.19 149.07 325.60 60.18 3 1 30 3271.8 -6.14 142.51  
 110.00 8 9 35 2668.79 -32.25 72.53 337.44 78.00 8 54 3 2068.8 -33.56 63.55  
 110.00 2 16 59 3808.96 3.29 140.90 322.18 55.96 3 20 28 3209.0 -1.20 134.70

Differential Corrections: TOE .1422 TRA 5.5429 TC3-2.0042 BAU 1.0999 SGT 6083.8 SGR 495.3 SG3 155.7 ST 1660.8 SR 384.5 SS 472.8  
 RDE .4161 RRA .3244 RC3 -.0403 FAU .01285 RRT .6502 RRF .6337 RTF .9694 CRT .3251 CRS -.1398 CST -.9815  
 FDE -.0681 FRA 1.7764 FC3 -.2711 BSP 20121 SGB 6103.9 R23 .0012 R13 .9695 LSA 1728.9 MSA 374.5 SSA 12.5  
 BDE .4397 BRA 5.5524 BC3 2.0046 FSP -540 SG1 6092.3 SG2 375.8 THA 3.04 EL1 1665.7 EL2 362.6 ALF 4.52

LAUNCH DATE FEB 1 1969

FLIGHT TIME 212.00

ARRIVAL DATE SEP 1 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.523 GAL 12.04 AZL 89.58 HCA 298.11 SMA 120.96 ECC .29868 INC .4242 V1 30.224  
 RP 107.85 LAP -.37 LOP 70.07 VP 36.933 GAP 16.26 AZP 89.80 TAL 147.75 TAP 85.86 RCA 84.83 APO 157.09 V2 35.138  
 RC 188.109 GL 1.62 GP -10.54 ZAL 39.05 ZAP 169.36 ETS 281.23 ZAE 127.96 ETE 188.29 ZAC 165.93 ETC 166.84 CLP-178.57

Distance 604.103

Planeto-centric Conic: C3 46.323 VHL 6.806 OLA 25.03 RAL 93.24 RAD 6568.7 VEL 12.949 PTH 2.36 VHP 10.732 DPA 11.53 RAP 72.09 ECC 1.7624  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 50 2 3350.37 -23.65 121.08 338.81 73.96 5 45 52 2750.4 -25.63 112.96  
 90.00 0 51 8 4140.33 -1.89 168.65 329.80 61.74 2 0 9 3540.3 -5.65 161.99  
 100.00 6 34 17 3014.25 -26.31 97.15 339.61 75.27 7 24 31 2414.3 -28.07 88.80  
 100.00 1 49 34 3951.68 .52 153.46 328.46 60.11 2 55 26 3351.7 -3.46 146.93  
 110.00 8 25 57 2664.90 -32.30 72.24 341.24 78.16 9 10 21 2064.9 -33.60 63.25  
 110.00 2 14 24 3873.79 5.75 144.31 325.21 56.25 3 18 58 3273.8 1.28 138.08

Differential Corrections: TOE -.0101 TRA 6.0263 TC3-1.7368 BAU 1.0758 SGT 6077.5 SGR 480.9 SG3 149.5 ST 1681.1 SR 370.1 SS 481.2  
 RDE .4247 RRA .3427 RC3 -.0330 FAU .01109 RRT .6453 RRF .6296 RTF .9712 CRT .2531 CRS -.0899 CST -.9859  
 FDE -.1049 FRA 1.8345 FC3 -.2073 BSP 20179 SGB 6096.5 R23 .0008 R13 .9712 LSA 1749.3 MSA 366.7 SSA 12.0  
 BDE .4248 BRA 6.0360 BC3 1.7372 FSP -518 SG1 6085.4 SG2 366.9 THA 2.93 EL1 1683.9 EL2 357.5 ALF 3.34

LAUNCH DATE FEB 1 1969

FLIGHT TIME 214.00

ARRIVAL DATE SEP 3 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.492 GAL 13.07 AZL 89.78 HCA 301.33 SMA 120.78 ECC .31188 INC .2148 V1 30.224  
 RP 107.81 LAP -.18 LOP 73.29 VP 36.921 GAP 17.13 AZP 89.89 TAL 146.59 TAP 87.92 RCA 83.11 APO 158.45 V2 35.150  
 RC 189.959 GL .77 GP -10.32 ZAL 37.56 ZAP 169.67 ETS 275.66 ZAE 127.79 ETE 188.10 ZAC 167.91 ETC 163.44 CLP-179.60

Distance 608.699

Planetocentric Conic: C3 52.539 VHL 7.248 DLA 24.14 RAL 94.83 RAD 6568.9 VEL 13.187 PTH 2.41 VHP 11.257 DPA 12.12 RAP 74.21 ECC 1.8647  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 11 30 3329.44 -24.04 119.67 342.69 74.57 6 7 0 2729.4 -25.93 111.51  
 90.00 0 42 20 4224.10 .82 173.32 332.61 61.69 1 52 44 3624.1 -2.97 166.69  
 100.00 6 52 59 3002.23 -26.51 96.32 343.42 75.66 7 43 1 2402.2 -28.22 87.93  
 100.00 1 43 32 4026.54 3.05 157.57 331.37 60.25 2 50 39 3426.5 -.93 151.04  
 110.00 8 40 51 2664.77 -32.31 72.23 344.96 78.16 9 25 16 2064.8 -33.60 63.24  
 110.00 2 12 10 3936.76 8.12 147.64 328.25 56.68 3 17 46 3336.8 3.68 141.37

Differential Corrections: TDE -.1670 TRA 6.5452 TC3-1.4867 BAU 1.0445 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4336 RRA .3605 RC3 -.0263 FAU .00935 SGT 6066.6 SGR 465.2 SG3 143.6 ST 1707.1 SR 355.3 SS 491.3  
 FDE -.1394 FRA 1.8967 FC3 -.1541 BSP 20220 RRT .6403 RRF .6257 RTF .9732 CRT .1881 CRS -.0467 CST -.9896  
 BOE .4647 BRA 6.5551 BC3 1.4870 FSP -498 SGB 6084.5 R23 .0006 R13 .9732 LSA 1776.3 MSA 355.9 SSA 11.5  
 SGI 6074.0 SG2 356.9 THA 2.82 EL1 1708.5 EL2 348.7 ALF 2.34

LAUNCH DATE FEB 1 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 5 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.462 GAL 14.20 AZL 90.01 HCA 304.55 SMA 120.61 ECC .32649 INC .0000 V1 30.224  
 RP 107.78 LAP .01 LOP 76.52 VP 36.910 GAP 18.09 AZP 90.00 TAL 145.49 TAP 90.05 RCA 81.23 APO 159.98 V2 35.161  
 RC 191.786 GL -.03 GP -10.12 ZAL 36.19 ZAP 169.86 ETS 269.65 ZAE 127.59 ETE 187.92 ZAC 169.81 ETC 158.77 CLP 179.33

Distance 613.063

Planetocentric Conic: C3 59.888 VHL 7.739 DLA 23.29 RAL 96.28 RAD 6569.1 VEL 13.463 PTH 2.46 VHP 11.837 DPA 12.67 RAP 76.33 ECC 1.9856  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 30 13 3316.29 -24.28 118.77 346.44 74.96 6 25 30 2716.3 -26.11 110.58  
 90.00 0 35 11 4301.63 3.31 177.65 335.47 61.86 1 46 53 3701.6 -.47 171.02  
 100.00 7 9 39 2995.69 -26.62 95.86 347.11 75.88 7 59 35 2395.7 -28.30 87.46  
 100.00 1 38 27 4097.46 5.44 161.48 334.50 60.56 2 46 44 3497.5 1.48 154.93  
 110.00 8 54 25 2667.91 -32.26 72.47 348.61 78.03 9 38 53 2067.9 -33.57 63.48  
 110.00 2 10 10 3998.00 10.40 150.93 331.29 57.25 3 16 48 3398.0 6.01 144.58

Differential Corrections: TDE -.3245 TRA 7.1048 TC3-1.2548 BAU 1.0048 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4429 RRA .3775 RC3 -.0202 FAU .00761 SGT 6051.9 SGR 448.4 SG3 138.0 ST 1735.7 SR 340.4 SS 503.0  
 FDE -.1720 FRA 1.9642 FC3 -1.100 BSP 20166 RRT .6354 RRF .6216 RTF .9752 CRT .1322 CRS -.0095 CST -.9922  
 BOE .5490 BRA 7.1148 BC3 1.2549 FSP -478 SGB 6068.5 R23 -.0001 R13 .9752 LSA 1806.6 MSA 342.9 SSA 11.0  
 SGI 6058.7 SG2 345.9 THA 2.70 EL1 1736.4 EL2 337.3 ALF 1.54

LAUNCH DATE FEB 1 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 7 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.432 GAL 15.44 AZL 90.25 HCA 307.78 SMA 120.43 ECC .34273 INC .2503 V1 30.224  
 RP 107.75 LAP .20 LOP 79.74 VP 36.899 GAP 19.14 AZP 90.15 TAL 144.49 TAP 92.26 RCA 79.16 APO 161.71 V2 35.172  
 RC 193.588 GL -.77 GP -9.94 ZAL 34.95 ZAP 169.91 ETS 263.29 ZAE 127.34 ETE 187.74 ZAC 171.58 ETC 152.13 CLP 178.23

Distance 617.144

Planetocentric Conic: C3 68.624 VHL 8.284 DLA 22.49 RAL 97.60 RAD 6569.3 VEL 13.783 PTH 2.52 VHP 12.480 DPA 13.16 RAP 78.43 ECC 2.1294  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 46 44 3309.05 -24.40 118.28 350.05 75.17 6 41 53 2709.1 -26.20 110.08  
 90.00 0 29 10 4374.39 5.64 181.74 338.35 62.20 1 42 4 3774.4 1.87 175.08  
 100.00 7 24 33 2993.61 -26.66 95.72 350.69 75.95 8 14 27 2393.6 -28.33 87.31  
 100.00 1 34 1 4165.06 7.69 165.24 337.24 61.02 2 43 26 3565.1 3.76 158.65  
 110.00 9 6 45 2673.90 -32.18 72.91 352.17 77.78 9 51 19 2073.9 -33.52 63.94  
 110.00 2 8 19 4057.54 12.57 154.17 334.31 57.95 3 15 56 3457.5 8.24 147.74

Differential Corrections: TDE -.4940 TRA 7.7124 TC3-1.0381 BAU .9525 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4527 RRA .3933 RC3 -.0145 FAU .00580 SGT 6033.6 SGR 430.5 SG3 132.8 ST 1766.1 SR 325.3 SS 516.2  
 FDE -.2021 FRA 2.0389 FC3 -.0731 BSP 20159 RRT .6291 RRF .6173 RTF .9775 CRT .0801 CRS .0213 CST -.9946  
 BOE .6700 BRA 7.7224 BC3 1.0382 FSP -457 SGB 6048.9 R23 .0005 R13 .9775 LSA 1839.4 MSA 328.3 SSA 10.5  
 SGI 6039.7 SG2 334.3 THA 2.58 EL1 1766.3 EL2 324.3 ALF .88

LAUNCH DATE FEB 1 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 9 1969

Heliocentric Conic: RL 147.41 LAL -.00 LOL 131.96 VL 26.403 GAL 16.80 AZL 90.52 HCA 311.00 SMA 120.27 ECC .36084 INC .5152 V1 30.224  
 RP 107.71 LAP .39 LOP 82.97 VP 36.888 GAP 20.32 AZP 90.34 TAL 143.58 TAP 94.58 RCA 76.87 APO 163.67 V2 35.182  
 RC 195.366 GL -1.47 GP -9.77 ZAL 33.85 ZAP 169.81 ETS 256.71 ZAE 127.04 ETE 187.56 ZAC 173.14 ETC 142.40 CLP 177.08

Distance 620.876

Planetocentric Conic: C3 79.071 VHL 8.892 DLA 21.73 RAL 98.77 RAD 6569.5 VEL 14.157 PTH 2.58 VHP 13.197 DPA 13.60 RAP 80.50 ECC 2.3013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 1 20 3306.49 -24.45 118.11 353.53 75.25 6 56 27 2706.5 -26.24 109.90  
 90.00 0 23 54 4443.16 7.80 185.63 341.21 62.69 1 37 57 3843.2 4.08 178.93  
 100.00 7 37 53 2995.20 -26.63 95.83 354.15 75.89 8 27 48 2395.2 -28.31 87.43  
 100.00 1 30 3 4229.68 9.80 168.88 340.15 61.62 2 40 33 3629.7 5.93 162.22  
 110.00 9 17 53 2682.33 -32.05 73.54 355.63 77.43 10 2 35 2082.3 -33.45 64.59  
 110.00 2 6 32 4115.32 14.63 157.37 337.31 58.76 3 15 7 3515.3 10.39 150.84

Differential Corrections: TDE -.6698 TRA 8.3671 TC3 -.8421 BAU .8903 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .4627 RRA .4071 RC3 -.0095 FAU .00399 SGT 6009.4 SGR 411.0 SG3 127.9 ST 1794.4 SR 309.9 SS 531.2  
 FDE -.2323 FRA 2.1200 FC3 -.0436 BSP 20177 RRT .6217 RRF .6114 RTF .9798 CRT .0339 CRS .0502 CST -.9963  
 BOE .8141 BRA 8.3770 BC3 .8422 FSP -440 SGB 6023.4 R23 .0006 R13 .9798 LSA 1870.8 MSA 312.8 SSA 10.0  
 SGI 6014.8 SG2 321.6 THA 2.44 EL1 1794.4 EL2 309.8 ALF .35

LAUNCH DATE FEB 2 1969

FLIGHT TIME 70.00

ARRIVAL DATE APR 13 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 24.674 GAL -1.68 AZL 87.24 HCA 72.68 SMA 111.38 ECC .32486 INC 2.7550 V1 30.220  
 RP 108.01 LAP 2.63 LOP 205.64 VP 35.580 GAP -18.88 AZP 89.18 TAL 183.50 TAP 256.18 RCA 75.20 APO 147.56 V2 35.086  
 RC 42.853 GL 11.81 GP 8.38 ZAL 99.71 ZAP 10.97 ETS 231.89 ZAE 163.61 ETE 356.95 ZAC 123.05 ETC 159.38 CLP 7.11

DISTANCE 170.559

PLANETOCENTRIC CONIC  
 C3 33.534 VHL 5.791 OLA 23.59 RAL 26.47 RAD 6568.3 VEL 12.446 PTH 2.25 VHP 11.961 OPA 17.95 RAP 28.03 ECC 1.5519  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 43 17 3187.06 -26.26 109.83 266.01 79.01 1 36 24 2587.1 -27.51 101.39  
 90.00 19 53 20 4140.64 -1.88 168.67 257.13 61.74 21 2 21 3540.6 -5.64 162.01  
 100.00 2 23 24 2864.25 -28.46 86.53 266.46 80.45 3 11 8 2264.2 -29.49 77.88  
 100.00 20 55 14 3938.68 .08 152.74 256.05 60.11 22 1 33 3338.7 -3.90 146.21  
 110.00 4 9 14 2533.14 -33.70 62.23 267.30 83.93 4 51 27 1933.1 -34.18 53.01  
 110.00 21 26 34 3842.55 4.57 142.66 253.25 56.09 22 30 36 3242.5 .09 136.45

MID-COURSE EXECUTION ACCURACY  
 SGT 780.7 SGR 430.5 SG3 68.1  
 RRT .1852 RRF -.2035 RTF -.6836  
 SGB 891.6 R23 -.0257 R13 -.6876  
 SGI 786.4 SG2 420.0 THA 8.18

ORBIT DETERMINATION ACCURACY  
 ST 380.9 SR 417.3 SS 249.3  
 CRT .8067 CRS .9142 CST .9728  
 LSA 591.4 MSA 177.2 SSA 16.8  
 EL1 537.3 EL2 174.8 ALF 48.24

LAUNCH DATE FEB 2 1969

FLIGHT TIME 72.00

ARRIVAL DATE APR 15 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 24.997 GAL -1.78 AZL 87.42 HCA 75.89 SMA 112.90 ECC .30730 INC 2.5835 V1 30.220  
 RP 108.05 LAP 2.51 LOP 208.86 VP 35.792 GAP -17.73 AZP 89.37 TAL 184.03 TAP 259.92 RCA 78.21 APO 147.59 V2 35.073  
 RC 43.347 GL 11.87 GP 8.83 ZAL 100.85 ZAP 10.27 ETS 241.57 ZAE 161.16 ETE 359.78 ZAC 124.11 ETC 158.60 CLP 5.26

DISTANCE 177.253

PLANETOCENTRIC CONIC  
 C3 29.991 VHL 5.476 OLA 23.22 RAL 25.28 RAD 6568.2 VEL 12.303 PTH 2.22 VHP 11.314 OPA 18.90 RAP 29.15 ECC 1.4936  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 44 0 3139.74 -26.83 106.49 262.65 80.60 1 36 20 2539.7 -27.86 97.97  
 90.00 19 43 8 4131.77 -2.16 168.17 254.04 61.76 20 52 0 3531.8 -5.92 161.51  
 100.00 2 23 17 2819.60 -28.92 83.29 263.01 82.10 3 10 17 2219.6 -29.71 74.58  
 100.00 20 46 32 3927.15 -.31 152.11 253.02 60.11 21 51 59 3327.1 -4.29 145.58  
 110.00 4 7 50 2492.31 -33.95 59.08 263.63 85.78 4 49 23 1892.5 -34.16 49.84  
 110.00 21 18 28 3827.00 3.98 141.85 250.34 56.02 22 22 15 3227.0 -.51 135.64

MID-COURSE EXECUTION ACCURACY  
 SGT 812.7 SGR 435.0 SG3 75.8  
 RRT .2091 RRF -.2301 RTF -.7030  
 SGB 921.8 R23 -.0295 R13 -.7075  
 SGI 819.6 SG2 421.8 THA 8.71

ORBIT DETERMINATION ACCURACY  
 ST 397.8 SR 421.5 SS 254.8  
 CRT .8177 CRS .9205 CST .9733  
 LSA 607.8 MSA 176.4 SSA 17.6  
 EL1 552.6 EL2 174.6 ALF 47.02

LAUNCH DATE FEB 2 1969

FLIGHT TIME 74.00

ARRIVAL DATE APR 17 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 25.292 GAL -1.90 AZL 87.58 HCA 79.10 SMA 114.34 ECC .29109 INC 2.4169 V1 30.220  
 RP 108.09 LAP 2.37 LOP 212.07 VP 35.986 GAP -16.64 AZP 89.54 TAL 184.64 TAP 263.74 RCA 81.06 APO 147.63 V2 35.060  
 RC 44.011 GL 11.85 GP 9.33 ZAL 102.13 ZAP 9.92 ETS 252.54 ZAE 158.80 ETE 362.16 ZAC 125.10 ETC 157.75 CLP 3.39

DISTANCE 183.963

PLANETOCENTRIC CONIC  
 C3 26.953 VHL 5.192 OLA 22.73 RAL 24.00 RAD 6568.1 VEL 12.179 PTH 2.19 VHP 10.699 OPA 19.88 RAP 30.23 ECC 1.4436  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 45 49 3088.50 -27.35 102.83 259.23 82.36 1 37 17 2488.5 -28.12 94.25  
 90.00 19 31 5 4129.70 -2.23 168.06 250.90 61.76 20 39 55 3529.7 -5.99 161.40  
 100.00 2 24 6 2771.56 -29.32 79.78 259.50 83.91 3 10 18 2171.6 -29.86 71.02  
 100.00 20 35 28 3921.87 -.49 151.82 249.93 60.11 21 40 50 3321.9 -4.47 145.29  
 110.00 4 7 4 2449.46 -34.12 55.73 259.91 87.75 4 47 53 1849.5 -34.05 46.48  
 110.00 21 9 1 3816.73 3.59 141.31 247.39 55.98 22 12 37 3216.7 -.90 135.10

MID-COURSE EXECUTION ACCURACY  
 SGT 846.0 SGR 439.5 SG3 84.3  
 RRT .2365 RRF -.2607 RTF -.7209  
 SGB 953.3 R23 -.0344 R13 -.7260  
 SGI 854.4 SG2 422.8 THA 9.30

ORBIT DETERMINATION ACCURACY  
 ST 414.3 SR 425.1 SS 259.1  
 CRT .8282 CRS .9264 CST .9736  
 LSA 623.3 MSA 175.2 SSA 18.5  
 EL1 567.6 EL2 173.9 ALF 45.89

LAUNCH DATE FEB 2 1969

FLIGHT TIME 76.00

ARRIVAL DATE APR 19 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 25.563 GAL -2.02 AZL 87.75 HCA 82.31 SMA 115.72 ECC .27617 INC 2.2539 V1 30.220  
 RP 108.13 LAP 2.23 LOP 215.28 VP 36.164 GAP -15.60 AZP 89.70 TAL 185.31 TAP 267.62 RCA 83.76 APO 147.67 V2 35.047  
 RC 44.838 GL 11.75 GP 9.89 ZAL 103.53 ZAP 10.00 ETS 264.09 ZAE 156.56 ETE 369.84 ZAC 126.03 ETC 156.84 CLP 1.48

DISTANCE 190.685

PLANETOCENTRIC CONIC  
 C3 24.352 VHL 4.935 OLA 22.12 RAL 22.64 RAD 6568.0 VEL 12.072 PTH 2.16 VHP 10.113 OPA 20.89 RAP 31.26 ECC 1.4008  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 48 40 3033.81 -27.78 98.88 255.77 84.29 1 39 14 2433.8 -28.28 90.25  
 90.00 19 17 22 4134.25 -2.08 168.31 247.73 61.75 20 26 17 3534.2 -5.84 161.65  
 100.00 2 25 51 2720.46 -29.63 76.01 255.95 85.87 3 11 12 2120.5 -29.89 67.22  
 100.00 20 22 53 3922.84 -.46 151.87 246.83 60.11 21 28 15 3322.8 -4.43 145.34  
 110.00 4 6 57 2404.16 -34.18 52.19 256.15 89.84 4 47 2 1804.2 -33.83 42.96  
 110.00 20 58 16 3811.90 3.40 141.06 244.42 55.97 22 1 48 3211.9 -1.09 134.85

MID-COURSE EXECUTION ACCURACY  
 SGT 879.0 SGR 444.3 SG3 93.9  
 RRT .2673 RRF -.2952 RTF -.7379  
 SGB 984.9 R23 -.0397 R13 -.7438  
 SGI 889.4 SG2 423.1 THA 9.97

ORBIT DETERMINATION ACCURACY  
 ST 428.7 SR 428.1 SS 260.8  
 CRT .8378 CRS .9321 CST .9735  
 LSA 636.1 MSA 173.4 SSA 19.5  
 EL1 580.7 EL2 172.5 ALF 44.95



LAUNCH DATE FEB '2 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 21 1969

HELIOCENTRIC CONIC

DISTANCE 197.413

RL 147.43 LAL -.00 LOL 132.98 VL 25.810 GAL -2.15 AZL 87.91 MCA 85.51 SMA 117.01 ECC .26249 INC 2.0935 V1 30.220  
 RP 108.17 LAP 2.09 LOP 218.49 VP 36.326 GAP -14.60 AZP 89.84 TAL 186.06 TAP 271.57 RCA 86.30 APO 147.72 V2 35.033  
 RC 45.818 GL 11.55 GP 10.51 ZAL 105.03 ZAP 10.52 ETS 275.26 ZAE 154.46 ETE 6.14 ZAC 126.87 ETC 155.85 CLP -.47

PLANETOCENTRIC CONIC

C3 22.126 VHL 4.704 DLA 21.38 RAL 21.22 RAD 6567.9 VEL 11.979 PTH 2.14 VHP 9.556 DPA 21.93 RAP 32.24 ECC 1.3641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 52 31 2976.23 -28.10 94.70 252.31 86.37 1 42 7 2376.2 -28.31 86.04  
 90.00 19 2 15 4145.09 -1.73 168.92 244.59 61.73 20 11 20 3545.1 -5.50 162.26  
 100.00 2 28 31 2666.69 -29.83 72.03 252.41 87.96 3 12 57 2066.7 -29.79 63.22  
 100.00 20 8 56 3929.86 -.22 152.26 243.75 60.11 21 14 26 3329.9 -4.20 145.73  
 110.00 4 7 34 2356.80 -34.13 48.49 252.41 92.03 4 46 51 1756.8 -33.47 39.31  
 110.00 20 46 23 3812.52 3.43 141.09 241.47 55.97 21 49 55 3212.5 -1.06 134.88

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3197 TRA -.5193 TC3 .4947 BAU .1481 SGT 910.9 SGR 449.6 SG3 104.6 ST 439.7 SR 430.2 SS 259.7  
 RDE -.3521 RRA .0871 RC3 .0772 FAU .03101 RRT .3015 RRF -.3337 RTF -.7544 CRT .8461 CRS .9372 CST .9730  
 FDE .2480 FRA .2064 FC3-1.2132 BSP 2754 SGB 1015.8 R23 -.0458 R13 -.7612 LSA 645.1 MSA 171.2 SSA 20.6  
 BOE .4756 BRA .5266 BC3 .5007 FSP -263 SGI 923.6 S62 422.8 THA 10.74 EL1 591.1 EL2 170.6 ALF 44.26

LAUNCH DATE FEB 2 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 23 1969

HELIOCENTRIC CONIC

DISTANCE 204.144

RL 147.43 LAL -.00 LOL 132.98 VL 26.035 GAL -2.28 AZL 88.07 MCA 88.71 SMA 118.23 ECC .24999 INC 1.9347 V1 30.220  
 RP 108.21 LAP 1.93 LOP 221.69 VP 36.474 GAP -13.65 AZP 89.96 TAL 186.86 TAP 275.57 RCA 88.67 APO 147.78 V2 35.020  
 RC 46.944 GL 11.26 GP 11.19 ZAL 106.63 ZAP 11.45 ETS 285.23 ZAE 152.53 ETE 7.94 ZAC 127.61 ETC 154.79 CLP -2.46

PLANETOCENTRIC CONIC

C3 20.225 VHL 4.497 DLA 20.51 RAL 19.78 RAD 6567.8 VEL 11.900 PTH 2.11 VHP 9.027 DPA 23.02 RAP 33.15 ECC 1.3329  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 57 16 2916.31 -28.28 90.33 248.88 88.55 1 45 52 2316.3 -28.18 81.66  
 90.00 18 45 59 4161.83 -1.19 169.85 241.52 61.71 19 55 21 3561.8 -4.97 163.20  
 100.00 2 32 2 2610.69 -29.89 67.87 248.90 90.15 3 15 33 2010.7 -29.55 59.08  
 100.00 19 53 54 3942.68 .21 152.96 240.74 60.11 20 59 36 3342.7 -3.77 146.44  
 110.00 4 8 54 2307.64 -33.95 44.66 248.71 94.29 4 47 22 1707.6 -32.98 35.56  
 110.00 20 33 31 3818.49 3.65 141.40 238.59 55.99 21 37 10 3218.5 -.83 135.19

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3145 TRA -.4954 TC3 .5842 BAU .1607 SGT 943.8 SGR 456.0 SG3 116.7 ST 449.1 SR 431.5 SS 255.5  
 RDE -.3376 RRA .0848 RC3 .1095 FAU .03341 RRT .3401 RRF -.3768 RTF -.7687 CRT .8535 CRS .9417 CST .9722  
 FDE .2477 FRA .1936 FC3-1.4303 BSP 2874 SGB 1048.2 R23 -.0531 R13 -.7766 LSA 651.3 MSA 168.7 SSA 21.9  
 BOE .4614 BRA .5026 BC3 .5944 FSP -298 SGI 959.6 S62 421.8 THA 11.60 EL1 599.6 EL2 168.4 ALF 43.66

LAUNCH DATE FEB 2 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 25 1969

HELIOCENTRIC CONIC

DISTANCE 210.874

RL 147.43 LAL -.00 LOL 132.98 VL 26.240 GAL -2.40 AZL 88.22 MCA 91.91 SMA 119.37 ECC .23860 INC 1.7764 V1 30.220  
 RP 108.25 LAP 1.78 LOP 224.89 VP 36.608 GAP -12.75 AZP 90.06 TAL 187.72 TAP 279.63 RCA 90.89 APO 147.85 V2 35.007  
 RC 48.205 GL 10.86 GP 11.95 ZAL 108.29 ZAP 12.76 ETS 293.64 ZAE 150.77 ETE 9.70 ZAC 128.24 ETC 153.67 CLP -4.51

PLANETOCENTRIC CONIC

C3 18.604 VHL 4.313 DLA 19.51 RAL 18.33 RAD 6567.8 VEL 11.832 PTH 2.10 VHP 8.525 DPA 24.16 RAP 33.97 ECC 1.3062  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 2 51 2854.57 -28.31 85.81 245.50 90.82 1 50 25 2254.6 -27.89 77.17  
 90.00 18 28 51 4184.01 -1.48 171.09 238.55 61.69 19 38 35 3584.0 -4.26 164.45  
 100.00 2 36 25 2552.87 -29.80 63.57 245.46 92.40 3 18 57 1952.9 -29.15 54.83  
 100.00 19 37 58 3960.94 .83 153.96 237.82 60.12 20 43 59 3360.9 -3.15 147.44  
 110.00 4 11 0 2256.94 -33.62 40.74 245.10 96.59 4 48 37 1656.9 -32.34 31.74  
 110.00 20 19 52 3829.64 4.08 141.98 235.80 56.03 21 23 42 3229.6 -.41 135.77

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3068 TRA -.4710 TC3 .6793 BAU .1730 SGT 974.7 SGR 464.0 SG3 130.2 ST 454.0 SR 431.6 SS 247.2  
 RDE -.3238 RRA .0831 RC3 .1492 FAU .03611 RRT .3825 RRF -.4242 RTF -.7821 CRT .8595 CRS .9454 CST .9707  
 FDE .2441 FRA .1784 FC3-1.6803 BSP 3007 SGB 1079.5 R23 -.0612 R13 -.7914 LSA 652.2 MSA 166.0 SSA 23.4  
 BOE .4461 BRA .4782 BC3 .6955 FSP -338 SGI 994.3 S62 420.3 THA 12.61 EL1 604.0 EL2 165.8 ALF 43.32

LAUNCH DATE FEB 2 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 27 1969

HELIOCENTRIC CONIC

DISTANCE 217.599

RL 147.43 LAL -.00 LOL 132.98 VL 26.427 GAL -2.53 AZL 88.38 MCA 95.11 SMA 120.43 ECC .22826 INC 1.6176 V1 30.220  
 RP 108.29 LAP 1.61 LOP 228.09 VP 36.729 GAP -11.88 AZP 90.14 TAL 188.61 TAP 283.72 RCA 92.94 APO 147.92 V2 34.994  
 RC 49.590 GL 10.35 GP 12.80 ZAL 110.00 ZAP 14.39 ETS 300.50 ZAE 149.19 ETE 11.48 ZAC 128.74 ETC 152.48 CLP -6.62

PLANETOCENTRIC CONIC

C3 17.222 VHL 4.150 DLA 18.39 RAL 16.90 RAD 6567.7 VEL 11.773 PTH 2.08 VHP 8.049 DPA 25.34 RAP 34.70 ECC 1.2834  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 9 13 2791.48 -28.16 81.20 242.23 93.12 1 55 44 2191.5 -27.43 72.61  
 90.00 18 11 6 4211.15 .40 172.60 235.73 61.69 19 21 17 3611.2 -3.39 165.97  
 100.00 2 41 35 2493.64 -29.55 59.18 242.12 94.70 3 23 8 1893.6 -28.59 50.51  
 100.00 19 21 25 3984.23 1.62 155.24 235.05 60.15 20 27 49 3384.2 -2.36 148.72  
 110.00 4 13 51 2204.95 -33.14 36.76 241.62 98.90 4 50 36 1604.9 -31.56 27.89  
 110.00 20 5 38 3845.69 4.69 142.83 233.14 56.10 21 9 44 3245.7 .21 136.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2970 TRA -.4471 TC3 .7784 BAU .1849 SGT 1004.3 SGR 474.3 SG3 145.2 ST 454.6 SR 430.3 SS 234.6  
 RDE -.3106 RRA .0820 RC3 .1974 FAU .03912 RRT .4284 RRF -.4759 RTF -.7942 CRT .8638 CRS .9481 CST .9683  
 FDE .2363 FRA .1611 FC3-1.9663 BSP 3142 SGB 1110.7 R23 -.0707 R13 -.8052 LSA 647.8 MSA 163.2 SSA 25.2  
 BOE .4298 BRA .4545 BC3 .8030 FSP -384 SGI 1028.9 S62 418.4 THA 13.76 EL1 604.3 EL2 163.1 ALF 43.18

LAUNCH DATE FEB 2 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 29 1969

Heliocentric Conic

DISTANCE 224.316

RL 147.43 LAL -.00 LOL 132.98 VL 26.596 GAL -2.65 AZL 88.54 MCA 98.30 SMA 121.42 ECC .21892 INC 1.4573 V1 30.220  
 RP 108.33 LAP 1.44 LOP 231.28 VP 36.839 GAP -11.05 AZP 90.21 TAL 189.54 TAP 287.84 RCA 94.84 APO 148.00 V2 34.980  
 RC 51.091 GL 9.71 GP 13.75 ZAL 111.73 ZAP 16.28 ETS 306.00 ZAE 147.79 ETE 13.32 ZAC 129.10 ETC 151.23 CLP -8.81

Planetocentric Conic

C3 16.048 VHL 4.006 DLA 17.14 RAL 15.52 RAD 6567.6 VEL 11.723 PTH 2.07 VHP 7.599 DPA 26.59 RAP 35.31 ECC 1.2641  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 16 20 2727.44 -27.83 76.55 239.09 95.43 2 1 47 2127.4 -26.79 68.04  
 90.00 17 52 59 4242.82 1.42 174.37 233.09 61.72 19 3 42 3642.8 -2.37 167.74  
 100.00 2 47 31 2433.34 -29.14 54.75 238.93 97.00 3 28 5 1833.3 -27.86 46.18  
 100.00 19 4 28 4012.14 2.57 156.77 232.45 60.21 20 11 20 3412.1 -1.42 150.25  
 110.00 4 17 28 2151.92 -32.51 32.75 238.30 101.20 4 53 20 1551.9 -30.63 24.04  
 110.00 19 51 1 3866.33 5.47 143.91 230.64 56.20 20 55 27 3266.3 .99 137.69

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2851 TRA -.4241 TC3 .8788 BAU .1963 SGT 1031.9 SGR 487.9 SG3 162.0 ST 450.6 SR 427.4 SS 217.6  
 RDE -.2977 RRA .0815 RC3 .2553 FAU .04247 RRT .4772 RRF -.5311 RTF -.8051 CRT .8662 CRS .9493 CST .9645  
 FDE .2241 FRA .1422 FC3-2.2909 BSP 3263 SGB 1141.5 R23 -.0818 R13 -.8182 LSA 637.6 MSA 160.4 SSA 27.3  
 BOE .4122 BRA .4318 BC3 .9151 FSP -434 SG1 1062.8 SG2 416.3 THA 15.08 EL1 600.0 EL2 160.4 ALF 43.26

LAUNCH DATE FEB 2 1969

FLIGHT TIME 88.00

ARRIVAL DATE MAY 1 1969

Heliocentric Conic

DISTANCE 231.021

RL 147.43 LAL -.00 LOL 132.98 VL 26.749 GAL -2.77 AZL 88.71 MCA 101.49 SMA 122.34 ECC .21051 INC 1.2945 V1 30.220  
 RP 108.38 LAP 1.27 LOP 234.47 VP 36.937 GAP -10.26 AZP 90.26 TAL 190.49 TAP 291.98 RCA 96.58 APO 148.09 V2 34.967  
 RC 52.697 GL 8.95 GP 14.80 ZAL 113.46 ZAP 18.42 ETS 310.41 ZAE 146.58 ETE 15.26 ZAC 129.29 ETC 149.93 CLP -11.09

Planetocentric Conic

C3 15.051 VHL 3.880 DLA 15.79 RAL 14.22 RAD 6567.6 VEL 11.681 PTH 2.05 VHP 7.175 DPA 27.91 RAP 35.79 ECC 1.2477  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 24 10 2662.74 -27.33 71.88 236.11 97.72 2 8 33 2062.7 -25.98 63.47  
 90.00 17 34 42 4278.58 2.57 176.36 230.65 61.79 18 46 0 3678.6 -1.22 169.74  
 100.00 2 54 14 2372.27 -28.55 50.31 235.91 99.26 3 33 46 1772.3 -26.97 41.86  
 100.00 18 47 19 4044.28 3.65 158.54 230.05 60.31 19 54 43 3444.3 -.33 152.02  
 110.00 4 21 52 2098.08 -31.73 28.75 235.17 103.44 4 56 50 1498.1 -29.55 20.21  
 110.00 19 36 10 3891.24 6.41 145.23 228.34 56.35 20 41 1 3291.2 1.95 138.99

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2690 TRA -.3997 TC3 .9833 BAU .2084 SGT 1056.5 SGR 505.9 SG3 180.9 ST 438.5 SR 422.1 SS 193.9  
 RDE -.2846 RRA .0817 RC3 .3246 FAU .04625 RRT .5281 RRF -.5888 RTF -.8168 CRT .8659 CRS .9481 CST .9580  
 FDE .2043 FRA .1196 FC3-2.6600 BSP 3433 SGB 1171.4 R23 -.0926 R13 -.8325 LSA 618.4 MSA 157.5 SSA 29.7  
 BOE .3917 BRA .4080 BC3 1.0355 FSP -494 SG1 1095.7 SG2 414.2 THA 16.63 EL1 587.9 EL2 157.5 ALF 43.74

LAUNCH DATE FEB 2 1969

FLIGHT TIME 90.00

ARRIVAL DATE MAY 3 1969

Heliocentric Conic

DISTANCE 237.712

RL 147.43 LAL -.00 LOL 132.98 VL 26.888 GAL -2.88 AZL 88.87 MCA 104.68 SMA 123.18 ECC .20298 INC 1.1282 V1 30.220  
 RP 108.42 LAP 1.09 LOP 237.66 VP 37.025 GAP -9.50 AZP 90.29 TAL 191.44 TAP 296.12 RCA 98.18 APO 148.18 V2 34.954  
 RC 54.398 GL 8.06 GP 15.98 ZAL 115.17 ZAP 20.78 ETS 313.96 ZAE 145.54 ETE 17.35 ZAC 129.29 ETC 148.59 CLP -13.46

Planetocentric Conic

C3 14.207 VHL 3.769 DLA 14.32 RAL 13.00 RAD 6567.6 VEL 11.644 PTH 2.04 VHP 6.777 DPA 29.30 RAP 36.12 ECC 1.2338  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 32 43 2597.62 -26.65 67.24 233.34 99.95 2 16 1 1997.6 -25.00 58.95  
 90.00 17 16 27 4318.04 3.84 178.57 228.44 61.92 18 28 25 3718.0 .06 171.94  
 100.00 3 1 42 2310.66 -27.79 45.88 233.10 101.48 3 40 13 1710.7 -25.93 37.58  
 100.00 18 30 9 4080.24 4.86 160.53 227.88 60.47 19 38 9 3480.2 .89 153.99  
 110.00 4 27 3 2043.60 -30.80 24.77 232.27 105.62 5 1 7 1443.6 -28.35 16.43  
 110.00 19 21 17 3920.06 7.50 146.75 226.26 56.55 20 26 37 3320.1 3.05 140.49

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2528 TRA -.3788 TC3 1.0779 BAU .2188 SGT 1077.5 SGR 529.6 SG3 201.7 ST 424.3 SR 414.4 SS 166.0  
 RDE -.2714 RRA .0823 RC3 .4059 FAU .05037 RRT .5791 RRF -.6472 RTF -.8246 CRT .8635 CRS .9422 CST .9474  
 FDE .1783 FRA .0966 FC3-3.0694 BSP 3542 SGB 1200.6 R23 -.1067 R13 -.8438 LSA 595.2 MSA 154.9 SSA 32.6  
 BOE .3709 BRA .3876 BC3 1.1518 FSP -558 SG1 1127.5 SG2 412.6 THA 18.44 EL1 572.6 EL2 154.9 ALF 44.22

LAUNCH DATE FEB 2 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 5 1969

Heliocentric Conic

DISTANCE 244.388

RL 147.43 LAL -.00 LOL 132.98 VL 27.012 GAL -2.98 AZL 89.04 MCA 107.87 SMA 123.95 ECC .19621 INC .9570 V1 30.220  
 RP 108.45 LAP .91 LOP 240.85 VP 37.104 GAP -8.77 AZP 90.29 TAL 192.39 TAP 300.26 RCA 99.63 APO 148.27 V2 34.942  
 RC 56.186 GL 7.04 GP 17.30 ZAL 116.83 ZAP 23.35 ETS 316.85 ZAE 144.66 ETE 19.64 ZAC 129.09 ETC 147.23 CLP -15.94

Planetocentric Conic

C3 13.495 VHL 3.674 DLA 12.76 RAL 11.90 RAD 6567.5 VEL 11.614 PTH 2.03 VHP 6.404 DPA 30.77 RAP 36.26 ECC 1.2221  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 42 2 2532.21 -25.79 62.64 230.80 102.11 2 24 14 1932.2 -23.87 54.50  
 90.00 16 58 21 4360.91 5.21 180.98 226.50 62.13 18 11 2 3760.9 1.44 174.33  
 100.00 3 9 58 2248.61 -26.87 41.50 230.53 103.61 3 47 26 1648.6 -24.74 33.36  
 100.00 18 13 6 4119.74 6.18 162.72 225.96 60.70 19 21 46 3519.7 2.23 156.16  
 110.00 4 33 3 1988.60 -29.72 20.85 229.62 107.72 5 6 12 1388.6 -27.01 12.71  
 110.00 19 6 30 3952.52 8.71 148.48 224.42 56.81 20 12 22 3352.5 4.28 142.19

Differential Corrections

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.2343 TRA -.3590 TC3 1.1658 BAU .2289 SGT 1094.0 SGR 560.6 SG3 224.7 ST 404.8 SR 403.4 SS 132.2  
 RDE -.2573 RRA .0833 RC3 .5011 FAU .05492 RRT .6285 RRF -.7045 RTF -.8312 CRT .8575 CRS .9241 CST .9259  
 FDE .1431 FRA .0721 FC3-3.5233 BSP 3653 SGB 1229.3 R23 -.1221 R13 -.8549 LSA 565.3 MSA 152.5 SSA 36.1  
 BOE .3480 BRA .3686 BC3 1.2689 FSP -630 SG1 1158.2 SG2 411.9 THA 20.57 EL1 550.8 EL2 152.5 ALF 44.88

LAUNCH DATE FEB 2 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 7 1969

Heliocentric Conic: RL 147.43 LAL -.00 LOL 132.98 VL 27.123 GAL -3.08 AZL 89.22 MCA 111.05 SMA 124.65 ECC .19021 INC .7796 V1 30.220  
 RP 108.49 LAP .73 LOP 244.03 VP 37.173 GAP -8.07 AZP 90.28 TAL 193.31 TAP 304.37 RCA 100.94 APO 148.36 V2 34.929  
 RC 58.051 GL 5.89 GP 18.77 ZAL 118.42 ZAP 26.15 ETS 319.25 ZAE 143.92 ETE 22.17 ZAC 128.66 ETC 145.87 CLP -18.55

Planetocentric Conic: C3 12.896 VHL 3.591 DLA 11.10 RAL 10.93 RAD 6567.5 VEL 11.588 PTH 2.03 VHP 6.057 DPA 32.35 RAP 36.20 ECC 1.2122  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 52 7 2466.50 -24.78 58.09 228.51 104.17 2 33 13 1866.5 -22.59 50.11  
 90.00 16 40 32 4406.98 6.67 183.58 224.82 62.42 17 53 58 3807.0 2.92 176.90  
 100.00 3 19 2 2186.18 -25.80 37.17 228.21 105.64 3 55 28 1586.2 -23.40 29.19  
 100.00 17 56 18 4162.53 7.60 165.10 224.31 61.00 19 5 40 3562.5 3.68 158.51  
 110.00 4 39 54 1933.11 -28.51 16.99 227.24 109.71 5 12 7 1333.1 -25.56 9.06  
 110.00 18 51 55 3988.36 10.04 150.41 222.83 57.15 19 58 23 3388.4 5.64 144.08

Differential Corrections: TOE -.2141 TRA -.3411 TC3 1.2420 BAU .2387 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 ROE -.2419 RRA .0847 RC3 .6118 FAU .05988 SGT 1104.6 SGR 600.8 SG3 249.9 ST 380.9 SR 388.3 SS 94.1  
 FDE .0977 FRA .0472 FC3-4.0201 BSP 3757 RRT .6742 RRF -.7586 RTF -.8361 CRT .8471 CRS .8643 CST .8673  
 BOE .3230 BRA .3515 BC3 1.3845 FSP -709 SGB 1257.4 R23 -.1385 R13 -.8658 LSA 529.6 MSA 150.4 SSA 40.3  
 SG1 1187.7 SG2 412.6 THA 23.08 EL1 522.8 EL2 150.4 ALF 45.65

LAUNCH DATE FEB 2 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 9 1969

Heliocentric Conic: RL 147.43 LAL -.00 LOL 132.98 VL 27.223 GAL -3.16 AZL 89.41 MCA 114.23 SMA 125.29 ECC .18490 INC .5945 V1 30.220  
 RP 108.53 LAP .54 LOP 247.21 VP 37.235 GAP -7.40 AZP 90.24 TAL 194.20 TAP 308.44 RCA 102.12 APO 148.45 V2 34.917  
 RC 59.985 GL 4.60 GP 20.41 ZAL 119.92 ZAP 29.17 ETS 321.27 ZAE 143.29 ETE 25.01 ZAC 127.97 ETC 144.55 CLP -21.30

Planetocentric Conic: C3 12.396 VHL 3.521 DLA 9.35 RAL 10.11 RAD 6567.5 VEL 11.566 PTH 2.02 VHP 5.737 DPA 34.02 RAP 35.89 ECC 1.2040  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 3 4 2400.41 -23.60 53.61 226.50 106.12 2 43 4 1800.4 -21.17 45.78  
 90.00 16 23 1 4456.13 8.21 186.37 223.42 62.80 17 37 17 3856.1 4.50 179.65  
 100.00 3 28 59 2123.29 -24.58 32.90 226.17 107.57 4 4 22 1523.3 -21.94 25.10  
 100.00 17 39 47 4208.48 9.11 167.68 222.94 61.41 18 49 55 3608.5 5.22 161.05  
 110.00 4 47 39 1877.10 -27.16 13.19 225.15 111.60 5 18 56 1277.1 -23.99 5.46  
 110.00 18 37 36 4027.43 11.48 152.52 221.53 57.58 19 44 43 3427.4 7.12 146.14

Differential Corrections: TOE -.1925 TRA -.3252 TC3 1.3030 BAU .2483 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 ROE -.2245 RRA .0864 RC3 .7397 FAU .06524 SGT 1108.0 SGR 651.9 SG3 277.3 ST 353.3 SR 368.1 SS 57.8  
 FDE .0398 FRA .0227 FC3-4.5561 BSP 3657 RRT .7142 RRF -.8075 RTF -.8392 CRT .8305 CRS .5752 CST .6009  
 BOE .2957 BRA .3365 BC3 1.4983 FSP -796 SGB 1285.6 R23 -.1550 R13 -.8767 LSA 489.4 MSA 148.4 SSA 45.4  
 SG1 1216.5 SG2 415.6 THA 26.06 EL1 488.1 EL2 148.4 ALF 46.42

LAUNCH DATE FEB 2 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 11 1969

Heliocentric Conic: RL 147.43 LAL -.00 LOL 132.98 VL 27.312 GAL -3.24 AZL 89.60 MCA 117.41 SMA 125.86 ECC .18020 INC .4001 V1 30.220  
 RP 108.57 LAP .36 LOP 250.39 VP 37.288 GAP -6.76 AZP 90.18 TAL 195.05 TAP 312.47 RCA 103.18 APO 148.54 V2 34.906  
 RC 61.981 GL 3.16 GP 22.25 ZAL 121.30 ZAP 32.42 ETS 323.04 ZAE 142.73 ETE 28.20 ZAC 127.01 ETC 143.28 CLP -24.21

Planetocentric Conic: C3 11.981 VHL 3.461 DLA 7.50 RAL 9.44 RAD 6567.5 VEL 11.549 PTH 2.02 VHP 5.444 DPA 35.81 RAP 35.29 ECC 1.1972  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 14 57 2333.74 -22.27 49.17 224.77 107.95 2 53 51 1733.7 -19.61 41.51  
 90.00 16 5 51 4508.40 9.82 189.36 222.33 63.31 17 20 59 3908.4 6.16 182.59  
 100.00 3 39 54 2059.76 -23.20 28.68 224.42 109.39 4 14 14 1459.8 -20.35 21.05  
 100.00 17 23 35 4257.61 10.70 170.46 221.87 61.92 18 34 33 3657.6 6.86 163.77  
 110.00 4 56 22 1820.44 -25.69 9.44 223.36 113.37 5 26 43 1220.4 -22.30 1.92  
 110.00 18 23 36 4069.69 13.01 154.84 220.51 58.11 19 31 26 3469.7 8.70 148.39

Differential Corrections: TOE -.1679 TRA -.3099 TC3 1.3506 BAU .2589 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 ROE -.2038 RRA .0886 RC3 .8878 FAU .07101 SGT 1104.2 SGR 716.5 SG3 306.9 ST 319.6 SR 340.7 SS 57.2  
 FDE -.0354 FRA -.0026 FC3-5.1312 BSP 4000 RRT .7482 RRF -.8502 RTF -.8420 CRT .8025 CRS -.4280 CST -.3471  
 BOE .2640 BRA .3223 BC3 1.6163 FSP -894 SGB 1316.3 R23 -.1674 R13 -.8894 LSA 444.2 MSA 146.6 SSA 51.6  
 SG1 1247.2 SG2 420.9 THA 29.60 EL1 443.6 EL2 146.4 ALF 47.28

