

## General Disclaimer

### One or more of the Following Statements may affect this Document

- This document has been reproduced from the best copy furnished by the organizational source. It is being released in the interest of making available as much information as possible.
- This document may contain data, which exceeds the sheet parameters. It was furnished in this condition by the organizational source and is the best copy available.
- This document may contain tone-on-tone or color graphs, charts and/or pictures, which have been reproduced in black and white.
- This document is paginated as submitted by the original source.
- Portions of this document are not fully legible due to the historical nature of some of the material. However, it is the best reproduction available from the original submission.



TR-302-1

SPACE SHUTTLE POST-ENTRY  
AND LANDING ANALYSIS

VOLUME II: APPENDICES

20 JULY 1973

Prepared Under:

Contract No. NAS 9-12968

for

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
Johnson Space Center  
Houston, Texas

Prepared by:

Bard S. Crawford  
Edward M. Duiven

Approved by:

Arthur A. Sutherland, Jr.  
Arthur Gelb

THE ANALYTIC SCIENCES CORPORATION  
6 Jacob Way  
Reading, Massachusetts 01867

## ABSTRACT

Four candidate navigation systems for the Space Shuttle Orbiter approach and landing phase are evaluated in detail. These include three conventional navaid systems and a single-station one-way doppler system. In each case a Kalman filter is assumed to be mechanized in the onboard computer, blending the navaid data with IMU and altimeter data. Filter state dimensions ranging from 6 to 24 are involved in the candidate systems. Comprehensive truth models with state dimensions ranging from 63 to 82 are formulated and used to generate detailed error budgets and sensitivity curves illustrating the effect of variations in the size of individual error sources on touchdown accuracy. The projected overall performance of each system is shown in the form of time histories of position and velocity error components. The detailed results are summarized, compared and interpreted, the filter designs are reviewed and suggestions are made concerning possible software improvements.



### ACKNOWLEDGEMENT

The authors acknowledge the guidance and assistance of the Contract Technical Monitors, Messers R.T. Savely and P.T. Pixley of the Mathematical Physics Group of the Mission Planning and Analysis Division of NASA/JSC. Assistance and cooperation were also received from Messers B.F. Cockrell and P.H. Mitchell of the same group. The authors would also like to thank Mr. M.F. D'Avanzo of TASC for his assistance in the programming portion of this work.

TABLE OF CONTENTS

	<u>Page No.</u>
ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
APPENDIX A    COORDINATE FRAMES AND TRANSFORMATIONS	A-1
APPENDIX B    COMPUTATION OF SPECIAL OUTPUT QUANTITIES	B-1
APPENDIX C    ERROR CONTRIBUTION TIME HISTORIES	C-1

## APPENDIX A

COORDINATE FRAMES AND TRANSFORMATIONS

There are several coordinate frames whose relationship to each other had to be defined as part of the development of the Space Shuttle evaluation tools. These coordinate systems may be divided into three distinct groups.

- Systems which remain fixed in inertial space
- Systems which are fixed to and rotate with the earth
- Systems which are defined by the vehicle's position and velocity vectors.

It is the purpose of this appendix to define all of the necessary coordinate systems and their orientation with respect to each other.

The inertially fixed coordinate system group is composed of three reference frames: the I, the A, and the P frames. The I coordinate frame, with unit vectors  $\underline{1}_{x_I}$ ,  $\underline{1}_{y_I}$ , and  $\underline{1}_z$ , is the system in which the navigation error analysis is performed and is also the system in which the Space Shuttle trajectory data was furnished. The  $x_I$  and  $y_I$  axes lie in the equatorial plane with  $x_I$  passing through the Greenwich Meridian when the vehicle is at entry (400,000 ft). The z axis lies along the earth's spin axis. It is this system to which all other coordinate systems must be referenced.

The A coordinate frame, with unit vectors  $\underline{1}_{x_A}$ ,  $\underline{1}_{y_A}$ ,  $\underline{1}_z$ , is also earth centered and its z axis is common with that of the I system.

The  $x_A$  axis, however, is pointed toward the First Point of Aries. Figure A-1 shows the relationship between I and A as one looks down along the common z axis from the North Pole. It is with respect to this system that the platform attitude is initially defined in Ref. 7. The transformation to the I system from the A system is a known function of the two angles  $\theta_1$  and  $\theta_2$  (shown in Fig. A-1) and may be written as

$$T_{I/A} = \begin{bmatrix} \cos(\theta_1 + \theta_2) & \sin(\theta_1 + \theta_2) & 0 \\ -\sin(\theta_1 + \theta_2) & \cos(\theta_1 + \theta_2) & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad (A-1)$$

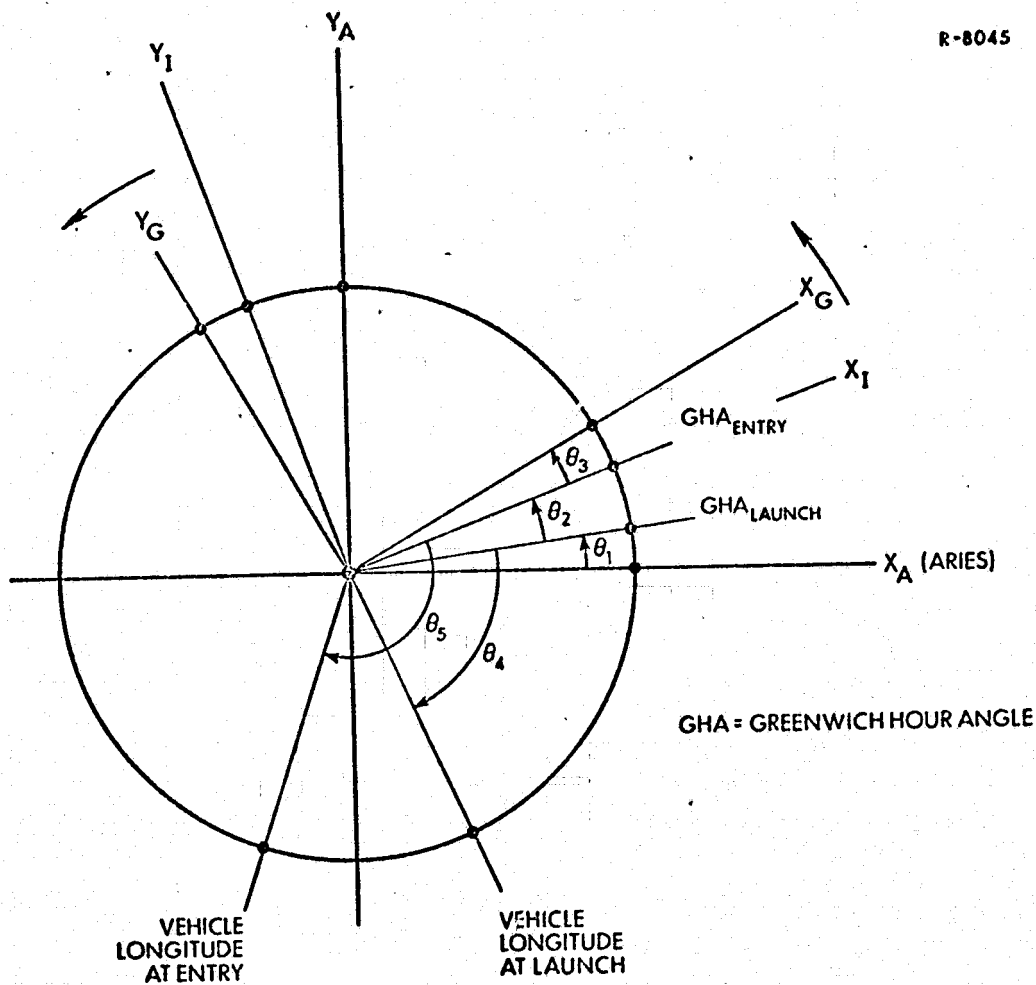
The angle  $\theta_1$  is an input to the program which generated the data in Ref. 7, and  $\theta_2$  is the angle through which the Greenwich Meridian moves in the time between vehicle launch and reentry. For this study  $\theta_1 = 5.85$  deg and  $\theta_2 = 17.64$  deg.

The third inertially fixed coordinate system is that of the nominal platform axes, the P coordinate frame. This frame has unit vectors  $\underline{1}_{P_1}$ ,  $\underline{1}_{P_2}$ , and  $\underline{1}_{P_3}$ . The  $P_1$  axis is normal to the launch site just prior to launch while  $P_2$  and  $P_3$  lie in the locally level plane. The  $P_3$  axis is pointed downrange at an angle of 50.14 degrees east of north. The transformation from P to I is computed as follows.

$$T_{I/P} = T_{I/A} T_{A/P}$$

$$= T_{I/A} \begin{bmatrix} 0.23177526 & 0.71487436 & 0.65972333 \\ -0.84754132 & -0.18446170 & 0.49764201 \\ 0.47744520 & -0.67448390 & 0.56313191 \end{bmatrix}^* \quad (A-2)$$

\* Provided by P. Pixley of MSC.



- $\theta_1 = 5.855 \text{ deg}$
- $\theta_2 = 17.647 \text{ deg}$
- $\theta_3 = \Omega_E \times t$
- $\theta_4 = -80.557 \text{ deg}$
- $\theta_5 = -137.51 \text{ deg}$

Figure A-1 Frames with a Common Z Axis

The two earth fixed coordinate frames are given the initials G and R. The G frame ( $\underline{1}_{x_G}, \underline{1}_{y_G}, \underline{1}_z$ ) is an earth centered reference system with its z axis common to those of I and A. The  $x_G$  and  $y_G$  axes lie in the equatorial plane with  $x_G$  passing through the Greenwich Meridian.

Since, by definition, the G and the I systems are aligned at  $t = 0$  (entry), the following transformation may be written relating them.

$$T_{I/G} = \begin{bmatrix} \cos \Omega_E t & -\sin \Omega_E t & 0 \\ \sin \Omega_E t & \cos \Omega_E t & 0 \\ 0 & 0 & 1 \end{bmatrix} \quad (A-3)$$

where  $\Omega_E$  is the earth's spin rate. Figure A-1 shows the relationship between I, A, and G systems. This system is used as a means of relating earth relative quantities to inertial space.

The R system is located with respect to the landing sight and runway and is the system in which navigation aid locations and survey errors are defined. The system has axes R, D, and C with R assumed parallel to the local vertical at the landing sight. The D axis is pointed down the runway (in this case north) and C is normal to R and D. The transformation from the R to the I system is given in terms of touchdown latitude ( $\phi_T$ ), longitude ( $\lambda_T$ ), and time (t) by Eq. (A-4).

$$T_{I/R} = T_{I/G}^{(t)} \begin{bmatrix} \cos \phi_T \sin \lambda_T & -\sin \phi_T \cos \lambda_T & \sin \lambda_T \\ \cos \phi_T \cos \lambda_T & -\sin \phi_T \sin \lambda_T & -\cos \lambda_T \\ \sin \phi_T & \cos \phi_T & 0 \end{bmatrix} \quad (A-4)$$

where

$$\phi_T = 28.4 \text{ deg}$$

$$\lambda_T = -80.7 \text{ deg}$$

There are three vehicle position and velocity related coordinate systems used in the space shuttle evaluation programs. The first to be discussed is a locally level, L frame, with one axis pointed towards north.

This system is used to relate gravitational anomaly and deflection errors to the inertial system. The unit vectors which define this system may be written in terms of the vehicle's position vector ( $\underline{r}$ ) and the North Pole vector ( $\underline{1}_z$ ) as follows:

$$\underline{1}_u = \underline{r}/|\underline{r}| \quad (\text{A-5})$$

$$\underline{1}_e = \underline{1}_z \times \underline{1}_u / |\underline{1}_z \times \underline{1}_u| \quad (\text{A-6})$$

$$\underline{1}_n = \underline{1}_u \times \underline{1}_e \quad (\text{A-7})$$

with these unit vectors defined it is easily shown that the transformation from the L system to the I system may be written as:

$$T_{I/L} = \left[ \begin{array}{ccc} \begin{array}{c} \uparrow \\ \underline{1}_u(I) \\ \downarrow \end{array} & \begin{array}{c} \uparrow \\ \underline{1}_e(I) \\ \downarrow \end{array} & \begin{array}{c} \uparrow \\ \underline{1}_n(I) \\ \downarrow \end{array} \end{array} \right]^* \quad (\text{A-8})$$

The remaining two coordinate systems (U and V) are related to the vehicle's inertial and earth relative velocity vectors ( $\underline{v}_I$  and  $\underline{v}_{E'}$ ) respectively as well as position. The U frame is the one in which the data of Ref. 7 is defined and that data must be rotated to the I system. The V frame is used to output position and velocity errors and platform misalignments in a physically meaningful coordinate system. The U system has unit vectors  $\underline{1}_U$ ,  $\underline{1}_V$ , and  $\underline{1}_W$  which may be evaluated using the expressions below.

$$\underline{1}_U = \underline{r}/|\underline{r}| \quad (\text{A-9})$$

\* The quantity  $\underline{a}(I)$  means the vector  $\underline{a}$  coordinatized in the I frame.



$$\underline{1}_W = \underline{r} \times \underline{v}_I / |\underline{r} \times \underline{v}_I| \quad (\text{A-10})$$

$$\underline{1}_V = \underline{1}_W \times \underline{1}_U \quad (\text{A-11})$$

The transformation from U to I is given by the following equation.

$$T_{I/U} = \begin{bmatrix} \uparrow \underline{1}_U(I) \downarrow & \uparrow \underline{1}_V(I) \downarrow & \uparrow \underline{1}_W(I) \downarrow \end{bmatrix} \quad (\text{A-12})$$

The V system's unit vectors ( $\underline{1}_u, \underline{1}_v, \underline{1}_w$ ) are defined in the same manner as the U systems except that earth relative rather than inertial velocity is used. That is:

$$\underline{1}_u = \underline{r} / |\underline{r}| \quad (\text{A-13})$$

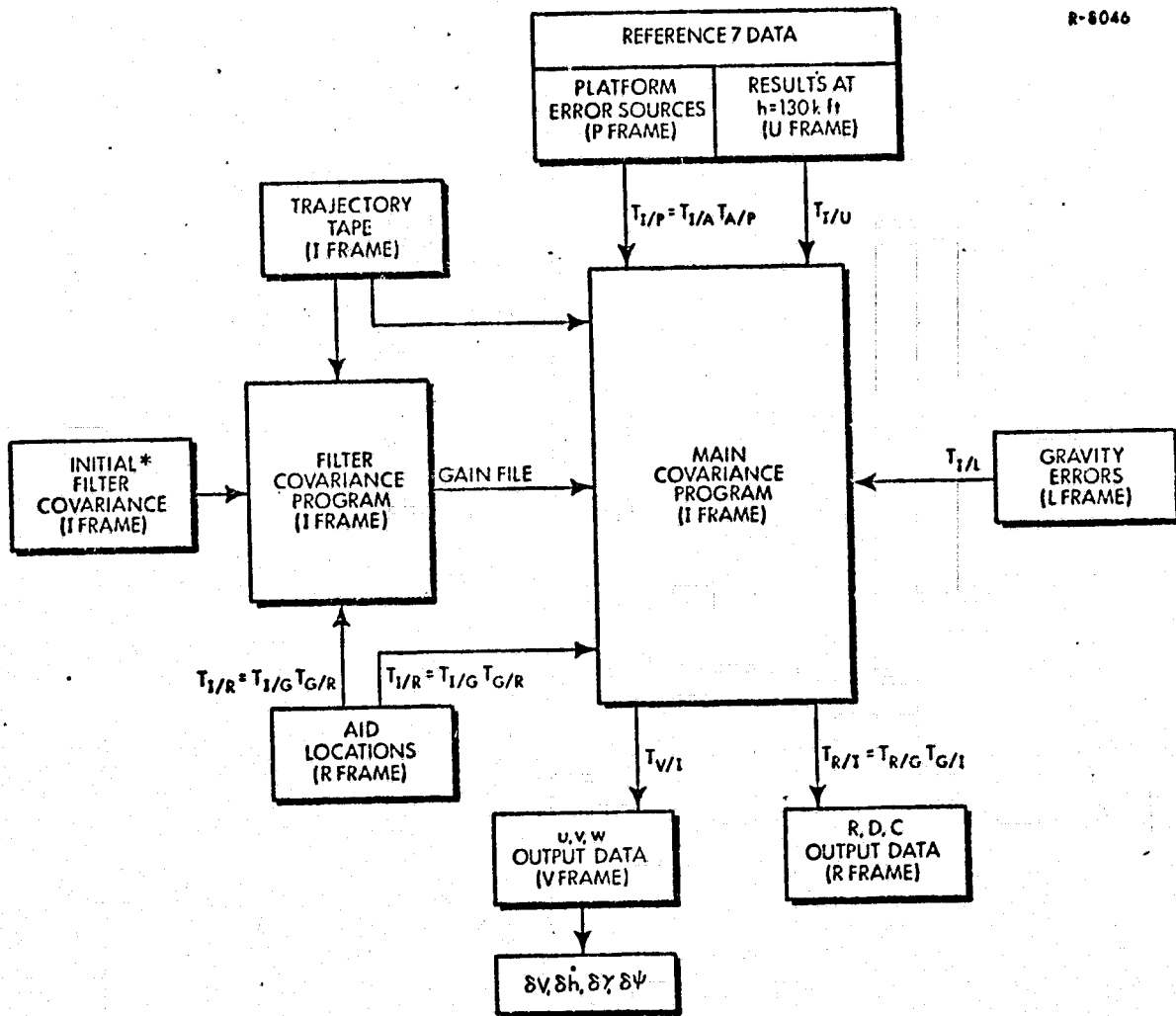
$$\underline{1}_w = \underline{r} \times \underline{v}_E / |\underline{r} \times \underline{v}_E| \quad (\text{A-14})$$

$$\underline{1}_v = \underline{1}_w \times \underline{1}_u \quad (\text{A-15})$$

in like manner  $T_{I/V}$  is given by Eq. (A-16) below.

$$T_{I/V} = \begin{bmatrix} \uparrow \underline{1}_u(I) \downarrow & \uparrow \underline{1}_v(I) \downarrow & \uparrow \underline{1}_w(I) \downarrow \end{bmatrix} \quad (\text{A-16})$$

This completes the definition of the coordinate frames used in the Space Shuttle programs. Figure A-2 shows pictorially the way in which all these systems interrelate in order to produce the desired reentry and landing error budgets for the Space Shuttle mission.



\* For the System D evaluation the initial filter covariance received from NASA was coordinated partly in the U frame and partly in an inertial frame which was Up-East-North at time of launch. This was transformed to the I frame prior to running the filter covariance program.

Figure A-2 Use of Transformation Matrices

## APPENDIX B

COMPUTATION OF SPECIAL OUTPUT QUANTITIES

In addition to the output that is obtained from a typical navigation error analysis program, such as position, velocity, and platform alignment errors in the navigation coordinate system, several special quantities were requested for the Space Shuttle study. These included position, velocity, and platform alignment errors in the runway coordinate system (R) and the coordinate system (V) which is referenced to the position and earth relative velocity vector. The rms values of the error in computing altitude rate ( $\delta\dot{h}$ ), velocity magnitude ( $\delta v_E$ ), flight path angle ( $\delta\gamma$ ), and track angle ( $\delta\psi$ ) were also desired. These quantities are tabulated at the end of each error analysis run for specific output times, and the tables are included in Appendix C. The equations required to calculate these errors and their statistics are derived in this appendix

The rotation of the position, velocity, and platform alignment errors from the inertial (I) to either the R or V coordinate systems is complicated only by the fact that major interest here is in earth relative rather than inertial velocity errors. The error analysis program determines the error in computing inertial velocity. This difference is easily adjusted for by the application of Equation (B-1) which relates inertial to earth relative velocity errors.

$$\underline{\delta v}_E = \underline{\delta v}_I - \underline{\omega}^{E/I} \times \underline{\delta r} \quad (\text{B-1})$$

Thus, the errors in position, earth relative velocity, and platform alignment may be related to the inertial errors using Equation (B-2)

$$\begin{bmatrix} \delta r_{(I)} \\ \delta v_{-E(I)} \\ \delta \phi_{(P)} \end{bmatrix} = \begin{bmatrix} I & 0 & 0 \\ 0 & \Omega_E & 0 \\ -\Omega_E & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & I \end{bmatrix} \begin{bmatrix} \delta r_{(I)} \\ \delta v_{-I(I)} \\ \delta \phi_{(P)} \end{bmatrix} = M_E \begin{bmatrix} \delta r_{(I)} \\ \delta v_{-I(I)} \\ \delta \phi_{(P)} \end{bmatrix} \tag{B-2}$$

if the covariance matrix associated with  $\delta r_{(I)}$ ,  $\delta v_{-I(I)}$ , and  $\delta \phi_{(P)}$  is defined to be  $P_I$  (the output of the navigation error analysis program), then a similar matrix  $P_E$  may be evaluated using Equation (B-3).

$$P_E = M_E P_I M_E^T \tag{B-3}$$

The coordinate rotations  $T_{I/R}$ ,  $T_{I/V}$ , and  $T_{I/P}$ , defined in Appendix A, may now be used to obtain the desired errors and/or error statistics in the R and V coordinate frames. This is done using Equations (B-4) thru (B-7).

$$\begin{bmatrix} \delta r_{(R)} \\ \delta v_{-E(R)} \\ \delta \phi_{(R)} \end{bmatrix} = \begin{bmatrix} T_{R/I} & 0 & 0 \\ 0 & T_{R/I} & 0 \\ 0 & 0 & T_{R/I} T_{I/P} \end{bmatrix} \begin{bmatrix} \delta r_{(I)} \\ \delta v_{-E(I)} \\ \delta \phi_{(P)} \end{bmatrix} = M_R \begin{bmatrix} \delta r_{(I)} \\ \delta v_{-E(I)} \\ \delta \phi_{(P)} \end{bmatrix} \tag{B-4}$$

$$P_R = M_R P_E M_R^T \quad (B-5)$$

$$\begin{bmatrix} \delta r_{-}(V) \\ \delta v_{-E}(V) \\ \delta \phi_V \end{bmatrix} = \begin{bmatrix} T_{V/I} & 0 & 0 \\ 0 & T_{V/I} & 0 \\ 0 & 0 & T_{V/I} \ T_{I/P} \end{bmatrix} \begin{bmatrix} \delta r_{-}(I) \\ \delta v_{-E}(I) \\ \delta \phi_{(P)} \end{bmatrix} = M_V \begin{bmatrix} \delta r_{-}(I) \\ \delta v_{-E}(I) \\ \delta \phi_{(P)} \end{bmatrix} \quad (B-6)$$

$$P_V = M_V P_E M_V^T \quad (B-7)$$

The derivation of the equations used to evaluate altitude rate, velocity magnitude, flight path angle, and track angle errors are somewhat more difficult and are derived, one at a time, below. The error in each of the four quantities is the difference between the value which would be computed using the navigator's estimates of position and earth relative velocity and the actual value.

Altitude rate ( $\dot{h}$ ) is defined as

$$\dot{h} = \frac{\underline{r} \cdot \underline{v}_E}{|\underline{r}|} \quad (B-8)$$

and the calculated value ( $h_c$ ) is evaluated using Equation (B-9) below.

$$\dot{h}_c = \frac{\underline{r}_c \cdot \underline{v}_{E_c}}{|\underline{r}_c|} \quad (B-9)$$

However;

$$\underline{r}_c = \underline{r} + \delta \underline{r} \quad (B-10)$$

$$\underline{v}_{-E_c} = \underline{v}_{-E} + \delta \underline{v}_{-E} \quad (B-11)$$

$$h_c = h + \delta h \quad (B-12)$$

if Equations (B-10) thru (B-12) are inserted into Equation (B-9) the following equation results.

$$\dot{h} + \delta \dot{h} = \frac{(\underline{r} + \delta \underline{r}) \cdot (\underline{v} + \delta \underline{v})}{[(\underline{r} + \delta \underline{r}) (\underline{r} + \delta \underline{r})]^{1/2}} \quad (B-13)$$

Equation (B-12) may now be expanded and only first-order terms maintained. The result is an equation relating  $\delta h$  to  $\delta \underline{r}$  and  $\delta \underline{v}$ .

$$\delta \dot{h} = \left[ \begin{array}{c} \left[ \frac{(\underline{r}_{(I)} \times)^* (\underline{v}_{-E(I)} \times) \underline{r}_{(I)}}{|\underline{r}|^3} \right]^T \\ \left[ \frac{\underline{r}_{(I)}^T}{|\underline{r}|} \right] \\ 0 \end{array} \right] \cdot \begin{bmatrix} \delta \underline{r}_{(I)} \\ \delta \underline{v}_{-E(I)} \\ \delta \phi_{(P)} \end{bmatrix} = M_{\dot{h}} \cdot \begin{bmatrix} \delta \underline{r}_{(I)} \\ \delta \underline{v}_{-E(I)} \\ \delta \phi_{(P)} \end{bmatrix} \quad (B-14)$$

The variance of  $\delta h$  ( $\sigma_{\delta h}^2$ ) may be calculated using Equation (B-14) below, all the terms of which have been defined in other places in this appendix.

$$\sigma_{\delta \dot{h}}^2 = M_{\dot{h}}^T P_E M_{\dot{h}} \quad (B-15)$$

\* If  $\underline{a}_{(I)} = \begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix}$  then  $(\underline{a}_{(I)} \times) \triangleq \begin{bmatrix} 0 & -a_3 & a_2 \\ a_3 & 0 & -a_1 \\ -a_2 & a_1 & 0 \end{bmatrix}$

The velocity magnitude error equations are derived using the same logic as that which was employed to obtain the altitude rate error equation. Equations (B-15) and (B-16) show the definition of velocity magnitude and the means of computing it.

$$v_E = (\underline{v}_E \cdot \underline{v}_E)^{1/2} \quad (B-16)$$

$$v_{E_c} = (\underline{v}_{E_c} \cdot \underline{v}_{E_c})^{1/2} = v_E + \delta v_E \quad (B-17)$$

With the aid of Equations (B-11) and (B-17) as well as the definition of Equation (B-16) the following equation for  $\delta v_E$  may be written.

$$\delta v_E = \begin{bmatrix} 0 & \frac{\underline{v}_E(I)^T}{v_E} & 0 \end{bmatrix} \begin{bmatrix} \delta r_{(I)} \\ \delta v_{E(I)} \\ \delta \phi_{(P)} \end{bmatrix} = M_V \begin{bmatrix} \delta r_{(I)} \\ \delta v_{E(I)} \\ \delta \phi_{(P)} \end{bmatrix} \quad (B-18)$$

In addition, the variance of  $\delta v_E$  may be calculated using Equation (B-19) below.

$$\sigma_{\delta v_E}^2 = M_V^P \Sigma_E M_V^T \quad (B-19)$$

The equations which define flight path angle ( $\gamma$ ) and track angle ( $\psi$ ) are given below.

$$\sin \gamma = \frac{\underline{v}_E \cdot \underline{u}}{|\underline{v}_E|} \quad (B-20)$$



$$\tan \psi = \frac{\underline{v}_E \cdot \underline{e}}{\underline{v}_e \cdot \underline{n}} \quad (\text{B-21})$$

where

$$\underline{u} = \frac{\underline{r}}{|\underline{r}|} \quad (\text{B-22})$$

$$\underline{e} = \frac{\underline{1}_Z \times \underline{u}}{|\underline{1}_Z \times \underline{u}|} \quad (\text{B-23})$$

$$\underline{n} = \underline{u} \times \underline{e} \quad (\text{B-24})$$

The equations used, in an onboard computer, to compute  $\gamma$  and  $\psi$  are the same except that the computed values of  $\underline{u}$ ,  $\underline{e}$ ,  $\underline{n}$  as well as  $\underline{v}_E$  are required. This leads to the interesting problem of trying to compute quantities in a coordinate frame which itself must be computed. Thus, there are two causes of error in the real time computation of  $\gamma$  and  $\psi$ : errors in computing  $\underline{v}_E$ , and errors in computing  $\underline{r}$ , which result in errors in the computation of  $\underline{u}$ ,  $\underline{e}$ ,  $\underline{n}$ . Before expressions for  $\delta\gamma$  and  $\delta\psi$  are evaluated it is required that  $\delta\underline{u}$ ,  $\delta\underline{e}$ , and  $\delta\underline{n}$  be evaluated. The derivation follows exactly the logic used thus far and the algebra will not be presented here. The results, however, are Equations (B-25) through (B-27) below.

$$\delta\underline{u}_{(I)} = \frac{1}{|\underline{r}|} \left[ \underline{I} - \frac{\underline{u}_{(I)} \underline{u}_{(I)}^T}{|\underline{u}_{(I)}|^2} \right] \delta\underline{r}_{(I)} = \underline{M}_u \delta\underline{r}_{(I)} \quad (\text{B-25})$$

$$\delta\underline{e}_{(I)} = \frac{1}{|\underline{1}_Z \times \underline{u}|} \left[ \underline{I} - \frac{\underline{e}_{(I)} \underline{e}_{(I)}^T}{|\underline{e}_{(I)}|^2} \right] (\underline{1}_Z \times) \delta\underline{u}_{(I)} = \underline{M}_e \delta\underline{r}_{(I)} \quad (\text{B-26})$$

$$\delta\underline{v}_{(I)} = (\underline{u}_{(I)} \times) \delta\underline{e}_{(I)} - (\underline{e}_{(I)} \times) \delta\underline{u}_{(I)} = \underline{M}_v \delta\underline{r}_{(I)} \quad (\text{B-27})$$

With Equations (B-25) through (B-27) defined it is quite straightforward to derive expressions for  $\delta\gamma$  and  $\delta\psi$ . The equation used to compute  $\gamma_c$  is:

$$\sin \gamma_c = \frac{\underline{v}_{-E_c} \cdot \underline{u}_c}{|\underline{v}_{-E_c}|} \quad (B-28)$$

However, the definitions

$$\gamma_c = \gamma + \delta\gamma \quad (B-29)$$

$$\underline{u}_c = \underline{u} + \delta\underline{u} \quad (B-30)$$

along with (B-11) and (B-25) may be substituted into (B-28) to obtain the following expression for  $\delta\gamma$ .

$$\delta\gamma = \frac{\sec \gamma}{|\underline{v}_{-E}|} \left[ \frac{1}{|\underline{r}|} \left[ (\underline{u}_{(I)} \times \underline{v}_{-E(I)} \times \underline{u}_{(I)})^T \right] \left[ \frac{1}{|\underline{v}_{-E}^2|} \left[ (\underline{v}_{-E(I)} \times (\underline{u}_{(I)} \times \underline{v}_{-E(I)}))^T \right] \right] \begin{matrix} \delta\underline{r}_{(I)} \\ \delta\underline{v}_{-E(I)} \\ \delta\underline{\omega}_{(P)} \end{matrix} \right]$$

$$= M_\gamma \begin{matrix} \delta\underline{r}_{(I)} \\ \delta\underline{v}_{-E(I)} \\ \delta\underline{\omega}_{(P)} \end{matrix}$$

(B-31)

The variance for  $\delta\gamma$  is also easily shown to be:

$$\sigma_{\delta\gamma}^2 = M_{\gamma} P_E M_{\gamma}^T \tag{B-32}$$

Finally, the expression for  $\delta\psi$  and  $\sigma_{\delta\psi}^2$  may be shown, with some effort, to be given by Eqs. (B-33) and (B-34).

$$\delta\psi_{(I)} = \frac{1}{[(\underline{v} \cdot \underline{n})^2 + (\underline{v} \cdot \underline{e})^2]} \left[ (\underline{v}_E \cdot \underline{n}) \underline{v}_{E(I)}^T M_e - (\underline{v}_E \cdot \underline{e}) (\underline{v}_{E(I)}^T M_n) \right] \left[ \underline{v}_{E(I)} \times \underline{u}_{(I)} \right]^T \begin{bmatrix} \delta r_{(I)} \\ \delta v_{E(I)} \\ \delta \varphi_{(P)} \end{bmatrix} + 0$$

$$= M_{\psi} \begin{bmatrix} \delta r_{(I)} \\ \delta v_{E(I)} \\ \delta \varphi_{(P)} \end{bmatrix} \tag{B-33}$$

$$\sigma_{\delta\psi}^2 = M_{\psi} P_E M_{\psi}^T \tag{B-34}$$

This completes the development of the equations used to evaluate the special output quantities for the Space Shuttle landing system evaluation.

## APPENDIX C

ERROR CONTRIBUTION TIME HISTORIES

This appendix presents the time histories associated with the error budget results summarized in Section 5. The data is presented in tabular form with each table indicating the rms errors in position, velocity, and platform alignment in both the R (runway) and V (relative velocity) coordinate frames (see Appendix A), which result from a specific error source or group of errors. The rms errors in altitude, velocity magnitude, flight path angle ( $\gamma$ ), and track angle ( $\psi$ ) are also presented. In addition the error in estimating each of the states 10 through 24 is given at touchdown for System A, states 10 through 22 for System C, and states 10 through 23 for System D.

The data contained in pages C-3 through C-62 is that for Systems A and B. The time points in each table correspond to every minute from the first DME measurement (1686 sec) to touchdown (2482 sec) as well as just before and just after each measurement device is activated. Thus, there are two rows of data for each of the following times (see Table 2.1-1):

$$T_{DME} = 1686 \text{ sec}$$

$$T_{BA} = 1806 \text{ sec}$$

$$T_{LCL} = 2292 \text{ sec}$$

$$T_{RA} = 2430 \text{ sec}$$

$$T_{GLS} = 2449.5 \text{ sec}$$

System A data is given first, ordered according to error source group numbers, 1 through 17. System B data follows, ordered according to its group numbers, 1 through 18.

The data contained in pages C-63 through C-86 is that for System C. The time points correspond to every minute from the first one-way doppler measurement (1686 sec) as well as before and after each measurement device is activated. Thus, there are two rows of data for each of the following times:

$$T_{\text{OWD}} = 1686 \text{ sec}$$

$$T_{\text{BA}} = 1806 \text{ sec}$$

$$T_{\text{RA}} = 2430 \text{ sec}$$

Additional rows are added 10 and 5 seconds prior to touchdown (2472 and 2477 sec). The tables are ordered according to error source group numbers, 1 through 16.

The data contained in pages C-87 through C-117 is that for System D. The time points are similar to those of Systems A and B except that  $T_{\text{RA}} = 2450 \text{ sec}$  and there is no  $T_{\text{GLS}}$ . Additional rows are also added 10 and 5 seconds prior to touchdown. The tables are ordered according to error source group numbers, 1 through 19.

The magnitudes and mathematical description of the error sources are given in Section 3. Units are in feet, feet/sec, radians and radians/sec.

SYSTEM A GROUP 1

(LCL FIRST ORDER MARKOV

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERR--
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	3.650E+01	2.845E+01	2.836E+02	2.837E-01	6.861E-01	1.886E+00	6.102E-05	1.682E-04	9.868E-05	2.824E-01	1.757E+00
2346.00	2.606E+01	9.257E+00	1.068E+02	1.169E-01	1.691E-01	6.191E-01	4.472E-05	5.250E-05	2.485E-05	1.176E-01	1.891E-00
2406.00	6.338E+01	2.859E+01	5.922E+01	2.436E-01	8.821E-02	6.118E-01	1.025E-04	6.620E-05	3.246E-05	2.444E-01	1.355E-00
2430.00	7.614E+01	3.174E+01	4.846E+01	2.692E-01	8.958E-02	6.230E-01	1.079E-04	6.768E-05	3.217E-05	2.699E-01	1.382E-00
2430.00	2.735E+00	2.223E+01	4.627E+01	8.029E-02	1.412E-01	6.049E-01	1.089E-04	6.747E-05	3.500E-05	8.089E-02	1.550E-00
2449.50	7.278E-01	1.738E+01	3.235E+01	7.025E-02	1.531E-01	6.122E-01	1.111E-04	7.021E-05	3.515E-05	7.068E-02	1.642E-00
2449.50	5.555E-01	1.451E+01	3.143E+01	6.530E-02	1.606E-01	6.962E-01	1.109E-04	6.985E-05	3.558E-05	6.568E-02	1.705E-00
2466.00	1.524E-01	1.920E+00	1.627E+01	2.998E-02	1.826E-01	5.887E-01	1.054E-04	7.256E-05	3.582E-05	3.001E-02	1.843E-00
2462.00	1.026E-01	3.182E+00	9.230E+00	6.888E-03	1.345E-01	5.068E-01	8.231E-05	6.425E-05	2.734E-05	6.880E-03	1.349E-00

ORIGINAL PAGE IS OF POOR QUALITY

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERRO
	1686.00										
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	3.647E+01	1.597E+02	2.361E+02	2.876E-01	1.734E+00	1.009E+00	6.178E-05	6.576E-05	1.834E-04	5.534E-05	1.888E-01
2346.00	2.603E+01	8.950E+00	1.068E+02	1.174E-01	1.726E-01	6.181E-01	4.485E-05	5.225E-05	2.517E-05	1.373E-04	9.815E-01
2406.00	6.334E+01	2.861E+01	5.925E+01	2.437E-01	8.915E-02	6.116E-01	1.026E-04	6.598E-05	3.261E-05	4.481E-04	1.261E-02
2430.00	7.611E+01	3.177E+01	4.849E+01	2.692E-01	9.006E-02	6.229E-01	1.080E-04	6.753E-05	3.225E-05	5.414E-04	1.385E-02
2430.00	2.714E+00	2.220E+01	4.629E+01	8.043E-02	1.419E-01	6.047E-01	1.090E-04	6.752E-05	3.509E-05	1.115E-04	1.344E-01
2449.50	7.182E-01	1.737E+01	3.235E+01	7.034E-02	1.536E-01	6.120E-01	1.112E-04	7.012E-05	3.521E-05	9.171E-05	1.823E-01
2449.50	5.639E-01	1.450E+01	3.143E+01	6.539E-02	1.610E-01	6.060E-01	1.109E-04	6.976E-05	3.564E-05	7.712E-05	1.409E-01
2466.00	1.528E-01	1.924E+00	1.627E+01	3.003E-02	1.830E-01	5.886E-01	1.054E-04	7.251E-05	3.587E-05	5.700E-05	1.614E-02
2482.00	1.026E-01	3.185E+00	9.229E+00	6.888E-03	1.348E-01	5.067E-01	8.231E-05	6.423E-05	2.738E-05	1.989E-05	1.674E-02

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.023E-08	4.462E-08	2.419E-08	1.558E-06	1.974E-06	7.138E-07	1.189E-05	4.724E-06	1.071E-05
3.034E+00	8.701E+00	9.816E-02	2.040E-03	5.386E-02	1.010E-11			

C-3

PRINTED IN U.S.A.

LITHO

SYSTEM A GROUP 1

(GLS FIRST ORDER MARKOV

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	1.024E+01	2.183E+01	1.137E-01	3.786E-02	7.039E-02	6.147E-03	2.230E-06	8.109E-08	4.804E-06	3.827E-02	6.189E-02
2466.00	1.920E+00	3.183E+00	2.233E-01	2.377E-01	8.275E-02	1.946E-02	4.434E-06	3.209E-06	5.312E-06	2.377E-01	9.343E-02
2482.00	8.104E-01	9.298E+00	1.028E-01	1.028E-01	1.570E-01	4.089E-03	7.377E-06	1.155E-06	1.641E-05	1.028E-01	1.563E-01

C-4

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	1.023E+01	2.183E+01	1.323E-01	3.782E-02	7.040E-02	6.207E-03	2.230E-06	7.571E-08	4.804E-06	1.164E-04	1.443E-05
2466.00	1.920E+00	3.183E+00	2.228E-01	2.377E-01	8.271E-02	1.940E-02	4.435E-06	3.205E-06	5.313E-06	6.399E-04	5.321E-05
2482.00	8.103E-01	9.298E+00	1.075E-01	1.027E-01	1.570E-01	4.122E-03	7.377E-06	1.164E-06	1.641E-05	3.432E-04	1.361E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

3.568E-09	5.983E-09	6.132E-09	2.839E-06	3.035E-06	2.379E-06	2.565E-05	3.817E-06	1.137E-05
8.957E+00	5.815E-01	7.503E-01	2.974E-06	3.812E-01	1.182E-03			

PCN 11/11/11

05/11/11



ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM A GROUP 1

CRADAR ALT. MARKOV ERROR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.045F+02	1.419E+01	8.728E-01	2.722E-01	8.522E-02	1.782E-02	1.694F-06	7.915F-09	4.638E-06	2.725E-01	2.965E-02
2449.50	3.253E+01	6.013E+00	8.320E-02	8.450F-02	3.435E-02	5.753E-03	1.622E-06	7.592F-07	2.286E-06	8.461E-02	2.303F-02
2449.50	1.100E+01	3.791E+01	1.827E-01	3.037E-02	1.075F-01	1.207E-02	3.392E-06	7.043E-07	7.560E-06	3.041E-02	1.065E-01
2466.00	8.940E-01	4.890E+00	5.813E-02	6.888E-02	7.890F-02	7.014E-03	4.013E-06	8.606E-07	7.069E-06	6.885F-02	8.198F-02
2482.00	9.901E-01	8.648E+00	2.473E-02	5.265E-02	1.318E-01	2.251F-03	5.968E-06	1.490E-07	1.239E-05	5.261E-02	1.323E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.045F+02	1.429F+01	8.919E-01	2.722E-01	8.547E-02	1.794E-02	1.696E-06	8.831E-11	4.638E-06	6.183F-04	3.987F-05
2449.50	3.253F+01	6.030E+00	8.797E-02	8.449E-02	3.439E-02	5.753E-03	1.622E-06	7.566E-07	2.287E-06	2.016E-04	1.337E-05
2449.50	1.103F+01	3.791F+01	2.140E-01	3.038F-02	1.075E-01	1.215E-02	3.392E-06	7.055E-07	7.559E-06	7.821E-05	2.823E-05
2466.00	8.961E-01	4.890F+00	5.784E-02	6.889E-02	7.889E-02	6.961F-03	4.013E-06	8.549E-07	7.069E-06	1.784E-04	1.909E-05
2482.00	9.902F-01	8.648E+00	3.026E-02	5.265E-02	1.318E-01	2.166E-03	5.968E-06	1.534E-07	1.239E-05	1.696F-04	7.151E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

2.529E+09	5.892E-09	3.046E-09	1.633E-06	1.187E+06	8.310E-07	1.060E+05	3.253E-06	3.104E-06
8.373E+00	5.858E-01	9.530F-01	6.520E-07	1.249E+00	2.961E-11			

C-5

1036

SYSTEM A GROUP 1

(DME MEASUREMENT NOISE)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR		VELOCITY MAG ERROR	
	R	D	C	R	D	C	R	D	C	R	C	R	C
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.461F+01	4.705E+01	7.360E+00	8.061F+02	3.926F+02	5.925E+02	8.129F+09	1.894F+08	7.224E+09	6.936F+02	9.393E+03	2.358E+01	6.957E-01
1746.00	1.849E+03	7.836E+02	1.037E+03	4.108F+00	1.969E+00	7.193E+00	3.868E+05	9.328F+05	6.441F+05	4.155F+00	2.358E+01	6.957E-01	6.957E-01
1806.00	3.962F+02	1.578E+02	1.931E+02	8.700F+01	8.033E+01	1.180E+01	1.211F+04	3.172F+05	5.299E+05	8.799E+01	6.957E-01	6.957E-01	6.957E-01
1806.00	2.303F+02	1.597F+02	1.714E+02	5.276F+01	8.139E+01	9.711E+01	9.885F+05	3.627F+05	4.750F+05	5.304E+01	5.119F+01	4.804E-01	5.899E-01
1866.00	1.784E+02	2.154E+02	1.589E+02	4.520F+01	9.290F+01	7.365F+01	9.301F+05	3.462F+05	7.551F+05	4.604E+01	4.804E-01	5.899E-01	5.899E-01
1926.00	2.134F+02	1.373E+02	2.718E+02	4.782E+01	7.901E+01	1.047F+00	1.169F+04	3.036F+05	5.111F+05	4.856F+01	5.899E-01	1.631E+01	1.631E+01
1986.00	7.240E+01	1.029F+02	8.278E+01	2.002F+01	4.133F+01	4.470F+01	6.732E+05	4.952F+05	6.156E+05	5.829F+05	9.528F+02	4.573E-01	5.872E-01
2046.00	1.226E+01	1.199E+02	1.231E+02	9.685F+02	5.166E+01	6.001F+01	6.922F+05	5.032E+05	5.816F+05	1.905E+01	6.393E-01	5.872E-01	5.872E-01
2092.00	1.528F+01	6.157F+01	3.292E+01	1.931E+01	5.008E+01	3.831F+01	4.440F+05	6.430F+05	8.691F+05	1.899F+01	6.393E-01	4.248F+01	4.248F+01
2106.00	1.321F+01	5.230F+01	2.373E+01	1.261F+01	1.926F+01	3.825F+01	4.582E+05	4.939F+05	7.166F+05	1.236E+01	2.400F+01	4.248F+01	4.248F+01
2166.00	1.624E+01	3.367F+01	1.847E+01	1.261F+01	4.108F+01	2.953F+01	4.044E+05	3.438F+05	4.614F+05	9.109E+02	2.800F+01	4.064E+01	4.064E+01
2226.00	2.138E+01	3.301F+01	3.225E+01	9.263F+02	2.720F+01	2.874F+01	3.801E+05	3.764F+05	3.677E+05	8.834E+02	4.024E+01	4.024E+01	4.024E+01
2286.00	2.274F+01	2.225F+01	5.582E+01	8.856F+02	2.312F+01	3.927E+01	3.801E+05	3.764F+05	3.677E+05	8.834E+02	4.024E+01	4.024E+01	4.024E+01
2292.00	2.246E+01	2.134E+01	5.734E+01	8.585F+02	2.395F+01	3.927E+01	3.807F+05	3.761F+05	3.697E+05	8.579E+02	4.064E+01	2.699E+01	2.699E+01
2292.00	2.063F+01	1.914E+01	3.016E+01	6.438E+02	2.111E+01	2.273F+01	3.730F+05	2.528F+05	3.364E+05	6.444E+02	1.808F+01	1.808F+01	1.808F+01
2346.00	2.214E+01	1.747E+01	4.520F+00	6.471F+02	1.839E+01	1.061E+01	3.537F+05	1.679F+05	2.680E+05	4.982E+02	1.808F+01	1.808F+01	1.808F+01
2406.00	3.257E+01	1.799E+01	2.715F+00	7.303F+02	1.585E+01	7.423F+02	2.902F+05	1.185F+05	2.045F+05	7.312E+02	1.513E+01	1.513E+01	1.513E+01
2430.00	5.016F+01	1.660F+01	2.477E+00	1.193F+01	1.477F+01	6.264E+02	2.638E+05	1.006E+05	1.833F+05	1.194F+01	1.390E+01	1.390E+01	1.390E+01
2430.00	1.874F+00	1.533F+01	2.585E+00	1.793F+02	1.347E+01	6.478F+02	2.594F+05	9.914F+06	1.758E+05	1.787E+02	1.339F+01	1.339F+01	1.339F+01
2449.50	1.036E+00	1.418E+01	4.931E+01	2.044E+02	8.488F+02	3.496F+02	2.127E+05	6.535E+06	1.269E+05	2.055E+02	8.278E+02	8.278E+02	8.278E+02
2449.50	8.267F+01	1.351E+01	4.655F+01	1.909F+02	8.337E+02	3.461E+02	2.118E+05	6.494E+06	1.257E+05	1.918E+02	8.278E+02	8.278E+02	8.278E+02
2466.00	5.582E+01	1.266E+01	2.613E+01	1.427E+02	8.999F+02	2.227E+02	1.912E+05	4.933E+06	1.207E+05	1.444E+02	8.980F+02	8.980F+02	8.980F+02
2482.00	1.660E+01	8.466E+00	1.133E+01	1.988E+02	9.473E+02	9.225E+03	1.768E+05	3.556F+06	1.227E+05	2.000E+02	9.487E+02	9.487E+02	9.487E+02

TIME	U			V			W			GAMMA ERROR		PSI ERROR	
	U	V	W	U	V	W	U	V	W	R	C	R	C
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.599F+01	4.442F+01	1.500E+01	7.989F+02	5.520E+03	7.166F+02	7.931E+09	1.389E+08	1.492E+08	1.381E+05	1.426E+05	8.030E+04	8.030E+04
1746.00	1.840E+03	3.459F+02	1.267E+03	4.093E+00	5.240E+01	2.922F+00	3.903F+05	7.581F+05	1.103E+04	1.102E+03	4.544E+04	4.544E+04	4.544E+04
1806.00	3.945E+02	1.373E+02	2.113E+02	8.634F+00	7.608E+01	1.212F+00	1.213F+04	5.670F+05	2.325E+05	3.451E+04	4.284F+04	4.284F+04	4.284F+04
1806.00	2.294E+02	9.830E+01	2.136E+02	5.193F+01	5.487E+01	1.144F+00	9.958F+05	5.590F+05	1.735F+05	2.096F+04	5.643E+04	5.643E+04	5.643E+04
1866.00	1.779E+02	1.291E+02	2.349E+02	4.503E+01	5.258F+01	1.063F+00	9.367E+05	6.324F+05	5.277E+05	2.654E+04	8.608E+04	8.608E+04	8.608E+04
1926.00	2.128F+02	1.601E+02	2.033E+02	4.759F+01	6.873E+01	1.118F+00	1.170F+04	5.840F+05	1.019F+05	4.521E+04	6.054E+04	6.054E+04	6.054E+04
1986.00	7.224F+01	5.620F+01	1.196E+02	1.997E+01	1.801E+01	5.817F+01	6.742F+05	7.781F+05	3.166E+05	2.735E+04	7.991E+04	7.991E+04	7.991E+04
2046.00	1.223F+01	9.067E+01	1.460F+02	9.672F+02	4.563E+01	6.472F+01	6.922F+05	6.796F+05	3.621F+05	1.129E+04	3.228E+04	3.228E+04	3.228E+04
2092.00	1.520F+01	5.568F+01	4.215F+01	1.922F+01	5.645E+01	2.816E+01	4.444E+05	4.504E+05	9.158F+05	1.151E+04	1.173E+04	2.113F+04	2.113F+04
2106.00	1.314F+01	4.901F+01	2.997E+01	1.914F+01	6.189E+01	1.831F+01	4.431F+05	2.666F+05	1.048E+04	1.173E+04	7.752F+05	3.702E+04	3.702E+04
2166.00	1.616F+01	3.370E+01	1.849E+01	1.744F+01	4.111E+01	2.955E+01	4.575E+05	4.929E+05	7.177F+05	7.177F+05	4.242F+04	4.242F+04	4.242F+04
2226.00	2.130F+01	4.276F+01	1.746F+01	9.232F+02	2.367F+01	3.172F+01	4.046F+05	5.404F+05	1.972E+05	8.137E+05	1.57E+05	3.170F+04	3.170F+04
2286.00	2.268E+01	3.195F+01	5.091E+01	8.911E+02	4.008E+01	2.171F+01	3.811F+05	1.811F+05	4.932E+05	4.932E+05	3.532E+04	3.532E+04	3.532E+04
2292.00	2.241E+01	2.903F+01	5.388F+01	8.643E+02	3.969E+01	2.599F+01	3.817F+05	1.794F+05	4.951E+05	8.241F+05	3.532E+04	3.532E+04	3.532E+04
2292.00	2.058E+01	1.711F+01	3.139F+01	6.461E+02	2.680E+01	1.561E+01	3.739F+05	1.339E+05	3.981E+05	8.150E+05	2.295E+04	2.295E+04	2.295E+04
2346.00	2.212E+01	1.752F+01	4.484E+00	4.969E+02	1.844E+01	1.053E+01	3.542E+05	1.654F+05	2.688E+05	9.600E+05	1.668E+04	1.668E+04	1.668E+04
2406.00	3.255E+01	1.802E+01	2.687E+00	7.295E+02	1.586E+01	7.401F+02	2.904F+05	1.177F+05	2.047E+05	1.762F+04	1.525E+04	1.525E+04	1.525E+04
2430.00	5.015E+01	1.662E+01	2.462E+00	1.193F+01	1.478F+01	6.251F+02	2.639F+05	1.002F+05	1.834E+05	2.822E+04	1.389E+04	1.389E+04	1.389E+04
2430.00	1.876E+00	1.533E+01	2.577E+00	1.800F+02	1.347E+01	6.488F+02	2.595F+05	9.871F+06	1.759E+05	5.179E+05	1.434F+04	1.434F+04	1.434F+04
2449.50	1.039E+00	1.418E+01	4.911F+01	2.045E+02	8.488F+02	3.494F+02	2.127E+05	6.515F+06	1.270E+05	5.306F+05	8.119E+05	8.119E+05	8.119E+05
2449.50	8.339F+01	1.351E+01	4.705E+01	1.910F+02	8.338F+02	3.488E+02	2.118F+05	6.474F+06	1.257F+05	4.949F+05	8.036E+05	8.036E+05	8.036E+05
2466.00	5.615E+01	1.266E+01	2.626E+01	1.427E+02	9.000E+02	2.225F+02	1.912E+05	4.922F+06	1.207F+05	4.290E+05	6.101E+05	6.101E+05	6.101E+05
2482.00	1.661F+01	8.466E+00	1.146E+01	1.988E+02	9.473E+02	9.213E+03	1.768E+05	3.552E+06	1.227E+05	6.392E+05	3.043E+05	3.043E+05	3.043E+05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)  
 2.760E+09 5.952F+09 4.054E+09 4.732F+07 3.375E+07 3.761E+06 1.729E+06 2.134E+06  
 1.971E+01 1.864E+01 1.743E+01 4.204E+06 1.167E+01 2.305E+11

Note: The input value  $\sigma = 48$  ft was used. Divide all values in this table by two to make it consistent with the base-line error budget value for DME noise,  $\sigma = 24$  ft.

PRINTED IN U.S.A. C-6 11/11/71

SYSTEM A GROUP 1

RADAR ALT. MEAS. NOISE

POSITION ESTIMATE ERROR VELOCITY ESTIMATE ERROR PLATFORM TILT ESTIMATE ERROR ALTITUDE VELOCITY  
 R D C R D C R D C RATE ERROR MAG ERROR

ORIGINAL PAGE IS  
OF POOR QUALITY

TIME	R	D	C	R	D	C	R	D	C	ALTITUDE RATE ERROR	VELOCITY MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	3.156E+00	4.284F-01	2.635E-02	8.218F-03	2.573E-03	5.380F-04	5.120F-08	2.389E-10	1.400F-07	8.225E-03	8.951F-04
2449.50	1.916E+00	4.725E-01	7.011E-03	6.482E-03	1.397F+03	4.397E+04	3.171E-08	2.318E-08	6.769E-08	6.491E-03	4.469E-04
2449.50	6.858E-01	2.241F+00	7.564E-03	2.160E-03	7.416E-03	3.683F-04	2.722E-07	3.248E-08	5.397E-07	2.122F-03	7.666E-03
2466.00	4.026E-01	1.851E+00	2.211E-02	3.537E-02	3.870F-02	3.258E-03	1.944E-06	4.328F-07	3.385E-06	3.535E-02	4.044F-02
2482.00	7.809E-01	4.648E+00	1.188E-02	4.505E-02	9.063F+02	1.363F+03	3.917E-06	8.251E-06	8.194E-06	4.500E-02	9.121E-02

TIME U V W U V W U V W GAMMA ERROR PSI ERROR

1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	3.155F+00	4.315E-01	2.693E-02	8.216E-03	2.580E-03	5.414E-04	5.120F-08	2.666F-12	1.400F-07	1.867E-05	1.204E-06
2449.50	1.916F+00	4.735E-01	7.415F-03	6.481F-03	1.400F-03	4.408F-04	3.171E-08	2.318F-08	6.769F-08	1.511E-05	1.024E-06
2449.50	6.871E-01	2.241F+00	9.443F-03	2.164E-03	7.415E-03	3.740E-04	2.722F-07	3.195F-08	5.397E-07	2.100E-06	8.691E-07
2466.00	4.031E-01	1.851E+00	2.099E-02	3.538F-02	3.870E-02	3.230E-03	1.944E-06	4.298F-07	3.385F-06	9.131E-05	8.856E-06
2482.00	7.810E-01	4.648E+00	1.501E-02	4.505F-02	9.063E-02	1.302E-03	3.917E-06	8.207E-06	8.194E-06	1.447E-06	4.301E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.604E-09	4.069E-09	1.703E-09	1.451E-06	9.959E-07	6.852E-07	9.020E-06	2.941E-06	2.190E-06
4.459E+00	3.103E-01	7.465E-01	3.214E-07	4.298E-01	1.027E-11			

SYSTEM A GROUP 1

QUANTIZATION IN COMPUTER

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.240E+02	3.333E+01	4.706E+01	2.891E+01	1.646E+01	2.133E-01	2.186E-06	6.369E-06	5.045E-06	2.891E-01	1.647E-01
1806.00	9.844E+01	3.154E+01	3.235E+01	2.705E-01	2.195E-01	2.301E-01	8.285E-06	4.582E-06	5.436E-06	2.704E-01	2.174E-01
1806.00	5.096E+01	2.665E+01	2.896E+01	2.175E-01	2.133E-01	2.074E-01	1.457E-05	6.728E-06	5.530E-06	2.169E-01	1.810E-01
1866.00	8.749E+01	2.646E+01	3.974E+01	2.572E-01	2.732E-01	2.808E-01	1.787E-05	7.031E-06	1.202E-05	2.567E-01	2.539E-01
1926.00	6.724E+01	3.741E+01	3.119E+01	2.459E-01	3.126E-01	2.869E-01	2.049E-05	9.074E-06	1.581E-05	2.456E-01	2.706E-01
1986.00	3.271E+01	4.461E+01	3.109E+01	2.501E-01	3.732E-01	2.933E-01	2.590E-05	1.732E-05	1.884E-05	2.495E-01	2.827E-01
2046.00	6.324E+00	4.355E+01	2.263E+01	2.914E-01	3.920E-01	2.467E-01	2.398E-05	3.067E-05	2.345E-05	2.907E-01	2.260E-01
2092.00	1.483E+01	3.828E+01	1.932E+01	3.319E-01	3.089E-01	1.987E-01	2.278E-05	2.259E-05	1.501E-05	3.314E-01	2.175E-01
2106.00	1.943E+01	3.555E+01	2.200E+01	3.493E-01	2.693E-01	2.046E-01	2.280E-05	1.955E-05	1.544E-05	3.489E-01	1.959E-01
2166.00	4.212E+01	2.851E+01	3.689E+01	4.170E-01	1.976E-01	2.941E-01	2.499E-05	2.188E-05	3.708E-05	4.167E-01	2.335E-01
2226.00	6.741E+01	2.219E+01	5.344E+01	4.520E-01	2.161E-01	3.641E-01	2.736E-05	2.449E-05	4.518E-05	4.521E-01	3.070E-01
2286.00	9.614E+01	1.537E+01	6.499E+01	4.883E-01	2.991E-01	3.790E-01	2.835E-05	2.354E-05	4.911E-05	4.885E-01	3.920E-01
2292.00	9.895E+01	1.583E+01	6.658E+01	4.921E-01	3.081E-01	3.823E-01	2.834E-05	2.350E-05	4.913E-05	4.920E-01	3.915E-01
2292.00	1.012E+02	1.636E+01	3.567E+01	5.059E-01	2.508E-01	2.330E-01	2.641E-05	2.303E-05	4.106E-05	5.860E-01	2.318E-01
2346.00	1.303E+02	2.310E+01	4.791E+00	5.539E-01	2.149E-01	2.594E-01	2.646E-05	3.465E-05	3.353E-05	5.543E-01	1.806E-01
2406.00	1.559E+02	2.720E+01	6.136E+00	5.870E-01	2.321E-01	2.263E-01	2.900E-05	3.123E-05	3.343E-05	5.874E-01	1.909E-01
2430.00	1.609E+02	2.838E+01	5.601E+00	5.876E-01	2.405E-01	2.029E-01	3.233E-05	3.009E-05	3.352E-05	5.881E-01	2.061E-01
2430.00	5.657E+00	8.894E+00	4.763E+00	2.540E-01	2.045E-01	1.910E-01	3.245E-05	3.001E-05	3.125E-05	2.641E-01	2.061E-01
2449.50	1.561E+00	9.085E+00	1.201E+00	2.623E-01	2.188E-01	1.458E-01	3.899E-05	3.004E-05	3.200E-05	2.624E-01	2.198E-01
2449.50	4.523E-01	7.390E+00	1.127E+00	2.583E-01	2.177E-01	1.446E-01	3.912E-05	3.004E-05	3.197E-05	2.583E-01	2.200E-01
2466.00	5.131E-01	2.584E+00	1.000E+00	1.219E-01	2.325E-01	1.210E-01	4.393E-05	3.026E-05	3.312E-05	1.219E-01	2.313E-01
2482.00	3.296E-01	5.562E+00	6.955E-01	6.919E-02	2.410E-01	9.240E-02	4.801E-05	3.154E-05	3.365E-05	6.922E-02	2.407E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.233E+02	2.693E+01	5.264E+01	2.850E-01	1.827E-01	2.038E-01	2.191E-06	4.518E-07	8.111E-06	7.906E-05	5.473E-05
1806.00	9.798E+01	3.061E+01	3.462E+01	2.682E-01	2.285E-01	2.239E-01	8.330E-06	3.957E-06	5.842E-06	1.034E-04	8.312E-05
1806.00	5.070E+01	2.018E+01	3.417E+01	2.164E-01	1.854E-01	2.337E-01	1.448E-05	7.908E-06	3.980E-06	8.161E-05	8.676E-05
1866.00	8.712E+01	3.213E+01	3.623E+01	2.555E-01	2.732E-01	2.823E-01	1.780E-05	1.035E-05	9.451E-06	1.440E-04	1.492E-04
1926.00	6.700E+01	3.859E+01	3.026E+01	2.452E-01	2.880E-01	3.121E-01	2.044E-05	1.745E-05	5.462E-06	1.986E-04	2.384E-04
1986.00	3.260E+01	3.770E+01	3.927E+01	2.500E-01	2.849E-01	3.798E-01	2.886E-05	2.461E-05	7.194E-06	2.641E-04	3.943E-04
2046.00	6.308E+00	2.119E+01	4.427E+01	2.914E-01	2.149E-01	4.103E-01	2.398E-05	2.968E-05	2.471E-05	3.402E-04	5.047E-04
2092.00	1.480E+01	1.630E+01	3.967E+01	3.319E-01	2.101E-01	3.013E-01	2.279E-05	9.955E-06	2.523E-05	3.670E-04	3.046E-04
2106.00	1.939E+01	1.673E+01	3.833E+01	3.492E-01	1.854E-01	2.822E-01	2.822E-05	1.261E-05	2.149E-05	3.903E-04	3.248E-04
2166.00	4.205E+01	2.849E+01	3.698E+01	4.165E-01	1.981E-01	2.944E-01	2.496E-05	2.189E-05	3.710E-05	4.903E-04	3.686E-04
2226.00	6.733E+01	5.450E+01	1.971E+01	4.512E-01	3.079E-01	2.918E-01	2.733E-05	4.893E-05	1.576E-05	5.961E-04	3.896E-04
2286.00	9.606E+01	4.907E+01	4.546E+01	4.875E-01	4.237E-01	2.330E-01	2.835E-05	2.797E-05	4.673E-05	7.340E-04	3.389E-04
2292.00	9.887E+01	4.571E+01	5.108E+01	4.914E-01	4.239E-01	2.493E-01	2.834E-05	2.378E-05	4.899E-05	7.472E-04	3.661E-04
2292.00	1.011E+02	2.947E+01	2.621E+01	5.053E-01	2.539E-01	2.309E-01	2.639E-05	2.954E-05	3.666E-05	7.042E-04	3.383E-04
2346.00	1.302E+02	2.348E+01	4.852E+00	5.536E-01	2.149E-01	2.330E-01	2.647E-05	3.467E-05	3.350E-05	8.783E-04	4.116E-04
2406.00	1.558E+02	2.743E+01	6.163E+00	5.868E-01	2.323E-01	2.265E-01	2.900E-05	3.124E-05	3.342E-05	1.213E-03	4.668E-04
2430.00	1.608E+02	2.854E+01	5.615E+00	5.875E-01	2.406E-01	2.030E-01	3.233E-05	3.009E-05	3.352E-05	1.309E-03	4.511E-04
2430.00	5.651E+00	8.894E+00	4.763E+00	2.640E-01	2.044E-01	1.911E-01	3.245E-05	3.001E-05	3.125E-05	5.722E-04	4.247E-04
2449.50	1.558E+00	9.086E+00	1.200E+00	2.623E-01	2.188E-01	1.459E-01	3.900E-05	3.003E-05	3.200E-05	5.965E-04	3.389E-04
2449.50	4.546E-01	7.391E+00	1.125E+00	2.583E-01	2.176E-01	1.446E-01	3.912E-05	3.003E-05	3.197E-05	5.804E-04	3.361E-04
2466.00	5.129E-01	2.584E+00	1.000E+00	1.219E-01	2.325E-01	1.211E-01	4.394E-05	3.026E-05	3.312E-05	3.404E-04	3.320E-04
2482.00	3.296E-01	5.562E+00	6.939E-01	6.919E-02	2.409E-01	9.241E-02	4.801E-05	3.153E-05	3.365E-05	2.313E-04	3.052E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

4.255E+09	1.692E+08	6.855E+09	7.837E+06	6.732E+06	4.827E+06	5.882E+05	1.345E+05	1.951E+05
5.109E+00	6.196E-01	2.934E-01	2.549E+05	1.356E+01	2.219E-11			

REPORTED IN USA

8-C

000000

SYSTEM A GROUP 1 DIRECT

INITIAL CONDITION ERRORS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	1.366E+04	1.018E+04	1.735E+04	3.646E+01	8.402E+00	8.724E+00	6.837E-04	3.894E-03	6.148E-04	3.396E+01	7.491E+00
1686.00	9.201E+03	1.469E+04	1.397E+04	2.005E+01	1.790E+01	2.161E+01	6.834E-04	3.867E-04	6.126E-04	2.032E+01	8.933E+00
1746.00	5.533F+03	2.100E+03	1.811E+03	1.428E+01	2.234E+01	2.101E+01	8.319E-04	6.483E-04	7.827E-04	1.426E+01	7.908E+00
1806.00	5.485E+03	1.819E+03	8.102E+02	1.535E+01	1.712E+01	1.502E+01	9.802E-04	7.793E-04	8.005E-04	1.536E+01	9.763E+00
1806.00	2.828E+03	1.179E+03	6.136E+02	1.005E+01	1.688E+01	1.334E+01	9.813E-04	7.777E-04	1.094E-03	1.003E+01	6.594E+00
1866.00	2.111E+03	9.508E+02	9.273E+02	6.907E+00	1.402E+01	1.216E+01	1.218E-03	8.205E-04	1.244E-03	6.918E+00	8.485E+00
1926.00	1.537E+03	1.030E+03	8.173E+02	6.073E+00	1.354E+01	8.633E+00	1.488E-03	8.483E-04	1.490E-03	6.076E+00	5.929E+00
1986.00	7.614E+02	1.450E+03	5.628E+02	3.930E+00	1.515E+01	7.173E+00	1.753E-03	7.771E-04	1.777E-03	3.940E+00	8.019E+00
2046.00	1.966E+02	1.572E+03	6.178E+02	2.651E+00	1.615E+01	5.933E+00	1.939E-03	7.346E-04	1.963E-03	2.639E+00	3.201E+00
2092.00	1.578E+02	1.308E+03	1.879E+02	2.308E+00	1.251E+01	2.408E+00	2.072E-03	4.532E-04	1.450E-03	2.295E+00	5.917E+00
2106.00	1.635E+02	1.211E+03	3.271E+02	2.199E+00	1.057E+01	3.232E+00	2.071E-03	4.633E-04	1.152E-03	2.194E+00	5.491E+00
2166.00	3.077E+02	9.862E+02	9.483E+02	2.898E+00	3.221E+00	8.568E+00	2.027E-03	1.004E-03	1.584E-04	2.908E+00	3.088E+00
2226.00	5.785E+02	7.642E+02	1.582E+03	3.173E+00	1.998E+00	1.140E+01	2.035E-03	1.193E-03	5.065E-04	3.189E+00	8.538E+00
2286.00	9.170E+02	2.530E+02	1.940E+03	3.500E+00	4.819E+00	1.156E+01	2.049E-03	1.057E-03	7.496E-04	3.509E+00	1.093E+01
2292.00	9.431E+02	2.189E+02	1.992E+03	3.540E+00	4.999E+00	1.166E+01	2.050E-03	1.049E-03	7.572E-04	3.547E+00	1.052E+01
2292.00	1.040E+03	1.431E+02	1.058E+03	4.225E+00	2.866E+00	5.728E+00	2.064E-03	5.032E-04	4.397E-04	4.230E+00	4.827E+00
2346.00	1.439E+03	1.576E+02	5.220E+01	5.245E+00	1.002E+00	2.802E+00	2.074E-03	1.389E-04	1.582E-04	5.246E+00	3.379E+01
2406.00	1.703E+03	2.037E+02	4.841E+01	5.390E+00	1.423E+00	1.509E+00	1.973E-03	1.303E-04	2.007E-04	5.392E+00	4.916E-01
2430.00	1.736E+03	2.134E+02	3.995E+01	5.260E+00	1.524E+00	1.077E+00	1.755E-03	1.354E-04	2.176E-04	5.263E+00	6.087E-01
2430.00	6.092E+0	7.259E+01	2.598E+01	9.054E-01	4.698E-01	7.753E-01	1.935E-03	1.359E-04	1.517E-04	9.048E-01	4.813E-01
2449.50	1.019E+01	7.828E+01	4.442E+00	7.108E-01	5.514E-01	4.260E-01	1.900E-03	1.496E-04	1.675E-04	7.099E-01	5.310E-01
2449.50	6.831E+00	7.811E+01	4.130E+00	6.927E-01	5.548E-01	4.194E-01	1.900E-03	1.496E-04	1.669E-04	6.916E-01	5.410E-01
2466.00	1.262E+00	8.186E+00	2.593E+00	7.821E-01	8.940E-01	3.314E-01	1.899E-03	1.439E-04	1.977E-04	2.820E-01	8.858E-01
2482.00	3.740E-01	1.989E+01	2.165E+00	5.603E-02	9.643E-01	3.013E-01	1.920E-03	1.260E-04	1.995E-04	5.624E-02	9.634E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	1.413E+04	1.501E+04	1.291E+04	3.628E+01	8.181E+00	9.616E+00	6.932E-04	3.671E-04	6.180E-04	6.811E-03	1.707E-03
1686.00	9.141E+03	7.054E+03	1.903E+04	1.991E+01	9.132E+00	2.644E+01	6.929E-04	3.679E-04	6.135E-04	4.091E-03	5.710E-03
1746.00	5.502E+03	1.272E+03	2.532E+03	1.405E+01	8.909E+00	2.945E+01	8.395E-04	4.475E-04	9.055E-04	3.914E-03	7.823E-03
1806.00	5.450E+03	1.348E+03	1.562E+03	1.520E+01	1.019E+01	2.048E+01	9.859E-04	5.911E-04	9.420E-04	5.897E-03	7.607E-03
1806.00	2.813E+03	7.157E+02	1.156E+03	9.958E+00	6.981E+00	2.039E+01	9.844E-04	9.239E-04	9.702E-04	3.806E-03	7.973E-03
1866.00	2.102E+03	9.223E+02	9.754E+02	6.846E+00	9.267E+00	1.610E+01	1.220E-03	8.850E-04	1.197E-03	4.104E-03	8.495E-03
1926.00	1.531E+03	9.034E+02	9.645E+02	6.036E+00	6.754E+00	1.458E+01	1.490E-03	1.482E-03	9.238E-04	5.167E-03	1.115E-02
1986.00	7.588E+02	8.949E+02	1.274E+03	3.911E+00	8.321E+00	1.456E+01	1.754E-03	1.559E-03	1.153E-03	4.678E-03	1.511E-02
2046.00	1.950E+02	2.791E+02	1.666E+03	2.647E+00	3.124E+00	1.692E+01	1.939E-03	2.039E-03	4.861E-04	3.071E-03	2.081E-02
2092.00	1.573E+02	4.976E+02	1.224E+03	2.306E+00	5.865E+00	1.130E+01	2.072E-03	1.264E-03	8.437E-04	2.437E-03	1.293E-02
2106.00	1.631E+02	5.649E+02	1.120E+03	2.198E+00	5.522E+00	9.579E+00	2.071E-03	1.004E-03	7.315E-04	2.589E-03	1.105E-02
2166.00	3.074E+02	9.861E+02	9.486E+02	2.889E+00	3.219E+00	8.572E+00	2.027E-03	1.001E-03	1.531E-04	3.859E-03	1.073E-02
2226.00	5.782E+02	1.737E+03	2.606E+02	3.152E+00	8.923E+00	7.348E+00	2.035E-03	1.074E-03	7.262E-04	5.527E-03	9.799E-03
2286.00	9.168E+02	1.272E+03	1.486E+03	3.480E+00	1.354E+01	4.874E+00	2.049E-03	1.956E-04	1.281E-03	7.304E-03	7.135E-03
2292.00	9.430E+02	1.137E+03	1.650E+03	3.520E+00	1.111E+01	6.143E+00	2.050E-03	3.350E-04	1.249E-03	7.286E-03	9.061E-03
2292.00	1.039E+03	6.178E+02	8.715E+02	4.213E+00	5.471E+00	3.345E+00	2.064E-03	1.453E-04	6.525E-04	7.141E-03	4.925E-03
2346.00	1.438E+03	1.614E+02	5.235E+01	5.242E+00	1.007E+00	2.607E+00	2.074E-03	1.389E-04	1.575E-04	8.266E-03	4.125E-03
2406.00	1.703E+03	2.061E+02	4.872E+01	5.388E+00	1.428E+00	1.512E+00	1.973E-03	1.323E-04	2.005E-04	1.122E-02	3.116E-03
2430.00	1.734E+03	2.150E+02	4.017E+01	5.259E+00	1.528E+00	1.079E+00	1.935E-03	1.370E-04	2.126E-04	1.186E-02	2.398E-03
2430.00	6.094E+01	7.259E+01	2.594E+01	9.054E-01	4.694E-01	7.756E-01	1.935E-03	1.375E-04	1.517E-04	1.056E-03	1.724E-03
2449.50	1.021E+01	7.828E+01	4.397E+00	7.108E-01	5.514E-01	4.262E-01	1.900E-03	1.506E-04	1.675E-04	1.652E-03	9.902E-04
2449.50	6.074E+00	7.811E+01	4.080E+00	6.928E-01	5.548E-01	4.195E-01	1.900E-03	1.506E-04	1.669E-04	1.602E-03	9.748E-04
2466.00	1.261E+00	8.183E+00	2.598E+00	7.819E-01	8.941E-01	3.315E-01	1.899E-03	1.444E-04	1.977E-04	8.467E-04	9.089E-04
2482.00	3.740E-01	1.989E+01	2.166E+00	5.602E-02	9.643E-01	3.011E-01	1.920E-03	1.259E-04	1.995E-04	2.220E-04	9.944E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.193E-07	2.064E-07	1.195E-07	4.441E-05	2.745E-05	1.414E-05	3.038E-04	1.252E-04	4.079E-05
1.799E+01	1.907E+00	3.452E-01	7.681E-05	1.762E-01	6.770E-11			

C-9

(POSITION & VELOCITY ERRORS)