LAUNCH DATE FEB 2 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 13 1969

Heliocentric Conic: RL 147.43 LAL -.00 LOL 132.98 VL 27.390 GAL -3.31 AZL 89.81 MCA 120.59 SMA 126.38 ECC .17608 INC .1943 V1 30.220  
 RP 108.60 LAP .17 LOP 253.57 VP 37.335 GAP -6.14 AZP 90.10 TAL 195.84 TAP 316.43 RCA 104.12 APO 148.63 V2 34.894  
 RC 64.032 GL 1.56 GP 24.29 ZAL 122.55 ZAP 35.91 ETS 324.63 ZAE 142.20 ETE 31.79 ZAC 125.75 ETC 142.10 CLP -27.30

Planetocentric Conic: C3 11.642 VHL 3.412 DLA 5.56 RAL 8.96 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 5.180 DPA 37.71 RAP 34.36 ECC 1.1916  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 27 55 2266.17 -20.79 44.78 223.33 109.67 3 5 41 1666.2 -17.92 37.28  
 90.00 15 49 0 4563.93 11.50 192.58 221.55 63.95 17 5 3 3963.9 7.91 185.74  
 100.00 3 51 53 1995.33 -21.69 24.50 222.98 111.09 4 25 8 1395.3 -18.63 17.04  
 100.00 17 7 42 4310.00 12.36 173.46 221.11 62.56 18 19 32 3710.0 8.59 166.70  
 110.00 5 6 9 1762.91 -24.08 5.75 221.87 115.03 5 35 32 1162.9 -20.51 358.43  
 110.00 18 9 56 4115.19 14.63 157.37 219.80 58.76 19 18 31 3515.2 10.38 150.84

Differential Corrections: TOE -.1448 TRA -.2992 TC3 1.3685 BAU .2690 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 ROE -.1796 RRA .0901 RC3 1.0553 FAU .07691 SGT 1089.1 SGR 795.4 SG3 337.7 ST 287.8 SR 305.7 SS 107.9  
 FDE -.1254 FRA -.0221 FC3-5.7194 BSP 4102 RRT .7724 RRF -.8854 RTF -.8398 CRT .7615 CRS -.8198 CST -.7146  
 BOE .2307 BRA .3125 BC3 1.7281 FSP -994 SGB 1348.6 R23 -.1792 R13 -.9012 LSA 404.2 MSA 145.4 SSA 58.1  
 SG1 1278.0 SG2 430.5 THA 33.77 EL1 394.2 EL2 144.7 ALF 47.27

LAUNCH DATE FEB 2 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 15 1969

HELIOCENTRIC CONIC

DISTANCE 277.459

RL 147.43 LAL -.00 LOL 132.98 VL 27.459 GAL -3.37 AZL 90.02 HCA 123.77 SMA 126.83 ECC .17247 INC .0210 V1 30.220  
 RP 108.64 LAP -.02 LOP 256.74 VP 37.375 GAP -5.55 AZP 89.99 TAL 196.57 TAP 320.33 RCA 104.96 APO 148.71 V2 34.883  
 RC 66.131 GL -.20 GP 26.56 ZAL 123.64 ZAP 39.65 ETS 326.13 ZAE 141.64 ETE 35.81 ZAC 124.17 ETC 141.06 CLP -30.59

PLANETOCENTRIC CONIC

C3 11.372 VHL 3.372 DLA 3.52 RAL 8.65 RAD 6567.4 VEL 11.522 PTH 2.01 VHP 4.946 DPA 39.74 RAP 33.05 ECC 1.1872  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 42 7 2197.25 -19.14 40.39 222.22 111.27 3 18 44 1597.3 -16.08 33.05  
 90.00 15 32 23 4623.10 13.25 196.05 221.11 64.74 16 49 26 4023.1 9.74 189.13  
 100.00 4 5 6 1929.58 -20.02 20.33 221.85 112.68 4 37 16 1329.6 -16.77 13.04  
 100.00 16 52 5 4366.00 14.09 176.72 220.68 63.36 18 4 51 3766.0 10.40 169.87  
 110.00 5 17 7 1704.19 -22.34 2.07 220.70 116.57 5 45 31 1104.2 -18.59 354.95  
 110.00 17 56 33 4164.16 16.34 160.13 219.42 59.55 19 5 57 3564.2 12.17 153.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1217 TRA -.2911 TC3 1.3586 BAU .2801  
 RDE -.1502 RRA .0911 RC3 1.2441 FAU .08286  
 FDE -.2342 FRA -.0362 FC3-6.3079 BSP 4214  
 BOE .1933 BRA .3050 BC3 1.8422 FSP -1096

SGT 1062.0 SGR 890.7 SG3 369.2  
 RRT .7875 RRF -.9138 RTF -.8341  
 SGB 1386.1 R23 -.1844 R13 -.9141  
 SG1 1313.0 SG2 444.0 TMA 38.67

ST 256.1 SR 260.6 SS 178.7  
 CRT .6973 CRS -.8941 CST -.7608  
 LSA 374.7 MSA 145.0 SSA 63.7  
 EL1 336.7 EL2 142.1 ALF 45.72

LAUNCH DATE FEB 2 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 17 1969

HELIOCENTRIC CONIC

DISTANCE 284.003

RL 147.43 LAL -.00 LOL 132.98 VL 27.519 GAL -3.42 AZL 90.26 HCA 126.94 SMA 127.23 ECC .16933 INC .2604 V1 30.220  
 RP 108.67 LAP -.21 LOP 259.92 VP 37.410 GAP -4.98 AZP 89.84 TAL 197.22 TAP 324.16 RCA 105.69 APO 148.78 V2 34.873  
 RC 68.274 GL -2.15 GP 29.06 ZAL 124.56 ZAP 43.62 ETS 327.63 ZAE 140.97 ETE 40.30 ZAC 122.27 ETC 140.19 CLP -34.09

PLANETOCENTRIC CONIC

C3 11.168 VHL 3.342 DLA 1.36 RAL 8.55 RAD 6567.4 VEL 11.513 PTH 2.01 VHP 4.745 DPA 41.87 RAP 31.29 ECC 1.1838  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 57 47 2126.38 -17.34 35.97 221.43 112.75 3 33 13 1526.4 -14.10 28.79  
 90.00 15 15 53 4686.45 15.05 199.82 221.01 65.73 16 34 0 4086.5 11.65 192.79  
 100.00 4 19 45 1861.98 -18.19 16.14 221.05 114.14 4 50 47 1262.0 -14.77 9.01  
 100.00 16 36 36 4426.09 15.90 180.27 220.60 64.35 17 50 22 3826.1 12.31 173.31  
 110.00 5 29 26 1643.84 -20.46 358.41 219.87 118.00 5 56 50 1043.8 -16.55 351.46  
 110.00 17 43 24 4216.99 18.14 163.17 219.38 60.52 18 53 41 3617.0 14.07 156.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1002 TRA -.2860 TC3 1.3162 BAU .2928  
 RDE -.1143 RRA .0907 RC3 1.4541 FAU .08860  
 FDE -.3623 FRA -.0416 FC3-6.8681 BSP 4349  
 BOE .1520 BRA .3000 BC3 1.9613 FSP -1199

SGT 1021.7 SGR 1003.6 SG3 400.3  
 RRT .7922 RRF -.9358 RTF -.8232  
 SGB 1432.2 R23 -.1811 R13 -.9278  
 SG1 1355.8 SG2 461.5 TMA 44.35

ST 227.7 SR 203.6 SS 261.0  
 CRT .5947 CRS -.9008 CST -.7326  
 LSA 368.6 MSA 146.0 SSA 64.8  
 EL1 273.3 EL2 136.4 ALF 39.67

LAUNCH DATE FEB 2 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 19 1969

HELIOCENTRIC CONIC

DISTANCE 290.522

RL 147.43 LAL -.00 LOL 132.98 VL 27.571 GAL -3.46 AZL 90.52 HCA 130.11 SMA 127.58 ECC .16661 INC .5173 V1 30.220  
 RP 108.70 LAP -.40 LOP 263.09 VP 37.438 GAP -4.44 AZP 89.67 TAL 197.79 TAP 327.89 RCA 106.33 APO 148.84 V2 34.862  
 RC 70.456 GL -4.29 GP 31.80 ZAL 125.28 ZAP 47.83 ETS 329.19 ZAE 140.11 ETE 45.22 ZAC 120.03 ETC 139.54 CLP -37.83

PLANETOCENTRIC CONIC

C3 11.027 VHL 3.321 DLA -.94 RAL 8.66 RAD 6567.4 VEL 11.507 PTH 2.00 VHP 4.578 DPA 44.11 RAP 29.04 ECC 1.1815  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 15 10 2052.80 -15.34 31.49 221.00 114.09 3 49 23 1452.8 -11.96 24.45  
 90.00 14 59 20 4754.83 16.92 203.97 221.30 66.95 16 18 35 4154.8 13.66 196.81  
 100.00 4 36 5 1791.81 -16.18 11.90 220.60 115.48 5 5 57 1191.8 -12.62 4.92  
 100.00 16 21 7 4491.05 17.77 184.18 220.91 65.56 17 35 58 3891.0 14.32 177.09  
 110.00 5 43 20 1581.31 -18.41 354.71 219.39 119.32 6 9 41 981.3 -14.37 347.93  
 110.00 17 30 21 4274.31 20.02 166.55 219.73 61.70 18 41 36 3674.3 16.08 159.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0799 TRA -.2825 TC3 1.2423 BAU .3087  
 RDE -.0693 RRA .0887 RC3 1.6858 FAU .09392  
 FDE -.5135 FRA -.0385 FC3-7.3734 BSP 4553  
 BOE .1058 BRA .2961 BC3 2.0941 FSP -1303

SGT 968.2 SGR 1136.3 SG3 430.0  
 RRT .7868 RRF -.9525 RTF -.8064  
 SGB 1492.9 R23 -.1658 R13 -.9425  
 SG1 1413.5 SG2 480.5 TMA 50.78

ST 202.5 SR 132.4 SS 355.3  
 CRT .3953 CRS -.8415 CST -.6675  
 LSA 399.3 MSA 148.0 SSA 59.1  
 EL1 212.4 EL2 116.0 ALF 21.04

LAUNCH DATE FEB 2 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 21 1969

HELIOCENTRIC CONIC

DISTANCE 297.016

RL 147.43 LAL -.00 LOL 132.98 VL 27.615 GAL -3.49 AZL 90.80 HCA 133.28 SMA 127.88 ECC .16427 INC .7989 V1 30.220  
 RP 108.73 LAP -.58 LOP 266.26 VP 37.462 GAP -3.91 AZP 89.45 TAL 198.27 TAP 331.54 RCA 106.88 APO 148.89 V2 34.853  
 RC 72.672 GL -6.67 GP 34.77 ZAL 125.78 ZAP 52.25 ETS 330.91 ZAE 138.98 ETE 50.55 ZAC 117.48 ETC 139.14 CLP -41.81

PLANETOCENTRIC CONIC

C3 10.954 VHL 3.310 DLA -3.38 RAL 8.99 RAD 6567.4 VEL 11.504 PTH 2.00 VHP 4.449 DPA 46.43 RAP 26.22 ECC 1.1803  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 34 40 1975.53 -13.14 26.88 220.96 115.31 4 7 36 1375.5 -9.63 19.97  
 90.00 14 42 29 4829.37 18.85 208.59 222.01 68.47 16 2 58 4229.4 15.76 201.28  
 100.00 4 54 26 1718.22 -13.98 7.54 220.54 116.69 5 23 4 1118.2 -10.28 .70  
 100.00 16 5 24 4561.91 19.71 188.55 221.63 67.06 17 21 26 3961.9 16.43 181.29  
 110.00 5 59 3 1515.93 -16.19 350.94 219.29 120.52 6 24 19 915.9 -12.02 344.32  
 110.00 17 17 16 4336.97 22.00 170.34 220.50 63.15 18 29 33 3737.0 18.22 163.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0656 TRA -.2834 TC3 1.1224 BAU .3270  
 RDE -.0143 RRA .0824 RC3 1.9300 FAU .09815  
 FDE -.6801 FRA -.0175 FC3-7.7567 BSP 4770  
 BOE .0671 BRA .2951 BC3 2.2327 FSP -1389

SGT 898.0 SGR 1285.8 SG3 455.1  
 RRT .7637 RRF -.9648 RTF -.7750  
 SGB 1568.3 R23 -.1426 R13 -.9561  
 SG1 1485.9 SG2 501.6 TMA 57.83

ST 187.4 SR 62.6 SS 456.4  
 CRT -.2269 CRS -.3068 CST -.5911  
 LSA 471.4 MSA 150.6 SSA 49.0  
 EL1 188.0 EL2 60.8 ALF 175.16

LAUNCH DATE FEB 2 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 23 1969

HELIOCENTRIC CONIC

DISTANCE 303.484

RL 147.43 LAL -.00 LOL 132.98 VL 27.653 GAL -3.51 AZL 91.11 MCA 136.44 SMA 128.14 ECC .16227 INC 1.1114 V1 30.220  
 RP 108.76 LAP -.77 LOP 269.42 VP 37.481 GAP -3.41 AZP 89.19 TAL 198.66 TAP 335.10 RCA 107.35 APO 148.93 V2 34.844  
 RC 74.919 GL -9.31 GP 37.97 ZAL 126.02 ZAP 56.83 ETS 332.85 ZAE 137.51 ETE 56.18 ZAC 114.62 ETC 139.04 CLP -46.05

PLANETOCENTRIC CONIC

C3 10.957 VHL 3.310 DLA -6.01 RAL 9.56 RAD 6567.4 VEL 11.504 PTH 2.00 VHP 4.361 DPA 48.79 RAP 22.77 ECC 1.1803  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 56 47 1893.29 -10.70 22.08 221.36 116.37 4 28 20 1293.3 -7.07 15.28  
 90.00 14 24 58 4911.72 20.82 213.83 223.19 70.36 15 46 50 4311.7 17.96 206.33  
 100.00 5 15 16 1640.07 -11.54 3.02 220.92 117.77 5 42 37 1040.1 -7.74 356.30  
 100.00 15 49 10 4640.17 21.71 193.50 222.84 68.93 17 6 30 4040.2 18.65 186.04  
 110.00 6 17 0 1446.82 -13.76 347.06 219.62 121.60 6 41 7 846.8 -9.48 340.57  
 110.00 17 3 56 4406.19 24.06 174.65 221.75 64.95 18 17 22 3806.2 20.48 167.33

DIFFERENTIAL CORRECTIONS

TDE -.0565 TRA -.2847 TC3 .9652 BAU .3498  
 RDE .0549 RRA .0721 RC3 2.1840 FAU .10112  
 FDE -.8652 FRA .0160 FC3-7.9894 BSP 5088  
 BDE .0788 BRA .2937 BC3 2.3878 FSP -1464

MID-COURSE EXECUTION ACCURACY

SGT 814.5 SGR 1454.4 SG3 475.0  
 RRT .7197 RRF -.9739 RTF -.7253  
 SGB 1666.9 R23 -.1111 R13 -.9682  
 SG1 1584.0 SG2 519.2 TMA 65.21

ORBIT DETERMINATION ACCURACY

ST 179.0 SR 111.0 SS 567.5  
 CRT -.7074 CRS .8903 CST -.5276  
 LSA 584.6 MSA 152.2 SSA 38.7  
 EL1 198.3 EL2 70.8 ALF 152.52

LAUNCH DATE FEB 2 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 25 1969

HELIOCENTRIC CONIC

DISTANCE 309.926

RL 147.43 LAL -.00 LOL 132.98 VL 27.684 GAL -3.52 AZL 91.46 MCA 139.60 SMA 128.35 ECC .16056 INC 1.4622 V1 30.220  
 RP 108.78 LAP -.95 LOP 272.59 VP 37.496 GAP -2.92 AZP 88.89 TAL 198.96 TAP 338.56 RCA 107.74 APO 148.96 V2 34.835  
 RC 77.194 GL -12.25 GP 41.38 ZAL 125.98 ZAP 61.53 ETS 335.09 ZAE 135.63 ETE 62.01 ZAC 111.51 ETC 139.27 CLP -50.56

PLANETOCENTRIC CONIC

C3 11.052 VHL 3.324 DLA -8.85 RAL 10.41 RAD 6567.4 VEL 11.508 PTH 2.00 VHP 4.320 DPA 51.15 RAP 18.63 ECC 1.1819  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 22 12 1804.42 -7.97 16.98 222.25 117.26 4 52 16 1204.4 -4.25 10.27  
 90.00 14 6 18 5004.11 22.81 219.87 224.94 72.75 15 29 42 4404.1 20.24 212.14  
 100.00 5 39 14 1555.90 -8.83 358.24 221.79 118.67 6 5 9 955.9 -4.93 351.62  
 100.00 15 31 57 4727.86 23.74 199.22 224.61 71.28 16 50 45 4127.9 20.96 191.53  
 110.00 6 37 39 1372.95 -11.09 343.00 220.43 122.54 7 0 32 772.9 -6.72 336.63  
 110.00 16 50 1 4483.58 26.20 179.65 223.59 67.21 18 4 44 3883.6 22.88 172.06

DIFFERENTIAL CORRECTIONS

TDE -.0588 TRA -.2885 TC3 .7585 BAU .3757  
 RDE .1391 RRA .0537 RC3 2.4269 FAU .10200  
 FDE -1.0551 FRA .0706 FC3-7.9900 BSP 5442  
 BDE .1510 BRA .2934 BC3 2.5427 FSP -1504

MID-COURSE EXECUTION ACCURACY

SGT 719.5 SGR 1634.0 SG3 485.3  
 RRT .6313 RRF -.9803 RTF -.6327  
 SGB 1785.4 R23 -.0779 R13 -.9774  
 SG1 1703.3 SG2 535.3 TMA 72.70

ORBIT DETERMINATION ACCURACY

ST 182.4 SR 246.2 SS 681.5  
 CRT -.6189 CRS .9847 CST -.5290  
 LSA 730.5 MSA 154.4 SSA 30.0  
 EL1 279.1 EL2 126.4 ALF 121.90

LAUNCH DATE FEB 2 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 27 1969

HELIOCENTRIC CONIC

DISTANCE 316.342

RL 147.43 LAL -.00 LOL 132.98 VL 27.709 GAL -3.52 AZL 91.86 MCA 142.76 SMA 128.53 ECC .15913 INC 1.8614 V1 30.220  
 RP 108.81 LAP -1.13 LOP 275.76 VP 37.507 GAP -2.46 AZP 88.52 TAL 199.16 TAP 341.93 RCA 108.07 APO 148.98 V2 34.827  
 RC 79.493 GL -15.53 GP 44.96 ZAL 125.60 ZAP 66.26 ETS 337.70 ZAE 133.31 ETE 67.90 ZAC 108.18 ETC 139.85 CLP -55.32

PLANETOCENTRIC CONIC

C3 11.264 VHL 3.356 DLA -11.93 RAL 11.55 RAD 6567.4 VEL 11.517 PTH 2.01 VHP 4.332 DPA 53.46 RAP 13.77 ECC 1.1854  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 51 55 1706.56 -4.88 11.44 223.77 117.93 5 20 22 1106.6 -1.11 4.80  
 90.00 13 45 43 5109.82 24.77 227.00 227.35 75.81 15 10 52 4509.8 22.57 219.01  
 100.00 6 7 11 1463.72 -5.78 353.10 223.27 119.38 6 31 35 863.7 -1.82 346.54  
 100.00 15 13 8 4827.89 25.76 205.97 227.06 74.28 16 33 35 4227.9 23.35 198.00  
 110.00 7 1 43 1292.97 -8.13 338.70 221.83 123.32 7 23 16 693.0 -3.69 332.43  
 110.00 16 35 6 4571.40 28.38 185.55 226.11 70.09 17 51 17 3971.4 25.40 177.64

DIFFERENTIAL CORRECTIONS

TDE -.0745 TRA -.2917 TC3 .5126 BAU .4055  
 RDE .2425 RRA .0254 RC3 2.6434 FAU .10059  
 FDE -1.2450 FRA .1431 FC3-7.7312 BSP 5874  
 BDE .2537 BRA .2928 BC3 2.6926 FSP -1511

MID-COURSE EXECUTION ACCURACY

SGT 627.3 SGR 1822.5 SG3 485.0  
 RRT .4682 RRF -.9850 RTF -.4664  
 SGB 1927.5 R23 -.0456 R13 -.9839  
 SG1 1848.4 SG2 546.6 TMA 79.96

ORBIT DETERMINATION ACCURACY

ST 199.0 SR 417.6 SS 798.1  
 CRT -.6514 CRS .9963 CST -.6063  
 LSA 908.7 MSA 156.8 SSA 23.2  
 EL1 439.8 EL2 143.3 ALF 109.39

LAUNCH DATE FEB 2 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 29 1969

HELIOCENTRIC CONIC

DISTANCE 322.731

RL 147.43 LAL -.00 LOL 132.98 VL 27.728 GAL -3.51 AZL 92.32 MCA 145.92 SMA 128.66 ECC .15794 INC 2.3230 V1 30.220  
 RP 108.83 LAP -1.30 LOP 278.92 VP 37.515 GAP -2.01 AZP 88.08 TAL 199.27 TAP 345.19 RCA 108.34 APO 148.98 V2 34.820  
 RC 81.813 GL -19.20 GP 48.68 ZAL 124.84 ZAP 70.92 ETS 340.74 ZAE 130.54 ETE 73.75 ZAC 104.71 ETC 140.80 CLP -60.33

PLANETOCENTRIC CONIC

C3 11.637 VHL 3.411 DLA -15.31 RAL 13.04 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 4.403 DPA 55.66 RAP 8.15 ECC 1.1915  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 27 33 1596.04 -1.33 5.26 226.05 118.29 5 54 9 996.0 2.46 358.63  
 90.00 13 21 56 5233.86 26.55 235.64 230.55 79.79 14 49 10 4633.9 24.87 227.37  
 100.00 6 40 32 1360.56 -2.31 347.41 225.51 119.81 7 3 12 760.6 1.67 340.89  
 100.00 14 51 38 4944.57 27.65 214.12 230.31 78.17 16 14 3 4344.6 25.74 205.84  
 110.00 7 30 9 1205.14 -4.82 334.06 223.95 123.88 7 50 14 605.1 -.34 327.84  
 110.00 16 18 31 4672.77 30.52 192.66 229.49 73.80 17 36 23 4072.8 28.00 184.37

DIFFERENTIAL CORRECTIONS

TDE -.1080 TRA -.2907 TC3 .2389 BAU .4393  
 RDE .3699 RRA -.0142 RC3 2.8139 FAU .09685  
 FDE -1.4282 FRA .2257 FC3-7.2051 BSP 6425  
 BDE .3854 BRA .2911 BC3 2.8241 FSP -1489

MID-COURSE EXECUTION ACCURACY

SGT 561.9 SGR 2018.0 SG3 473.8  
 RRT .1876 RRF -.9883 RTF -.1834  
 SGB 2094.8 R23 -.0173 R13 -.9882  
 SG1 2021.0 SG2 551.1 TMA 86.77

ORBIT DETERMINATION ACCURACY

ST 236.6 SR 624.0 SS 915.4  
 CRT -.7536 CRS .9988 CST -.7314  
 LSA 1121.6 MSA 158.5 SSA 17.9  
 EL1 650.5 EL2 149.2 ALF 106.86

LAUNCH DATE FEB 2 1969

FLIGHT TIME 118.00

ARRIVAL DATE MAY 31 1969

HELIOCENTRIC CONIC

DISTANCE 329.094

RL 147.43 LAL -.00 LOL 132.98 VL 27.743 GAL -3.48 AZL 92.87 MCA 149.07 SMA 128.76 ECC .15697 INC 2.8660 V1 30.220  
 RP 108.85 LAP -1.47 LOP 282.08 VP 37.519 GAP -1.57 AZP 87.54 TAL 199.29 TAP 348.36 RCA 108.55 APO 148.97 V2 34.813  
 RC 84.153 GL -23.32 GP 52.51 ZAL 123.66 ZAP 75.42 ETS 344.25 ZAE 127.34 ETE 79.45 ZAC 101.15 ETC 142.13 CLP -65.56

PLANETOCENTRIC CONIC

C3 12.239 VHL 3.498 DLA -19.02 RAL 14.92 RAD 6567.5 VEL 11.560 PTH 2.02 VHP 4.545 DPA 57.72 RAP 1.79 ECC 1.2014  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 11 51 1466.27 2.85 358.02 229.38 118.18 6 36 17 866.3 6.60 351.35  
 90.00 12 52 39 5384.87 27.92 246.47 234.67 85.05 14 22 24 4784.9 26.94 237.94  
 100.00 7 21 31 1241.45 1.73 340.87 228.75 119.85 7 42 12 641.5 5.69 334.32  
 100.00 14 25 40 5084.92 29.20 224.26 234.52 83.29 15 50 25 4484.9 27.96 215.67  
 110.00 8 4 28 1106.89 -1.07 328.92 227.00 124.17 8 22 55 506.9 3.42 322.71  
 110.00 15 59 13 4792.25 32.46 201.43 233.92 78.65 17 19 5 4192.3 30.56 192.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1682 TRA -.2844 TC3 -.0555 BAU .4740  
 RDE .5216 RRA -.0721 RC3 2.8964 FAU .09027  
 FDE -1.5831 FRA .3233 FC3-6.3854 BSP 6985  
 BDE .5481 BRA .2934 BC3 2.8970 FSP -1415

SGT 565.8 SGR 2202.9 SG3 448.9  
 RRT -.2026 RRF -.9907 RTF .2081  
 SGB 2274.4 R23 .0062 R13 -.9907  
 SG1 2206.0 SG2 553.3 THA 93.18

ST 312.6 SR 857.3 SS 1021.7  
 CRT -.8577 CRS .9996 CST -.8478  
 LSA 1360.3 MSA 161.0 SSA 13.9  
 EL1 899.6 EL2 153.2 ALF 107.90

LAUNCH DATE FEB 2 1969

FLIGHT TIME 120.00

ARRIVAL DATE JUN 2 1969

HELIOCENTRIC CONIC

DISTANCE 335.430

RL 147.43 LAL -.00 LOL 132.98 VL 27.753 GAL -3.45 AZL 93.52 MCA 152.22 SMA 128.83 ECC .15618 INC 3.5190 V1 30.220  
 RP 108.87 LAP -1.64 LOP 285.25 VP 37.521 GAP -1.15 AZP 86.89 TAL 199.21 TAP 351.43 RCA 108.71 APO 148.95 V2 34.807  
 RC 86.508 GL -27.92 GP 56.44 ZAL 121.98 ZAP 79.63 ETS 348.28 ZAE 123.74 ETE 84.99 ZAC 97.57 ETC 143.85 CLP -70.99

PLANETOCENTRIC CONIC

C3 13.187 VHL 3.631 DLA -23.07 RAL 17.27 RAD 6567.5 VEL 11.601 PTH 2.03 VHP 4.774 DPA 59.59 RAP 354.68 ECC 1.2170  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 11 0 1301.22 8.09 348.72 234.21 117.23 7 32 41 701.2 11.68 341.88  
 90.00 12 12 16 5581.88 28.24 260.86 239.75 92.24 13 45 18 4981.9 28.25 252.19  
 100.00 8 14 43 1095.57 6.63 332.82 233.42 119.21 8 32 58 495.6 10.48 326.14  
 100.00 13 51 14 5262.76 29.89 237.42 239.79 90.17 15 18 57 4662.8 29.60 228.63  
 110.00 8 47 9 993.85 3.24 323.02 231.33 124.05 9 3 43 393.8 7.69 316.75  
 110.00 15 35 17 4937.25 33.87 212.50 239.60 85.05 16 57 34 4337.3 32.81 203.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2621 TRA -.2658 TC3 -.3401 BAU .5101  
 RDE .7063 RRA -.1487 RC3 2.8732 FAU .08156  
 FDE -1.7090 FRA .4190 FC3-5.3543 BSP 7635  
 BDE .7534 BRA .3045 BC3 2.8932 FSP -1312

SGT 663.1 SGR 2379.4 SG3 413.5  
 RRT -.5451 RRF -.9925 RTF .5507  
 SGB 2470.1 R23 .0247 R13 -.9922  
 SG1 2408.2 SG2 549.3 THA 99.12

ST 435.6 SR 1118.8 SS 1116.8  
 CRT -.9251 CRS .9999 CST -.9212  
 LSA 1631.6 MSA 162.4 SSA 10.8  
 EL1 1190.5 EL2 155.5 ALF 110.17

LAUNCH DATE FEB 2 1969

FLIGHT TIME 122.00

ARRIVAL DATE JUN 4 1969

HELIOCENTRIC CONIC

DISTANCE 341.739

RL 147.43 LAL -.00 LOL 132.98 VL 27.758 GAL -3.40 AZL 94.32 MCA 155.37 SMA 128.87 ECC .15558 INC 4.3238 V1 30.220  
 RP 108.89 LAP -1.80 LOP 288.41 VP 37.520 GAP -.75 AZP 86.07 TAL 199.04 TAP 354.41 RCA 108.82 APO 148.92 V2 34.802  
 RC 88.877 GL -33.04 GP 60.48 ZAL 119.76 ZAP 83.44 ETS 352.85 ZAE 119.78 ETE 90.35 ZAC 94.02 ETC 145.97 CLP -76.59

PLANETOCENTRIC CONIC

C3 14.681 VHL 3.832 DLA -27.48 RAL 20.19 RAD 6567.6 VEL 11.665 PTH 2.05 VHP 5.113 DPA 61.27 RAP 346.80 ECC 1.2416  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 8 53 1 1017.45 16.42 332.05 241.93 113.40 9 9 58 417.5 19.45 324.68  
 90.00 10 53 32 624.71 25.08 306.57 245.02 103.60 11 3 57 24.7 26.70 298.28  
 100.00 9 34 9 884.49 13.43 320.83 240.47 116.96 9 48 54 284.5 16.94 313.80  
 100.00 12 55 5 5520.94 28.32 256.40 245.78 100.00 14 27 6 4920.9 29.41 247.77  
 110.00 9 43 16 855.88 8.46 315.74 237.54 123.24 9 57 32 255.9 12.77 309.30  
 110.00 15 2 28 5122.31 34.02 226.93 246.57 93.57 16 27 50 4522.3 34.14 217.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.4040 TRA -.2289 TC3 -.5886 BAU .5436  
 RDE .9260 RRA -.2533 RC3 2.7064 FAU .07080  
 FDE -1.7885 FRA .5142 FC3-4.1749 BSP 8271  
 BDE 1.0103 BRA .3414 BC3 2.7697 FSP -1170

SGT 846.9 SGR 2530.0 SG3 368.0  
 RRT -.7502 RRF -.9938 RTF .7553  
 SGB 2668.0 R23 .0394 R13 -.9931  
 SG1 2612.3 SG2 542.4 THA 104.75

ST 615.3 SR 1392.0 SS 1187.7  
 CRT -.9604 CRS .9999 CST -.9593  
 LSA 1923.5 MSA 164.0 SSA 8.4  
 EL1 1513.7 EL2 157.6 ALF 113.27

LAUNCH DATE FEB 2 1969

FLIGHT TIME 124.00

ARRIVAL DATE JUN 6 1969

HELIOCENTRIC CONIC

DISTANCE 348.018

RL 147.43 LAL -.00 LOL 132.98 VL 27.760 GAL -3.35 AZL 95.35 MCA 158.51 SMA 128.88 ECC .15512 INC 5.3472 V1 30.220  
 RP 108.90 LAP -1.96 LOP 291.57 VP 37.517 GAP -.37 AZP 85.02 TAL 198.77 TAP 357.28 RCA 108.89 APO 148.87 V2 34.797  
 RC 91.256 GL -38.67 GP 64.65 ZAL 116.98 ZAP 86.74 ETS 358.03 ZAE 115.48 ETE 95.64 ZAC 90.52 ETC 148.55 CLP -82.37

PLANETOCENTRIC CONIC

C3 17.085 VHL 4.133 DLA -32.20 RAL 23.81 RAD 6567.7 VEL 11.767 PTH 2.08 VHP 5.600 DPA 62.73 RAP 338.09 ECC 1.2812  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 73.99 8 3 16 1253.91 23.17 352.58 250.97 113.01 8 24 9 653.9 26.08 344.80  
 106.01 12 12 7 5745.05 23.18 271.43 250.98 113.00 13 47 52 5145.0 26.09 263.65  
 73.99 8 3 16 1253.91 23.17 352.58 250.97 113.01 8 24 9 653.9 26.08 344.80  
 106.01 12 12 7 5745.05 23.18 271.43 250.98 113.00 13 47 52 5145.0 26.09 263.65  
 110.00 11 9 34 650.78 15.88 304.48 247.06 120.68 11 20 25 50.8 19.83 297.59  
 110.00 14 4 59 5396.17 30.90 247.61 253.99 105.40 15 34 56 4796.2 32.70 238.85

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6120 TRA -.1610 TC3 -.7621 BAU .5739  
 RDE 1.1904 RRA -.3891 RC3 2.3943 FAU .05894  
 FDE -1.8203 FRA .5943 FC3-2.9867 BSP 8957  
 BDE 1.3385 BRA .4211 BC3 2.5127 FSP -1012

SGT 1089.1 SGR 2654.6 SG3 316.4  
 RRT -.8574 RRF -.9948 RTF .8623  
 SGB 2869.4 R23 .0498 R13 -.9938  
 SG1 2820.4 SG2 527.6 THA 110.11

ST 852.3 SR 1662.2 SS 1229.4  
 CRT -.9783 CRS 1.0000 CST -.9784  
 LSA 2230.2 MSA 163.6 SSA 6.5  
 EL1 1861.3 EL2 157.7 ALF 116.85

LAUNCH DATE FEB 2 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 8 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.758 GAL -3.28 AZL 96.70 HCA 161.64 SMA 128.87 ECC .15480 INC 6.7007 V1 30.220  
 RP 108.92 LAP -2.11 LOP 294.73 VP 37.512 GAP .01 AZP 83.64 TAL 198.42 TAP .05 RCA 108.92 APO 148.81 V2 34.793  
 RC 93.644 GL -44.72 GP 69.03 ZAL 113.63 ZAP 89.43 ETS 3.96 ZAE 110.82 ETE 101.05 ZAC 87.08 ETC 151.77 CLP -88.42

DISTANCE 354.267

PLANETOCENTRIC CONIC

C3 21.115 VHL 4.595 DLA -37.10 RAL 28.27 RAD 6567.9 VEL 11.937 PTH 2.12 VHP 6.302 DPA 63.95 RAP 328.36 ECC 1.3475  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.96 7 27 41 1465.93 24.87 10.10 260.46 118.47 7 52 7 865.9 28.46 2.51  
 115.04 13 23 20 5632.83 24.88 263.54 260.47 118.45 14 57 13 5032.8 28.47 255.95  
 64.96 7 27 41 1465.93 24.87 10.10 260.46 118.47 7 52 7 865.9 28.46 2.51  
 115.04 13 23 20 5632.83 24.88 263.54 260.47 118.45 14 57 13 5032.8 28.47 255.95  
 64.96 7 27 41 1465.93 24.87 10.10 260.46 118.47 7 52 7 865.9 28.46 2.51  
 115.04 13 23 20 5632.83 24.88 263.54 260.47 118.45 14 57 13 5032.8 28.47 255.95

DIFFERENTIAL CORRECTIONS

TDE -.9187 TRA -.0409 TC3 -.8310 BAU .5889  
 RDE 1.4908 RRA -.5822 RC3 1.9135 FAU .04582  
 FDE -1.7826 FRA .6727 FC3 -1.8785 BSP 9319  
 BDE 1.7512 BRA .5836 BC3 2.0861 FSP -809

MID-COURSE EXECUTION ACCURACY

SGT 1378.2 SGR 2715.9 SG3 259.6  
 RRT -.9121 RRF -.9957 RTF .9171  
 SGB 3045.6 R23 .0595 R13 -.9942  
 SGI 3002.4 SG2 511.0 TMA 115.63

ORBIT DETERMINATION ACCURACY

ST 1145.9 SR 1879.6 SS 1222.6  
 CRT -.9868 CRS 1.0000 CST -.9876  
 LSA 2512.7 MSA 164.2 SSA 4.9  
 EL1 2195.6 EL2 158.9 ALF 121.21

LAUNCH DATE FEB 2 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 10 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.752 GAL -3.20 AZL 98.59 HCA 164.75 SMA 128.83 ECC .15461 INC 8.5860 V1 30.220  
 RP 108.93 LAP -2.25 LOP 297.89 VP 37.505 GAP .36 AZP 81.71 TAL 197.97 TAP 2.72 RCA 108.91 APO 148.75 V2 34.789  
 RC 96.038 GL -51.03 GP 73.75 ZAL 109.80 ZAP 91.44 ETS 11.10 ZAE 105.73 ETE 107.16 ZAC 83.63 ETC 156.15 CLP -95.14

DISTANCE 360.479

PLANETOCENTRIC CONIC

C3 28.316 VHL 5.321 DLA -41.92 RAL 33.75 RAD 6568.1 VEL 12.235 PTH 2.20 VHP 7.341 DPA 64.81 RAP 317.31 ECC 1.4660  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.69 7 15 21 1635.14 25.03 24.41 272.39 124.80 7 42 36 1035.1 29.41 17.29  
 122.31 14 19 20 5607.62 25.05 261.54 272.40 124.79 15 52 48 5007.6 29.42 254.42  
 57.69 7 15 21 1635.14 25.03 24.41 272.39 124.80 7 42 36 1035.1 29.41 17.29  
 122.31 14 19 20 5607.62 25.05 261.54 272.40 124.79 15 52 48 5007.6 29.42 254.42  
 57.69 7 15 21 1635.14 25.03 24.41 272.39 124.80 7 42 36 1035.1 29.41 17.29  
 122.31 14 19 20 5607.62 25.05 261.54 272.40 124.79 15 52 48 5007.6 29.42 254.42

DIFFERENTIAL CORRECTIONS

TDE -1.3817 TRA .1723 TC3 -.7791 BAU .5993  
 RDE 1.8619 RRA -.8113 RC3 1.3780 FAU .03401  
 FDE -1.7164 FRA .7098 FC3 -1.0399 BSP 10147  
 BDE 2.3186 BRA .8294 BC3 1.5830 FSP -657

MID-COURSE EXECUTION ACCURACY

SGT 1721.4 SGR 2747.4 SG3 206.2  
 RRT -.9497 RRF -.9965 RTF .9550  
 SGB 3242.2 R23 .0600 R13 -.9951  
 SGI 3209.1 SG2 461.5 TMA 121.48

ORBIT DETERMINATION ACCURACY

ST 1489.9 SR 2036.0 SS 1188.5  
 CRT -.9924 CRS 1.0000 CST -.9934  
 LSA 2784.6 MSA 153.1 SSA 3.7  
 EL1 2518.5 EL2 148.7 ALF 126.13

LAUNCH DATE FEB 2 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 12 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.744 GAL -3.10 AZL 101.41 HCA 167.84 SMA 128.77 ECC .15451 INC 11.4068 V1 30.220  
 RP 108.94 LAP -2.39 LOP 301.05 VP 37.496 GAP .70 AZP 78.84 TAL 197.42 TAP 5.26 RCA 108.87 APO 148.67 V2 34.787  
 RC 98.436 GL -57.21 GP 78.99 ZAL 105.63 ZAP 92.68 ETS 21.04 ZAE 100.04 ETE 115.66 ZAC 80.02 ETC 163.40 CLP -104.16

DISTANCE 366.645

PLANETOCENTRIC CONIC

C3 42.482 VHL 6.518 DLA -46.24 RAL 40.31 RAD 6568.6 VEL 12.800 PTH 2.33 VHP 8.963 DPA 65.07 RAP 304.51 ECC 1.6991  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.78 7 18 22 1798.66 22.73 37.22 286.64 131.42 7 48 21 1198.7 27.87 30.86  
 128.22 15 8 41 5648.48 22.74 263.25 286.66 131.41 16 42 50 5048.5 27.89 256.89  
 51.78 7 18 22 1798.66 22.73 37.22 286.64 131.42 7 48 21 1198.7 27.87 30.86  
 128.22 15 8 41 5648.48 22.74 263.25 286.66 131.41 16 42 50 5048.5 27.89 256.89  
 51.78 7 18 22 1798.66 22.73 37.22 286.64 131.42 7 48 21 1198.7 27.87 30.86  
 128.22 15 8 41 5648.48 22.74 263.25 286.66 131.41 16 42 50 5048.5 27.89 256.89

DIFFERENTIAL CORRECTIONS

TDE -2.1428 TRA .5927 TC3 -.6204 BAU .5735  
 RDE 2.2221 RRA -1.1061 RC3 .7966 FAU .02254  
 FDE -1.6000 FRA .7449 FC3 -.4594 BSP 10747  
 BDE 3.0870 BRA 1.2549 BC3 1.0097 FSP -497

MID-COURSE EXECUTION ACCURACY

SGT 2184.0 SGR 2621.1 SG3 155.4  
 RRT -.9745 RRF -.9973 RTF .9796  
 SGB 3411.8 R23 .0576 R13 -.9962  
 SGI 3390.6 SG2 379.0 TMA 129.67

ORBIT DETERMINATION ACCURACY

ST 1897.3 SR 1998.7 SS 1111.3  
 CRT -.9957 CRS .9999 CST -.9968  
 LSA 2968.5 MSA 132.1 SSA 2.7  
 EL1 2752.8 EL2 128.3 ALF 133.50

LAUNCH DATE FEB 2 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 14 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.733 GAL -2.99 AZL 106.09 HCA 170.89 SMA 128.69 ECC .15448 INC 16.0929 V1 30.220  
 RP 108.94 LAP -2.52 LOP 304.22 VP 37.486 GAP 1.02 AZP 74.10 TAL 196.74 TAP 7.62 RCA 108.81 APO 148.57 V2 34.785  
 RC 100.837 GL -62.54 GP 84.91 ZAL 101.33 ZAP 93.11 ETS 41.68 ZAE 93.31 ETE 134.62 ZAC 75.93 ETC 181.64 CLP -127.73

DISTANCE 372.739

PLANETOCENTRIC CONIC

C3 74.848 VHL 8.651 DLA -49.30 RAL 47.67 RAD 6569.5 VEL 14.007 PTH 2.56 VHP 11.740 DPA 64.14 RAP 289.53 ECC 2.2318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 47.79 7 33 57 1971.35 17.17 48.20 302.25 136.96 8 6 48 1371.3 22.92 42.70  
 132.21 15 51 50 5752.92 17.18 267.61 302.27 136.96 17 27 43 5152.9 22.93 262.11  
 47.79 7 33 57 1971.35 17.17 48.20 302.25 136.96 8 6 48 1371.3 22.92 42.70  
 132.21 15 51 50 5752.92 17.18 267.61 302.27 136.96 17 27 43 5152.9 22.93 262.11  
 47.79 7 33 57 1971.35 17.17 48.20 302.25 136.96 8 6 48 1371.3 22.92 42.70  
 132.21 15 51 50 5752.92 17.18 267.61 302.27 136.96 17 27 43 5152.9 22.93 262.11

DIFFERENTIAL CORRECTIONS

TDE -3.6707 TRA 1.6230 TC3 -.3855 BAU .4652  
 RDE 2.0682 RRA -1.2032 RC3 .2598 FAU .01186  
 FDE -1.4804 FRA .7974 FC3 -.1372 BSP 11159  
 BDE 4.2133 BRA 2.0204 BC3 .4649 FSP -356

MID-COURSE EXECUTION ACCURACY

SGT 3012.0 SGR 1889.9 SG3 111.8  
 RRT -.9915 RRF -.9978 RTF .9950  
 SGB 3555.8 R23 .0498 R13 -.9975  
 SGI 3549.7 SG2 -208.1 TMA 147.99

ORBIT DETERMINATION ACCURACY

ST 2480.9 SR 1418.0 SS 1024.6  
 CRT -.9981 CRS .9998 CST -.9991  
 LSA 3034.6 MSA 79.4 SSA 1.9  
 EL1 2856.6 EL2 74.9 ALF 150.27

LAUNCH DATE FEB 2 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 16 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.719 GAL -2.84 AZL 115.28 HCA 173.81 SMA 128.60 ECC .15443 INC25.2754 V1 30.220
RP 108.95 LAP -2.64 LOP 307.38 VP 37.475 GAP 1.29 AZP 64.85 TAL 195.86 TAP 9.67 RCA 108.74 APO 148.46 V2 34.784
RC 103.240 GL -65.32 GP 84.34 ZAL 97.18 ZAP 92.75 ETS 117.55 ZAE 84.27 ETE 208.74 ZAC 70.43 ETC 255.97 CLP 119.13

DISTANCE 378.686

PLANETOCENTRIC CONIC

C3 169.245 VHL 13.009 CLA -49.63 RAL 54.43 RAD 6570.8 VEL 17.046 PTH 2.93 VHP 17.258 DPA 60.55 RAP 272.11 ECC 3.7853
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.37 7 59 32 2140.67 8.82 55.67 316.84 139.05 8 35 13 1540.7 14.82 50.68
132.63 16 20 11 627.59 8.83 296.50 316.85 139.05 16 30 39 27.6 14.83 291.51
47.37 7 59 32 2140.67 8.82 55.67 316.84 139.05 8 35 13 1540.7 14.82 50.68
132.63 16 20 11 627.59 8.83 296.50 316.85 139.05 16 30 39 27.6 14.83 291.51
47.37 7 59 32 2140.67 8.82 55.67 316.84 139.05 8 35 13 1540.7 14.82 50.68
132.63 16 20 11 627.59 8.83 296.50 316.85 139.05 16 30 39 27.6 14.83 291.51

DIFFERENTIAL CORRECTIONS

TDE-3.2745 TRA 2.8975 TC3 -.0493 BAU .1140
RDE-5.2047 RRA 2.1225 RC3 -.0102 FAU .00040
FDE-1.4728 FRA .9487 FC3 -.0020 BSP 11496
BDE 6.1490 BRA 3.5917 BC3 .0504 FSP -254

MID-COURSE EXECUTION ACCURACY

SGT 2445.1 SGR 2708.9 SG3 79.0
RRT .9290 RRF .9757 RTF .9867
SG8 3649.2 R23 -.0495 R13 .9983
SG1 3584.5 SG2 684.0 THA 48.15

ORBIT DETERMINATION ACCURACY

ST 1558.6 SR 2332.8 SS 1009.3
CRT .9796 CRS -.9947 CST -.9951
LSA 2969.8 MSA 264.4 SSA 1.1
EL1 2793.3 EL2 261.5 ALF 56.46

LAUNCH DATE FEB 2 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 18 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.703 GAL -2.59 AZL 138.49 HCA 176.32 SMA 128.49 ECC .15407 INC48.4929 V1 30.220
RP 108.95 LAP -2.75 LOP 310.54 VP 37.462 GAP 1.43 AZP 41.57 TAL 194.46 TAP 10.79 RCA 108.69 APO 148.28 V2 34.783
RC 105.643 GL -59.98 GP 69.20 ZAL 93.60 ZAP 91.74 ETS 166.56 ZAE 68.42 ETE 256.08 ZAC 60.42 ETC 306.80 CLP 94.90

DISTANCE 384.171

PLANETOCENTRIC CONIC

C3 572.874 VHL 23.935 CLA -42.70 RAL 56.47 RAD 6572.5 VEL 26.347 PTH 3.38 VHP 30.877 DPA 49.48 RAP 252.55 ECC10.4281
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.60 8 41 27 2198.48 1.21 53.22 325.14 132.68 9 18 5 1598.5 6.62 47.73
123.40 15 54 33 858.12 1.23 310.27 325.15 132.68 16 8 51 258.1 6.64 304.78
56.60 8 41 27 2198.48 1.21 53.22 325.14 132.68 9 18 5 1598.5 6.62 47.73
123.40 15 54 33 858.12 1.23 310.27 325.15 132.68 16 8 51 258.1 6.64 304.78
56.60 8 41 27 2198.48 1.21 53.22 325.14 132.68 9 18 5 1598.5 6.62 47.73
123.40 15 54 33 858.12 1.23 310.27 325.15 132.68 16 8 51 258.1 6.64 304.78

DIFFERENTIAL CORRECTIONS

TDE 3.2569 TRA .6170 TC3 -.0437 BAU 1.5020
RDE-9.4857 RRA 7.4379 RC3 .1912 FAU-.02524
FDE-1.8634 FRA 1.5360 FC3 .0382 BSP 11243
BDE10.0293 BRA 7.4634 BC3 .1961 FSP -195

MID-COURSE EXECUTION ACCURACY

SGT 831.9 SGR 3444.2 SG3 60.0
RRT -.5148 RRF .9997 RTF -.4939
SG8 3543.3 R23 -.0506 R13 .9987
SG1 3471.9 SG2 707.5 THA 97.40

ORBIT DETERMINATION ACCURACY

ST 782.0 SR 2384.3 SS 1255.7
CRT -.9261 CRS -.9999 CST .9204
LSA 2791.2 MSA 287.6 SSA .3
EL1 2493.4 EL2 282.2 ALF 107.12

LAUNCH DATE FEB 2 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 20 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.685 GAL -3.20 AZL 14.22 HCA 182.95 SMA 128.36 ECC .15853 INC75.7763 V1 30.220
RP 108.95 LAP -2.86 LOP 313.70 VP 37.449 GAP 2.75 AZP 165.76 TAL 197.44 TAP 20.39 RCA 108.01 APO 148.71 V2 34.783
RC 108.045 GL 48.75 GP -55.73 ZAL 92.90 ZAP 92.58 ETS 178.42 ZAE 56.89 ETE 91.23 ZAC 76.67 ETC 47.67 CLP 94.24

DISTANCE 394.042

PLANETOCENTRIC CONIC

C31269.986 VHL 35.637 CLA 58.58 RAL 8.62 RAD 6573.1 VEL 37.300 PTH 3.54 VHP 43.495 DPA -64.71 RAP 186.93 ECC21.9008
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.31 16 22 50 5040.58 .92 239.74 279.19 31.42 17 46 50 4440.6 -5.91 235.98
143.69 1 51 22 3388.84 .93 105.08 279.17 31.42 2 47 51 2788.8 -5.89 101.32
36.31 16 22 50 5040.58 .92 239.74 279.19 31.42 17 46 50 4440.6 -5.91 235.98
143.69 1 51 22 3388.84 .93 105.08 279.17 31.42 2 47 51 2788.8 -5.89 101.32
36.31 16 22 50 5040.58 .92 239.74 279.19 31.42 17 46 50 4440.6 -5.91 235.98
143.69 1 51 22 3388.84 .93 105.08 279.17 31.42 2 47 51 2788.8 -5.89 101.32