SYSTEM A GROUP 1

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR		VELOCITY MAG ERROR
	R	U	C	R	U	C	R	U	C	R	U	C
1686.00	1.366E+04	1.018E+04	1.735E+04	3.646E+01	8.402E+00	8.725E+00	0.000E+00	0.000E+00	0.000E+00	3.386E+01	7.491E+00	
1686.00	9.201E+03	1.459E+04	1.397E+04	2.005E+01	1.790E+01	2.161E+01	5.933E-07	9.077E-06	3.656E-06	2.032E+01	8.933E+00	
1746.00	5.149E+03	2.105E+03	1.779E+03	1.304E+01	2.183E+01	2.142E+01	2.453E-04	4.990E-04	3.532E-04	1.303E+01	7.158E+00	
1806.00	4.885E+03	1.756E+03	6.741E+02	1.343E+01	1.581E+01	1.533E+01	5.231E-04	6.561E-04	3.532E-04	1.345E+01	8.622E+00	
1806.00	2.511E+03	1.184E+03	5.390E+02	8.652E+00	1.564E+01	1.360E+01	7.413E-04	6.823E-04	5.375E-04	8.641E+00	6.396E+00	
1866.00	1.503E+03	8.582E+02	8.515E+02	4.915E+00	1.223E+01	1.223E+01	1.002E-03	7.347E-04	7.250E-04	4.923E+00	6.343E+00	
1866.00	1.120E+03	7.509E+02	7.726E+02	4.172E+00	1.012E+01	8.623E+00	1.879E-03	7.801E-04	9.252E-04	4.173E+00	5.267E+00	
1926.00	1.120E+03	7.509E+02	7.726E+02	4.172E+00	1.012E+01	8.623E+00	1.879E-03	7.801E-04	9.252E-04	4.173E+00	5.267E+00	
1986.00	4.872E+02	9.804E+02	5.730E+02	4.522E+02	2.460E+00	9.628E+00	4.770E+00	1.300E-03	7.332E-04	1.091E-03	2.902E+00	
2046.00	1.150E+02	9.752E+02	4.522E+02	2.460E+00	9.628E+00	4.770E+00	1.300E-03	7.332E-04	1.091E-03	2.902E+00	3.159E+00	
2046.00	1.260E+02	7.597E+02	1.680E+02	2.337E+00	5.861E+00	2.233E+00	1.830E-03	4.054E-04	6.941E-04	2.334E+00	4.061E+00	
2106.00	1.503E+02	6.967E+02	2.333E+02	2.333E+02	2.696E+00	1.929E+00	4.945E+00	1.930E-03	6.189E-04	1.916E-04	2.699E+00	
2166.00	3.040E+02	5.544E+02	5.678E+02	2.696E+00	1.929E+00	4.945E+00	1.930E-03	6.189E-04	1.916E-04	2.699E+00	1.951E+00	
2226.00	3.030E+02	4.290E+02	9.255E+02	2.790E+00	1.778E+00	6.694E+00	1.951E-03	7.168E-04	3.305E-04	2.797E+00	5.131E+00	
2286.00	7.391E+02	1.536E+02	1.147E+03	2.950E+00	3.016E+00	7.203E+00	1.978E-03	6.384E-04	4.646E-04	2.955E+00	6.629E+00	
2286.00	7.591E+02	1.390E+02	1.179E+03	2.972E+00	3.113E+00	7.364E+00	1.979E-03	6.336E-04	4.688E-04	2.975E+00	6.388E+00	
2292.00	3.097E+02	1.104E+02	6.271E+02	3.329E+00	1.926E+00	4.004E+00	1.964E-03	3.146E-04	2.829E-04	3.332E+00	3.047E+00	
2346.00	1.078E+03	1.464E+02	4.797E+01	3.903E+00	8.914E-01	2.054E+00	1.933E-03	9.927E-05	1.159E-04	3.904E+00	2.906E-01	
2406.00	1.275E+03	1.822E+02	3.715E+01	4.019E+00	1.091E+00	1.024E+00	1.849E-03	1.184E-04	1.366E-04	4.022E+00	4.661E-01	
2406.00	1.303E+03	1.901E+02	2.629E+01	3.936E+00	1.131E+00	7.013E-01	1.822E-03	1.319E-04	1.397E-04	3.939E+00	5.310E-01	
2430.00	1.303E+03	1.901E+02	2.629E+01	3.936E+00	1.131E+00	7.013E-01	1.822E-03	1.319E-04	1.397E-04	3.939E+00	5.310E-01	
2430.00	4.576E+01	5.042E+01	1.961E+01	6.757E-01	4.632E-01	4.656E-01	1.817E-03	1.329E-04	1.026E-04	6.760E-01	5.251E-01	
2449.50	7.694E+00	4.633E+01	2.792E+00	5.357E-01	5.119E-01	2.968E-01	1.794E-03	1.488E-04	1.102E-04	5.358E-01	5.354E-01	
2449.50	3.235E+00	4.252E+01	2.560E+00	5.167E-01	5.184E-01	2.919E-01	1.794E-03	1.488E-04	1.097E-04	5.165E-01	5.354E-01	
2466.00	9.913E-01	6.104E+00	2.000E+00	2.124E-01	6.366E-01	3.083E-01	1.803E-03	1.418E-04	1.225E-04	2.124E-01	6.344E-01	
2482.00	3.568E-01	1.299E+01	2.128E+00	4.101E-02	6.280E-01	2.986E-01	1.827E-03	1.220E-04	1.208E-04	4.111E-02	6.277E-01	

ORIGINAL PAGE IS OF POOR QUALITY C-10

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W	R	U	C
1686.00	1.413E+04	1.501E+04	1.291E+04	3.628E+01	8.181E+00	9.615E+00	0.000E+00	0.000E+00	0.000E+00	6.811E-03	1.707E-03	
1686.00	9.141E+03	7.054E+03	1.903E+04	1.991E+01	9.132E+00	2.664E+01	4.523E-07	6.471E-06	7.351E-06	4.091E-03	5.710E-03	
1746.00	5.121E+03	1.186E+03	2.546E+03	1.283E+01	8.061E+00	2.960E+01	2.465E-04	5.264E-05	6.090E-04	3.572E-03	7.865E-03	
1806.00	4.862E+03	1.151E+03	1.565E+03	1.332E+01	9.365E+00	1.993E+01	5.320E-04	1.305E-04	7.315E-04	5.156E-03	7.425E-03	
1806.00	2.498E+03	5.867E+02	1.188E+03	8.790E+00	6.662E+00	1.970E+01	7.300E-04	4.824E-04	7.252E-04	3.342E-03	7.320E-03	
1866.00	1.496E+03	6.957E+02	9.965E+02	4.877E+00	6.772E+00	1.537E+01	1.001E-03	7.801E-04	6.784E-04	2.854E-03	8.428E-03	
1866.00	1.496E+03	6.957E+02	9.965E+02	4.877E+00	6.772E+00	1.537E+01	1.001E-03	7.801E-04	6.784E-04	2.854E-03	8.428E-03	
1926.00	1.116E+03	7.219E+02	8.057E+02	4.153E+00	5.653E+00	1.204E+01	1.319E-03	1.001E-03	6.805E-04	3.492E-03	9.217E-03	
1986.00	4.656E+02	5.728E+02	9.613E+02	2.893E+00	4.922E+00	1.102E+01	1.533E-03	1.121E-03	6.865E-04	3.242E-03	1.145E-02	
2046.00	1.146E+02	2.708E+02	1.040E+03	2.456E+00	3.036E+00	1.031E+01	1.806E-03	1.256E-03	4.553E-04	2.763E-03	1.209E-02	
2046.00	1.146E+02	2.708E+02	1.040E+03	2.456E+00	3.036E+00	1.031E+01	1.806E-03	1.256E-03	4.553E-04	2.763E-03	1.209E-02	
2092.00	1.257E+02	2.918E+02	7.212E+02	2.339E+00	4.004E+00	6.189E+00	1.830E-03	7.283E-04	5.789E-04	2.514E-03	7.079E-03	
2106.00	1.500E+02	3.211E+02	6.609E+02	2.336E+00	3.638E+00	5.184E+00	1.830E-03	5.789E-04	5.599E-04	2.628E-03	5.967E-03	
2166.00	3.037E+02	5.542E+02	5.682E+02	2.690E+00	1.930E+00	4.943E+00	1.904E-03	6.163E-04	1.866E-04	3.309E-03	6.194E-03	
2226.00	5.025E+02	1.003E+03	1.671E+02	2.770E+00	5.373E+00	4.377E+00	1.952E-03	6.586E-04	4.345E-04	4.251E-03	5.838E-03	
2286.00	7.367E+02	7.694E+02	8.642E+02	7.938E+00	7.045E+00	4.217E+00	1.979E-03	2.082E-04	7.567E-04	5.450E-03	6.211E-03	
2286.00	7.367E+02	7.694E+02	8.642E+02	7.938E+00	7.045E+00	4.217E+00	1.979E-03	2.082E-04	7.567E-04	5.450E-03	6.211E-03	
2292.00	7.568E+02	6.931E+02	9.637E+02	2.700E+00	6.079E+00	2.777E+00	1.954E-03	1.101E-04	4.065E-04	5.372E-03	4.081E-03	
2292.00	7.568E+02	6.931E+02	9.637E+02	2.700E+00	6.079E+00	2.777E+00	1.954E-03	1.101E-04	4.065E-04	5.372E-03	4.081E-03	
2346.00	8.093E+02	3.888E+02	5.048E+02	3.321E+00	3.475E+00	2.057E+00	1.333E-03	1.010E-04	1.154E-04	6.195E-03	3.257E-03	
2346.00	8.093E+02	3.888E+02	5.048E+02	3.321E+00	3.475E+00	2.057E+00	1.333E-03	1.010E-04	1.154E-04	6.195E-03	3.257E-03	
2406.00	1.078E+03	1.841E+02	3.738E+01	4.017E+00	1.094E+01	1.027E+00	1.349E-03	1.208E-04	1.346E-04	4.849E-03	1.563E-03	
2406.00	1.078E+03	1.841E+02	3.738E+01	4.017E+00	1.094E+01	1.027E+00	1.349E-03	1.208E-04	1.346E-04	4.849E-03	1.563E-03	
2430.00	1.503E+03	1.913E+02	2.846E+01	3.935E+00	1.134E+00	7.033E-01	1.822E-03	1.336E-04	1.397E-04	1.425E-03	1.080E-03	
2430.00	1.503E+03	1.913E+02	2.846E+01	3.935E+00	1.134E+00	7.033E-01	1.822E-03	1.336E-04	1.397E-04	1.425E-03	1.080E-03	
2430.00	4.575E+01	5.043E+01	1.961E+01	6.757E-01	4.628E-01	4.859E-01	1.317E-03	1.397E-04	1.020E-04	1.425E-03	1.080E-03	
2430.00	4.575E+01	5.043E+01	1.961E+01	6.757E-01	4.628E-01	4.859E-01	1.317E-03	1.397E-04	1.020E-04	1.425E-03	1.080E-03	
2449.50	7.693E+00	4.633E+01	2.785E+00	5.358E-01	5.119E-01	2.913E-01	1.794E-03	1.498E-04	1.098E-04	1.192E-03	6.896E-04	
2449.50	7.693E+00	4.633E+01	2.785E+00	5.358E-01	5.119E-01	2.913E-01	1.794E-03	1.498E-04	1.098E-04	1.192E-03	6.896E-04	
2466.00	9.912E-01	6.104E+00	2.000E+00	2.124E-01	6.367E-01	3.088E-01	1.803E-03	1.423E-04	1.225E-04	6.002E-04	8.468E-04	
2466.00	9.912E-01	6.104E+00	2.000E+00	2.124E-01	6.367E-01	3.088E-01	1.803E-03	1.423E-04	1.225E-04	6.002E-04	8.468E-04	
2482.00	3.568E-01	1.299E+01	2.127E+00	4.101E-02	6.280E-01	2.986E-01	1.827E-03	1.220E-04	1.208E-04	1.516E-04	9.857E-04	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

6.978E-08	1.341E-07	6.936E-08	3.023E-05	1.963E-05	1.086E-05	2.063E-04	7.893E-05	3.626E-05
1.177E+01	1.822E+00	3.338E-01	7.771E-05	1.750E-01	4.342E-11			

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	8.315E+03	2.062E+03	4.378E+03	1.744E+01	1.457E+00	3.882E+03	2.455E-05	5.969E-05	5.484E-05	1.701E+01	2.859E+00
1686.00	5.630E+03	4.943E+03	3.592E+03	8.903E+00	4.709E+00	9.147E+03	2.467E-05	5.805E-05	5.503E-05	9.679E+00	2.691E+00
1746.00	1.839E+03	1.821E+03	1.244E+03	6.337E+00	1.008E+01	7.027E+03	1.347E-05	3.743E-04	2.780E-04	6.307E+00	3.723E+00
1806.00	2.614E+03	1.150E+03	2.755E+02	6.431E+00	6.134E+00	4.071E+03	1.288E-04	5.005E-04	2.646E-04	8.436E+00	3.085E+00
1806.00	1.350E+03	8.316E+02	3.152E+02	5.798E+00	5.977E+00	4.513E+03	2.117E-04	5.478E-04	1.786E-04	5.783E+00	2.154E+00
1366.00	5.275E+02	4.293E+02	4.105E+02	2.116E+00	4.552E+00	4.861E+03	2.713E-04	5.894E-04	2.907E-04	2.127E+00	2.141E+00
1926.00	4.644E+02	2.584E+02	3.841E+02	1.603E+00	3.473E+00	4.273E+03	3.552E-04	6.294E-04	4.123E-04	1.604E+00	2.803E+00
1986.00	1.735E+02	3.321E+02	3.646E+02	9.074E-01	3.631E+00	4.141E+03	4.050E-04	6.022E-04	4.412E-04	9.085E-01	1.795E+00
2046.00	4.193E+01	2.996E+02	2.086E+02	7.255E-01	3.152E+00	2.833E+03	5.501E-04	4.813E-04	4.267E-04	4.786E-01	2.164E+00
2092.00	4.825E+01	2.293E+02	5.168E+01	3.837E-01	2.157E+00	1.723E+03	5.831E-04	3.586E-04	3.024E-04	4.786E-01	2.164E+00
2106.00	5.055E+01	2.146E+02	7.071E+01	3.837E-01	1.801E+00	1.613E+03	5.301E-04	3.246E-04	2.365E-04	3.806E-01	1.862E+00
2106.00	7.384E+01	1.905E+02	1.879E+02	5.937E-01	7.517E-01	1.987E+03	6.239E-04	2.803E-04	1.292E-05	5.947E-01	7.568E-01
2226.00	1.141E+02	1.619E+02	3.311E+02	8.041E-01	4.251E-01	2.837E+03	6.333E-04	3.903E-04	1.110E-04	8.018E-01	2.542E+00
2286.00	1.607E+02	6.905E+01	4.340E+02	6.296E-01	6.834E-01	3.373E+03	6.552E-04	2.662E-04	1.724E-04	8.275E-01	2.671E+00
2292.00	1.053E+02	5.946E+01	4.998E+02	8.282E-01	7.561E-01	3.433E+03	6.527E-04	2.641E-04	1.747E-04	8.264E-01	2.716E+00
2292.00	1.707E+02	3.860E+01	2.315E+02	7.917E-01	3.600E-01	2.952E+03	6.217E-04	1.515E-04	1.161E-04	7.909E-01	1.423E+00
2346.00	2.245E+02	3.006E+01	2.354E+01	8.194E-01	3.192E-01	5.923E-01	5.705E-04	8.463E-05	8.146E-05	8.194E-01	1.814E-01
2406.00	2.644E+02	3.483E+01	1.076E+01	6.486E-01	3.504E-01	2.220E-01	5.420E-04	8.675E-05	7.762E-05	8.489E-01	2.023E-01
2430.00	2.695E+02	3.655E+01	6.922E+00	6.922E-01	1.513E-01	5.345E-04	8.718E-05	7.692E-05	7.692E-05	8.356E-01	2.031E-01
2430.00	9.464E+00	1.331E+01	5.447E+00	3.079E-01	2.401E-01	1.052E-01	5.325E-04	8.713E-05	7.120E-05	3.079E-01	1.762E-01
2449.50	1.972E+00	1.411E+01	6.503E-01	3.179E-01	2.408E-01	1.005E-01	5.274E-04	8.679E-05	7.145E-05	3.180E-01	1.833E-01
2449.50	6.708E+01	1.188E+01	5.989E-01	3.118E-01	2.364E-01	1.000E-01	5.275E-04	8.672E-05	7.121E-05	3.118E-01	1.744E-01
2466.00	5.497E-01	3.695E+00	9.078E-01	1.443E-01	2.749E-01	1.302E-01	5.317E-04	8.289E-05	7.493E-05	1.442E-01	2.724E-01
2482.00	2.159E-01	8.222E+00	8.798E-01	4.763E-02	3.130E-01	1.112E-01	5.405E-04	7.523E-05	7.773E-05	4.774E-02	3.124E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	8.438E+03	2.424E+03	3.936E+03	1.746E+01	2.807E+00	2.913E+00	2.351E-05	5.975E-05	5.527E-05	3.405E-03	6.494E-04
1686.00	5.600E+03	2.992E+03	5.361E+03	6.980E+00	2.836E+00	9.621E+03	2.335E-05	5.894E-05	5.521E-05	1.947E-03	2.054E-03
1746.00	1.829E+03	4.355E+02	2.006E+03	6.237E+00	4.169E+00	1.161E+01	1.305E-05	6.506E-05	4.617E-04	1.735E-03	3.105E-03
1806.00	2.601E+03	5.272E+02	1.095E+03	6.372E+00	3.553E+00	6.914E+03	1.312E-04	7.527E-05	5.605E-04	3.187E-03	2.573E-03
1806.00	1.343E+03	2.334E+02	8.686E+02	5.765E+00	2.258E+00	7.103E+03	2.031E-04	2.437E-04	5.254E-04	2.155E-03	2.668E-03
1866.00	5.252E+02	2.892E+02	5.234E+02	2.103E+00	2.379E+00	6.224E+03	2.832E-04	6.249E-04	2.076E-04	1.236E-03	3.288E-03
1926.00	4.629E+02	3.263E+02	3.307E+02	1.599E+00	2.917E+00	4.076E+03	3.545E-04	5.911E-04	4.666E-04	1.282E-03	3.582E-03
1986.00	1.730E+02	1.935E+02	4.686E+02	9.057E-01	1.825E+00	5.195E+03	4.547E-04	6.927E-04	2.787E-04	1.001E-03	5.399E-03
2046.00	4.185E+01	1.475E+02	3.323E+02	7.245E-01	2.192E+00	3.625E+03	5.531E-04	5.143E-04	3.864E-04	6.092E-04	4.461E-03
2092.00	4.825E+01	8.852E+01	2.176E+02	4.811E-01	2.142E+00	1.737E+03	5.303E-04	2.117E-04	4.182E-04	4.162E-04	1.990E-03
2106.00	5.052E+01	9.671E+01	2.043E+02	3.824E-01	1.861E+00	1.549E+03	5.303E-04	1.982E-04	1.982E-04	4.324E-04	1.783E-03
2166.00	7.351E+01	1.907E+02	1.878E+02	5.958E-01	7.521E-01	1.983E+03	6.035E-04	2.787E-04	1.409E-05	7.273E-04	2.489E-03
2226.00	1.141E+02	3.653E+02	4.922E+01	8.055E-01	2.518E+00	1.637E+03	6.391E-04	2.380E-04	2.109E-04	9.499E-04	1.836E-03
2286.00	1.606E+02	2.750E+02	5.416E+02	8.293E-01	2.868E+00	1.900E+03	6.603E-04	1.151E-04	2.932E-04	1.176E-03	2.782E-03
2292.00	1.052E+02	2.454E+02	3.816E+02	3.283E-01	2.712E+00	2.253E+03	6.612E-04	1.350E-04	2.641E-04	1.179E-03	3.294E-03
2292.00	1.706E+02	1.279E+02	2.051E+02	7.906E-01	1.434E+00	1.513E+03	6.222E-04	1.080E-04	1.555E-04	1.168E-03	2.224E-03
2346.00	2.245E+02	3.051E+01	2.365E+01	6.185E-01	3.191E-01	5.933E-01	5.705E-04	6.521E-05	8.120E-05	1.334E-03	9.395E-03
2406.00	2.645E+02	3.518E+01	1.081E+01	8.461E-01	3.511E-01	2.233E-01	3.419E-04	6.731E-05	7.751E-05	1.809E-03	4.604E-04
2430.00	2.695E+02	3.679E+01	6.983E+00	8.348E-01	3.544E-01	1.520E-01	5.344E-04	8.758E-05	7.685E-05	1.926E-03	3.377E-04
2430.00	9.466E+00	1.330E+01	5.462E+00	3.076E-01	2.403E-01	1.053E-01	5.324E-04	8.752E-05	7.114E-05	7.588E-04	2.341E-04
2449.50	1.968E+00	1.111E+01	0.510E-01	3.177E-01	2.470E-01	1.005E-01	5.274E-04	6.704E-05	7.145E-05	8.176E-04	2.335E-04
2449.50	6.815E-01	1.188E+01	5.478E-01	3.116E-01	2.366E-01	1.001E-01	5.275E-04	8.697E-05	7.117E-05	7.993E-04	2.326E-04
2466.00	5.488E-01	3.695E+00	9.085E-01	1.442E-01	2.803E-01	1.301E-01	5.317E-04	8.302E-05	7.490E-05	4.327E-04	3.567E-04
2482.00	2.159E-01	8.222E+00	8.768E-01	4.763E-02	3.131E-01	1.111E-01	5.405E-04	7.526E-05	7.770E-05	1.718E-04	3.669E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

2.071E-08	4.948E-03	2.313E-08	8.112E-06	7.858E-06	6.125E-06	7.567E-05	2.336E-05	4.034E-05
7.608E+00	1.064E+00	1.872E-01	3.303E-05	7.958E-02	3.347E-11			

C-11



TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	U	C	R	D	C	A	D	C	RATE ERROR	MAG ERROR
1680.00	9.501E+03	1.464E+03	1.340E+04	2.744E+01	3.547E+00	4.193E+00	2.333E-08	3.561E-08	4.967E-08	2.556E+01	4.677E+00
1680.00	2.408E+03	1.218E+04	1.117E+04	4.032E+00	1.476E+01	1.287E+01	3.613E-07	5.767E-06	2.313E-06	5.401E+00	7.315E+00
1746.00	4.057E+03	1.277E+02	1.063E+03	7.925E+00	1.570E+01	1.882E+01	1.795E-04	8.582E-05	4.644E-05	7.942E+00	3.998E+00
1806.00	2.282E+03	3.410E+02	5.589E+02	4.050E+00	1.110E+01	1.355E+01	4.343E-04	2.665E-04	2.594E-05	4.103E+00	7.098E+00
1806.00	1.137E+03	7.879E+02	3.937E+02	1.623E+00	1.121E+01	1.173E+01	6.335E-04	1.905E-04	2.257E-04	1.656E+00	5.600E+00
1866.00	7.829E+02	2.602E+02	6.941E+02	1.198E+00	7.872E+00	1.033E+01	8.633E-04	2.321E-04	1.932E-04	1.181E+00	2.498E+00
1926.00	7.653E+02	1.303E+02	6.172E+02	1.208E+00	5.318E+00	6.703E+00	1.165E-03	2.472E-04	1.228E-04	1.227E+00	3.932E+00
1986.00	1.511E+02	8.872E+01	3.075E+02	3.569E-01	2.274E+00	4.219E+00	1.449E-03	1.518E-04	2.337E-04	3.568E-01	1.527E+00
2046.00	3.055E+01	3.200E+01	9.276E+01	3.413E-01	4.142E-01	1.407E+00	1.553E-03	5.340E-05	3.333E-04	3.904E-01	1.221E+00
2092.00	4.745E+01	1.049E+02	3.260E+01	5.100E-01	3.832E-01	1.245E-01	1.632E-03	6.645E-05	3.397E-04	5.095E-01	3.052E-01
2106.00	5.070E+01	8.653E+01	4.058E+01	5.282E-01	5.013E-01	2.553E-01	1.633E-03	4.988E-05	3.124E-04	5.268E-01	5.453E-01
2166.00	6.980E+01	7.141E+01	6.830E+01	6.077E-01	9.019E-01	4.192E-01	1.573E-03	7.362E-05	1.431E-04	6.076E-01	8.990E-01
2226.00	1.047E+02	3.142E+01	1.035E+02	7.423E-01	1.194E+00	1.073E+00	1.723E-03	1.216E-04	2.131E-05	7.447E-01	1.490E+00
2286.00	1.741E+02	2.414E+01	1.353E+02	8.865E-01	5.035E-01	2.397E+00	1.744E-03	9.353E-05	5.438E-05	8.889E-01	1.332E+00
2292.00	1.605E+02	2.523E+01	1.463E+02	8.951E-01	3.765E-01	2.501E+00	1.745E-03	9.210E-05	5.729E-05	8.971E-01	1.248E+00
2292.00	1.867E+02	2.633E+01	7.755E+01	9.403E-01	5.048E-01	2.053E+00	1.731E-03	5.090E-05	3.528E-05	9.423E-01	8.425E-01
2346.00	2.576E+02	4.010E+01	3.665E+01	1.077E+00	1.866E-01	1.421E+00	1.575E-03	4.396E-05	1.113E-05	1.078E+00	4.431E-02
2406.00	3.474E+02	3.80E+01	2.224E+01	1.250E+00	1.972E-01	4.149E-01	1.625E-03	1.018E-04	1.988E-05	1.257E+00	2.309E-01
2430.00	3.741E+02	6.005E+01	1.237E+01	1.295E+00	2.089E-01	1.252E-01	1.633E-03	1.206E-04	3.250E-05	1.296E+00	2.721E-01
2430.00	1.320E+01	1.781E+01	1.310E+01	3.597E-01	3.105E-01	1.253E-01	1.597E-03	1.219E-04	3.150E-05	3.632E-01	3.543E-01
2449.50	3.037E+00	1.548E+01	6.237E-01	3.300E-01	3.369E-01	1.413E-01	1.578E-03	1.383E-04	3.250E-05	3.304E-01	3.745E-01
2449.50	3.126E-01	1.017E+01	6.015E-01	3.199E-01	3.512E-01	1.409E-01	1.577E-03	1.384E-04	3.325E-05	3.202E-01	3.863E-01
2466.00	6.862E-01	3.098E+00	1.305E+00	1.424E-01	3.264E-01	2.533E-01	1.580E-03	1.324E-04	2.593E-05	1.424E-01	3.298E-01
2482.00	3.036E-01	4.865E+00	1.835E+00	3.435E-02	2.364E-01	2.026E-01	1.508E-03	1.143E-04	1.237E-05	3.407E-02	2.365E-01

ORIGINAL PAGE IS OF POOR QUALITY

C-12

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	
1680.00	9.964E+03	7.001E+03	1.117E+04	2.722E+01	6.000E+00	2.523E+00	2.230E-08	3.216E-08	5.238E-08	5.169E-03	1.753E-04	3.935E-03	
1680.00	2.409E+03	5.918E+03	1.543E+04	4.017E+00	7.515E+00	1.809E+01	2.798E-07	4.113E-06	4.665E-06	1.153E-03	3.935E-03	6.407E-03	
1746.00	4.034E+03	8.991E+02	7.213E+02	7.781E+00	4.560E+00	2.413E+01	1.799E-04	1.565E-05	9.568E-05	2.174E-03	5.918E-03	5.646E-03	
1806.00	2.271E+03	6.844E+02	9.940E+01	4.015E+00	1.592E+01	1.592E+01	4.373E-04	8.018E-05	2.193E-04	1.726E-03	5.918E-03	5.646E-03	
1806.00	1.132E+03	3.971E+02	1.274E+02	1.605E+00	5.743E+00	1.513E+01	6.331E-04	1.344E-04	2.643E-04	7.766E-04	5.646E-03	6.744E-03	
1866.00	7.795E+02	6.172E+01	7.474E+02	1.175E+00	2.365E+00	1.273E+01	3.633E-04	1.174E-04	2.781E-04	4.491E-04	4.491E-04	5.700E-03	
1926.00	7.033E+02	5.297E+02	3.477E+02	1.194E+00	4.236E+00	7.443E+00	1.165E-03	4.781E-05	2.737E-04	1.506E-03	5.700E-03	4.715E-03	
1986.00	1.536E+02	1.720E+02	2.708E+02	3.557E-01	1.341E+00	4.533E+00	1.445E-03	8.655E-05	2.632E-04	4.298E-04	4.715E-03	1.009E-03	
2046.00	3.055E+01	9.554E+01	2.244E+01	3.513E-01	1.243E+00	8.193E-01	1.593E-03	3.315E-04	6.265E-05	5.507E-04	1.009E-03	3.347E-04	
2092.00	4.741E+01	3.256E+01	1.049E+02	5.106E-01	2.774E-01	2.924E-01	1.633E-03	2.719E-04	2.099E-04	5.543E-04	3.347E-04	2.559E-04	
2106.00	5.066E+01	3.546E+01	9.072E+01	5.278E-01	5.173E-01	2.224E-01	1.034E-03	2.096E-04	3.324E-04	5.655E-04	2.559E-04	5.112E-05	
2166.00	6.980E+01	4.153E+01	6.829E+01	6.076E-01	9.020E-01	4.149E-01	1.074E-03	6.867E-05	1.356E-04	7.546E-04	5.112E-05	5.532E-04	
2226.00	1.046E+02	1.007E+02	3.981E+01	7.429E-01	1.552E+00	4.117E-01	1.721E-03	5.258E-05	1.019E-04	1.136E-03	5.532E-04	2.877E-03	
2286.00	1.740E+02	1.009E+02	9.355E+01	8.864E-01	1.445E+00	1.973E+00	1.744E-03	2.967E-05	9.716E-05	1.500E-03	2.877E-03	3.130E-03	
2292.00	1.804E+02	9.642E+01	1.131E+02	8.946E-01	1.359E+00	2.133E+00	1.745E-03	3.643E-05	5.936E-05	1.508E-03	3.130E-03	2.770E-03	
2292.00	1.360E+02	6.019E+01	5.627E+01	9.406E-01	9.523E-01	1.889E+00	1.731E-03	2.918E-05	5.411E-05	1.501E-03	2.770E-03	2.249E-03	
2346.00	2.575E+02	4.096E+01	3.655E+01	1.076E+00	1.928E-01	1.421E+00	1.639E-03	4.787E-05	1.691E-05	1.696E-03	2.249E-03	8.560E-04	
2406.00	3.473E+02	5.945E+01	2.216E+01	1.250E+00	1.570E-01	4.152E-01	1.625E-03	1.042E-04	2.003E-05	2.527E-03	8.560E-04	2.799E-04	
2430.00	3.741E+02	6.643E+01	1.232E+01	1.295E+00	2.091E-01	1.254E-01	1.502E-03	1.221E-04	2.263E-05	2.797E-03	2.799E-04	2.799E-04	
2430.00	1.316E+01	1.785E+01	1.308E+01	3.599E-01	3.101E-01	1.258E-01	1.578E-03	1.234E-04	3.160E-05	6.905E-04	2.799E-04	3.291E-04	
2449.50	3.028E+00	1.549E+01	6.180E-01	3.301E-01	3.389E-01	1.417E-01	1.577E-03	1.392E-04	3.336E-05	6.315E-04	3.266E-04	3.266E-04	
2449.50	3.077E-01	1.017E+01	5.909E-01	3.200E-01	3.512E-01	1.409E-01	1.577E-03	1.392E-04	3.336E-05	6.315E-04	3.266E-04	6.931E-04	
2466.00	6.865E-01	3.099E+00	1.303E+00	1.424E-01	3.265E-01	2.523E-01	1.585E-03	1.328E-04	2.602E-05	3.687E-04	6.931E-04	8.668E-04	
2482.00	3.009E-01	4.866E+00	1.832E+00	3.405E-02	2.365E-01	2.625E-01	1.638E-03	1.143E-04	1.291E-05	1.128E-04	8.668E-04		

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.941E-08	6.221E-08	1.850E-08	1.313E-05	9.583E-06	5.832E-06	8.865E-05	2.538E-05	2.216E-05
4.454E+00	1.607E+00	2.800E-01	6.734E-05	1.447E-01	1.877E-11			

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			FLATFCEM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	G	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.CC	3.317E+03	1.319E+03	2.870E+03	6.505E+00	6.176E-01	1.655E+03	7.554E-05	1.525E-04	1.769E-04	6.073E+00	1.170E+00
1696.CC	2.467E+03	2.079E+03	1.919E+03	2.871E+00	2.829E+00	3.733E+03	7.533E-05	1.926E-04	1.769E-04	3.025E+00	1.462E+00
1746.CC	3.215E+02	4.101E+02	4.500E+02	2.229E+00	3.452E+00	7.137E+00	5.533E-05	1.560E-04	2.430E-04	2.307E+00	1.242E+00
1806.CC	8.195E+02	4.000E+02	1.057E+02	3.152E+00	2.709E+00	1.426E+03	1.343E-04	1.704E-04	2.415E-04	3.159E+00	8.195E-01
1806.CC	4.212E+02	2.596E+02	1.309E+02	2.244E+00	2.167E+00	1.413E+00	1.337E-04	1.873E-04	1.802E-04	2.341E+00	7.164E-01
1866.CC	1.511E+02	1.005E+02	1.438E+02	9.586E-01	1.615E+00	1.598E+00	1.423E-04	1.575E-04	1.537E-04	9.623E-01	1.097E+00
1926.CC	2.015E+02	6.114E+01	1.779E+02	5.217E-01	1.407E+00	1.457E+03	1.524E-04	2.075E-04	1.604E-04	5.282E-01	1.957E+00
1986.CC	9.666E+01	9.291E+01	1.351E+02	4.447E-01	1.355E+00	1.487E+00	1.730E-04	1.957E-04	1.543E-04	4.433E-01	8.394E-01
2046.CC	2.195E+01	1.037E+02	4.282E+01	3.924E-01	1.230E+00	9.105E-01	1.993E-04	1.721E-04	1.568E-04	3.906E-01	7.831E-01
2092.CC	2.952E+01	1.201E+02	3.110E+01	4.579E-01	9.355E-01	6.743E-01	2.211E-04	1.509E-04	1.610E-04	4.572E-01	5.963E-01
2106.CC	3.530E+01	1.225E+02	4.245E+01	5.177E-01	8.168E-01	7.536E-01	2.211E-04	1.445E-04	1.653E-04	5.172E-01	5.062E-01
2166.CC	7.224E+01	1.169E+02	1.091E+02	7.071E-01	2.470E-01	1.153E+00	2.145E-04	1.343E-04	1.943E-04	7.065E-01	3.112E-01
2226.CC	1.140E+02	1.003E+02	1.893E+02	7.055E-01	2.369E-01	1.514E+03	2.137E-04	1.559E-04	2.068E-04	7.085E-01	1.227E+00
2286.CC	1.470E+02	4.842E+01	2.467E+02	6.060E-01	6.431E-01	1.571E+03	2.153E-04	1.338E-04	2.134E-04	6.050E-01	1.584E+00
2292.CC	1.455E+02	4.405E+01	2.542E+02	6.117E-01	6.724E-01	1.585E+00	2.150E-04	1.337E-04	2.124E-04	6.110E-01	1.526E+00
2292.CC	1.455E+02	4.405E+01	2.542E+02	6.117E-01	6.724E-01	1.585E+00	2.150E-04	1.337E-04	2.124E-04	6.110E-01	1.526E+00
2346.CC	1.675E+02	3.433E+01	5.074E+02	5.474E-01	4.184E-01	6.103E-01	2.117E-04	1.429E-04	2.015E-04	5.472E-01	2.338E-01
2346.CC	1.675E+02	3.433E+01	5.074E+02	5.474E-01	4.184E-01	6.103E-01	2.117E-04	1.429E-04	2.015E-04	5.472E-01	2.338E-01
2406.CC	1.820E+02	3.087E+01	8.835E+00	6.057E-01	2.898E-01	2.654E-01	1.313E-04	1.823E-04	2.032E-04	2.101E-01	1.985E-01
2430.CC	1.845E+02	3.355E+01	7.142E+00	6.781E-01	2.660E-01	1.563E-01	1.323E-04	1.794E-04	2.041E-04	2.024E-01	2.024E-01
2430.CC	1.845E+02	3.355E+01	7.142E+00	6.781E-01	2.660E-01	1.563E-01	1.323E-04	1.794E-04	2.041E-04	2.024E-01	2.024E-01
2430.CC	6.487E+00	1.729E+01	5.814E+00	6.116E-01	1.565E-01	1.751E-01	1.922E-04	1.791E-04	1.950E-04	6.118E-01	1.822E-01
2449.5C	3.120E+00	1.739E+01	1.124E+00	6.487E-01	1.601E-01	9.457E-02	1.773E-04	1.747E-04	2.007E-04	6.490E-01	1.955E-01
2449.5C	3.120E+00	1.739E+01	1.124E+00	6.487E-01	1.601E-01	9.457E-02	1.773E-04	1.747E-04	2.007E-04	6.490E-01	1.955E-01
2449.5C	5.693E+01	1.357E+01	1.072E+00	6.392E-01	1.544E-01	9.755E-02	1.773E-04	1.746E-04	2.006E-04	6.393E-01	2.012E-01
2449.5C	5.693E+01	1.357E+01	1.072E+00	6.392E-01	1.544E-01	9.755E-02	1.773E-04	1.746E-04	2.006E-04	6.393E-01	2.012E-01
2466.CC	1.305E+00	2.510E+00	9.918E-01	5.030E-01	1.841E-01	9.665E-02	1.773E-04	1.749E-04	2.006E-04	3.000E-01	1.754E-01
2466.CC	1.305E+00	2.510E+00	9.918E-01	5.030E-01	1.841E-01	9.665E-02	1.773E-04	1.749E-04	2.006E-04	3.000E-01	1.754E-01
2482.CC	5.546E-01	8.699E+00	6.148E-01	5.678E-01	2.071E-01	6.146E-02	1.773E-04	1.716E-04	2.007E-04	9.550E-02	2.658E-01

C-13

TIME	L			U			V			W			GAMMA ERROR	PSI ERROR
	L	V	H	L	V	H	L	V	H	L	V	H		
1686.CC	3.377E+03	2.360E+03	1.552E+03	6.503E+00	1.146E+00	1.355E+03	7.534E-05	1.927E-04	1.763E-04	1.214E-03	2.332E-04	9.419E-04	9.419E-04	
1696.CC	2.432E+03	1.696E+03	2.616E+03	2.017E+00	1.365E+00	4.451E+03	7.533E-05	1.927E-04	1.764E-04	5.977E-04	6.22E-04	1.021E-03	1.021E-03	
1746.CC	3.256E+02	8.375E+01	7.680E+02	2.750E+00	1.409E+00	3.327E+00	5.367E-05	1.770E-04	2.298E-04	6.22E-04	6.22E-04	9.148E-04	9.148E-04	
1806.CC	8.149E+02	1.542E+02	3.927E+02	3.142E+00	5.677E-01	2.402E+00	1.335E-04	1.529E-04	2.304E-04	1.186E-03	9.406E-04	9.406E-04	9.406E-04	
1806.CC	4.161E+02	6.491E+01	3.233E+02	2.326E+00	5.737E-01	2.533E+00	1.352E-04	1.457E-04	2.202E-04	8.670E-04	5.357E-04	1.122E-03	1.122E-03	
1866.CC	1.510E+02	4.533E+01	1.743E+02	5.544E-01	6.109E-01	2.123E+00	1.422E-04	1.771E-04	1.770E-04	5.357E-04	2.336E-04	1.322E-03	1.322E-03	
1926.CC	2.012E+02	1.318E+02	7.534E+01	5.274E-01	1.059E+00	1.723E+03	1.324E-04	1.705E-04	1.957E-04	2.336E-04	1.322E-03	1.322E-03	1.322E-03	
1926.CC	2.012E+02	1.318E+02	7.534E+01	5.274E-01	1.059E+00	1.723E+03	1.324E-04	1.705E-04	1.957E-04	2.336E-04	1.322E-03	1.322E-03	1.322E-03	
1986.CC	9.627E+01	1.053E+02	1.258E+02	4.448E-01	8.317E-01	1.814E+03	1.731E-04	1.654E-04	1.827E-04	4.525E-04	1.884E-03	1.884E-03	1.884E-03	
2046.CC	2.195E+01	5.833E+01	1.176E+02	3.923E-01	7.674E-01	1.323E+00	1.993E-04	1.520E-04	1.763E-04	4.326E-04	1.636E-03	1.636E-03	1.636E-03	
2092.CC	2.947E+01	4.847E+01	1.201E+02	4.582E-01	6.215E-01	9.541E-01	2.213E-04	1.748E-04	1.748E-04	5.507E-04	1.137E-03	1.137E-03	1.137E-03	
2106.CC	3.524E+01	5.502E+01	1.172E+02	5.182E-01	5.342E-01	9.733E-01	2.213E-04	1.782E-04	1.280E-04	6.185E-04	1.120E-03	1.120E-03	1.120E-03	
2166.CC	7.213E+01	1.140E+02	1.093E+02	7.078E-01	2.425E-01	1.193E+00	2.153E-04	1.340E-04	1.939E-04	8.371E-04	1.500E-03	1.500E-03	1.500E-03	
2226.CC	1.139E+02	2.170E+02	3.338E+01	7.107E-01	1.175E+03	9.775E-01	2.142E-04	1.781E-04	1.781E-04	1.712E-04	6.220E-04	1.304E-03	1.304E-03	
2226.CC	1.139E+02	2.170E+02	3.338E+01	7.107E-01	1.175E+03	9.775E-01	2.142E-04	1.781E-04	1.781E-04	1.712E-04	6.220E-04	1.304E-03	1.304E-03	
2286.CC	1.455E+02	1.547E+02	1.998E+02	6.074E-01	1.536E+03	7.165E-01	2.153E-04	1.525E-04	1.622E-04	6.733E-04	1.043E-03	1.043E-03	1.043E-03	
2286.CC	1.455E+02	1.547E+02	1.998E+02	6.074E-01	1.536E+03	7.165E-01	2.153E-04	1.525E-04	1.622E-04	6.733E-04	1.043E-03	1.043E-03	1.043E-03	
2292.CC	1.455E+02	1.547E+02	1.998E+02	6.074E-01	1.536E+03	7.165E-01	2.153E-04	1.525E-04	1.622E-04	6.733E-04	1.043E-03	1.043E-03	1.043E-03	
2292.CC	1.455E+02	1.547E+02	1.998E+02	6.074E-01	1.536E+03	7.165E-01	2.153E-04	1.525E-04	1.622E-04	6.733E-04	1.043E-03	1.043E-03	1.043E-03	
2346.CC	1.675E+02	3.448E+01	9.743E+00	6.277E-01	2.951E-01	4.432E-01	2.142E-04	1.859E-04	1.990E-04	1.014E-03	7.014E-04	7.014E-04	7.014E-04	
2346.CC	1.675E+02	3.448E+01	9.743E+00	6.277E-01	2.951E-01	4.432E-01	2.142E-04	1.859E-04	1.990E-04	1.014E-03	7.014E-04	7.014E-04	7.014E-04	
2406.CC	1.820E+02	3.712E+01	6.875E+00	6.054E-01	2.702E-01	2.665E-01	1.375E-04	1.623E-04	1.794E-04	2.631E-04	1.677E-03	5.556E-04	5.556E-04	
2430.CC	1.845E+02	3.448E+01	6.875E+00	6.054E-01	2.702E-01	2.665E-01	1.375E-04	1.623E-04	1.794E-04	2.631E-04	1.677E-03	5.556E-04	5.556E-04	
2430.CC	1.845E+02	3.448E+01	6.875E+00	6.054E-01	2.702E-01	2.665E-01	1.375E-04	1.623E-04	1.794E-04	2.631E-04	1.677E-03	5.556E-04	5.556E-04	
2430.CC	6.475E+00	1.730E+01	5.800E+00	6.116E-01	1.568E-01	1.791E-01	1.922E-04	1.791E-04	1.990E-04	1.316E-03	3.983E-04	3.983E-04	3.983E-04	
2449.5C	3.121E+01	1.789E+01	1.117E+00	6.497E-01	1.601E-01	9.753E-02	1.773E-04	1.746E-04	2.006E-04	1.458E-03	2.266E-04	2.266E-04	2.266E-04	
2449.5C	3.121E+01	1.789E+01	1.117E+00	6.497E-01	1.601E-01	9.753E-02	1.773E-04	1.746E-04	2.006E-04	1.458E-03	2.266E-04	2.266E-04	2.266E-04	
2449.5C	5.718E+01	1.357E+01	1.086E+00	6.392E-01	1.564E-01	9.753E-02	1.773E-04	1.749E-04	2.006E-04	8.519E-04	2.633E-04	2.633E-04	2.633E-04	
2449.5C	5.718E+01	1.357E+01	1.086E+00	6.392E-01	1.564E-01	9.753E-02	1.773E-04	1.749E-04	2.006E-04	8.519E-04	2.633E-04	2.633E-04	2.633E-04	
2466.CC	1.305E+00	2.510E+00	9.918E-01	5.030E-01	1.842E-01	9.665E-02	1.773E-04	1.749E-04	2.006E-04	3.312E-04	2.025E-04	2.025E-04	2.025E-04	
2466.CC	1.305E+00	2.510E+00	9.918E-01	5.030E-01	1.842E-									

ACC. NONLINEARITY - X,Y,Z

SYSTEM A GROUP 5

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1666.00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00
1667.00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00
1746.00	1.8550+00	2.2600-01	4.4800-01	1.4730-03	8.5240-03	4.3110-03	2.3100-08	1.6220-07	7.6270-08	1.4750-02	2.8120-03
1816.00	2.5700+00	5.2500-01	7.7000-01	6.4700-03	1.8000-02	7.1500-03	7.3000-08	1.5400-07	7.1000-06	6.4150-03	3.9250-03
1866.00	1.3800+00	4.0000-01	6.7500-01	7.2000-03	1.3500-02	8.1400-03	1.3500-07	2.1800-07	1.7500-07	7.2650-03	3.2810-03
1867.00	1.4340+00	1.1700+00	1.7100+00	1.2600-02	1.6700-02	1.2450-02	3.0000-07	2.9400-07	4.4000-07	5.7340-03	1.0430-02
1926.00	3.2700+00	1.7400+00	1.2600+00	1.9700-02	1.6700-02	1.4200-02	4.8600-07	4.9340-07	7.1800-07	1.9750-02	1.0760-02
1986.00	2.0000+00	1.9300+00	1.5100+00	1.9700-02	1.5400-02	1.1100-02	8.4000-07	8.4200-07	6.3900-07	2.5400-02	1.2570-02
2046.00	1.6040+00	1.8400+00	1.7700+00	2.6600-02	1.0400-02	7.5000-02	1.1800-06	6.7200-07	1.5600-07	2.5600-02	1.2510-02
2092.00	1.1640+00	1.8400+00	1.7700+00	2.6600-02	1.0400-02	7.5000-02	1.1800-06	6.7200-07	1.5600-07	2.5600-02	1.2510-02
2106.00	1.6260+00	1.6700+00	1.9700+00	3.1800-02	7.5500-03	8.1100-03	1.1800-06	6.8000-07	3.5800-07	3.1840-07	1.2220-02
2166.00	3.6260+00	9.2600-01	2.8500+00	4.1100-02	6.9700-03	1.3500-02	1.3500-05	8.3700-07	1.6100-06	4.1100-02	1.4560-02
2226.00	6.6800+00	3.0700-01	3.7500+00	4.8600-02	1.1400-02	1.7100-02	1.3500-06	8.7700-07	1.6000-06	4.8700-02	1.5740-02
2286.00	1.0150+01	1.2650+00	4.2500+00	5.4500-02	1.8300-02	1.6450-02	1.1200-06	8.9800-07	2.0800-06	5.5400-02	1.4390-02
2292.00	1.0150+01	1.2650+00	4.2500+00	5.4500-02	1.8300-02	1.6450-02	1.1200-06	8.9800-07	2.0800-06	5.5400-02	1.4390-02
2352.00	1.0150+01	1.2650+00	4.2500+00	5.4500-02	1.8300-02	1.6450-02	1.1200-06	8.9800-07	2.0800-06	5.5400-02	1.4390-02
2366.00	1.4300+01	2.4700+00	1.4100-01	6.4500-02	1.1500-02	1.2040-02	1.2700-06	2.4700-06	9.5740-07	6.4540-02	3.2900-03
2406.00	1.7800+01	3.0500+00	2.6900-01	7.1800-02	1.3500-02	0.7400-03	1.2400-06	2.0800-06	1.6600-06	7.9200-02	2.8500-03
2430.00	1.8600+01	3.2700+00	2.4600-01	7.1800-02	1.3500-02	0.7400-03	1.2400-06	2.0800-06	1.6600-06	7.9200-02	2.8500-03
2430.00	6.5700-01	7.6000-01	1.9600-02	2.5000-02	2.3800-03	3.6500-03	1.2150-06	1.8900-06	6.5200-07	2.5000-02	2.9740-03
2449.00	1.8100-01	5.8000-01	1.9600-02	2.3900-02	2.7100-03	2.1200-03	1.2450-06	1.7700-06	6.7100-07	2.3900-02	6.1120-03
2449.00	3.1500-02	3.1450-01	1.7200-02	2.3700-02	2.1300-03	2.0100-03	1.2340-06	1.7700-06	6.5900-07	2.3700-02	6.8050-03
2476.00	4.7000-02	7.8800-02	2.5300-03	2.3700-02	2.4700-03	1.7200-04	1.4400-06	1.5400-06	7.4100-07	1.0750-02	3.2710-03
2482.00	1.9300-02	2.7600-01	2.4400-03	2.9100-03	8.0300-03	2.2600-04	1.5700-06	1.5000-06	9.2140-07	2.9300-03	7.9900-03

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W				
1666.00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	
1667.00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	0.0000+00	
1746.00	1.8400+00	4.1800-01	3.3800-01	1.4700-03	2.8900-03	4.4800-03	2.3000-08	7.8900-08	1.2700-07	4.2800-07	2.3600-06	5.7060-06	
1816.00	2.5700+00	8.7500-01	5.2300-01	6.4500-03	2.4900-03	1.5400-02	7.4000-08	7.6300-08	1.6800-07	2.2800-06	5.8460-06	5.8460-06	
1866.00	1.3740+00	5.5100-01	5.7500-01	7.3200-03	2.7500-03	1.5700-02	1.3300-07	2.5700-07	1.2100-07	2.6000-06	5.8460-06	7.2730-06	
1867.00	1.3740+00	5.5100-01	5.7500-01	7.3200-03	2.7500-03	1.5700-02	1.3300-07	2.5700-07	1.2100-07	2.6000-06	5.8460-06	7.2730-06	
1926.00	3.2700+00	1.4500+00	4.8500-01	1.2200-02	5.7500-03	1.8600-02	3.0900-07	7.5400-07	2.5800-07	7.6600-06	1.4250-05	1.4250-05	
1986.00	2.0000+00	1.8500+00	1.2000+00	1.9800-02	5.2600-03	2.1000-02	4.8000-07	7.5400-07	4.3500-07	1.5600-05	2.0770-05	2.0770-05	
2046.00	1.5950-01	1.8000+00	1.8150+00	2.5500-02	8.5500-03	9.0300-03	1.1800-06	4.4000-07	5.3100-07	3.1800-07	1.0310-05	1.0310-05	
2092.00	1.1620+00	8.2300-01	2.4200+00	2.5500-02	5.7500-03	9.0300-03	1.1800-06	4.4000-07	5.3100-07	3.1800-07	1.0310-05	1.0310-05	
2106.00	1.6230+00	5.4700-01	2.5900+00	3.1300-02	8.6400-03	7.4900-03	1.3500-06	8.4000-07	1.6100-06	4.9100-05	1.7640-05	1.7640-05	
2166.00	3.6150+00	2.1000-01	2.9000+00	4.1000-02	7.0500-03	1.4100-02	1.3500-06	8.4000-07	1.6100-06	4.9100-05	1.7640-05	1.7640-05	
2226.00	6.6800+00	3.2700+00	1.9000+00	4.6600-02	8.0100-03	1.5100-02	1.3500-06	1.8700-06	7.2100-07	6.4900-05	2.5630-05	2.5630-05	
2286.00	1.0150+01	3.9500+00	1.9700+00	5.4500-02	7.4500-03	3.5400-03	1.1200-06	1.4300-06	1.7600-06	3.4100-05	5.0630-06	5.0630-06	
2292.00	1.0150+01	3.9500+00	1.9700+00	5.4500-02	7.4500-03	3.5400-03	1.1200-06	1.4300-06	1.7600-06	3.4100-05	5.0630-06	5.0630-06	
2352.00	1.0150+01	3.9500+00	1.9700+00	5.4500-02	7.4500-03	3.5400-03	1.1200-06	1.4300-06	1.7600-06	3.4100-05	5.0630-06	5.0630-06	
2366.00	1.4300+01	2.4700+00	1.4100-01	6.4500-02	1.1500-02	1.2040-02	1.2700-06	2.4700-06	9.5740-07	6.4540-02	3.2900-03	3.2900-03	
2406.00	1.7800+01	3.0500+00	2.6900-01	7.1800-02	1.3500-02	0.7400-03	1.2400-06	2.0800-06	1.6600-06	7.9200-02	2.8500-03	2.8500-03	
2430.00	1.8600+01	3.2700+00	2.4600-01	7.1800-02	1.3500-02	0.7400-03	1.2400-06	2.0800-06	1.6600-06	7.9200-02	2.8500-03	2.8500-03	
2430.00	6.5700-01	7.6000-01	1.9600-02	2.5000-02	2.3800-03	3.6500-03	1.2150-06	1.8900-06	6.5200-07	2.5000-02	2.9740-03	2.9740-03	
2449.00	1.8100-01	5.8000-01	1.9600-02	2.3900-02	2.7100-03	2.1200-03	1.2450-06	1.7700-06	6.7100-07	2.3900-02	6.1120-03	6.1120-03	
2449.00	3.1500-02	3.1450-01	1.7200-02	2.3700-02	2.1300-03	2.0100-03	1.2340-06	1.7700-06	6.5900-07	2.3700-02	6.8050-03	6.8050-03	
2476.00	4.7000-02	7.8800-02	2.5300-03	2.3700-02	2.4700-03	1.7200-04	1.4400-06	1.5400-06	7.4100-07	1.0750-02	3.2710-03	3.2710-03	
2482.00	1.9300-02	2.7600-01	2.4400-03	2.9100-03	8.0300-03	2.2600-04	1.5700-06	1.5000-06	9.2140-07	2.9300-03	7.9900-03	7.9900-03	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

4.2700-10	1.1000-09	1.4800-10	8.2900-07	6.8100-07	4.8300-07	6.0440-06	1.4700-06	1.8800-06
2.0000-01	2.0500-02	1.7400-02	1.3500-07	8.3400-03	1.7200-12			

C-14

SYSTEM A GROUP 6

(GRAVITATIONAL ANOMALY

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	3.142E+01	5.267E+00	1.064E+01	7.845F-02	3.484F-02	5.430E-02	5.320E-07	1.652E-06	1.295E-06	7.827E-02	4.074E-01
1806.00	2.707E+01	6.879F+00	1.044E+01	1.190E-01	5.869E-02	6.943E-02	1.829F-06	1.292F-06	1.440F-06	1.186E-01	6.567E-01
1866.00	1.409E+01	6.769E+00	9.307E+00	1.170F-01	5.717E-02	5.975E-02	3.763F-06	1.897E-06	1.327E-06	1.166F-01	5.341E-01
1926.00	3.227E+01	8.374E+00	1.282E+01	1.411F-01	8.080F-02	9.544F-02	4.440F-06	1.768F-06	4.297E-06	1.406F-01	8.296E-01
1986.00	2.981E+01	1.395E+01	1.354E+01	1.729F-01	1.050E-01	1.113E-01	6.066E-06	2.386E-06	6.634E-06	1.724E-01	1.154E-01
2046.00	1.735E+01	1.563E+01	1.896E+01	2.145F-01	1.379F-01	1.274F-01	8.954F-06	5.689F-06	7.623E-06	2.139F-01	1.211E-01
2092.00	2.680E+00	1.743F+01	1.864E+01	2.738E-01	1.616E-01	1.077E-01	8.931E-06	1.198F-05	9.392E-06	2.731E-01	1.281E-01
2106.00	1.405E+01	1.813F+01	1.785F+01	3.241F-01	1.187E-01	9.616F-02	8.794F-06	9.475F-06	6.526F-06	3.235E-01	1.287E-01
2166.00	1.875F+01	1.720E+01	1.906E+01	3.425F-01	1.236E-01	1.040F-01	8.792E-06	8.362F-06	7.273E-06	3.420F-01	1.229E-01
2226.00	4.222E+01	1.425F+01	2.688E+01	4.247F-01	1.007E-01	1.634F-01	9.546E-06	1.019F-05	1.868E-05	4.243F-01	1.635E-01
2286.00	7.005E+01	1.235E+01	3.589E+01	4.940E-01	1.143F-01	2.061E-01	1.109F-05	1.172E-05	2.366E-05	4.941E-01	1.806E-01
2346.00	1.042E+02	1.582F+01	4.014E+01	5.718F-01	1.705E-01	2.060F-01	1.198F-05	1.078E-05	2.726E-05	5.721E-01	1.860E-01
2406.00	1.077E+02	1.670F+01	4.082E+01	5.797E-01	1.756E-01	2.074E-01	1.200F-05	1.074F-05	2.737E-05	5.800E-01	1.828E-01
2449.50	1.095F+02	1.775F+01	2.207E+01	5.920F-01	1.391F-01	1.214F-01	1.067E-05	1.351F-05	2.240F-05	5.922F-01	1.010E-01
2466.00	1.454E+02	2.563F+01	2.639E+00	6.737F-01	1.291F-01	1.520F-01	1.058F-05	2.224F-05	1.922E-05	6.741E-01	7.272E-01
2482.00	1.820E+02	3.198E+01	3.638E+00	7.476E-01	1.514F-01	1.246F-01	1.230F-05	2.024F-05	2.048E-05	7.481E-01	7.997E-01
2430.00	1.911F+02	3.335F+01	3.345E+00	7.622E-01	1.559F-01	1.067E-01	1.480E-05	1.971F-05	2.082E-05	7.627E-01	8.676E-01
2430.00	6.721E+00	8.757E+00	2.404E+00	3.035F-01	8.343E-02	9.059F-02	1.459E-05	1.968E-05	1.796E-05	3.037F-01	1.096E-01
2449.50	2.020E+00	7.370F+00	5.869E-01	2.982E-01	9.112E-02	6.296F-02	1.879E-05	2.003E-05	1.851F-05	2.983E-01	1.126E-01
2449.50	3.957E-01	4.652F+00	5.490E-01	2.922E-01	9.278F-02	6.222E-02	1.885F-05	2.004F-05	1.845E-05	2.923E-01	1.177E-01
2466.00	5.858F-01	1.375F+00	4.567E-01	1.340E-01	1.031E-01	4.890F-02	2.229E-05	2.015F-05	1.968E-05	1.340F-01	1.009E-01
2482.00	2.496E-01	3.907E+00	2.921E-01	3.846E-02	1.348E-01	3.066E-02	2.505E-05	2.091E-05	2.108E-05	3.850E-02	1.344E-01

TIME	U			V			W			GAMMA ERROR	PSI ERR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	3.125F+01	6.838F+00	1.025E+01	7.755F-02	4.505F-02	4.767F-02	5.328F-07	8.998F-07	2.097F-06	2.125E-05	1.280E-01
1866.00	2.694E+01	9.393F+00	8.672E+00	1.186F-01	6.809E-02	6.101E-02	1.838F-06	8.608E-06	1.722E-06	4.439E-05	2.267E-01
1926.00	1.402E+01	6.466E+00	9.624E+00	1.168E-01	5.434E-02	6.271F-02	3.734F-06	2.015F-06	1.233E-06	4.327E-05	2.329E-01
1986.00	3.213F+01	1.191F+01	1.008F+01	1.408F-01	8.709F-02	9.014F-02	4.416F-06	2.510F-06	3.937E-06	7.466F-05	4.766E-01
2046.00	2.970E+01	1.729F+01	9.233E+00	1.729F-01	1.126F-01	1.037E-01	6.044F-06	6.655E-06	2.384F-06	1.278E-04	7.927E-01
2092.00	1.730E+01	2.005F+01	1.428E+01	2.145F-01	1.189E-01	1.453F-01	8.936E-06	8.604E-06	4.094E-06	2.197E-04	1.510E-01
2106.00	2.674F+00	1.921E+01	1.680E+01	2.738F-01	9.882E-02	1.672F-01	8.927F-06	1.159F-05	9.871E-06	3.144F-04	2.057E-01
2166.00	1.402E+01	1.318F+01	2.178E+01	3.241E-01	9.324F-02	1.409E-01	8.798F-06	4.980E-06	1.037F-05	3.405F-04	1.611E-01
2226.00	1.871E+01	1.165E+01	2.291E+01	3.424F-01	8.663E-02	1.366F-01	8.796F-06	6.068F-06	9.270F-06	3.756E-04	1.572F-01
2286.00	4.215E+01	1.424E+01	2.699E+01	4.243E-01	1.016E-01	1.640F-01	9.529E-06	1.020E-05	1.868E-05	4.984E-04	2.052E-01
2346.00	6.996F+01	3.294F+01	1.918E+01	4.934F-01	1.681E-01	1.671F-01	1.107F-05	2.530F-05	7.582E-05	6.446F-04	2.230F-01
2406.00	1.041E+02	3.611F+01	2.401E+01	5.711F-01	2.332E-01	1.339F-01	1.198F-05	1.621F-05	2.442E-05	8.406E-04	1.946E-01
2449.50	1.076E+02	3.478F+01	2.747E+01	5.790F-01	2.338E-01	1.415F-01	1.200E-05	1.383F-05	2.595E-05	8.616F-04	2.076E-01
2466.00	1.094E+02	2.522F+01	1.362F+01	5.915F-01	1.238F-01	1.392E-01	1.065E-05	1.789E-05	1.910E-05	8.594F-04	2.038E-01
2482.00	1.454E+02	2.607E+01	2.734F+00	6.733F-01	1.302E-01	1.527E-01	1.058F-05	2.226E-05	1.919E-05	1.059E-03	2.416E-01
2430.00	1.820F+02	3.185F+01	3.686F+00	7.474E-01	1.522F-01	1.249F-01	1.230F-05	2.025F-05	2.047F-05	1.533E-03	2.573E-01
2430.00	1.910E+02	3.354E+01	3.373E+00	7.620E-01	1.565E-01	1.068E-01	1.479E-05	1.971F-05	2.082F-05	1.685F-03	2.374E-01
2430.00	6.713F+00	8.742E+00	2.406E+00	3.035F-01	8.333F-02	9.064E-02	1.459E-05	1.968E-05	1.796F-05	6.427E-04	2.014E-01
2449.50	2.017E+00	7.371E+00	5.869F-01	2.982F-01	9.107E-02	6.299E-02	1.879F-05	2.003F-05	1.851F-05	6.434E-04	1.464E-01
2449.50	3.948E-01	4.652E+00	5.497E-01	2.922E-01	9.272E-02	6.224E-02	1.865E-05	2.004E-05	1.845E-05	6.458F-04	1.446E-01
2466.00	5.858F-01	1.375E+00	4.569E-01	1.340F-01	1.032E-01	4.892E-02	2.229E-05	2.014E-05	1.968E-05	3.717E-04	1.342E-01
2482.00	2.495F-01	3.907F+00	2.919E-01	3.845E-02	1.348F-01	3.067F-02	2.505E-05	2.091E-05	2.108E-05	1.318E-04	1.013E-01

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

4.353E-09	1.461E-08	3.488E-09	9.714E-06	8.159E-06	5.806E-06	7.168E-05	1.680E-05	2.294E-05
3.645E+00	3.672E-01	2.255E-01	1.092E-05	1.080E-01	2.188E-11			

PRINTED IN U.S.A.

ORIGINAL PAGE IS OF POOR QUALITY

C-15

021111

SYSTEM A GROUP 7

(GYRO BIAS DRIFT - X,Y,Z

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	2.965E+03	8.749E+03	8.602E+03	1.312E+01	7.397E+00	5.969E+00	6.298E-04	3.305E-04	5.736E-04	1.100E+01	4.874E+00
1686.00	-5.740E+03	-5.306E+03	-6.416E+03	1.481E+01	6.199E+00	1.205E+01	6.295E-04	3.275E-04	5.714E-04	1.431E+01	3.568E+00
1746.00	3.108E+03	1.170E+03	5.580E+02	8.845E+00	1.118E+01	4.396E+00	7.502E-04	4.885E-04	6.748E-04	8.839E+00	5.427E+00
1806.00	4.093E+03	1.217E+03	4.917E+02	1.094E+01	1.074E+01	3.245E+00	7.985E-04	5.057E-04	7.034E-04	1.094E+01	4.740E+00
1806.00	2.130E+03	7.586E+02	3.096E+02	6.860E+00	1.041E+01	3.418E+00	6.352E-04	4.755E-04	1.018E-03	6.841E+00	2.389E+00
1866.00	1.858E+03	7.905E+02	4.059E+02	5.800E+00	1.021E+01	3.081E+00	7.211E-04	4.770E-04	1.158E-03	5.812E+00	7.641E+00
1926.00	1.241E+03	9.770E+02	3.086E+02	5.177E+00	1.155E+01	2.577E+00	7.464E-04	4.417E-04	1.384E-03	5.178E+00	3.000E+00
1986.00	7.069E+02	1.379E+03	1.811E+02	3.242E+00	1.413E+01	3.525E+00	7.456E-04	4.417E-04	1.661E-03	3.256E+00	7.446E+00
2046.00	1.843E+02	1.512E+03	5.300E+02	1.776E+00	1.542E+01	4.792E+00	8.167E-04	5.539E-04	1.841E-03	1.767E+00	1.413E+00
2092.00	1.264E+02	1.254E+03	1.483E+02	1.497E+00	1.201E+01	1.451E+00	9.997E-04	2.768E-04	1.344E-03	1.486E+00	5.258E+00
2106.00	1.253E+02	1.160E+03	2.993E+02	1.465E+00	1.015E+01	2.584E+00	9.966E-04	3.213E-04	1.056E-03	1.466E+00	4.914E+00
2166.00	2.573E+02	9.399E+02	8.994E+02	2.528E+00	2.899E+00	8.057E+00	8.208E-04	9.271E-04	1.885E-05	2.541E+00	2.621E+00
2226.00	5.244E+02	7.244E+02	1.498E+03	2.837E+00	1.460E+00	1.065E+01	1.065E+01	1.115E-03	4.778E-04	2.855E+00	7.783E+00
2286.00	8.439E+02	2.320E+02	1.828E+03	3.148E+00	4.583E+00	1.046E+01	6.800E-04	9.902E-04	7.041E-04	3.197E+00	1.014E+01
2292.00	8.679E+02	1.981E+02	1.875E+03	3.187E+00	4.761E+00	1.053E+01	6.794E-04	9.828E-04	7.107E-04	3.194E+00	9.767E+00
2922.00	9.037E+02	1.217E+02	9.966E+02	3.879E+00	2.703E+00	4.782E+00	7.792E-04	4.690E-04	4.109E-04	3.882E+00	4.389E+00
2346.00	1.339E+03	1.319E+02	2.814E+01	4.862E+00	9.228E-01	2.031E+00	9.053E-04	1.288E-04	1.430E-04	4.863E+00	2.739E-01
2406.00	1.575E+03	1.737E+02	4.051E+01	4.959E+00	1.338E+00	1.391E+00	8.321E-04	7.130E-05	1.825E-04	4.961E+00	3.425E-01
2430.00	1.600E+03	1.811E+02	3.630E+01	4.819E+00	1.433E+00	1.023E+00	7.954E-04	4.309E-05	1.933E-04	4.822E+00	4.532E-01
2430.00	5.610E+01	6.315E+01	2.104E+01	7.992E-01	1.882E-01	7.324E-01	8.103E-04	4.093E-05	1.281E-04	7.982E-01	6.165E-02
2449.50	9.208E+00	7.177E+01	4.197E+00	6.138E-01	2.884E-01	3.671E-01	7.710E-04	2.950E-05	1.436E-04	6.125E-01	1.679E-01
2449.50	5.857E+00	7.370E+01	3.899E+00	6.004E-01	2.682E-01	3.607E-01	7.708E-04	2.957E-05	1.427E-04	5.990E-01	1.502E-01
2466.00	1.022E+00	6.609E+00	1.960E+00	2.410E-01	7.210E-01	1.515E-01	7.438E-04	3.757E-05	1.748E-04	2.409E-01	7.078E-01
2482.00	1.813E-01	1.780E+01	6.228E-01	4.873E-02	8.452E-01	7.237E-02	7.389E-04	4.293E-05	1.788E-04	4.897E-02	8.444E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	3.267E+03	1.145E+04	4.198E+03	1.311E+01	4.481E+00	8.398E+00	6.396E-04	3.041E-04	5.774E-04	2.176E-03	1.504E-03
1686.00	5.691E+03	1.690E+03	8.187E+03	1.462E+01	3.692E+00	1.326E+01	6.393E-04	3.051E-04	5.728E-04	2.872E-03	2.833E-03
1746.00	3.090E+03	7.507E+02	1.106E+03	8.707E+00	6.047E+00	1.049E+01	7.581E-04	4.012E-04	7.219E-04	2.435E-03	2.770E-03
1806.00	4.073E+03	1.004E+03	1.014E+03	1.082E+01	5.597E+00	9.867E+00	8.034E-04	5.411E-04	6.707E-04	4.196E-03	3.651E-03
1806.00	2.120E+03	5.338E+02	6.573E+02	6.773E+00	2.908E+00	1.062E+01	6.411E-04	8.569E-04	7.209E-04	2.604E-03	3.932E-03
1866.00	1.850E+03	8.660E+02	2.635E+02	5.742E+00	8.405E+00	6.624E+00	7.251E-04	5.852E-04	1.105E-03	3.545E-03	3.479E-03
1926.00	1.237E+03	6.211E+02	8.219E+02	5.140E+00	4.052E+00	1.113E+01	7.506E-04	1.275E-03	7.082E-04	4.388E-03	8.502E-03
1986.00	7.046E+02	8.366E+02	1.113E+03	3.222E+00	7.736E+00	1.234E+01	7.476E-04	1.360E-03	1.050E-03	4.009E-03	1.280E-02
2046.00	1.837E+02	1.383E+02	1.597E+03	1.772E+00	1.549E+00	1.608E+01	8.169E-04	1.901E-03	2.860E-04	2.265E-03	1.978E-02
2092.00	1.259E+02	4.669E+02	1.173E+03	1.496E+00	5.296E+00	1.087E+01	9.975E-04	1.183E-03	6.985E-04	1.830E-03	1.244E-02
2106.00	1.250E+02	5.358E+02	1.072E+03	1.468E+00	5.022E+00	9.185E+00	9.946E-04	9.339E-04	5.923E-04	2.050E-03	1.057E-02
2166.00	2.571E+02	9.397E+02	8.996E+02	2.518E+00	2.896E+00	8.061E+00	8.190E-04	9.287E-04	1.808E-05	3.487E-03	1.009E-02
2226.00	5.242E+02	1.647E+03	2.374E+02	2.815E+00	8.201E+00	6.965E+00	7.138E-04	1.011E-03	6.728E-04	5.097E-03	9.288E-03
2286.00	8.438E+02	1.198E+03	1.401E+03	3.127E+00	1.073E+01	3.927E+00	6.783E-04	1.789E-04	1.203E-03	6.764E-03	5.760E-03
2292.00	8.678E+02	1.069E+03	1.553E+03	3.167E+00	1.034E+01	5.167E+00	6.777E-04	3.121E-04	1.173E-03	6.743E-03	7.630E-03
2292.00	9.635E+02	5.793E+02	8.202E+02	3.865E+00	5.015E+00	2.264E+00	7.781E-04	1.314E-04	6.109E-04	6.601E-03	3.344E-03
2346.00	1.339E+03	1.355E+02	2.849E+01	4.859E+00	9.262E-01	2.036E+00	9.056E-04	1.274E-04	1.423E-04	7.655E-03	3.221E-03
2406.00	1.575E+03	1.759E+02	4.089E+01	4.957E+00	1.343E+00	1.394E+00	8.322E-04	7.097E-05	1.824E-04	1.035E-02	2.879E-03
2430.00	1.599E+03	1.826E+02	3.653E+01	4.818E+00	1.437E+00	1.025E+00	7.954E-04	4.311E-05	1.932E-04	1.091E-02	2.273E-03
2430.00	5.613E+01	6.314E+01	2.100E+01	7.990E-01	1.881E-01	7.326E-01	8.103E-04	4.089E-05	1.281E-04	1.780E-03	1.628E-03
2449.50	9.238E+00	7.177E+01	4.154E+00	6.137E-01	2.884E-01	3.673E-01	7.710E-04	2.981E-05	1.436E-04	1.496E-03	8.536E-04
2449.50	5.898E+00	7.370E+01	3.850E+00	6.002E-01	2.683E-01	3.610E-01	7.708E-04	2.988E-05	1.427E-04	1.457E-03	8.388E-04
2466.00	1.020E+00	6.607E+00	1.965E+00	2.408E-01	7.209E-01	1.520E-01	7.438E-04	3.768E-05	1.748E-04	7.591E-04	4.167E-04
2482.00	1.810E-01	1.780E+01	6.313E-01	4.871E-02	8.452E-01	7.230E-02	7.389E-04	4.285E-05	1.788E-04	2.020E-04	2.388E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.143E-07	1.841E-07	1.146E-07	4.050E-05	2.475E-05	1.241E-05	2.818E-04	1.192E-04	3.691E-05
1.613E+01	7.617E-01	1.523E-01	2.137E-05	5.732E-02	6.364E-11			