DIFFERENTIAL CORRECTIONS

TDE-4.9534 TRA 2.2796 TC3 -.1064 BAU 4.0159
RD-16.3124 RRA 1.2458 RC3 -.2112 FAU-.06540
FDE 3.5002 FRA -.2791 FC3 .0446 BSP 9985
BDE17.0478 BRA 2.5978 BC3 .2365 FSP -179

MID-COURSE EXECUTION ACCURACY

SGT 1305.3 SGR 3048.4 SG3 56.3
RRT .8798 RRF-1.0000 RTF -.8809
SG8 3316.1 R23 -.0667 R13 -.9977
SG1 3265.1 SG2 579.3 THA 68.65

ORBIT DETERMINATION ACCURACY

ST 824.2 SR 2625.6 SS 2117.3
CRT .9769 CRS 1.0000 CST -.9773
LSA 3468.0 MSA 170.6 SSA .8
EL1 2746.7 EL2 168.2 ALF 72.89

LAUNCH DATE FEB 2 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 22 1969

HELIOCENTRIC CONIC

RL 147.43 LAL -.00 LOL 132.98 VL 27.664 GAL -2.81 AZL 52.73 HCA 184.88 SMA 128.22 ECC .15748 INC37.2697 V1 30.220
RP 108.94 LAP -2.95 LOP 316.87 VP 37.435 GAP 2.72 AZP 127.17 TAL 195.35 TAP 20.23 RCA 108.03 APO 148.41 V2 34.784
RC 110.446 GL 63.38 GP -77.79 ZAL 94.94 ZAP 94.64 ETS 186.96 ZAE 80.05 ETE 100.08 ZAC 92.47 ETC 59.42 CLP 112.50

DISTANCE 398.877

PLANETOCENTRIC CONIC

C3 350.305 VHL 18.716 CLA 66.12 RAL 340.00 RAD 6571.9 VEL 21.717 PTH 3.22 VHP 22.215 DPA -75.26 RAP 120.88 ECC 6.7651
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
27.38 14 7 4 4991.22 -4.39 242.85 248.06 23.95 15 30 15 4391.2 -11.69 239.96
152.62 0 18 50 3265.36 -4.38 97.67 248.05 23.95 1 13 16 2665.4 -11.68 94.78
27.38 14 7 4 4991.22 -4.39 242.85 248.06 23.95 15 30 15 4391.2 -11.69 239.96
152.62 0 18 50 3265.36 -4.38 97.67 248.05 23.95 1 13 16 2665.4 -11.68 94.78
27.38 14 7 4 4991.22 -4.39 242.85 248.06 23.95 15 30 15 4391.2 -11.69 239.96
152.62 0 18 50 3265.36 -4.38 97.67 248.05 23.95 1 13 16 2665.4 -11.68 94.78

DIFFERENTIAL CORRECTIONS

TDE .3582 TRA 1.3125 TC3 -.0485 BAU .7341
RDE-9.1840 RRA 3.2696 RC3 -.1491 FAU-.01012
FDE 2.0169 FRA -.6925 FC3 .0250 BSP 12306
BDE 9.1910 BRA 3.5232 BC3 .1568 FSP -230

MID-COURSE EXECUTION ACCURACY

SGT 1015.0 SGR 3785.4 SG3 70.4
RRT .5849 RRF -.9993 RTF -.5671
SG8 3919.1 R23 -.0563 R13 -.9979
SG1 3833.9 SG2 812.8 THA 80.66

ORBIT DETERMINATION ACCURACY

ST 317.4 SR 2907.7 SS 1222.9
CRT -.0946 CRS 1.0000 CST -.1034
LSA 3154.5 MSA 316.0 SSA 1.4
EL1 2907.9 EL2 315.9 ALF 90.60



LAUNCH DATE FEB 2 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 24 1969

HELIOCENTRIC CONIC

DISTANCE 404.612

RL 147.43 LAL -.00 LOL 132.98 VL 27.642 GAL -2.60 AZL 66.60 MCA 187.68 SMA 128.07 ECC .15766 INC23.4022 V1 30.220
RP 108.94 LAP -3.04 LOP 320.03 VP 37.420 GAP 2.92 AZP 113.21 TAL 194.10 TAP 21.77 RCA 107.88 APO 148.26 V2 34.786
RC 112.844 GL 65.05 GP -81.99 ZAL 97.15 ZAP 98.00 ETS 250.30 ZAE 91.46 ETE 163.58 ZAC 99.30 ETC 123.67 CLP 178.10

PLANETOCENTRIC CONIC

C3 146.336 VHL 12.097 DLA 64.81 RAL 333.16 RAD 6570.6 VEL 16.360 PTH 2.86 VHP 13.958 DPA -70.92 RAP 81.81 ECC 3.4083
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
28.91 13 43 17 4860.11 -12.08 238.70 237.40 25.80 15 4 17 4260.1 -19.25 235.44
151.09 23 44 8 3144.96 -12.07 95.23 237.38 25.80 24 36 33 2545.0 -19.24 91.97
28.91 13 43 17 4860.11 -12.08 238.70 237.40 25.80 15 4 17 4260.1 -19.25 235.44
151.09 23 44 8 3144.96 -12.07 95.23 237.38 25.80 24 36 33 2545.0 -19.24 91.97
28.91 13 43 17 4860.11 -12.08 238.70 237.40 25.80 15 4 17 4260.1 -19.25 235.44
151.09 23 44 8 3144.96 -12.07 95.23 237.38 25.80 24 36 33 2545.0 -19.24 91.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.8485 TRA-2.0678 TC3 -.0791 BAU .1700 SGT 3256.8 SGR 2488.7 SG3 98.5 ST 2398.0 SR 1293.0 SS 974.4
RDE-2.3371 RRA 2.0011 RC3 .0361 FAU .00797 RRT -.9481 RRF -.9583 RTF .9983 CRT -.9687 CRS .9741 CST -.9997
FDE 1.6220 FRA -.7496 FC3 -.0472 BSP 13018 SGB 4098.8 R23 -.0805 R13 -.9958 LSA 2879.2 MSA 285.8 SSA 1.7
BDE 5.3824 BRA 2.8775 BC3 .0869 FSP -324 SG1 4049.1 SGR 636.4 THA 143.01 ELI 2709.5 EL2 284.2 ALF 152.09

LAUNCH DATE FEB 2 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 26 1969

HELIOCENTRIC CONIC

DISTANCE 410.547

RL 147.43 LAL -.00 LOL 132.98 VL 27.619 GAL -2.41 AZL 72.92 MCA 190.68 SMA 127.91 ECC .15819 INC17.0820 V1 30.220
RP 108.93 LAP -3.12 LOP 323.20 VP 37.405 GAP 3.18 AZP 106.80 TAL 193.01 TAP 23.69 RCA 107.68 APO 148.14 V2 34.789
RC 115.239 GL 63.20 GP -76.22 ZAL 98.97 ZAP 101.95 ETS 302.43 ZAE 99.04 ETE 215.28 ZAC 103.20 ETC 176.18 CLP-150.39

PLANETOCENTRIC CONIC

C3 82.462 VHL 9.081 DLA 62.66 RAL 334.86 RAD 6569.6 VEL 14.276 PTH 2.60 VHP 10.254 DPA -65.33 RAP 64.45 ECC 2.3571
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
31.45 13 56 2 4732.23 -18.92 233.30 234.66 29.05 15 14 54 4132.2 -25.86 229.41
148.55 23 44 54 3036.60 -18.91 92.74 234.64 29.04 24 35 30 2436.6 -25.85 88.86
31.45 13 56 2 4732.23 -18.92 233.30 234.66 29.05 15 14 54 4132.2 -25.86 229.41
148.55 23 44 54 3036.60 -18.91 92.74 234.64 29.04 24 35 30 2436.6 -25.85 88.86
31.45 13 56 2 4732.23 -18.92 233.30 234.66 29.05 15 14 54 4132.2 -25.86 229.41
148.55 23 44 54 3036.60 -18.91 92.74 234.64 29.04 24 35 30 2436.6 -25.85 88.86

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.8328 TRA-2.3266 TC3 -.4129 BAU .4774 SGT 4077.6 SGR 1085.2 SG3 137.4 ST 2601.6 SR 852.9 SS 985.0
RDE 1.3150 RRA -.4791 RC3 -.1305 FAU .02088 RRT .9690 RRF .9901 RTF .9918 CRT .9897 CRS -.9974 CST -.9975
FDE 1.6801 FRA -.8131 FC3 -.2192 BSP 14018 SGB 4219.6 R23 .1018 R13 .9935 LSA 2906.8 MSA 127.9 SSA 1.9
BDE 4.0522 BRA 2.3754 BC3 .4330 FSP -481 SG1 4211.6 SG2 259.7 THA 14.52 ELI 2735.4 EL2 116.3 ALF 18.01

LAUNCH DATE FEB 2 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 28 1969

HELIOCENTRIC CONIC

DISTANCE 416.549

RL 147.43 LAL -.00 LOL 132.98 VL 27.594 GAL -2.23 AZL 76.47 MCA 193.75 SMA 127.74 ECC .15889 INC13.5343 V1 30.220
RP 108.92 LAP -3.19 LOP 326.36 VP 37.389 GAP 3.45 AZP 103.16 TAL 191.95 TAP 25.70 RCA 107.44 APO 148.03 V2 34.792
RC 117.630 GL 60.43 GP -69.64 ZAL 100.31 ZAP 106.23 ETS 311.63 ZAE 104.97 ETE 223.37 ZAC 105.95 ETC 185.31 CLP-143.44

PLANETOCENTRIC CONIC

C3 55.040 VHL 7.419 DLA 60.53 RAL 338.72 RAD 6569.0 VEL 13.282 PTH 2.43 VHP 8.275 DPA -59.81 RAP 54.37 ECC 1.9058
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
33.97 14 17 37 4625.25 -24.09 227.77 234.10 32.61 15 34 43 4025.2 -30.74 223.19
146.03 23 54 8 2951.28 -24.08 90.23 234.08 32.60 24 43 19 2351.3 -30.73 85.64
33.97 14 17 37 4625.25 -24.09 227.77 234.10 32.61 15 34 43 4025.2 -30.74 223.19
146.03 23 54 8 2951.28 -24.08 90.23 234.08 32.60 24 43 19 2351.3 -30.73 85.64
33.97 14 17 37 4625.25 -24.09 227.77 234.10 32.61 15 34 43 4025.2 -30.74 223.19
146.03 23 54 8 2951.28 -24.08 90.23 234.08 32.60 24 43 19 2351.3 -30.73 85.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.1092 TRA-1.8751 TC3 -.7358 BAU .5888 SGT 3952.6 SGR 1595.6 SG3 179.2 ST 2558.7 SR 1242.4 SS 1074.9
RDE 1.5676 RRA -.5916 RC3 -.3145 FAU .03113 RRT .9752 RRF .9958 RTF .9854 CRT .9920 CRS -.9994 CST -.9958
FDE 1.8811 FRA -.8215 FC3 -.4896 BSP 13254 SGB 4262.5 R23 .1274 R13 .9897 LSA 3036.7 MSA 156.6 SSA 2.6
BDE 3.4820 BRA 1.9662 BC3 .8002 FSP -584 SG1 4249.8 SG2 328.5 THA 21.62 ELI 2840.9 EL2 140.9 ALF 25.79

LAUNCH DATE FEB 2 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUN 30 1969

HELIOCENTRIC CONIC

DISTANCE 422.565

RL 147.43 LAL -.00 LOL 132.98 VL 27.567 GAL -2.05 AZL 78.73 MCA 196.86 SMA 127.56 ECC .15973 INC11.2679 V1 30.220
RP 108.91 LAP -3.25 LOP 329.53 VP 37.374 GAP 3.73 AZP 100.80 TAL 190.88 TAP 27.74 RCA 107.18 APO 147.94 V2 34.796
RC 120.015 GL 57.49 GP -63.44 ZAL 101.19 ZAP 110.64 ETS 314.17 ZAE 109.87 ETE 224.17 ZAC 108.11 ETC 187.43 CLP-142.04

PLANETOCENTRIC CONIC

C3 40.752 VHL 6.384 DLA 58.55 RAL 343.04 RAD 6568.6 VEL 12.733 PTH 2.31 VHP 7.104 DPA -54.45 RAP 47.73 ECC 1.6707
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
36.34 14 40 54 4538.78 -27.75 222.49 234.29 36.12 15 56 32 3938.8 -34.09 217.22
143.66 0 9 15 2887.39 -27.73 87.88 234.27 36.12 0 57 22 2287.4 -34.08 82.61
36.34 14 40 54 4538.78 -27.75 222.49 234.29 36.12 15 56 32 3938.8 -34.09 217.22
143.66 0 9 15 2887.39 -27.73 87.88 234.27 36.12 0 57 22 2287.4 -34.08 82.61
36.34 14 40 54 4538.78 -27.75 222.49 234.29 36.12 15 56 32 3938.8 -34.09 217.22
143.66 0 9 15 2887.39 -27.73 87.88 234.27 36.12 0 57 22 2287.4 -34.08 82.61

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7707 TRA-1.6213 TC3-1.1228 BAU .6646 SGT 4002.4 SGR 1658.5 SG3 222.8 ST 2624.2 SR 1305.3 SS 1162.3
RDE 1.4254 RRA -.5012 RC3 -.4767 FAU .04159 RRT .9730 RRF .9957 RTF .9807 CRT .9922 CRS -.9997 CST -.9950
FDE 2.0567 FRA -.8158 FC3 -.8836 BSP 13504 SGB 4332.4 R23 .1466 R13 .9862 LSA 3148.5 MSA 167.3 SSA 3.2
BDE 3.1159 BRA 1.6970 BC3 1.2198 FSP -735 SG1 4317.9 SG2 354.6 THA 22.12 ELI 2927.2 EL2 146.0 ALF 26.34

LAUNCH DATE FEB 2 1969 FLIGHT TIME 150.00 ARRIVAL DATE JUL 2 1969

HELIOCENTRIC CONIC DISTANCE 428.583  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.540 GAL -1.86 AZL 80.31 HCA 199.98 SMA 127.37 ECC .16070 INC 9.6911 V1 30.220  
 RP 108.89 LAP -3.30 LOP 332.70 VP 37.357 GAP 4.01 A2P 99.12 TAL 189.79 TAP 29.77 RCA 106.90 APO 147.84 V2 34.800  
 RC 122.394 GL 54.60 GP -57.73 ZAL 101.64 ZAP 115.04 ETS 315.11 ZAE 113.95 ETE 222.84 ZAC 109.92 ETC 187.67 CLP-142.43

PLANETOCENTRIC CONIC  
 C3 32.309 VHL 5.684 DLA 56.76 RAL 347.34 RAD 6568.3 VEL 12.397 PTH 2.24 VHP 6.373 DPA -49.31 RAP 43.13 ECC 1.5317  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 38.50 15 3 47 4468.86 -30.27 217.62 234.87 39.39 16 18 16 3868.9 -36.31 211.75  
 141.50 0 20 41 2840.07 -30.26 85.79 234.85 39.39 1 8 1 2240.1 -36.30 79.92  
 38.50 15 3 47 4468.86 -30.27 217.62 234.87 39.39 16 18 16 3868.9 -36.31 211.75  
 141.50 0 20 41 2840.07 -30.26 85.79 234.85 39.39 1 8 1 2240.1 -36.30 79.92  
 38.50 15 3 47 4468.86 -30.27 217.62 234.87 39.39 16 18 16 3868.9 -36.31 211.75  
 141.50 0 20 41 2840.07 -30.26 85.79 234.85 39.39 1 8 1 2240.1 -36.30 79.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.5839 TRA-1.4369 TC3-1.5465 BAU .7166 SGT 4106.0 SGR 1600.8 SG3 263.2 ST 2723.1 SR 1273.2 SS 1235.1  
 RDE 1.2444 RRA -.3932 RC3 -.6007 FAU .05098 RRT .9704 RRF .9946 RTF .9771 CRT .9923 CRS -.9998 CST -.9946  
 FDE 2.1844 FRA -.7726 FC3-1.3659 BSP 13818 SGB 4407.0 R23 .1616 R13 .9826 LSA 3245.4 MSA 171.0 SSA 4.0  
 BDE 2.8680 BRA 1.4898 BC3 1.6591 FSP -.881 SG1 4392.2 SG2 361.1 THA 20.87 EL1 3002.6 EL2 143.1 ALF 24.95

LAUNCH DATE FEB 2 1969 FLIGHT TIME 152.00 ARRIVAL DATE JUL 4 1969

HELIOCENTRIC CONIC DISTANCE 434.597  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.511 GAL -1.66 AZL 81.47 HCA 203.12 SMA 127.18 ECC .16178 INC 8.5262 V1 30.220  
 RP 108.88 LAP -3.34 LOP 335.87 VP 37.341 GAP 4.28 A2P 97.85 TAL 188.66 TAP 31.78 RCA 106.60 APO 147.76 V2 34.805  
 RC 124.766 GL 51.87 GP -52.53 ZAL 101.70 ZAP 119.29 ETS 315.59 ZAE 117.31 ETE 220.66 ZAC 111.54 ETC 187.25 CLP-143.52

PLANETOCENTRIC CONIC  
 C3 26.867 VHL 5.183 DLA 55.17 RAL 351.52 RAD 6568.1 VEL 12.175 PTH 2.19 VHP 5.905 DPA -44.45 RAP 39.90 ECC 1.4422  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.45 15 25 49 4411.65 -32.00 213.23 235.76 42.34 16 39 21 3811.7 -37.73 206.84  
 139.55 0 32 0 2804.95 -31.99 84.00 235.75 42.33 1 18 45 2205.0 -37.72 77.61  
 40.45 15 25 49 4411.65 -32.00 213.23 235.76 42.34 16 39 21 3811.7 -37.73 206.84  
 139.55 0 32 0 2804.95 -31.99 84.00 235.75 42.33 1 18 45 2205.0 -37.72 77.61  
 40.45 15 25 49 4411.65 -32.00 213.23 235.76 42.34 16 39 21 3811.7 -37.73 206.84  
 139.55 0 32 0 2804.95 -31.99 84.00 235.75 42.33 1 18 45 2205.0 -37.72 77.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.4682 TRA-1.2806 TC3-1.9861 BAU .7539 SGT 4222.0 SGR 1498.6 SG3 296.9 ST 2828.5 SR 1206.2 SS 1289.4  
 RDE 1.0800 RRA -.2946 RC3 -.6792 FAU .05843 RRT .9672 RRF .9927 RTF .9736 CRT .9923 CRS -.9999 CST -.9942  
 FDE 2.2573 FRA -.6877 FC3-1.8829 BSP 14057 SGB 4480.1 R23 .1734 R13 .9789 LSA 3329.9 MSA 172.7 SSA 4.8  
 BDE 2.6942 BRA 1.3140 BC3 2.0990 FSP -1000 SG1 4465.6 SG2 359.9 THA 19.08 EL1 3071.9 EL2 137.1 ALF 22.98

LAUNCH DATE FEB 2 1969 FLIGHT TIME 154.00 ARRIVAL DATE JUL 6 1969

HELIOCENTRIC CONIC DISTANCE 440.602  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.481 GAL -1.45 AZL 82.37 HCA 206.26 SMA 126.98 ECC .16298 INC 7.6262 V1 30.220  
 RP 108.86 LAP -3.37 LOP 339.04 VP 37.325 GAP 4.56 A2P 96.85 TAL 187.50 TAP 33.77 RCA 106.29 APO 147.68 V2 34.811  
 RC 127.128 GL 49.29 GP -47.83 ZAL 101.40 ZAP 123.32 ETS 315.95 ZAE 120.03 ETE 218.11 ZAC 113.02 ETC 186.60 CLP-144.92

PLANETOCENTRIC CONIC  
 C3 23.132 VHL 4.810 DLA 53.75 RAL 355.58 RAD 6567.9 VEL 12.021 PTH 2.15 VHP 5.606 DPA -39.92 RAP 37.64 ECC 1.3807  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.19 15 47 0 4364.15 -33.17 209.33 236.97 44.94 16 59 44 3764.1 -38.63 202.52  
 137.81 0 43 13 2778.78 -33.16 82.50 236.95 44.93 1 29 32 2178.8 -38.62 75.69  
 42.19 15 47 0 4364.15 -33.17 209.33 236.97 44.94 16 59 44 3764.1 -38.63 202.52  
 137.81 0 43 13 2778.78 -33.16 82.50 236.95 44.93 1 29 32 2178.8 -38.62 75.69  
 42.19 15 47 0 4364.15 -33.17 209.33 236.97 44.94 16 59 44 3764.1 -38.63 202.52  
 137.81 0 43 13 2778.78 -33.16 82.50 236.95 44.93 1 29 32 2178.8 -38.62 75.69

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3885 TRA-1.1406 TC3-2.4369 BAU .7860 SGT 4344.3 SGR 1385.5 SG3 323.3 ST 2928.6 SR 1126.7 SS 1323.8  
 RDE .9394 RRA -.2138 RC3 -.7216 FAU .06406 RRT .9638 RRF .9899 RTF .9706 CRT .9925 CRS -.9999 CST -.9939  
 FDE 2.2751 FRA -.5748 FC3-2.3975 BSP 14313 SGB 4559.9 R23 .1808 R13 .9752 LSA 3401.3 MSA 172.8 SSA 5.7  
 BDE 2.5666 BRA 1.1605 BC3 2.5415 FSP -1093 SG1 4546.2 SG2 352.9 THA 17.19 EL1 3135.2 EL2 128.9 ALF 20.93

LAUNCH DATE FEB 2 1969 FLIGHT TIME 156.00 ARRIVAL DATE JUL 8 1969

HELIOCENTRIC CONIC DISTANCE 446.598  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.451 GAL -1.24 AZL 83.09 HCA 209.41 SMA 126.78 ECC .16430 INC 6.9064 V1 30.220  
 RP 108.84 LAP -3.39 LOP 342.21 VP 37.308 GAP 4.84 A2P 96.02 TAL 186.32 TAP 35.73 RCA 105.95 APO 147.61 V2 34.818  
 RC 129.481 GL 46.87 GP -43.63 ZAL 100.79 ZAP 127.09 ETS 316.30 ZAE 122.20 ETE 215.44 ZAC 114.45 ETC 185.89 CLP-146.44

PLANETOCENTRIC CONIC  
 C3 20.449 VHL 4.522 DLA 52.51 RAL 359.56 RAD 6567.8 VEL 11.909 PTH 2.12 VHP 5.421 DPA -35.73 RAP 36.12 ECC 1.3365  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 43.74 16 7 26 4324.26 -33.95 205.87 238.47 47.21 17 19 30 3724.3 -39.16 198.72  
 136.26 0 54 30 2759.13 -33.94 81.26 238.46 47.20 1 40 29 2159.1 -39.15 74.11  
 43.74 16 7 26 4324.26 -33.95 205.87 238.47 47.21 17 19 30 3724.3 -39.16 198.72  
 136.26 0 54 30 2759.13 -33.94 81.26 238.46 47.20 1 40 29 2159.1 -39.15 74.11  
 43.74 16 7 26 4324.26 -33.95 205.87 238.47 47.21 17 19 30 3724.3 -39.16 198.72  
 136.26 0 54 30 2759.13 -33.94 81.26 238.46 47.20 1 40 29 2159.1 -39.15 74.11

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.3294 TRA-1.0089 TC3-2.8899 BAU .8151 SGT 4466.8 SGR 1273.4 SG3 342.4 ST 3018.9 SR 1045.5 SS 1339.3  
 RDE .8217 RRA -.1496 RC3 -.7340 FAU .06787 RRT .9602 RRF .9859 RTF .9678 CRT .9927 CRS -.9999 CST -.9936  
 FDE 2.2454 FRA -.4443 FC3-2.8732 BSP 14613 SGB 4644.8 R23 .1829 R13 .9718 LSA 3460.0 MSA 171.7 SSA 6.7  
 BDE 2.4701 BRA 1.0199 BC3 2.9817 FSP -1163 SG1 4632.1 SG2 343.0 THA 15.40 EL1 3192.6 EL2 119.3 ALF 19.00

LAUNCH DATE FEB 2 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 10 1969

HELIOCENTRIC CONIC

DISTANCE 452.582

RL 147.43 LAL -.00 LOL 132.98 VL 27.419 GAL -1.01 AZL 83.69 MCA 212.56 SMA 126.57 ECC .16574 INC 6.3144 V1 30.220
RP 108.82 LAP -3.39 LOP 345.38 VP 37.292 GAP 5.12 AZP 95.33 TAL 185.10 TAP 37.66 RCA 105.59 APO 147.55 V2 34.825
RC 131.823 GL 44.58 GP -39.89 ZAL 99.88 ZAP 130.59 ETS 316.64 ZAE 123.90 ETE 212.80 ZAC 115.86 ETC 185.20 CLP-147.99

PLANETOCENTRIC CONIC

C3 18.455 VHL 4.296 DLA 51.40 RAL 3.49 RAD 6567.7 VEL 11.825 PTH 2.09 VHP 5.316 DPA -31.89 RAP 35.17 ECC 1.3037
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.13 16 27 22 4290.33 -34.47 202.82 240.28 49.18 17 38 53 3690.3 -39.45 195.40
134.87 1 5 56 2744.49 -34.45 80.26 240.27 49.17 1 51 41 2144.5 -39.44 72.84
45.13 16 27 22 4290.33 -34.47 202.82 240.28 49.18 17 38 53 3690.3 -39.45 195.40
134.87 1 5 56 2744.49 -34.45 80.26 240.27 49.17 1 51 41 2144.5 -39.44 72.84
45.13 16 27 22 4290.33 -34.47 202.82 240.28 49.18 17 38 53 3690.3 -39.45 195.40
134.87 1 5 56 2744.49 -34.45 80.26 240.27 49.17 1 51 41 2144.5 -39.44 72.84

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2874 TRA -.8768 TC3-3.3318 BAU .8411 SGT 4584.2 SGR 1168.3 SG3 354.4 ST 3103.3 SR 970.9 SS 1342.2
RDE .7263 RRA -.0974 RC3 -.7206 FAU .06983 RRT .9556 RRF .9805 RTF .9651 CRT .9930 CRS -1.0000 CST -.9932
FOE 2.1853 FRA -.2996 FC3-3.2758 BSP 14851 SGB 4730.8 R23 .1809 R13 .9684 LSA 3513.7 MSA 170.7 SSA 7.7
BOE 2.4000 BRA .8822 BC3 3.4088 FSP -1200 SG1 4718.9 SG2 334.6 THA 13.76 EL1 3249.8 EL2 109.3 ALF 17.28

LAUNCH DATE FEB 2 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 12 1969

HELIOCENTRIC CONIC

DISTANCE 458.553

RL 147.43 LAL -.00 LOL 132.98 VL 27.387 GAL -.77 AZL 84.18 MCA 215.72 SMA 126.36 ECC .16730 INC 5.8162 V1 30.220
RP 108.79 LAP -3.39 LOP 348.56 VP 37.276 GAP 5.39 AZP 94.73 TAL 183.85 TAP 39.57 RCA 105.22 APO 147.50 V2 34.833
RC 134.153 GL 42.40 GP -36.58 ZAL 98.70 ZAP 133.81 ETS 316.98 ZAE 125.22 ETE 210.27 ZAC 117.27 ETC 184.57 CLP-149.54

PLANETOCENTRIC CONIC

C3 16.939 VHL 4.116 DLA 50.41 RAL 7.41 RAD 6567.7 VEL 11.761 PTH 2.08 VHP 5.270 DPA -28.36 RAP 34.66 ECC 1.2788
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.38 16 46 57 4261.29 -34.78 200.13 242.37 50.89 17 57 58 3661.3 -39.57 192.50
133.62 1 17 39 2733.70 -34.77 79.46 242.36 50.88 2 3 13 2133.7 -39.56 71.83
46.38 16 46 57 4261.29 -34.78 200.13 242.37 50.89 17 57 58 3661.3 -39.57 192.50
133.62 1 17 39 2733.70 -34.77 79.46 242.36 50.88 2 3 13 2133.7 -39.56 71.83
46.38 16 46 57 4261.29 -34.78 200.13 242.37 50.89 17 57 58 3661.3 -39.57 192.50
133.62 1 17 39 2733.70 -34.77 79.46 242.36 50.88 2 3 13 2133.7 -39.56 71.83

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2516 TRA -.7456 TC3-3.7623 BAU .8663 SGT 4697.7 SGR 1073.1 SG3 360.6 ST 3173.7 SR 902.2 SS 1330.6
RDE .6474 RRA -.0567 RC3 -.6913 FAU .07044 RRT .9500 RRF .9734 RTF .9628 CRT .9935 CRS -.9999 CST -.9928
FOE 2.0970 FRA -.1538 FC3-3.6002 BSP 15157 SGB 4818.7 R23 .1738 R13 .9654 LSA 3553.6 MSA 169.1 SSA 8.7
BOE 2.3428 BRA .7478 BC3 3.8253 FSP -1223 SG1 4807.6 SG2 327.3 THA 12.30 EL1 3298.0 EL2 98.6 ALF 15.79

LAUNCH DATE FEB 2 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 14 1969

HELIOCENTRIC CONIC

DISTANCE 464.511

RL 147.43 LAL -.00 LOL 132.98 VL 27.355 GAL -.52 AZL 84.61 MCA 218.88 SMA 126.14 ECC .16900 INC 5.3889 V1 30.220
RP 108.77 LAP -3.38 LOP 351.74 VP 37.260 GAP 5.67 AZP 94.20 TAL 182.58 TAP 41.46 RCA 104.83 APO 147.46 V2 34.841
RC 136.471 GL 40.31 GP -33.65 ZAL 97.29 ZAP 136.76 ETS 317.31 ZAE 126.21 ETE 207.91 ZAC 118.72 ETC 183.99 CLP-151.06

PLANETOCENTRIC CONIC

C3 15.769 VHL 3.971 DLA 49.51 RAL 11.35 RAD 6567.6 VEL 11.711 PTH 2.06 VHP 5.267 DPA -25.14 RAP 34.53 ECC 1.2595
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.52 17 6 20 4236.22 -34.95 197.74 244.74 52.38 18 16 57 3636.2 -39.56 189.94
132.48 1 29 41 2726.09 -34.94 78.85 244.73 52.37 2 15 7 2126.1 -39.55 71.05
47.52 17 6 20 4236.22 -34.95 197.74 244.74 52.38 18 16 57 3636.2 -39.56 189.94
132.48 1 29 41 2726.09 -34.94 78.85 244.73 52.37 2 15 7 2126.1 -39.55 71.05
47.52 17 6 20 4236.22 -34.95 197.74 244.74 52.38 18 16 57 3636.2 -39.56 189.94
132.48 1 29 41 2726.09 -34.94 78.85 244.73 52.37 2 15 7 2126.1 -39.55 71.05

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2203 TRA -.6141 TC3-4.1807 BAU .8921 SGT 4811.4 SGR 990.4 SG3 362.6 ST 3231.0 SR 841.4 SS 1307.6
RDE .5829 RRA -.0257 RC3 -.6545 FAU .07017 RRT .9440 RRF .9643 RTF .9610 CRT .9942 CRS -.9998 CST -.9924
FOE 1.9906 FRA -.0145 FC3-3.8525 BSP 15531 SGB 4912.3 R23 .1609 R13 .9631 LSA 3581.8 MSA 166.6 SSA 9.8
BOE 2.2955 BRA .6147 BC3 4.2317 FSP -1237 SG1 4901.8 SG2 320.7 THA 11.04 EL1 3337.6 EL2 87.3 ALF 14.53

LAUNCH DATE FEB 2 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 16 1969

HELIOCENTRIC CONIC

DISTANCE 470.455

RL 147.43 LAL -.00 LOL 132.98 VL 27.321 GAL -.26 AZL 84.98 MCA 222.04 SMA 125.93 ECC .17083 INC 5.0162 V1 30.220
RP 108.74 LAP -3.36 LOP 354.91 VP 37.244 GAP 5.95 AZP 93.73 TAL 181.28 TAP 43.32 RCA 104.41 APO 147.44 V2 34.850
RC 138.775 GL 38.29 GP -31.06 ZAL 95.64 ZAP 139.48 ETS 317.60 ZAE 126.96 ETE 205.75 ZAC 120.21 ETC 183.47 CLP-152.54

PLANETOCENTRIC CONIC

C3 14.863 VHL 3.855 DLA 48.68 RAL 15.33 RAD 6567.6 VEL 11.673 PTH 2.05 VHP 5.297 DPA -22.18 RAP 34.69 ECC 1.2446
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.59 17 25 43 4214.40 -34.99 195.60 247.37 53.70 18 35 58 3614.4 -39.45 187.67
131.41 1 42 0 2721.30 -34.98 78.41 247.36 53.68 2 27 22 2121.3 -39.44 70.48
48.59 17 25 43 4214.40 -34.99 195.60 247.37 53.70 18 35 58 3614.4 -39.45 187.67
131.41 1 42 0 2721.30 -34.98 78.41 247.36 53.68 2 27 22 2121.3 -39.44 70.48
48.59 17 25 43 4214.40 -34.99 195.60 247.37 53.70 18 35 58 3614.4 -39.45 187.67
131.41 1 42 0 2721.30 -34.98 78.41 247.36 53.68 2 27 22 2121.3 -39.44 70.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.1916 TRA -.4778 TC3-4.5753 BAU .9172 SGT 4920.4 SGR 918.9 SG3 361.0 ST 3274.7 SR 789.0 SS 1276.4
RDE .5308 RRA -.0008 RC3 -.6112 FAU .06907 RRT .9364 RRF .9531 RTF .9595 CRT .9951 CRS -.9994 CST -.9918
FOE 1.8749 FRA .1203 FC3-4.0232 BSP 15933 SGB 5005.5 R23 .1448 R13 .9612 LSA 3598.4 MSA 164.1 SSA 10.9
BOE 2.2550 BRA .4778 BC3 4.6159 FSP -1243 SG1 4995.4 SG2 317.6 THA 9.96 EL1 3367.6 EL2 75.9 ALF 13.49

LAUNCH DATE FEB 2 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 18 1969

HELIOCENTRIC CONIC DISTANCE 476.378  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.288 GAL .01 AZL 85.31 HCA 225.21 SMA 125.71 ECC .17281 INC 4.6863 VI 30.220  
 RP 108.71 LAP -3.32 LOP 358.09 VP 37.228 GAP 6.23 AZP 93.31 TAL 179.96 TAP 45.17 RCA 103.98 APO 147.43 V2 34.860  
 RC 141.067 GL 36.32 GP -28.77 ZAL 93.80 ZAP 141.97 ETS 317.84 ZAE 127.52 ETE 203.78 ZAC 121.75 ETC 183.01 CLP-153.98

PLANETOCENTRIC CONIC  
 C3 14.165 VHL 3.764 OLA 47.90 RAL 19.34 RAD 6567.6 VEL 11.643 PTH 2.04 VHP 5.353 DPA -19.47 RAP 35.11 ECC 1.2331  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 49.61 17 45 11 4195.24 -34.92 193.67 250.23 54.86 18 55 6 3595.2 -39.24 185.63  
 130.39 1 54 32 2719.11 -34.91 78.13 250.22 54.85 2 39 51 2119.1 -39.23 70.10  
 49.61 17 45 11 4195.24 -34.92 193.67 250.23 54.86 18 55 6 3595.2 -39.24 185.63  
 130.39 1 54 32 2719.11 -34.91 78.13 250.22 54.85 2 39 51 2119.1 -39.23 70.10  
 49.61 17 45 11 4195.24 -34.92 193.67 250.23 54.86 18 55 6 3595.2 -39.24 185.63  
 130.39 1 54 32 2719.11 -34.91 78.13 250.22 54.85 2 39 51 2119.1 -39.23 70.10

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1704 TRA -.3283 TC3-4.8090 BAU .9159 SGT 4957.4 SGR 840.9 SG3 346.4 ST 3313.5 SR 745.2 SS 1240.9  
 ROE .4894 RRA .0208 RC3 -.5144 FAU .06364 RRT .9182 RRF .9358 RTF .9564 CRT .9961 CRS -.9988 CST -.9912  
 FOE 1.7577 FRA .2558 FC3-3.8897 BSP 15533 SGB 5028.2 R23 .1355 R13 .9579 LSA 3612.2 MSA 162.1 SSA 11.9  
 BOE 2.2249 BRA .3289 BC3 4.8364 FSP -1113 SG1 5017.5 SG2 329.1 THA 8.89 EL1 3395.6 EL2 64.1 ALF 12.63

LAUNCH DATE FEB 2 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 20 1969

HELIOCENTRIC CONIC DISTANCE 482.301  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.254 GAL .29 AZL 85.61 HCA 228.38 SMA 125.49 ECC .17494 INC 4.3907 VI 30.220  
 RP 108.68 LAP -3.28 LOP 1.27 VP 37.212 GAP 6.52 AZP 92.92 TAL 178.61 TAP 46.99 RCA 103.53 APO 147.44 V2 34.870  
 RC 143.344 GL 34.40 GP -26.74 ZAL 91.76 ZAP 144.26 ETS 318.02 ZAE 127.92 ETE 202.02 ZAC 123.35 ETC 182.60 CLP-155.36

PLANETOCENTRIC CONIC  
 C3 13.639 VHL 3.693 OLA 47.14 RAL 23.42 RAD 6567.5 VEL 11.620 PTH 2.04 VHP 5.430 DPA -16.97 RAP 35.74 ECC 1.2245  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.59 18 4 54 4178.37 -34.76 191.90 253.34 55.89 19 14 32 3578.4 -38.96 183.80  
 129.41 2 7 23 2719.37 -34.75 78.02 253.33 55.88 2 52 42 2119.4 -38.95 69.92  
 50.59 18 4 54 4178.37 -34.76 191.90 253.34 55.89 19 14 32 3578.4 -38.96 183.80  
 129.41 2 7 23 2719.37 -34.75 78.02 253.33 55.88 2 52 42 2119.4 -38.95 69.92  
 50.59 18 4 54 4178.37 -34.76 191.90 253.34 55.89 19 14 32 3578.4 -38.96 183.80  
 129.41 2 7 23 2719.37 -34.75 78.02 253.33 55.88 2 52 42 2119.4 -38.95 69.92

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1433 TRA -.1790 TC3-5.2329 BAU .9586 SGT 5115.0 SGR 806.8 SG3 349.3 ST 3329.5 SR 710.3 SS 1203.4  
 ROE .4575 RRA .0383 RC3 -.5057 FAU .06428 RRT .9131 RRF .9234 RTF .9564 CRT .9971 CRS -.9977 CST -.9904  
 FOE 1.6438 FRA .3806 FC3-4.0804 BSP 16324 SGB 5178.2 R23 .1143 R13 .9575 LSA 3607.2 MSA 161.5 SSA 13.1  
 BOE 2.1916 BRA .1830 BC3 5.2573 FSP -1169 SG1 5168.0 SG2 325.5 THA 8.23 EL1 3404.0 EL2 52.8 ALF 12.01

LAUNCH DATE FEB 2 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 22 1969

HELIOCENTRIC CONIC DISTANCE 488.200  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.219 GAL .59 AZL 85.88 HCA 231.55 SMA 125.27 ECC .17724 INC 4.1225 VI 30.220  
 RP 108.65 LAP -3.23 LOP 4.46 VP 37.197 GAP 6.81 AZP 92.57 TAL 177.25 TAP 48.80 RCA 103.06 APO 147.47 V2 34.880  
 RC 145.608 GL 32.50 GP -24.95 ZAL 89.56 ZAP 146.38 ETS 318.12 ZAE 128.22 ETE 200.43 ZAC 125.01 ETC 182.23 CLP-156.70

PLANETOCENTRIC CONIC  
 C3 13.261 VHL 3.642 OLA 46.38 RAL 27.53 RAD 6567.5 VEL 11.604 PTH 2.03 VHP 5.525 DPA -14.65 RAP 36.55 ECC 1.2182  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.59 18 24 52 4163.30 -34.50 190.25 256.63 56.83 19 34 15 3563.3 -38.58 182.10  
 128.41 2 20 14 2722.20 -34.49 78.08 256.62 56.82 3 5 37 2122.2 -38.57 69.93  
 51.59 18 24 52 4163.30 -34.50 190.25 256.63 56.83 19 34 15 3563.3 -38.58 182.10  
 128.41 2 20 14 2722.20 -34.49 78.08 256.62 56.82 3 5 37 2122.2 -38.57 69.93  
 51.59 18 24 52 4163.30 -34.50 190.25 256.63 56.83 19 34 15 3563.3 -38.58 182.10  
 128.41 2 20 14 2722.20 -34.49 78.08 256.62 56.82 3 5 37 2122.2 -38.57 69.93

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.1084 TRA -.0239 TC3-5.5132 BAU .9808 SGT 5208.7 SGR 763.6 SG3 341.1 ST 3319.6 SR 677.1 SS 1151.7  
 ROE .4297 RRA .0518 RC3 -.4597 FAU .06181 RRT .9002 RRF .9055 RTF .9559 CRT .9981 CRS -.9960 CST -.9896  
 FOE 1.5175 FRA .4907 FC3-4.0351 BSP 16677 SGB 5264.4 R23 .0954 R13 .9568 LSA 3574.8 MSA 159.4 SSA 14.2  
 BOE 2.1518 BRA .0571 BC3 5.5323 FSP -1147 SG1 5254.1 SG2 329.6 THA 7.55 EL1 3387.7 EL2 40.6 ALF 11.51

LAUNCH DATE FEB 2 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 24 1969

HELIOCENTRIC CONIC DISTANCE 494.084  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.185 GAL .90 AZL 86.12 HCA 234.72 SMA 125.04 ECC .17972 INC 3.8769 VI 30.220  
 RP 108.61 LAP -3.16 LOP 7.64 VP 37.182 GAP 7.10 AZP 92.24 TAL 175.86 TAP 50.59 RCA 102.57 APO 147.52 V2 34.891  
 RC 147.857 GL 30.63 GP -23.35 ZAL 87.21 ZAP 148.35 ETS 318.14 ZAE 128.42 ETE 199.02 ZAC 126.71 ETC 181.89 CLP-157.99

PLANETOCENTRIC CONIC  
 C3 13.015 VHL 3.608 OLA 45.61 RAL 31.68 RAD 6567.5 VEL 11.593 PTH 2.03 VHP 5.635 DPA -12.50 RAP 37.52 ECC 1.2142  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.62 18 45 10 4149.61 -34.14 188.69 260.10 57.70 19 54 20 3549.6 -38.12 180.51  
 127.38 2 33 1 2727.80 -34.13 78.33 260.09 57.68 3 18 28 2127.8 -38.11 70.15  
 52.62 18 45 10 4149.61 -34.14 188.69 260.10 57.70 19 54 20 3549.6 -38.12 180.51  
 127.38 2 33 1 2727.80 -34.13 78.33 260.09 57.68 3 18 28 2127.8 -38.11 70.15  
 52.62 18 45 10 4149.61 -34.14 188.69 260.10 57.70 19 54 20 3549.6 -38.12 180.51  
 127.38 2 33 1 2727.80 -34.13 78.33 260.09 57.68 3 18 28 2127.8 -38.11 70.15

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TOE 2.0671 TRA .1374 TC3-5.7471 BAU 1.0026 SGT 5298.1 SGR 727.4 SG3 331.7 ST 3286.6 SR 648.4 SS 1094.1  
 ROE .4073 RRA .0632 RC3 -.4160 FAU .05916 RRT .8856 RRF .8858 RTF .9559 CRT .9990 CRS -.9933 CST -.9885  
 FOE 1.3912 FRA .5907 FC3-3.9350 BSP 17038 SGB 5347.8 R23 .0770 R13 .9565 LSA 3520.6 MSA 157.5 SSA 15.3  
 BOE 2.1068 BRA .1512 BC3 5.7621 FSP -1122 SG1 5337.2 SG2 335.3 THA 6.96 EL1 3349.8 EL2 28.5 ALF 11.15

LAUNCH DATE FEB 2 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 26 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.150 GAL 1.23 AZL 86.35 MCA 237.90 SMA 124.82 ECC .18238 INC 3.6497 V1 30.220  
 RP 108.58 LAP -3.09 LOP 10.82 VP 37.167 GAP 7.40 AZP 91.94 TAL 174.46 TAP 52.36 RCA 102.06 APO 147.58 V2 34.902  
 RC 150.092 GL 28.77 GP -21.92 ZAL 84.73 ZAP 150.17 ETS 318.06 ZAE 128.57 ETE 197.77 ZAC 128.47 ETC 181.58 CLP-159.25

PLANETOCENTRIC CONIC  
 C3 12.891 VHL 3.590 DLA 44.81 RAL 35.84 RAD 6567.5 VEL 11.588 PTH 2.03 VHP 5.758 DPA -10.50 RAP 38.64 ECC 1.2122  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.70 19 5 51 4137.02 -33.68 187.18 263.72 58.50 20 14 48 3537.0 -37.57 178.99  
 126.30 2 45 34 2736.29 -33.67 78.76 263.71 58.48 3 31 11 2136.3 -37.55 70.58  
 53.70 19 5 51 4137.02 -33.68 187.18 263.72 58.50 20 14 48 3537.0 -37.57 178.99  
 126.30 2 45 34 2736.29 -33.67 78.76 263.71 58.48 3 31 11 2136.3 -37.55 70.58  
 53.70 19 5 51 4137.02 -33.68 187.18 263.72 58.50 20 14 48 3537.0 -37.57 178.99  
 126.30 2 45 34 2736.29 -33.67 78.76 263.71 58.48 3 31 11 2136.3 -37.55 70.58

DIFFERENTIAL CORRECTIONS  
 TOE 2.0233 TRA .3109 TC3-5.9156 BAU 1.0215 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3906 RRA .0744 RC3 -.3725 FAU .05617 SGT 5381.3 SGR 698.6 SG3 321.7 ST 3238.0 SR 625.3 SS 1037.3  
 FDE 1.2728 FRA .6884 FC3-3.7721 BSP 17295 RRT .8687 RRF .8650 RTF .9557 CRT .9995 CRS -.9893 CST -.9873  
 BOE 2.0606 BRA .3197 BC3 5.9273 FSP -1084 SGB 5426.4 R23 .0633 R13 .9562 LSA 3459.5 MSA 157.4 SSA 16.3  
 SGI 5415.5 SG2 343.9 THA 6.46 EL1 3237.8 EL2 18.9 ALF 10.93

LAUNCH DATE FEB 2 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 28 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.115 GAL 1.57 AZL 86.56 MCA 241.08 SMA 124.60 ECC .18524 INC 3.4376 V1 30.220  
 RP 108.54 LAP -3.01 LOP 14.01 VP 37.152 GAP 7.71 AZP 91.66 TAL 173.05 TAP 54.13 RCA 101.52 APO 147.68 V2 34.914  
 RC 152.312 GL 26.92 GP -20.65 ZAL 82.14 ZAP 151.87 ETS 317.88 ZAE 128.67 ETE 196.66 ZAC 130.28 ETC 181.28 CLP-160.46

PLANETOCENTRIC CONIC  
 C3 12.885 VHL 3.590 DLA 43.96 RAL 40.01 RAD 6567.5 VEL 11.588 PTH 2.03 VHP 5.893 DPA -8.63 RAP 39.87 ECC 1.2121  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.85 19 26 53 4125.25 -33.11 185.70 267.47 59.25 20 35 39 3525.2 -36.91 177.51  
 125.15 2 57 44 2747.86 -33.10 79.41 267.46 59.24 3 43 32 2147.9 -36.90 71.23  
 54.85 19 26 53 4125.25 -33.11 185.70 267.47 59.25 20 35 39 3525.2 -36.91 177.51  
 125.15 2 57 44 2747.86 -33.10 79.41 267.46 59.24 3 43 32 2147.9 -36.90 71.23  
 54.85 19 26 53 4125.25 -33.11 185.70 267.47 59.25 20 35 39 3525.2 -36.91 177.51  
 125.15 2 57 44 2747.86 -33.10 79.41 267.46 59.24 3 43 32 2147.9 -36.90 71.23

DIFFERENTIAL CORRECTIONS  
 TOE 1.9742 TRA .4950 TC3-6.0198 BAU 1.0386 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3780 RRA .0852 RC3 -.3319 FAU .05308 SGT 5460.0 SGR 675.6 SG3 311.2 ST 3170.9 SR 606.0 SS 979.2  
 FDE 1.1593 FRA .7802 FC3-3.5665 BSP 17505 RRT .8507 RRF .8438 RTF .9557 CRT .9995 CRS -.9835 CST -.9857  
 BOE 2.0100 BRA .5023 BC3 6.0290 FSP -1043 SGB 5501.7 R23 .0519 R13 .9561 LSA 3369.8 MSA 158.4 SSA 17.3  
 SGI 5490.3 SG2 353.2 THA 6.03 EL1 3228.2 EL2 18.4 ALF 10.82

LAUNCH DATE FEB 2 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 30 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.080 GAL 1.93 AZL 86.76 MCA 244.26 SMA 124.37 ECC .18831 INC 3.2380 V1 30.220  
 RP 108.50 LAP -2.92 LOP 17.20 VP 37.138 GAP 8.03 AZP 91.41 TAL 171.62 TAP 55.88 RCA 100.95 APO 147.80 V2 34.926  
 RC 154.516 GL 25.09 GP -19.51 ZAL 79.46 ZAP 153.45 ETS 317.59 ZAE 128.73 ETE 195.67 ZAC 132.14 ETC 180.99 CLP-161.63

PLANETOCENTRIC CONIC  
 C3 12.995 VHL 3.605 DLA 43.07 RAL 44.14 RAD 6567.5 VEL 11.592 PTH 2.03 VHP 6.039 DPA -6.87 RAP 41.21 ECC 1.2139  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.09 19 48 19 4113.88 -32.44 184.21 271.30 59.96 20 56 53 3513.9 -36.16 176.05  
 123.91 3 9 17 2762.89 -32.43 80.29 271.29 59.95 3 55 20 2162.9 -36.15 72.13  
 56.09 19 48 19 4113.88 -32.44 184.21 271.30 59.96 20 56 53 3513.9 -36.16 176.05  
 123.91 3 9 17 2762.89 -32.43 80.29 271.29 59.95 3 55 20 2162.9 -36.15 72.13  
 56.09 19 48 19 4113.88 -32.44 184.21 271.30 59.96 20 56 53 3513.9 -36.16 176.05  
 123.91 3 9 17 2762.89 -32.43 80.29 271.29 59.95 3 55 20 2162.9 -36.15 72.13

DIFFERENTIAL CORRECTIONS  
 TDE 1.9118 TRA .6838 TC3-6.0742 BAU 1.0566 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3677 RRA .0948 RC3 -.2969 FAU .05016 SGT 5534.0 SGR 655.6 SG3 300.0 ST 3073.9 SR 587.7 SS 914.7  
 FDE 1.0439 FRA .8600 FC3-3.3418 BSP 17800 RRT .8323 RRF .8219 RTF .9563 CRT .9987 CRS -.9753 CST -.9838  
 BOE 1.9468 BRA .6903 BC3 6.0815 FSP -1010 SGB 5572.7 R23 .0406 R13 .9565 LSA 3256.5 MSA 160.5 SSA 18.1  
 SGI 5560.9 SG2 361.6 THA 5.66 EL1 3129.5 EL2 29.7 ALF 10.81

LAUNCH DATE FEB 2 1969

FLIGHT TIME 180.00

ARRIVAL DATE AUG 1 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 27.044 GAL 2.31 AZL 86.95 MCA 247.44 SMA 124.15 ECC .19162 INC 3.0487 V1 30.220  
 RP 108.47 LAP -2.82 LOP 20.39 VP 37.124 GAP 8.35 AZP 91.17 TAL 170.19 TAP 57.63 RCA 100.36 APO 147.94 V2 34.938  
 RC 156.704 GL 23.28 GP -18.49 ZAL 76.73 ZAP 154.94 ETS 317.17 ZAE 128.77 ETE 194.79 ZAC 134.03 ETC 180.70 CLP-162.78

PLANETOCENTRIC CONIC  
 C3 13.224 VHL 3.636 DLA 42.12 RAL 48.22 RAD 6567.5 VEL 11.602 PTH 2.03 VHP 6.197 DPA -5.21 RAP 42.65 ECC 1.2176  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.42 20 10 5 4102.77 -31.67 182.71 275.21 60.64 21 18 27 3502.8 -35.31 174.58  
 122.58 3 20 4 2781.52 -31.66 81.41 275.20 60.63 4 6 26 2181.5 -35.30 73.29  
 57.42 20 10 5 4102.77 -31.67 182.71 275.21 60.64 21 18 27 3502.8 -35.31 174.58  
 122.58 3 20 4 2781.52 -31.66 81.41 275.20 60.63 4 6 26 2181.5 -35.30 73.29  
 57.42 20 10 5 4102.77 -31.67 182.71 275.21 60.64 21 18 27 3502.8 -35.31 174.58  
 122.58 3 20 4 2781.52 -31.66 81.41 275.20 60.63 4 6 26 2181.5 -35.30 73.29

DIFFERENTIAL CORRECTIONS  
 TDE 1.8423 TRA .8844 TC3-6.0637 BAU 1.0730 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3604 RRA .1048 RC3 -.2651 FAU .04723 SGT 5603.8 SGR 639.7 SG3 288.9 ST 2959.8 SR 571.9 SS 851.5  
 FDE .9347 FRA .9363 FC3-3.0921 BSP 18051 RRT .8137 RRF .8006 RTF .9568 CRT .9966 CRS -.9638 CST -.9814  
 BOE 1.8772 BRA .8906 BC3 6.0695 FSP -974 SGB 5640.2 R23 .0322 R13 .9570 LSA 3128.1 MSA 165.0 SSA 18.8  
 SGI 5628.0 SG2 370.3 THA 5.33 EL1 3014.2 EL2 46.2 ALF 10.90

LAUNCH DATE FEB 2 1969

FLIGHT TIME 182.00

ARRIVAL DATE AUG 3 1969

HELIOCENTRIC CONIC

DISTANCE 523.221

RL 147.43 LAL -.00 LOL 132.98 VL 27.009 GAL 2.70 AZL 87.13 HCA 250.63 SMA 123.93 ECC .19518 INC 2.8679 V1 30.220  
 RP 108.43 LAP -2.71 LOP 23.58 VP 37.110 GAP 8.68 AZP 90.95 TAL 168.74 TAP 59.37 RCA 99.74 APO 148.12 V2 34.951  
 RC 158.875 GL 21.49 GP -17.57 ZAL 73.95 ZAP 156.34 ETS 316.63 ZAE 128.79 ETE 194.00 ZAC 135.97 ETC 180.40 CLP-163.89

PLANETOCENTRIC CONIC

C3 13.574 VHL 3.684 DLA 41.11 RAL 52.22 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 6.365 DPA -3.65 RAP 44.18 ECC 1.2234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 58.85 20 32 12 4091.48 -30.80 181.16 279.16 61.29 21 40 23 3491.5 -34.36 173.08  
 121.15 3 29 52 2804.17 -30.79 82.82 279.15 61.28 4 16 36 2204.2 -34.35 74.73  
 58.85 20 32 12 4091.48 -30.80 181.16 279.16 61.29 21 40 23 3491.5 -34.36 173.08  
 121.15 3 29 52 2804.17 -30.79 82.82 279.15 61.28 4 16 36 2204.2 -34.35 74.73  
 58.85 20 32 12 4091.48 -30.80 181.16 279.16 61.29 21 40 23 3491.5 -34.36 173.08  
 121.15 3 29 52 2804.17 -30.79 82.82 279.15 61.28 4 16 36 2204.2 -34.35 74.73

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.7636 TRA 1.0941 TC3-5.9943 BAU 1.0886 SGT 5668.5 SGR 626.2 SG3 277.6 ST 2828.2 SR 557.2 SS 788.4  
 ROE .3554 RRA .1148 RC3 -.2372 FAU .04439 RRT .7953 RRF .7799 RTF .9575 CRT .9928 CRS -.9481 CST -.9785  
 FDE .8293 FRA 1.0058 FC3-2.8313 BSP 18310 SGB 5703.0 R23 .0248 R13 .9576 LSA 2983.4 MSA 171.9 SSA 19.1  
 BOE 1.7990 BRA 1.1001 BC3 5.9990 FSP -940 SG1 5690.4 SG2 378.2 THA 5.04 EL1 2881.8 EL2 65.6 ALF 11.07

LAUNCH DATE FEB 2 1969

FLIGHT TIME 184.00

ARRIVAL DATE AUG 5 1969

HELIOCENTRIC CONIC

DISTANCE 528.982

RL 147.43 LAL -.00 LOL 132.98 VL 26.974 GAL 3.11 AZL 87.31 HCA 253.82 SMA 123.71 ECC .19901 INC 2.6938 V1 30.220  
 RP 108.39 LAP -2.59 LOP 26.78 VP 37.096 GAP 9.03 AZP 90.75 TAL 167.28 TAP 61.10 RCA 99.09 APO 148.33 V2 34.964  
 RC 161.027 GL 19.73 GP -16.74 ZAL 71.16 ZAP 157.65 ETS 315.94 ZAE 128.80 ETE 193.30 ZAC 137.95 ETC 180.10 CLP-164.97

PLANETOCENTRIC CONIC

C3 14.054 VHL 3.749 DLA 40.06 RAL 56.12 RAD 6567.6 VEL 11.638 PTH 2.04 VHP 6.545 DPA -2.17 RAP 45.78 ECC 1.2313  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.39 20 54 38 4079.86 -29.83 179.56 283.14 61.92 22 2 38 3479.9 -33.33 171.53  
 119.61 3 38 33 2831.02 -29.82 84.51 283.13 61.91 4 25 44 2231.0 -33.32 76.47  
 60.39 20 54 38 4079.86 -29.83 179.56 283.14 61.92 22 2 38 3479.9 -33.33 171.53  
 119.61 3 38 33 2831.02 -29.82 84.51 283.13 61.91 4 25 44 2231.0 -33.32 76.47  
 60.39 20 54 38 4079.86 -29.83 179.56 283.14 61.92 22 2 38 3479.9 -33.33 171.53  
 119.61 3 38 33 2831.02 -29.82 84.51 283.13 61.91 4 25 44 2231.0 -33.32 76.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.6806 TRA 1.3191 TC3-5.8563 BAU 1.1010 SGT 5728.5 SGR 615.6 SG3 266.6 ST 2690.6 SR 544.5 SS 730.8  
 ROE .3528 RRA 1.259 RC3 -.2108 FAU .04146 RRT .7774 RRF .7610 RTF .9580 CRT .9865 CRS -.9270 CST -.9752  
 FDE .7323 FRA 1.0744 FC3-2.5540 BSP 18454 SGB 5761.5 R23 .0205 R13 .9581 LSA 2834.9 MSA 182.0 SSA 19.3  
 BOE 1.7173 BRA 1.3251 BC3 5.8600 FSP -899 SG1 5748.5 SG2 385.9 THA 4.80 EL1 2743.8 EL2 87.4 ALF 11.30

LAUNCH DATE FEB 2 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 7 1969

HELIOCENTRIC CONIC

DISTANCE 534.715

RL 147.43 LAL -.00 LOL 132.98 VL 26.938 GAL 3.54 AZL 87.47 HCA 257.01 SMA 123.49 ECC .20313 INC 2.5252 V1 30.220  
 RP 108.35 LAP -2.46 LOP 29.97 VP 37.083 GAP 9.39 AZP 90.57 TAL 165.82 TAP 62.83 RCA 98.41 APO 148.58 V2 34.977  
 RC 163.161 GL 18.01 GP -15.99 ZAL 68.37 ZAP 158.89 ETS 315.09 ZAE 128.79 ETE 192.68 ZAC 139.95 ETC 179.77 CLP-166.03

PLANETOCENTRIC CONIC

C3 14.673 VHL 3.831 DLA 38.96 RAL 59.89 RAD 6567.6 VEL 11.664 PTH 2.05 VHP 6.735 DPA -.78 RAP 47.46 ECC 1.2415  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.04 21 17 24 4067.46 -28.78 177.89 287.12 62.52 22 25 12 3467.5 -32.21 169.91  
 117.96 3 45 53 2862.49 -28.77 86.52 287.11 62.51 4 33 36 2262.5 -32.20 78.54  
 62.04 21 17 24 4067.46 -28.78 177.89 287.12 62.52 22 25 12 3467.5 -32.21 169.91  
 117.96 3 45 53 2862.49 -28.77 86.52 287.11 62.51 4 33 36 2262.5 -32.20 78.54  
 62.04 21 17 24 4067.46 -28.78 177.89 287.12 62.52 22 25 12 3467.5 -32.21 169.91  
 117.96 3 45 53 2862.49 -28.77 86.52 287.11 62.51 4 33 36 2262.5 -32.20 78.54

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.5853 TRA 1.5512 TC3-5.6785 BAU 1.1145 SGT 5783.7 SGR 605.6 SG3 255.6 ST 2537.9 SR 531.6 SS 673.6  
 ROE .3514 RRA 1.1370 RC3 -.1892 FAU .03878 RRT .7603 RRF .7426 RTF .9586 CRT .9768 CRS -.8984 CST -.9710  
 FDE .6369 FRA 1.1356 FC3-2.2881 BSP 18700 SGB 5815.3 R23 .0159 R13 .9587 LSA 2671.8 MSA 195.4 SSA 19.2  
 BOE 1.6237 BRA 1.5572 BC3 5.6816 FSP -867 SG1 5802.1 SG2 392.1 THA 4.57 EL1 2590.5 EL2 111.6 ALF 11.58

LAUNCH DATE FEB 2 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 9 1969

HELIOCENTRIC CONIC

DISTANCE 540.419

RL 147.43 LAL -.00 LOL 132.98 VL 26.903 GAL 4.00 AZL 87.64 HCA 260.20 SMA 123.27 ECC .20757 INC 2.3607 V1 30.220  
 RP 108.31 LAP -2.33 LOP 33.17 VP 37.070 GAP 9.76 AZP 90.40 TAL 164.36 TAP 64.56 RCA 97.69 APO 148.86 V2 34.990  
 RC 165.276 GL 16.34 GP -15.31 ZAL 65.60 ZAP 160.06 ETS 314.08 ZAE 128.78 ETE 192.12 ZAC 141.99 ETC 179.42 CLP-167.07

PLANETOCENTRIC CONIC

C3 15.444 VHL 3.930 DLA 37.82 RAL 63.53 RAD 6567.6 VEL 11.697 PTH 2.06 VHP 6.938 DPA .55 RAP 49.20 ECC 1.2542  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 63.80 21 40 35 4053.89 -27.66 176.11 291.09 63.10 22 48 8 3453.9 -31.03 168.20  
 116.20 3 51 43 2898.98 -27.64 88.87 291.09 63.08 4 40 2 2299.0 -31.01 80.97  
 63.80 21 40 35 4053.89 -27.66 176.11 291.09 63.10 22 48 8 3453.9 -31.03 168.20  
 116.20 3 51 43 2898.98 -27.64 88.87 291.09 63.08 4 40 2 2299.0 -31.01 80.97  
 63.80 21 40 35 4053.89 -27.66 176.11 291.09 63.10 22 48 8 3453.9 -31.03 168.20  
 116.20 3 51 43 2898.98 -27.64 88.87 291.09 63.08 4 40 2 2299.0 -31.01 80.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE 1.4839 TRA 1.7962 TC3-5.4519 BAU 1.1262 SGT 5833.8 SGR 596.8 SG3 244.8 ST 2384.6 SR 519.3 SS 622.3  
 ROE .3516 RRA 1.1489 RC3 -.1695 FAU .03614 RRT .7443 RRF .7258 RTF .9593 CRT .9624 CRS -.8613 CST -.9664  
 FDE .5480 FRA 1.1938 FC3-2.0260 BSP 18907 SGB 5864.3 R23 .0127 R13 .9593 LSA 2509.6 MSA 212.2 SSA 18.8  
 BOE 1.5250 BRA 1.8024 BC3 5.4545 FSP -834 SG1 5850.8 SG2 397.4 THA 4.37 EL1 2436.6 EL2 138.1 ALF 11.88

LAUNCH DATE FEB 2 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 11 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.868 GAL 4.48 AZL 87.80 HCA 263.40 SMA 123.06 ECC .21235 INC 2.1992 V1 30.220  
 RP 108.26 LAP -2.18 LOP 36.37 VP 37.057 GAP 10.16 AZP 90.25 TAL 162.90 TAP 66.30 RCA 96.93 APO 149.19 V2 35.003  
 RC 167.370 GL 14.71 GP -14.69 ZAL 62.88 ZAP 161.17 ETS 312.87 ZAE 128.77 ETE 191.62 ZAC 144.05 ETC 179.03 CLP-168.09

PLANETOCENTRIC CONIC  
 C3 16.381 VHL 4.047 OLA 36.66 RAL 67.01 RAD 6567.7 VEL 11.737 PTH 2.07 VHP 7.154 DPA 1.80 RAP 51.00 ECC 1.2696  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 65.68 22 4 9 4038.87 -26.46 174.22 295.05 63.65 23 11 27 3438.9 -29.78 166.38  
 114.32 3 55 55 2940.76 -26.45 91.60 295.04 63.64 4 44 55 2340.8 -29.77 83.76  
 65.68 22 4 9 4038.87 -26.46 174.22 295.05 63.65 23 11 27 3438.9 -29.78 166.38  
 114.32 3 55 55 2940.76 -26.45 91.60 295.04 63.64 4 44 55 2340.8 -29.77 83.76  
 65.68 22 4 9 4038.87 -26.46 174.22 295.05 63.65 23 11 27 3438.9 -29.78 166.38  
 114.32 3 55 55 2940.76 -26.45 91.60 295.04 63.64 4 44 55 2340.8 -29.77 83.76

DIFFERENTIAL CORRECTIONS  
 TDE 1.3764 TRA 2.0547 TC3-5.1853 BAU 1.1361 SGT 5879.0 SGR 588.7 SG3 234.4 ORBIT DETERMINATION ACCURACY  
 RDE .3532 RRA .1616 RC3 -.1520 FAU .03359 RRT .7297 RRF .7106 RTF .9598 CRT .9418 CRS -.8142 CST -.9614  
 FDE .4649 FRA 1.2497 FC3-1.7751 BSP 19089 SGB 5908.4 R23 .0102 R13 .9599 LSA 2352.1 MSA 232.3 SSA 18.3  
 BDE 1.4210 BRA 2.0611 BC3 5.1875 FSP -802 SG1 5894.7 SG2 401.5 THA 4.20 EL1 2285.9 EL2 166.8 ALF 12.13

LAUNCH DATE FEB 2 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 13 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.833 GAL 4.98 AZL 87.96 HCA 266.59 SMA 122.84 ECC .21752 INC 2.0397 V1 30.220  
 RP 108.22 LAP -2.04 LOP 39.57 VP 37.044 GAP 10.57 AZP 90.12 TAL 161.44 TAP 68.03 RCA 96.12 APO 149.56 V2 35.016  
 RC 169.445 GL 13.14 GP -14.13 ZAL 60.22 ZAP 162.22 ETS 311.46 ZAE 128.75 ETE 191.17 ZAC 146.13 ETC 178.60 CLP-169.09

PLANETOCENTRIC CONIC  
 C3 17.905 VHL 4.184 OLA 35.48 RAL 70.33 RAD 6567.7 VEL 11.785 PTH 2.08 VHP 7.384 DPA 2.99 RAP 52.86 ECC 1.2881  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 67.67 22 28 17 4021.69 -25.22 172.17 298.97 64.18 23 35 18 3421.7 -28.48 164.39  
 112.33 3 58 15 2988.47 -25.21 94.75 298.97 64.17 4 48 3 2388.5 -28.47 86.97  
 67.67 22 28 17 4021.69 -25.22 172.17 298.97 64.18 23 35 18 3421.7 -28.48 164.39  
 112.33 3 58 15 2988.47 -25.21 94.75 298.97 64.17 4 48 3 2388.5 -28.47 86.97  
 67.67 22 28 17 4021.69 -25.22 172.17 298.97 64.18 23 35 18 3421.7 -28.48 164.39  
 112.33 3 58 15 2988.47 -25.21 94.75 298.97 64.17 4 48 3 2388.5 -28.47 86.97

DIFFERENTIAL CORRECTIONS  
 TDE 1.2662 TRA 2.3299 TC3-4.8817 BAU 1.1429 SGT 5919.9 SGR 581.3 SG3 224.5 ORBIT DETERMINATION ACCURACY  
 RDE .3562 RRA .1755 RC3 -.1356 FAU .03103 RRT .7165 RRF .6975 RTF .9603 CRT .9135 CRS -.7576 CST -.9571  
 FDE .3895 FRA 1.3050 FC3-1.5346 BSP 19190 SGB 5948.4 R23 .0091 R13 .9603 LSA 2208.4 MSA 254.8 SSA 17.7  
 BDE 1.3154 BRA 2.3365 BC3 4.8836 FSP -767 SG1 5934.6 SG2 404.6 THA 4.04 EL1 2147.2 EL2 197.2 ALF 12.28

LAUNCH DATE FEB 2 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 15 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.798 GAL 5.52 AZL 88.12 HCA 269.79 SMA 122.63 ECC .22311 INC 1.8812 V1 30.220  
 RP 108.18 LAP -1.88 LOP 42.77 VP 37.031 GAP 11.00 AZP 90.01 TAL 159.98 TAP 69.78 RCA 95.27 APO 149.99 V2 35.030  
 RC 171.498 GL 11.64 GP -13.62 ZAL 57.63 ZAP 163.21 ETS 309.82 ZAE 128.72 ETE 190.77 ZAC 148.23 ETC 178.11 CLP-170.08

PLANETOCENTRIC CONIC  
 C3 18.836 VHL 4.340 OLA 34.29 RAL 73.47 RAD 6567.8 VEL 11.841 PTH 2.10 VHP 7.628 DPA 4.12 RAP 54.76 ECC 1.3100  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 69.80 22 53 9 4001.59 -23.94 169.91 302.87 64.68 23 59 51 3401.6 -27.14 162.20  
 110.20 3 58 29 3042.83 -23.93 98.35 302.86 64.67 4 49 12 2442.8 -27.13 90.65  
 69.80 22 53 9 4001.59 -23.94 169.91 302.87 64.68 23 59 51 3401.6 -27.14 162.20  
 110.20 3 58 29 3042.83 -23.93 98.35 302.86 64.67 4 49 12 2442.8 -27.13 90.65  
 69.80 22 53 9 4001.59 -23.94 169.91 302.87 64.68 23 59 51 3401.6 -27.14 162.20  
 110.20 3 58 29 3042.83 -23.93 98.35 302.86 64.67 4 49 12 2442.8 -27.13 90.65

DIFFERENTIAL CORRECTIONS  
 TDE 1.1471 TRA 2.6159 TC3-4.5652 BAU 1.1500 SGT 5955.4 SGR 573.4 SG3 214.8 ORBIT DETERMINATION ACCURACY  
 RDE .3599 RRA .1897 RC3 -.1217 FAU .02869 RRT .7044 RRF .6852 RTF .9609 CRT .8752 CRS -.6893 CST -.9532  
 FDE .3170 FRA 1.3560 FC3-1.3188 BSP 19372 SGB 5982.9 R23 .0072 R13 .9610 LSA 2072.5 MSA 279.4 SSA 17.1  
 BDE 1.2022 BRA 2.6227 BC3 4.5668 FSP -738 SG1 5969.1 SG2 406.1 THA 3.90 EL1 2015.2 EL2 228.7 ALF 12.29

LAUNCH DATE FEB 2 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 17 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.763 GAL 6.08 AZL 88.28 HCA 273.00 SMA 122.42 ECC .22915 INC 1.7225 V1 30.220  
 RP 108.14 LAP -1.72 LOP 45.98 VP 37.019 GAP 11.46 AZP 89.91 TAL 158.54 TAP 71.53 RCA 94.37 APO 150.47 V2 35.043  
 RC 173.532 GL 10.20 GP -13.15 ZAL 55.12 ZAP 164.14 ETS 307.93 ZAE 128.69 ETE 190.40 ZAC 150.35 ETC 177.54 CLP-171.06

PLANETOCENTRIC CONIC  
 C3 20.404 VHL 4.517 OLA 33.10 RAL 76.45 RAD 6567.8 VEL 11.907 PTH 2.12 VHP 7.889 DPA 5.19 RAP 56.72 ECC 1.3358  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 72.09 23 19 6 3977.42 -22.63 167.37 306.73 65.17 24 25 23 3377.4 -25.78 159.72  
 107.91 3 56 17 3104.91 -22.62 102.50 306.72 65.16 4 48 2 2504.9 -25.77 94.86  
 72.09 23 19 6 3977.42 -22.63 167.37 306.73 65.17 24 25 23 3377.4 -25.78 159.72  
 107.91 3 56 17 3104.91 -22.62 102.50 306.72 65.16 4 48 2 2504.9 -25.77 94.86  
 110.00 5 14 6 2865.93 -28.57 86.69 309.42 70.38 6 1 52 2265.9 -30.97 78.32  
 110.00 3 4 23 3264.39 -16.92 111.70 303.57 59.85 3 58 48 2664.4 -20.80 104.72

DIFFERENTIAL CORRECTIONS  
 TDE 1.0242 TRA 2.9182 TC3-4.2318 BAU 1.1547 SGT 5985.8 SGR 565.4 SG3 205.6 ORBIT DETERMINATION ACCURACY  
 RDE .3645 RRA .2049 RC3 -.1088 FAU .02641 RRT .6936 RRF .6744 RTF .9615 CRT .8259 CRS -.6131 CST -.9512  
 FDE .2506 FRA 1.4063 FC3-1.1207 BSP 19523 SGB 6012.5 R23 .0060 R13 .9615 LSA 1955.7 MSA 304.4 SSA 16.4  
 BDE 1.0871 BRA 2.9254 BC3 4.2332 FSP -709 SG1 5998.7 SG2 406.4 THA 3.77 EL1 1900.8 EL2 260.1 ALF 12.06

LAUNCH DATE FEB 2 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 19 1969

Heliocentric Conic: RL 147.43 LAL -0.00 LOL 132.98 VL 26.728 GAL 6.68 AZL 88.44 HCA 276.20 SMA 122.21 ECC .23570 INC 1.5629 V1 30.220  
 RP 108.10 LAP -1.55 LOP 49.18 VP 37.006 GAP 11.94 AZP 89.83 TAL 157.10 TAP 73.30 RCA 93.41 APO 151.01 V2 35.056  
 RC 175.544 GL 8.83 GP -12.73 ZAL 52.72 ZAP 165.02 ETS 305.75 ZAE 128.66 ETE 190.07 ZAC 152.47 ETC 176.89 CLP-172.03

Distance 568.342

Planetocentric Conic: C3 22.239 VHL 4.716 OLA 31.93 RAL 79.26 RAD 6567.9 VEL 11.984 PTH 2.14 VHP 8.168 DPA 6.19 RAP 58.71 ECC 1.3660  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 74.59 23 46 40 3947.31 -21.30 164.40 310.55 65.63 24 52 27 3347.3 -24.41 156.82  
 105.41 3 51 6 3176.47 -21.29 107.33 310.54 65.62 4 44 3 2576.5 -24.40 99.74  
 74.59 23 46 40 3947.31 -21.30 164.40 310.55 65.63 24 52 27 3347.3 -24.41 156.82  
 105.41 3 51 6 3176.47 -21.29 107.33 310.54 65.62 4 44 3 2576.5 -24.40 99.74  
 110.00 5 53 51 2796.34 -30.06 81.82 314.22 72.90 6 40 27 2196.3 -32.10 73.21  
 110.00 2 47 1 3375.45 -13.02 117.94 305.93 58.11 3 43 16 2775.4 -17.15 111.26

Differential Corrections: TOE .8969 TRA 3.2373 TC3-3.8915 BAU 1.1574 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3698 RRA .2208 RC3 -.0970 FAU .02423 SGT 6011.5 SGR 557.0 SG3 196.8 ST 1769.9 SR 459.2 SS 470.4  
 FDE .1890 FRA 1.4557 FC3 -.9433 BSP 19663 RRT .6841 RRF .6648 RTF .9622 CRT .7650 CRS -.5309 CST -.9513  
 BDE .9702 BRA 3.2448 BC3 3.8927 FSP -681 SGB 6037.2 R23 .0049 R13 .9622 LSA 1859.3 MSA 328.3 SSA 15.8  
 SG1 6023.6 SG2 405.4 THA 3.64 EL1 1805.4 EL2 290.0 ALF 11.53

LAUNCH DATE FEB 2 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 21 1969

Heliocentric Conic: RL 147.43 LAL -0.00 LOL 132.98 VL 26.694 GAL 7.32 AZL 88.60 HCA 279.41 SMA 122.00 ECC .24281 INC 1.4011 V1 30.220  
 RP 108.06 LAP -1.38 LOP 52.39 VP 36.994 GAP 12.45 AZP 89.77 TAL 155.68 TAP 75.09 RCA 92.38 APO 151.63 V2 35.069  
 RC 177.535 GL 7.53 GP -12.34 ZAL 50.41 ZAP 165.84 ETS 303.25 ZAE 128.61 ETE 189.77 ZAC 154.61 ETC 176.11 CLP-172.99

Distance 573.768

Planetocentric Conic: C3 24.382 VHL 4.938 OLA 30.78 RAL 81.89 RAD 6568.0 VEL 12.073 PTH 2.16 VHP 8.468 DPA 7.15 RAP 60.74 ECC 1.4013  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 77.40 0 20 49 3907.77 -19.96 160.78 314.33 66.07 1 25 57 3307.8 -23.03 153.25  
 102.60 3 41 55 3260.90 -19.95 113.06 314.33 66.06 4 36 16 2660.9 -23.01 105.54  
 77.40 0 20 49 3907.77 -19.96 160.78 314.33 66.07 1 25 57 3307.8 -23.03 153.25  
 102.60 3 41 55 3260.90 -19.95 113.06 314.33 66.06 4 36 16 2660.9 -23.01 105.54  
 110.00 6 25 30 2750.22 -30.94 78.52 318.66 74.68 7 11 20 2150.2 -32.73 69.76  
 110.00 2 36 24 3466.45 -9.70 122.90 308.60 57.06 3 34 11 2866.4 -13.97 116.40

Differential Corrections: TOE .7694 TRA 3.5783 TC3-3.5434 BAU 1.1554 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3762 RRA .2377 RC3 -.0855 FAU .02203 SGT 6033.1 SGR 548.4 SG3 188.5 ST 1705.9 SR 447.0 SS 461.2  
 FDE .1339 FRA 1.5067 FC3 -.7823 BSP 19701 RRT .6761 RRF .6571 RTF .9629 CRT .6945 CRS -.4497 CST -.9544  
 BDE .8564 BRA 3.5862 BC3 3.5444 FSP -650 SGB 6058.0 R23 .0044 R13 .9629 LSA 1789.1 MSA 348.8 SSA 15.1  
 SG1 6044.6 SG2 403.3 THA 3.53 EL1 1734.9 EL2 316.2 ALF 10.67

LAUNCH DATE FEB 2 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 23 1969

Heliocentric Conic: RL 147.43 LAL -0.00 LOL 132.98 VL 26.660 GAL 7.99 AZL 88.76 HCA 282.62 SMA 121.80 ECC .25054 INC 1.2362 V1 30.220  
 RP 108.02 LAP -1.21 LOP 55.60 VP 36.982 GAP 13.00 AZP 89.73 TAL 154.27 TAP 76.90 RCA 91.29 APO 152.32 V2 35.083  
 RC 179.506 GL 6.31 GP -11.98 ZAL 48.22 ZAP 166.60 ETS 300.39 ZAE 128.56 ETE 189.49 ZAC 156.74 ETC 175.18 CLP-173.95

Distance 579.120

Planetocentric Conic: C3 26.880 VHL 5.185 OLA 29.65 RAL 84.36 RAD 6568.1 VEL 12.176 PTH 2.19 VHP 8.789 DPA 8.04 RAP 62.79 ECC 1.4424  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 80.81 0 56 9 3850.76 -18.63 155.91 318.08 66.50 2 0 20 3250.8 -21.65 148.43  
 99.19 3 26 17 3366.09 -18.61 120.29 318.07 66.49 4 22 24 2766.1 -21.63 112.81  
 100.00 4 4 15 3244.73 -21.41 112.51 319.30 68.62 4 58 20 2644.7 -24.12 104.76  
 100.00 3 0 53 3447.35 -15.88 125.01 316.76 64.34 3 58 20 2847.4 -19.20 117.79  
 110.00 6 52 37 2716.98 -31.51 76.10 322.90 76.01 7 37 54 2117.0 -33.11 67.24  
 110.00 2 29 0 3547.87 -6.66 127.24 311.43 56.39 3 28 8 2947.9 -11.03 120.87

Differential Corrections: TOE .6340 TRA 3.9347 TC3-3.2074 BAU 1.1529 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3828 RRA .2549 RC3 -.0754 FAU .02003 SGT 6048.9 SGR 538.6 SG3 180.6 ST 1659.6 SR 434.0 SS 456.1  
 FDE .0812 FRA 1.5556 FC3 -.6451 BSP 19828 RRT .6686 RRF .6497 RTF .9638 CRT .6144 CRS -.3673 CST -.9590  
 BDE .7406 BRA 3.9430 BC3 3.2083 FSP -625 SGB 6072.8 R23 .0034 R13 .9638 LSA 1736.9 MSA 365.2 SSA 14.5  
 SG1 6059.6 SG2 399.8 THA 3.42 EL1 1681.8 EL2 337.9 ALF 9.52

LAUNCH DATE FEB 2 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 25 1969

Heliocentric Conic: RL 147.43 LAL -0.00 LOL 132.98 VL 26.626 GAL 8.72 AZL 88.93 HCA 285.83 SMA 121.60 ECC .25896 INC 1.0670 V1 30.220  
 RP 107.98 LAP -1.03 LOP 58.81 VP 36.969 GAP 13.59 AZP 89.71 TAL 152.89 TAP 78.73 RCA 90.11 APO 153.09 V2 35.095  
 RC 181.455 GL 5.15 GP -11.65 ZAL 46.13 ZAP 167.30 ETS 297.15 ZAE 128.50 ETE 189.24 ZAC 158.87 ETC 174.06 CLP-174.92

Distance 584.389

Planetocentric Conic: C3 29.790 VHL 5.458 OLA 28.56 RAL 86.67 RAD 6568.2 VEL 12.295 PTH 2.21 VHP 9.136 DPA 8.88 RAP 64.88 ECC 1.4903  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 86.11 1 47 58 3739.27 -17.30 147.09 321.79 66.92 2 50 17 3139.3 -20.28 139.66  
 93.89 2 52 55 3528.88 -17.29 131.68 321.78 66.91 3 51 44 2928.9 -20.27 124.26  
 100.00 4 56 35 3130.80 -24.05 105.07 324.51 71.69 5 48 46 2530.8 -26.32 97.01  
 100.00 2 26 59 3612.58 -10.78 134.63 318.58 61.95 3 27 12 3012.6 -14.45 127.76  
 110.00 7 16 32 2692.65 -31.90 74.31 327.00 77.00 8 1 25 2092.7 -33.36 65.38  
 110.00 2 23 31 3623.49 -3.79 131.22 314.34 56.00 3 23 54 3023.5 -8.23 124.94

Differential Corrections: TOE .4951 TRA 4.3131 TC3-2.8792 BAU 1.1470 MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 RDE .3899 RRA .2726 RC3 -.0658 FAU .01808 SGT 6059.9 SGR 528.1 SG3 173.1 ST 1634.2 SR 420.8 SS 455.5  
 FDE .0327 FRA 1.6056 FC3 -.5254 BSP 19933 RRT .6619 RRF .6433 RTF .9649 CRT .5295 CRS -.2899 CST -.9649  
 BDE .6302 BRA 4.3217 BC3 2.8799 FSP -601 SGB 6082.8 R23 .0026 R13 .9649 LSA 1707.0 MSA 375.9 SSA 14.0  
 SG1 6070.0 SG2 395.2 THA 3.32 EL1 1650.1 EL2 353.6 ALF 8.14



LAUNCH DATE FEB 2 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 27 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.593 GAL 9.49 AZL 89.11 HCA 289.05 SMA 121.40 ECC .26816 INC .8921 V1 30.220  
 RP 107.94 LAP -.84 LOP 62.03 VP 36.957 GAP 14.22 A7P 89.71 TAL 151.54 TAP 80.59 RCA 88.85 APO 153.96 V2 35.108  
 RC 183.384 GL 4.07 GP -11.36 ZAL 44.17 ZAP 167.93 ETS 293.47 ZAE 128.42 ETE 189.00 ZAC 160.99 ETC 172.67 CLP-175.89

DISTANCE 589.558

PLANETOCENTRIC CONIC  
 C3 33.182 VML 5.760 DLA 27.50 RAL 88.83 RAD 6568.3 VEL 12.432 PTH 2.25 VHP 9.512 DPA 9.67 RAP 66.99 ECC 1.5461  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 28 32 3467.33 -21.24 128.80 327.58 70.82 4 26 19 2867.3 -23.66 120.97  
 90.00 1 29 32 3855.05 -10.86 152.49 323.06 63.69 2 33 47 3255.0 -14.31 145.51  
 100.00 5 30 24 3074.46 -25.20 101.28 328.97 73.36 6 21 39 2474.5 -27.24 93.08  
 100.00 2 10 21 3723.15 -7.18 140.86 321.10 60.90 3 12 24 3123.1 -11.00 134.16  
 110.00 7 37 59 2675.24 -32.16 73.01 331.01 77.73 8 22 34 2075.2 -33.51 64.04  
 110.00 2 19 16 3695.14 -1.06 134.96 317.32 55.83 3 20 51 3095.1 -5.53 128.73

MID-COURSE EXECUTION ACCURACY  
 SGT 6066.1 SGR 516.6 SG3 166.0  
 RRT .6559 RRF .6378 RTF .9662  
 SGB 6088.1 R23 .0019 R13 .9662  
 SG1 6075.6 SG2 389.3 THA 3.21

ORBIT DETERMINATION ACCURACY  
 ST 1627.0 SR 407.3 SS 458.4  
 CRT .4437 CRS -.2193 CST -.9712  
 LSA 1696.5 MSA 380.6 SSA 13.4  
 EL1 1637.5 EL2 362.7 ALF 6.67

LAUNCH DATE FEB 2 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 29 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.560 GAL 10.32 AZL 89.29 HCA 292.26 SMA 121.21 ECC .27823 INC .7102 V1 30.220  
 RP 107.90 LAP -.66 LOP 65.24 VP 36.946 GAP 14.90 A7P 89.73 TAL 150.23 TAP 82.49 RCA 87.48 APO 154.93 V2 35.120  
 RC 185.291 GL 3.05 GP -11.08 ZAL 42.32 ZAP 168.49 ETS 289.32 ZAE 128.33 ETE 188.78 ZAC 163.08 ETC 170.92 CLP-176.87

DISTANCE 594.613

PLANETOCENTRIC CONIC  
 C3 37.142 VML 6.094 DLA 26.49 RAL 90.83 RAD 6568.4 VEL 12.590 PTH 2.28 VHP 9.919 DPA 10.40 RAP 69.11 ECC 1.6113  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 6 13 3397.26 -22.74 124.21 332.14 72.65 5 2 50 2797.3 -24.90 116.21  
 90.00 1 7 50 3982.05 -6.94 159.76 325.42 62.48 2 14 12 3382.0 -10.57 152.97  
 100.00 5 57 39 3038.00 -25.89 98.79 333.16 74.50 6 48 17 2438.0 -27.76 90.49  
 100.00 1 59 5 3816.54 -4.06 146.03 323.84 60.36 3 2 41 3216.5 -7.97 139.43  
 110.00 7 57 21 2663.48 -32.32 72.14 334.94 78.22 8 41 45 2063.5 -33.61 63.14  
 110.00 2 15 53 3763.82 1.57 138.54 320.34 55.85 3 18 36 3163.8 -2.92 132.34

MID-COURSE EXECUTION ACCURACY  
 SGT 6069.6 SGR 504.5 SG3 159.3  
 RRT .6509 RRF .6335 RTF .9676  
 SGB 6090.6 R23 .0016 R13 .9676  
 SG1 6078.5 SG2 382.5 THA 3.11

ORBIT DETERMINATION ACCURACY  
 ST 1636.2 SR 393.8 SS 464.3  
 CRT .3628 CRS -.1593 CST -.9774  
 LSA 1704.0 MSA 379.6 SSA 12.9  
 EL1 1642.8 EL2 365.5 ALF 5.25

LAUNCH DATE FEB 2 1969

FLIGHT TIME 210.00

ARRIVAL DATE AUG 31 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.528 GAL 11.22 AZL 89.48 HCA 295.48 SMA 121.02 ECC .28929 INC .5196 V1 30.220  
 RP 107.87 LAP -.47 LOP 68.46 VP 36.934 GAP 15.65 A7P 89.78 TAL 148.95 TAP 84.44 RCA 86.01 APO 156.03 V2 35.132  
 RC 187.175 GL 2.09 GP -10.83 ZAL 40.59 ZAP 168.96 ETS 284.69 ZAE 128.21 ETE 188.57 ZAC 165.15 ETC 168.68 CLP-177.86

DISTANCE 599.529

PLANETOCENTRIC CONIC  
 C3 41.776 VML 6.463 DLA 25.51 RAL 92.69 RAD 6568.6 VEL 12.773 PTH 2.32 VHP 10.364 DPA 11.08 RAP 71.25 ECC 1.6875  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 34 46 3355.55 -23.56 121.43 336.34 73.81 5 30 41 2755.6 -25.55 113.33  
 90.00 0 54 7 4083.14 -3.73 165.46 328.09 61.91 2 2 10 3483.1 -7.46 158.76  
 100.00 6 20 55 3013.32 -26.32 97.09 337.18 75.30 7 11 8 2413.3 -28.08 88.73  
 100.00 1 50 38 3900.61 -1.21 150.65 326.70 60.13 2 55 39 3300.6 -5.18 144.11  
 110.00 8 14 57 2656.55 -32.42 71.62 338.81 78.51 8 59 14 2056.5 -33.66 62.61  
 110.00 2 13 6 3830.14 4.10 142.01 323.39 56.03 3 16 56 3230.1 -3.39 135.80

MID-COURSE EXECUTION ACCURACY  
 SGT 6066.4 SGR 490.9 SG3 152.9  
 RRT .6455 RRF .6288 RTF .9692  
 SGB 6086.2 R23 .0011 R13 .9692  
 SG1 6074.7 SG2 374.4 THA 3.00

ORBIT DETERMINATION ACCURACY  
 ST 1653.9 SR 379.6 SS 472.0  
 CRT .2844 CRS -.1034 CST -.9826  
 LSA 1721.1 MSA 374.1 SSA 12.4  
 EL1 1657.6 EL2 363.1 ALF 3.92

LAUNCH DATE FEB 2 1969

FLIGHT TIME 212.00

ARRIVAL DATE SEP 2 1969

MELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.496 GAL 12.19 AZL 89.68 HCA 298.70 SMA 120.83 ECC .30146 INC .3181 V1 30.220  
 RP 107.83 LAP -.28 LOP 71.68 VP 36.922 GAP 16.45 A7P 89.85 TAL 147.73 TAP 86.44 RCA 84.41 APO 157.26 V2 35.144  
 RC 189.037 GL 1.20 GP -10.60 ZAL 38.99 ZAP 169.34 ETS 279.56 ZAE 128.07 ETE 188.38 ZAC 167.18 ETC 165.72 CLP-178.87

DISTANCE 604.280

PLANETOCENTRIC CONIC  
 C3 47.214 VML 6.871 DLA 24.58 RAL 94.40 RAD 6568.8 VEL 12.984 PTH 2.37 VHP 10.850 DPA 11.70 RAP 73.39 ECC 1.7770  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 58 31 3328.29 -24.06 119.59 340.34 74.60 5 53 59 2728.3 -25.94 111.42  
 90.00 0 44 2 4171.95 -.87 170.42 330.90 61.70 1 53 34 3572.0 -4.64 163.77  
 100.00 6 4 17 2996.93 -26.60 95.95 341.08 75.84 7 31 14 2396.9 -28.29 87.55  
 100.00 1 43 57 3978.54 1.43 154.93 329.62 60.14 2 50 16 3378.5 -2.56 148.41  
 110.00 8 30 58 2653.78 -32.46 71.41 342.60 78.63 9 15 12 2053.8 -33.68 62.39  
 110.00 2 10 46 3894.46 6.53 145.40 326.46 56.37 3 15 40 3294.5 2.07 139.16

MID-COURSE EXECUTION ACCURACY  
 SGT 6059.2 SGR 476.2 SG3 146.9  
 RRT .6403 RRF .6246 RTF .9711  
 SGB 6077.9 R23 .0007 R13 .9711  
 SG1 6066.9 SG2 365.3 THA 2.89

ORBIT DETERMINATION ACCURACY  
 ST 1679.6 SR 365.1 SS 481.6  
 CRT .2132 CRS -.0555 CST -.9870  
 LSA 1747.3 MSA 364.8 SSA 11.9  
 EL1 1681.5 EL2 356.3 ALF 2.78

LAUNCH DATE FEB 2 1969

FLIGHT TIME 214.00

ARRIVAL DATE SEP 4 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.464 GAL 13.24 AZL 89.90 HCA 301.93 SMA 120.65 ECC .31490 INC .1033 VI 30.220  
 RP 107.79 LAP -.09 LOP 74.90 VP 36.910 GAP 17.34 AZP 89.94 TAL 146.57 TAP 88.50 RCA 82.66 APO 158.64 V2 35.155  
 RC 190.875 GL .37 GP -10.38 ZAL 37.51 ZAP 169.62 ETS 273.97 ZAE 127.90 ETE 188.19 ZAC 169.14 ETC 161.68 CLP-179.91

DISTANCE 608.833

PLANETOCENTRIC CONIC  
 C3 53.620 VHL 7.323 DLA 23.70 RAL 95.98 RAD 6568.9 VEL 13.228 PTH 2.42 VHP 11.384 DPA 12.28 RAP 75.52 ECC 1.8825  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 19 0 3310.51 -24.38 118.38 344.19 75.13 6 14 11 2710.5 -26.18 110.18  
 90.00 0 36 7 4252.92 1.75 174.94 333.78 61.73 1 47 0 3652.9 -2.04 168.32  
 100.00 6 59 22 2986.91 -26.77 95.25 344.87 76.17 7 49 9 2386.9 -28.40 86.83  
 100.00 1 38 26 4051.95 3.91 158.97 332.58 60.34 2 45 58 3452.0 -.07 152.44  
 110.00 8 45 34 2654.64 -32.44 71.48 346.33 78.59 9 29 49 2054.6 -33.68 62.46  
 110.00 2 8 43 3956.98 8.88 148.72 329.53 56.85 3 14 40 3357.0 4.45 142.43

DIFFERENTIAL CORRECTIONS  
 TOE -.2589 TRA 6.6184 TC3-1.4557 BAU 1.0437 SGT 6047.3 SGR 460.2 SG3 141.2 ST 1709.9 SR 350.4 SS 492.6  
 ROE .4318 RRA .3630 RC3 -.0259 FAU .00906 RRT .6348 RRF .6203 RTF .9731 CRT .1494 CRS -.0140 CST -.9905  
 FOE -.1613 FRA 1.8906 FC3 -.1463 BSP 20151 SGB 6064.7 R23 .0005 R13 .9731 LSA 1778.9 MSA 352.8 SSA 11.4  
 BOE .5035 BRA 6.6283 BC3 1.4559 FSP -489 SG1 6054.3 SG2 355.2 THA 2.78 EL1 1710.7 EL2 346.3 ALF 1.83

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 2 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 6 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.434 GAL 14.39 AZL 90.13 HCA 305.15 SMA 120.47 ECC .32980 INC .1249 VI 30.220  
 RP 107.76 LAP .10 LOP 78.13 VP 36.899 GAP 18.31 AZP 90.07 TAL 145.48 TAP 90.63 RCA 80.74 APO 160.20 V2 35.166  
 RC 192.690 GL -.41 GP -10.18 ZAL 36.15 ZAP 169.77 ETS 267.96 ZAE 127.69 ETE 188.00 ZAC 170.99 ETC 155.97 CLP 179.03

DISTANCE 613.147

PLANETOCENTRIC CONIC  
 C3 61.204 VHL 7.823 DLA 22.86 RAL 97.42 RAD 6569.1 VEL 13.511 PTH 2.47 VHP 11.974 DPA 12.80 RAP 77.65 ECC 2.0073  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 36 59 3299.70 -24.56 117.64 347.92 75.45 6 31 59 2699.7 -26.32 109.42  
 90.00 0 29 36 4328.78 4.18 179.17 336.69 61.97 1 41 45 3728.8 .40 172.54  
 100.00 7 15 31 2981.99 -26.85 94.91 348.55 76.33 8 5 13 2382.0 -28.46 86.48  
 100.00 1 33 45 4121.72 6.25 162.83 335.56 60.71 2 42 27 3521.7 2.30 156.27  
 110.00 8 58 52 2658.68 -32.39 71.78 349.98 78.42 9 43 10 2058.7 -33.64 62.77  
 110.00 2 6 54 4017.80 11.12 152.00 332.61 57.47 3 13 52 3417.8 6.75 145.63

DIFFERENTIAL CORRECTIONS  
 TOE -.4207 TRA 7.1883 TC3-1.2219 BAU .9999 SGT 6032.4 SGR 443.3 SG3 135.9 ST 1742.3 SR 335.7 SS 505.2  
 ROE .4414 RRA .3797 RC3 -.0195 FAU .00727 RRT .6294 RRF .6162 RTF .9753 CRT .0951 CRS .0197 CST -.9931  
 FOE -.1925 FRA 1.9609 FC3 -.1028 BSP 20059 SGB 6048.6 R23 .0005 R13 .9753 LSA 1813.5 MSA 339.0 SSA 10.9  
 BOE .6098 BRA 7.1983 BC3 1.2220 FSP -467 SG1 6038.8 SG2 344.1 THA 2.66 EL1 1742.7 EL2 334.1 ALF 1.09

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 2 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 8 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.404 GAL 15.65 AZL 90.37 HCA 308.38 SMA 120.30 ECC .34636 INC .3744 VI 30.220  
 RP 107.73 LAP .29 LOP 81.35 VP 36.887 GAP 19.39 AZP 90.23 TAL 144.48 TAP 92.86 RCA 78.63 APO 161.97 V2 35.177  
 RC 194.480 GL -1.14 GP -10.00 ZAL 34.92 ZAP 169.79 ETS 261.64 ZAE 127.44 ETE 187.82 ZAC 172.69 ETC 147.58 CLP 177.92

DISTANCE 617.166

PLANETOCENTRIC CONIC  
 C3 70.229 VHL 8.380 DLA 22.06 RAL 98.71 RAD 6569.4 VEL 13.841 PTH 2.53 VHP 12.629 DPA 13.27 RAP 79.75 ECC 2.1558  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 52 53 3294.31 -24.66 117.28 351.52 75.62 6 47 48 2694.3 -26.39 109.04  
 90.00 0 24 2 4400.08 6.45 183.19 339.61 62.37 1 37 22 3800.1 2.70 176.51  
 100.00 7 29 59 2981.27 -26.86 94.86 352.13 76.36 8 19 40 2381.3 -28.47 86.42  
 100.00 1 29 38 4188.36 8.45 166.55 338.53 61.22 2 39 27 3588.4 4.55 159.93  
 110.00 9 10 55 2665.47 -32.30 72.29 353.54 78.14 9 55 20 2065.5 -33.59 63.29  
 110.00 2 5 11 4076.91 13.27 155.24 335.66 58.20 3 13 8 3476.9 8.97 148.78

DIFFERENTIAL CORRECTIONS  
 TOE -.5960 TRA 7.8005 TC3-1.0099 BAU .9482 SGT 6012.1 SGR 424.8 SG3 130.8 ST 1774.5 SR 320.5 SS 519.3  
 ROE .4511 RRA .3947 RC3 -.0140 FAU .00553 RRT .6224 RRF .6107 RTF .9776 CRT .0442 CRS .0515 CST -.9952  
 FOE -.2239 FRA 2.0360 FC3 -.0681 BSP 20099 SGB 6027.1 R23 .0005 R13 .9776 LSA 1848.4 MSA 323.9 SSA 10.5  
 BOE .7475 BRA 7.8104 BC3 1.0100 FSP -450 SG1 6018.0 SG2 332.2 THA 2.53 EL1 1774.6 EL2 320.2 ALF .47