C-16

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	4.096E+03	2.380E+02	1.572E+03	3.643E+00	6.877E-01	1.106E+00	5.576E-05	1.544E-05	2.749E-05	3.411E+00	8.908E-01
1686.00	3.542E+03	1.605E+03	1.305E+03	1.157E+00	2.114E+00	1.795E+00	5.525E-05	1.597E-05	2.755E-05	1.159E+00	1.214E+00
1746.00	1.322E+03	2.997E+02	5.111E+02	5.453E+00	1.915E+00	2.552E+00	6.421E-05	1.378E-04	1.158E-04	5.404E+00	8.582E-01
1806.00	6.756E+02	1.793E+02	2.744E+02	5.847E+00	1.131E+00	1.928E+00	8.176E-05	1.664E-04	1.160E-04	5.827E+00	1.235E+00
1866.00	3.498E+02	1.841E+02	2.470E+02	6.156E+00	1.167E+00	1.530E+00	1.267E-04	1.549E-04	1.601E-04	6.131E+00	1.509E-01
1866.00	7.149E+02	1.507E+02	2.707E+02	4.077E+00	7.556E-01	1.461E+00	1.554E-04	1.685E-04	6.531E-05	4.056E+00	1.012E+00
1926.00	6.421E+02	2.693E+02	2.949E+02	3.611E+00	6.180E-01	1.237E+00	1.868E-04	1.818E-04	7.130E-05	3.594E+00	1.778E+00
1986.00	3.441E+02	2.333E+02	3.254E+02	3.602E+00	4.900E-01	1.092E+00	2.227E-04	1.340E-04	9.307E-05	3.587E+00	1.379E+00
2046.00	2.423E+01	2.619E+02	2.245E+02	3.843E+00	9.237E-01	3.241E-01	2.337E-04	5.510E-05	1.343E-04	3.832E+00	1.227E+00
2092.00	1.620E+02	2.707E+02	2.557E+02	3.893E+00	7.978E-01	5.397E-01	2.303E-04	6.612E-05	1.065E-04	3.889E+00	9.272E-01
2106.00	2.220E+02	2.480E+02	2.810E+02	3.980E+00	5.720E-01	7.533E-01	2.308E-04	8.815E-05	8.162E-05	3.977E+00	9.995E-01
2166.00	4.862E+02	1.486E+02	3.950E+02	4.277E+00	8.216E-01	1.647E+00	2.468E-04	1.878E-04	1.318E-04	4.275E+00	1.594E+00
2226.00	7.591E+02	6.400E+01	5.031E+02	4.306E+00	1.328E+00	2.062E+00	2.600E-04	1.986E-04	1.660E-04	4.311E+00	4.705E-01
2286.00	1.062E+03	1.170E+02	5.565E+02	4.486E+00	2.115E+00	2.062E+00	2.695E-04	1.667E-04	2.109E-04	4.491E+00	2.058E+00
2292.00	1.091E+03	1.320E+02	5.645E+02	4.508E+00	2.171E+00	2.075E+00	2.699E-04	1.645E-04	2.118E-04	4.513E+00	2.128E+00
2292.00	1.124E+03	1.583E+02	3.057E+02	4.766E+00	1.558E+00	4.953E-01	2.554E-04	2.701E-05	1.232E-04	4.769E+00	5.531E-01
2346.00	1.432E+03	2.442E+02	1.897E+01	5.174E+00	1.074E+00	1.572E+00	1.572E-04	1.419E-04	4.613E-05	5.178E+00	6.863E-02
2406.00	1.674E+03	2.827E+02	3.449E+01	5.234E+00	1.190E+00	1.110E+00	2.414E-04	8.335E-05	6.777E-05	5.238E+00	1.409E-01
2430.00	1.709E+03	2.895E+02	3.063E+01	5.106E+00	1.187E+00	8.456E-01	2.463E-04	5.545E-05	7.380E-05	5.112E+00	1.609E-01
2430.00	6.009E+01	6.579E+01	1.478E+01	8.102E-01	1.621E-01	5.410E-01	2.394E-04	5.316E-05	9.264E-06	8.118E-01	3.158E-01
2449.50	9.812E+00	4.553E+01	3.103E+00	6.105E-01	1.321E-01	2.908E-01	2.470E-04	2.849E-05	1.764E-05	6.115E-01	2.406E-01
2449.50	1.201E+00	2.861E+01	2.820E+00	5.782E-01	1.807E-01	2.822E-01	2.465E-04	2.818E-05	1.483E-05	5.789E-01	2.848E-01
2466.00	1.101E+00	8.942E-01	1.492E+00	2.359E-01	9.531E-02	1.429E-01	2.565E-04	1.408E-05	2.347E-05	2.360E-01	1.064E-01
2482.00	3.801E-01	3.565E+00	6.468E-01	4.429E-02	6.879E-02	5.629E-02	2.660E-04	1.159E-05	3.571E-05	4.434E-02	6.822E-02

TIME	GAMMA ERROR			PSI ERROR							
	U	V	W	U	V	W					
1686.00	4.110E+03	8.442E+02	1.302E+03	3.602E+00	1.060E+00	9.336E-01	5.573E-05	1.521E-05	2.666E-05	6.921E-04	1.602E-04
1686.00	3.521E+03	1.824E+03	1.824E+03	1.134E+00	1.246E+00	2.488E+00	5.572E-05	1.546E-05	2.688E-05	2.406E-04	5.234E-04
1746.00	1.315E+03	2.812E+02	5.397E+02	5.436E+00	1.077E+00	3.034E+00	6.467E-05	1.757E-05	1.790E-04	1.435E-03	8.092E-04
1806.00	6.723E+02	2.389E+02	2.340E+02	5.843E+00	1.281E+00	1.846E+00	8.216E-05	3.955E-05	1.988E-04	2.157E-03	6.878E-04
1806.00	3.400E+02	1.662E+02	2.617E+02	6.149E+00	9.618E-01	1.600E+00	1.264E-04	8.136E-05	2.075E-04	2.273E-03	6.288E-04
1866.00	7.119E+02	2.575E+02	1.846E+02	4.078E+00	4.891E-01	1.556E+00	1.549E-04	1.417E-04	1.128E-04	2.064E-03	8.233E-04
1866.00	3.498E+02	3.758E+02	1.456E+02	3.616E+00	1.202E+00	6.536E-01	1.865E-04	1.051E-04	1.649E-04	2.509E-03	5.004E-04
1926.00	6.398E+02	3.972E+02	5.736E+01	3.605E+00	1.096E+00	4.584E-01	2.225E-04	9.855E-05	1.303E-04	3.603E-03	4.830E-04
1986.00	3.430E+02	3.972E+02	5.736E+01	3.605E+00	1.096E+00	4.584E-01	2.225E-04	9.855E-05	1.303E-04	3.603E-03	4.830E-04
2046.00	2.410E+01	2.812E+02	1.999E+02	3.843E+00	5.138E-01	8.316E-01	2.337E-04	1.294E-04	6.589E-05	4.422E-03	1.019E-03
2092.00	1.617E+02	1.058E+02	3.572E+02	3.893E+00	2.997E-01	9.175E-01	2.304E-04	1.077E-04	6.365E-05	4.256E-03	1.046E-03
2106.00	2.217E+02	6.050E+01	3.701E+02	3.979E+00	4.127E-01	8.569E-01	2.309E-04	9.250E-05	7.624E-05	4.396E-03	9.824E-04
2166.00	4.855E+02	1.472E+02	3.965E+02	4.270E+00	8.341E-01	1.660E+00	2.470E-04	1.875E-04	1.318E-04	4.994E-03	2.075E-03
2226.00	7.582E+02	4.521E+02	2.328E+02	4.295E+00	1.048E+00	2.200E+00	2.603E-04	2.464E-04	7.862E-05	5.807E-03	2.988E-03
2286.00	1.062E+03	4.899E+02	2.919E+02	4.475E+00	2.938E+00	4.425E-01	2.699E-04	4.851E-05	2.641E-04	7.073E-03	6.361E-04
2292.00	1.090E+03	4.654E+02	3.482E+02	4.497E+00	2.986E+00	4.509E-01	2.702E-04	4.643E-05	2.666E-04	7.170E-03	6.675E-04
2292.00	1.123E+03	3.206E+02	1.328E+02	4.759E+00	1.414E+00	8.637E-01	2.556E-04	7.525E-05	1.010E-04	7.122E-03	1.257E-03
2346.00	1.431E+03	2.442E+02	2.042E+01	5.171E+00	1.080E+00	1.578E+00	2.494E-04	1.421E-04	4.529E-05	8.202E-03	2.498E-03
2406.00	1.674E+03	2.852E+02	3.514E+01	5.232E+00	1.196E+00	1.113E+00	2.414E-04	8.360E-05	6.758E-05	1.084E-02	2.294E-03
2430.00	1.709E+03	2.911E+02	3.102E+01	5.105E+00	1.191E+00	8.472E-01	2.463E-04	5.566E-05	7.372E-05	1.147E-02	1.883E-03
2430.00	6.003E+01	6.583E+01	1.487E+01	8.104E-01	1.620E-01	5.408E-01	2.394E-04	5.326E-05	9.255E-06	1.666E-03	1.202E-03
2449.50	9.785E+00	4.553E+01	3.142E+00	6.105E-01	1.320E-01	2.907E-01	2.470E-04	2.861E-05	1.762E-05	1.317E-03	6.754E-04
2449.50	1.186E+00	2.861E+01	2.844E+00	5.783E-01	1.806E-01	2.821E-01	2.465E-04	2.829E-05	1.481E-05	1.221E-03	6.554E-04
2466.00	1.101E+00	8.937E-01	1.497E+00	2.359E-01	9.535E-02	1.429E-01	2.565E-04	1.455E-05	2.347E-05	6.331E-04	3.918E-04
2482.00	3.801E-01	3.564E+00	6.490E-01	4.429E-02	6.877E-02	5.633E-02	2.660E-04	1.158E-05	3.571E-05	1.492E-04	1.860E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)  
 3.807E-08 5.074E-08 3.665E-08 3.095E-05 2.188E-05 1.470E-05 2.058E-04 6.562E-05 5.276E-05  
 3.410E+00 3.158E-01 3.507E-01 2.366E-05 1.763E-01 3.239E-11

PRINTED IN U.S.A.

C-17  
071111

SYSTEM A GROUP 9

(GYRU G-2 ERRORS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	3.279E+01	1.243E+01	2.715E+01	1.009E-01	4.662E-02	3.675E-02	5.560E-06	6.994E-07	2.437E-06	9.628E-02	5.208E-02
1686.00	1.798E+01	2.749E+01	2.260E+01	5.111E-02	5.514E-02	1.833E-02	5.503E-06	7.085E-07	2.486E-06	5.339E-02	5.435E-02
1746.00	2.503E+01	1.214E+01	6.173E+00	6.077E-02	4.907E-02	6.082E-02	4.201E-06	1.122E-06	2.109E-06	6.074E-02	4.032E-02
1806.00	2.926E+01	1.067E+01	2.855E+00	6.439E-02	2.995E-02	5.031E-02	3.113E-06	1.957E-06	1.723E-06	6.431E-02	4.015E-02
1806.00	1.508E+01	7.038E+00	2.181E+00	3.470E-02	2.879E-02	3.610E-02	5.173E-06	2.153E-06	2.921E-06	3.476E-02	2.405E-02
1866.00	8.598E+00	4.481E+00	3.052E+00	2.056E-02	2.759E-02	3.250E-02	6.148E-06	2.314E-06	3.827E-06	2.055E-02	2.264E-02
1926.00	5.368E+00	3.895E+00	2.441E+00	1.796E-02	2.638E-02	2.281E-02	5.533E-06	2.387E-06	4.510E-06	1.802E-02	1.711E-02
1986.00	2.319E+00	4.756E+00	1.102E+00	1.104E-02	3.676E-02	1.733E-02	6.031E-06	2.727E-06	5.521E-06	1.103E-02	2.056E-02
2046.00	4.905E-01	4.573E+00	1.400E+00	9.835E-03	3.995E-02	1.850E-02	5.577E-06	3.115E-06	5.952E-06	9.830E-03	8.281E-03
2092.00	6.966E-01	3.235E+00	7.285E-01	1.127E-02	2.922E-02	8.343E-03	4.831E-06	1.755E-06	4.363E-06	1.126E-02	1.840E-02
2106.00	8.953E-01	2.817E+00	1.031E+00	1.227E-02	2.414E-02	5.701E-03	4.823E-06	1.157E-06	3.463E-06	1.229E-02	1.660E-02
2166.00	1.928E+00	1.818E+00	2.132E+00	1.681E-02	7.510E-03	1.232E-02	5.467E-06	1.600E-06	4.566E-07	1.663E-02	7.836E-03
2226.00	3.190E+00	1.273E+00	3.132E+00	1.613E-02	4.736E-03	1.999E-02	5.951E-06	2.020E-06	1.324E-06	1.816E-02	1.576E-02
2286.00	4.554E+00	5.777E-01	3.729E+00	1.903E-02	1.041E-02	2.457E-02	6.194E-06	1.814E-06	1.781E-06	1.905E-02	2.166E-02
2292.00	4.677E+00	5.815E-01	3.838E+00	1.512E-02	1.110E-02	2.487E-02	6.194E-06	1.791E-06	1.806E-06	1.914E-02	2.121E-02
2292.00	4.837E+00	5.896E-01	2.049E+00	2.032E-02	7.285E-03	1.368E-02	5.351E-06	8.098E-07	1.193E-06	2.033E-02	1.053E-02
2346.00	6.192E+00	9.197E-01	1.442E-01	2.234E-02	5.996E-03	5.695E-03	5.312E-06	6.868E-07	7.38E-07	2.234E-02	1.630E-03
2406.00	7.267E+00	1.120E+00	1.290E-01	2.265E-02	6.556E-03	4.293E-03	5.139E-06	7.681E-07	8.668E-07	2.286E-02	2.169E-03
2430.00	7.419E+00	1.107E+00	1.196E-01	2.234E-02	6.657E-03	3.717E-03	5.137E-06	8.113E-07	9.270E-07	2.236E-02	2.468E-03
2430.00	2.607E-01	2.168E-01	5.436E-02	3.72E-03	1.788E-03	2.493E-03	5.030E-06	8.087E-07	7.505E-07	3.731E-03	1.584E-03
2449.50	4.360E-02	1.590E-01	1.577E-02	2.901E-03	2.200E-03	2.034E-03	5.140E-06	8.034E-07	8.314E-07	2.903E-03	1.957E-03
2449.50	1.015E-02	1.082E-01	1.449E-02	2.776E-03	2.139E-03	2.004E-03	5.139E-06	8.070E-07	8.251E-07	2.776E-03	1.949E-03
2466.00	4.759E-03	3.346E-02	1.419E-02	1.108E-03	3.104E-03	1.810E-03	5.267E-06	7.589E-07	9.504E-07	1.108E-03	3.008E-03
2482.00	1.350E-03	7.867E-02	1.134E-02	2.201E-04	3.675E-03	1.370E-03	5.392E-06	6.720E-07	1.027E-06	2.210E-04	3.671E-03

ORIGINAL PAGE IS OF POOR QUALITY

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	3.357E+01	1.611E+01	2.409E+01	9.551E-02	5.470E-02	2.842E-02	5.611E-06	6.340E-07	2.385E-06	1.957E-05	5.141E-06
1686.00	1.790E+01	1.497E+01	3.232E+01	4.993E-02	5.616E-02	1.853E-02	5.611E-06	6.394E-07	2.391E-06	1.108E-05	4.331E-06
1746.00	2.489E+01	6.164E+00	1.243E+01	5.566E-02	4.448E-02	6.528E-02	4.271E-06	1.130E-06	2.043E-06	1.677E-05	1.740E-05
1806.00	2.511E+01	6.617E+00	9.304E+00	6.346E-02	4.509E-02	3.842E-02	3.120E-06	1.183E-06	2.317E-06	2.497E-05	1.431E-05
1806.00	1.500E+01	3.212E+00	6.801E+00	3.436E-02	2.709E-02	3.771E-02	5.141E-06	2.864E-06	2.362E-06	1.354E-05	1.405E-05
1866.00	8.561E+00	4.222E+00	3.495E+00	2.034E-02	2.406E-02	3.532E-02	6.113E-06	3.060E-06	3.317E-06	1.156E-05	1.868E-05
1926.00	5.347E+00	3.036E+00	3.449E+00	1.785E-02	2.091E-02	2.611E-02	5.515E-06	4.754E-06	1.925E-06	1.625E-05	1.995E-05
1986.00	2.312E+00	2.818E+00	3.953E+00	1.100E-02	2.118E-02	3.463E-02	6.077E-06	5.584E-06	2.627E-06	1.257E-05	3.601E-05
2046.00	4.886E-01	3.138E-01	4.772E+00	9.837E-03	1.001E-02	4.287E-02	5.595E-06	6.499E-06	1.708E-06	1.366E-05	5.275E-05
2092.00	6.958E-01	1.118E+00	3.122E+00	1.229E-02	1.954E-02	2.327E-02	4.837E-06	3.147E-06	3.487E-06	1.467E-05	2.662E-05
2106.00	8.944E-01	1.212E+00	2.744E+00	1.229E-02	1.773E-02	1.735E-02	4.834E-06	2.082E-06	2.989E-06	1.566E-05	1.997E-05
2166.00	1.928E+00	1.816E+00	2.135E+00	1.680E-02	7.509E-03	1.234E-02	5.474E-06	1.885E-06	4.497E-07	2.056E-05	1.543E-05
2226.00	3.187E+00	3.267E+00	8.777E-01	1.609E-02	1.670E-02	1.202E-02	5.957E-06	2.187E-06	9.825E-07	2.500E-05	1.601E-05
2286.00	4.552E+00	2.683E+00	2.658E+00	1.898E-02	2.399E-02	1.133E-02	6.201E-06	3.559E-07	2.498E-06	3.093E-05	1.656E-05
2292.00	4.074E+00	2.468E+00	3.000E+00	1.907E-02	2.355E-02	1.374E-02	6.201E-06	3.900E-07	2.495E-06	3.129E-05	2.024E-05
2292.00	4.834E+00	1.498E+00	1.526E+00	2.029E-02	1.271E-02	8.940E-03	5.854E-06	4.457E-07	1.355E-06	3.104E-05	1.314E-05
2346.00	6.189E+00	9.384E-01	1.463E-01	2.232E-02	6.039E-03	5.021E-03	5.310E-06	7.065E-07	7.348E-07	3.581E-05	9.372E-06
2406.00	7.266E+00	1.131E+00	1.314E-01	2.284E-02	6.582E-03	4.313E-03	5.138E-06	7.974E-07	8.654E-07	4.783E-05	8.899E-06
2430.00	7.418E+00	1.174E+00	1.211E-01	2.234E-02	6.674E-03	3.725E-03	5.136E-06	8.172E-07	9.263E-07	5.052E-05	8.275E-06
2430.00	2.605E-01	2.189E-01	5.400E-02	3.728E-03	1.787E-03	2.493E-03	5.077E-06	8.143E-07	7.498E-07	8.321E-06	5.543E-06
2449.50	4.359E-02	1.590E-01	1.563E-02	2.901E-03	2.199E-03	2.035E-03	5.140E-06	8.066E-07	8.310E-07	7.006E-06	4.730E-06
2449.50	1.015E-02	1.082E-01	1.450E-02	2.775E-03	2.139E-03	2.005E-03	5.139E-06	8.053E-07	8.257E-07	6.643E-06	4.660E-06
2466.00	4.759E-03	3.346E-02	1.421E-02	1.108E-03	3.103E-03	1.812E-03	5.266E-06	7.606E-07	9.501E-07	3.292E-06	4.668E-06
2482.00	1.355E-03	7.867E-02	1.138E-02	2.201E-04	3.674E-03	1.372E-03	5.392E-06	6.724E-07	1.027E-06	8.703E-07	4.531E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

3.119E-10	3.868E-10	3.495E-10	1.492E-07	1.030E-07	5.912E-08	1.095E-06	4.142E-07	2.462E-07
7.125E-02	5.600E-03	1.244E-03	4.062E-07	8.304E-04	2.019E-13			

C-18



SYSTEM A GROUP 10

(DME BIAS ERRORS = 1.2 -)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VLOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.514E+02	7.894E+02	4.524E+01	4.958E-01	2.415E-01	3.644E-01	5.001E-08	1.168E-07	4.443E-08	4.267E-01	5.778E-02
1746.00	9.429E+02	5.402E+02	6.527E+02	2.068E+00	1.600E+00	1.578E+00	1.630E-05	5.181E-05	4.038E-06	2.087E+00	1.049E-01
1806.00	1.162E+02	1.514E+02	1.589E+02	3.281E-01	2.766E-01	1.049E-01	4.127E-06	4.188E-06	1.556E-05	3.072E-01	6.243E-02
1806.00	6.236E+01	1.544E+02	1.640E+02	2.156E-01	2.258E-01	1.616E-01	8.933E-06	4.932E-06	1.251E-05	1.932E-01	6.557E-02
1866.00	7.830E+01	1.473E+02	1.714E+02	2.434E-01	3.464E-01	3.631E-01	3.537E-05	6.546E-06	6.686E-06	2.259E-01	1.606E-01
1926.00	1.149E+02	1.343E+02	1.768E+02	2.949E-01	3.677E-01	4.414E-01	4.154E-05	1.191E-05	1.410E-05	2.892E-01	2.581E-01
1986.00	1.346E+02	1.375E+02	1.506E+02	3.508E-01	3.959E-01	4.046E-01	3.698E-05	1.894E-05	1.251E-05	3.428E-01	1.677E-01
2046.00	1.936E+02	1.601E+02	8.032E+01	4.931E-01	4.111E-01	7.533E-01	4.311E-05	5.077E-05	3.126E-05	4.908E-01	5.761E-01
2092.00	2.145E+02	1.461E+02	3.331E+01	4.966E-01	2.145E-01	8.682E-01	3.930E-05	5.434E-05	2.810E-05	5.021E-01	7.521E-01
2106.00	2.238E+02	1.341E+02	3.758E+01	5.466E-01	1.100E-01	8.255E-01	3.931E-05	4.516E-05	1.502E-05	5.531E-01	5.896E-01
2166.00	2.683E+02	9.115E+01	6.423E+01	7.367E-01	3.118E-01	6.347E-01	5.011E-05	8.724E-06	4.238E-05	7.411E-01	4.451E-01
2226.00	3.025E+02	9.194E+01	1.040E+02	7.318E-01	1.575E-01	6.656E-01	3.975E-05	1.875E-05	1.744E-05	7.313E-01	7.658E-01
2286.00	3.280E+02	1.173E+02	1.133E+02	7.129E-01	6.101E-02	5.038E-01	3.378E-05	1.897E-05	1.365E-05	7.079E-01	5.058E-01
2292.00	3.315E+02	1.186E+02	1.154E+02	7.166E-01	7.157E-02	5.010E-01	3.360E-05	2.010E-05	1.474E-05	7.116E-01	4.642E-01
2292.00	3.250E+02	1.240E+02	6.530E+01	6.674E-01	1.081E-01	1.773E-01	4.249E-05	2.485E-05	1.584E-05	6.626E-01	1.662E-01
2346.00	3.491E+02	1.253E+02	2.417E+00	6.820E-01	2.198E-01	2.886E-01	4.803E-05	5.110E-05	2.154E-05	6.775E-01	8.455E-02
2406.00	3.850E+02	1.233E+02	5.600E+00	7.502E-01	1.291E-01	2.403E-01	2.878E-05	6.637E-06	7.472E-06	7.383E-01	8.884E-02
2430.00	3.840E+02	1.247E+02	4.749E+00	7.410E-01	7.245E-02	1.891E-01	1.506E-05	2.831E-05	7.072E-06	7.383E-01	8.884E-02
2430.00	1.330E+01	1.742E+02	7.252E+00	2.263E-01	2.462E-01	2.439E-01	9.011E-06	2.739E-05	2.191E-05	2.298E-01	1.963E-01
2449.50	6.179E-01	1.739E+02	1.493E+00	2.290E-01	3.149E-01	1.241E-01	1.505E-05	1.291E-05	3.125E-05	2.324E-01	2.656E-01
2449.50	8.048E+00	1.571E+02	1.320E+00	1.999E-01	2.637E-01	1.172E-01	1.380E-05	1.273E-05	2.790E-05	2.029E-01	2.209E-01
2466.00	3.006E-01	1.491E+00	4.179E-01	7.544E-02	1.777E-01	4.384E-02	7.027E-06	7.589E-06	4.117E-06	7.549E-02	1.814E-01
2482.00	1.551E-01	1.683E+00	1.813E-01	1.472E-02	1.428E-01	1.625E-02	1.041E-05	3.528E-06	4.084E-06	1.471E-02	1.430E-01

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR	
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1686.00	1.599E+02	2.732E+02	9.228E+01	4.914E-01	3.395E-02	4.408E-01	4.879E-08	8.545E-08	9.180E-08	8.496E-05	8.769E-05	
1746.00	9.381E+02	2.638E+02	8.107E+02	2.059E+00	2.475E-01	2.241E+00	1.711E-05	3.417E-05	4.688E-05	5.531E-04	6.115E-04	
1806.00	1.180E+02	1.890E+02	1.096E+02	3.260E-01	8.173E-02	2.483E-01	4.177E-06	1.271E-05	9.889E-06	1.151E-04	9.482E-05	
1806.00	6.435E+01	1.983E+02	1.056E+02	2.146E-01	6.147E-02	2.715E-01	8.940E-06	9.625E-06	9.384E-06	7.085E-05	1.036E-04	
1866.00	8.012E+01	1.815E+02	1.338E+02	2.423E-01	1.735E-01	4.715E-01	3.531E-05	8.001E-06	7.670E-06	1.223E-04	2.511E-04	
1866.00	1.157E+02	1.902E+02	1.137E+02	2.978E-01	2.985E-01	4.914E-01	4.148E-05	1.720E-05	7.312E-06	2.441E-04	3.794E-04	
1926.00	1.350E+02	1.633E+02	1.218E+02	3.502E-01	1.979E-01	5.307E-01	3.692E-05	2.176E-05	6.779E-06	3.700E-04	5.528E-04	
1986.00	1.937E+02	7.100E+01	1.644E+02	4.931E-01	6.708E-01	5.363E-01	4.309E-05	4.203E-05	4.231E-05	7.210E-04	6.618E-04	
2046.00	2.146E+02	9.688E+01	1.140E+02	4.983E-01	8.588E-01	2.444E-01	3.931E-05	1.084E-05	6.020E-05	7.326E-04	2.802E-04	
2106.00	2.240E+02	1.151E+02	7.770E+01	5.485E-01	6.880E-01	4.669E-01	3.929E-05	2.143E-05	4.251E-05	7.471E-04	5.359E-04	
2166.00	2.688E+02	9.032E+01	6.341E+01	7.377E-01	3.141E-01	6.323E-01	4.995E-05	8.869E-06	4.254E-05	8.259E-04	7.916E-04	
2226.00	3.032E+02	3.634E+01	1.323E+02	7.326E-01	6.846E-01	7.320E-01	5.962E-05	7.189E-06	2.478E-05	7.914E-04	3.091E-04	
2286.00	3.286E+02	1.609E+02	1.780E+01	7.132E-01	3.868E-01	3.280E-01	3.369E-05	3.490E-06	2.311E-05	8.973E-04	4.793E-04	
2292.00	3.321E+02	1.627E+02	2.253E+01	7.188E-01	3.505E-01	3.647E-01	3.360E-05	6.061E-06	2.418E-05	9.273E-04	5.378E-04	
2292.00	3.256E+02	1.352E+02	3.130E+01	6.670E-01	9.933E-02	1.839E-01	4.259E-05	9.160E-06	7.784E-05	8.350E-04	2.709E-04	
2346.00	3.495E+02	1.242E+02	2.771E+00	6.813E-01	2.237E-01	2.872E-01	4.819E-05	5.082E-05	2.185E-05	1.098E-03	4.545E-04	
2406.00	3.852E+02	1.227E+02	5.865E+00	7.500E-01	1.307E-01	2.400E-01	2.733E-05	3.689E-05	6.694E-06	1.530E-03	4.946E-04	
2430.00	3.841E+02	1.244E+02	4.905E+00	7.409E-01	7.332E-02	1.890E-01	1.508E-05	2.831E-05	7.051E-06	1.603E-03	4.200E-04	
2430.00	1.347E+01	1.742E+02	7.478E+00	2.261E-01	2.461E-01	2.447E-01	9.030E-06	2.741E-05	2.187E-05	5.972E-04	5.427E-04	
2449.50	6.838E-01	1.739E+02	1.639E+00	2.288E-01	3.149E-01	1.243E-01	1.504E-05	1.295E-05	3.123E-05	6.574E-04	2.889E-04	
2449.50	8.139E+00	1.571E+02	1.451E+00	1.997E-01	2.637E-01	1.175E-01	1.379E-05	1.276E-05	2.789E-05	5.691E-04	2.730E-04	
2466.00	3.005E-01	1.491E+00	4.178E-01	7.549E-02	1.777E-01	4.371E-02	7.026E-06	7.588E-06	4.120E-06	1.816E-04	1.199E-04	
2482.00	1.552E-01	1.683E+00	1.802E-01	1.473E-02	1.428E-01	1.616E-02	1.041E-05	3.528E-06	4.084E-06	4.191E-05	5.336E-05	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

3.562E-09	1.042E-08	1.513E-09	1.703E-06	1.840E-06	2.208E-06	1.609E-05	2.693E-06	1.087E-05
2.921E+02	2.937E+02	1.452E-01	7.036E-06	7.556E-02	6.525E-12			

PARTIC-10-USA

C-19

1111028



TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.070E+01	7.779E+01	1.217E+01	1.333E-01	6.491E-02	9.795E+02	1.345E-08	3.138E+08	1.194E-08	1.147E-01	1.553E-02
1746.00	3.113E+02	1.942E+02	1.878E+02	6.797E-01	3.834E-01	4.227E-01	8.900E-06	1.618E-05	1.264E-05	6.908E-01	6.591E-02
1806.00	1.720E+02	1.060E+02	3.699E+01	3.212E-01	1.703E-01	2.199E-01	2.292E-05	1.466E-05	1.225E-05	3.236E+01	1.437E+01
1866.00	8.658E+01	8.541E+01	3.619E+01	1.455E-01	1.698E-01	2.997E-01	2.600E-05	1.816E-05	1.627E-05	1.519E+01	2.307E+01
1866.00	3.799E+01	4.395E+01	4.031E+01	1.466E-01	1.961E-01	3.402E-01	3.234E-05	2.622E-05	3.255E-05	1.435E-01	1.473E-01
1926.00	3.179E+01	2.281E+01	2.853E+01	1.072E-01	1.474E-01	2.980E-01	2.466E-05	2.109E-05	3.582E-05	1.068E-01	2.406E-01
1986.00	1.070E+01	1.937E+01	1.677E+01	7.419E-02	1.043E-01	2.306E-01	2.167E-05	1.711E-05	3.129E-05	7.388E-02	1.510E-01
2046.00	6.039E+00	1.205E+01	7.582E+00	4.586E-02	4.048E-02	1.348E-01	1.704E-05	1.251E-05	2.706E-05	4.586E-02	1.209E-01
2092.00	8.213E+00	6.484E+00	1.760E+00	4.633E-02	4.799E-02	1.197E-01	1.494E-05	1.429E-05	2.815E-05	4.642E-02	1.972E-01
2106.00	8.763E+00	6.281E+00	3.140E+00	4.595E-02	5.466E-02	1.220E-01	1.495E-05	1.440E-05	2.835E-05	4.606E-02	1.077E-01
2166.00	1.122E+01	6.143E+00	9.629E+00	4.353E-02	6.111E-02	1.231E-01	1.420E-05	1.220E-05	2.504E-05	4.371E-02	5.944E-02
2226.00	1.408E+01	5.151E+00	1.649E+01	5.292E-02	7.264E-02	1.306E-01	1.275E-05	1.076E-05	2.161E-05	5.297E-02	8.435E-02
2286.00	1.876E+01	3.645E+00	2.609E+01	3.645E-02	6.276E-02	9.485E-02	1.511E-05	1.088E-05	1.964E-05	7.574E-02	1.826E-01
2292.00	1.932E+01	3.638E+00	2.702E+01	7.732E-02	9.710E-02	1.526E-01	1.211E-05	1.083E-05	1.943E-05	7.723E-02	1.796E-01
2292.00	1.792E+01	4.023E+00	1.451E+01	6.547E-02	6.800E-02	7.467E-02	1.181E-05	8.968E-06	1.547E-05	6.543E-02	1.440E-01
2346.00	2.077E+01	2.652E+00	1.044E+00	6.276E-02	6.276E-02	6.483E-02	1.228E-05	1.309E-05	8.186E-06	6.270E-02	3.640E-02
2406.00	2.768E+01	2.408E+00	1.646E+00	7.519E-02	2.980E-02	5.748E-02	9.456E-06	1.039E-05	6.313E-06	7.524E-02	3.254E-02
2430.00	2.994E+01	3.531E+00	1.462E+00	7.951E-02	2.922E-02	4.798E-02	7.701E-06	8.676E-06	6.098E-06	7.959E-02	3.332E-02
2430.00	1.057E+01	1.521E+00	1.563E+00	5.251E-03	3.762E-02	5.110E-02	7.337E-06	8.500E-06	7.027E-06	5.270E-03	3.771E-02
2449.50	1.430E-01	1.781E+00	3.630E-01	4.150E-03	4.981E-02	3.685E-02	5.458E-06	5.675E-06	7.323E-06	4.170E-03	4.954E-02
2449.50	9.421E-02	1.624E+00	3.413E-01	3.895E-02	4.999E-02	3.645E-02	5.630E-06	5.627E-06	7.345E-06	3.910E-03	4.970E-02
2466.00	2.664E-02	6.295E-01	2.467E-01	2.295E-03	6.262E-02	5.667E-02	5.282E-06	3.428E-06	7.307E-06	2.210E-03	6.263E-02
2482.00	1.832E-02	1.186E+00	1.496E-01	5.229E-04	6.403E-02	1.054E-02	5.031E-06	1.288E-06	6.506E-06	5.357E-04	6.401E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.297E+01	7.344E+01	2.480E+01	1.321E-01	9.126E-03	1.185E-01	1.312E-08	2.297E-08	2.468E-08	2.284E-05	2.357E-05
1746.00	3.093E+02	8.759E+01	2.580E+02	6.776E-01	9.246E-02	5.657E-01	8.979E-06	4.595E-06	1.997E-05	1.829E-04	1.549E-04
1806.00	1.708E+02	5.529E+01	9.984E+01	3.220E-01	1.295E-01	2.451E-01	2.313E-05	1.320E-05	1.347E-05	1.193E-04	9.147E+05
1866.00	8.805E+01	3.701E+01	8.591E+01	1.479E-01	2.220E-01	2.621E-01	2.603E-05	2.214E-05	1.016E-05	5.095E-05	9.785E-05
1866.00	3.785E+01	2.939E+01	5.200E+01	1.444E-01	1.606E-01	3.591E-01	3.223E-05	3.270E-05	2.015E-05	8.184E-05	1.899E-04
1926.00	3.171E+01	2.110E+01	2.989E+01	1.059E-01	2.642E-01	2.026E-01	2.644E-05	4.107E-05	6.451E-06	1.152E-04	1.555E-04
1986.00	1.069E+01	7.276E+00	2.457E+01	7.374E-02	1.579E-01	1.979E-01	2.169E-05	3.439E-05	9.404E-06	9.006E-05	2.056E-04
2046.00	6.039E+00	4.554E+00	1.349E+01	4.584E-02	1.308E-01	5.515E-02	1.705E-05	2.884E-05	7.529E-06	8.365E-05	6.792E-05
2092.00	8.212E+00	2.671E+00	6.166E+00	4.645E-02	1.133E-01	6.153E-02	1.491E-05	2.001E-05	2.442E-05	6.641E-05	7.936E-05
2106.00	8.765E+00	3.049E+00	6.323E+00	4.609E-02	1.115E-01	7.358E-02	1.492E-05	1.508E-05	2.801E-05	6.184E-05	8.467E-05
2166.00	1.124E+01	6.204E+00	9.598E+00	4.385E-02	6.107E-02	1.230E-01	1.417E-05	1.217E-05	2.507E-05	5.651E-05	1.540E-04
2226.00	1.411E+01	1.576E+01	7.931E+00	5.350E-02	7.677E-02	1.279E-01	1.276E-05	2.218E-05	9.499E-06	5.264E-05	1.709E-04
2286.00	1.878E+01	1.955E+01	1.765E+01	7.636E-02	1.723E-01	4.551E-02	1.219E-05	1.116E-05	1.944E-05	6.543E-05	6.672E-05
2292.00	1.933E+01	1.809E+01	2.038E+01	7.780E-02	1.692E-01	6.322E-02	1.215E-05	9.485E-06	2.010E-05	7.011E-05	9.338E-05
2292.00	1.793E+01	1.112E+01	1.013E+01	6.577E-02	9.518E-02	3.317E-02	1.184E-05	1.357E-05	7.260E-05	4.875E-05	
2346.00	2.078E+01	2.620E+00	1.050E+00	6.278E-02	3.253E-02	6.481E-02	1.232E-05	1.307E-05	8.153E-06	9.390E-05	1.026E-04
2406.00	2.768E+01	2.545E+00	1.442E+00	7.519E-02	2.983E-02	5.743E-02	9.469E-06	1.038E-05	6.303E-06	1.406E-04	1.844E-04
2430.00	2.995E+01	3.559E+00	1.458E+00	7.952E-02	2.922E-02	4.797E-02	7.707E-06	8.675E-06	6.084E-06	1.697E-04	1.766E-04
2430.00	1.057E+01	1.520E+00	1.564E+00	5.282E-03	3.758E-02	5.112E-02	7.342E-06	8.510E-06	7.020E-06	9.187E-06	1.136E-04
2449.50	1.430E-01	1.781E+00	3.627E-01	4.174E-03	4.979E-02	3.688E-02	5.650E-06	5.678E-06	7.320E-06	1.403E-05	8.569E-05
2449.50	9.508E-02	1.624E+00	3.412E-01	3.919E-03	4.997E-02	3.648E-02	5.631E-06	5.631E-06	7.342E-06	1.498E-05	8.476E-05
2466.00	2.682E-02	6.293E-01	2.470E-01	2.220E-03	6.260E-02	2.671E-02	5.282E-06	3.432E-06	7.305E-06	3.854E-06	7.324E-05
2482.00	1.834E-02	1.186E+00	1.103E-01	5.222E-04	6.402E-02	1.058E-02	5.031E-06	1.291E-06	6.505E-06	4.606E-06	3.493E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.948E-09	6.251E-09	1.302E-09	4.414E-07	3.027E-07	7.024E-06	1.735E-06	0.190E-07	1.968E-07
1.569E+00	9.979E-01	1.828E-02	3.921E-06	1.100E-02	2.237E-12			