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 2 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 10 1969

HELIOCENTRIC CONIC  
 RL 147.43 LAL -.00 LOL 132.98 VL 26.375 GAL 17.05 AZL 90.65 HCA 311.60 SMA 120.14 ECC .36484 INC .6471 VI 30.220  
 RP 107.70 LAP .48 LOP 84.58 VP 36.876 GAP 20.59 AZP 90.43 TAL 143.59 TAP 95.19 RCA 76.30 APO 163.97 V2 35.187  
 RC 196.245 GL -1.81 GP -9.83 ZAL 33.83 ZAP 169.65 ETS 255.14 ZAE 127.14 ETE 187.64 ZAC 174.10 ETC 134.93 CLP 176.77

DISTANCE 620.821

PLANETOCENTRIC CONIC  
 C3 81.036 VHL 9.002 DLA 21.32 RAL 99.87 RAD 6569.6 VEL 14.226 PTH 2.59 VHP 13.360 DPA 13.69 RAP 81.82 ECC 2.3336  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 7 0 3293.27 -24.67 117.21 354.98 75.65 7 1 53 2693.3 -26.41 108.97  
 90.00 0 19 9 4467.62 8.57 187.02 342.50 62.91 1 33 37 3867.6 4.87 180.30  
 100.00 7 42 54 2984.02 -26.81 95.05 355.57 76.27 8 32 38 2384.0 -28.44 86.62  
 100.00 1 25 56 4252.05 10.52 170.15 341.46 61.86 2 36 48 3652.1 6.68 163.47  
 110.00 9 21 47 2674.64 -32.17 72.97 356.99 77.75 10 6 22 2074.6 -33.52 64.00  
 110.00 2 3 32 4134.25 15.30 158.44 338.69 59.05 3 12 26 3534.3 11.08 151.87

DIFFERENTIAL CORRECTIONS  
 TOE -.7774 TRA 8.4647 TC3 -.8153 BAU .8834 SGT 5987.1 SGR 405.0 SG3 126.0 ST 1804.7 SR 305.3 SS 535.1  
 ROE .4613 RRA .4076 RC3 -.0090 FAU .00371 RRT .6141 RRF .6040 RTF .9800 CRT -.0006 CRS .0794 CST -.9967  
 FOE -.2543 FRA 2.1192 FC3 -.0397 BSP 20115 SGB 6000.8 R23 .0006 R13 .9800 LSA 1881.9 MSA 307.9 SSA 9.8  
 BOE .9040 BRA 8.4745 BC3 .8154 FSP -433 SG1 5992.3 SG2 319.4 THA 2.39 EL1 1804.7 EL2 305.3 ALF 179.99

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 70.00 ARRIVAL DATE APR 14 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 24.811 GAL -2.06 AZL 87.32 MCA 73.27 SMA 112.04 ECC .31788 INC 2.6823 V1 30.215  
 RP 108.03 LAP 2.57 LOP 207.25 VP 35.673 GAP -18.42 AZP 89.23 TAL 184.44 TAP 257.72 RCA 76.43 APO 147.66 V2 35.080  
 RC 43.078 GL 11.77 GP 8.68 ZAL 101.71 ZAP 10.74 ETS 236.08 ZAE 162.22 ETE 358.70 ZAC 123.71 ETC 158.89 CLP 6.35

Distance 171.404

Planetocentric Conic: C3 32.338 VHL 5.687 OLA 23.19 RAL 25.45 RAD 6568.3 VEL 12.398 PTH 2.24 VHP 11.710 DPA 18.56 RAP 28.72 ECC 1.5322  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 41 18 3156.79 -26.64 107.70 264.24 80.02 1 33 55 2556.8 -27.74 99.21  
 90.00 19 39 22 4152.60 -1.49 169.34 255.33 61.72 20 48 35 3552.6 -5.26 162.69  
 100.00 2 20 30 2836.90 -28.75 84.55 264.63 81.46 3 7 47 2236.9 -29.64 75.86  
 100.00 20 42 51 3947.72 .38 153.24 254.29 60.11 21 48 38 3347.7 -3.60 146.71  
 110.00 4 4 56 2510.20 -33.86 60.45 265.34 84.97 4 46 46 1910.2 -34.18 51.22  
 110.00 21 14 54 3847.18 4.75 142.90 251.57 56.11 22 19 2 3247.2 .26 136.69

Differential Corrections: TDE -.3225 TRA -.5936 TC3 .2384 BAW .1031 SGT 776.2 SGR 430.7 SG3 70.0 ST 379.2 SR 416.8 SS 239.8  
 RDE -.4122 RRA .1035 RC3 .0098 FAU .02431 RRT .1919 RRF -.2123 RTF -.6848 CRT .8122 CRS .9195 CST .9714  
 FDE .2229 FRA .2201 FC3 -.6508 BSP 2203 SGB 887.7 R23 -.0272 R13 -.6892 LSA 586.9 MSA 173.7 SSA 17.2  
 BDE .5234 BRA .6025 BC3 .2386 FSP -164 SG1 782.3 SG2 419.4 THA 8.55 EL1 536.6 EL2 171.8 ALF 48.32

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 72.00 ARRIVAL DATE APR 16 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 25.125 GAL -2.16 AZL 87.49 MCA 76.48 SMA 113.55 ECC .30077 INC 2.5099 V1 30.215  
 RP 108.07 LAP 2.44 LOP 210.46 VP 35.879 GAP -17.29 AZP 89.41 TAL 185.04 TAP 261.52 RCA 79.40 APO 147.70 V2 35.067  
 RC 43.658 GL 11.78 GP 9.15 ZAL 102.96 ZAP 10.18 ETS 246.35 ZAE 159.82 ETE 1.22 ZAC 124.72 ETC 158.08 CLP 4.48

Distance 178.107

Planetocentric Conic: C3 28.990 VHL 5.384 OLA 22.74 RAL 24.19 RAD 6568.2 VEL 12.262 PTH 2.21 VHP 11.072 DPA 19.51 RAP 29.81 ECC 1.4771  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 42 38 3106.74 -27.18 104.13 260.80 81.73 1 34 25 2506.7 -28.04 95.57  
 90.00 19 27 58 4147.78 -1.65 169.07 252.18 61.73 20 37 5 3547.8 -5.41 162.41  
 100.00 2 20 56 2789.79 -29.18 81.12 261.10 83.22 3 7 26 2189.8 -29.81 72.37  
 100.00 20 32 21 3939.96 .12 152.81 251.20 60.11 21 38 1 3340.0 -3.86 146.28  
 110.00 4 3 54 2467.68 -34.06 57.15 261.59 86.91 4 45 2 1867.7 -34.11 47.90  
 110.00 21 5 53 3834.84 4.28 142.26 248.61 56.05 22 9 47 3234.8 -.21 136.04

Differential Corrections: TDE -.3217 TRA -.5695 TC3 .2993 BAW .1164 SGT 808.0 SGR 435.4 SG3 77.9 ST 395.2 SR 420.8 SS 243.8  
 RDE -.3941 RRA .0993 RC3 .0232 FAU .02591 RRT .2170 RRF -.2404 RTF -.7038 CRT .8227 CRS .9257 CST .9716  
 FDE .2280 FRA .2127 FC3 -.7739 BSP 2343 SGB 917.9 R23 -.0314 R13 -.7089 LSA 602.0 MSA 172.9 SSA 18.1  
 BDE .5087 BRA .5781 BC3 .3002 FSP -186 SG1 815.6 SG2 421.1 THA 9.12 EL1 551.2 EL2 171.5 ALF 47.18

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 74.00 ARRIVAL DATE APR 18 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 25.413 GAL -2.26 AZL 87.66 MCA 79.69 SMA 114.98 ECC .28501 INC 2.3421 V1 30.215  
 RP 108.11 LAP 2.30 LOP 213.67 VP 36.068 GAP -16.21 AZP 89.58 TAL 185.70 TAP 265.39 RCA 82.21 APO 147.74 V2 35.053  
 RC 44.405 GL 11.71 GP 9.68 ZAL 104.33 ZAP 10.01 ETS 257.64 ZAE 157.53 ETE 3.39 ZAC 125.67 ETC 157.19 CLP 2.57

Distance 184.824

Planetocentric Conic: C3 26.127 VHL 5.111 OLA 22.16 RAL 22.85 RAD 6568.1 VEL 12.145 PTH 2.18 VHP 10.465 DPA 20.50 RAP 30.86 ECC 1.4300  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 45 2 3053.14 -27.64 100.28 257.32 83.61 1 35 55 2453.1 -28.24 91.67  
 90.00 19 14 50 4149.61 -1.59 169.17 249.00 61.72 20 23 59 3549.6 -5.36 162.52  
 100.00 2 22 17 2739.55 -29.53 77.42 257.53 85.13 3 7 56 2139.6 -29.89 68.64  
 100.00 20 20 16 3938.43 .07 152.73 248.08 60.11 21 25 54 3338.4 -3.91 146.20  
 110.00 4 3 30 2422.87 -34.17 53.65 257.81 88.98 4 43 53 1822.9 -33.93 44.41  
 110.00 20 55 32 3827.88 4.01 141.89 245.62 56.02 21 59 20 3227.9 -.48 135.68

Differential Corrections: TDE -.3202 TRA -.5455 TC3 .3681 BAW .1294 SGT 840.4 SGR 440.3 SG3 86.8 ST 410.1 SR 424.1 SS 245.9  
 RDE -.3771 RRA .0957 RC3 .0407 FAU .02772 RRT .2458 RRF -.2724 RTF -.7217 CRT .8328 CRS .9315 CST .9715  
 FDE .2321 FRA .2038 FC3 -.9184 BSP 2457 SGB 948.7 R23 -.0362 R13 -.7274 LSA 615.4 MSA 171.5 SSA 19.0  
 BDE .4947 BRA .5538 BC3 .3703 FSP -211 SG1 849.7 SG2 422.1 THA 9.77 EL1 564.8 EL2 170.5 ALF 46.16

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 76.00 ARRIVAL DATE APR 20 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 25.675 GAL -2.38 AZL 87.82 MCA 82.90 SMA 116.33 ECC .27055 INC 2.1779 V1 30.215  
 RP 108.15 LAP 2.16 LOP 216.88 VP 36.241 GAP -15.18 AZP 89.73 TAL 186.44 TAP 269.34 RCA 84.85 APO 147.80 V2 35.040  
 RC 45.309 GL 11.56 GP 10.26 ZAL 105.81 ZAP 10.28 ETS 269.10 ZAE 155.37 ETE 5.34 ZAC 126.54 ETC 156.24 CLP .64

Distance 191.550

Planetocentric Conic: C3 23.680 VHL 4.866 OLA 21.46 RAL 21.44 RAD 6568.0 VEL 12.044 PTH 2.15 VHP 9.887 DPA 21.52 RAP 31.85 ECC 1.3897  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 0 48 24 2996.51 -28.01 96.18 253.83 85.63 1 38 20 2396.5 -28.32 87.53  
 90.00 19 0 13 4157.85 -1.32 169.63 245.83 61.71 20 9 30 3557.9 -5.09 162.98  
 100.00 2 24 31 2686.57 -29.77 73.50 253.95 87.18 3 9 18 2086.6 -29.84 64.70  
 100.00 20 6 46 3943.03 .22 152.98 244.97 60.11 21 12 29 3343.0 -3.75 146.45  
 110.00 4 3 47 2375.99 -34.17 49.99 254.03 91.15 4 43 23 1776.0 -33.63 40.79  
 110.00 20 43 59 3826.37 3.95 141.81 242.65 56.02 21 47 46 3226.4 -.53 135.60

Differential Corrections: TDE -.3173 TRA -.5215 TC3 .4455 BAW .1425 SGT 873.4 SGR 445.4 SG3 96.8 ST 423.0 SR 426.7 SS 245.2  
 RDE -.3612 RRA .0928 RC3 .0632 FAU .02973 RRT .2780 RRF -.3082 RTF -.7385 CRT .8417 CRS .9369 CST .9711  
 FDE .2342 FRA .1926 FC3 -1.0869 BSP 2581 SGB 980.4 R23 -.0418 R13 -.7451 LSA 626.0 MSA 169.6 SSA 20.2  
 BDE .4808 BRA .5296 BC3 .4500 FSP -240 SG1 884.8 SG2 422.4 THA 10.48 EL1 576.6 EL2 169.0 ALF 45.30

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969

FLIGHT TIME 78.00

ARRIVAL DATE APR 22 1969

HELIOCENTRIC CONIC

DISTANCE 198.282

RL 147.45 LAL -.00 LOL 133.99 VL 25.915 GAL -2.49 AZL 87.98 MCA 86.10 SMA 117.60 ECC .25731 INC 2.0161 V1 30.215
RP 108.19 LAP 2.01 LOP 220.09 VP 36.398 GAP -14.20 AZP 89.86 TAL 187.24 TAP 273.34 RCA 87.34 APO 147.86 V2 35.027
RC 46.364 GL 11.30 GP 10.91 ZAL 107.39 ZAP 10.99 ETS 279.79 ZAE 153.36 ETE 7.16 ZAC 127.32 ETC 155.23 CLP -1.35

PLANETOCENTRIC CONIC

C3 21.593 VHL 4.647 OLA 20.63 RAL 19.99 RAD 6567.9 VEL 11.957 PTH 2.13 VMP 9.339 DPA 22.58 RAP 32.79 ECC 1.3554
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 52 41 2937.43 -28.24 91.87 250.35 87.78 1 41 38 2337.4 -28.25 83.21
90.00 18 44 22 4172.11 -.86 170.43 242.71 61.70 19 53 54 3572.1 -4.64 163.78
100.00 2 27 37 2631.27 -29.89 69.40 250.39 89.34 3 11 29 2031.3 -29.66 60.60
100.00 19 52 6 3953.50 .58 153.56 241.91 60.11 20 57 59 3353.5 -3.40 147.03
110.00 4 4 47 2327.28 -34.03 46.19 250.28 93.39 4 43 35 1727.3 -33.19 37.05
110.00 20 31 25 3830.25 4.10 142.02 239.71 56.03 21 35 16 3230.3 -.38 135.81

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3119 TRA -.4961 TC3 .5289 BAU .1549 SGT 903.7 SGR 451.4 SG3 107.9 ST 431.9 SR 428.5 SS 241.6
RDE -.3463 RRA .0905 RC3 .0915 FAU .03199 RRT .3140 RRF -.3485 RTF -.7543 CRT .8495 CRS .9417 CST .9701
FDE .2341 FRA .1794 FC3-1.2825 BSP 2735 SGB 1010.2 R23 -.0478 R13 -.7619 LSA 632.5 MSA 167.2 SSA 21.5
BOE .4660 BRA .5043 BC3 .5368 FSP -272 SG1 917.8 SG2 422.0 THA 11.34 EL1 585.0 EL2 166.9 ALF 44.73

LAUNCH DATE FEB 3 1969

FLIGHT TIME 80.00

ARRIVAL DATE APR 24 1969

HELIOCENTRIC CONIC

DISTANCE 205.015

RL 147.45 LAL -.00 LOL 133.99 VL 26.133 GAL -2.61 AZL 88.14 MCA 89.30 SMA 118.80 ECC .24525 INC 1.8557 V1 30.215
RP 108.23 LAP 1.86 LOP 223.29 VP 36.541 GAP -13.27 AZP 89.98 TAL 188.10 TAP 277.40 RCA 89.66 APO 147.93 V2 35.013
RC 47.558 GL 10.95 GP 11.63 ZAL 109.05 ZAP 12.10 ETS 289.08 ZAE 151.52 ETE 8.91 ZAC 127.99 ETC 154.14 CLP -3.38

PLANETOCENTRIC CONIC

C3 19.815 VHL 4.451 OLA 19.68 RAL 18.52 RAD 6567.8 VEL 11.883 PTH 2.11 VMP 8.818 DPA 23.69 RAP 33.64 ECC 1.3261
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 0 57 48 2876.42 -28.32 87.41 246.91 90.01 1 45 45 2276.4 -28.02 78.76
90.00 18 27 33 4191.95 -.22 171.53 239.69 61.68 19 37 25 3592.0 -4.00 164.89
100.00 2 31 34 2574.09 -29.85 65.15 246.89 91.58 3 14 28 1974.1 -29.32 56.38
100.00 19 36 29 3969.51 1.12 154.43 238.94 60.13 20 42 38 3369.5 -2.86 147.91
110.00 4 6 31 2277.01 -33.76 42.29 246.60 95.68 4 44 28 1677.0 -32.61 33.25
110.00 20 18 1 3839.36 4.45 142.49 236.87 56.07 21 22 0 3239.4 -.04 136.28

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3047 TRA -.4717 TC3 .6197 BAU .1676 SGT 934.8 SGR 458.5 SG3 120.4 ST 437.6 SR 429.0 SS 233.9
RDE -.3321 RRA .0890 RC3 .1266 FAU .03453 RRT .3533 RRF -.3930 RTF -.7687 CRT .8556 CRS .9459 CST .9681
FDE .2306 FRA .1634 FC3-1.5089 BSP 2875 SGB 1041.2 R23 -.0557 R13 -.7776 LSA 634.5 MSA 164.8 SSA 23.0
BOE .4507 BRA .4800 BC3 .6325 FSP -310 SG1 952.3 SG2 421.1 THA 12.26 EL1 590.3 EL2 164.6 ALF 44.34

LAUNCH DATE FEB 3 1969

FLIGHT TIME 82.00

ARRIVAL DATE APR 26 1969

HELIOCENTRIC CONIC

DISTANCE 211.744

RL 147.45 LAL -.00 LOL 133.99 VL 26.332 GAL -2.73 AZL 88.30 MCA 92.50 SMA 119.91 ECC .23429 INC 1.6955 V1 30.215
RP 108.27 LAP 1.69 LOP 226.49 VP 36.671 GAP -12.37 AZP 90.07 TAL 189.01 TAP 281.50 RCA 91.82 APO 148.01 V2 35.000
RC 48.883 GL 10.48 GP 12.43 ZAL 110.76 ZAP 13.56 ETS 296.79 ZAE 149.86 ETE 10.66 ZAC 128.55 ETC 152.98 CLP -5.47

PLANETOCENTRIC CONIC

C3 18.301 VHL 4.278 OLA 18.60 RAL 17.07 RAD 6567.7 VEL 11.819 PTH 2.09 VMP 8.325 DPA 24.84 RAP 34.41 ECC 1.3012
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 3 43 2814.00 -28.23 82.85 243.57 92.30 1 50 37 2214.0 -27.61 74.23
90.00 18 10 3 4216.90 -.58 172.92 236.80 61.69 19 20 20 3616.9 -3.20 166.29
100.00 2 36 17 2515.46 -29.67 60.80 243.48 93.86 3 18 13 1915.5 -28.81 52.10
100.00 19 20 9 3990.67 1.84 155.60 236.10 60.16 20 26 40 3390.7 -2.14 149.07
110.00 4 8 59 2225.46 -33.35 38.32 243.03 98.00 4 46 4 1625.5 -31.88 29.40
110.00 20 3 57 3853.44 4.98 143.23 234.14 56.14 21 8 11 3253.4 .50 137.01

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2962 TRA -.4484 TC3 .7134 BAU .1794 SGT 965.1 SGR 467.5 SG3 134.3 ST 440.3 SR 428.5 SS 222.9
RDE -.3187 RRA .0879 RC3 .1692 FAU .03735 RRT .3967 RRF -.4420 RTF -.7814 CRT .8605 CRS .9492 CST .9654
FDE .2242 FRA .1461 FC3-1.7668 BSP 2990 SGB 1072.3 R23 -.0647 R13 -.7919 LSA 632.6 MSA 162.3 SSA 24.7
BOE .4351 BRA .4569 BC3 .7331 FSP -351 SG1 986.8 SG2 419.7 THA 13.33 EL1 592.6 EL2 162.2 ALF 44.09

LAUNCH DATE FEB 3 1969

FLIGHT TIME 84.00

ARRIVAL DATE APR 28 1969

HELIOCENTRIC CONIC

DISTANCE 218.468

RL 147.45 LAL -.00 LOL 133.99 VL 26.512 GAL -2.85 AZL 88.47 MCA 95.69 SMA 120.96 ECC .22437 INC 1.5348 V1 30.215
RP 108.31 LAP 1.53 LOP 229.69 VP 36.788 GAP -11.52 AZP 90.15 TAL 189.95 TAP 285.64 RCA 93.82 APO 148.10 V2 34.987
RC 50.327 GL 9.90 GP 13.32 ZAL 112.50 ZAP 15.32 ETS 303.03 ZAE 148.38 ETE 12.45 ZAC 128.97 ETC 151.77 CLP -7.63

PLANETOCENTRIC CONIC

C3 17.016 VHL 4.125 OLA 17.40 RAL 15.65 RAD 6567.7 VEL 11.764 PTH 2.08 VMP 7.858 DPA 26.05 RAP 35.07 ECC 1.2800
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 10 21 2750.59 -27.97 78.23 240.35 94.60 1 56 12 2150.6 -27.04 69.68
90.00 17 52 7 4246.49 1.54 174.57 234.07 61.72 19 2 53 3646.5 -2.25 167.95
100.00 2 41 47 2455.76 -29.31 56.40 240.21 96.15 3 22 42 1855.8 -28.15 47.78
100.00 19 3 22 4016.56 2.72 157.02 233.42 60.22 20 10 19 3416.6 -1.27 150.50
110.00 4 12 11 2172.89 -32.78 34.33 239.62 100.30 4 48 24 1572.9 -31.01 25.55
110.00 19 49 27 3872.19 5.69 144.22 231.57 56.24 20 53 59 3272.2 1.22 137.99

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.2849 TRA -.4245 TC3 .8106 BAU .1911 SGT 992.8 SGR 479.1 SG3 150.0 ST 437.5 SR 426.2 SS 206.9
RDE -.3056 RRA .0876 RC3 .2207 FAU .04053 RRT .4434 RRF -.4950 RTF -.7933 CRT .8634 CRS .9513 CST .9608
FDE .2126 FRA .1257 FC3-2.0618 BSP 3119 SGB 1102.4 R23 -.0748 R13 -.8058 LSA 624.3 MSA 159.6 SSA 26.7
BOE .4178 BRA .4335 BC3 .8401 FSP -398 SG1 1020.1 SG2 418.0 THA 14.58 EL1 589.6 EL2 159.5 ALF 44.13

LAUNCH DATE FEB 3 1969

FLIGHT TIME 86.00

ARRIVAL DATE APR 30 1969

HELIOCENTRIC CONIC DISTANCE 225.182  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.675 GAL -2.96 AZL 88.63 MCA 98.88 SMA 121.92 ECC .21543 INC 1.3723 V1 30.215  
 RP 108.36 LAP 1.36 LOP 232.88 VP 36.893 GAP -10.70 AZP 90.21 TAL 190.92 TAP 289.80 RCA 95.65 APO 148.19 V2 34.974  
 RC 51.881 GL 9.20 GP 14.32 ZAL 114.25 ZAP 17.33 ETS 308.04 ZAE 147.09 ETE 14.32 ZAC 129.24 ETC 150.50 CLP -9.87

PLANETOCENTRIC CONIC  
 C3 15.927 VHL 3.991 OLA 16.09 RAL 14.30 RAD 6567.6 VEL 11.718 PTH 2.06 VHP 7.418 DPA 27.32 RAP 35.61 ECC 1.2621  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 17 42 2686.55 -27.53 73.59 237.29 96.89 2 2 29 2086.6 -26.29 65.14  
 90.00 17 33 57 4280.26 2.63 176.46 231.55 61.80 18 45 18 3680.3 -1.16 169.83  
 100.00 2 48 1 2395.31 -28.79 51.98 237.10 98.42 3 27 56 1795.3 -27.33 43.48  
 100.00 18 46 20 4046.74 3.73 158.68 230.94 60.32 19 53 47 3446.7 -.24 152.15  
 110.00 4 16 9 2119.56 -32.06 30.34 236.40 102.56 4 51 28 1519.6 -30.00 21.73  
 110.00 19 34 41 3895.25 6.56 145.44 229.18 56.38 20 39 36 3295.3 2.10 139.20

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2719 TRA -.4020 TC3 .9073 BAU .2023 SGT 1018.7 SGR 494.4 SG3 167.4 ST 430.5 SR 422.1 SS 186.4  
 RDE -.2927 RRA .0878 RC3 .2820 FAU .04405 RRT .4928 RRF -.5511 RTF -.8038 CRT .8645 CRS .9512 CST .9539  
 FDE .1959 FRA .1035 FC3-2.3946 BSP 3237 SGB 1132.3 R23 -.0864 R13 -.8187 LSA 610.5 MSA 156.9 SSA 29.0  
 BDE .3995 BRA .4115 BC3 .9501 FSP -451 SG1 1053.0 SG2 416.2 THA 16.02 EL1 582.1 EL2 156.9 ALF 44.34

LAUNCH DATE FEB 3 1969

FLIGHT TIME 88.00

ARRIVAL DATE MAY 2 1969

HELIOCENTRIC CONIC DISTANCE 231.883  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.822 GAL -3.07 AZL 88.79 MCA 102.07 SMA 122.81 ECC .20740 INC 1.2071 V1 30.215  
 RP 108.40 LAP 1.18 LOP 236.07 VP 36.988 GAP -9.91 AZP 90.25 TAL 191.89 TAP 293.97 RCA 97.34 APO 148.28 V2 34.961  
 RC 53.536 GL 8.38 GP 15.42 ZAL 115.99 ZAP 19.58 ETS 312.07 ZAE 145.98 ETE 16.32 ZAC 129.33 ETC 149.19 CLP -12.21

PLANETOCENTRIC CONIC  
 C3 15.005 VHL 3.874 OLA 14.68 RAL 13.03 RAD 6567.6 VEL 11.679 PTH 2.05 VHP 7.003 DPA 28.66 RAP 36.01 ECC 1.2469  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 25 45 2622.15 -26.92 68.98 234.43 99.12 2 9 27 2022.2 -25.39 60.65  
 90.00 17 15 47 4317.79 3.83 178.56 229.25 61.92 18 27 45 3717.8 .05 171.92  
 100.00 2 54 59 2334.38 -28.10 47.58 234.19 100.63 3 33 53 1734.4 -26.35 39.22  
 100.00 18 29 14 4080.80 4.88 160.56 228.67 60.47 19 37 15 3480.8 .91 154.02  
 110.00 4 20 52 2065.66 -31.19 26.37 233.39 104.75 4 55 17 1465.7 -28.85 17.95  
 110.00 19 19 51 3922.28 7.58 146.87 227.01 56.57 20 25 13 3322.3 3.13 140.61

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2565 TRA -.3803 TC3 1.0006 BAU .2129 SGT 1040.7 SGR 514.5 SG3 186.8 ST 418.2 SR 415.5 SS 160.4  
 RDE -.2795 RRA .0887 RC3 .3544 FAU .04797 RRT .5432 RRF -.6091 RTF -.8127 CRT .8629 CRS .9470 CST .9418  
 FDE .1722 FRA .0791 FC3-2.7675 BSP 3358 SGB 1160.9 R23 -.0996 R13 -.8309 LSA 590.3 MSA 154.4 SSA 31.8  
 BDE .3793 BRA .3905 BC3 1.0615 FSP -511 SG1 1084.4 SG2 414.6 THA 17.70 EL1 568.9 EL2 154.4 ALF 44.79

LAUNCH DATE FEB 3 1969

FLIGHT TIME 90.00

ARRIVAL DATE MAY 4 1969

HELIOCENTRIC CONIC DISTANCE 238.569  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.955 GAL -3.17 AZL 88.96 MCA 105.26 SMA 123.63 ECC .20022 INC 1.0381 V1 30.215  
 RP 108.43 LAP 1.00 LOP 239.26 VP 37.072 GAP -9.17 AZP 90.27 TAL 192.87 TAP 298.13 RCA 98.87 APO 148.38 V2 34.948  
 RC 55.282 GL 7.43 GP 16.66 ZAL 117.68 ZAP 22.04 ETS 315.33 ZAE 145.03 ETE 18.50 ZAC 129.23 ETC 147.86 CLP -14.65

PLANETOCENTRIC CONIC  
 C3 14.227 VHL 3.772 OLA 13.16 RAL 11.86 RAD 6567.6 VEL 11.645 PTH 2.04 VHP 6.614 DPA 30.08 RAP 36.24 ECC 1.2341  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 34 30 2557.55 -26.14 64.41 231.78 101.28 2 17 7 1957.6 -24.32 56.21  
 90.00 16 57 45 4358.74 5.14 180.86 227.20 62.12 18 10 24 3758.7 1.37 174.21  
 100.00 3 2 41 2273.12 -27.26 43.22 231.52 102.78 3 40 34 1673.1 -25.22 35.01  
 100.00 18 12 14 4118.40 6.14 162.64 226.65 60.69 19 20 53 3518.4 2.19 156.08  
 110.00 4 26 21 2011.35 -30.18 22.46 230.63 106.87 4 59 52 1411.4 -27.58 14.24  
 110.00 19 5 4 3952.93 8.73 148.50 225.07 56.82 20 10 57 3352.9 4.30 142.21

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2372 TRA -.3582 TC3 1.0934 BAU .2242 SGT 1059.5 SGR 541.0 SG3 208.6 ST 398.2 SR 405.7 SS 128.2  
 RDE -.2655 RRA .0903 RC3 .4400 FAU .05236 RRT .5939 RRF -.6674 RTF -.8224 CRT .8574 CRS .9322 CST .9165  
 FDE .1390 FRA .0514 FC3-3.1860 BSP 3509 SGB 1189.6 R23 -.1125 R13 -.8445 LSA 561.5 MSA 151.8 SSA 35.2  
 BDE .3561 BRA .3694 BC3 1.1786 FSP -579 SG1 1115.5 SG2 413.4 THA 19.68 EL1 547.8 EL2 151.8 ALF 45.62

LAUNCH DATE FEB 3 1969

FLIGHT TIME 92.00

ARRIVAL DATE MAY 6 1969

HELIOCENTRIC CONIC DISTANCE 245.238  
 RL 147.45 LAL -.00 LOL 133.99 VL 27.075 GAL -3.27 AZL 89.14 MCA 108.45 SMA 124.37 ECC .19383 INC .8639 V1 30.215  
 RP 108.47 LAP .82 LOP 242.44 VP 37.147 GAP -8.45 AZP 90.27 TAL 193.83 TAP 302.28 RCA 100.29 APO 148.48 V2 34.936  
 RC 57.109 GL 6.35 GP 18.04 ZAL 119.31 ZAP 24.73 ETS 318.01 ZAE 144.24 ETE 20.90 ZAC 128.97 ETC 146.51 CLP -17.20

PLANETOCENTRIC CONIC  
 C3 13.573 VHL 3.684 OLA 11.56 RAL 10.82 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 6.251 DPA 31.59 RAP 36.27 ECC 1.2234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 1 43 58 2492.84 -25.20 59.90 229.38 103.35 2 25 31 1892.8 -23.12 51.86  
 90.00 16 39 58 4402.79 6.54 183.34 225.41 62.39 17 53 21 3802.8 2.79 176.67  
 100.00 3 11 10 2211.65 -26.26 38.93 229.09 104.83 3 48 1 1611.6 -23.96 30.88  
 100.00 17 55 28 4159.22 7.49 164.91 224.89 60.98 19 4 47 3559.2 3.57 158.33  
 110.00 4 32 38 1956.71 -29.04 18.62 228.14 108.88 5 5 15 1356.7 -26.19 10.60  
 110.00 18 50 29 3986.92 9.99 150.33 223.38 57.14 19 56 56 3386.9 5.59 144.00

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE -.2182 TRA -.3398 TC3 1.1716 BAU .2340 SGT 1073.0 SGR 575.4 SG3 232.3 ST 376.9 SR 392.5 SS 92.9  
 RDE -.2507 RRA .0922 RC3 .5390 FAU .05712 RRT .6417 RRF -.7236 RTF -.8281 CRT .8485 CRS .8821 CST .8541  
 FDE .0975 FRA .0239 FC3-3.6431 BSP 3619 SGB 1217.6 R23 -.1284 R13 -.8556 LSA 529.9 MSA 149.7 SSA 39.1  
 BDE .3323 BRA .3521 BC3 1.2897 FSP -655 SG1 1145.2 SG2 413.5 THA 22.00 EL1 523.1 EL2 149.6 ALF 46.37

LAUNCH DATE FEB 3 1969

FLIGHT TIME 94.00

ARRIVAL DATE MAY 8 1969

HELIOCENTRIC CONIC

DISTANCE 251.888

RL 147.45 LAL -.00 LOL 133.99 VL 27.181 GAL -3.35 AZL 89.32 HCA 111.63 SMA 125.05 ECC .18816 INC .6832 V1 30.215
RP 108.51 LAP .64 LOP 245.62 VP 37.213 GAP -7.76 AZP 90.25 TAL 194.76 TAP 306.39 RCA 101.52 APO 148.58 V2 34.923
RC 59.010 GL 5.14 GP 19.59 ZAL 120.86 ZAP 27.64 ETS 320.26 ZAE 143.58 ETE 23.56 ZAC 128.35 ETC 145.19 CLP -19.90

PLANETOCENTRIC CONIC

C3 13.026 VHL 3.609 OLA 9.87 RAL 9.93 RAD 6567.5 VEL 11.594 PTH 2.03 VHP 5.915 DPA 33.19 RAP 36.08 ECC 1.2144
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 1 54 14 2427.98 -24.11 55.47 227.25 105.32 2 34 42 1828.0 -21.77 47.58
90.00 16 22 32 4449.80 8.01 186.01 223.90 62.75 17 36 42 3849.8 4.30 179.30
100.00 3 20 27 2149.94 -25.11 34.70 226.93 106.77 3 56 17 1549.9 -22.57 26.82
100.00 17 39 1 4203.08 8.93 167.37 223.41 61.35 18 49 4 3603.1 5.04 160.75
110.00 4 39 46 1901.75 -27.77 14.85 225.92 110.78 5 11 27 1301.8 -24.69 7.03
110.00 18 36 11 4024.02 11.35 152.34 221.96 57.54 19 43 15 3424.0 6.99 145.96

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1977 TRA -.3232 TC3 1.2359 BAU .2434 SGT 1079.7 SGR 619.4 SG3 258.2 ST 351.6 SR 374.7 SS 58.4
RDE -.2341 RRA .0946 RC3 .6532 FAU .06226 RRT .6847 RRF -.7758 RTF -.8319 CRT .8340 CRS .6470 CST .6055
FDE .0447 FRA -.0042 FC3-4.1383 BSP 3710 SGB 1244.7 R23 -.1452 R13 -.8666 LSA 493.7 MSA 147.8 SSA 43.8
BOE .3064 BRA .3368 BC3 1.3979 FSP -735 SGI 1173.4 SG2 415.4 THA 24.75 EL1 492.2 EL2 147.7 ALF 47.18

LAUNCH DATE FEB 3 1969

FLIGHT TIME 96.00

ARRIVAL DATE MAY 10 1969

HELIOCENTRIC CONIC

DISTANCE 258.516

RL 147.45 LAL -.00 LOL 133.99 VL 27.276 GAL -3.43 AZL 89.51 HCA 114.81 SMA 125.66 ECC .18314 INC .4945 V1 30.215
RP 108.55 LAP .45 LOP 248.80 VP 37.272 GAP -7.10 AZP 90.21 TAL 195.65 TAP 310.46 RCA 102.65 APO 148.68 V2 34.911
RC 60.976 GL 3.80 GP 21.31 ZAL 122.30 ZAP 30.77 ETS 322.19 ZAE 143.01 ETE 26.56 ZAC 127.52 ETC 143.90 CLP -22.74

PLANETOCENTRIC CONIC

C3 12.571 VHL 3.546 OLA 8.09 RAL 9.18 RAD 6567.5 VEL 11.574 PTH 2.02 VHP 5.606 DPA 34.90 RAP 35.62 ECC 1.2069
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 5 22 2362.83 -22.87 51.10 225.39 107.17 2 44 44 1762.8 -20.30 43.36
90.00 16 5 28 4499.68 9.55 188.86 222.68 63.22 17 20 28 3899.7 5.88 182.10
100.00 3 30 37 2087.87 -23.83 30.54 225.05 108.61 4 5 25 1487.9 -21.07 22.83
100.00 17 22 54 4249.86 10.45 170.02 222.21 61.83 18 33 44 3649.9 6.60 163.34
110.00 4 47 47 1846.39 -26.38 11.14 224.00 112.57 5 18 33 1246.4 -23.09 3.53
110.00 18 22 13 4064.12 12.81 154.53 220.82 58.03 19 29 58 3464.1 8.49 148.09

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1760 TRA -.3088 TC3 1.2838 BAU .2529 SGT 1078.7 SGR 675.0 SG3 286.1 ST 323.2 SR 351.4 SS 51.5
RDE -.2152 RRA .0972 RC3 .7846 FAU .06778 RRT .7215 RRF -.8223 RTF -.8337 CRT .8113 CRS -.2588 CST -.2766
FDE -.0219 FRA -.0317 FC3-4.6682 BSP 3804 SGB 1272.5 R23 -.1612 R13 -.8779 LSA 454.8 MSA 146.1 SSA 49.4
BOE .2780 BRA .3238 BC3 1.5046 FSP -823 SGI 1201.3 SG2 419.7 THA 28.01 EL1 454.6 EL2 146.1 ALF 47.94

LAUNCH DATE FEB 3 1969

FLIGHT TIME 98.00

ARRIVAL DATE MAY 12 1969

HELIOCENTRIC CONIC

DISTANCE 265.123

RL 147.45 LAL -.00 LOL 133.99 VL 27.360 GAL -3.50 AZL 89.70 HCA 117.99 SMA 126.21 ECC .17873 INC .2961 V1 30.215
RP 108.58 LAP .26 LOP 251.98 VP 37.322 GAP -6.47 AZP 90.14 TAL 196.49 TAP 314.48 RCA 103.66 APO 148.77 V2 34.900
RC 63.000 GL 2.32 GP 23.22 ZAL 123.61 ZAP 34.14 ETS 323.90 ZAE 142.49 ETE 29.93 ZAC 126.42 ETC 142.70 CLP -25.76

PLANETOCENTRIC CONIC

C3 12.196 VHL 3.492 OLA 6.23 RAL 8.60 RAD 6567.5 VEL 11.558 PTH 2.02 VHP 5.324 DPA 36.72 RAP 34.86 ECC 1.2007
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 17 27 2297.14 -21.48 46.78 223.83 108.90 2 55 44 1697.1 -18.71 39.21
90.00 15 48 46 4552.51 11.16 191.91 221.77 63.81 17 4 38 3952.5 7.55 185.09
100.00 3 41 45 2025.23 -22.41 26.43 223.47 110.32 4 15 30 1425.2 -19.44 18.89
100.00 17 7 9 4299.65 12.03 172.87 221.32 62.43 18 18 48 3699.7 8.25 166.12
110.00 4 56 46 1790.45 -24.86 7.50 222.37 114.25 5 26 36 1190.5 -21.38 .09
110.00 18 8 37 4107.20 14.35 156.92 219.97 58.64 19 17 4 3507.2 10.09 150.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1532 TRA -.2967 TC3 1.3124 BAU .2628 SGT 1069.2 SGR 744.3 SG3 315.9 ST 292.4 SR 320.8 SS 94.2
RDE -.1928 RRA .1001 RC3 .9352 FAU .07364 RRT .7506 RRF -.8623 RTF -.8332 CRT .7756 CRS -.7674 CST -.7358
FDE -.1040 FRA -.0576 FC3-5.2275 BSP 3915 SGB 1302.8 R23 -.1746 R13 -.8901 LSA 416.2 MSA 144.7 SSA 55.7
BOE .2462 BRA .3132 BC3 1.6115 FSP -921 SGI 1230.7 SG2 427.3 THA 31.87 EL1 409.2 EL2 144.7 ALF 48.41

LAUNCH DATE FEB 3 1969

FLIGHT TIME 100.00

ARRIVAL DATE MAY 14 1969

HELIOCENTRIC CONIC

DISTANCE 271.706

RL 147.45 LAL -.00 LOL 133.99 VL 27.435 GAL -3.57 AZL 89.91 HCA 121.16 SMA 126.70 ECC .17487 INC .0845 V1 30.215
RP 108.62 LAP .07 LOP 255.16 VP 37.366 GAP -5.86 AZP 90.04 TAL 197.26 TAP 318.43 RCA 104.55 APO 148.86 V2 34.889
RC 65.076 GL .68 GP 25.35 ZAL 124.77 ZAP 37.75 ETS 325.47 ZAE 141.98 ETE 33.72 ZAC 125.01 ETC 141.62 CLP -28.96

PLANETOCENTRIC CONIC

C3 11.894 VHL 3.449 OLA 4.28 RAL 8.20 RAD 6567.5 VEL 11.545 PTH 2.01 VHP 5.073 DPA 38.65 RAP 33.74 ECC 1.1957
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 2 30 37 2230.53 -19.95 42.49 222.57 110.52 3 7 48 1630.5 -16.98 35.08
90.00 15 32 22 4608.53 12.82 195.19 221.17 64.53 16 49 11 4008.5 9.29 188.29
100.00 3 53 58 1961.69 -20.85 22.35 222.20 111.92 4 26 40 1361.7 -17.69 14.98
100.00 16 51 42 4352.60 13.68 175.93 220.74 63.16 18 4 15 3752.6 9.97 169.11
110.00 5 6 49 1733.68 -23.23 3.91 221.06 115.81 5 35 43 1133.7 -19.56 356.68
110.00 17 55 21 4153.37 15.97 159.52 219.44 59.37 19 4 34 3553.4 11.78 152.91

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TOE -.1291 TRA -.2862 TC3 1.3208 BAU .2740 SGT 1050.4 SGR 829.6 SG3 347.4 ST 259.3 SR 281.0 SS 159.6
RDE -.1657 RRA .1031 RC3 1.1069 FAU .07974 RRT .7721 RRF -.8953 RTF -.8311 CRT .7180 CRS -.8710 CST -.8023
FDE -.2054 FRA -.0811 FC3-5.8044 BSP 4058 SGB 1338.5 R23 -.1809 R13 -.9040 LSA 383.8 MSA 143.3 SSA 61.8
BOE .2101 BRA .3042 BC3 1.7233 FSP -1026 SGI 1264.8 SG2 437.8 THA 36.43 EL1 354.6 EL2 143.0 ALF 48.20

LAUNCH DATE FEB 3 1969

FLIGHT TIME 102.00

ARRIVAL DATE MAY 16 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.499 GAL -3.62 AZL 90.14 MCA 124.34 SMA 127.14 ECC .17151 INC .1381 V1 30.215  
 RP 108.65 LAP -.11 LOP 258.33 VP 37.404 GAP -5.28 AZP 89.92 TAL 197.97 TAP 322.30 RCA 105.33 APO 148.94 V2 34.878  
 RC 67.198 GL -1.12 GP 27.70 ZAL 125.77 ZAP 41.59 ETS 327.00 ZAE 141.41 ETE 37.97 ZAC 123.28 ETC 140.68 CLP -32.37

Distance 278.265

Planetocentric Conic: C3 11.657 VHL 3.414 CLA 2.23 RAL 7.98 RAD 6567.4 VEL 11.534 PTH 2.01 VHP 4.852 DPA 40.70 RAP 32.22 ECC 1.1918  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 45 4 2162.52 -18.27 38.21 221.62 112.02 3 21 7 1562.5 -15.13 30.95  
 90.00 15 16 13 4668.11 14.54 198.72 220.90 65.43 16 34 1 4068.1 11.10 191.73  
 100.00 4 7 27 1896.80 -19.14 18.29 221.24 113.41 4 39 4 1296.8 -15.81 11.08  
 100.00 16 36 31 4409.07 15.39 179.26 220.49 64.05 17 50 0 3809.1 11.78 172.33  
 110.00 5 18 5 1675.73 -21.46 .33 220.07 117.27 5 46 1 1075.7 -17.64 353.29  
 110.00 17 42 23 4202.91 17.66 162.36 219.23 60.25 18 52 26 3602.9 13.57 155.63

Differential Corrections: TOE -.1080 TRA -.2805 TC3 1.2927 BAU .2853 SGT 1016.8 SGR 930.0 SG3 378.3 ST 231.3 SR 231.6 SS 234.4  
 RDE -.1334 RRA .1048 RC3 1.2966 FAU .08562 RRT .7817 RRF -.9211 RTF -.8219 CRT .6312 CRS -.8903 CST -.7846  
 FDE -.3227 FRA -.0953 FC3-6.3584 BSP 4171 SGB 1378.0 R23 -.1828 R13 -.9175 LSA 370.8 MSA 142.7 SSA 65.1  
 BDE .1716 BRA .2994 BC3 1.8309 FSP -1127 SG1 1301.3 SG2 453.2 THA 41.74 EL1 295.6 EL2 140.5 ALF 45.06

Mid-course Execution Accuracy: SGT 1016.8 SGR 930.0 SG3 378.3  
 RRT .7817 RRF -.9211 RTF -.8219  
 SGB 1378.0 R23 -.1828 R13 -.9175  
 SG1 1301.3 SG2 453.2 THA 41.74

Orbit Determination Accuracy: ST 231.3 SR 231.6 SS 234.4  
 CRT .6312 CRS -.8903 CST -.7846  
 LSA 370.8 MSA 142.7 SSA 65.1  
 EL1 295.6 EL2 140.5 ALF 45.06

LAUNCH DATE FEB 3 1969

FLIGHT TIME 104.00

ARRIVAL DATE MAY 18 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.556 GAL -3.66 AZL 90.38 MCA 127.51 SMA 127.52 ECC .16858 INC .3810 V1 30.215  
 RP 108.68 LAP -.30 LOP 261.50 VP 37.436 GAP -4.72 AZP 89.77 TAL 198.59 TAP 326.10 RCA 106.02 APO 149.01 V2 34.867  
 RC 69.360 GL -3.09 GP 30.27 ZAL 126.58 ZAP 45.68 ETS 328.56 ZAE 140.69 ETE 42.67 ZAC 121.23 ETC 139.95 CLP -36.00

Distance 284.799

Planetocentric Conic: C3 11.483 VHL 3.389 CLA .07 RAL 7.97 RAD 6567.4 VEL 11.527 PTH 2.01 VHP 4.664 DPA 42.84 RAP 30.23 ECC 1.1890  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 1 1 2092.47 -16.43 33.90 221.01 113.39 3 35 54 1492.5 -13.13 26.78  
 90.00 15 0 9 4731.91 16.31 202.57 220.99 66.52 16 19 1 4131.9 12.99 195.46  
 100.00 4 22 24 1829.97 -17.28 14.19 220.61 114.77 4 52 54 1230.0 -13.80 7.13  
 100.00 16 21 27 4469.64 17.16 182.88 220.59 65.14 17 35 57 3869.6 13.67 175.83  
 110.00 5 30 43 1616.11 -19.56 356.75 219.41 118.61 5 57 39 1016.1 -15.59 349.88  
 110.00 17 29 37 4256.28 19.44 165.48 219.38 61.31 18 40 34 3656.3 15.46 158.62

Differential Corrections: TOE -.0884 TRA -.2777 TC3 1.2342 BAU .2991 SGT 970.8 SGR 1048.9 SG3 408.7 ST 206.9 SR 169.8 SS 319.5  
 RDE -.0936 RRA .1052 RC3 1.5072 FAU .09125 RRT .7804 RRF -.9412 RTF -.8066 CRT .4814 CRS -.8635 CST -.7320  
 FDE -.4606 FRA -.1004 FC3-6.8793 BSP 4323 SGB 1429.2 R23 -.1744 R13 -.9321 LSA 386.4 MSA 143.1 SSA 62.7  
 BDE .1288 BRA .2969 BC3 1.9481 FSP -1229 SG1 1349.0 SG2 472.0 THA 47.83 EL1 232.7 EL2 132.4 ALF 33.78

Mid-course Execution Accuracy: SGT 970.8 SGR 1048.9 SG3 408.7  
 RRT .7804 RRF -.9412 RTF -.8066  
 SGB 1429.2 R23 -.1744 R13 -.9321  
 SG1 1349.0 SG2 472.0 THA 47.83

Orbit Determination Accuracy: ST 206.9 SR 169.8 SS 319.5  
 CRT .4814 CRS -.8635 CST -.7320  
 LSA 386.4 MSA 143.1 SSA 62.7  
 EL1 232.7 EL2 132.4 ALF 33.78

LAUNCH DATE FEB 3 1969

FLIGHT TIME 106.00

ARRIVAL DATE MAY 20 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.604 GAL -3.69 AZL 90.64 MCA 130.68 SMA 127.84 ECC .16606 INC .6447 V1 30.215  
 RP 108.72 LAP -.49 LOP 264.67 VP 37.462 GAP -4.18 AZP 89.58 TAL 199.12 TAP 329.80 RCA 106.61 APO 149.07 V2 34.858  
 RC 71.560 GL -5.27 GP 33.08 ZAL 127.18 ZAP 49.98 ETS 330.23 ZAE 139.76 ETE 47.80 ZAC 118.86 ETC 139.45 CLP -39.88

Distance 291.307

Planetocentric Conic: C3 11.373 VHL 3.372 CLA -2.21 RAL 8.17 RAD 6567.4 VEL 11.522 PTH 2.01 VHP 4.512 DPA 45.07 RAP 27.72 ECC 1.1872  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 18 46 2019.53 -14.41 29.50 220.76 114.64 3 52 26 1419.5 -10.96 22.51  
 90.00 14 43 58 4800.84 18.13 206.81 221.46 67.87 16 3 59 4200.8 14.97 199.56  
 100.00 4 39 5 1760.47 -15.25 10.03 220.34 116.02 5 8 26 1160.5 -11.63 3.11  
 100.00 16 6 21 4535.14 -18.99 186.89 221.08 66.47 17 21 56 3935.1 -15.65 179.69  
 110.00 5 44 58 1554.24 -17.50 353.13 219.10 119.84 6 10 52 954.2 -13.40 346.42  
 110.00 17 16 57 4314.13 21.29 168.94 219.91 62.60 18 28 51 3714.1 17.45 161.92

Differential Corrections: TOE -.0711 TRA -.2762 TC3 1.1433 BAU .3162 SGT 911.0 SGR 1187.1 SG3 437.0 ST 187.0 SR 98.1 SS 415.2  
 RDE -.0440 RRA .1039 RC3 1.7369 FAU .09630 RRT .7670 RRF -.9564 RTF -.7832 CRT .1291 CRS -.6785 CST -.6563  
 FDE -.6200 FRA -.0961 FC3-7.3304 BSP 4548 SGB 1496.4 R23 -.1538 R13 -.9471 LSA 439.5 MSA 144.2 SSA 54.7  
 BDE .0836 BRA .2951 BC3 2.0794 FSP -1329 SG1 1413.6 SG2 490.9 THA 54.63 EL1 187.6 EL2 97.0 ALF 5.29

Mid-course Execution Accuracy: SGT 911.0 SGR 1187.1 SG3 437.0  
 RRT .7670 RRF -.9564 RTF -.7832  
 SGB 1496.4 R23 -.1538 R13 -.9471  
 SG1 1413.6 SG2 490.9 THA 54.63

Orbit Determination Accuracy: ST 187.0 SR 98.1 SS 415.2  
 CRT .1291 CRS -.6785 CST -.6563  
 LSA 439.5 MSA 144.2 SSA 54.7  
 EL1 187.6 EL2 97.0 ALF 5.29

LAUNCH DATE FEB 3 1969

FLIGHT TIME 108.00

ARRIVAL DATE MAY 22 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.645 GAL -3.71 AZL 90.93 MCA 133.84 SMA 128.12 ECC .16389 INC .9345 V1 30.215  
 RP 108.74 LAP -.67 LOP 267.84 VP 37.484 GAP -3.66 AZP 89.35 TAL 199.56 TAP 333.41 RCA 107.12 APO 149.12 V2 34.848  
 RC 73.792 GL -7.68 GP 36.11 ZAL 127.55 ZAP 54.48 ETS 332.07 ZAE 138.53 ETE 53.29 ZAC 116.19 ETC 139.22 CLP -44.01

Distance 297.789

Planetocentric Conic: C3 11.331 VHL 3.366 CLA -4.66 RAL 8.59 RAD 6567.4 VEL 11.520 PTH 2.01 VHP 4.399 DPA 47.36 RAP 24.63 ECC 1.1865  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 3 38 43 1942.70 -12.18 24.95 220.90 115.76 4 11 6 1342.7 -8.62 18.09  
 90.00 14 27 25 4876.13 19.99 211.55 222.36 69.52 15 48 41 4276.1 17.02 204.13  
 100.00 4 57 52 1687.36 -13.03 5.75 220.46 117.14 5 26 0 1087.4 -9.28 358.96  
 100.00 15 50 56 4606.71 20.87 191.37 222.00 68.10 17 7 43 4006.7 17.72 184.00  
 110.00 6 1 6 1489.41 -15.27 349.44 219.18 120.96 6 25 56 889.4 -11.05 342.87  
 110.00 17 4 12 4377.42 23.22 172.84 220.88 64.18 18 17 9 3777.4 19.55 165.62

Differential Corrections: TOE -.0610 TRA -.2795 TC3 1.0060 BAU .3357 SGT 835.0 SGR 1340.2 SG3 459.7 ST 178.0 SR 69.8 SS 516.1  
 RDE .0163 RRA .0977 RC3 1.9747 FAU .10003 RRT .7309 RRF -.9675 RTF -.7397 CRT -.7439 CRS .4795 CST -.5882  
 FDE -.7922 FRA -.0718 FC3-7.6427 BSP 4785 SGB 1579.0 R23 -.1265 R13 -.9603 LSA 528.7 MSA 146.4 SSA 44.6  
 BDE .0632 BRA .2961 BC3 2.2162 FSP -1408 SG1 1494.0 SG2 511.3 THA 61.95 EL1 185.9 EL2 44.6 ALF 162.72

Mid-course Execution Accuracy: SGT 835.0 SGR 1340.2 SG3 459.7  
 RRT .7309 RRF -.9675 RTF -.7397  
 SGB 1579.0 R23 -.1265 R13 -.9603  
 SG1 1494.0 SG2 511.3 THA 61.95

Orbit Determination Accuracy: ST 178.0 SR 69.8 SS 516.1  
 CRT -.7439 CRS .4795 CST -.5882  
 LSA 528.7 MSA 146.4 SSA 44.6  
 EL1 185.9 EL2 44.6 ALF 162.72

LAUNCH DATE FEB 3 1969

FLIGHT TIME 110.00

ARRIVAL DATE MAY 24 1969

HELIOCENTRIC CONIC

DISTANCE 304.246

RL 147.45 LAL -.00 LOL 133.99 VL 27.679 GAL -3.73 AZL 91.26 HCA 137.01 SMA 128.36 ECC .16205 INC 1.2569 V1 30.215  
 RP 108.77 LAP -.86 LOP 271.01 VP 37.501 GAP -3.16 AZP 89.08 TAL 199.91 TAP 336.92 RCA 107.56 APO 149.16 V2 34.839  
 RC 76.053 GL -10.35 GP 39.35 ZAL 127.65 ZAP 59.11 ETS 334.18 ZAE 136.93 ETE 59.05 ZAC 113.23 ETC 139.30 CLP -48.40

PLANETOCENTRIC CONIC

C3 11.367 VML 3.372 DLA -7.28 RAL 9.26 RAD 6567.4 VEL 11.522 PTH 2.01 VHP 4.330 DPA 49.66 RAP 20.90 ECC 1.1871  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 1 24 1860.60 -9.71 20.19 221.48 116.73 4 32 25 1260.6 -6.04 13.43  
 90.00 14 10 5 4959.56 21.88 216.93 223.75 71.57 15 32 44 4359.6 19.16 209.32  
 100.00 5 19 15 1609.55 -10.56 1.27 221.02 118.13 5 46 5 1009.5 -6.72 354.59  
 100.00 15 34 54 4685.95 22.80 196.47 223.41 70.12 16 53 0 4086.0 19.88 188.89  
 110.00 6 19 32 1420.70 -12.83 345.61 219.69 121.96 6 43 13 820.7 -8.51 339.17  
 110.00 16 51 7 4447.45 25.22 177.29 222.34 66.13 18 5 15 3847.4 21.78 169.83

DIFFERENTIAL CORRECTIONS

TOE -.0576 TRA -.2830 TC3 .8328 BAU .3600  
 RDE .0915 RRA .0871 RC3 2.2179 FAU .10235  
 FDE -.9798 FRA -.0339 FC3-7.7949 BSP 5155  
 BDE .1081 BRA .2961 BC3 2.3691 FSP -1474

MID-COURSE EXECUTION ACCURACY

SGT 748.3 SGR 1511.0 SG3 476.4  
 RRT .6652 RRF -.9756 RTF -.6690  
 SGB 1686.2 R23 -.0930 R13 -.9715  
 SG1 1601.6 SG2 527.1 THA 69.44

ORBIT DETERMINATION ACCURACY

ST 176.2 SR 167.9 SS 625.7  
 CRT -.7095 CRS .9498 CST -.5531  
 LSA 653.8 MSA 148.2 SSA 35.2  
 EL1 225.0 EL2 92.6 ALF 136.94

LAUNCH DATE FEB 3 1969

FLIGHT TIME 112.00

ARRIVAL DATE MAY 26 1969

HELIOCENTRIC CONIC

DISTANCE 310.676

RL 147.45 LAL -.00 LOL 133.99 VL 27.707 GAL -3.73 AZL 91.62 HCA 140.17 SMA 128.55 ECC .16049 INC 1.6196 V1 30.215  
 RP 108.80 LAP -1.04 LOP 274.17 VP 37.514 GAP -2.69 AZP 88.76 TAL 200.17 TAP 340.34 RCA 107.92 APO 149.18 V2 34.831  
 RC 78.340 GL -13.32 GP 42.77 ZAL 127.45 ZAP 63.82 ETS 336.61 ZAE 134.92 ETE 64.95 ZAC 110.05 ETC 139.72 CLP -53.06

PLANETOCENTRIC CONIC

C3 11.500 VML 3.391 DLA -10.11 RAL 10.20 RAD 6567.4 VEL 11.528 PTH 2.01 VHP 4.307 DPA 51.94 RAP 16.49 ECC 1.1893  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 27 34 1771.43 -6.94 15.10 222.58 117.52 4 57 6 1171.4 -3.20 8.42  
 90.00 13 51 25 5053.55 23.77 223.17 225.71 74.14 15 15 39 4456.6 21.37 215.33  
 100.00 5 43 55 1525.15 -7.82 356.52 222.10 118.94 6 9 20 925.1 -3.90 349.92  
 100.00 15 17 46 4775.07 24.73 202.38 225.40 72.66 16 37 21 4175.1 22.13 194.55  
 110.00 6 40 47 1347.04 -10.14 341.60 220.69 122.82 7 3 14 747.0 -5.74 335.27  
 110.00 16 37 23 4525.94 27.28 182.46 224.40 68.56 17 52 49 3925.9 24.13 174.72

DIFFERENTIAL CORRECTIONS

TOE -.0672 TRA -.2887 TC3 .6137 BAU .3875  
 RDE .1820 RRA .0676 RC3 2.4444 FAU .10244  
 FDE -1.1669 FRA .0268 FC3-7.7117 BSP 5515  
 BDE .1940 BRA .2965 BC3 2.5203 FSP -1502

MID-COURSE EXECUTION ACCURACY

SGT 657.0 SGR 1690.1 SG3 483.0  
 RRT .5382 RRF -.9814 RTF -.5381  
 SGB 1813.4 R23 -.0296 R13 -.9797  
 SG1 1730.9 SG2 540.7 THA 76.88

ORBIT DETERMINATION ACCURACY

ST 187.5 SR 313.4 SS 736.1  
 CRT -.6717 CRS .9898 CST -.5928  
 LSA 807.2 MSA 150.8 SSA 27.6  
 EL1 342.3 EL2 127.1 ALF 115.68

LAUNCH DATE FEB 3 1969

FLIGHT TIME 114.00

ARRIVAL DATE MAY 28 1969

HELIOCENTRIC CONIC

DISTANCE 317.079

RL 147.45 LAL -.00 LOL 133.99 VL 27.730 GAL -3.72 AZL 92.03 HCA 143.33 SMA 128.70 ECC .15918 INC 2.0335 V1 30.215  
 RP 108.82 LAP -1.21 LOP 277.34 VP 37.523 GAP -2.23 AZP 88.37 TAL 200.33 TAP 343.65 RCA 108.22 APO 149.19 V2 34.824  
 RC 80.651 GL -16.64 GP 46.33 ZAL 126.91 ZAP 68.52 ETS 339.43 ZAE 132.46 ETE 70.85 ZAC 106.70 ETC 140.49 CLP -57.97

PLANETOCENTRIC CONIC

C3 11.760 VML 3.429 DLA -13.20 RAL 11.45 RAD 6567.4 VEL 11.539 PTH 2.01 VHP 4.339 DPA 54.13 RAP 11.38 ECC 1.1935  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 4 58 21 1672.58 -3.79 9.54 224.32 118.08 5 26 14 1072.6 -.01 2.90  
 90.00 13 30 35 5161.72 25.58 230.58 228.34 77.43 14 56 37 4561.7 23.60 222.47  
 100.00 6 12 49 1432.31 -4.73 351.36 223.80 119.55 6 36 41 832.3 -.76 344.82  
 100.00 14 58 48 4877.22 26.62 209.38 228.07 75.88 16 20 5 4277.2 24.42 201.27  
 110.00 7 5 36 1267.00 -7.16 337.32 222.30 123.51 7 26 43 667.0 -2.70 331.07  
 110.00 16 22 31 4615.30 29.36 188.59 227.17 71.65 17 39 26 4015.3 26.57 180.51

DIFFERENTIAL CORRECTIONS

TOE -.0923 TRA -.2932 TC3 .3589 BAU .4184  
 RDE .2919 RRA .0375 RC3 2.6371 FAU .10012  
 FDE -1.3491 FRA .1054 FC3-7.3708 BSP 5972  
 BDE .3062 BRA .2956 BC3 2.6615 FSP -1495

MID-COURSE EXECUTION ACCURACY

SGT 581.0 SGR 1874.4 SG3 478.5  
 RRT .3101 RRF -.9856 RTF -.3070  
 SGB 1962.4 R23 -.0287 R13 -.9852  
 SG1 1883.8 SG2 549.6 THA 84.00

ORBIT DETERMINATION ACCURACY

ST 215.9 SR 491.1 SS 847.2  
 CRT -.7328 CRS .9970 CST -.6931  
 LSA 990.7 MSA 153.5 SSA 21.5  
 EL1 518.1 EL2 139.2 ALF 109.30

LAUNCH DATE FEB 3 1969

FLIGHT TIME 116.00

ARRIVAL DATE MAY 30 1969

HELIOCENTRIC CONIC

DISTANCE 323.456

RL 147.45 LAL -.00 LOL 133.99 VL 27.747 GAL -3.70 AZL 92.51 HCA 146.48 SMA 128.82 ECC .15810 INC 2.5133 V1 30.215  
 RP 108.84 LAP -1.39 LOP 280.50 VP 37.529 GAP -1.78 AZP 87.90 TAL 200.39 TAP 346.87 RCA 108.45 APO 149.19 V2 34.816  
 RC 82.981 GL -20.35 GP 50.01 ZAL 125.97 ZAP 73.10 ETS 342.70 ZAE 129.57 ETE 76.67 ZAC 103.23 ETC 141.63 CLP -63.11

PLANETOCENTRIC CONIC

C3 12.194 VML 3.492 DLA -16.57 RAL 13.04 RAD 6567.5 VEL 11.558 PTH 2.02 VHP 4.433 DPA 56.20 RAP 5.56 ECC 1.2007  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 5 35 31 1559.88 -.16 3.25 226.87 118.32 6 1 31 959.9 3.62 356.61  
 90.00 13 6 7 5289.70 27.17 239.61 231.78 81.69 14 34 17 4689.7 25.74 231.23  
 100.00 6 47 30 1327.63 -1.19 345.60 226.30 119.87 7 9 38 727.6 2.79 339.08  
 100.00 14 36 50 4997.19 28.33 217.88 231.57 80.04 16 0 7 4397.2 26.66 209.48  
 110.00 7 35 3 1178.68 -3.81 332.67 224.66 124.00 7 54 42 578.7 .67 326.46  
 110.00 16 5 46 4718.90 31.35 196.00 230.82 75.61 17 24 25 4118.9 29.05 187.54

DIFFERENTIAL CORRECTIONS

TOE -.1374 TRA -.2927 TC3 .0828 BAU .4530  
 RDE .4257 RRA -.0048 RC3 2.7776 FAU .09548  
 FDE -1.5190 FRA .1939 FC3-6.7787 BSP 6540  
 BDE .4474 BRA .2927 BC3 2.7789 FSP -1459

MID-COURSE EXECUTION ACCURACY

SGT 552.5 SGR 2061.9 SG3 463.2  
 RRT -.0362 RRF -.9887 RTF .0412  
 SGB 2134.6 R23 -.0026 R13 -.9887  
 SG1 2062.0 SG2 552.1 THA 90.60

ORBIT DETERMINATION ACCURACY

ST 271.0 SR 701.0 SS 956.8  
 CRT -.8268 CRS .9990 CST -.8076  
 LSA 1206.6 MSA 155.7 SSA 16.8  
 EL1 737.4 EL2 144.9 ALF 108.47



LAUNCH DATE FEB 3 1969 FLIGHT TIME 118.00 ARRIVAL DATE JUN 1 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.758 GAL -3.67 AZL 93.08 HCA 149.64 SMA 128.90 ECC .15722 INC 3.0802 V1 30.215  
 RP 108.86 LAP -1.56 LOP 283.66 VP 37.532 GAP -1.36 AZP 87.34 TAL 200.35 TAP 349.99 RCA 108.64 APO 149.17 V2 34.810  
 RC 85.328 GL -24.50 GP 53.79 ZAL 124.59 ZAP 77.47 ETS 346.44 ZAE 126.28 ETE 82.32 ZAC 99.71 ETC 143.14 CLP -68.46

Distance 329.807

Planetocentric Conic: C3 12.882 VHL 3.589 DLA -20.27 RAL 15.04 RAD 6567.5 VEL 11.587 PTH 2.03 VHP 4.599 DPA 58.10 RAP 359.06 ECC 1.2120  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 6 22 23 1425.30 4.17 355.73 230.54 118.03 6 46 9 825.3 7.89 349.02  
 90.00 12 35 13 5447.70 28.20 251.05 236.12 87.32 14 6 0 4847.7 27.53 242.44  
 100.00 7 30 36 1205.19 2.96 338.88 229.87 119.76 7 50 41 605.2 6.89 332.31  
 100.00 14 9 41 5143.05 29.58 228.54 236.02 85.51 15 35 24 4543.1 28.65 219.86  
 110.00 8 10 47 1079.25 -.02 327.48 228.01 124.18 8 28 46 479.3 4.47 321.26  
 110.00 15 46 0 4841.75 33.06 205.16 235.53 80.78 17 6 41 4241.7 31.44 196.32

Differential Corrections: TDE -.2122 TRA -.2855 TC3 -.2059 BAU .4879 SGT 610.4 SGR 2234.8 SG3 434.8 ST 368.8 SR 934.7 SS 1054.4  
 RDE .5839 RRA -.0662 RC3 2.8252 FAU .08811 RRT -.4111 RRF -.9909 RTF .4166 CRT -.9025 CRS .9996 CST -.8940  
 FDE -1.6575 FRA .2962 FC3 -5.9216 BSP 7107 SGB 2316.7 R23 .0189 R13 -.9908 LSA 1447.8 MSA 158.6 SSA 13.1  
 BDE .6213 BRA .2930 BC3 2.8327 FSP -1372 SGI 2249.8 SG2 552.7 THA 96.82 ELI 993.6 EL2 149.4 ALF 110.07

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 120.00 ARRIVAL DATE JUN 3 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.766 GAL -3.63 AZL 93.76 HCA 152.78 SMA 128.96 ECC .15652 INC 3.7643 V1 30.215  
 RP 108.88 LAP -1.72 LOP 286.83 VP 37.532 GAP -.94 AZP 86.65 TAL 200.22 TAP 353.01 RCA 108.77 APO 149.14 V2 34.804  
 RC 87.691 GL -29.14 GP 57.65 ZAL 122.70 ZAP 81.51 ETS 350.70 ZAE 122.61 ETE 87.79 ZAC 96.20 ETC 145.01 CLP -74.00

Distance 336.130

Planetocentric Conic: C3 13.955 VHL 3.736 DLA -24.32 RAL 17.53 RAD 6567.5 VEL 11.634 PTH 2.04 VHP 4.856 DPA 59.84 RAP 351.88 ECC 1.2297  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 7 27 4 1246.96 9.77 345.62 235.89 116.71 7 47 51 647.0 13.28 338.69  
 90.00 11 50 21 5660.82 27.89 266.60 241.32 95.10 13 24 42 5060.8 28.31 257.96  
 100.00 8 27 46 1051.03 8.10 330.33 235.01 118.87 8 45 17 451.0 11.90 323.59  
 100.00 13 32 20 5331.99 29.77 242.56 241.47 92.87 15 1 12 4732.0 29.85 233.76  
 110.00 8 55 40 963.52 4.40 321.43 232.73 123.93 9 11 43 363.5 8.83 315.14  
 110.00 15 20 55 4992.26 34.11 216.78 241.49 87.57 16 44 8 4392.3 33.40 207.61

Differential Corrections: TDE -.3245 TRA -.2645 TC3 -.4762 BAU .5228 SGT 756.6 SGR 2392.8 SG3 396.4 ST 515.5 SR 1190.0 SS 1137.6  
 RDE .7733 RRA -.1487 RC3 2.7613 FAU .07868 RRT -.6699 RRF -.9925 RTF .6752 CRT -.9471 CRS .9999 CST -.9438  
 FDE -1.7616 FRA .3985 FC3 -4.8809 BSP 7721 SGB 2509.6 R23 .0359 R13 -.9920 LSA 1717.6 MSA 161.0 SSA 10.2  
 BDE .8386 BRA .3034 BC3 2.8020 FSP -1254 SGI 2448.8 SG2 548.9 THA 102.60 ELI 1287.8 EL2 152.8 ALF 112.64

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 122.00 ARRIVAL DATE JUN 5 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.769 GAL -3.58 AZL 94.61 HCA 155.93 SMA 128.98 ECC .15599 INC 4.6117 V1 30.215  
 RP 108.90 LAP -1.88 LOP 289.99 VP 37.530 GAP -.55 AZP 85.79 TAL 200.00 TAP 355.93 RCA 108.86 APO 149.10 V2 34.799  
 RC 90.065 GL -34.29 GP 61.61 ZAL 120.27 ZAP 85.12 ETS 355.49 ZAE 118.61 ETE 93.10 ZAC 92.74 ETC 147.28 CLP -79.69

Distance 342.426

Planetocentric Conic: C3 15.642 VHL 3.955 DLA -28.71 RAL 20.60 RAD 6567.6 VEL 11.706 PTH 2.06 VHP 5.228 DPA 61.38 RAP 344.00 ECC 1.2574  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 85.07 9 9 46 968.67 21.24 330.50 245.36 109.78 9 25 54 368.7 23.75 322.69  
 94.93 10 32 9 701.93 21.25 310.96 245.36 109.76 10 43 51 101.9 23.76 303.15  
 100.00 10 1 43 799.99 15.98 315.85 243.03 115.61 10 15 3 200.0 19.29 308.63  
 100.00 12 22 52 5633.89 26.72 264.41 247.17 103.93 13 56 46 5033.9 28.37 256.00  
 110.00 9 55 54 818.27 9.85 313.72 239.52 122.90 10 9 33 218.3 14.12 307.22  
 110.00 14 45 10 5188.37 33.62 232.04 248.61 96.58 16 11 39 4588.4 34.16 222.84

Differential Corrections: TDE -.4884 TRA -.2214 TC3 -.6965 BAU .5560 SGT 968.4 SGR 2529.1 SG3 350.2 ST 716.2 SR 1455.1 SS 1199.2  
 RDE .9997 RRA -.2569 RC3 2.5658 FAU .06771 RRT -.8115 RRF -.9938 RTF .8164 CRT -.9708 CRS 1.0000 CST -.9699  
 FDE -1.8237 FRA .4927 FC3 -3.7475 BSP 8392 SGB 2708.2 R23 .0486 R13 -.9927 LSA 2010.5 MSA 162.1 SSA 8.0  
 BDE 1.1126 BRA .3391 BC3 2.6587 FSP -1114 SGI 2654.0 SG2 539.2 THA 108.03 ELI 1614.4 EL2 154.7 ALF 115.79

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969 FLIGHT TIME 124.00 ARRIVAL DATE JUN 7 1969

Heliocentric Conic: RL 147.45 LAL -.00 LOL 133.99 VL 27.769 GAL -3.51 AZL 95.70 HCA 159.06 SMA 128.97 ECC .15559 INC 5.6962 V1 30.215  
 RP 108.91 LAP -2.03 LOP 293.15 VP 37.525 GAP -.17 AZP 84.68 TAL 199.69 TAP 358.75 RCA 108.91 APO 149.04 V2 34.795  
 RC 92.449 GL -39.94 GP 65.72 ZAL 117.27 ZAP 88.18 ETS .90 ZAE 114.28 ETE 98.36 ZAC 89.35 ETC 150.03 CLP -85.57

Distance 348.692

Planetocentric Conic: C3 18.363 VHL 4.285 DLA -33.38 RAL 24.39 RAD 6567.7 VEL 11.821 PTH 2.09 VHP 5.759 DPA 62.74 RAP 335.32 ECC 1.3022  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 71.54 7 45 49 1319.67 23.50 357.79 253.07 114.42 8 7 49 719.7 26.59 350.06  
 108.46 12 26 20 5712.80 23.52 269.12 253.08 114.40 14 1 33 5112.8 26.61 261.39  
 71.54 7 45 49 1319.67 23.50 357.79 253.07 114.42 8 7 49 719.7 26.59 350.06  
 108.46 12 26 20 5712.80 23.52 269.12 253.08 114.40 14 1 33 5112.8 26.61 261.39  
 110.00 11 39 44 5855.70 18.70 277.60 250.47 119.15 13 17 20 5255.7 22.44 270.46  
 110.00 13 31 36 5512.81 28.50 255.84 255.32 109.72 15 3 28 4912.8 30.92 247.47

Differential Corrections: TDE -.7263 TRA -.1439 TC3 -.8364 BAU .5831 SGT 1228.8 SGR 2628.7 SG3 298.2 ST 973.8 SR 1705.2 SS 1228.1  
 RDE 1.2665 RRA -.4008 RC3 2.2233 FAU .05561 RRT -.8861 RRF -.9948 RTF .8910 CRT -.9830 CRS 1.0000 CST -.9832  
 FDE -1.8335 FRA .5765 FC3 -2.6217 BSP 9017 SGB 2901.7 R23 .0583 R13 -.9933 LSA 2310.4 MSA 162.2 SSA 6.2  
 BDE 1.4599 BRA .4259 BC3 2.3754 FSP -949 SGI 2853.9 SG2 524.5 THA 113.34 ELI 1957.5 EL2 155.7 ALF 119.51

MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY

LAUNCH DATE FEB 3 1969

FLIGHT TIME 126.00

ARRIVAL DATE JUN 9 1969

HELIOCENTRIC CONIC

DISTANCE 354.926

RL 147.45 LAL -.00 LOL 133.99 VL 27.764 GAL -3.44 AZL 97.14 HCA 162.19 SMA 128.95 ECC .15533 INC 7.1422 V1 30.215
RP 108.92 LAP -2.18 LOP 296.31 VP 37.519 GAP .20 AZP 83.20 TAL 199.28 TAP 1.47 RCA 108.92 APO 148.97 V2 34.791
RC 94.840 GL -45.99 GP 70.06 ZAL 113.71 ZAP 90.61 ETS 7.12 ZAE 109.59 ETE 103.85 ZAC 85.99 ETC 153.48 CLP -91.78

PLANETOCENTRIC CONIC

C3 22.955 VHL 4.791 DLA -38.20 RAL 29.06 RAD 6567.9 VEL 12.014 PTH 2.14 VHP 6.523 DPA 63.85 RAP 325.62 ECC 1.3778
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
63.22 7 18 2 1511.96 24.85 13.86 262.98 119.99 7 43 14 912.0 28.64 6.38
116.78 13 31 24 5627.22 24.87 263.07 262.99 119.98 15 5 11 5027.2 28.66 255.59
63.22 7 18 2 1511.96 24.85 13.86 262.98 119.99 7 43 14 912.0 28.64 6.38
116.78 13 31 24 5627.22 24.87 263.07 262.99 119.98 15 5 11 5027.2 28.66 255.59
63.22 7 18 2 1511.96 24.85 13.86 262.98 119.99 7 43 14 912.0 28.64 6.38
116.78 13 31 24 5627.22 24.87 263.07 262.99 119.98 15 5 11 5027.2 28.66 255.59

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.0740 TRA -.0080 TC3 -.8671 BAU .6021 SGT 1529.7 SGR 2687.9 SG3 244.6 ST 1284.6 SR 1912.1 SS 1221.1
RDE 1.5826 RRA -.5873 RC3 1.7600 FAU .04335 RRT -.9293 RRF -.9957 RTF .9346 CRT -.9897 CRS 1.0000 CST -.9905
FDE-1.7948 FRA .6407 FC3-1.6349 BSP 9682 SGB 3092.7 R23 .0637 R13 -.9940 LSA 2602.4 MSA 158.7 SSA 4.7
BDE 1.9126 BRA .5874 BC3 1.9620 FSP -782 SG1 3052.4 SG2 497.4 THA 118.71 EL1 2298.5 EL2 153.0 ALF 123.79

LAUNCH DATE FEB 3 1969

FLIGHT TIME 128.00

ARRIVAL DATE JUN 11 1969

HELIOCENTRIC CONIC

DISTANCE 361.123

RL 147.45 LAL -.00 LOL 133.99 VL 27.757 GAL -3.35 AZL 99.18 HCA 165.30 SMA 128.90 ECC .15517 INC 9.1781 V1 30.215
RP 108.93 LAP -2.32 LOP 299.47 VP 37.510 GAP .55 AZP 81.12 TAL 198.78 TAP 4.08 RCA 108.89 APO 148.90 V2 34.788
RC 97.236 GL -52.24 GP 74.78 ZAL 109.69 ZAP 92.33 ETS 14.74 ZAE 104.45 ETE 110.26 ZAC 82.61 ETC 158.31 CLP -98.91

PLANETOCENTRIC CONIC

C3 31.258 VHL 5.591 DLA -42.88 RAL 34.78 RAD 6568.2 VEL 12.354 PTH 2.23 VHP 7.658 DPA 64.61 RAP 314.55 ECC 1.5144
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
56.35 7 9 57 1675.06 24.54 27.53 275.31 126.33 7 37 52 1075.1 29.09 20.58
123.65 14 25 5 5617.24 24.55 261.99 275.32 126.33 15 58 42 5017.2 29.11 255.04
56.35 7 9 57 1675.06 24.54 27.53 275.31 126.33 7 37 52 1075.1 29.09 20.58
123.65 14 25 5 5617.24 24.55 261.99 275.32 126.33 15 58 42 5017.2 29.11 255.04
56.35 7 9 57 1675.06 24.54 27.53 275.31 126.33 7 37 52 1075.1 29.09 20.58
123.65 14 25 5 5617.24 24.55 261.99 275.32 126.33 15 58 42 5017.2 29.11 255.04

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-1.6023 TRA -.2391 TC3 -.7790 BAU .6013 SGT 1888.6 SGR 2667.2 SG3 191.7 ST 1645.3 SR 2012.3 SS 1171.7
RDE 1.9333 RRA -.8336 RC3 1.2098 FAU .03129 RRT -.9571 RRF -.9965 RTF .9629 CRT -.9935 CRS .9999 CST -.9947
FDE-1.7045 FRA .6910 FC3 -.8665 BSP 10241 SGB 3268.1 R23 .0651 R13 -.9949 LSA 2847.2 MSA 149.6 SSA 3.5
BDE 2.5109 BRA .8672 BC3 1.4388 FSP -611 SG1 3236.9 SG2 450.8 THA 124.90 EL1 2595.2 EL2 144.8 ALF 129.23

LAUNCH DATE FEB 3 1969

FLIGHT TIME 130.00

ARRIVAL DATE JUN 13 1969

HELIOCENTRIC CONIC

DISTANCE 367.269

RL 147.45 LAL -.00 LOL 133.99 VL 27.747 GAL -3.25 AZL 102.27 HCA 168.38 SMA 128.82 ECC .15510 INC12.2713 V1 30.215
RP 108.94 LAP -2.45 LOP 302.63 VP 37.501 GAP .88 AZP 77.97 TAL 198.18 TAP 6.56 RCA 108.84 APO 148.80 V2 34.786
RC 99.636 GL -58.28 GP 80.07 ZAL 105.36 ZAP 93.28 ETS 25.94 ZAE 98.66 ETE 119.90 ZAC 79.01 ETC 166.82 CLP 109.40

PLANETOCENTRIC CONIC

C3 47.917 VHL 6.922 DLA -46.94 RAL 41.58 RAD 6568.8 VEL 13.011 PTH 2.37 VHP 9.451 DPA 64.70 RAP 301.65 ECC 1.7886
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
50.86 7 16 10 1837.31 21.62 39.81 289.82 132.74 7 46 47 1237.3 26.91 33.65
129.14 15 13 7 5670.34 21.63 264.25 289.84 132.73 16 47 37 5070.3 26.93 258.08
50.86 7 16 10 1837.31 21.62 39.81 289.82 132.74 7 46 47 1237.3 26.91 33.65
129.14 15 13 7 5670.34 21.63 264.25 289.84 132.73 16 47 37 5070.3 26.93 258.08
50.86 7 16 10 1837.31 21.62 39.81 289.82 132.74 7 46 47 1237.3 26.91 33.65
129.14 15 13 7 5670.34 21.63 264.25 289.84 132.73 16 47 37 5070.3 26.93 258.08

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-2.4874 TRA .7373 TC3 -.5917 BAU .5636 SGT 2389.3 SGR 2461.2 SG3 143.5 ST 2076.3 SR 1891.4 SS 1092.2
RDE 2.2316 RRA -1.1168 RC3 .6511 FAU .02017 RRT -.9781 RRF -.9972 RTF .9838 CRT -.9962 CRS .9999 CST -.9975
FDE-1.5836 FRA .7318 FC3 -.3645 BSP 10794 SGB 3430.2 R23 .0607 R13 -.9962 LSA 3011.0 MSA 125.7 SSA 2.5
BDE 3.3417 BRA 1.3382 BC3 .8798 FSP -458 SG1 3411.3 SG2 359.2 THA 134.13 EL1 2806.1 EL2 121.6 ALF 137.68

LAUNCH DATE FEB 3 1969

FLIGHT TIME 132.00

ARRIVAL DATE JUN 15 1969

HELIOCENTRIC CONIC

DISTANCE 373.335

RL 147.45 LAL -.00 LOL 133.99 VL 27.734 GAL -3.12 AZL 107.53 HCA 171.41 SMA 128.73 ECC .15508 INC17.5310 V1 30.215
RP 108.94 LAP -2.58 LOP 305.80 VP 37.490 GAP 1.19 AZP 72.65 TAL 197.44 TAP 8.85 RCA 108.77 APO 148.70 V2 34.784
RC 102.038 GL -63.28 GP 85.78 ZAL 100.94 ZAP 93.44 ETS 52.23 ZAE 91.67 ETE 144.43 ZAC 74.78 ETC 190.77 CLP-144.62

PLANETOCENTRIC CONIC

C3 87.220 VHL 9.339 DLA -49.56 RAL 49.05 RAD 6569.7 VEL 14.442 PTH 2.62 VHP 12.580 DPA 63.44 RAP 286.48 ECC 2.4354
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.46 7 34 27 2008.85 15.48 50.07 305.39 137.70 8 7 56 1408.9 21.32 44.72
132.54 15 54 30 5785.25 15.50 268.95 305.40 137.69 17 30 55 5185.2 21.33 263.60
47.46 7 34 27 2008.85 15.48 50.07 305.39 137.70 8 7 56 1408.9 21.32 44.72
132.54 15 54 30 5785.25 15.50 268.95 305.40 137.69 17 30 55 5185.2 21.33 263.60
47.46 7 34 27 2008.85 15.48 50.07 305.39 137.70 8 7 56 1408.9 21.32 44.72
132.54 15 54 30 5785.25 15.50 268.95 305.40 137.69 17 30 55 5185.2 21.33 263.60

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE-4.3209 TRA 1.9769 TC3 -.3329 BAU .4266 SGT 3303.0 SGR 1342.8 SG3 103.1 ST 2709.7 SR 981.8 SS 1015.0
RDE 1.5366 RRA -.9654 RC3 .1518 FAU .00977 RRT -.9882 RRF -.9955 RTF .9962 CRT -.9972 CRS .9993 CST -.9993
FDE-1.4767 FRA .7978 FC3 -.0970 BSP 11204 SGB 3565.5 R23 .0504 R13 -.9975 LSA 3054.7 MSA 73.5 SSA 1.8
BDE 4.5860 BRA 2.2000 BC3 .3659 FSP -329 SG1 3560.4 SG2 190.8 THA 158.05 EL1 2881.2 EL2 68.5 ALF 160.12

LAUNCH DATE FEB 3 1969

FLIGHT TIME 134.00

ARRIVAL DATE JUN 17 1969

HELIOCENTRIC CONIC

DISTANCE 379.225

RL 147.45 LAL -.00 LOL 133.99 VL 27.718 GAL -2.96 AZL 118.22 MCA 174.29 SMA 128.63 ECC .15501 INC28.2245 V1 30.215
RP 108.95 LAP -2.70 LOP 308.96 VP 37.477 GAP 1.44 AZP 61.89 TAL 196.48 TAP 10.77 RCA 108.69 APO 148.56 V2 34.783
RC 104.441 GL -65.15 GP 82.23 ZAL 96.73 ZAP 92.81 ETS 133.25 ZAE 81.94 ETE 223.68 ZAC 68.77 ETC 270.54 CLP 111.31

PLANETOCENTRIC CONIC

C3 208.160 VHL 14.428 DLA -48.98 RAL 55.50 RAD 6571.2 VEL 18.152 PTH 3.02 VHP 19.003 DPA 59.01 RAP 268.90 ECC 4.425H
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
48.21 8 2 36 2167.26 7.04 56.28 319.31 138.60 8 38 43 1567.3 13.00 51.28
131.79 16 17 45 667.37 7.06 298.44 319.33 138.60 16 28 52 67.4 13.02 293.44
48.21 8 2 36 2167.26 7.04 56.28 319.31 138.60 8 38 43 1567.3 13.00 51.28
131.79 16 17 45 667.37 7.06 298.44 319.33 138.60 16 28 52 67.4 13.02 293.44
48.21 8 2 36 2167.26 7.04 56.28 319.31 138.60 8 38 43 1567.3 13.00 51.28
131.79 16 17 45 667.37 7.06 298.44 319.33 138.60 16 28 52 67.4 13.02 293.44

DIFFERENTIAL CORRECTIONS

TDE -1.6371 TRA 2.5438 TC3 -.0166 BAU .1008
ROE -6.5874 RRA 3.1361 RC3 .0322 FAU-.00251
FOE -1.5172 FRA .9963 FC3 .0104 BSP 11357
BOE 6.7878 BRA 4.0381 BC3 .0362 FSP -234

MID-COURSE EXECUTION ACCURACY

SGT 1671.6 SGR 3233.1 SG3 73.7
RRT .8543 RRF .9875 RTF .9246
SG8 3639.6 R23 -.0523 R13 .9984
SG1 3552.7 SG2 790.6 THA 64.84

ORBIT DETERMINATION ACCURACY

ST 797.4 SR 2677.2 SS 1032.9
CRT .9198 CRS -.9970 CST -.9473
LSA 2962.6 MSA 305.1 SSA .9
EL1 2777.1 EL2 301.7 ALF 74.49

LAUNCH DATE FEB 3 1969

FLIGHT TIME 136.00

ARRIVAL DATE JUN 19 1969

HELIOCENTRIC CONIC

DISTANCE 384.511

RL 147.45 LAL -.00 LOL 133.99 VL 27.701 GAL -2.66 AZL 146.33 MCA 176.63 SMA 128.50 ECC .15446 INC56.3333 V1 30.215
RP 108.95 LAP -2.81 LOP 312.12 VP 37.464 GAP 1.53 AZP 33.71 TAL 194.85 TAP 11.48 RCA 108.65 APO 148.35 V2 34.783
RC 106.844 GL -57.00 GP 64.65 ZAL 93.23 ZAP 91.63 ETS 169.28 ZAE 63.79 ETE 257.99 ZAC 57.13 ETC 309.85 CLP 93.82

PLANETOCENTRIC CONIC

C3 754.020 VHL 27.459 DLA -39.49 RAL 56.24 RAD 6572.7 VEL 29.586 PTH 3.44 VHP 35.221 DPA 45.39 RAP 249.57 ECC13.4093
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
61.24 8 56 57 2159.94 .36 49.16 325.79 129.49 9 32 57 1559.9 5.43 43.38
118.76 15 29 19 932.69 .38 315.94 325.80 129.49 15 44 52 332.7 5.45 310.17
61.24 8 56 57 2159.94 .36 49.16 325.79 129.49 9 32 57 1559.9 5.43 43.38
118.76 15 29 19 932.69 .38 315.94 325.80 129.49 15 44 52 332.7 5.45 310.17
61.24 8 56 57 2159.94 .36 49.16 325.79 129.49 9 32 57 1559.9 5.43 43.38
118.76 15 29 19 932.69 .38 315.94 325.80 129.49 15 44 52 332.7 5.45 310.17

DIFFERENTIAL CORRECTIONS

TDE 4.0324 TRA .2670 TC3 -.0570 BAU 2.1553
RD -10.1601 RRA 8.5063 RC3 .2061 FAU-.03547
FOE -2.0056 FRA 1.7466 FC3 .0407 BSP 10512
BOE10.9310 BRA 8.5105 BC3 .2138 FSP -182

MID-COURSE EXECUTION ACCURACY

SGT 900.6 SGR 3326.3 SG3 57.8
RRT -.6582 RRF .9998 RTF -.6436
SG8 3446.0 R23 -.0559 R13 .9984
SG1 3380.9 SG2 667.0 THA 100.52

ORBIT DETERMINATION ACCURACY

ST 841.7 SR 2229.7 SS 1344.6
CRT -.9426 CRS -.9999 CST .9386
LSA 2722.9 MSA 271.4 SSA .4
EL1 2368.5 EL2 264.5 ALF 109.85

LAUNCH DATE FEB 3 1969

FLIGHT TIME 138.00

ARRIVAL DATE JUN 21 1969

HELIOCENTRIC CONIC

DISTANCE 394.293

RL 147.45 LAL -.00 LOL 133.99 VL 27.681 GAL -3.26 AZL 23.95 MCA 183.18 SMA 128.37 ECC .15895 INC66.0469 V1 30.215
RP 108.94 LAP -2.91 LOP 315.28 VP 37.450 GAP 2.82 AZP 156.01 TAL 197.70 TAP 20.88 RCA 107.96 APO 148.77 V2 34.784
RC 109.246 GL 52.93 GP -61.06 ZAL 93.32 ZAP 92.77 ETS 178.98 ZAE 62.38 ETE 92.30 ZAC 80.08 ETC 50.24 CLP 95.74

PLANETOCENTRIC CONIC

C31002.015 VHL 31.655 DLA 61.79 RAL 3.24 RAD 6573.0 VEL 33.516 PTH 3.50 VHP 38.502 DPA -69.25 RAP 178.64 ECC17.4906
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
32.48 15 47 47 5048.56 .37 241.76 273.45 28.21 17 11 56 4448.6 -6.68 238.38
147.52 1 35 37 3361.46 .38 102.42 273.43 28.21 2 31 39 2761.5 -6.67 99.03
32.48 15 47 47 5048.56 .37 241.76 273.45 28.21 17 11 56 4448.6 -6.68 238.38
147.52 1 35 37 3361.46 .38 102.42 273.43 28.21 2 31 39 2761.5 -6.67 99.03
32.48 15 47 47 5048.56 .37 241.76 273.45 28.21 17 11 56 4448.6 -6.68 238.38
147.52 1 35 37 3361.46 .38 102.42 273.43 28.21 2 31 39 2761.5 -6.67 99.03

DIFFERENTIAL CORRECTIONS

TDE -3.9444 TRA 2.1820 TC3 -.1005 BAU 3.1704
RD -15.6679 RRA 2.0653 RC3 -.2143 FAU-.04962
FOE 3.2192 FRA -.4364 FC3 .0429 BSP 10513
BOE16.1568 BRA 3.0045 BC3 .2367 FSP -183

MID-COURSE EXECUTION ACCURACY

SGT 1270.0 SGR 3241.6 SG3 57.4
RRT .8620 RRF -.9999 RTF -.8635
SG8 3481.5 R23 -.0590 R13 -.9982
SG1 3427.9 SG2 608.8 THA 70.71

ORBIT DETERMINATION ACCURACY

ST 756.9 SR 2846.1 SS 1945.7
CRT .9678 CRS 1.0000 CST .9684
LSA 3524.8 MSA 185.8 SSA .9
EL1 2939.3 EL2 184.4 ALF 75.51

LAUNCH DATE FEB 3 1969

FLIGHT TIME 140.00

ARRIVAL DATE JUN 23 1969

HELIOCENTRIC CONIC

DISTANCE 399.390

RL 147.45 LAL -.00 LOL 133.99 VL 27.659 GAL -2.92 AZL 56.01 MCA 185.37 SMA 128.22 ECC .15822 INC33.9900 V1 30.215
RP 108.94 LAP -3.00 LOP 318.45 VP 37.435 GAP 2.86 AZP 123.87 TAL 195.84 TAP 21.21 RCA 107.93 APO 148.51 V2 34.785
RC 111.645 GL 64.10 GP -79.51 ZAL 95.58 ZAP 95.36 ETS 192.11 ZAE 82.47 ETE 105.72 ZAC 93.79 ETC 65.80 CLP 120.83

PLANETOCENTRIC CONIC

C3 294.708 VHL 17.167 DLA 66.23 RAL 338.05 RAD 6571.7 VEL 20.396 PTH 3.16 VHP 20.309 DPA -75.19 RAP 110.70 ECC 5.8501
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
27.25 13 55 4 4971.93 -5.62 242.47 245.58 23.89 15 17 56 4371.9 -12.93 239.57
152.75 0 7 24 3245.23 -5.61 97.14 245.56 23.89 1 1 30 2645.2 -12.92 94.25
27.25 13 55 4 4971.93 -5.62 242.47 245.58 23.89 15 17 56 4371.9 -12.93 239.57
152.75 0 7 24 3245.23 -5.61 97.14 245.56 23.89 1 1 30 2645.2 -12.92 94.25
27.25 13 55 4 4971.93 -5.62 242.47 245.58 23.89 15 17 56 4371.9 -12.93 239.57
152.75 0 7 24 3245.23 -5.61 97.14 245.56 23.89 1 1 30 2645.2 -12.92 94.25

DIFFERENTIAL CORRECTIONS

TDE 1.2327 TRA .9601 TC3 -.0329 BAU .4917
ROE -8.0091 RRA 3.2958 RC3 -.1204 FAU-.00586
FOE 1.8596 FRA -.7025 FC3 .0172 BSP 12325
BOE 8.1034 BRA 3.4328 BC3 .1248 FSP -239

MID-COURSE EXECUTION ACCURACY

SGT 902.3 SGR 3842.4 SG3 73.7
RRT .3221 RRF -.9984 RTF -.2779
SG8 3946.9 R23 -.0637 R13 -.9974
SG1 3853.9 SG2 851.6 THA 85.45

ORBIT DETERMINATION ACCURACY

ST 475.6 SR 2795.7 SS 1131.3
CRT -.6803 CRS .9997 CST -.6971
LSA 3033.4 MSA 346.3 SSA 1.5
EL1 2814.6 EL2 346.2 ALF 96.70

LAUNCH DATE FEB 3 1969

FLIGHT TIME 142.00

ARRIVAL DATE JUN 25 1969

HELIOCENTRIC CONIC

DISTANCE 405.172

RL 147.45 LAL -.00 LOL 133.99 VL 27.636 GAL -2.70 AZL 67.90 MCA 188.22 SMA 128.06 ECC .15846 INC22.0974 V1 30.215  
 RP 108.93 LAP -3.08 LOP 321.61 VP 37.420 GAP 3.07 AZP 111.89 TAL 194.61 TAP 22.83 RCA 107.77 APO 148.35 V2 34.787  
 RC 114.042 GL 64.77 GP -81.04 ZAL 97.83 ZAP 98.91 ETS 265.49 ZAE 92.87 ETE 179.13 ZAC 99.95 ETC 139.98 CLP-173.87

PLANETOCENTRIC CONIC

C3 131.784 VHL 11.480 DLA 64.49 RAL 333.45 RAD 6570.4 VEL 15.910 PTH 2.81 VHP 13.228 DPA -70.09 RAP 77.34 ECC 3.1688  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 29.29 13 41 23 4839.14 -13.24 237.90 237.02 26.26 15 2 2 4239.1 -20.38 234.55  
 150.71 23 40 29 3126.75 -13.23 94.85 237.00 26.25 24 32 36 2526.7 -20.37 91.50  
 29.29 13 41 23 4839.14 -13.24 237.90 237.02 26.26 15 2 2 4239.1 -20.38 234.55  
 150.71 23 40 29 3126.75 -13.23 94.85 237.00 26.25 24 32 36 2526.7 -20.37 91.50  
 29.29 13 41 23 4839.14 -13.24 237.90 237.02 26.26 15 2 2 4239.1 -20.38 234.55  
 150.71 23 40 29 3126.75 -13.23 94.85 237.00 26.25 24 32 36 2526.7 -20.37 91.50

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 4.8679 TRA-2.5069 TC3 -.1339 BAU .2430 SGT 3800.0 SGR 1558.2 SG3 102.9 ST 2581.3 SR 714.6 SS 952.0  
 RDE -1.1363 RRA 1.2505 RC3 .0332 FAU .01028 RRT -.9479 RRF -.9331 RTF .9981 CRT -.9524 CRS .9452 CST -.9997  
 FDE 1.5834 FRA -.7568 FC3 -.0675 BSP 13073 SGB 4107.1 R23 -.0853 R13 -.9953 LSA 2834.4 MSA 214.2 SSA 1.8  
 BDE 4.9988 BRA 2.8015 BC3 .1379 FSP -.340 SG1 4080.9 SG2 462.4 THA 158.47 ELI 2670.1 EL2 210.5 ALF 165.13

LAUNCH DATE FEB 3 1969

FLIGHT TIME 144.00

ARRIVAL DATE JUN 27 1969

HELIOCENTRIC CONIC

DISTANCE 411.110

RL 147.45 LAL -.00 LOL 133.99 VL 27.611 GAL -2.52 AZL 73.58 MCA 191.23 SMA 127.89 ECC .15902 INC16.4151 V1 30.215  
 RP 108.93 LAP -3.16 LOP 324.78 VP 37.404 GAP 3.33 AZP 106.12 TAL 193.52 TAP 24.75 RCA 107.55 APO 148.23 V2 34.790  
 RC 116.435 GL 62.64 GP -74.92 ZAL 99.67 ZAP 102.98 ETS 303.68 ZAE 100.07 ETE 216.73 ZAC 103.65 ETC 178.45 CLP-149.72

PLANETOCENTRIC CONIC

C3 77.030 VHL 8.777 DLA 62.25 RAL 335.70 RAD 6569.5 VEL 14.085 PTH 2.57 VHP 9.922 DPA -64.39 RAP 61.97 ECC 2.2677  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 31.93 13 56 37 4714.63 -19.77 232.39 234.81 29.66 15 15 12 4114.6 -26.67 228.39  
 148.07 23 43 9 3022.98 -19.76 92.40 234.79 29.65 24 33 32 2423.0 -26.66 88.40  
 31.93 13 56 37 4714.63 -19.77 232.39 234.81 29.66 15 15 12 4114.6 -26.67 228.39  
 148.07 23 43 9 3022.98 -19.76 92.40 234.79 29.65 24 33 32 2423.0 -26.66 88.40  
 31.93 13 56 37 4714.63 -19.77 232.39 234.81 29.66 15 15 12 4114.6 -26.67 228.39  
 148.07 23 43 9 3022.98 -19.76 92.40 234.79 29.65 24 33 32 2423.0 -26.66 88.40