PRINTED ON 11/10/73

C-20

RECORD

ORIGINAL PAGE IS OF POOR QUALITY

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR	
	R	D	C	R	D	C	R	D	C			
1686.00												
1686.00												
1746.00												
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.433E+03	4.017E+02	1.647E+02	3.038E+00	2.948E-01	2.103E+00	2.461E-04	7.130E-05	2.818E-04	3.053E+00	1.829E+04	6.167E-02
1866.00	3.828E+02	3.085E+01	1.650E+02	7.911E-01	4.921E-01	9.739E-01	9.876E-05	6.421E-05	1.114E-04	7.964E-01	6.167E-02	4.673E-01
1926.00	1.636E+02	3.867E+01	1.350E+02	1.426E-01	4.990E-01	7.439E-01	6.393E-05	4.735E-05	6.396E-05	1.477E-01	8.673E-01	4.673E-01
1986.00	2.344E+01	1.730E+00	2.016E+01	1.394E+01	1.546E-01	2.179E-01	1.098E-01	9.188E-01	3.411E-05	1.542E-01	8.027E-02	1.794E-01
2046.00	6.613E+00	1.224E+01	1.394E+01	1.546E-01	1.546E-01	2.179E-01	1.098E-01	9.188E-01	3.411E-05	1.542E-01	8.027E-02	1.794E-01
2092.00	1.223E+00	1.067E+01	8.613E+00	1.523E-01	1.935E-01	1.741E-01	5.639E-02	3.082E-06	1.108E-05	1.909E-05	1.388E-05	2.616E-05
2106.00	2.581E-01	9.902E+00	7.641E+00	1.442E-01	1.741E-01	5.639E-02	3.082E-06	1.108E-05	1.909E-05	1.388E-05	2.616E-05	1.778E-01
2166.00	6.006E+00	8.256E+00	4.614E+00	1.086E-01	8.291E-02	4.470E-03	7.978E-07	3.582E-06	1.210E-07	9.446E-02	6.046E-02	2.352E-02
2226.00	9.666E+00	7.806E+00	2.536E+00	9.466E-02	3.754E-02	2.771E-02	3.721E-06	3.059E-06	1.441E-06	9.277E-02	2.352E-02	1.960E-02
2286.00	1.421E+01	7.728E+00	2.239E+00	9.263E-02	2.205E-02	2.940E-02	4.326E-06	3.046E-06	1.498E-06	9.286E-02	1.960E-02	1.960E-02
2292.00	1.474E+01	7.811E+00	2.091E+00	9.271E-02	2.102E-02	3.009E-02	4.349E-06	3.046E-06	1.498E-06	9.286E-02	1.960E-02	1.960E-02
2292.00	1.482E+01	7.864E+00	1.366E+00	9.341E-02	1.906E-02	3.494E-02	4.518E-06	3.042E-06	1.775E-06	9.356E-02	1.960E-02	1.960E-02
2346.00	1.970E+01	8.347E+00	7.028E-01	9.441E-02	1.032E-02	4.082E-02	4.503E-06	3.383E-06	2.112E-06	9.464E-02	1.960E-02	1.960E-02
2406.00	2.377E+01	8.255E+00	8.482E-01	9.207E-02	8.962E-03	2.545E-02	1.496E-06	6.074E-07	1.134E-06	8.976E-02	9.440E-03	1.595E-02
2430.00	2.465E+01	8.128E+00	6.864E-01	8.959E-02	8.478E-03	1.805E-02	1.496E-06	6.074E-07	1.134E-06	8.976E-02	9.440E-03	1.595E-02
2430.00	8.711E-01	4.900E+00	4.333E-01	2.761E-02	1.068E-02	1.335E-02	1.791E-06	5.414E-07	2.151E-06	2.772E-02	1.595E-02	1.595E-02
2430.00	8.711E-01	4.900E+00	4.333E-01	2.761E-02	1.068E-02	1.335E-02	1.791E-06	5.414E-07	2.151E-06	2.772E-02	1.595E-02	1.595E-02
2449.50	2.096E-01	4.265E+00	7.528E-02	2.337E-02	1.015E-02	5.705E-03	7.192E-07	2.867E-07	1.861E-06	2.219E-02	1.626E-02	1.911E-02
2449.50	1.254E-01	3.576E+00	6.703E-02	2.211E-02	1.227E-02	5.410E-03	7.711E-07	2.867E-07	1.861E-06	2.219E-02	1.626E-02	1.911E-02
2466.00	4.353E-02	8.007E-02	1.616E-02	9.171E-03	1.866E-02	1.077E+03	5.187E-07	7.065E-07	2.145E-06	9.174E-03	1.911E-02	1.350E-02
2482.00	1.812E-02	1.410E-01	6.817E-04	1.575E+03	1.348E-02	5.154E+04	1.720E-07	8.585E-07	1.644E-06	1.573E-03	1.350E-02	1.350E-02

TIME	U			V			W			U			V			W			GAMMA ERROR	PSI ERROR			
	U	V	W	U	V	W	U	V	W	U	V	W	U	V	W	U	V	W					
1686.00																							
1686.00																							
1746.00																							
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.426E+03	3.453E+02	2.968E+02	3.048E+00	2.070E+00	6.326E+01	2.418E-04	2.886E-04	5.690E-05	1.185E-03	2.380E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04
1866.00	3.813E+02	1.055E+02	1.348E+02	7.868E-01	4.262E-02	1.076E+00	9.747E-05	1.084E-04	7.088E-05	4.147E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04
1866.00	3.813E+02	1.055E+02	1.348E+02	7.868E-01	4.262E-02	1.076E+00	9.747E-05	1.084E-04	7.088E-05	4.147E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04
1926.00	1.631E+02	1.116E+02	1.116E+02	1.408E-01	5.038E-01	7.410E-01	6.346E-05	7.741E-05	2.006E-05	1.814E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04
1926.00	1.631E+02	1.116E+02	1.116E+02	1.408E-01	5.038E-01	7.410E-01	6.346E-05	7.741E-05	2.006E-05	1.814E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04	5.712E-04
1985.00	2.340E+01	1.360E+01	1.500E+01	1.219E-01	2.010E-02	2.510E-01	4.007E-06	4.850E-05	3.780E-05	9.940E-06	1.705E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04
1985.00	2.340E+01	1.360E+01	1.500E+01	1.219E-01	2.010E-02	2.510E-01	4.007E-06	4.850E-05	3.780E-05	9.940E-06	1.705E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04	2.935E-04
2046.00	6.617E+00	1.044E+01	1.534E+01	1.546E-01	1.539E-01	1.380E-01	3.118E-06	1.851E-05	2.420E-05	1.317E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04
2046.00	6.617E+00	1.044E+01	1.534E+01	1.546E-01	1.539E-01	1.380E-01	3.118E-06	1.851E-05	2.420E-05	1.317E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04
2092.00	1.245E+00	1.255E+00	1.439E-01	1.564E-01	1.564E-01	1.564E-01	3.039E-06	1.125E-05	2.420E-05	1.317E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04
2092.00	1.245E+00	1.255E+00	1.439E-01	1.564E-01	1.564E-01	1.564E-01	3.039E-06	1.125E-05	2.420E-05	1.317E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04	1.102E-04
2106.00	2.315E-01	1.224E+01	2.555E+00	1.084E-01	8.325E-02	4.118E-03	8.215E-07	8.506E-08	7.511E-06	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04
2106.00	2.315E-01	1.224E+01	2.555E+00	1.084E-01	8.325E-02	4.118E-03	8.215E-07	8.506E-08	7.511E-06	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04	1.118E-04
2166.00	5.966E+00	8.273E+00	4.634E+00	9.454E-02	4.390E-02	1.654E-02	3.739E-06	1.873E-06	3.034E-06	1.116E-04	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05
2166.00	5.966E+00	8.273E+00	4.634E+00	9.454E-02	4.390E-02	1.654E-02	3.739E-06	1.873E-06	3.034E-06	1.116E-04	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05	2.215E-05
2226.00	9.620E+00	7.201E+00	7.964E+00	9.454E-02	6.272E-03	3.646E-02	4.340E-06	1.006E-06	3.209E-06	1.283E-04	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05
2226.00	9.620E+00	7.201E+00	7.964E+00	9.454E-02	6.272E-03	3.646E-02	4.340E-06	1.006E-06	3.209E-06	1.283E-04	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05
2286.00	1.417E+01	6.948E+00	4.192E+00	9.254E-02	6.272E-03	3.646E-02	4.340E-06	1.006E-06	3.209E-06	1.283E-04	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05
2286.00	1.417E+01	6.948E+00	4.192E+00	9.254E-02	6.272E-03	3.646E-02	4.340E-06	1.006E-06	3.209E-06	1.283E-04	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05	5.294E-05
2292.00	1.470E+01	7.395E+00	3.438E+00	9.261E-02	2.774E-03	3.682E-02	4.363E-06	1.343E-06	3.090E-06	1.308E-04	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05	5.758E-05
2292.00	1.470E+01	7.395E+00	3.438E+00	9.261E-02																			



SYSTEM A GROUP 12 (STATIC DEFECT IN HARD. ALT.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1706.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1806.00	5.310E+02	1.447E+02	6.104F+01	1.126F+00	1.093F-01	7.792F-01	2.11E-05	2.642E-05	1.044F-04	1.131E+00	6.774E-01
1866.00	1.418E+02	1.143E+01	6.113E+01	2.932E-01	1.675E-01	3.609F-01	3.660F-05	2.379F-05	4.127E-05	2.951E-01	2.285E-02
1926.00	6.044E+01	1.433F+01	5.001E+01	2.283E-02	1.849F-01	2.757F-01	2.369E-05	1.755F-05	2.370E-05	5.474F-02	1.732E-01
1986.00	8.687E+00	6.410E-01	7.449E+00	4.521F-02	7.308F-02	5.801F-02	1.535E-06	1.018F-05	1.568F-05	4.496E-02	3.509E-03
2046.00	2.451E+00	4.535F+00	5.167E+00	5.731E-02	8.073E-02	4.068E-02	3.405E-08	7.074E-06	1.264F-05	5.713E-02	2.974E-02
2092.00	4.531E-01	3.953F+00	3.192E+00	5.645F-02	7.171F-02	2.670F-02	1.170F-06	5.144E-06	1.043F-05	5.617F-02	6.648E-02
2106.00	9.564E-02	3.669F+00	2.832E+00	5.344E-02	6.453F-02	2.096F-02	1.142F-06	4.106E-06	8.995E-05	5.314E-02	6.587F-02
2166.00	2.226E+00	3.059F+00	1.710E+00	4.025F-02	3.073E-02	1.657F-03	2.957F-07	3.309F-08	2.784E-06	4.004F-02	3.774E-02
2226.00	3.582E+00	2.893F+00	9.398F-01	3.508E-02	1.391E-02	1.027F-02	1.379E-06	1.327F-06	4.487F-08	3.500F-02	2.240E-02
2286.00	5.265F+00	2.864F+00	8.296F-01	3.433F-02	8.173F-03	1.089F-02	1.633F-06	1.134F-06	5.341E-07	3.438E-02	8.714F-03
2292.00	5.461E+00	2.895F+00	7.749E-01	3.435E-02	7.788F-03	1.115E-02	1.612E-06	1.129F-06	5.553F-07	3.441E-02	7.265E-03
2292.00	5.492F+00	2.914E+00	5.062E-01	3.462E-02	7.063F-03	1.295E-02	1.674F-06	1.290F-06	6.576E-07	3.467E-02	8.992E-03
2346.00	7.300E+00	3.093F+00	2.891E-01	3.499E-02	3.825F-03	1.513F-02	1.669F-06	1.254F-06	7.827E-07	3.507E-02	3.181E-03
2406.00	8.807F+00	3.059F+00	3.143E-01	3.417F-02	3.321F-03	9.431F-03	9.209F-07	5.320F-07	5.257E-07	3.418E-02	3.508E-03
2430.00	9.134E+00	3.012E+00	2.544E-01	3.320E-02	3.142E-03	6.888F-03	5.544E-07	2.251E-07	4.203F-07	3.326F-02	3.498F-03
2430.00	3.228F-01	1.816F+00	1.606E-01	1.023F-02	3.957F-03	4.947F-03	6.634E-07	2.006F-07	7.971E-07	1.027E-02	5.989E-03
2430.00	7.755E-02	1.578E+00	2.696E-02	8.536E-03	4.548F-03	1.928F-03	2.606F-07	1.075E-07	6.311F-07	8.671F-03	6.110F-03
2449.50	4.653E-02	1.323E+00	2.394E-02	8.162E-03	5.401E-03	1.815F-03	2.800E-07	1.110F-07	6.826E-07	8.193E-03	6.856E-03
2449.50	4.653E-02	1.323E+00	2.394E-02	8.162E-03	5.401E-03	1.815F-03	2.800E-07	1.110F-07	6.826E-07	8.193E-03	6.856E-03
2466.00	1.540E-02	5.657F-02	2.650E-03	3.067F-03	9.777F-03	2.028F-04	2.485F-07	2.608F-07	8.567F-07	3.069E-03	9.920E-03
2482.00	6.781E-03	1.137E-01	4.517E-03	5.916F-04	8.511F-03	9.323E-04	1.460E-07	2.758E-07	6.937E-07	5.901E-04	8.518E-03

TIME	GAMMA ERROR			PSI ERROR		
	U	V	W	U	V	W
1686.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00
1686.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00
1746.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00
1806.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00
1806.00	5.285E+02	1.279F+02	1.100E+02	1.115E+00	7.672F-01	2.344F-01
1866.00	1.413E+02	3.999F+01	4.994F+01	2.916F-01	1.579F-01	3.987F-01
1926.00	6.044E+01	4.136E+01	3.193E+01	5.216E-02	1.877F-01	2.744F-01
1986.00	8.673F+00	5.055F+00	5.557F+00	4.519F-02	7.458F-03	9.301F-02
2046.00	2.452F+00	3.867E+00	5.683E+00	5.728F-02	1.915E-02	8.837F-02
2092.00	4.612E-01	4.660F+00	2.022E+00	5.636F-02	5.702F-02	5.114F-02
2106.00	8.588E-02	4.537F+00	9.468E-01	5.333F-02	5.796F-02	3.541E-02
2166.00	2.211E+00	3.066E+00	1.717E+00	4.016E-02	3.085F-02	1.526F-03
2226.00	3.565E+00	8.158E-01	2.951E+00	3.503E-02	1.627F-02	6.129F-03
2286.00	5.251E+00	2.575F+00	1.554F+00	3.429F-02	2.308F-03	1.351F-02
2292.00	5.447E+00	2.740F+00	1.274F+00	3.432F-02	1.028F-03	1.365E-02
2292.00	5.478F+00	2.583F+00	1.493E+00	3.459F-02	2.735F-03	1.456F-02
2346.00	7.290E+00	3.114F+00	3.083E-01	3.497E-02	3.841F-03	1.515F-02
2406.00	8.803E+00	3.072E+00	3.213E-01	3.411F-02	3.352F-03	9.439E-03
2430.00	9.131E+00	3.021E+00	2.584E-01	3.320E-02	3.165E-03	6.692F-03
2430.00	3.210E-01	1.816F+00	1.630E-01	1.023F-02	3.953F-03	4.942F-03
2430.00	7.664E-02	1.578E+00	2.830E-02	8.639E-03	4.545E-03	1.924F-03
2449.50	4.729F-02	1.323E+00	2.506E-02	8.165E-03	5.397E-03	1.811F-03
2466.00	1.541E-02	5.657F-02	2.613E-03	3.070F-03	9.776E-03	2.100F-04
2482.00	6.783E-03	1.137E-01	4.594E-03	5.917E-04	8.510E-03	9.381E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

1.841E-10	3.951E-10	1.066E-10	2.836E-07	2.378E-07	2.015E-07	1.359E-06	2.755E-07	5.737E-07
9.732E-02	3.660F-03	1.377E+01	1.395E-07	3.360F-03	6.277E-14			

15 MAR 1974

C-23

02117

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	3.259E+00	2.540F+00	2.532F+01	2.533F-02	6.126F-02	1.684E-01	5.448F-06	1.502F-05	8.811E-06	2.521F-02	1.569F-01
2346.00	6.898E+00	1.863E+00	4.855E+01	2.609E-02	6.926E-02	2.400F-01	1.455E-06	1.784E-05	6.937E-06	2.636E-02	7.450F-02
2406.00	5.269F+00	2.916E+00	3.035F+01	3.293F-02	1.966E-02	1.710F-03	2.834E-05	7.718E-06	8.619F-06	3.303E-02	2.577E-02
2430.00	1.117F+01	5.425F+00	2.173E+01	5.489F-02	4.415E-02	9.755E-02	3.973F-05	1.675F-05	1.275F-05	5.505E-02	5.427E-02
2430.00	4.093F-01	4.234F+00	2.126E+01	2.753E-02	5.412E-02	1.025F-01	4.081E-05	1.747E-05	1.353E-05	2.767E-02	5.863E-02
2449.50	2.019E-01	6.306E+00	1.172E+01	3.266F-02	7.420E-02	2.000E-01	5.204E-05	2.657E-05	1.681E-05	3.283E-02	7.923E-02
2449.50	2.253E-01	5.460E+00	1.169E+01	3.109E-02	7.686E-02	2.005F-01	5.222F-05	2.665F-05	1.701E-05	3.125F-02	8.154E-02
2466.00	7.680E-02	6.810E-01	7.693F+00	1.472E-02	8.744E-02	2.212F-01	5.329E-05	2.784F-05	1.693E-05	1.473F-02	8.824E-02
2482.00	4.874E-02	1.237E+00	4.727E+00	2.596E-03	7.269E-02	2.101E-01	4.992E-05	2.525E-05	1.425E-05	2.578E-03	7.286E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	3.256E+00	1.426F+01	2.108E+01	2.568E-02	1.548F-01	9.013E-02	5.516E-06	5.871F-06	1.637E-05	4.941E-06	1.329E-02
2346.00	6.893E+00	1.585F+00	4.856E+01	2.631E-02	7.068E-02	2.436F-01	1.511E-06	1.779F-05	7.047E-06	1.829E-05	3.871E-04
2406.00	5.265E+00	2.993F+00	3.034E+01	3.296E-02	1.961F-02	1.686F-03	2.835E-05	7.656F-06	8.637E-06	5.748E-05	2.397E-06
2430.00	1.117F+01	5.465E+00	2.172E+01	5.493F-02	4.423E-02	9.749F-02	3.975F-05	1.670F-05	1.277F-05	9.831F-05	2.158E-04
2430.00	4.051F-01	4.263E+00	2.126E+01	2.758F-02	5.423E-02	1.024F-01	4.083E-05	1.741F-05	1.355F-05	3.557F-05	2.267E-04
2449.50	1.983E-01	6.318F+00	1.172E+01	3.270F-02	7.435E-02	2.000E-01	5.206F-05	2.653E-05	1.684E-05	4.115E-05	4.642F-04
2449.50	2.284E-01	5.470F+00	1.168E+01	3.114F-02	7.702E-02	2.004F-01	5.223E-05	2.661E-05	1.703E-05	3.845E-05	4.652E-04
2466.00	7.699E-02	6.753E-01	7.694E+00	1.475E-02	8.760F-02	2.212F-01	5.330E-05	2.781F-05	1.695E-05	2.799F-05	6.062E-04
2482.00	4.877E-02	1.233E+00	4.728E+00	2.596E-03	7.263F-02	2.100E-01	4.992E-05	2.524E-05	1.426E-05	5.017E-06	6.935E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)											
	1.405E-09	9.180E-09	1.058F-09	7.370E-07	7.628E-07	1.564E-07	5.578E-06	2.744E-07	6.688E-07		
	9.579E-01	5.001E+00	4.652E-02	1.267E-05	2.557E-02	1.390E-12					

ORIGINAL PAGE IS OF POOR QUALITY

C-24

SYSTEM A GROUP 13

(GLIDE SLOPE BIAS

PRINTED IN U.S.A.

C-25

INITIAL

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	3.466E+00	7.386E+00	3.847E-02	1.281E-02	2.382E-02	2.080E-03	7.545E-07	2.744E-08	1.625E-06	1.295E-02	2.094E-02
2466.00	1.943E+00	4.405E+00	1.004E-01	1.247E-01	9.127E-02	1.193E-02	4.709E-06	1.810E-06	7.059E-06	1.247E-01	9.753E-02
2482.00	4.504E-01	4.748E+00	6.454E-02	1.332E-01	6.592E-02	6.122E-03	2.562E-06	1.024E-06	3.936E-06	1.331E-01	6.785E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	3.462E+00	7.388E+00	4.477E-02	1.280E-02	2.382E-02	2.100E-03	7.545E-07	2.562E-08	1.625E-06	3.937E-05	4.881E-06
2466.00	1.941E+00	4.406E+00	9.754E-02	1.244E-01	9.125E-02	1.186E-02	4.709E-06	1.803E-06	7.060E-06	3.282E-04	3.253E-05
2482.00	4.504E-01	4.748E+00	6.133E-02	1.332E-01	6.592E-02	6.078E-03	2.562E-06	1.021E-06	3.936E-06	4.362E-04	2.007E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)  
 4.485E-10 4.079E-09 1.558E-09 3.864E-06 3.564E-06 2.644E-06 3.083E-05 6.069E-06 1.087E-05  
 4.601E+00 3.804E-01 3.713E-01 3.231E-06 1.236E-01 1.486E-11

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1966.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	3.650E+01	2.845E+01	2.836E+02	2.837E-01	6.861E-01	1.986E+00	6.102E-05	1.682E-04	9.868E-05	2.824E-01	1.757E+00
2346.00	1.897E+01	6.996E+00	7.266E+01	8.577E-02	1.171E-01	4.338E-01	3.309E-05	3.748E-05	1.798E-05	8.627E-02	1.319E-01
2406.00	4.384E+01	1.970E+01	4.034E+01	1.681E-01	6.075E-02	4.271E-01	7.007E-05	4.599E-05	2.222E-05	1.686E-01	9.344E-02
2430.00	5.214E+01	2.167E+01	3.331E+01	1.838E-01	5.968E-02	4.296E-01	7.289E-05	4.642E-05	2.167E-05	1.843E-01	9.304E-02
2430.00	1.872E+00	1.517E+01	3.178E+01	5.419E-02	9.516E-02	4.168E-01	7.355E-05	4.623E-05	2.359E-05	5.460E-02	1.045E-01
2449.50	5.249E-01	1.259E+01	2.350E+01	5.009E-02	1.090E-01	4.537E-01	7.941E-05	5.235E-05	2.535E-05	5.040E-02	1.169E-01
2449.50	4.028E-01	1.050E+01	2.241E+01	4.652E-02	1.144E-01	4.486E-01	7.927E-05	5.211E-05	2.568E-05	4.679E-02	1.215E-01
2466.00	1.238E-01	2.004E+00	9.893E+00	2.106E-02	1.327E-01	4.416E-01	7.541E-05	5.445E-05	2.619E-05	2.107E-02	1.339E-01
2482.00	6.897E-02	2.353E+00	5.931E+00	4.799E-03	8.705E-02	3.048E-01	4.852E-05	3.780E-05	1.667E-05	4.812E-03	8.725E-02

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W			
1686.00												
1686.00												
1746.00												
1806.00												
1806.00												
1866.00												
1926.00												
1966.00												
2046.00												
2092.00												
2106.00												
2166.00												
2226.00												
2286.00												
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
2292.00	3.647E+01	1.597E+02	2.361E+02	2.876E-01	1.734E+00	1.009E+00	6.178E-05	6.576E-05	1.834E-04	5.534E-05	1.488E-03	
2346.00	1.895E+01	6.775E+00	7.268E+01	8.608E-02	1.195E-01	4.331E-01	3.318E-05	3.729E-05	1.820E-05	1.018E-04	6.877E-04	
2406.00	4.383E+01	1.972E+01	4.039E+01	1.682E-01	6.142E-02	4.270E-01	7.014E-05	4.584E-05	2.232E-05	3.092E-04	8.604E-04	
2430.00	5.212E+01	2.170E+01	3.333E+01	1.838E-01	6.001E-02	4.294E-01	7.293E-05	4.632E-05	2.173E-05	3.700E-04	9.550E-04	
2430.00	1.858E+00	1.515E+01	3.180E+01	5.428E-02	9.563E-02	4.167E-01	7.359E-05	4.613E-05	2.365E-05	7.539E-05	9.263E-04	
2449.50	5.179E-01	1.258E+01	2.350E+01	5.015E-02	1.093E-01	4.536E-01	7.944E-05	5.229E-05	2.534E-05	6.549E-05	1.055E-03	
2449.50	4.088E-01	1.049E+01	2.242E+01	4.659E-02	1.148E-01	4.485E-01	7.930E-05	5.204E-05	2.573E-05	5.494E-05	1.043E-03	
2466.00	1.242E-01	2.008E+00	9.892E+00	2.109E-02	1.331E-01	4.415E-01	7.542E-05	5.441E-05	2.623E-05	3.953E-05	1.211E-03	
2482.00	6.897E-02	2.356E+00	5.929E+00	4.799E-03	8.724E-02	3.047E-01	4.852E-05	3.779E-05	1.669E-05	1.570E-05	1.006E-03	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

6.600E-09	2.645E-08	1.532E-08	9.654E-07	1.230E-06	4.309E-07	7.527E-06	2.966E-06	6.352E-06
2.298E+00	5.480E+00	6.651E+02	9.659E+04	3.734E-02	1.137E-11			

C-26



TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	1.205E+01	2.568E+01	1.337E-01	4.454E-02	8.286E-02	7.231E-03	2.623E-06	9.539E-08	5.651E-06	4.502E-02	7.281E-02
2466.00	1.716E+00	2.399E+00	2.167E-01	2.257E-01	6.166E-02	1.804E-02	3.400E-06	3.020E-06	3.439E-06	2.257E-01	7.207E-02
2462.00	6.978E-01	5.156E+00	1.022E-01	6.570E-02	1.548E-01	2.695E-03	7.341E-06	9.775E-07	1.624E-05	6.580E-02	1.540E-01

TIME	GAMMA ERROR			PSI ERROR		
	U	V	W	U	V	W
1686.00						
1686.00						
1746.00						
1806.00						
1806.00						
1866.00						
1926.00						
1986.00						
2046.00						
2092.00						
2106.00						
2166.00						
2226.00						
2286.00						
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	1.205E+01	2.568E+01	1.556E-01	4.449E-02	8.282E-02	7.302E-03
2466.00	1.716E+00	2.399E+00	2.168E-01	2.257E-01	6.162E-02	1.800E-02
2462.00	6.977E-01	9.156E+00	1.077E-01	6.570E-02	1.548E-01	2.752E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

3.606E-09	6.195E-09	5.800E-09	1.752E-06	2.085E-06	1.698E-06	1.748E-05	1.930E-06	6.736E-06
8.820E+00	5.563E-01	6.549E-01	2.669E-06	3.436E-01	2.227E-10			

C-27

ORIGINAL PAGE IS  
OF POOR QUALITY



SYSTEM A GROUP 15

CRADAR ALTIMETER BIAS ERROR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	9.647E-01	1.310E-01	2.055E-03	2.512E-03	7.865E-04	1.645E-04	1.565E-08	7.305E-11	4.280E-08	2.515E-03	2.736E-04
2449.50	1.004E+00	1.763E-01	1.908E-03	2.526E-03	9.892E-04	6.483E-05	3.468E-08	1.055E-08	6.013E-08	2.529E-03	4.904E-04
2449.50	3.528E-01	1.208E+00	5.389E-03	1.159E-04	3.462E-03	3.276E-04	1.058E-07	5.614E-09	2.430E-07	9.308E-05	3.420E-03
2466.00	2.300E-01	1.273E+00	3.328E-03	1.136E-02	1.866E-02	1.226E-03	9.312E-07	1.479E-07	1.694E-06	1.134E-02	1.922E-02
2482.00	8.132E-01	6.988E+00	1.795E-02	2.862E-02	1.116E-01	1.777E-03	5.035E-06	5.191E-08	1.046E-05	2.852E-02	1.121E-01

TIME	U			V			W			GAMMA ERROR PSI ERROR	
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	9.646E-01	1.319E-01	2.055E-03	2.512E-03	7.867E-04	1.655E-04	1.565E-08	8.150E-13	4.280E-08	5.706E-06	3.680E-07
2449.50	1.004E+00	1.769E-01	2.060E-03	2.526E-03	9.906E-04	6.588E-05	3.469E-08	1.048E-08	6.013E-08	6.094E-06	1.527E-07
2449.50	3.535E-01	1.208E+00	6.417E-03	1.179E-04	3.461E-03	3.305E-04	1.058E-07	5.882E-09	2.430E-07	1.300E-06	7.681E-07
2466.00	2.303E-01	1.273E+00	2.392E-03	1.137E-02	1.866E-02	1.212E-03	9.313E-07	1.464E-07	1.694E-06	2.800E-05	3.324E-05
2482.00	8.133E-01	6.988E+00	2.267E-02	2.862E-02	1.116E-01	1.701E-03	5.035E-06	5.906E-08	1.046E-05	8.890E-05	5.618E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

2.112E-09	4.868E-09	2.488E-09	8.800E-07	5.151E-07	2.807E-07	4.736E-06	2.050E-06	1.154E-07
6.742E+00	4.709E-01	7.864E-01	4.770E-07	1.383E-01	2.153E-11			

PRINTED IN U.S.

C-28

FORM 111

SYSTEM A GROUP 15

(RADAR ALT. SCALE FACTOR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	5.920E+01	8.036E+00	4.943E-01	1.542E-01	4.826E-02	1.009E-02	9.605E-07	4.482E-09	2.627E-06	1.543E-01	1.679E-02
2449.50	2.820E+01	3.838E+00	2.588E-02	5.754E-02	3.223E-02	6.812E-04	1.458E-06	5.890E-07	2.155E-06	5.760E-02	2.069E-02
2449.50	9.519E+00	3.350E+01	1.721E-01	1.199E-02	8.766E-02	1.143E-02	2.306E-06	4.656E-07	5.990E-06	1.193E-02	8.390E-02
2466.00	1.201E+00	7.873E+00	2.807E-02	2.351E-02	8.098E-02	2.749E-03	3.885E-06	3.359E-07	7.505E-06	2.339E-02	8.207E-02
2482.00	3.910E-01	1.204E+01	4.064E-02	3.831E-02	1.017E-01	1.253E-03	5.025E-06	1.548E-07	1.033E-05	3.846E-02	1.011E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	5.919E+01	8.094E+00	5.051E-01	1.541E-01	4.840E-02	1.016E-02	9.605E-07	5.001E-11	2.627E-06	3.502E-04	2.256E-05
2449.50	2.820E+01	3.855E+00	2.921E-02	5.752E-02	3.226E-02	6.536E-04	1.458E-06	5.863E-07	2.155E-06	1.430E-04	1.518E-06
2449.50	9.538E+00	3.349E+01	2.006E-01	1.124E-02	8.766E-02	1.151E-02	2.306E-06	4.720E-07	5.990E-06	6.492E-05	2.674E-05
2466.00	1.203E+00	7.873E+00	3.386E-02	2.353E-02	8.097E-02	2.689E-03	3.885E-06	3.294E-07	7.505E-06	5.259E-05	7.373E-06
2482.00	3.912E-01	1.204E+01	4.879E-02	3.831E-02	1.017E-01	1.184E-03	5.025E-06	1.619E-07	1.033E-05	1.319E-04	3.910E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)											
	2.114E-09	3.233E-09	3.556E-09	1.150E-06	1.178E-06	9.702E-07	1.015E-05	1.391E-06	4.950E-06		
	1.179E+01	8.240E-01	4.068E-01	4.859E-07	2.603E-02	1.105E-11					

PRINTED IN U.S.A.

C-29

02/11/11

ORIGINAL PAGE IS  
OF POOR QUALITY

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATF ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	5.132E-01	9.810E-01	1.535E-01	1.681E-03	8.186E-04	1.235E-03	1.695E-10	3.958E-10	1.506E-10	1.446E-03	1.959E-01
1746.00	3.240E+00	1.918E+00	2.281E+00	7.101E-03	5.593E-03	5.534E-03	6.443E-08	2.008E-07	2.695E-08	7.168E-03	4.074E-01
1806.00	6.827E-01	7.473E-01	7.336E-01	1.569E-03	1.234E-03	1.025E-03	5.334E-08	3.677E-08	6.137E-08	1.535E-03	5.133E-01
1806.00	3.589E-01	7.530E-01	7.408E-01	9.054E-04	1.719E-03	1.164E-03	8.032E-08	4.843E-08	5.988E-08	8.586E-04	6.769E-01
1866.00	4.739E-01	7.682E-01	7.906E-01	1.006E-03	1.619E-03	1.676E-03	1.726E-07	5.333E-08	5.299E-08	9.707E-04	8.055E-01
1926.00	5.921E-01	7.671E-01	8.457E-01	1.205E-03	1.924E-03	2.319E-03	2.541E-07	5.894E-08	6.975E-08	1.194E-03	1.426E-01
1986.00	6.187E-01	8.793E-01	9.055E-01	1.245E-03	2.948E-03	2.790E-03	3.345E-07	8.059E-08	6.847E-08	1.234E-03	5.530E-01
2046.00	7.099E-01	1.197E+00	1.085E+00	1.872E-03	5.227E-03	4.017E-03	4.114E-07	1.962E-07	2.774E-07	1.852E-03	2.824E-01
2092.00	7.704E-01	7.243E-01	7.112E-01	1.784E-03	2.498E-03	1.514E-03	1.431E-07	2.794E-07	3.643E-07	1.778E-03	2.506E-01
2106.00	7.917E-01	7.215E-01	7.032E-01	1.752E-03	2.173E-03	1.657E-03	1.587E-07	3.114E-07	3.627E-07	1.748E-03	2.595E-01
2166.00	8.919E-01	7.348E-01	6.888E-01	1.772E-03	1.574E-03	2.344E-03	1.766E-07	3.425E-07	2.967E-07	1.770E-03	1.651E-01
2226.00	1.003E+00	7.350E-01	7.134E-01	1.964E-03	1.377E-03	3.196E-03	1.748E-07	3.571E-07	2.518E-07	1.964E-03	2.153E-01
2286.00	1.135E+00	7.219E-01	8.555E-01	2.255E-03	2.065E-03	4.452E-03	2.049E-07	4.119E-07	2.976E-07	2.756E-03	4.633E-01
2292.00	1.149E+00	7.204E-01	8.770E-01	2.276E-03	2.145E-03	4.582E-03	2.073E-07	4.167E-07	3.006E-07	2.277E-03	4.545E-01
2292.00	1.154E+00	7.168E-01	4.706E-01	2.251E-03	1.748E-03	3.601E-03	1.519E-07	3.121E-07	2.419E-07	2.254E-03	3.581E-01
2346.00	1.286E+00	7.198E-01	6.936E-02	2.423E-03	1.842E-03	4.040E-03	8.949E-08	2.794E-07	1.885E-07	2.426E-03	1.431E-01
2406.00	1.412E+00	7.309E-01	7.309E-02	2.572E-03	1.924E-03	2.422E-03	2.841E-07	7.827E-08	8.017E-08	2.575E-03	8.152E-01
2430.00	1.461E+00	7.425E-01	5.557E-02	2.647E-03	1.379E-03	1.640E-03	4.054E-07	3.234E-08	1.413E-07	2.643E-03	1.129E-01
2430.00	5.171E-02	7.230E-01	4.809E-02	1.064E-03	1.239E-03	1.519E-03	4.128E-07	3.689E-08	1.342E-07	1.065E-03	1.151E-01
2449.50	4.221E-03	7.264E-01	7.580E-03	1.162E-03	1.656E-03	6.202E-04	5.355E-07	1.225E-07	1.917E-07	1.164E-03	1.594E-01
2449.50	3.299E-02	6.551E-01	7.062E-03	1.60E-03	1.648E-03	6.096E-04	5.357E-07	1.238E-07	1.886E-07	1.161E-03	1.586E-01
2466.00	4.149E-02	9.301E-01	4.340E-03	9.622E-04	3.637E-03	3.953E-04	5.733E-07	1.655E-07	3.308E-07	9.762E-04	3.619E-01
2482.00	1.172E-02	5.953E-01	2.852E-03	1.482E-03	6.050E-03	2.008E-04	5.911E-07	1.892E-07	5.540E-07	1.491E-03	6.067E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	5.420E-01	9.262E-01	3.128E-01	1.666E-03	1.151E-04	1.494E-03	1.654E-10	2.897E-10	3.112E-10	2.880E-07	2.973E-07
1746.00	3.224E+00	9.066E-01	2.454E+00	7.072E-03	8.696E-04	7.846E-03	6.715E-08	1.194E-07	1.626E-07	1.900E-06	2.140E-06
1806.00	6.846E-01	6.854E-01	7.901E-01	1.565E-03	5.345E-04	1.547E-03	5.381E-08	5.176E-08	4.687E-08	5.701E-07	5.797E-07
1806.00	3.621E-01	7.049E-01	7.853E-01	9.069E-04	6.462E-04	1.556E-03	8.007E-08	6.592E-08	4.079E-08	3.087E-07	5.943E-07
1866.00	4.760E-01	6.915E-01	8.573E-01	1.006E-03	7.951E-04	2.191E-03	1.726E-07	6.479E-08	3.813E-08	5.009E-07	1.170E-06
1926.00	5.926E-01	7.513E-01	8.595E-01	1.203E-03	1.501E-03	2.613E-03	2.540E-07	7.782E-08	4.250E-08	9.627E-07	2.016E-06
1986.00	6.191E-01	6.748E-01	1.066E+00	1.245E-03	5.255E-04	4.025E-03	3.343E-07	9.454E-08	4.868E-08	1.261E-06	4.193E-06
2046.00	7.099E-01	8.925E-01	1.347E+00	1.871E-03	2.598E-03	6.059E-03	4.113E-07	3.171E-07	1.222E-07	1.798E-06	7.477E-06
2092.00	7.702E-01	7.398E-01	6.961E-01	1.782E-03	2.336E-03	1.755E-03	1.430E-07	2.133E-07	4.066E-07	1.719E-06	2.011E-06
2106.00	7.916E-01	7.356E-01	6.886E-01	1.749E-03	2.464E-03	1.186E-03	1.584E-07	1.192E-07	4.631E-07	1.756E-06	1.371E-06
2166.00	8.916E-01	7.347E-01	6.873E-01	1.769E-03	1.526E-04	2.345E-03	1.768E-07	3.421E-07	2.970E-07	2.034E-06	2.940E-06
2226.00	1.002E+00	7.349E-01	7.141E-01	1.964E-03	2.069E-03	2.798E-03	1.758E-07	4.047E-07	1.636E-07	2.466E-06	3.740E-06
2286.00	1.135E+00	7.668E-01	8.161E-01	2.256E-03	4.593E-03	1.726E-03	2.065E-07	8.135E-08	5.010E-07	3.104E-06	2.522E-06
2292.00	1.148E+00	7.600E-01	8.435E-01	2.277E-03	4.506E-03	2.301E-03	2.090E-07	1.379E-07	4.943E-07	3.171E-06	3.388E-06
2292.00	1.153E+00	6.361E-01	5.756E-01	2.251E-03	3.584E-03	1.856E-03	1.529E-07	9.927E-08	3.818E-07	3.166E-06	2.719E-06
2346.00	1.285E+00	7.202E-01	6.929E-02	2.422E-03	1.464E-03	4.032E-03	8.948E-08	2.786E-07	1.500E-07	3.792E-06	3.582E-06
2406.00	1.411E+00	7.313E-01	7.323E-02	2.571E-03	1.028E-03	2.422E-03	2.840E-07	7.879E-08	8.004E-08	5.348E-06	4.991E-06
2430.00	1.461E+00	7.428E-01	5.568E-02	2.639E-03	1.379E-03	1.641E-03	4.054E-07	3.211E-08	1.414E-07	6.008E-06	3.646E-06
2430.00	5.173E-02	7.230E-01	4.813E-02	1.063E-03	1.239E-03	1.519E-03	4.128E-07	3.651E-08	1.342E-07	2.525E-06	3.376E-06
2449.50	4.196E-03	7.264E-01	7.653E-03	1.162E-03	1.659E-03	6.204E-04	5.356E-07	1.221E-07	1.918E-07	2.853E-06	1.442E-06
2449.50	3.337E-02	6.551E-01	7.100E-03	1.160E-03	1.648E-03	6.098E-04	5.357E-07	1.233E-07	1.887E-07	2.839E-06	1.417E-06
2466.00	4.174E-02	9.301E-01	4.643E-03	9.621E-04	3.637E-03	3.938E-04	5.733E-07	1.652E-07	3.309E-07	2.858E-06	1.080E-06
2482.00	1.173E-02	5.953E-01	3.030E-03	1.482E-03	6.050E-03	1.978E-04	5.911E-07	1.892E-07	5.540E-07	4.689E-06	6.533E-07

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)											
	1.186E-10	3.225E-10	1.381E-10	4.757E-08	3.167E-08	1.835E-08	2.726E-07	1.039E-07	6.686E-08		
	4.172E-01	9.939E-01	1.238E-02	1.172E-07	8.360E-03	1.655E-12					

PRINTED IN U.S.A. C-30 QUALITY

SYSTEM A GROUP 17

(LOCALIZER SURVER ERRORS)

PRINTED IN USA

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	5.981E-02	4.661E-02	4.648E-01	4.649E-04	1.124E-03	3.090F-03	9.998E-08	2.757E-07	1.617E-07	4.627E-04	2.879F-03
2346.00	1.752E-01	4.911F-02	1.088E+00	6.870F-04	1.605F-03	5.708F-03	8.300E-08	4.307E-07	1.743E-07	6.933E-04	1.743E-03
2406.00	2.051E-01	7.196F-02	1.102F+00	3.989F-04	1.013E-04	3.424F-03	2.954E-07	1.446F-07	8.237E-08	4.004E-04	2.097F-05
2430.00	3.144E-01	9.628E-02	1.077E+00	5.458F-04	8.742F-04	2.307E-03	4.718F-07	2.117E-08	1.797E-07	5.470E-04	7.463E-04
2430.00	1.194E-02	5.368E-02	1.067E+00	2.543F-04	6.778F-04	2.151E-03	4.827E-07	1.149F-08	1.742E-07	2.559E-04	7.123E-04
2449.50	3.317E-03	2.668E-02	1.009E+00	4.212E-04	1.066E-03	8.508F-04	6.583E-07	1.253E-07	2.429E-07	4.224E-04	1.126E-03
2449.50	2.762E-03	3.337E-02	1.009E+00	4.256E-04	1.047E-03	8.344E-04	6.597E-07	1.271E-07	2.420E-07	4.269E-04	1.108E-03
2466.00	8.397E-04	7.585E-03	1.003E+00	2.382F-04	7.334E-04	3.594F-04	6.948F-07	1.820F-07	2.044E-07	2.383E-04	7.443E-04
2482.00	5.724E-04	3.661E-03	1.001E+00	6.455E-05	6.041E-04	8.992E-05	7.118E-07	2.138F-07	1.912E-07	6.451E-05	6.050E-04

C-31

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	5.975E-02	2.616E-01	3.869E-01	4.713F-04	2.841F-03	1.654E-03	1.012E-07	1.077E-07	3.005E-07	9.067F-08	2.439E-06
2346.00	1.750E-01	4.295E-02	1.088E+00	6.920F-04	1.638E-03	5.698E-03	8.435E-08	4.294F-07	1.770E-07	5.494E-07	9.054E-06
2406.00	2.050E-01	6.978E-02	1.102E+00	3.987E-04	9.419E-05	3.424F-03	2.951E-07	1.453F-07	8.204F-08	8.293E-07	7.093F-06
2430.00	3.143F-01	9.516F-02	1.077E+00	5.409F-04	8.717E-04	2.308F-03	4.718F-07	2.182F-08	1.797F-07	1.544F-06	5.165E-06
2430.00	1.189F-02	5.228F-02	1.067E+00	2.570F-04	6.747F-04	2.152F-03	4.827E-07	1.202F-08	1.742F-07	2.538E-07	4.817E-06
2449.50	3.331E-03	2.754E-02	1.009E+00	4.219E-04	1.065E-03	8.517E-04	6.583E-07	1.248E-07	2.430E-07	4.823E-07	2.014E-06
2449.50	2.780E-03	3.422F-02	1.009E+00	4.262F-04	1.046F-03	8.353F-04	6.598E-07	1.265E-07	2.421E-07	5.005E-07	1.976E-06
2466.00	8.457E-04	6.847E-03	1.003E+00	2.384E-04	7.331E-04	3.600F-04	6.948E-07	1.816E-07	2.045E-07	5.497E-07	1.015E-06
2482.00	5.747E-04	2.991E-03	1.001E+00	6.456E-05	6.041E-04	9.008E-05	7.118E-07	2.137F-07	1.913E-07	1.840E-07	3.098E-07
ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)											
	1.823E-11	1.529E-10	5.792E-11	5.994E-09	9.660F-09	5.138E-10	5.465F-08	1.482E-08	2.432E-08		
	2.453E-02	9.920E-01	4.997E-04	3.814E-08	2.476E-04	1.331E-14					

SYSTEM A GROUP 17

(GLIDE SLOPE SURVEY ERRORS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	6.418E-01	1.368E+00	7.123E-03	2.372E-03	4.410E-03	3.851E-04	1.397E-07	5.080E-09	3.009E-07	2.398E-03	3.878E-03
2466.00	7.710E-01	1.381E+00	4.071E-03	1.028E-02	2.149E-02	1.440E-03	1.077E-06	1.820E-07	1.942E-06	1.026E-02	2.199E-02
2482.00	1.872E-01	7.123E+00	1.684E-02	2.829E-02	1.145E-01	1.918E-03	5.158E-06	2.633E-08	1.068E-05	2.818E-02	1.149E-01

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	6.410E-01	1.368E+00	8.289E-03	2.370E-03	4.411E-03	3.859E-04	1.397E-07	4.743E-09	3.009E-07	7.290E-06	9.035E-07
2466.00	7.706E-01	1.381E+00	3.055E-03	1.028E-02	2.149E-02	1.425E-03	1.077E-06	1.803E-07	1.942E-06	2.504E-05	3.986E-06
2482.00	1.871E-01	7.123E+00	2.166E-02	2.829E-02	1.145E-01	1.841E-03	5.158E-06	3.362E-08	1.068E-05	8.756E-05	6.079E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 24)

2.135E-09	4.966E-09	2.494E-09	9.344E-07	5.625E-07	3.154E-07	5.147E-06	2.142E-06	2.462E-07
6.872E+00	4.796E-01	2.000E-01	5.422E-07	1.382E-01	2.119E-11			

PRINTED IN U.S.A.

C-32

SYSTEM B GROUP 1 (DME MEASUREMENT NOISE)

POSITION

C-33

TIME

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1666.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.438E+01	1.169E+03	1.063E+03	6.820E-02	3.687E-02	4.142E-02	0.000E+00	0.000E+00	0.000E+00	6.402E-02	5.250E-02
1746.00	6.988E+02	3.571E+02	3.476E+02	4.134E-01	9.165E-01	4.273E-01	0.000E+00	0.000E+00	0.000E+00	4.302E-01	7.448E-01
1806.00	8.870E+02	2.841E+02	1.437E+02	9.058E-01	1.405E+00	1.177E+00	0.000E+00	0.000E+00	0.000E+00	9.156E-01	1.007E+00
1836.00	4.109E+01	1.247E+02	9.867E+01	9.101E-01	1.103E+00	9.847E-01	0.000E+00	0.000E+00	0.000E+00	9.072E-01	4.018E-01
1866.00	2.875E+01	1.138E+02	1.047E+02	9.977E-01	1.146E+00	9.835E-01	0.000E+00	0.000E+00	0.000E+00	9.978E-01	5.719E-01
1926.00	2.145E+01	8.265E+01	6.797E+01	4.200E-01	7.681E-01	6.300E-01	0.000E+00	0.000E+00	0.000E+00	4.266E-01	2.693E-01
1986.00	1.457E+01	6.200E+01	4.940E+01	1.882E-01	4.940E-01	3.848E-01	0.000E+00	0.000E+00	0.000E+00	1.884E-01	7.690E-02
2046.00	8.178E+00	4.314E+01	3.517E+01	9.322E-02	3.098E-01	2.400E-01	0.000E+00	0.000E+00	0.000E+00	9.305E-02	1.686E-01
2092.00	7.858E+00	2.868E+01	1.670E+01	7.173E-02	2.219E-01	1.580E-01	0.000E+00	0.000E+00	0.000E+00	7.133E-02	2.232E-01
2106.00	7.264E+00	2.656E+01	1.298E+01	6.075E-02	2.038E-01	1.418E-01	0.000E+00	0.000E+00	0.000E+00	6.076E-02	2.140E-01
2166.00	2.496E+00	2.284E+01	1.449E+01	3.588E-02	1.332E-01	1.350E-01	0.000E+00	0.000E+00	0.000E+00	3.583E-02	1.317E-01
2226.00	7.915E-01	1.041E+01	2.503E+01	3.748E-02	9.782E-02	1.665E-01	0.000E+00	0.000E+00	0.000E+00	3.156E-02	1.931E-01
2286.00	6.462E-01	1.125E+01	2.884E+01	1.744E-02	8.666E-02	1.487E-01	0.000E+00	0.000E+00	0.000E+00	1.723E-02	1.263E-01
2292.00	6.763E-01	1.052E+01	2.923E+01	1.635E-02	8.658E-02	1.465E-01	0.000E+00	0.000E+00	0.000E+00	1.616E-02	1.188E-01
2292.00	6.343E-01	1.006E+01	2.655E+01	1.578E-02	8.589E-02	1.315E-01	0.000E+00	0.000E+00	0.000E+00	1.560E-02	1.091E-01
2326.00	3.894E-01	6.875E+00	5.617E+00	6.103E-03	7.733E-02	4.231E-02	0.000E+00	0.000E+00	0.000E+00	6.286E-03	7.539E-02
2406.00	2.436E-01	6.791E+00	1.820E+00	3.564E-03	7.351E-02	4.773E-02	0.000E+00	0.000E+00	0.000E+00	3.579E-03	7.211E-02
2430.00	2.294E-01	6.932E+00	1.611E+00	3.514E-03	7.264E-02	4.312E-02	0.000E+00	0.000E+00	0.000E+00	3.521E-03	7.132E-02
2430.00	2.081E-01	6.820E+00	1.542E+00	3.348E-03	7.263E-02	4.252E-02	0.000E+00	0.000E+00	0.000E+00	3.356E-03	7.130E-02
2449.50	4.827E-02	5.576E+00	2.402E-01	2.880E-03	6.874E-02	2.932E-02	0.000E+00	0.000E+00	0.000E+00	2.886E-03	6.755E-02
2449.50	1.563E-01	5.372E+00	2.269E-01	4.289E-03	6.738E-02	2.895E-02	0.000E+00	0.000E+00	0.000E+00	4.208E-03	6.666E-02
2466.00	7.051E-02	2.651E+00	1.488E-01	3.261E-03	5.029E-02	1.503E-02	0.000E+00	0.000E+00	0.000E+00	3.222E-03	5.031E-02
2482.00	5.504E-03	1.495E+00	5.445E-02	3.529E-03	4.966E-02	4.024E-03	0.000E+00	0.000E+00	0.000E+00	3.588E-03	4.865E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1666.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.481E+01	5.644E+02	1.478E+03	7.023E-02	4.914E-02	1.945E-02	0.000E+00	0.000E+00	0.000E+00	1.334E-05	2.563E-05
1746.00	6.051E+02	1.465E+02	4.817E+02	4.039E-01	7.613E-01	6.713E-01	0.000E+00	0.000E+00	0.000E+00	1.212E-04	1.759E-04
1806.00	8.827E+02	2.222E+02	2.441E+02	8.884E-01	1.078E+00	1.494E+00	0.000E+00	0.000E+00	0.000E+00	3.671E-04	5.549E-04
1836.00	4.180E+01	3.645E+01	1.548E+02	9.071E-01	4.227E-01	1.482E+00	0.000E+00	0.000E+00	0.000E+00	3.390E-04	5.513E-04
1866.00	2.871E+01	5.504E+01	1.445E+02	9.941E-01	6.029E-01	1.385E+00	0.000E+00	0.000E+00	0.000E+00	5.302E-04	7.316E-04
1926.00	2.141E+01	3.290E+01	1.018E+02	4.205E-01	3.076E-01	9.446E-01	0.000E+00	0.000E+00	0.000E+00	3.408E-04	7.236E-04
1986.00	1.455E+01	1.038E+01	7.865E+01	1.881E-01	8.597E-02	6.203E-01	0.000E+00	0.000E+00	0.000E+00	1.966E-04	6.405E-04
2046.00	8.173E+00	2.438E+01	5.003E+01	9.319E-02	1.702E-01	3.592E-01	0.000E+00	0.000E+00	0.000E+00	1.180E-04	4.223E-04
2092.00	7.833E+00	2.404E+01	2.243E+01	7.169E-02	2.252E-01	1.533E-01	0.000E+00	0.000E+00	0.000E+00	8.735E-05	1.755E-04
2106.00	7.241E+00	2.186E+01	1.091E+01	6.095E-02	2.168E-01	1.210E-01	0.000E+00	0.000E+00	0.000E+00	7.842E-05	1.394E-04
2166.00	2.489E+00	2.284E+01	1.440E+01	3.554E-02	1.332E-01	1.351E-01	0.000E+00	0.000E+00	0.000E+00	5.082E-05	1.501E-04
2226.00	7.900E-01	3.070E+01	7.788E+00	3.154E-02	1.547E-01	1.157E-01	0.000E+00	0.000E+00	0.000E+00	5.137E-05	1.505E-04
2286.00	6.572E-01	1.612E+01	2.645E+01	1.723E-02	1.289E-01	1.142E-01	0.000E+00	0.000E+00	0.000E+00	4.273E-05	1.666E-04
2292.00	6.671E-01	1.381E+01	2.794E+01	1.614E-02	1.213E-01	1.194E-01	0.000E+00	0.000E+00	0.000E+00	4.243E-05	1.757E-04
2292.00	6.262E-01	1.284E+01	2.531E+01	1.558E-02	1.114E-01	1.107E-01	0.000E+00	0.000E+00	0.000E+00	4.020E-05	1.628E-04
2346.00	3.867E-01	6.869E+00	5.625E+00	6.036E-03	7.723E-02	4.250E-02	0.000E+00	0.000E+00	0.000E+00	2.788E-05	6.724E-05
2406.00	2.448E-01	6.791E+00	3.577E-03	3.577E-03	7.349E-02	4.777E-02	0.000E+00	0.000E+00	0.000E+00	2.972E-05	9.842E-05
2430.00	2.306E-01	6.932E+00	1.611E+00	3.528E-03	7.262E-02	4.315E-02	0.000E+00	0.000E+00	0.000E+00	3.101E-05	9.588E-05
2430.00	2.093E-01	6.820E+00	1.542E+00	3.362E-03	7.262E-02	4.254E-02	0.000E+00	0.000E+00	0.000E+00	3.109E-05	9.453E-05
2449.50	4.857E-02	5.576E+00	2.400E-01	2.886E-03	6.873E-02	2.935E-02	0.000E+00	0.000E+00	0.000E+00	2.980E-05	6.810E-05
2449.50	1.592E-01	5.372E+00	2.274E-01	4.293E-03	6.737E-02	2.897E-02	0.000E+00	0.000E+00	0.000E+00	2.488E-05	6.732E-05
2466.00	7.120E-02	2.651E+00	1.488E-01	3.268E-03	5.028E-02	1.504E-02	0.000E+00	0.000E+00	0.000E+00	7.998E-06	4.125E-05
2482.00	5.506E-03	1.495E+00	5.453E-02	3.529E-03	4.966E-02	4.038E-03	0.000E+00	0.000E+00	0.000E+00	1.183E-05	1.334E-05

Note: The input value  $\sigma = 48$  ft was used. Divide all values in this table by two to make it consistent with the base-line error budget value for DME noise,  $\sigma = 24$  ft.

ORIGINAL PAGE IS OF POOR QUALITY

SYSTEM B GROUP 1 (RADAR ALT. MEAS. NOISE)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	2.311E-01	2.686E-02	1.932E-03	3.625E-03	8.671E-05	4.344E-05	0.000E+00	0.000E+00	0.000E+00	3.626E-03	6.323E-04
2449.50	6.234E-01	8.515E-02	4.376E-03	1.138E-02	4.851E-04	7.575E-04	0.000E+00	0.000E+00	0.000E+00	1.139E-02	2.169E-03
2449.50	3.234E-01	1.604E-01	5.498E-03	6.890E-03	2.799E-03	5.759E-04	0.000E+00	0.000E+00	0.000E+00	6.889E-03	4.010E-03
2466.00	6.394E-01	6.310E+00	1.331E-01	4.105E-02	1.020E-01	9.592E-03	0.000E+00	0.000E+00	0.000E+00	4.100E-02	1.034E-01
2482.00	9.645E-01	6.911E+00	7.866E-02	9.630E-02	9.607E-02	4.910E-03	0.000E+00	0.000E+00	0.000E+00	9.631E-02	9.650E-02

C-34

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	2.311E-01	2.709E-02	1.896E-03	3.625E-03	9.024E-05	4.357E-05	0.000E+00	0.000E+00	0.000E+00	7.775E-06	9.671E-08
2449.50	6.233E-01	8.551E-02	4.436E-03	1.138E-02	4.860E-04	7.574E-04	0.000E+00	0.000E+00	0.000E+00	2.552E-05	1.760E-06
2449.50	3.835E-01	1.601E-01	5.620E-03	6.892E-03	2.795E-03	5.769E-04	0.000E+00	0.000E+00	0.000E+00	1.479E-05	1.340E-06
2466.00	6.410E-01	6.309E+00	1.377E-01	4.108E-02	1.020E-01	9.667E-03	0.000E+00	0.000E+00	0.000E+00	1.011E-04	2.551E-05
2482.00	9.645E-01	6.910E+00	8.186E-02	9.630E-02	9.607E-02	4.948E-03	0.000E+00	0.000E+00	0.000E+00	3.166E-04	1.634E-05



SYSTEM B GROUP 1 QUANTIZATION IN COMPUTER

PRINT WIDTH

C-35 WIDTH

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
1746.00	8.705F+01	7.982E+00	1.925E+01	1.617E-01	1.745E-01	1.414E-01	0.000E+00	0.000E+00	0.000E+00	1.612E-01	1.504E-01
1806.00	1.474F+02	2.319F+01	4.095E+01	2.373F-01	2.749E-01	2.446F-01	0.000E+00	0.000E+00	0.000E+00	2.322F-01	2.628E-01
1806.00	6.873F+00	2.000F+01	2.184E+01	2.312E-01	2.143E-01	2.005F-01	0.000E+00	0.000E+00	0.000E+00	2.344E-01	1.605E-01
1866.00	1.462E+01	1.589E+01	2.167E+01	5.141F-01	2.419E-01	2.982E-01	0.000E+00	0.000E+00	0.000E+00	5.118E-01	1.869E-01
1926.00	1.844F+01	2.613E+01	9.315E+00	3.828F-01	3.440F-01	2.065E-01	0.000E+00	0.000E+00	0.000E+00	3.821E-01	1.813E-01
1986.00	2.166F+01	2.571E+01	1.602E+01	3.166F-01	2.574E-01	2.746F-01	0.000E+00	0.000E+00	0.000E+00	3.169F-01	2.568F-01
2046.00	1.000E+01	1.653F+01	1.661E+01	2.430E-01	2.367E-01	2.810E-01	0.000E+00	0.000E+00	0.000E+00	2.433E-01	2.625E-01
2092.00	1.278E+01	3.125E+01	1.175E+01	2.471E-01	2.682E-01	2.065E-01	0.000E+00	0.000E+00	0.000E+00	2.455E-01	2.064E-01
2106.00	1.369E+01	3.250E+01	1.094E+01	2.362E-01	2.703F-01	2.124F-01	0.000E+00	0.000E+00	0.000E+00	2.357E-01	2.130E-01
2166.00	6.518E+00	3.633E+01	2.080E+01	1.704E-01	2.354E-01	2.771E-01	0.000E+00	0.000E+00	0.000E+00	1.711E-01	2.378F-01
2226.00	4.460F+00	2.130F+01	3.475F+01	1.681E-01	1.944E-01	3.125F-01	0.000E+00	0.000E+00	0.000E+00	1.680F-01	2.861F-01
2286.00	4.347E+00	9.323F+00	4.475F+01	1.620F-01	2.044E-01	3.224E-01	0.000E+00	0.000E+00	0.000E+00	1.622F-01	3.350E-01
2292.00	4.568E+00	8.625F+00	4.594F+01	1.640E-01	2.084E-01	3.237E-01	0.000E+00	0.000E+00	0.000E+00	1.640E-01	2.946E-01
2292.00	4.882F+00	7.476F+00	4.193F+01	1.608E-01	2.049E-01	3.030E-01	0.000E+00	0.000E+00	0.000E+00	1.608F-01	2.790E-01
2346.00	4.013F+00	5.536F+00	1.101F+01	1.516E-01	1.755E-01	2.026F-01	0.000E+00	0.000E+00	0.000E+00	1.516E-01	1.723E-01
2406.00	3.691E+00	5.836F+00	5.511F+00	1.461E-01	1.713E-01	1.939E-01	0.000E+00	0.000E+00	0.000E+00	1.461E-01	1.687F-01
2430.00	3.891E+00	6.124F+00	4.931E+00	1.485E-01	1.718E-01	1.833E-01	0.000E+00	0.000E+00	0.000E+00	1.485E-01	1.697E-01
2430.00	3.398E+00	5.841F+00	4.529E+00	1.421E-01	1.690E-01	1.794E-01	0.000E+00	0.000E+00	0.000E+00	1.421E-01	1.669E-01
2449.50	7.960E-01	3.588F+00	8.734E-01	1.150E-01	1.492E-01	1.372E-01	0.000E+00	0.000E+00	0.000E+00	1.150E-01	1.475E-01
2449.50	4.513E-01	3.412E+00	8.145E-01	1.083E-01	1.472E-01	1.360E-01	0.000E+00	0.000E+00	0.000E+00	1.083E-01	1.462E-01
2466.00	2.405E-01	2.789F+00	7.462E-01	6.899E-02	1.368E-01	1.018E-01	0.000E+00	0.000E+00	0.000E+00	6.900E-02	1.362E-01
2462.00	2.000E-01	2.687E+00	4.492E-01	5.362E-02	1.424E-01	7.554F-02	0.000E+00	0.000E+00	0.000E+00	5.363E-02	1.423E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1746.00	8.655E+01	2.018F+01	1.064E+01	1.608E-01	1.533E-01	1.650E-01	0.000E+00	0.000E+00	0.000E+00	4.323E-04	4.357E-04
1806.00	1.471E+02	4.633F+01	1.674E+01	2.302E-01	2.704E-01	2.514E-01	0.000E+00	0.000E+00	0.000E+00	8.922E-05	9.289E-05
1806.00	6.837E+00	1.079F+01	2.818E+01	2.306F-01	1.668E-01	2.426E-01	0.000E+00	0.000E+00	0.000E+00	8.686E-05	8.992E-05
1866.00	1.454E+01	6.456F+00	2.612E+01	5.118E-01	2.383E-01	3.050E-01	0.000E+00	0.000E+00	0.000E+00	2.778E-04	1.609E-04
1926.00	1.841E+01	7.130F+00	2.684E+01	3.817E-01	2.250E-01	3.232E-01	0.000E+00	0.000E+00	0.000E+00	3.032E-04	2.471E-04
1986.00	2.160F+01	2.032E+01	2.252E+01	3.160F-01	2.776E-01	2.549E-01	0.000E+00	0.000E+00	0.000E+00	3.450E-04	2.446E-04
2046.00	9.493E+00	1.917E+01	1.347E+01	2.430F-01	2.859E-01	2.308E-01	0.000E+00	0.000E+00	0.000E+00	3.239E-04	2.836E-04
2092.00	1.275E+01	1.766E+01	2.834E+01	2.470F-01	2.033E-01	2.707E-01	0.000E+00	0.000E+00	0.000E+00	2.741E-04	3.096E-04
2106.00	1.366F+01	2.010E+01	2.780F+01	2.362E-01	2.115E-01	2.710E-01	0.000E+00	0.000E+00	0.000E+00	2.662E-04	3.120E-04
2166.00	8.494E+00	3.034E+01	2.079E+01	1.703E-01	2.354E-01	2.771E-01	0.000E+00	0.000E+00	0.000E+00	2.056E-04	3.470E-04
2226.00	4.464E+00	4.045E+01	5.033E+00	1.680F-01	2.888E-01	2.363E-01	0.000E+00	0.000E+00	0.000E+00	2.276E-04	3.157E-04
2266.00	4.305E+00	2.735E+01	3.662E+01	1.620E-01	3.081E-01	2.254E-01	0.000E+00	0.000E+00	0.000E+00	2.425E-04	3.282E-04
2292.00	4.566E+00	2.412E+01	4.008E+01	1.640E-01	2.984E-01	2.434E-01	0.000E+00	0.000E+00	0.000E+00	2.462E-04	3.575E-04
2292.00	4.280E+00	2.243F+01	3.621E+01	1.608F-01	2.825E-01	2.324E-01	0.000E+00	0.000E+00	0.000E+00	2.497E-04	3.412E-04
2346.00	4.011E+00	5.547E+00	1.101E+01	1.516E-01	1.753E-01	2.027E-01	0.000E+00	0.000E+00	0.000E+00	2.403E-04	3.210E-04
2406.00	3.690F+00	5.832E+00	5.516E+00	1.461E-01	1.713E-01	1.940E-01	0.000E+00	0.000E+00	0.000E+00	3.009E-04	3.997E-04
2430.00	3.890F+00	6.123F+00	4.933F+00	1.485F-01	1.718E-01	1.833E-01	0.000E+00	0.000E+00	0.000E+00	3.287E-04	4.073E-04
2430.00	3.389E+00	5.839E+00	4.531E+00	1.421E-01	1.690E-01	1.794E-01	0.000E+00	0.000E+00	0.000E+00	3.150E-04	3.986E-04
2449.50	7.959E-01	3.588F+00	8.732F-01	1.150E-01	1.492E-01	1.372E-01	0.000E+00	0.000E+00	0.000E+00	2.671E-04	3.188E-04
2449.50	4.512E-01	3.412F+00	8.143E-01	1.083E-01	1.472E-01	1.360E-01	0.000E+00	0.000E+00	0.000E+00	2.509E-04	3.159E-04
2466.00	2.404E-01	2.790F+00	7.452E-01	6.899E-02	1.368E-01	1.018E-01	0.000E+00	0.000E+00	0.000E+00	1.921E-04	2.792E-04
2462.00	2.000E-01	2.687E+00	4.491E-01	5.362E-02	1.424E-01	7.554E-02	0.000E+00	0.000E+00	0.000E+00	1.781E-04	2.495E-04



ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 1

(INITIAL CONDITION ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	B	C	R	U	C	R	D	C	RATE ERROR	MAG ERROR
1666.00	1.366E+04	1.018E+04	1.735E+04	3.646E+01	8.402E+00	8.724E+00	6.337E-04	3.834E-04	6.148E-04	3.386E+01	7.491E+00
1586.00	1.173E+04	4.924E+03	2.086E+03	3.736E+01	6.476E+00	9.144E+00	6.837E-04	3.894E-04	6.148E-04	3.799E+01	7.392E+00
1746.00	5.133E+03	1.005E+03	5.673E+02	3.565E+01	9.115E+00	1.123E+01	6.917E-04	3.898E-04	6.138E-04	3.557E+01	8.617E+00
1836.00	3.270E+03	1.114E+03	7.295E+02	3.101E+01	7.698E+00	7.223E+00	6.797E-04	3.902E-04	6.187E-04	3.093E+01	5.343E+00
1866.00	1.504E+02	6.463E+02	6.234E+02	3.077E+01	6.145E+00	6.645E+00	6.797E-04	3.902E-04	6.187E-04	3.067E+01	3.215E+00
1906.00	1.609E+02	2.245E+02	2.369E+02	6.500E+00	4.238E+00	2.281E+00	6.777E-04	3.906E-04	6.217E-04	6.489E+00	2.608E+00
1926.00	1.752E+02	3.381E+02	1.522E+02	7.168E+01	3.468E+00	4.169E+00	6.737E-04	3.915E-04	6.245E-04	3.469E+00	3.330E+00
1986.00	2.557E+02	3.265E+02	1.168E+01	3.468E+00	4.169E+00	1.766E+00	6.717E-04	3.919E-04	6.254E-04	2.277E+00	2.927E+00
2046.00	1.266E+02	2.731E+02	1.547E+02	2.271E+02	3.581E+00	2.823E+00	6.701E-04	3.922E-04	6.279E-04	2.096E+00	1.688E+00
2092.00	1.347E+02	5.364E+02	3.184E+01	2.510E+00	4.364E+00	2.053E+00	6.701E-04	3.922E-04	6.279E-04	1.948E+00	2.153E+00
2106.00	1.392E+02	5.355E+02	3.392E+01	1.951E+00	4.393E+00	2.399E+00	6.697E-04	3.923E-04	6.283E-04	1.948E+00	2.153E+00
2166.00	7.952E+01	5.303E+02	3.232E+02	6.771E-01	3.655E+00	3.783E+00	6.675E-04	3.928E-04	6.302E-04	8.564E-01	3.755E+00
2226.00	1.993E+01	2.992E+02	4.065E+02	2.708E-01	2.093E+00	3.479E+00	6.555E-04	3.932E-04	6.321E-04	2.789E-01	3.446E+00
2236.00	1.708E+01	1.059E+02	4.463E+02	8.663E-01	1.886E+00	3.123E+00	6.535E-04	3.936E-04	6.340E-04	8.925E-01	3.170E+00
2292.00	1.997E+01	9.850E+01	4.592E+02	9.071E-01	1.984E+00	3.153E+00	6.533E-04	3.937E-04	6.342E-04	9.135E-01	3.150E+00
2292.00	1.865E+01	8.046E+01	4.186E+02	6.925E-01	1.938E+00	2.919E+00	6.533E-04	3.937E-04	6.342E-04	8.983E-01	2.991E+00
2346.00	1.564E+01	6.732E+01	1.172E+02	5.268E-01	1.821E+00	1.171E+00	6.515E-04	3.941E-04	6.358E-04	5.304E-01	1.889E+00
2406.00	5.050E+00	6.757E+01	4.146E+01	1.335E-02	1.635E+00	8.849E-00	6.594E-04	3.945E-04	6.377E-04	1.370E-02	1.003E+00
2436.00	6.095E-01	7.092E+01	3.225E+01	7.375E-02	1.659E+00	6.522E-01	6.535E-04	3.947E-04	6.384E-04	7.364E-02	1.611E+00
2436.00	6.024E-01	6.765E+01	2.975E+01	7.723E-02	1.619E+00	8.207E-01	6.535E-04	3.947E-04	6.384E-04	7.768E-02	1.571E+00
2449.50	7.038E-01	4.138E+01	4.180E+00	9.149E-02	1.313E+00	5.258E-01	6.579E-04	3.949E-04	6.390E-04	9.158E-02	1.272E+00
2449.50	7.136E-01	3.902E+01	3.820E+00	6.110E-02	1.284E+00	5.171E-01	6.579E-04	3.949E-04	6.390E-04	6.116E-02	1.248E+00
2466.00	2.072E-01	2.327E+01	3.266E+00	6.089E-02	1.111E+00	4.322E-01	6.574E-04	3.950E-04	6.395E-04	6.101E-02	1.106E+00
2482.00	1.012E-01	2.152E+01	2.087E+00	4.236E-02	1.111E+00	2.946E-01	6.538E-04	3.951E-04	6.400E-04	4.265E-02	1.110E+00

C-86

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W			
1666.00	1.413E+04	1.501E+04	1.291E+04	3.622E+01	8.161E+00	9.616E+00	6.332E-04	3.671E-04	6.180E-04	6.811E-03	1.707E-03	
1586.00	1.166E+04	3.731E+03	4.390E+03	3.718E+01	8.056E+00	1.018E+01	6.932E-04	3.671E-04	6.180E-04	7.634E-03	2.035E-03	
1746.00	5.105E+03	1.187E+03	5.804E+02	3.539E+01	1.099E+01	1.034E+01	6.333E-04	4.649E-04	5.653E-04	9.548E-03	2.738E-03	
1806.00	3.254E+03	6.678E+02	1.000E+03	3.093E+01	7.374E+00	7.910E+00	5.340E-04	5.208E-04	5.060E-04	1.159E-02	2.923E-03	
1866.00	1.496E+02	2.852E+02	3.516E+02	3.070E+01	5.319E+00	7.409E+00	6.840E-04	5.208E-04	5.060E-04	1.146E-02	2.765E-03	
1866.00	1.604E+02	1.108E+02	3.074E+02	6.482E+00	3.183E+00	3.007E+00	6.840E-04	5.208E-04	5.060E-04	3.515E-03	1.897E-03	
1926.00	1.745E+02	7.112E+01	3.643E+02	3.749E+00	1.774E+00	5.429E+00	6.775E-04	5.451E-04	4.905E-04	3.003E-03	4.151E-03	
1986.00	2.550E+02	2.504E+02	2.219E+02	3.458E+00	3.643E+00	2.702E+00	6.744E-04	4.973E-04	5.850E-04	3.896E-03	2.802E-03	
2046.00	1.266E+02	2.119E+02	2.316E+02	2.265E+00	3.417E+00	3.022E+00	6.715E-04	5.817E-04	4.557E-04	3.463E-03	3.709E-03	
2092.00	1.343E+02	2.364E+02	4.368E+02	2.187E+00	1.554E+00	4.567E+00	6.597E-04	6.647E-04	3.728E-04	2.236E-03	5.225E-03	
2106.00	1.388E+02	3.200E+02	4.248E+02	1.962E+00	1.564E+00	7.601E+00	6.563E-04	6.123E-04	4.190E-04	1.975E-03	5.302E-03	
2166.00	7.686E+01	5.306E+02	3.230E+02	8.762E-01	3.655E+00	3.783E+00	6.555E-04	3.937E-04	6.320E-04	2.616E-04	4.733E-03	
2226.00	1.931E+01	5.029E+02	6.588E+02	2.813E-01	3.503E+00	2.951E+00	6.533E-04	4.979E-04	5.560E-04	9.293E-04	2.740E-03	
2226.00	1.722E+01	2.346E+02	3.710E+02	5.549E-01	3.145E+00	1.853E+00	6.522E-04	5.848E-04	4.855E-04	1.087E-03	3.035E-03	
2292.00	2.019E+01	2.392E+02	4.046E+02	9.159E-01	3.106E+00	2.062E+00	6.522E-04	5.848E-04	4.855E-04	1.049E-03	2.785E-03	
2292.00	1.886E+01	2.220E+02	3.651E+02	9.000E-01	2.943E+00	1.855E+00	6.522E-04	5.848E-04	4.855E-04	2.731E-04	1.854E-03	
2346.00	1.985E+01	6.746E+01	1.171E+02	5.324E-01	1.821E+00	1.163E+00	6.515E-04	3.945E-04	6.374E-04	6.465E-04	1.827E-03	
2406.00	5.153E+00	6.763E+01	4.145E+01	1.434E-02	1.534E+00	8.804E-01	6.594E-04	3.955E-04	6.374E-04	6.465E-04	1.827E-03	
2436.00	8.784E-01	7.092E+01	3.233E+01	7.212E-02	1.659E+00	8.531E-01	6.584E-04	3.953E-04	6.382E-04	6.845E-04	1.826E-03	
2436.00	6.680E-01	6.765E+01	2.975E+01	7.563E-02	1.616E+00	8.216E-01	6.584E-04	3.953E-04	6.382E-04	6.845E-04	1.826E-03	
2449.50	6.795E-01	4.138E+01	4.174E+00	9.073E-02	1.313E+00	5.261E-01	6.573E-04	3.953E-04	6.382E-04	7.766E-04	1.222E-03	
2449.50	7.381E-01	3.902E+01	3.823E+00	6.036E-02	1.283E+00	5.173E-01	6.573E-04	3.953E-04	6.382E-04	6.845E-04	1.202E-03	
2466.00	2.832E-01	2.327E+01	3.269E+00	6.060E-02	1.111E+00	4.324E-01	6.574E-04	3.953E-04	6.395E-04	6.394E-04	1.186E-03	
2482.00	1.009E-01	2.152E+01	2.093E+00	4.234E-02	1.111E+00	2.949E-01	6.568E-04	3.953E-04	6.399E-04	1.941E-04	9.739E-04	