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.5814 TRA-2.3134 TC3 -.4880 BAU .5314 SGT 4089.0 SGR 1179.7 SG3 143.3 ST 2532.6 SR 898.6 SS 968.2  
 RDE 1.3339 RRA -.5274 RC3 -.1677 FAU .02366 RRT .9715 RRF .9920 RTF .9910 CRT .9895 CRS -.9977 CST -.9970  
 FDE 1.6434 FRA -.8381 FC3 -.2660 BSP 14955 SGB 4255.8 R23 .1056 R13 .9930 LSA 2853.2 MSA 134.4 SSA 2.0  
 BDE 3.8218 BRA 2.3727 BC3 .5160 FSP -.538 SG1 4247.3 SG2 269.2 THA 15.72 ELI 2684.5 EL2 122.5 ALF 19.39

LAUNCH DATE FEB 3 1969

FLIGHT TIME 146.00

ARRIVAL DATE JUN 29 1969

HELIOCENTRIC CONIC

DISTANCE 417.113

RL 147.45 LAL -.00 LOL 133.99 VL 27.585 GAL -2.33 AZL 76.87 MCA 194.31 SMA 127.71 ECC .15974 INC13.1329 V1 30.215  
 RP 108.91 LAP -3.22 LOP 327.95 VP 37.388 GAP 3.60 AZP 102.74 TAL 192.42 TAP 26.74 RCA 107.31 APO 148.11 V2 34.794  
 RC 118.823 GL 59.79 GP -68.42 ZAL 101.00 ZAP 107.32 ETS 311.16 ZAE 105.79 ETE 222.98 ZAC 106.33 ETC 185.80 CLP-144.08

PLANETOCENTRIC CONIC

C3 52.508 VHL 7.246 DLA 60.10 RAL 339.67 RAD 6568.9 VEL 13.186 PTH 2.41 VHP 8.112 DPA -58.82 RAP 52.83 ECC 1.8642  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 34.49 14 18 47 4611.24 -24.64 226.84 234.39 33.26 15 35 38 4011.2 -31.24 222.14  
 145.51 23 52 42 2942.00 -24.63 89.93 234.37 33.26 24 41 44 2342.0 -31.23 85.23  
 34.49 14 18 47 4611.24 -24.64 226.84 234.39 33.26 15 35 38 4011.2 -31.24 222.14  
 145.51 23 52 42 2942.00 -24.63 89.93 234.37 33.26 24 41 44 2342.0 -31.23 85.23  
 34.49 14 18 47 4611.24 -24.64 226.84 234.39 33.26 15 35 38 4011.2 -31.24 222.14  
 145.51 23 52 42 2942.00 -24.63 89.93 234.37 33.26 24 41 44 2342.0 -31.23 85.23

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 3.0086 TRA-1.8672 TC3 -.8023 BAU .6089 SGT 3972.6 SGR 1551.1 SG3 182.4 ST 2539.6 SR 1209.4 SS 1065.2  
 RDE 1.4919 RRA -.5591 RC3 -.3296 FAU .03265 RRT .9717 RRF .9950 RTF .9840 CRT .9908 CRS -.9993 CST -.9952  
 FDE 1.8574 FRA -.8199 FC3 -.5383 BSP 13255 SGB 4264.7 R23 .1343 R13 .9886 LSA 3003.3 MSA 164.7 SSA 2.7  
 BDE 3.3582 BRA 1.9491 BC3 .8674 FSP -.594 SG1 4251.0 SG2 342.4 THA 20.92 ELI 2809.0 EL2 147.9 ALF 25.33

LAUNCH DATE FEB 3 1969

FLIGHT TIME 148.00

ARRIVAL DATE JUL 1 1969

HELIOCENTRIC CONIC

DISTANCE 423.122

RL 147.45 LAL -.00 LOL 133.99 VL 27.557 GAL -2.14 AZL 79.00 MCA 197.42 SMA 127.52 ECC .16060 INC10.9974 V1 30.215  
 RP 108.90 LAP -3.27 LOP 331.11 VP 37.372 GAP 3.87 AZP 100.50 TAL 191.33 TAP 28.75 RCA 107.04 APO 148.00 V2 34.798  
 RC 121.206 GL 56.82 GP -62.33 ZAL 101.88 ZAP 111.76 ETS 313.44 ZAE 110.52 ETE 223.41 ZAC 108.49 ETC 187.60 CLP-142.98

PLANETOCENTRIC CONIC

C3 39.391 VHL 6.276 DLA 58.11 RAL 343.98 RAD 6568.5 VEL 12.679 PTH 2.30 VHP 7.028 DPA -53.45 RAP 46.76 ECC 1.6483  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 36.87 14 42 5 4527.54 -28.07 221.58 234.62 36.77 15 57 33 3927.5 -34.36 216.20  
 143.13 0 7 42 2881.48 -28.06 87.63 234.60 36.77 0 55 43 2281.5 -34.35 82.26  
 36.87 14 42 5 4527.54 -28.07 221.58 234.62 36.77 15 57 33 3927.5 -34.36 216.20  
 143.13 0 7 42 2881.48 -28.06 87.63 234.60 36.77 0 55 43 2281.5 -34.35 82.26  
 36.87 14 42 5 4527.54 -28.07 221.58 234.62 36.77 15 57 33 3927.5 -34.36 216.20  
 143.13 0 7 42 2881.48 -28.06 87.63 234.60 36.77 0 55 43 2281.5 -34.35 82.26

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.7067 TRA-1.6267 TC3-1.1974 BAU .6800 SGT 4033.3 SGR 1595.0 SG3 224.3 ST 2611.3 SR 1253.6 SS 1146.6  
 RDE 1.3466 RRA -.4720 RC3 -.4830 FAU .04277 RRT .9702 RRF .9950 RTF .9795 CRT .9912 CRS -.9996 CST -.9945  
 FDE 2.0164 FRA -.8094 FC3 -.9399 BSP 13528 SGB 4337.2 R23 .1526 R13 .9849 LSA 3110.5 MSA 172.1 SSA 3.4  
 BDE 3.0232 BRA 1.6937 BC3 1.2912 FSP -.741 SG1 4322.2 SG2 360.4 THA 21.15 ELI 2892.7 EL2 149.5 ALF 25.52

LAUNCH DATE FEB 3 1969

FLIGHT TIME 150.00

ARRIVAL DATE JUL 3 1969

HELIOCENTRIC CONIC

DISTANCE 429.133

RL 147.45 LAL -.00 LOL 133.99 VL 27.528 GAL -1.95 AZL 80.51 HCA 200.55 SMA 127.33 ECC .16158 INC 9.4932 V1 30.215  
 RP 108.89 LAP -3.32 LOP 334.28 VP 37.355 GAP 4.15 AZP 98.90 TAL 190.20 TAP 30.75 RCA 106.76 APO 147.90 V2 34.803  
 RC 123.581 GL 53.95 GP -56.72 ZAL 102.32 ZAP 116.15 ETS 314.38 ZAE 114.45 ETE 222.00 ZAC 110.33 ETC 187.78 CLP-143.43

PLANETOCENTRIC CONIC

C3 31.501 VHL 5.613 CLA 56.33 RAL 348.25 RAD 6568.3 VEL 12.364 PTH 2.23 VHP 6.346 DPA -48.32 RAP 42.55 ECC 1.5184  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 39.03 15 4 54 4459.59 -30.44 216.74 235.22 40.02 16 19 13 3859.6 -36.41 210.78  
 140.97 0 18 56 2836.61 -30.43 85.61 235.20 40.01 1 6 12 2236.6 -36.40 79.64  
 39.03 15 4 54 4459.59 -30.44 216.74 235.22 40.02 16 19 13 3859.6 -36.41 210.78  
 140.97 0 18 56 2836.61 -30.43 85.61 235.20 40.01 1 6 12 2236.6 -36.40 79.64  
 39.03 15 4 54 4459.59 -30.44 216.74 235.22 40.02 16 19 13 3859.6 -36.41 210.78  
 140.97 0 18 56 2836.61 -30.43 85.61 235.20 40.01 1 6 12 2236.6 -36.40 79.64

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.5340 TRA-1.4465 TC3-1.6259 BAU .7295 SGT 4137.2 SGR 1534.6 SG3 262.2 ST 2707.9 SR 1218.0 SS 1212.9  
 RDE 1.1761 RRA -.3700 RC3 -.5973 FAU .05164 RRT .9677 RRF .9937 RTF .9757 CRT .9914 CRS -.9997 CST -.9941  
 FDE 2.1272 FRA -.7601 FC3-1.4191 BSP 13837 SGB 4412.7 R23 .1671 R13 .9812 LSA 3202.7 MSA 174.8 SSA 4.2  
 BOE 2.7936 BRA 1.4931 BC3 1.7322 FSP -878 SG1 4397.6 SG2 364.0 THA 19.89 EL1 2965.7 EL2 145.3 ALF 24.10

LAUNCH DATE FEB 3 1969

FLIGHT TIME 152.00

ARRIVAL DATE JUL 5 1969

HELIOCENTRIC CONIC

DISTANCE 435.140

RL 147.45 LAL -.00 LOL 133.99 VL 27.498 GAL -1.75 AZL 81.63 HCA 203.69 SMA 127.13 ECC .16267 INC 8.3718 V1 30.215  
 RP 108.87 LAP -3.35 LOP 337.45 VP 37.338 GAP 4.43 AZP 97.68 TAL 189.05 TAP 32.74 RCA 106.45 APO 147.81 V2 34.808  
 RC 125.948 GL 51.22 GP -51.62 ZAL 102.36 ZAP 120.36 ETS 314.91 ZAE 117.68 ETE 219.83 ZAC 111.98 ETC 187.37 CLP-144.51

PLANETOCENTRIC CONIC

C3 26.351 VHL 5.133 CLA 54.74 RAL 352.39 RAD 6568.1 VEL 12.154 PTH 2.18 VHP 5.908 DPA -43.50 RAP 39.60 ECC 1.4337  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 40.97 15 26 50 4403.72 -32.05 212.40 236.14 42.93 16 40 14 3803.7 -37.73 205.93  
 139.03 0 30 4 2803.26 -32.04 83.87 236.12 42.92 1 16 47 2203.3 -37.72 77.41  
 40.97 15 26 50 4403.72 -32.05 212.40 236.14 42.93 16 40 14 3803.7 -37.73 205.93  
 139.03 0 30 4 2803.26 -32.04 83.87 236.12 42.92 1 16 47 2203.3 -37.72 77.41  
 40.97 15 26 50 4403.72 -32.05 212.40 236.14 42.93 16 40 14 3803.7 -37.73 205.93  
 139.03 0 30 4 2803.26 -32.04 83.87 236.12 42.92 1 16 47 2203.3 -37.72 77.41

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.4249 TRA-1.2921 TC3-2.0692 BAU .7661 SGT 4252.2 SGR 1436.5 SG3 293.7 ST 2809.2 SR 1153.0 SS 1261.5  
 RDE 1.0227 RRA -.2780 RC3 -.6689 FAU .05862 RRT .9645 RRF .9916 RTF .9723 CRT .9916 CRS -.9998 CST -.9938  
 FDE 2.1857 FRA -.6726 FC3-1.9260 BSP 14077 SGB 4488.3 R23 .1780 R13 .9774 LSA 3283.5 MSA 175.5 SSA 5.0  
 BOE 2.6318 BRA 1.3216 BC3 2.1746 FSP -988 SG1 4473.7 SG2 360.6 THA 18.17 EL1 3033.5 EL2 138.3 ALF 22.19

LAUNCH DATE FEB 3 1969

FLIGHT TIME 154.00

ARRIVAL DATE JUL 7 1969

HELIOCENTRIC CONIC

DISTANCE 441.137

RL 147.45 LAL -.00 LOL 133.99 VL 27.468 GAL -1.53 AZL 82.50 HCA 206.83 SMA 126.92 ECC .16389 INC 7.4993 V1 30.215  
 RP 108.85 LAP -3.38 LOP 340.62 VP 37.322 GAP 4.70 AZP 96.70 TAL 187.87 TAP 34.70 RCA 106.12 APO 147.73 V2 34.815  
 RC 128.306 GL 48.66 GP -47.03 ZAL 102.05 ZAP 124.34 ETS 315.32 ZAE 120.30 ETE 217.32 ZAC 113.52 ETC 186.75 CLP-145.86

PLANETOCENTRIC CONIC

C3 22.782 VHL 4.773 CLA 53.35 RAL 356.43 RAD 6567.9 VEL 12.007 PTH 2.14 VHP 5.629 DPA -39.01 RAP 37.57 ECC 1.3749  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 42.70 15 47 56 4357.17 -33.15 208.53 237.37 45.48 17 0 33 3757.2 -38.55 201.66  
 137.30 0 41 10 2778.32 -33.14 82.42 237.35 45.47 1 27 29 2178.3 -38.54 75.55  
 42.70 15 47 56 4357.17 -33.15 208.53 237.37 45.48 17 0 33 3757.2 -38.55 201.66  
 137.30 0 41 10 2778.32 -33.14 82.42 237.35 45.47 1 27 29 2178.3 -38.54 75.55  
 42.70 15 47 56 4357.17 -33.15 208.53 237.37 45.48 17 0 33 3757.2 -38.55 201.66  
 137.30 0 41 10 2778.32 -33.14 82.42 237.35 45.47 1 27 29 2178.3 -38.54 75.55

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.3482 TRA-1.1524 TC3-2.5225 BAU .7979 SGT 4371.9 SGR 1328.9 SG3 318.0 ST 2904.2 SR 1077.5 SS 1290.7  
 RDE .8917 RRA -.2022 RC3 -.7065 FAU .06382 RRT .9611 RRF .9885 RTF .9692 CRT .9918 CRS -.9999 CST -.9935  
 FDE 2.1923 FRA -.5590 FC3-2.4254 BSP 14352 SGB 4569.4 R23 .1843 R13 .9737 LSA 3351.2 MSA 174.9 SSA 5.9  
 BOE 2.5118 BRA 1.1700 BC3 2.6196 FSP -1076 SG1 4555.8 SG2 352.4 THA 16.39 EL1 3094.9 EL2 129.5 ALF 20.24

LAUNCH DATE FEB 3 1969

FLIGHT TIME 156.00

ARRIVAL DATE JUL 9 1969

HELIOCENTRIC CONIC

DISTANCE 447.125

RL 147.45 LAL -.00 LOL 133.99 VL 27.436 GAL -1.31 AZL 83.20 HCA 209.98 SMA 126.71 ECC .16522 INC 6.7977 V1 30.215  
 RP 108.83 LAP -3.39 LOP 343.80 VP 37.305 GAP 4.98 AZP 95.90 TAL 186.66 TAP 36.64 RCA 105.78 APO 147.65 V2 34.821  
 RC 130.653 GL 46.25 GP -42.93 ZAL 101.41 ZAP 128.05 ETS 315.71 ZAE 122.38 ETE 214.72 ZAC 115.00 ETC 186.08 CLP-147.33

PLANETOCENTRIC CONIC

C3 20.199 VHL 4.494 CLA 52.11 RAL .39 RAD 6567.8 VEL 11.899 PTH 2.11 VHP 5.457 DPA -34.88 RAP 36.22 ECC 1.3324  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 44.24 16 8 20 4317.94 -33.88 205.12 238.90 47.71 17 20 18 3717.9 -39.04 197.92  
 135.76 0 52 24 2759.58 -33.87 81.23 238.89 47.70 1 38 23 2159.6 -39.02 74.03  
 44.24 16 8 20 4317.94 -33.88 205.12 238.90 47.71 17 20 18 3717.9 -39.04 197.92  
 135.76 0 52 24 2759.58 -33.87 81.23 238.89 47.70 1 38 23 2159.6 -39.02 74.03  
 44.24 16 8 20 4317.94 -33.88 205.12 238.90 47.71 17 20 18 3717.9 -39.04 197.92  
 135.76 0 52 24 2759.58 -33.87 81.23 238.89 47.70 1 38 23 2159.6 -39.02 74.03

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 2.2923 TRA-1.0191 TC3-2.9752 BAU .8263 SGT 4490.8 SGR 1222.7 SG3 335.2 ST 2991.6 SR 1002.4 SS 1303.9  
 RDE .7831 RRA -.1410 RC3 -.7145 FAU .06717 RRT .9570 RRF .9842 RTF .9663 CRT .9920 CRS -.9999 CST -.9931  
 FDE 2.1584 FRA -.4272 FC3-2.8787 BSP 14649 SGB 4654.3 R23 .1859 R13 .9701 LSA 3409.4 MSA 173.8 SSA 6.9  
 BOE 2.4224 BRA 1.0288 BC3 3.0598 FSP -1138 SG1 4641.6 SG2 343.3 THA 14.69 EL1 3152.8 EL2 119.8 ALF 18.41

LAUNCH DATE FEB 3 1969

FLIGHT TIME 158.00

ARRIVAL DATE JUL 11 1969

HELIOCENTRIC CONIC

RL 147.45 LAL -.00 LOL 133.99 VL 27.404 GAL -1.08 AZL 83.78 HCA 213.13 SMA 126.50 ECC .16667 INC 6.2181 VI 30.215
RP 108.80 LAP -3.39 LOP 346.97 VP 37.288 GAP 5.25 AZP 95.21 TAL 185.41 TAP 38.55 RCA 105.42 APO 147.59 V2 34.829
RC 132.989 GL 43.97 GP -39.29 ZAL 100.48 ZAP 131.47 ETS 316.09 ZAE 124.02 ETE 212.15 ZAC 116.46 ETC 185.42 CLP-148.84

DISTANCE 453.101

PLANETOCENTRIC CONIC

C3 18.269 VHL 4.274 DLA 51.02 RAL 4.32 RAD 6567.7 VEL 11.817 PTH 2.09 VHP 5.362 CPA -31.08 RAP 35.42 ECC 1.3007
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
45.61 16 28 14 4284.54 -34.36 202.11 240.74 49.65 17 39 39 3684.5 -39.29 194.65
134.39 1 3 50 2745.54 -34.35 80.26 240.73 49.64 1 49 36 2145.5 -39.28 72.80
45.61 16 28 14 4284.54 -34.36 202.11 240.74 49.65 17 39 39 3684.5 -39.29 194.65
134.39 1 3 50 2745.54 -34.35 80.26 240.73 49.64 1 49 36 2145.5 -39.28 72.80
45.61 16 28 14 4284.54 -34.36 202.11 240.74 49.65 17 39 39 3684.5 -39.29 194.65
134.39 1 3 50 2745.54 -34.35 80.26 240.73 49.64 1 49 36 2145.5 -39.28 72.80

DIFFERENTIAL CORRECTIONS

TDE 2.2513 TRA -.8868 TC3-3.4182 BAU .8522
ROE .6944 RRA -.0922 RC3 -.7002 FAU .06887
FDE 2.0949 FRA -.2860 FC3-3.2633 BSP 14889
BDE 2.3559 BRA .8916 BC3 3.4892 FSP -1170

MID-COURSE EXECUTION ACCURACY

SGT 4606.1 SGR 1124.0 SG3 346.0
RRT .9521 RRF .9782 RTF .9637
SGB 4741.3 R23 .1825 R13 .9669
SG1 4729.5 SG2 334.6 THA 13.15

ORBIT DETERMINATION ACCURACY

ST 3071.8 SR 932.8 SS 1304.2
CRT .9925 CRS -.9999 CST -.9927
LSA 3460.9 MSA 172.2 SSA 7.9
EL1 3208.5 EL2 109.4 ALF 16.79

LAUNCH DATE FEB 3 1969

FLIGHT TIME 160.00

ARRIVAL DATE JUL 13 1969

HELIOCENTRIC CONIC

RL 147.45 LAL -.00 LOL 133.99 VL 27.371 GAL -.84 AZL 84.27 HCA 216.29 SMA 126.28 ECC .16825 INC 5.7286 VI 30.215
RP 108.78 LAP -3.39 LOP 350.15 VP 37.271 GAP 5.53 AZP 94.62 TAL 184.14 TAP 40.44 RCA 105.04 APO 147.53 V2 34.837
RC 135.313 GL 41.80 GP -36.06 ZAL 99.28 ZAP 134.63 ETS 316.45 ZAE 125.28 ETE 209.71 ZAC 117.93 ETC 184.81 CLP-150.34

DISTANCE 459.064

PLANETOCENTRIC CONIC

C3 16.795 VHL 4.098 DLA 50.04 RAL 8.25 RAD 6567.7 VEL 11.755 PTH 2.07 VHP 5.322 CPA -27.61 RAP 35.03 ECC 1.2764
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
46.85 16 47 50 4255.82 -34.65 199.45 242.87 51.33 17 58 46 3655.8 -39.39 191.78
133.15 1 15 34 2735.25 -34.64 79.49 242.86 51.32 2 1 9 2135.2 -39.38 71.83
46.85 16 47 50 4255.82 -34.65 199.45 242.87 51.33 17 58 46 3655.8 -39.39 191.78
133.15 1 15 34 2735.25 -34.64 79.49 242.86 51.32 2 1 9 2135.2 -39.38 71.83
46.85 16 47 50 4255.82 -34.65 199.45 242.87 51.33 17 58 46 3655.8 -39.39 191.78
133.15 1 15 34 2735.25 -34.64 79.49 242.86 51.32 2 1 9 2135.2 -39.38 71.83

DIFFERENTIAL CORRECTIONS

TDE 2.2161 TRA -.7552 TC3-3.8521 BAU .8780
ROE .6212 RRA -.0540 RC3 -.6725 FAU .06937
FDE 2.0064 FRA -.1447 FC3-3.5758 BSP 15218
BDE 2.3015 BRA .7572 BC3 3.9104 FSP -1192

MID-COURSE EXECUTION ACCURACY

SGT 4719.3 SGR 1035.3 SG3 351.6
RRT .9465 RRF .9705 RTF .9614
SGB 4831.5 R23 .1739 R13 .9640
SG1 4820.4 SG2 327.1 THA 11.79

ORBIT DETERMINATION ACCURACY

ST 3138.7 SR 869.4 SS 1291.2
CRT .9931 CRS -.9999 CST -.9923
LSA 3499.4 MSA 170.0 SSA 9.0
EL1 3255.4 EL2 98.5 ALF 15.39

LAUNCH DATE FEB 3 1969

FLIGHT TIME 162.00

ARRIVAL DATE JUL 15 1969

HELIOCENTRIC CONIC

RL 147.45 LAL -.00 LOL 133.99 VL 27.338 GAL -.58 AZL 84.69 HCA 219.45 SMA 126.06 ECC .16996 INC 5.3073 VI 30.215
RP 108.75 LAP -3.37 LOP 353.32 VP 37.255 GAP 5.80 AZP 94.10 TAL 182.85 TAP 42.30 RCA 104.64 APO 147.49 V2 34.846
RC 137.625 GL 39.72 GP -33.20 ZAL 97.83 ZAP 137.52 ETS 316.79 ZAE 126.24 ETE 207.43 ZAC 119.44 ETC 184.25 CLP-151.81

DISTANCE 465.015

PLANETOCENTRIC CONIC

C3 15.654 VHL 3.957 DLA 49.16 RAL 12.20 RAD 6567.6 VEL 11.706 PTH 2.06 VHP 5.323 CPA -24.43 RAP 35.00 ECC 1.2576
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
47.98 17 7 17 4230.97 -34.80 197.08 245.28 52.79 18 17 48 3631.0 -39.37 189.26
132.02 1 27 38 2728.03 -34.79 78.91 245.27 52.78 2 13 7 2128.0 -39.36 71.08
47.98 17 7 17 4230.97 -34.80 197.08 245.28 52.79 18 17 48 3631.0 -39.37 189.26
132.02 1 27 38 2728.03 -34.79 78.91 245.27 52.78 2 13 7 2128.0 -39.36 71.08
47.98 17 7 17 4230.97 -34.80 197.08 245.28 52.79 18 17 48 3631.0 -39.37 189.26
132.02 1 27 38 2728.03 -34.79 78.91 245.27 52.78 2 13 7 2128.0 -39.36 71.08

DIFFERENTIAL CORRECTIONS

TDE 2.1855 TRA -.6204 TC3-4.2663 BAU .9027
ROE .5614 RRA -.0237 RC3 -.6347 FAU .06883
FDE 1.9023 FRA -.0056 FC3-3.8068 BSP 15526
BDE 2.2564 BRA .6209 BC3 4.3133 FSP -1196

MID-COURSE EXECUTION ACCURACY

SGT 4827.1 SGR 957.1 SG3 352.7
RRT .9396 RRF .9607 RTF .9594
SGB 4921.1 R23 .1612 R13 .9615
SG1 4910.5 SG2 322.1 THA 10.60

ORBIT DETERMINATION ACCURACY

ST 3193.2 SR 813.3 SS 1267.7
CRT .9939 CRS -.9997 CST -.9918
LSA 3526.6 MSA 167.6 SSA 10.1
EL1 3294.0 EL2 87.2 ALF 14.22

LAUNCH DATE FEB 3 1969

FLIGHT TIME 164.00

ARRIVAL DATE JUL 17 1969

HELIOCENTRIC CONIC

RL 147.45 LAL -.00 LOL 133.99 VL 27.304 GAL -.32 AZL 85.06 HCA 222.62 SMA 125.84 ECC .17181 INC 4.9388 VI 30.215
RP 108.72 LAP -3.34 LOP 356.50 VP 37.239 GAP 6.08 AZP 93.64 TAL 181.53 TAP 44.14 RCA 104.22 APO 147.46 V2 34.855
RC 139.923 GL 37.71 GP -30.68 ZAL 96.15 ZAP 140.17 ETS 317.09 ZAE 126.97 ETE 205.34 ZAC 120.98 ETC 183.75 CLP-153.25

DISTANCE 470.951

PLANETOCENTRIC CONIC

C3 14.768 VHL 3.843 DLA 48.34 RAL 16.20 RAD 6567.6 VEL 11.668 PTH 2.05 VHP 5.356 CPA -21.52 RAP 35.25 ECC 1.2430
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
49.03 17 26 45 4209.30 -34.84 194.96 247.95 54.08 18 36 55 3609.3 -39.25 187.01
130.97 1 40 2 2723.53 -34.82 78.49 247.94 54.07 2 25 26 2123.5 -39.24 70.54
49.03 17 26 45 4209.30 -34.84 194.96 247.95 54.08 18 36 55 3609.3 -39.25 187.01
130.97 1 40 2 2723.53 -34.82 78.49 247.94 54.07 2 25 26 2123.5 -39.24 70.54
49.03 17 26 45 4209.30 -34.84 194.96 247.95 54.08 18 36 55 3609.3 -39.25 187.01
130.97 1 40 2 2723.53 -34.82 78.49 247.94 54.07 2 25 26 2123.5 -39.24 70.54

DIFFERENTIAL CORRECTIONS

TDE 2.1581 TRA -.4815 TC3-4.6550 BAU .9264
ROE .5134 RRA .0003 RC3 -.5908 FAU .06749
FDE 1.7913 FRA .1269 FC3-3.9565 BSP 15856
BDE 2.2183 BRA .4815 BC3 4.6923 FSP -1190

MID-COURSE EXECUTION ACCURACY

SGT 4931.5 SGR 890.0 SG3 350.5
RRT .9311 RRF .9486 RTF .9579
SGB 5011.1 R23 .1450 R13 .9595
SG1 5000.9 SG2 320.1 THA 9.58

ORBIT DETERMINATION ACCURACY

ST 3235.6 SR 765.6 SS 1237.3
CRT .9948 CRS -.9994 CST -.9913
LSA 3543.9 MSA 164.9 SSA 11.2
EL1 3324.1 EL2 75.7 ALF 13.25

LAUNCH DATE FEB 3 1969

FLIGHT TIME 166.00

ARRIVAL DATE JUL 19 1969

HELIOCENTRIC CONIC DISTANCE 476.873  
 RL 147.45 LAL -.00 LOL 133.99 VL 27.269 GAL -.04 AZL 85.39 HCA 225.78 SMA 125.62 ECC .17381 INC 4.6119 V1 30.215  
 RP 108.69 LAP -3.30 LOP 359.68 VP 37.223 GAP 6.36 AZP 93.22 TAL 180.18 TAP 45.97 RCA 103.79 APO 147.45 V2 34.865  
 RC 142.207 GL 35.75 GP -28.45 ZAL 94.27 ZAP 142.61 ETS 317.33 ZAE 127.51 ETE 203.44 ZAC 122.57 ETC 183.30 CLP-154.64

PLANETOCENTRIC CONIC  
 C3 14.085 VHL 3.753 DLA 47.56 RAL 20.24 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 5.415 DPA -18.84 RAP 35.74 ECC 1.2318  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 50.04 17 46 20 4190.28 -34.76 193.05 250.87 55.22 18 56 11 3590.3 -39.04 185.00  
 129.96 1 52 42 2721.58 -34.75 78.24 250.85 55.21 2 38 3 2121.6 -39.03 70.19  
 50.04 17 46 20 4190.28 -34.76 193.05 250.87 55.22 18 56 11 3590.3 -39.04 185.00  
 129.96 1 52 42 2721.58 -34.75 78.24 250.85 55.21 2 38 3 2121.6 -39.03 70.19  
 50.04 17 46 20 4190.28 -34.76 193.05 250.87 55.22 18 56 11 3590.3 -39.04 185.00  
 129.96 1 52 42 2721.58 -34.75 78.24 250.85 55.21 2 38 3 2121.6 -39.03 70.19

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.1048 TRA -.3704 TC3-5.0724 BAU .9611 SGT 5052.1 SGR 827.6 SG3 345.5 ST 3225.2 SR 710.4 SS 1168.1  
 RDE .4652 RRA .0060 RC3 -.5656 FAU .06715 RRT .9297 RRF .9339 RTF .9623 CRT .9963 CRS -.9988 CST -.9916  
 FDE 1.6320 FRA .1902 FC3-4.1274 BSP 16510 SGB 5119.5 R23 .0979 R13 .9632 LSA 3499.8 MSA 150.1 SSA 12.4  
 BDE 2.1556 BRA .3704 BC3 5.1038 FSP -1223 SGI 5110.6 SG2 301.2 THA 8.69 EL1 3302.0 EL2 59.3 ALF 12.38

LAUNCH DATE FEB 3 1969

FLIGHT TIME 168.00

ARRIVAL DATE JUL 21 1969

HELIOCENTRIC CONIC DISTANCE 482.782  
 RL 147.45 LAL -.00 LOL 133.99 VL 27.235 GAL .25 AZL 85.68 HCA 228.95 SMA 125.40 ECC .17596 INC 4.3183 V1 30.215  
 RP 108.66 LAP -3.26 LOP 2.86 VP 37.207 GAP 6.65 AZP 92.84 TAL 178.82 TAP 47.77 RCA 103.33 APO 147.46 V2 34.875  
 RC 144.478 GL 33.83 GP -26.47 ZAL 92.19 ZAP 144.85 ETS 317.50 ZAE 127.91 ETE 201.74 ZAC 124.21 ETC 182.90 CLP-155.99

PLANETOCENTRIC CONIC  
 C3 13.571 VHL 3.684 DLA 46.81 RAL 24.34 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 5.494 DPA -16.37 RAP 36.44 ECC 1.2233  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 51.03 18 6 10 4173.44 -34.59 191.29 254.01 56.24 19 15 44 3573.4 -38.74 183.17  
 128.97 2 5 35 2722.11 -34.58 78.15 254.00 56.23 2 50 57 2122.1 -38.73 70.03  
 51.03 18 6 10 4173.44 -34.59 191.29 254.01 56.24 19 15 44 3573.4 -38.74 183.17  
 128.97 2 5 35 2722.11 -34.58 78.15 254.00 56.23 2 50 57 2122.1 -38.73 70.03  
 51.03 18 6 10 4173.44 -34.59 191.29 254.01 56.24 19 15 44 3573.4 -38.74 183.17  
 128.97 2 5 35 2722.11 -34.58 78.15 254.00 56.23 2 50 57 2122.1 -38.73 70.03

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.1036 TRA -.1817 TC3-5.3235 BAU .9700 SGT 5124.3 SGR 785.6 SG3 339.2 ST 3276.3 SR 691.3 SS 1159.7  
 RDE .4441 RRA .0378 RC3 -.4942 FAU .06304 RRT .9074 RRF .9175 RTF .9547 CRT .9970 CRS -.9974 CST -.9897  
 FDE 1.5609 FRA .3792 FC3-4.0214 BSP 16400 SGB 5184.2 R23 .1134 R13 .9558 LSA 3539.8 MSA 161.9 SSA 13.4  
 BDE 2.1500 BRA .1856 BC3 5.3464 FSP -1138 SGI 5173.9 SG2 327.0 THA 7.95 EL1 3348.0 EL2 52.6 ALF 11.88

LAUNCH DATE FEB 3 1969

FLIGHT TIME 170.00

ARRIVAL DATE JUL 23 1969

HELIOCENTRIC CONIC DISTANCE 488.674  
 RL 147.45 LAL -.00 LOL 133.99 VL 27.200 GAL .56 AZL 85.95 HCA 232.12 SMA 125.17 ECC .17828 INC 4.0515 V1 30.215  
 RP 108.63 LAP -3.20 LOP 6.05 VP 37.191 GAP 6.93 AZP 92.49 TAL 177.43 TAP 49.56 RCA 102.85 APO 147.49 V2 34.885  
 RC 146.734 GL 31.93 GP -24.72 ZAL 89.95 ZAP 146.93 ETS 317.59 ZAE 128.20 ETE 200.21 ZAC 125.91 ETC 182.53 CLP-157.29

PLANETOCENTRIC CONIC  
 C3 13.202 VHL 3.634 DLA 46.05 RAL 28.48 RAD 6567.5 VEL 11.601 PTH 2.03 VHP 5.590 DPA -14.08 RAP 37.31 ECC 1.2173  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 52.03 18 26 19 4158.32 -34.32 189.64 257.35 57.17 19 35 37 3558.3 -38.36 181.48  
 127.97 2 18 32 2725.28 -34.31 78.23 257.34 57.16 3 3 57 2125.3 -38.35 70.07  
 52.03 18 26 19 4158.32 -34.32 189.64 257.35 57.17 19 35 37 3558.3 -38.36 181.48  
 127.97 2 18 32 2725.28 -34.31 78.23 257.34 57.16 3 3 57 2125.3 -38.35 70.07  
 52.03 18 26 19 4158.32 -34.32 189.64 257.35 57.17 19 35 37 3558.3 -38.36 181.48  
 127.97 2 18 32 2725.28 -34.31 78.23 257.34 57.16 3 3 57 2125.3 -38.35 70.07

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.0729 TRA -.0237 TC3-5.5955 BAU .9908 SGT 5217.4 SGR 747.0 SG3 331.5 ST 3271.0 SR 663.0 SS 1114.0  
 RDE .4198 RRA .0511 RC3 -.4486 FAU .06045 RRT .8937 RRF .8992 RTF .9545 CRT .9981 CRS -.9955 CST -.9889  
 FDE 1.4464 FRA .4869 FC3-3.9641 BSP 16690 SGB 5270.6 R23 .0951 R13 .9553 LSA 3514.9 MSA 159.4 SSA 14.6  
 BDE 2.1150 BRA .0563 BC3 5.6135 FSP -1110 SGI 5260.1 SG2 332.4 THA 7.32 EL1 3337.2 EL2 40.1 ALF 11.44

LAUNCH DATE FEB 3 1969

FLIGHT TIME 172.00

ARRIVAL DATE JUL 25 1969

HELIOCENTRIC CONIC DISTANCE 494.550  
 RL 147.45 LAL -.00 LOL 133.99 VL 27.164 GAL .87 AZL 86.19 HCA 235.30 SMA 124.94 ECC .18078 INC 3.8067 V1 30.215  
 RP 108.59 LAP -3.13 LOP 9.23 VP 37.176 GAP 7.23 AZP 92.17 TAL 176.03 TAP 51.33 RCA 102.36 APO 147.53 V2 34.897  
 RC 148.977 GL 30.05 GP -23.16 ZAL 87.56 ZAP 148.85 ETS 317.59 ZAE 128.41 ETE 198.85 ZAC 127.65 ETC 182.19 CLP-158.56

PLANETOCENTRIC CONIC  
 C3 12.965 VHL 3.601 DLA 45.28 RAL 32.67 RAD 6567.5 VEL 11.591 PTH 2.03 VHP 5.701 DPA -11.96 RAP 38.34 ECC 1.2134  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 53.06 18 46 49 4144.54 -33.95 188.08 260.86 58.02 19 55 54 3544.5 -37.89 179.89  
 126.94 2 31 23 2731.22 -33.94 78.50 260.86 58.01 3 16 54 2131.2 -37.88 70.32  
 53.06 18 46 49 4144.54 -33.95 188.08 260.86 58.02 19 55 54 3544.5 -37.89 179.89  
 126.94 2 31 23 2731.22 -33.94 78.50 260.86 58.01 3 16 54 2131.2 -37.88 70.32  
 53.06 18 46 49 4144.54 -33.95 188.08 260.86 58.02 19 55 54 3544.5 -37.89 179.89  
 126.94 2 31 23 2731.22 -33.94 78.50 260.86 58.01 3 16 54 2131.2 -37.88 70.32

DIFFERENTIAL CORRECTIONS MID-COURSE EXECUTION ACCURACY ORBIT DETERMINATION ACCURACY  
 TDE 2.0315 TRA .1399 TC3-5.8241 BAU 1.0120 SGT 5304.8 SGR 713.6 SG3 322.4 ST 3236.4 SR 636.8 SS 1058.0  
 RDE .3993 RRA .0625 RC3 -.4063 FAU .05779 RRT .8785 RRF .8789 RTF .9545 CRT .9990 CRS -.9926 CST -.9878  
 FDE 1.3255 FRA .5852 FC3-3.8588 BSP 17049 SGB 5352.6 R23 .0773 R13 .9551 LSA 3460.3 MSA 157.6 SSA 15.7  
 BDE 2.0703 BRA .1533 BC3 5.8383 FSP -1088 SGI 5341.8 SG2 338.5 THA 6.77 EL1 3298.3 EL2 28.1 ALF 11.12

LAUNCH DATE FEB 3 1969

FLIGHT TIME 174.00

ARRIVAL DATE JUL 27 1969

HELIOCENTRIC CONIC

DISTANCE 500.409

RL 147.45 LAL -.00 LOL 133.99 VL 27.129 GAL 1.21 AZL 86.42 HCA 238.48 SMA 124.72 ECC .18347 INC 3.5798 VI 30.215  
 RP 108.56 LAP -3.05 LOP 12.42 VP 37.161 GAP 7.53 AZP 91.87 TAL 174.62 TAP 53.09 RCA 101.84 APO 147.60 V2 34.908  
 RC 151.204 GL 28.19 GP -21.76 ZAL 85.03 ZAP 150.63 ETS 317.49 ZAE 128.56 ETE 197.64 ZAC 129.45 ETC 181.87 CLP-159.78

PLANETOCENTRIC CONIC

C3 12.850 VHL 3.585 DLA 44.47 RAL 36.86 RAD 6567.5 VEL 11.586 PTH 2.03 VHP 5.825 DPA -9.98 RAP 39.50 ECC 1.2115  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 54.15 19 7 43 4131.80 -33.48 186.56 264.53 58.82 20 16 35 3531.8 -37.33 178.36  
 125.85 2 43 59 2740.13 -33.47 78.97 264.52 58.80 3 29 39 2140.1 -37.32 70.78  
 54.15 19 7 43 4131.80 -33.48 186.56 264.53 58.82 20 16 35 3531.8 -37.33 178.36  
 125.85 2 43 59 2740.13 -33.47 78.97 264.52 58.80 3 29 39 2140.1 -37.32 70.78  
 54.15 19 7 43 4131.80 -33.48 186.56 264.53 58.82 20 16 35 3531.8 -37.33 178.36  
 125.85 2 43 59 2740.13 -33.47 78.97 264.52 58.80 3 29 39 2140.1 -37.32 70.78

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9865 TRA .3153 TC3-5.9894 BAU 1.0309 SGT 5387.0 SGR 687.3 SG3 312.8 ST 3184.8 SR 615.7 SS 1002.5  
 RDE .3839 RRA .0738 RC3 -.3651 FAU .05489 RRT .8613 RRF .8579 RTF .9543 CRT .9995 CRS -.9882 CST -.9864  
 FDE 1.2119 FRA .6808 FC3-3.6979 BSP 17295 SGB 5430.7 R23 .0638 R13 .9548 LSA 3391.5 MSA 157.4 SSA 16.8  
 BDE 2.0233 BRA .3238 BC3 6.0006 FSP -1050 SGI 5419.6 SG2 347.1 THA 6.30 ELI 3243.8 EL2 18.8 ALF 10.94

LAUNCH DATE FEB 3 1969

FLIGHT TIME 176.00

ARRIVAL DATE JUL 29 1969

HELIOCENTRIC CONIC

DISTANCE 506.250

RL 147.45 LAL -.00 LOL 133.99 VL 27.093 GAL 1.55 AZL 86.63 HCA 241.65 SMA 124.49 ECC .18636 INC 3.3677 VI 30.215  
 RP 108.52 LAP -2.96 LOP 15.61 VP 37.146 GAP 7.83 AZP 91.60 TAL 173.19 TAP 54.84 RCA 101.29 APO 147.69 V2 34.920  
 RC 153.416 GL 26.35 GP -20.52 ZAL 82.40 ZAP 152.30 ETS 317.28 ZAE 128.67 ETE 196.56 ZAC 131.29 ETC 181.57 CLP-160.97

PLANETOCENTRIC CONIC

C3 12.853 VHL 3.585 DLA 43.62 RAL 41.06 RAD 6567.5 VEL 11.586 PTH 2.03 VHP 5.961 DPA -8.13 RAP 40.77 ECC 1.2115  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 55.32 19 29 1 4119.78 -32.90 185.06 268.32 59.57 20 37 40 3519.8 -36.66 176.87  
 124.68 2 56 9 2752.24 -32.89 79.66 268.31 59.55 3 42 2 2152.2 -36.65 71.47  
 55.32 19 29 1 4119.78 -32.90 185.06 268.32 59.57 20 37 40 3519.8 -36.66 176.87  
 124.68 2 56 9 2752.24 -32.89 79.66 268.31 59.55 3 42 2 2152.2 -36.65 71.47  
 55.32 19 29 1 4119.78 -32.90 185.06 268.32 59.57 20 37 40 3519.8 -36.66 176.87  
 124.68 2 56 9 2752.24 -32.89 79.66 268.31 59.55 3 42 2 2152.2 -36.65 71.47

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.9341 TRA .4998 TC3-6.0913 BAU 1.0482 SGT 5463.3 SGR 665.5 SG3 302.5 ST 3111.4 SR 597.1 SS 943.4  
 RDE .3720 RRA .0842 RC3 -.3271 FAU .05193 RRT .8435 RRF .8362 RTF .9546 CRT .9995 CRS -.9819 CST -.9847  
 FDE 1.1000 FRA .7683 FC3-3.4979 BSP 17533 SGB 5503.7 R23 .0514 R13 .9550 LSA 3301.9 MSA 158.1 SSA 17.7  
 BDE 1.9695 BRA .5068 BC3 6.1001 FSP -1014 SGI 5492.2 SG2 355.6 THA 5.89 ELI 3168.2 EL2 19.4 ALF 10.86

LAUNCH DATE FEB 3 1969

FLIGHT TIME 178.00

ARRIVAL DATE JUL 31 1969

HELIOCENTRIC CONIC

DISTANCE 512.071

RL 147.45 LAL -.00 LOL 133.99 VL 27.057 GAL 1.92 AZL 86.83 HCA 244.84 SMA 124.27 ECC .18947 INC 3.1678 VI 30.215  
 RP 108.48 LAP -2.87 LOP 18.80 VP 37.131 GAP 8.15 AZP 91.35 TAL 171.74 TAP 56.58 RCA 100.72 APO 147.81 V2 34.932  
 RC 155.612 GL 24.51 GP -19.41 ZAL 79.69 ZAP 153.85 ETS 316.96 ZAE 128.74 ETE 195.60 ZAC 133.18 ETC 181.27 CLP-162.12

PLANETOCENTRIC CONIC

C3 12.973 VHL 3.602 DLA 42.72 RAL 45.23 RAD 6567.5 VEL 11.591 PTH 2.03 VHP 6.108 DPA -6.39 RAP 42.15 ECC 1.2135  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 56.57 19 50 42 4108.16 -32.22 183.55 272.20 60.28 20 59 10 3508.2 -35.90 175.39  
 123.43 3 7 42 2767.85 -32.21 80.58 272.19 60.26 3 53 50 2167.9 -35.89 72.42  
 56.57 19 50 42 4108.16 -32.22 183.55 272.20 60.28 20 59 10 3508.2 -35.90 175.39  
 123.43 3 7 42 2767.85 -32.21 80.58 272.19 60.26 3 53 50 2167.9 -35.89 72.42  
 56.57 19 50 42 4108.16 -32.22 183.55 272.20 60.28 20 59 10 3508.2 -35.90 175.39  
 123.43 3 7 42 2767.85 -32.21 80.58 272.19 60.26 3 53 50 2167.9 -35.89 72.42

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.8713 TRA .6922 TC3-6.1379 BAU 1.0657 SGT 5536.9 SGR 647.7 SG3 292.0 ST 3013.5 SR 580.4 SS 881.5  
 RDE .3628 RRA .0943 RC3 -.2937 FAU .04908 RRT .8252 RRF .8146 RTF .9551 CRT .9985 CRS -.9730 CST -.9827  
 FDE .9902 FRA .8485 FC3-3.2752 BSP 17807 SGB 5574.6 R23 .0407 R13 .9554 LSA 3188.9 MSA 160.6 SSA 18.6  
 BDE 1.9062 BRA .6985 BC3 6.1449 FSP -981 SGI 5562.7 SG2 364.1 THA 5.54 ELI 3068.8 EL2 31.5 ALF 10.89

LAUNCH DATE FEB 3 1969

FLIGHT TIME 180.00

ARRIVAL DATE AUG 2 1969

HELIOCENTRIC CONIC

DISTANCE 517.871

RL 147.45 LAL -.00 LOL 133.99 VL 27.022 GAL 2.30 AZL 87.02 HCA 248.02 SMA 124.04 ECC .19281 INC 2.9780 VI 30.215  
 RP 108.45 LAP -2.76 LOP 21.99 VP 37.117 GAP 8.47 AZP 91.12 TAL 170.29 TAP 58.31 RCA 100.12 APO 147.96 V2 34.945  
 RC 157.792 GL 22.70 GP -18.40 ZAL 76.91 ZAP 155.31 ETS 316.51 ZAE 128.79 ETE 194.74 ZAC 135.10 ETC 180.98 CLP-163.24

PLANETOCENTRIC CONIC

C3 13.212 VHL 3.635 DLA 41.76 RAL 49.33 RAD 6567.5 VEL 11.602 PTH 2.03 VHP 6.267 DPA -4.75 RAP 43.63 ECC 1.2174  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 57.92 20 12 46 4096.64 -31.43 182.02 276.15 60.96 21 21 2 3496.6 -35.03 173.89  
 122.08 3 18 26 2787.26 -31.42 81.76 276.14 60.94 4 4 53 2187.3 -35.02 73.63  
 57.92 20 12 46 4096.64 -31.43 182.02 276.15 60.96 21 21 2 3496.6 -35.03 173.89  
 122.08 3 18 26 2787.26 -31.42 81.76 276.14 60.94 4 4 53 2187.3 -35.02 73.63  
 57.92 20 12 46 4096.64 -31.43 182.02 276.15 60.96 21 21 2 3496.6 -35.03 173.89  
 122.08 3 18 26 2787.26 -31.42 81.76 276.14 60.94 4 4 53 2187.3 -35.02 73.63

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7993 TRA .8943 TC3-6.1203 BAU 1.0820 SGT 5604.6 SGR 632.7 SG3 281.2 ST 2895.5 SR 565.2 SS 818.8  
 RDE .3561 RRA .1044 RC3 -.2633 FAU .04622 RRT .8066 RRF .7932 RTF .9557 CRT .9962 CRS -.9605 CST -.9800  
 FDE .8837 FRA .9230 FC3-3.0288 BSP 18062 SGB 5640.2 R23 .0320 R13 .9559 LSA 3057.2 MSA 165.5 SSA 19.2  
 BDE 1.8342 BRA .9004 BC3 6.1259 FSP -948 SGI 5627.9 SG2 372.5 THA 5.23 ELI 2949.8 EL2 48.5 ALF 11.01



LAUNCH DATE FEB 3 1969

FLIGHT TIME 182.00

ARRIVAL DATE AUG 4 1969

HELIOCENTRIC CONIC

DISTANCE 523.648

RL 147.45 LAL -.00 LOL 133.99 VL 26.986 GAL 2.70 AZL 87.20 MCA 251.21 SMA 123.82 ECC .19641 INC 2.7964 VI 30.215  
 RP 108.41 LAP -2.65 LOP 25.18 VP 37.103 GAP 8.81 AZP 90.90 TAL 168.83 TAP 60.04 RCA 99.50 APO 148.14 V2 34.957  
 RC 159.953 GL 20.91 GP -17.50 ZAL 74.09 ZAP 156.67 ETS 315.93 ZAE 128.82 ETE 193.98 ZAC 137.07 ETC 180.67 CLP-164.33

PLANETOCENTRIC CONIC

C3 13.575 VHL 3.684 DLA 40.74 RAL 53.36 RAD 6567.5 VEL 11.617 PTH 2.04 VHP 6.436 DPA -3.21 RAP 45.18 ECC 1.2234  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 59.39 20 35 11 4084.94 -30.54 180.44 280.14 61.61 21 43 16 3484.9 -34.07 172.36  
 120.61 3 28 8 2810.74 -30.53 83.22 280.14 61.60 4 14 59 2210.7 -34.06 75.14  
 59.39 20 35 11 4084.94 -30.54 180.44 280.14 61.61 21 43 16 3484.9 -34.07 172.36  
 120.61 3 28 8 2810.74 -30.53 83.22 280.14 61.60 4 14 59 2210.7 -34.06 75.14  
 59.39 20 35 11 4084.94 -30.54 180.44 280.14 61.61 21 43 16 3484.9 -34.07 172.36  
 120.61 3 28 8 2810.74 -30.53 83.22 280.14 61.60 4 14 59 2210.7 -34.06 75.14

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.7190 TRA 1.1071 TC3-6.0406 BAU 1.0971 SGT 5667.7 SGR 620.4 SG3 270.4 ST 2762.0 SR 551.4 SS 757.8  
 RDE .3517 RRA .1149 RC3 -.2361 FAU .04341 RRT .7883 RRF .7729 RTF .9564 CRT .9919 CRS -.9432 CST -.9768  
 FDE .7822 FRA .9927 FC3-2.7688 BSP 18307 SGB 5701.5 R23 .0252 R13 .9565 LSA 2911.4 MSA 173.1 SSA 19.5  
 BDE 1.7546 BRA 1.1130 BC3 6.0452 FSP -915 SGI 5688.8 SG2 380.3 THA 4.95 EL1 2815.6 EL2 68.6 ALF 11.21

LAUNCH DATE FEB 3 1969

FLIGHT TIME 184.00

ARRIVAL DATE AUG 6 1969

HELIOCENTRIC CONIC

DISTANCE 529.400

RL 147.45 LAL -.00 LOL 133.99 VL 26.950 GAL 3.12 AZL 87.38 MCA 254.40 SMA 123.59 ECC .20028 INC 2.6214 VI 30.215  
 RP 108.37 LAP -2.52 LOP 28.37 VP 37.089 GAP 9.16 AZP 90.71 TAL 167.36 TAP 61.76 RCA 98.84 APO 148.35 V2 34.970  
 RC 162.097 GL 19.15 GP -16.69 ZAL 71.26 ZAP 157.96 ETS 315.20 ZAE 128.84 ETE 193.30 ZAC 139.06 ETC 180.36 CLP-165.40

PLANETOCENTRIC CONIC

C3 14.069 VHL 3.751 DLA 39.68 RAL 57.28 RAD 6567.6 VEL 11.639 PTH 2.04 VHP 6.616 DPA -1.75 RAP 46.82 ECC 1.2315  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 60.96 20 57 59 4072.64 -29.56 178.79 284.16 62.23 22 5 52 3472.6 -33.02 170.76  
 119.04 3 36 37 2838.72 -29.55 84.99 284.15 62.22 4 23 56 2238.7 -33.01 76.97  
 60.96 20 57 59 4072.64 -29.56 178.79 284.16 62.23 22 5 52 3472.6 -33.02 170.76  
 119.04 3 36 37 2838.72 -29.55 84.99 284.15 62.22 4 23 56 2238.7 -33.01 76.97  
 60.96 20 57 59 4072.64 -29.56 178.79 284.16 62.23 22 5 52 3472.6 -33.02 170.76  
 119.04 3 36 37 2838.72 -29.55 84.99 284.15 62.22 4 23 56 2238.7 -33.01 76.97

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.6332 TRA 1.3343 TC3-5.8949 BAU 1.1095 SGT 5726.4 SGR 610.5 SG3 259.8 ST 2621.5 SR 539.1 SS 701.5  
 RDE .3495 RRA .1263 RC3 -.2108 FAU .04058 RRT .7708 RRF .7542 RTF .9569 CRT .9850 CRS -.9200 CST -.9731  
 FDE .6878 FRA 1.0605 FC3-2.4968 BSP 18459 SGB 5758.9 R23 .0207 R13 .9570 LSA 2760.6 MSA 184.1 SSA 19.6  
 BDE 1.6702 BRA 1.3402 BC3 5.8986 FSP -876 SGI 5745.8 SG2 387.7 THA 4.72 EL1 2674.8 EL2 91.2 ALF 11.46

LAUNCH DATE FEB 3 1969

FLIGHT TIME 186.00

ARRIVAL DATE AUG 8 1969

HELIOCENTRIC CONIC

DISTANCE 535.125

RL 147.45 LAL -.00 LOL 133.99 VL 26.914 GAL 3.56 AZL 87.55 MCA 257.59 SMA 123.37 ECC .20445 INC 2.4516 VI 30.215  
 RP 108.33 LAP -2.39 LOP 31.57 VP 37.075 GAP 9.52 AZP 90.53 TAL 165.89 TAP 63.48 RCA 98.15 APO 148.60 V2 34.983  
 RC 164.221 GL 17.44 GP -15.95 ZAL 68.44 ZAP 159.18 ETS 314.31 ZAE 128.84 ETE 192.70 ZAC 141.09 ETC 180.02 CLP-166.44

PLANETOCENTRIC CONIC

C3 14.706 VHL 3.835 DLA 38.56 RAL 61.08 RAD 6567.6 VEL 11.666 PTH 2.05 VHP 6.808 DPA -.37 RAP 48.53 ECC 1.2420  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 62.65 21 21 9 4059.46 -28.50 177.06 288.18 62.84 22 28 49 3459.5 -31.89 169.09  
 117.35 3 43 43 2871.49 -28.48 87.09 288.17 62.82 4 31 34 2271.5 -31.88 79.13  
 62.65 21 21 9 4059.46 -28.50 177.06 288.18 62.84 22 28 49 3459.5 -31.89 169.09  
 117.35 3 43 43 2871.49 -28.48 87.09 288.17 62.82 4 31 34 2271.5 -31.88 79.13  
 62.65 21 21 9 4059.46 -28.50 177.06 288.18 62.84 22 28 49 3459.5 -31.89 169.09  
 117.35 3 43 43 2871.49 -28.48 87.09 288.17 62.82 4 31 34 2271.5 -31.88 79.13

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.5362 TRA 1.5693 TC3-5.7061 BAU 1.1225 SGT 5780.3 SGR 601.3 SG3 249.2 ST 2468.7 SR 526.6 SS 646.8  
 RDE .3485 RRA .1378 RC3 -.1896 FAU .03794 RRT .7540 RRF .7362 RTF .9576 CRT .9743 CRS -.8887 CST -.9685  
 FDE .5959 FRA 1.1216 FC3-2.2335 BSP 18683 SGB 5811.5 R23 .0164 R13 .9577 LSA 2598.1 MSA 198.4 SSA 19.4  
 BDE 1.5752 BRA 1.5753 BC3 5.7093 FSP -844 SGI 5798.1 SG2 393.7 THA 4.51 EL1 2521.5 EL2 116.2 ALF 11.77

LAUNCH DATE FEB 3 1969

FLIGHT TIME 188.00

ARRIVAL DATE AUG 10 1969

HELIOCENTRIC CONIC

DISTANCE 540.818

RL 147.45 LAL -.00 LOL 133.99 VL 26.878 GAL 4.02 AZL 87.71 MCA 260.78 SMA 123.15 ECC .20895 INC 2.2858 VI 30.215  
 RP 108.29 LAP -2.26 LOP 34.77 VP 37.062 GAP 9.89 AZP 90.37 TAL 164.41 TAP 65.20 RCA 97.42 APO 148.89 V2 34.996  
 RC 166.326 GL 15.76 GP -15.28 ZAL 65.64 ZAP 160.33 ETS 313.24 ZAE 128.84 ETE 192.15 ZAC 143.15 ETC 179.65 CLP-167.46

PLANETOCENTRIC CONIC

C3 15.497 VHL 3.937 DLA 37.41 RAL 64.73 RAD 6567.6 VEL 11.700 PTH 2.06 VHP 7.012 DPA .94 RAP 50.29 ECC 1.2550  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 64.45 21 44 42 4045.09 -27.35 175.22 292.19 63.41 22 52 8 3445.1 -30.69 167.32  
 115.55 3 49 16 2909.35 -27.34 89.55 292.18 63.40 4 37 46 2309.3 -30.68 81.65  
 64.45 21 44 42 4045.09 -27.35 175.22 292.19 63.41 22 52 8 3445.1 -30.69 167.32  
 115.55 3 49 16 2909.35 -27.34 89.55 292.18 63.40 4 37 46 2309.3 -30.68 81.65  
 64.45 21 44 42 4045.09 -27.35 175.22 292.19 63.41 22 52 8 3445.1 -30.69 167.32  
 115.55 3 49 16 2909.35 -27.34 89.55 292.18 63.40 4 37 46 2309.3 -30.68 81.65

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.4325 TRA 1.8170 TC3-5.4697 BAU 1.1338 SGT 5829.1 SGR 592.9 SG3 238.8 ST 2315.5 SR 514.6 SS 597.8  
 RDE .3490 RRA .1500 RC3 -.1703 FAU .03536 RRT .7384 RRF .7198 RTF .9583 CRT .9584 CRS -.8481 CST -.9635  
 FDE .5099 FRA 1.1796 FC3-1.9754 BSP 18885 SGB 5859.1 R23 .0132 R13 .9584 LSA 2436.5 MSA 216.3 SSA 19.0  
 BDE 1.4744 BRA 1.8232 BC3 5.4723 FSP -813 SGI 5845.6 SG2 398.7 THA 4.32 EL1 2367.6 EL2 143.7 ALF 12.07

LAUNCH DATE FEB 3 1969

FLIGHT TIME 190.00

ARRIVAL DATE AUG 12 1969

HELIOCENTRIC CONIC

DISTANCE 546.478

RL 147.45 LAL -.00 LOL 133.99 VL 26.843 GAL 4.51 AZL 87.88 MCA 263.98 SMA 122.94 ECC .21379 INC 2.1229 V1 30.215
RP 108.24 LAP -2.11 LOP 37.97 VP 37.048 GAP 10.29 AZP 90.22 TAL 162.94 TAP 66.92 RCA 96.65 APO 149.22 V2 35.010
RC 168.410 GL 14.14 GP -14.68 ZAL 62.89 ZAP 161.41 ETS 311.99 ZAE 128.84 ETE 191.66 ZAC 145.23 ETC 179.24 CLP-168.47

PLANETOCENTRIC CONIC

C3 16.459 VHL 4.057 DLA 36.24 RAL 68.22 RAD 6567.7 VEL 11.741 PTH 2.07 VHP 7.230 DPA 2.18 RAP 52.12 ECC 1.2709
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
66.38 22 8 48 4028.77 -26.15 173.23 296.17 63.97 23 15 57 3428.8 -29.42 165.40
113.62 3 53 2 2953.01 -26.14 92.41 296.17 63.96 4 42 15 2353.0 -29.41 84.58
66.38 22 8 48 4028.77 -26.15 173.23 296.17 63.97 23 15 57 3428.8 -29.42 165.40
113.62 3 53 2 2953.01 -26.14 92.41 296.17 63.96 4 42 15 2353.0 -29.41 84.58
66.38 22 8 48 4028.77 -26.15 173.23 296.17 63.97 23 15 57 3428.8 -29.42 165.40
113.62 3 53 2 2953.01 -26.14 92.41 296.17 63.96 4 42 15 2353.0 -29.41 84.58

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.3221 TRA 2.0780 TC3-5.1952 BAU 1.1436 SGT 5873.1 SGR 585.1 SG3 228.8 ST 2166.5 SR 502.6 SS 555.2
RDE .3507 RRA .1631 RC3 -.1532 FAU .03287 RRT .7240 RRF .7049 RTF .9589 CRT .9355 CRS -.7965 CST -.9581
FDE .4291 FRA 1.2354 FC3-1.7290 BSP 19079 SGB 5902.2 R23 .0107 R13 .9590 LSA 2279.9 MSA 237.6 SSA 18.5
BDE 1.3678 BRA 2.0844 BC3 5.1975 FSP -783 SG1 5888.5 SG2 402.5 THA 4.14 EL1 2217.3 EL2 173.5 ALF 12.32

LAUNCH DATE FEB 3 1969

FLIGHT TIME 192.00

ARRIVAL DATE AUG 14 1969

HELIOCENTRIC CONIC

DISTANCE 552.100

RL 147.45 LAL -.00 LOL 133.99 VL 26.807 GAL 5.02 AZL 88.04 MCA 267.18 SMA 122.72 ECC .21903 INC 1.9618 V1 30.215
RP 108.20 LAP -1.96 LOP 41.17 VP 37.035 GAP 10.70 AZP 90.10 TAL 161.47 TAP 68.65 RCA 95.84 APO 149.60 V2 35.023
RC 170.474 GL 12.58 GP -14.13 ZAL 60.21 ZAP 162.44 ETS 310.52 ZAE 128.82 ETE 191.22 ZAC 147.32 ETC 178.79 CLP-169.46

PLANETOCENTRIC CONIC

C3 17.610 VHL 4.196 DLA 35.04 RAL 71.54 RAD 6567.7 VEL 11.790 PTH 2.08 VHP 7.461 DPA 3.35 RAP 54.00 ECC 1.2898
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
68.43 22 33 30 4010.14 -24.89 171.08 300.13 64.50 23 40 20 3410.1 -28.11 163.31
111.57 3 54 51 3002.82 -24.88 95.71 300.12 64.49 4 44 54 2402.8 -28.10 87.94
68.43 22 33 30 4010.14 -24.89 171.08 300.13 64.50 23 40 20 3410.1 -28.11 163.31
111.57 3 54 51 3002.82 -24.88 95.71 300.12 64.49 4 44 54 2402.8 -28.10 87.94
68.43 22 33 30 4010.14 -24.89 171.08 300.13 64.50 23 40 20 3410.1 -28.11 163.31
111.57 3 54 51 3002.82 -24.88 95.71 300.12 64.49 4 44 54 2402.8 -28.10 87.94

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.2093 TRA 2.3560 TC3-4.8832 BAU 1.1501 SGT 5912.8 SGR 577.9 SG3 219.3 ST 2032.4 SR 491.2 SS 521.3
RDE .3538 RRA .1773 RC3 -.1370 FAU .03039 RRT .7112 RRF .6921 RTF .9595 CRT .9042 CRS -.7349 CST -.9536
FDE .3556 FRA 1.2906 FC3-1.4939 BSP 19176 SGB 5940.9 R23 .0092 R13 .9595 LSA 2138.9 MSA 261.3 SSA 17.8
BDE 1.2600 BRA 2.3627 BC3 4.8851 FSP -749 SG1 5927.1 SG2 405.3 THA 4.00 EL1 2080.8 EL2 204.9 ALF 12.45

LAUNCH DATE FEB 3 1969

FLIGHT TIME 194.00

ARRIVAL DATE AUG 16 1969

HELIOCENTRIC CONIC

DISTANCE 557.679

RL 147.45 LAL -.00 LOL 133.99 VL 26.772 GAL 5.56 AZL 88.20 MCA 270.38 SMA 122.50 ECC .22469 INC 1.8014 V1 30.215
RP 108.16 LAP -1.80 LOP 44.37 VP 37.022 GAP 11.13 AZP 89.99 TAL 160.00 TAP 70.39 RCA 94.98 APO 150.03 V2 35.036
RC 172.518 GL 11.09 GP -13.62 ZAL 57.60 ZAP 163.40 ETS 308.82 ZAE 128.81 ETE 190.83 ZAC 149.44 ETC 178.27 CLP-170.44

PLANETOCENTRIC CONIC

C3 18.976 VHL 4.356 DLA 33.85 RAL 74.69 RAD 6567.8 VEL 11.847 PTH 2.10 VHP 7.707 DPA 4.46 RAP 55.93 ECC 1.3123
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
70.64 22 59 7 3988.00 -23.60 168.68 304.05 65.01 24 5 35 3388.0 -26.77 160.97
109.36 3 54 23 3059.90 -23.59 99.51 304.05 64.99 4 45 23 2459.9 -26.76 91.81
70.64 22 59 7 3988.00 -23.60 168.68 304.05 65.01 24 5 35 3388.0 -26.77 160.97
109.36 3 54 23 3059.90 -23.59 99.51 304.05 64.99 4 45 23 2459.9 -26.76 91.81
110.00 4 34 37 2937.03 -26.85 91.51 305.61 68.00 5 23 34 2337.0 -29.59 83.39
110.00 3 21 59 3158.86 -20.42 105.52 302.34 61.97 4 14 38 2558.9 -24.01 98.20

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE 1.0878 TRA 2.6451 TC3-4.5579 BAU 1.1567 SGT 5946.7 SGR 570.1 SG3 209.9 ST 1908.0 SR 479.1 SS 493.2
RDE .3576 RRA .1919 RC3 -.1229 FAU .02808 RRT .6994 RRF .6800 RTF .9601 CRT .8619 CRS -.6616 CST -.9498
FDE .2853 FRA 1.3420 FC3-1.2812 BSP 19347 SGB 5974.0 R23 .0074 R13 .9601 LSA 2007.6 MSA 286.8 SSA 17.1
BDE 1.1450 BRA 2.6521 BC3 4.5596 FSP -721 SG1 5960.1 SG2 406.5 THA 3.85 EL1 1952.9 EL2 237.4 ALF 12.40

LAUNCH DATE FEB 3 1969

FLIGHT TIME 196.00

ARRIVAL DATE AUG 18 1969

HELIOCENTRIC CONIC

DISTANCE 563.209

RL 147.45 LAL -.00 LOL 133.99 VL 26.737 GAL 6.14 AZL 88.36 MCA 273.59 SMA 122.29 ECC .23081 INC 1.6408 V1 30.215
RP 108.12 LAP -1.64 LOP 47.58 VP 37.010 GAP 11.59 AZP 89.90 TAL 158.55 TAP 72.13 RCA 94.07 APO 150.52 V2 35.050
RC 174.540 GL 9.66 GP -13.17 ZAL 55.08 ZAP 164.32 ETS 306.86 ZAE 128.78 ETE 190.47 ZAC 151.57 ETC 177.66 CLP-171.40

PLANETOCENTRIC CONIC

C3 20.583 VHL 4.537 DLA 32.65 RAL 77.67 RAD 6567.8 VEL 11.915 PTH 2.12 VHP 7.971 DPA 5.51 RAP 57.90 ECC 1.3387
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
73.02 23 25 59 3961.08 -22.28 165.94 307.94 65.49 24 32 0 3361.1 -25.40 158.30
106.98 3 51 15 3125.42 -22.27 103.91 307.94 65.48 4 43 21 2525.4 -25.39 96.27
73.02 23 25 59 3961.08 -22.28 165.94 307.94 65.49 24 32 0 3361.1 -25.40 158.30
106.98 3 51 15 3125.42 -22.27 103.91 307.94 65.48 4 43 21 2525.4 -25.39 96.27
110.00 5 27 19 2829.44 -29.38 84.16 311.03 71.68 6 14 29 2229.4 -31.59 75.65
110.00 2 53 2 3305.06 -15.52 114.02 304.20 59.15 3 48 7 2705.1 -19.49 107.15

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .9620 TRA 2.9504 TC3-4.2183 BAU 1.1611 SGT 5975.9 SGR 562.1 SG3 201.0 ST 1803.3 SR 466.9 SS 472.7
RDE .3622 RRA .2073 RC3 -.1100 FAU .02585 RRT .6889 RRF .6694 RTF .9607 CRT .8076 CRS -.5804 CST -.9483
FDE .2206 FRA 1.3926 FC3-1.0874 BSP 19501 SGB 6002.3 R23 .0062 R13 .9608 LSA 1896.2 MSA 312.4 SSA 16.4
BDE 1.0279 BRA 2.9577 BC3 4.2197 FSP -693 SG1 5988.5 SG2 406.6 THA 3.72 EL1 1843.2 EL2 269.4 ALF 12.07

LAUNCH DATE FEB 3 1969

FLIGHT TIME 198.00

ARRIVAL DATE AUG 20 1969

HELIOCENTRIC CONIC  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.702 GAL 6.74 AZL 88.52 HCA 276.79 SMA 122.08 ECC .23745 INC 1.4790 V1 30.215  
 RP 108.08 LAP -1.47 LOP 50.79 VP 36.997 GAP 12.08 AZP 89.83 TAL 157.10 TAP 73.90 RCA 93.09 APO 151.07 V2 35.063  
 RC 176.542 GL 8.30 GP -12.75 ZAL 52.66 ZAP 165.17 ETS 304.61 ZAE 128.75 ETE 190.14 ZAC 153.70 ETC 176.96 CLP-172.36

PLANETOCENTRIC CONIC  
 C3 22.465 VHL 4.740 DLA 31.48 RAL 80.47 RAD 6567.9 VEL 11.993 PTH 2.14 VHP 8.252 DPA 6.50 RAP 59.91 ECC 1.3697  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 75.65 23 54 52 3926.95 -20.95 162.69 311.79 65.95 25 0 19 3327.0 -24.01 155.11  
 104.35 3 44 45 3201.73 -20.93 109.07 311.78 65.94 4 38 6 2601.7 -24.00 101.49  
 75.65 23 54 52 3926.95 -20.95 162.69 311.79 65.95 25 0 19 3327.0 -24.01 155.11  
 104.35 3 44 45 3201.73 -20.93 109.07 311.78 65.94 4 38 6 2601.7 -24.00 101.49  
 110.00 6 3 42 2770.01 -30.57 79.95 315.69 73.91 6 49 52 2170.0 -32.47 71.24  
 110.00 2 39 0 3406.67 -11.89 119.66 306.75 57.71 3 35 47 2806.7 -16.07 113.04

DIFFERENTIAL CORRECTIONS  
 TOE .8319 TRA 3.2730 TC3-3.8718 BAU 1.1632 SGT 6000.3 SGR 553.6 SG3 192.6 ST 1720.6 SR 454.5 SS 459.1  
 RDE .3676 RRA .2235 RC3 -.0979 FAU .02371 RRT .6795 RRF .6599 RTF .9615 CRT .7411 CRS -.4942 CST -.9493  
 FDE .1606 FRA 1.4425 FC3 -.9136 BSP 19630 SGB 6025.8 R23 .0049 R13 .9615 LSA 1806.7 MSA 336.4 SSA 15.8  
 BDE .9095 BRA 3.2806 BC3 3.8730 FSP -666 SG1 6012.1 SG2 405.3 THA 3.60 EL1 1754.2 EL2 299.3 ALF 11.41

LAUNCH DATE FEB 3 1969

FLIGHT TIME 200.00

ARRIVAL DATE AUG 22 1969

HELIOCENTRIC CONIC  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.667 GAL 7.39 AZL 88.69 HCA 280.00 SMA 121.88 ECC .24467 INC 1.3148 V1 30.215  
 RP 108.04 LAP -1.29 LOP 54.00 VP 36.984 GAP 12.60 AZP 89.77 TAL 155.67 TAP 75.67 RCA 92.06 APO 151.69 V2 35.076  
 RC 178.523 GL 7.02 GP -12.36 ZAL 50.35 ZAP 165.97 ETS 302.03 ZAE 128.71 ETE 189.84 ZAC 155.85 ETC 176.12 CLP-173.32

PLANETOCENTRIC CONIC  
 C3 24.663 VHL 4.966 DLA 30.32 RAL 83.10 RAD 6568.0 VEL 12.085 PTH 2.16 VHP 8.555 DPA 7.43 RAP 61.96 ECC 1.4059  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 78.69 0 31 7 3880.81 -19.60 158.59 315.60 66.40 1 35 47 3280.8 -22.63 151.07  
 101.31 3 33 26 3293.50 -19.59 115.34 315.60 66.39 4 28 19 2693.5 -22.62 107.81  
 78.69 0 31 7 3880.81 -19.60 158.59 315.60 66.40 1 35 47 3280.8 -22.63 151.07  
 101.31 3 33 26 3293.50 -19.59 115.34 315.60 66.39 4 28 19 2693.5 -22.62 107.81  
 110.00 6 33 47 2728.66 -31.32 76.95 320.07 75.54 7 19 16 2128.7 -32.98 68.12  
 110.00 2 29 55 3493.65 -8.69 124.36 309.53 56.81 3 28 8 2893.6 -13.00 117.91

DIFFERENTIAL CORRECTIONS  
 TOE .7018 TRA 3.6176 TC3-3.5195 BAU 1.1608 SGT 6020.9 SGR 544.9 SG3 184.6 ST 1664.5 SR 442.2 SS 452.4  
 RDE .3740 RRA .2406 RC3 -.0862 FAU .02156 RRT .6716 RRF .6524 RTF .9623 CRT .6652 CRS -.4106 CST -.9534  
 FDE .1070 FRA 1.4939 FC3 -.7568 BSP 19664 SGB 6045.6 R23 .0043 R13 .9623 LSA 1744.6 MSA 356.2 SSA 15.1  
 BDE .7952 BRA 3.6256 BC3 3.5205 FSP -637 SG1 6032.1 SG2 403.0 THA 3.49 EL1 1691.3 EL2 324.9 ALF 10.41

LAUNCH DATE FEB 3 1969

FLIGHT TIME 202.00

ARRIVAL DATE AUG 24 1969

HELIOCENTRIC CONIC  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.633 GAL 8.08 AZL 88.85 HCA 283.21 SMA 121.67 ECC .25251 INC 1.1472 V1 30.215  
 RP 108.00 LAP -1.12 LOP 57.21 VP 36.972 GAP 13.15 AZP 89.74 TAL 154.26 TAP 77.48 RCA 90.95 APO 152.39 V2 35.089  
 RC 180.483 GL 5.81 GP -12.01 ZAL 48.14 ZAP 166.71 ETS 299.09 ZAE 128.67 ETE 189.57 ZAC 157.99 ETC 175.11 CLP-174.28

PLANETOCENTRIC CONIC  
 C3 27.227 VHL 5.218 DLA 29.19 RAL 85.57 RAD 6568.1 VEL 12.190 PTH 2.19 VHP 8.880 DPA 8.31 RAP 64.04 ECC 1.4481  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 82.60 1 11 5 3808.89 -18.27 152.64 319.37 66.83 2 14 34 3208.9 -21.25 145.17  
 97.40 3 13 7 3414.33 -18.25 123.69 319.37 66.82 4 10 2 2814.3 -21.24 116.22  
 100.00 4 27 48 3174.91 -23.07 107.99 321.38 70.45 5 20 43 2574.9 -25.53 100.05  
 100.00 2 39 6 3523.55 -13.58 129.50 317.10 63.11 3 37 49 2923.5 -17.08 122.45  
 110.00 6 59 56 2698.41 -31.81 74.73 324.27 76.76 7 44 54 2098.4 -33.30 65.82  
 110.00 2 23 27 3572.81 -5.72 128.55 312.44 56.24 3 22 59 2972.8 -10.11 122.22

DIFFERENTIAL CORRECTIONS  
 TOE .5635 TRA 3.9778 TC3-3.1796 BAU 1.1577 SGT 6035.4 SGR 535.0 SG3 177.0 ST 1626.5 SR 429.2 SS 449.6  
 RDE .3807 RRA .2579 RC3 -.0759 FAU .01958 RRT .6641 RRF .6450 RTF .9633 CRT .5801 CRS -.3271 CST -.9590  
 FDE .0556 FRA 1.5435 FC3 -.6227 BSP 19784 SGB 6059.0 R23 .0033 R13 .9633 LSA 1701.1 MSA 371.3 SSA 14.5  
 BDE .6800 BRA 3.9862 BC3 3.1805 FSP -612 SG1 6045.9 SG2 399.3 THA 3.38 EL1 1646.4 EL2 345.4 ALF 9.11

LAUNCH DATE FEB 3 1969

FLIGHT TIME 204.00

ARRIVAL DATE AUG 26 1969

HELIOCENTRIC CONIC  
 RL 147.45 LAL -.00 LOL 133.99 VL 26.599 GAL 8.81 AZL 89.02 HCA 286.43 SMA 121.47 ECC .26107 INC .9751 V1 30.215  
 RP 107.96 LAP -.94 LOP 60.42 VP 36.960 GAP 13.75 AZP 89.72 TAL 152.88 TAP 79.31 RCA 89.76 APO 153.18 V2 35.102  
 RC 182.422 GL 4.67 GP -11.69 ZAL 46.06 ZAP 167.39 ETS 295.76 ZAE 128.61 ETE 189.32 ZAC 160.12 ETC 173.88 CLP-175.24

PLANETOCENTRIC CONIC  
 C3 30.215 VHL 5.497 DLA 28.10 RAL 87.87 RAD 6568.2 VEL 12.312 PTH 2.22 VHP 9.231 DPA 9.13 RAP 66.14 ECC 1.4973  
 LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG  
 90.00 2 52 15 3537.10 -19.61 133.27 324.23 69.16 3 51 12 2937.1 -22.28 125.61  
 90.00 1 50 19 3738.14 -14.29 145.62 321.89 65.29 2 52 37 3138.1 -17.51 138.42  
 100.00 5 9 26 3094.85 -24.79 102.66 326.16 72.74 6 1 1 2494.8 -26.92 94.51  
 100.00 2 15 50 3655.63 -9.39 137.07 319.39 61.49 3 16 45 3055.6 -13.13 130.27  
 110.00 7 23 10 2676.26 -32.14 73.09 328.36 77.68 8 7 46 2076.3 -33.50 64.12  
 110.00 2 18 35 3646.99 -2.90 132.45 315.42 55.92 3 19 22 3047.0 -7.35 126.19

DIFFERENTIAL CORRECTIONS  
 TOE .4213 TRA 4.3601 TC3-2.8494 BAU 1.1513 SGT 6045.4 SGR 524.3 SG3 169.7 ST 1609.5 SR 415.9 SS 451.0  
 RDE .3878 RRA .2758 RC3 -.0661 FAU .01768 RRT .6575 RRF .6386 RTF .9644 CRT .4912 CRS -.2497 CST -.9656  
 FDE .0082 FRA 1.5942 FC3 -.5064 BSP 19893 SGB 6068.1 R23 .0025 R13 .9644 LSA 1679.9 MSA 380.2 SSA 13.9  
 BDE .5726 BRA 4.3688 BC3 2.8501 FSP -589 SG1 6055.3 SG2 394.4 THA 3.28 EL1 1623.1 EL2 359.2 ALF 7.61

LAUNCH DATE FEB 3 1969

FLIGHT TIME 206.00

ARRIVAL DATE AUG 28 1969

HELIOCENTRIC CONIC

DISTANCE 589.822

RL 147.45 LAL -.00 LOL 133.99 VL 26.566 GAL 9.60 AZL 89.20 HCA 289.64 SMA 121.27 ECC .27042 INC .7970 VI 30.215
RP 107.92 LAP -.75 LOP 63.64 VP 36.947 GAP 14.39 AZP 89.73 TAL 151.52 TAP 81.17 RCA 88.48 APO 154.07 V2 35.114
RC 184.340 GL 3.60 GP -11.40 ZAL 44.09 ZAP 167.99 ETS 292.00 ZAE 128.53 ETE 189.09 ZAC 162.24 ETC 172.33 CLP-176.20

PLANETOCENTRIC CONIC

C3 33.700 VHL 5.805 CLA 27.04 RAL 90.02 RAD 6568.3 VEL 12.453 PTH 2.25 VHP 9.611 DPA 9.90 RAP 68.26 ECC 1.5546
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 3 44 21 3421.67 -22.23 125.82 329.35 72.00 4 41 23 2821.7 -24.49 117.87
90.00 1 15 20 3908.59 -9.23 155.58 323.79 63.11 2 20 29 3308.6 -12.76 148.68
100.00 5 40 25 3047.48 -25.71 99.44 330.51 74.20 6 31 13 2447.5 -27.63 91.17
100.00 2 1 57 3757.90 -6.02 142.79 322.06 60.67 3 4 35 3157.9 -9.89 136.14
110.00 7 44 5 2660.52 -32.36 71.92 332.37 78.34 8 28 25 2060.5 -33.63 62.91
110.00 2 14 44 3717.60 -.20 136.15 318.45 55.82 3 16 41 3117.6 -4.68 129.93

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .2760 TRA 4.7670 TC3-2.5311 BAU 1.1406 SGT 6050.9 SGR 512.6 SG3 162.9 ST 1610.4 SR 402.4 SS 455.6
RDE .3955 RRA .2939 RC3 -.0568 FAU .01582 RRT .6514 RRF .6331 RTF .9658 CRT .4033 CRS -.1804 CST -.9723
FDE -.0355 FRA 1.6466 FC3 -.4064 BSP 19972 SGB 6072.6 R23 .0017 R13 .9658 LSA 1678.1 MSA 382.9 SSA 13.4
BDE .4822 BRA 4.7760 BC3 2.5317 FSP -566 SGI 6060.1 SGI 388.3 THA 3.17 EL1 1619.0 EL2 366.2 ALF 6.07

LAUNCH DATE FEB 3 1969

FLIGHT TIME 208.00

ARRIVAL DATE AUG 30 1969

HELIOCENTRIC CONIC

DISTANCE 594.849

RL 147.45 LAL -.00 LOL 133.99 VL 26.532 GAL 10.45 AZL 89.39 HCA 292.86 SMA 121.08 ECC .28066 INC .6114 VI 30.215
RP 107.88 LAP -.56 LOP 66.85 VP 36.935 GAP 15.08 AZP 89.76 TAL 150.21 TAP 83.07 RCA 87.10 APO 155.06 V2 35.126
RC 186.236 GL 2.60 GP -11.13 ZAL 42.25 ZAP 168.52 ETS 287.78 ZAE 128.44 ETE 188.87 ZAC 164.34 ETC 170.37 CLP-177.18

PLANETOCENTRIC CONIC

C3 37.772 VHL 6.146 DLA 26.03 RAL 92.01 RAD 6568.5 VEL 12.615 PTH 2.29 VHP 10.025 DPA 10.61 RAP 70.40 ECC 1.6216
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 17 32 3366.03 -23.36 122.13 333.75 73.52 5 13 38 2766.0 -25.39 114.05
90.00 0 58 4 4021.78 -5.68 162.01 326.36 62.21 2 5 5 3421.8 -9.36 155.26
100.00 6 6 10 3015.82 -26.28 97.26 334.65 75.22 6 56 26 2415.8 -28.05 88.91
100.00 1 52 7 3847.22 -3.02 147.72 324.90 60.25 2 56 14 3247.2 -6.96 141.15
110.00 8 3 1 2650.23 -32.50 71.15 336.30 78.78 8 47 11 2050.2 -33.71 62.12
110.00 2 11 46 3785.58 2.40 139.68 321.52 55.89 3 14 51 3185.6 -2.09 133.48

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE .1296 TRA 5.2039 TC3-2.2240 BAU 1.1233 SGT 6052.8 SGR 500.2 SG3 156.4 ST 1626.2 SR 388.8 SS 463.0
RDE .4038 RRA .3124 RC3 -.0478 FAU .01394 RRT .6461 RRF .6286 RTF .9673 CRT .3213 CRS -.1217 CST -.9786
FDE -.0748 FRA 1.7024 FC3 -.3196 BSP 19949 SGB 6073.4 R23 .0015 R13 .9673 LSA 1692.8 MSA 380.1 SSA 12.9
BDE .4241 BRA 5.2132 BC3 2.2245 FSP -541 SGI 6061.4 SGI 381.3 THA 3.07 EL1 1631.3 EL2 367.0 ALF 4.63

LAUNCH DATE FEB 3 1969

FLIGHT TIME 210.00

ARRIVAL DATE SEP 1 1969

HELIOCENTRIC CONIC

DISTANCE 599.734

RL 147.45 LAL -.00 LOL 133.99 VL 26.500 GAL 11.36 AZL 89.58 HCA 296.08 SMA 120.89 ECC .29191 INC .4166 VI 30.215
RP 107.85 LAP -.37 LOP 70.07 VP 36.923 GAP 15.83 AZP 89.82 TAL 148.93 TAP 85.01 RCA 85.60 APO 156.17 V2 35.138
RC 188.109 GL 1.66 GP -10.88 ZAL 40.53 ZAP 168.97 ETS 283.08 ZAE 128.32 ETE 188.66 ZAC 166.41 ETC 167.79 CLP-178.17

PLANETOCENTRIC CONIC

C3 42.540 VHL 6.522 DLA 25.06 RAL 93.86 RAD 6568.6 VEL 12.803 PTH 2.33 VHP 10.476 DPA 11.27 RAP 72.55 ECC 1.7001
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 4 44 5 3330.75 -24.02 119.76 337.88 74.53 5 39 36 2730.8 -25.91 111.60
90.00 0 46 15 4117.08 -2.64 167.35 329.15 61.80 1 54 52 3517.1 -6.39 160.68
100.00 6 28 26 2994.30 -26.64 95.77 338.65 75.92 7 18 21 2394.3 -28.32 87.36
100.00 1 44 34 3928.77 -.26 152.20 327.83 60.11 2 50 3 3328.8 -4.23 145.67
110.00 8 20 14 2644.52 -32.58 70.72 340.16 79.02 9 4 19 2044.5 -33.75 61.68
110.00 2 9 16 3851.31 4.90 143.12 324.61 56.13 3 13 27 3251.3 .42 136.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.0257 TRA 5.6660 TC3-1.9397 BAU 1.1034 SGT 6049.1 SGR 486.4 SG3 150.3 ST 1650.2 SR 374.6 SS 472.0
RDE .4122 RRA .3305 RC3 -.0398 FAU .01220 RRT .6405 RRF .6238 RTF .9690 CRT .2434 CRS -.0679 CST -.9838
FDE -.3131 FRA 1.7593 FC3 -.2484 BSP 20016 SGB 6068.6 R23 .0010 R13 .9690 LSA 1716.7 MSA 372.8 SSA 12.4
BDE .4130 BRA 5.6756 BC3 1.9401 FSP -520 SGI 6057.2 SGI 373.0 THA 2.96 EL1 1652.9 EL2 362.8 ALF 3.32

LAUNCH DATE FEB 3 1969

FLIGHT TIME 212.00

ARRIVAL DATE SEP 3 1969

HELIOCENTRIC CONIC

DISTANCE 604.449

RL 147.45 LAL -.00 LOL 133.99 VL 26.468 GAL 12.34 AZL 89.79 HCA 299.30 SMA 120.70 ECC .30430 INC .2105 VI 30.215
RP 107.81 LAP -.18 LOP 73.29 VP 36.911 GAP 16.65 AZP 89.90 TAL 147.71 TAP 87.01 RCA 83.97 APO 157.43 V2 35.150
RC 189.959 GL .79 GP -10.65 ZAL 38.93 ZAP 169.32 ETS 277.91 ZAE 128.18 ETE 188.46 ZAC 168.42 ETC 164.31 CLP-179.17

PLANETOCENTRIC CONIC

C3 48.141 VHL 6.938 DLA 24.13 RAL 95.56 RAD 6568.8 VEL 13.019 PTH 2.38 VHP 10.969 DPA 11.87 RAP 74.69 ECC 1.7923
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 6 36 3307.42 -24.43 118.17 341.85 75.22 6 1 44 2707.4 -26.23 109.96
90.00 0 37 18 4202.58 .12 172.12 332.03 61.68 1 47 21 3602.6 -3.66 165.49
100.00 6 48 5 2980.25 -26.87 94.79 342.53 76.39 7 37 45 2380.2 -28.48 86.35
100.00 1 38 31 4004.96 2.32 156.38 330.81 60.19 2 45 16 3405.0 -1.66 149.86
110.00 8 35 56 2642.84 -32.60 70.59 343.96 79.10 9 19 58 2042.8 -33.76 61.55
110.00 2 7 9 3915.14 7.31 146.49 327.72 56.51 3 12 24 3315.1 2.86 140.24

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.1860 TRA 6.1607 TC3-1.6727 BAU 1.0768 SGT 6040.5 SGR 471.3 SG3 144.4 ST 1680.9 SR 360.2 SS 482.6
RDE .4209 RRA .3483 RC3 -.0323 FAU .01048 RRT .6349 RRF .6192 RTF .9010 CRT .1731 CRS -.0215 CST -.9881
FDE -.1490 FRA 1.8198 FC3 -.1885 BSP 20071 SGB 6058.9 R23 .0006 R13 .9710 LSA 1748.3 MSA 362.2 SSA 11.8
BDE .4602 BRA 6.1706 BC3 1.6731 FSP -500 SGI 6047.9 SGI 363.7 THA 2.85 EL1 1682.1 EL2 354.5 ALF 2.22

LAUNCH DATE FEB 3 1969

FLIGHT TIME 214.00

ARRIVAL DATE SEP 5 1969

HELIOCENTRIC CONIC

DISTANCE 608.958

RL 147.45 LAL -.00 LOL 133.99 VL 26.436 GAL 13.42 AZL 90.01 HCA 302.52 SMA 120.52 ECC .31799 INC .0000 V1 30.215
RP 107.78 LAP .01 LOP 76.52 VP 36.899 GAP 17.55 AZP 90.00 TAL 146.55 TAP 89.08 RCA 82.19 APO 158.84 V2 35.161
RC 191.786 GL -.03 GP -10.44 ZAL 37.45 ZAP 169.56 ETS 272.30 ZAE 128.01 ETE 188.27 ZAC 170.35 ETC 159.43 CLP 179.79

PLANETOCENTRIC CONIC

C3 54.746 VHL 7.399 DLA 23.25 RAL 97.12 RAD 6569.0 VEL 13.270 PTH 2.42 VHP 11.513 OPA 12.42 RAP 76.84 ECC 1.9010
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 26 13 3292.41 -24.69 117.15 345.68 75.67 6 21 6 2692.4 -26.42 108.90
90.00 0 30 8 4281.48 2.67 176.53 334.97 61.80 1 41 30 3681.5 -1.12 169.90
100.00 7 5 35 2972.07 -27.00 94.21 346.31 76.67 7 55 7 2372.1 -28.57 85.76
100.00 1 33 28 4077.06 4.75 160.35 333.81 60.45 2 41 25 3477.1 .78 153.81
110.00 8 50 13 2644.68 -32.58 70.73 347.69 79.02 9 34 18 2044.7 -33.75 61.69
110.00 2 5 19 3977.22 9.63 149.81 330.83 57.04 3 11 36 3377.2 5.22 143.49

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.3521 TRA 6.6922 TC3 -1.4242 BAU 1.0426 SGT 6027.4 SGR 455.1 SG3 138.9 ST 1715.1 SR 345.6 SS 494.6
RDE .4300 RRA .3653 RC3 -.0255 FAU .00878 RRT .6290 RRF .6145 RTF .9731 CRT .1106 CRS .0183 CST -.9914
FDE -.1830 FRA 1.8848 FC3 -.1388 BSP 20100 SGB 6044.6 R23 .0004 R13 .9731 LSA 1784.3 MSA 349.2 SSA 11.4
BDE .5558 BRA 6.7021 BC3 1.4244 FSP -481 SG1 6034.2 SG2 353.4 THA 2.73 EL1 1715.5 EL2 343.4 ALF 1.33

LAUNCH DATE FEB 3 1969

FLIGHT TIME 216.00

ARRIVAL DATE SEP 7 1969

HELIOCENTRIC CONIC

DISTANCE 613.219

RL 147.45 LAL -.00 LOL 133.99 VL 26.406 GAL 14.59 AZL 90.24 HCA 305.75 SMA 120.34 ECC .33317 INC .2438 V1 30.215
RP 107.75 LAP .20 LOP 79.74 VP 36.887 GAP 18.55 AZP 90.14 TAL 145.47 TAP 91.22 RCA 80.25 APO 160.43 V2 35.172
RC 193.588 GL -.79 GP -10.24 ZAL 36.11 ZAP 169.68 ETS 286.30 ZAE 127.80 ETE 188.09 ZAC 172.15 ETC 152.28 CLP 178.72

PLANETOCENTRIC CONIC

C3 62.574 VHL 7.910 DLA 22.42 RAL 98.54 RAD 6569.2 VEL 13.562 PTH 2.48 VHP 12.114 OPA 12.92 RAP 78.97 ECC 2.0298
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 43 32 3283.73 -24.83 116.55 349.39 75.94 6 38 16 2683.7 -26.52 108.29
90.00 0 24 10 4355.48 5.04 180.67 337.93 62.10 1 36 46 3755.5 1.26 174.02
100.00 7 21 15 2968.67 -27.06 93.97 349.99 76.78 8 10 43 2368.7 -28.61 85.51
100.00 1 29 9 4145.76 7.05 164.16 336.83 60.88 2 38 15 3545.8 3.11 157.59
110.00 9 3 14 2649.59 -32.51 71.10 351.34 78.81 9 47 23 2049.6 -33.71 62.07
110.00 2 3 39 4037.61 11.85 153.08 333.94 57.70 3 10 56 3437.6 7.50 146.68

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.5192 TRA 7.2710 TC3 -1.1916 BAU .9969 SGT 6012.7 SGR 437.9 SG3 133.8 ST 1750.9 SR 330.9 SS 508.0
RDE .4398 RRA .3815 RC3 -.0190 FAU .00699 RRT .6229 RRF .6099 RTF .9753 CRT .0579 CRS .0503 CST -.9939
FDE -.2138 FRA 1.9568 FC3 -.0967 BSP 20017 SGB 6028.6 R23 .0005 R13 .9753 LSA 1822.4 MSA 334.7 SSA 10.9
BDE .6804 BRA 7.2810 BC3 1.1917 FSP -459 SG1 6018.9 SG2 342.2 THA 2.61 EL1 1751.0 EL2 330.4 ALF .65

LAUNCH DATE FEB 3 1969

FLIGHT TIME 218.00

ARRIVAL DATE SEP 9 1969

HELIOCENTRIC CONIC

DISTANCE 617.173

RL 147.45 LAL -.00 LOL 133.99 VL 26.376 GAL 15.88 AZL 90.50 HCA 308.98 SMA 120.17 ECC .35006 INC .5000 V1 30.215
RP 107.71 LAP .39 LOP 82.97 VP 36.876 GAP 19.64 AZP 90.31 TAL 144.48 TAP 93.45 RCA 78.10 APO 162.23 V2 35.182
RC 195.366 GL -1.50 GP -10.06 ZAL 34.89 ZAP 169.66 ETS 260.03 ZAE 127.54 ETE 187.90 ZAC 173.73 ETC 141.39 CLP 177.61

PLANETOCENTRIC CONIC

C3 71.900 VHL 8.479 DLA 21.64 RAL 99.82 RAD 6569.4 VEL 13.902 PTH 2.54 VHP 12.781 OPA 13.37 RAP 81.07 ECC 2.1833
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 5 58 53 3280.05 -24.89 116.30 352.97 76.05 6 53 33 2680.1 -26.57 108.03
90.00 0 19 2 4425.42 7.25 184.62 340.88 62.55 1 32 48 3825.4 3.52 177.93
100.00 7 35 16 2969.24 -27.05 94.01 353.55 76.76 8 24 46 2369.2 -28.60 85.55
100.00 1 25 20 4211.47 9.21 167.85 339.83 61.44 2 35 31 3611.5 5.32 161.21
110.00 9 15 1 2657.18 -32.41 71.67 354.90 78.49 9 59 18 2057.2 -33.66 62.66
110.00 2 2 5 4096.29 13.96 156.31 337.03 58.48 3 10 21 3496.3 9.69 149.82

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.6990 TRA 7.8900 TC3 -.9812 BAU .9433 SGT 5990.6 SGR 419.0 SG3 128.9 ST 1785.0 SR 315.9 SS 522.9
RDE .4497 RRA .3957 RC3 -.0134 FAU .00525 RRT .6151 RRF .6037 RTF .9777 CRT .0088 CRS .0809 CST -.9957
FDE -.2454 FRA 2.0337 FC3 -.0633 BSP 20040 SGB 6005.2 R23 .0005 R13 .9777 LSA 1859.4 MSA 319.1 SSA 10.4
BDE .8311 BRA 7.8999 BC3 .9813 FSP -443 SG1 5996.1 SG2 330.1 THA 2.47 EL1 1785.0 EL2 315.9 ALF .09

LAUNCH DATE FEB 3 1969

FLIGHT TIME 220.00

ARRIVAL DATE SEP 11 1969

HELIOCENTRIC CONIC

DISTANCE 620.749

RL 147.45 LAL -.00 LOL 133.99 VL 26.347 GAL 17.30 AZL 90.78 HCA 312.20 SMA 120.00 ECC .36893 INC .7808 V1 30.215
RP 107.68 LAP .58 LOP 86.20 VP 36.864 GAP 20.87 AZP 90.52 TAL 143.60 TAP 95.80 RCA 75.73 APO 164.28 V2 35.192
RC 197.118 GL -2.16 GP -9.89 ZAL 33.81 ZAP 169.49 ETS 253.60 ZAE 127.23 ETE 187.72 ZAC 174.92 ETC 124.77 CLP 176.46

PLANETOCENTRIC CONIC

C3 83.084 VHL 9.115 DLA 20.90 RAL 100.96 RAD 6569.6 VEL 14.298 PTH 2.60 VHP 13.527 OPA 13.78 RAP 83.14 ECC 2.3674
LNCH AZMTH LNCH TIME L-I TIME INJ LAT INJ LONG INJ RT ASC INJ AZMTH INJ TIME PO CST TIM INJ 2 LAT INJ 2 LONG
90.00 6 12 30 3280.44 -24.89 116.33 356.41 76.04 7 7 11 2680.4 -26.56 108.06
90.00 0 14 29 4491.80 9.31 188.41 343.80 63.14 1 29 21 3891.8 5.64 181.66
100.00 7 47 49 2973.11 -26.99 94.29 356.98 76.63 8 37 22 2373.1 -28.56 85.84
100.00 1 21 52 4274.36 11.23 171.42 342.79 62.12 2 33 6 3674.4 7.41 164.71
110.00 9 25 38 2667.06 -32.27 72.41 358.34 78.07 10 10 5 2067.1 -33.58 63.42
110.00 2 0 32 4153.18 15.96 159.51 340.07 59.36 3 9 45 3553.2 11.78 152.90

DIFFERENTIAL CORRECTIONS

MID-COURSE EXECUTION ACCURACY

ORBIT DETERMINATION ACCURACY

TDE -.8860 TRA 8.5635 TC3 -.7884 BAU .8758 SGT 5964.6 SGR 398.9 SG3 124.2 ST 1816.6 SR 300.7 SS 539.4
RDE .4602 RRA .4076 RC3 -.0085 FAU .00344 RRT .6058 RRF .5960 RTF .9802 CRT -.0345 CRS .1080 CST -.9971
FDE -.2760 FRA 2.1189 FC3 -.0358 BSP 20047 SGB 5977.9 R23 .0007 R13 .9802 LSA 1894.6 MSA 302.9 SSA 9.9
BDE .9984 BRA 8.5732 BC3 .7885 FSP -427 SG1 5969.5 SG2 317.1 THA 2.33 EL1 1816.6 EL2 300.5 ALF 179.66