SYSTEM B GROUP 1

(POSITION & VELOCITY ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	1.366E+04	1.018E+04	1.735E+04	3.646E+01	8.402E+00	8.725E+00	0.000E+00	0.000E+00	0.000E+00	3.386E+01	7.491E+00
1686.00	1.173E+04	4.924E+03	2.686E+03	3.736E+01	8.476E+00	9.144E+00	0.000E+00	0.000E+00	0.000E+00	3.799E+01	7.392E+00
1746.00	5.079E+03	1.058E+03	5.792E+02	3.615E+01	8.075E+00	1.170E+01	0.000E+00	0.000E+00	0.000E+00	3.607E+01	8.663E+00
1806.00	2.199E+03	1.052E+03	3.870E+02	3.198E+01	5.180E+00	7.848E+00	0.000E+00	0.000E+00	0.000E+00	3.189E+01	5.028E+00
1806.00	9.485E+01	6.001E+02	5.549E+02	3.174E+01	4.406E+00	6.893E+00	0.000E+00	0.000E+00	0.000E+00	3.163E+01	3.601E+00
1866.00	1.087E+02	2.121E+02	1.932E+02	5.338E+00	2.160E+00	1.967E+00	0.000E+00	0.000E+00	0.000E+00	5.336E+00	1.066E+00
1926.00	4.583E+01	1.556E+02	1.288E+02	1.214E+00	1.225E+00	1.197E+00	0.000E+00	0.000E+00	0.000E+00	1.216E+00	4.298E-01
1986.00	7.746E+00	2.630E+01	2.198E+01	2.002E-01	2.168E-01	2.367E-01	0.000E+00	0.000E+00	0.000E+00	2.000E-01	6.902E-02
2046.00	3.611E+00	9.686E+00	8.459E+00	1.236E-01	6.822E-02	1.195E-01	0.000E+00	0.000E+00	0.000E+00	1.237E-01	8.308E-02
2092.00	5.979E+00	4.479E+00	4.861E+00	1.052E-01	3.806E-02	3.857E-02	0.000E+00	0.000E+00	0.000E+00	1.050E-01	2.459E-02
2106.00	6.443E+00	4.227E+00	3.825E+00	9.268E-02	2.895E-02	3.968E-02	0.000E+00	0.000E+00	0.000E+00	9.255E-02	2.147E-02
2166.00	3.296E+00	7.017E+00	4.054E+00	1.787E-02	2.507E-02	6.641E-02	0.000E+00	0.000E+00	0.000E+00	1.774E-02	2.786E-02
2226.00	4.214E-01	5.274E+00	7.790E+00	1.209E-02	7.403E-03	6.190E-02	0.000E+00	0.000E+00	0.000E+00	1.232E-02	5.213E-02
2286.00	2.939E-01	1.786E+00	7.471E+00	1.272E-02	1.353E-02	3.981E-02	0.000E+00	0.000E+00	0.000E+00	1.232E-02	3.550E-02
2292.00	3.255E-01	1.589E+00	7.543E+00	1.176E-02	1.433E-02	3.869E-02	0.000E+00	0.000E+00	0.000E+00	1.179E-02	3.313E-02
2292.00	3.084E-01	1.370E+00	6.838E+00	1.154E-02	1.398E-02	3.442E-02	0.000E+00	0.000E+00	0.000E+00	1.157E-02	3.022E-02
2346.00	2.224E-01	8.194E-02	1.349E+00	3.909E-03	3.402E-03	2.589E-03	0.000E+00	0.000E+00	0.000E+00	3.901E-03	2.561E-03
2406.00	5.517E-02	2.401E-02	6.739E-03	1.178E-04	5.487E-04	9.133E-03	0.000E+00	0.000E+00	0.000E+00	1.168E-04	5.286E-04
2430.00	2.207E-02	1.799E-02	1.430E-01	4.522E-04	3.885E-04	8.743E-03	0.000E+00	0.000E+00	0.000E+00	4.519E-04	3.518E-04
2430.00	1.928E-02	1.710E-02	1.312E-01	4.936E-04	3.688E-04	8.210E-03	0.000E+00	0.000E+00	0.000E+00	4.935E-04	3.356E-04
2449.50	2.701E-03	1.316E-02	3.654E-02	6.353E-04	1.697E-04	5.196E-03	0.000E+00	0.000E+00	0.000E+00	6.355E-04	2.425E-04
2449.50	1.281E-03	1.218E-02	3.411E-02	6.063E-04	1.703E-04	5.142E-03	0.000E+00	0.000E+00	0.000E+00	6.065E-04	2.465E-04
2466.00	7.505E-04	1.570E-02	2.495E-02	2.269E-04	4.278E-05	2.544E-03	0.000E+00	0.000E+00	0.000E+00	2.272E-04	4.444E-05
2482.00	9.011E-05	7.283E-03	7.481E-03	6.041E-06	9.256E-05	4.962E-04	0.000E+00	0.000E+00	0.000E+00	5.960E-06	9.217E-05

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	1.413E+04	1.501E+04	1.291E+04	3.628E+01	8.181E+00	9.616E+00	0.000E+00	0.000E+00	0.000E+00	6.811E-03	1.707E-03
1686.00	1.166E+04	3.731E+03	4.390E+03	3.718E+01	8.056E+00	1.018E+01	0.000E+00	0.000E+00	0.000E+00	7.634E-03	2.036E-03
1746.00	5.051E+03	1.172E+03	6.020E+02	3.588E+01	1.116E+01	9.843E+00	0.000E+00	0.000E+00	0.000E+00	9.687E-03	2.611E-03
1806.00	2.188E+03	4.319E+02	1.056E+03	3.188E+01	7.452E+00	6.267E+00	0.000E+00	0.000E+00	0.000E+00	1.197E-02	2.323E-03
1806.00	9.452E+01	2.403E+02	7.812E+02	3.166E+01	5.982E+00	6.002E+00	0.000E+00	0.000E+00	0.000E+00	1.183E-02	2.226E-03
1866.00	1.087E+02	1.030E+02	2.677E+02	5.339E+00	1.251E+00	2.655E+00	0.000E+00	0.000E+00	0.000E+00	2.804E-03	1.401E-03
1926.00	4.575E+01	6.144E+01	1.925E+02	1.212E+00	6.611E-01	1.581E+00	0.000E+00	0.000E+00	0.000E+00	9.861E-04	1.212E-03
1986.00	7.741E+00	2.785E+00	3.416E+01	2.000E-01	8.662E-02	3.092E-01	0.000E+00	0.000E+00	0.000E+00	2.136E-04	3.213E-04
2046.00	3.612E+00	5.782E+00	1.149E+01	1.236E-01	1.063E-01	2.734E-02	0.000E+00	0.000E+00	0.000E+00	1.693E-04	1.076E-04
2092.00	5.969E+00	6.005E+00	2.696E+00	1.052E-01	3.594E-02	3.624E-02	0.000E+00	0.000E+00	0.000E+00	1.216E-04	4.156E-05
2106.00	6.431E+00	5.357E+00	1.988E+00	9.275E-02	2.982E-02	7.885E-02	0.000E+00	0.000E+00	0.000E+00	1.077E-04	4.082E-05
2166.00	3.287E+00	7.028E+00	4.048E+00	1.800E-02	2.514E-02	6.635E-02	0.000E+00	0.000E+00	0.000E+00	1.619E-05	8.311E-05
2226.00	4.133E-01	9.406E+00	2.273E-01	1.198E-02	5.524E-02	2.891E-02	0.000E+00	0.000E+00	0.000E+00	2.925E-05	3.851E-05
2286.00	2.990E-01	4.288E+00	6.387E+00	1.218E-02	3.844E-02	1.712E-02	0.000E+00	0.000E+00	0.000E+00	2.749E-05	2.511E-05
2292.00	3.304E-01	3.613E+00	6.809E+00	1.168E-02	3.583E-02	2.052E-02	0.000E+00	0.000E+00	0.000E+00	2.602E-05	3.031E-05
2292.00	3.125E-01	3.330E+00	6.128E+00	1.146E-02	3.283E-02	1.746E-02	0.000E+00	0.000E+00	0.000E+00	2.492E-05	2.581E-05
2346.00	2.221E-01	9.087E-02	1.349E+00	3.899E-03	3.398E-03	2.610E-03	0.000E+00	0.000E+00	0.000E+00	6.972E-06	4.081E-06
2406.00	5.514E-02	2.407E-02	6.771E-03	1.170E-04	5.620E-04	9.132E-03	0.000E+00	0.000E+00	0.000E+00	4.515E-07	1.881E-06
2430.00	2.206E-02	1.793E-02	1.430E-01	4.521E-04	3.949E-04	8.343E-03	0.000E+00	0.000E+00	0.000E+00	1.058E-06	1.854E-05
2430.00	1.927E-02	1.705E-02	1.312E-01	4.936E-04	3.748E-04	8.210E-03	0.000E+00	0.000E+00	0.000E+00	1.134E-06	1.874E-05
2449.50	2.695E-03	1.319E-02	3.653E-02	6.354E-04	1.679E-04	5.196E-03	0.000E+00	0.000E+00	0.000E+00	1.393E-06	1.207E-05
2449.50	1.278E-03	1.220E-02	3.410E-02	6.063E-04	1.686E-04	5.143E-03	0.000E+00	0.000E+00	0.000E+00	1.321E-06	1.195E-05
2466.00	7.469E-04	1.572E-02	2.494E-02	2.269E-04	4.306E-05	2.544E-03	0.000E+00	0.000E+00	0.000E+00	6.214E-07	6.975E-06
2482.00	9.020E-05	7.288E-03	7.476E-03	6.039E-06	9.224E-05	4.963E-04	0.000E+00	0.000E+00	0.000E+00	2.293E-08	1.639E-06

C-37

117613

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM 8 GROUP 2 DIRECT

(ACC. BIAS ERRORS - X,Y,Z)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	8.315E+03	2.062E+03	4.378E+03	1.744E+01	1.457E+00	3.882E+00	2.466E-05	5.969E-05	5.484E-05	1.701E+01	2.859E+00
1686.00	7.651E+03	2.132E+03	8.368E+02	1.770E+01	1.434E+00	3.816E+00	2.466E-05	5.969E-05	5.484E-05	1.817E+01	2.877E+00
1746.00	2.195E+03	3.908E+02	2.603E+02	1.659E+01	2.916E+00	3.534E+00	2.486E-05	5.968E-05	5.475E-05	1.655E+01	3.684E+00
1806.00	9.895E+02	4.314E+02	3.179E+02	1.460E+01	1.576E+00	2.224E+00	2.507E-05	5.968E-05	5.466E-05	1.455E+01	1.817E+00
1806.00	4.383E+01	3.232E+02	3.083E+02	1.451E+01	1.555E+00	1.547E+00	2.507E-05	5.968E-05	5.466E-05	1.445E+01	1.048E+00
1866.00	4.881E+01	1.186E+02	1.121E+02	2.434E+00	8.712E-01	4.895E-01	2.527E-05	5.967E-05	5.457E-05	2.436E+00	2.950E-01
1926.00	1.552E+01	4.599E+01	3.427E+01	5.009E-01	2.526E-01	2.372E-01	2.540E-05	5.967E-05	5.448E-05	5.015E-01	8.52E-02
1986.00	8.323E+00	7.757E+00	1.341E+01	1.544E-01	9.851E-02	1.704E-01	2.568E-05	5.967E-05	5.439E-05	1.543E-01	1.136E-01
2046.00	3.921E+00	7.143E+00	1.441E+01	2.070E-01	8.080E-02	1.638E-01	2.589E-05	5.966E-05	5.430E-05	2.066E-01	1.759E-01
2092.00	1.095E+01	1.598E+01	1.409E+01	2.800E-01	9.982E-02	1.350E-01	2.604E-05	5.966E-05	5.423E-05	2.794E-01	1.608E-01
2106.00	1.295E+01	1.714E+01	1.363E+01	2.826E-01	9.975E-02	1.334E-01	2.609E-05	5.966E-05	5.421E-05	2.822E-01	1.410E-01
2166.00	1.093E+01	1.354E+01	1.133E+01	1.969E-01	8.751E-02	1.370E-01	2.629E-05	5.965E-05	5.411E-05	1.967E-01	1.041E-01
2226.00	5.949E+00	9.087E+00	1.601E+01	1.499E-01	6.218E-02	1.687E-01	2.649E-05	5.965E-05	5.402E-05	1.499E-01	1.157E-01
2286.00	4.580E+00	4.125E+00	2.399E+01	1.460E-01	7.498E-02	2.102E-01	2.670E-05	5.964E-05	5.393E-05	1.461E-01	1.724E-01
2292.00	4.847E+00	3.665E+00	2.503E+01	1.504E-01	7.908E-02	2.143E-01	2.672E-05	5.964E-05	5.392E-05	1.504E-01	1.655E-01
2292.00	4.553E+00	3.082E+00	2.283E+01	1.466E-01	7.720E-02	2.008E-01	2.672E-05	5.964E-05	5.392E-05	1.466E-01	1.564E-01
2346.00	4.504E+00	2.552E+00	7.501E+00	1.438E-01	5.248E-02	1.065E-01	2.690E-05	5.964E-05	5.383E-05	1.437E-01	3.563E-02
2406.00	4.052E+00	1.769E+00	3.201E+00	1.283E-01	4.198E-02	8.385E-02	2.710E-05	5.963E-05	5.374E-05	1.283E-01	3.574E-02
2430.00	4.187E+00	1.839E+00	2.596E+00	1.291E-01	4.284E-02	7.980E-02	2.718E-05	5.963E-05	5.370E-05	1.291E-01	3.770E-02
2430.00	3.648E+00	1.738E+00	2.374E+00	1.207E-01	4.181E-02	7.747E-02	2.718E-05	5.963E-05	5.370E-05	1.207E-01	3.676E-02
2449.50	7.249E-01	1.062E+00	3.971E-01	7.794E-02	3.454E-02	5.520E-02	2.724E-05	5.963E-05	5.367E-05	7.794E-02	3.052E-02
2449.50	3.911E-01	9.140E-01	3.788E-01	7.070E-02	3.259E-02	5.555E-02	2.724E-05	5.963E-05	5.367E-05	7.070E-02	3.002E-02
2466.00	1.566E-01	1.102E+00	3.459E-01	4.307E-02	3.925E-02	4.224E-02	2.730E-05	5.963E-05	5.364E-05	4.308E-02	3.755E-02
2482.00	8.525E-02	1.551E+00	1.658E-01	1.792E-02	5.264E-02	2.082E-02	2.735E-05	5.962E-05	5.362E-05	1.794E-02	5.241E-02

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	PSI ERROR
1686.00	8.438E+03	2.424E+03	3.936E+03	1.746E+01	2.807E+00	2.918E+00	2.351E-05	5.975E-05	5.527E-05	3.405E-03	6.494E-04	6.494E-04	
1686.00	7.602E+03	1.944E+03	1.483E+03	1.772E+01	2.802E+00	2.820E+00	2.351E-05	5.975E-05	5.527E-05	3.635E-03	5.655E-04	5.655E-04	
1746.00	2.183E+03	5.015E+02	1.452E+02	1.647E+01	4.825E+00	1.206E+00	2.397E-05	5.826E-05	5.664E-05	4.439E-03	3.209E-04	3.209E-04	
1806.00	9.348E+02	2.721E+02	4.716E+02	1.456E+01	2.757E+00	1.004E+00	2.456E-05	5.683E-05	5.784E-05	5.436E-03	3.814E-04	3.814E-04	
1806.00	4.365E+01	1.378E+02	4.249E+02	1.447E+01	2.165E+00	1.077E+00	2.456E-05	5.683E-05	5.784E-05	5.390E-03	4.068E-04	4.068E-04	
1866.00	4.883E+01	5.591E+01	1.533E+02	2.431E+00	6.110E-01	8.005E-01	2.495E-05	5.961E-05	5.478E-05	1.301E-03	4.248E-04	4.248E-04	
1926.00	1.550E+01	1.533E+01	5.527E+01	5.006E-01	1.547E-01	3.105E-01	2.527E-05	5.618E-05	5.817E-05	3.877E-04	2.385E-04	2.385E-04	
1986.00	8.299E+00	9.761E+00	1.205E+01	1.543E-01	1.162E-01	1.589E-01	2.560E-05	5.811E-05	5.609E-05	1.614E-04	1.652E-04	1.652E-04	
2046.00	3.919E+00	1.547E+01	4.394E+00	2.070E-01	1.596E-01	8.884E-02	2.589E-05	5.526E-05	5.877E-05	2.327E-04	1.093E-04	1.093E-04	
2092.00	1.093E+01	1.037E+01	1.863E+01	2.798E-01	1.208E-01	1.170E-01	2.614E-05	5.435E-05	5.950E-05	2.904E-04	1.337E-04	1.337E-04	
2106.00	1.293E+01	9.078E+00	1.994E+01	2.824E-01	1.066E-01	1.284E-01	2.622E-05	5.529E-05	5.860E-05	3.029E-04	1.477E-04	1.477E-04	
2166.00	1.091E+01	1.354E+01	1.134E+01	1.955E-01	8.771E-02	1.373E-01	2.649E-05	5.964E-05	5.403E-05	2.322E-04	1.729E-04	1.729E-04	
2226.00	5.942E+00	1.816E+01	3.021E+00	1.495E-01	1.345E-01	1.198E-01	2.668E-05	5.699E-05	5.673E-05	2.170E-04	1.601E-04	1.601E-04	
2286.00	4.585E+00	1.500E+01	1.917E+01	1.456E-01	2.002E-01	9.905E-02	2.678E-05	5.525E-05	5.838E-05	2.542E-04	1.446E-04	1.446E-04	
2292.00	4.852E+00	1.350E+01	2.134E+01	1.500E-01	1.931E-01	1.224E-01	2.679E-05	5.600E-05	5.765E-05	2.599E-04	1.801E-04	1.801E-04	
2292.00	4.557E+00	1.255E+01	1.932E+01	1.462E-01	1.832E-01	1.132E-01	2.679E-05	5.600E-05	5.765E-05	2.521E-04	1.665E-04	1.665E-04	
2346.00	4.499E+00	2.100E+00	7.491E+00	1.437E-01	5.327E-02	1.063E-01	2.693E-05	5.960E-05	5.385E-05	2.312E-04	1.684E-04	1.684E-04	
2406.00	4.051E+00	1.776E+00	3.199E+00	1.283E-01	4.214E-02	8.382E-02	2.712E-05	5.962E-05	5.374E-05	2.629E-04	1.728E-04	1.728E-04	
2430.00	4.186E+00	1.842E+00	2.595E+00	1.291E-01	4.298E-02	7.978E-02	2.719E-05	5.962E-05	5.370E-05	2.847E-04	1.773E-04	1.773E-04	
2430.00	3.647E+00	1.741E+00	2.373E+00	1.207E-01	4.190E-02	7.745E-02	2.719E-05	5.962E-05	5.370E-05	2.664E-04	1.721E-04	1.721E-04	
2449.50	7.246E-01	1.062E+00	3.968E-01	7.793E-02	3.457E-02	5.519E-02	2.725E-05	5.962E-05	5.367E-05	1.816E-04	1.282E-04	1.282E-04	
2449.50	3.910E-01	9.141E-01	3.786E-01	7.070E-02	3.262E-02	5.554E-02	2.725E-05	5.962E-05	5.367E-05	1.639E-04	1.291E-04	1.291E-04	
2466.00	1.564E-01	1.102E+00	3.453E-01	4.307E-02	3.928E-02	4.222E-02	2.730E-05	5.962E-05	5.364E-05	1.221E-04	1.158E-04	1.158E-04	
2482.00	8.523E-02	1.552E+00	1.649E-01	1.792E-02	5.265E-02	2.079E-02	2.735E-05	5.962E-05	5.362E-05	6.153E-05	6.867E-05	6.867E-05	

PP NIED HUSA

C-38

UNIT 11

SYSTEM B GROUP 3 DIRECT

(ACC. SCALE FACTOR ERROR -XYZ)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	9.561E+03	1.464E+03	1.340E+04	2.744E+01	3.547E+00	4.190E+00	2.330E-08	3.561E-08	4.967E-08	2.556E+01	4.677E+00
1686.00	7.800E+03	4.247E+03	2.293E+03	2.816E+01	3.162E+00	4.499E+00	2.330E-08	3.561E-08	4.967E-08	2.865E+01	4.464E+00
1746.00	4.134E+03	8.603E+02	3.899E+02	2.761E+01	4.062E+00	7.639E+00	2.349E-08	3.564E-08	4.955E-08	2.755E+01	7.178E+00
1806.00	1.592E+03	8.588E+02	2.124E+02	2.447E+01	1.962E+00	5.081E+00	2.368E-08	3.568E-08	4.944E-08	2.441E+01	3.891E+00
1806.00	6.413E+01	4.859E+02	4.456E+02	2.428E+01	1.173E+00	3.592E+00	2.368E-08	3.568E-08	4.944E-08	2.420E+01	2.217E+00
1866.00	8.396E+01	1.340E+02	1.236E+02	4.086E+00	6.642E-01	1.883E-01	2.387E-08	3.571E-08	4.932E-08	4.087E+00	1.384E-01
1866.00	8.396E+01	1.340E+02	1.236E+02	4.086E+00	6.642E-01	1.883E-01	2.387E-08	3.571E-08	4.932E-08	4.087E+00	1.384E-01
1926.00	3.001E+01	9.145E+01	7.464E+01	8.233E-01	6.278E-01	6.488E-01	2.406E-08	3.575E-08	4.920E-08	8.245E-01	2.126E-01
1926.00	3.001E+01	9.145E+01	7.464E+01	8.233E-01	6.278E-01	6.488E-01	2.406E-08	3.575E-08	4.920E-08	8.245E-01	2.126E-01
1986.00	6.343E+00	3.702E+00	6.495E+00	1.407E-01	5.235E-02	1.239E-01	2.424E-08	3.579E-08	4.908E-08	1.406E-01	8.688E-02
1986.00	6.343E+00	3.702E+00	6.495E+00	1.407E-01	5.235E-02	1.239E-01	2.424E-08	3.579E-08	4.908E-08	1.406E-01	8.688E-02
2046.00	2.700E+00	4.921E+00	7.899E+00	1.117E-01	6.025E-02	1.220E-01	2.443E-08	3.582E-08	4.897E-08	1.115E-01	1.173E-01
2046.00	2.700E+00	4.921E+00	7.899E+00	1.117E-01	6.025E-02	1.220E-01	2.443E-08	3.582E-08	4.897E-08	1.115E-01	1.173E-01
2092.00	5.414E+00	1.016E+01	6.747E+00	1.285E-01	8.257E-02	8.813E-02	2.457E-08	3.585E-08	4.887E-08	1.288E-01	8.620E-02
2092.00	5.414E+00	1.016E+01	6.747E+00	1.285E-01	8.257E-02	8.813E-02	2.457E-08	3.585E-08	4.887E-08	1.288E-01	8.620E-02
2106.00	6.244E+00	1.091E+01	6.611E+00	1.289E-01	8.388E-02	8.899E-02	2.462E-08	3.586E-08	4.885E-08	1.288E-01	8.620E-02
2106.00	6.244E+00	1.091E+01	6.611E+00	1.289E-01	8.388E-02	8.899E-02	2.462E-08	3.586E-08	4.885E-08	1.288E-01	8.620E-02
2166.00	5.101E+00	9.084E+00	7.554E+00	1.006E-01	5.927E-02	9.954E-02	2.480E-08	3.589E-08	4.873E-08	1.006E-01	6.325E-02
2166.00	5.101E+00	9.084E+00	7.554E+00	1.006E-01	5.927E-02	9.954E-02	2.480E-08	3.589E-08	4.873E-08	1.006E-01	6.325E-02
2226.00	3.180E+00	6.613E+00	1.173E+01	9.086E-02	2.678E-02	1.114E-01	2.499E-08	3.593E-08	4.860E-08	9.089E-02	7.619E-02
2226.00	3.180E+00	6.613E+00	1.173E+01	9.086E-02	2.678E-02	1.114E-01	2.499E-08	3.593E-08	4.860E-08	9.089E-02	7.619E-02
2286.00	2.650E+00	3.081E+00	1.493E+01	7.865E-02	3.173E-02	1.197E-01	2.517E-08	3.596E-08	4.848E-08	7.889E-02	8.817E-02
2286.00	2.650E+00	3.081E+00	1.493E+01	7.865E-02	3.173E-02	1.197E-01	2.517E-08	3.596E-08	4.848E-08	7.889E-02	8.817E-02
2292.00	2.774E+00	2.824E+00	1.537E+01	7.929E-02	3.353E-02	1.218E-01	2.519E-08	3.597E-08	4.847E-08	7.931E-02	8.151E-02
2292.00	2.774E+00	2.824E+00	1.537E+01	7.929E-02	3.353E-02	1.218E-01	2.519E-08	3.597E-08	4.847E-08	7.931E-02	8.151E-02
2292.00	2.605E+00	2.416E+00	1.396E+01	7.707E-02	3.287E-02	1.135E-01	2.519E-08	3.597E-08	4.847E-08	7.708E-02	7.593E-02
2292.00	2.605E+00	2.416E+00	1.396E+01	7.707E-02	3.287E-02	1.135E-01	2.519E-08	3.597E-08	4.847E-08	7.708E-02	7.593E-02
2346.00	2.142E+00	1.097E+00	4.277E+00	6.230E-02	3.471E-02	6.633E-02	2.536E-08	3.600E-08	4.836E-08	6.227E-02	3.012E-02
2346.00	2.142E+00	1.097E+00	4.277E+00	6.230E-02	3.471E-02	6.633E-02	2.536E-08	3.600E-08	4.836E-08	6.227E-02	3.012E-02
2406.00	1.827E+00	1.435E+00	2.080E+00	5.779E-02	3.622E-02	5.067E-02	2.554E-08	3.603E-08	4.824E-08	5.779E-02	3.562E-02
2406.00	1.827E+00	1.435E+00	2.080E+00	5.779E-02	3.622E-02	5.067E-02	2.554E-08	3.603E-08	4.824E-08	5.779E-02	3.562E-02
2430.00	1.899E+00	1.533E+00	1.666E+00	5.917E-02	3.538E-02	4.571E-02	2.561E-08	3.605E-08	4.819E-08	5.917E-02	3.539E-02
2430.00	1.899E+00	1.533E+00	1.666E+00	5.917E-02	3.538E-02	4.571E-02	2.561E-08	3.605E-08	4.819E-08	5.917E-02	3.539E-02
2430.00	1.654E+00	1.461E+00	1.531E+00	5.532E-02	3.463E-02	4.415E-02	2.561E-08	3.605E-08	4.819E-08	5.533E-02	3.461E-02
2430.00	1.654E+00	1.461E+00	1.531E+00	5.532E-02	3.463E-02	4.415E-02	2.561E-08	3.605E-08	4.819E-08	5.533E-02	3.461E-02
2449.50	3.345E-01	8.301E-01	2.178E-01	3.650E-02	2.660E-02	2.822E-02	2.567E-08	3.606E-08	4.815E-08	3.650E-02	2.654E-02
2449.50	3.345E-01	8.301E-01	2.178E-01	3.650E-02	2.660E-02	2.822E-02	2.567E-08	3.606E-08	4.815E-08	3.650E-02	2.654E-02
2449.50	1.844E-01	7.780E-01	2.058E-01	3.323E-02	2.596E-02	2.820E-02	2.567E-08	3.606E-08	4.815E-08	3.323E-02	2.625E-02
2449.50	1.844E-01	7.780E-01	2.058E-01	3.323E-02	2.596E-02	2.820E-02	2.567E-08	3.606E-08	4.815E-08	3.323E-02	2.625E-02
2466.00	7.905E-02	5.744E-01	1.764E-01	2.103E-02	2.286E-02	2.187E-02	2.572E-08	3.607E-08	4.811E-08	2.103E-02	2.240E-02
2466.00	7.905E-02	5.744E-01	1.764E-01	2.103E-02	2.286E-02	2.187E-02	2.572E-08	3.607E-08	4.811E-08	2.103E-02	2.240E-02
2482.00	4.061E-02	7.267E-01	9.038E-02	8.480E-03	2.632E-02	1.180E-02	2.577E-08	3.608E-08	4.808E-08	8.489E-03	2.624E-02
2482.00	4.061E-02	7.267E-01	9.038E-02	8.480E-03	2.632E-02	1.180E-02	2.577E-08	3.608E-08	4.808E-08	8.489E-03	2.624E-02

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR	
1686.00	9.964E+03	7.001E+03	1.117E+04	2.722E+01	6.006E+00	2.520E+00	2.236E-08	3.216E-08	5.238E-08	5.169E-03	1.750E-04	
1686.00	9.964E+03	7.001E+03	1.117E+04	2.722E+01	6.006E+00	2.520E+00	2.236E-08	3.216E-08	5.238E-08	5.169E-03	1.750E-04	
1746.00	7.751E+03	3.031E+03	3.857E+03	2.793E+01	5.827E+00	2.975E+00	2.236E-08	3.216E-08	5.238E-08	5.787E-03	5.362E-04	
1746.00	7.751E+03	3.031E+03	3.857E+03	2.793E+01	5.827E+00	2.975E+00	2.236E-08	3.216E-08	5.238E-08	5.787E-03	5.362E-04	
1746.00	4.111E+03	9.563E+02	4.042E+02	2.738E+01	9.161E+00	1.844E+00	2.275E-08	3.741E-08	4.858E-08	7.416E-03	4.973E-04	
1746.00	4.111E+03	9.563E+02	4.042E+02	2.738E+01	9.161E+00	1.844E+00	2.275E-08	3.741E-08	4.858E-08	7.416E-03	4.973E-04	
1806.00	1.585E+03	2.158E+02	8.715E+02	2.438E+01	5.813E+00	3.707E-01	2.327E-08	4.212E-08	4.429E-08	9.166E-03	1.311E-04	
1806.00	1.585E+03	2.158E+02	8.715E+02	2.438E+01	5.813E+00	3.707E-01	2.327E-08	4.212E-08	4.429E-08	9.166E-03	1.311E-04	
1806.00	6.410E+01	1.895E+02	6.315E+02	2.422E+01	4.123E+00	4.456E-01	2.327E-08	4.212E-08	4.429E-08	9.039E-03	1.536E-04	
1806.00	6.410E+01	1.895E+02	6.315E+02	2.422E+01	4.123E+00	4.456E-01	2.327E-08	4.212E-08	4.429E-08	9.039E-03	1.536E-04	
1866.00	8.397E+01	6.474E+01	1.704E+02	4.081E+00	6.822E-01	2.347E-01	2.361E-08	3.198E-08	5.194E-08	2.159E-03	1.294E-04	
1866.00	8.397E+01	6.474E+01	1.704E+02	4.081E+00	6.822E-01	2.347E-01	2.361E-08	3.198E-08	5.194E-08	2.159E-03	1.294E-04	
1926.00	2.997E+01	3.526E+01	1.127E+02	8.223E-01	3.753E-01	8.220E-01	2.388E-08	4.298E-08	4.313E-08	6.600E-04	6.306E-04	
1926.00	2.997E+01	3.526E+01	1.127E+02	8.223E-01	3.753E-01	8.220E-01	2.388E-08	4.298E-08	4.313E-08	6.600E-04	6.306E-04	
1986.00	6.332E+00	5.597E+00	4.971E+00	1.406E-01	9.481E-02	9.567E-02	2.418E-08	3.576E-08	4.914E-08	1.504E-04	9.937E-05	
1986.00	6.332E+00	5.597E+00	4.971E+00	1.406E-01	9.481E-02	9.567E-02	2.418E-08	3.576E-08	4.914E-08	1.504E-04	9.937E-05	
2046.00	2.700E+00	8.586E+00	3.591E+00	1.117E-01	1.206E-01	6.296E-02	2.443E-08	4.507E-08	4.061E-08	1.388E-04	7.743E-05	
2046.00	2.700E+00	8.586E+00	3.591E+00	1.117E-01	1.206E-01	6.296E-02	2.443E-08	4.507E-08	4.061E-08	1.388E-04	7.743E-05	
2092.00	5.405E+00	5.124E+00	1.107E+01	1.284E-01	8.216E-02	8.859E-02	2.467E-08	5.148E-08	3.192E-08	1.366E-04	1.013E-04	
2092.00	5.405E+00	5.124E+00	1.107E+01	1.284E-01	8.216E-02	8.859E-02	2.467E-08	5.148E-08	3.192E-08	1.366E-04	1.013E-04	
2106.00	6.234E+00	5.333E+00	1.160E+01	1.288E-01	8.000E-02	9.261E-02	2.474E-08	5.021E-08	3.383E-08	1.400E-04	1.066E-04	
2106.00	6.234E+00	5.333E+00	1.160E+01	1.288E-01	8.000E-02	9.261E-02	2.474E-08	5.021E-08	3.383E-08	1.400E-04	1.066E-04	
2166.00	5.095E+00	9.083E+00	7.559E+00	1.004E-01	5.931E-02	9.975E-02	2.500E-08	3.585E-08	4.865E-08	1.209E-04	1.249E-04	
2166.00	5.095E+00	9.083E+00	7.559E+00	1.004E-01	5.931E-02	9.975E-02	2.500E-08	3.585E-08	4.865E-08	1.209E-04	1.249E-04	
2226.00	3.179E+00	1.337E+01	1.605E+00	9.058E-02	8.916E-02	7.229E-02	2.519E-08	3.836E-08	4.660E-08	1.344E-04	9.651E-05	
2226.00	3.179E+00	1.337E+01	1.605E+00	9.058E-02	8.916E-02	7.229E-02	2.519E-08	3.836E-08	4.660E-08	1.344E-04	9.651E-05	
2286.00	2.653E+00	8.934E+00	1.235E+01	7.866E-02	1.023E-01	6.992						

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 4

(ACC. MISALIGNMENT - X,Y,Z

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	3.317E+03	1.519E+03	2.470E+03	6.505E+00	6.176E-01	1.658E+00	7.954E-05	1.925E-04	1.769E-04	6.073E+00	1.170E+00
1686.00	3.028E+03	5.769E+02	2.416E+02	5.646E+00	6.345E-01	1.710E+00	7.954E-05	1.925E-04	1.769E-04	6.782E+00	1.168E+00
1746.00	7.770E+02	1.143E+02	1.151E+02	6.472E+00	8.309E-01	1.801E+00	8.020E-05	1.925E-04	1.766E-04	6.459E+00	1.354E+00
1806.00	4.151E+02	1.362E+02	1.590E+02	5.727E+00	7.882E-01	1.170E+00	8.086E-05	1.925E-04	1.763E-04	5.708E+00	9.200E-01
1806.00	1.914E+01	1.321E+02	1.302E+02	5.687E+00	6.730E-01	9.521E-01	8.086E-05	1.925E-04	1.763E-04	5.667E+00	5.819E-01
1866.00	2.973E+01	5.145E+01	5.242E+01	1.210E+00	5.675E-01	2.694E-01	8.152E-05	1.925E-04	1.760E-04	1.208E+00	3.349E-01
1926.00	2.694E+01	3.570E+01	1.763E+01	6.905E-01	7.789E-01	2.589E-01	8.218E-05	1.925E-04	1.757E-04	6.893E-01	1.154E-01
1986.00	3.313E+01	4.558E+01	1.115E+01	5.075E-01	5.740E-01	2.003E-01	8.284E-05	1.925E-04	1.754E-04	5.077E-01	3.695E-01
2046.00	1.708E+01	3.261E+01	1.541E+01	4.891E-01	4.409E-01	3.195E-01	8.350E-05	1.924E-04	1.749E-04	6.210E-01	2.892E-01
2092.00	2.814E+01	5.736E+01	2.263E+01	6.225E-01	5.087E-01	2.852E-01	8.400E-05	1.924E-04	1.749E-04	6.210E-01	2.892E-01
2106.00	3.181E+01	6.052E+01	2.035E+01	6.131E-01	5.076E-01	3.218E-01	8.415E-05	1.924E-04	1.748E-04	6.117E-01	3.027E-01
2166.00	2.240E+01	6.475E+01	3.902E+01	3.031E-01	4.140E-01	4.636E-01	8.480E-05	1.924E-04	1.745E-04	5.017E-01	4.373E-01
2226.00	7.209E+00	3.846E+01	5.406E+01	5.744E-02	2.106E-01	4.357E-01	8.546E-05	1.924E-04	1.742E-04	5.755E-02	3.912E-01
2286.00	4.438E+00	1.212E+01	6.397E+01	2.541E-01	3.096E-01	5.165E-01	8.611E-05	1.924E-04	1.739E-04	2.542E-01	5.203E-01
2292.00	5.382E+00	1.069E+01	6.658E+01	2.773E-01	3.319E-01	5.351E-01	8.617E-05	1.924E-04	1.739E-04	2.773E-01	5.322E-01
2292.00	5.059E+00	9.180E+00	6.085E+01	2.730E-01	3.255E-01	5.027E-01	8.617E-05	1.924E-04	1.739E-04	2.731E-01	5.079E-01
2346.00	9.167E+00	1.006E+01	2.052E+01	3.243E-01	2.775E-01	3.164E-01	8.676E-05	1.924E-04	1.736E-04	3.242E-01	2.582E-01
2406.00	8.245E+00	8.611E+00	8.867E+00	2.590E-01	1.899E-01	2.491E-01	8.741E-05	1.923E-04	1.733E-04	2.590E-01	1.714E-01
2430.00	8.351E+00	8.478E+00	7.307E+00	2.530E-01	1.863E-01	2.364E-01	8.767E-05	1.923E-04	1.732E-04	2.530E-01	1.653E-01
2430.00	7.277E+00	8.065E+00	6.677E+00	2.364E-01	1.810E-01	2.301E-01	8.767E-05	1.923E-04	1.732E-04	2.364E-01	1.608E-01
2449.50	1.399E+00	4.940E+00	1.159E+00	1.472E-01	1.449E-01	1.643E-01	8.788E-05	1.923E-04	1.731E-04	1.472E-01	1.300E-01
2449.50	7.336E-01	4.509E+00	1.092E+00	1.326E-01	1.390E-01	1.638E-01	8.788E-05	1.923E-04	1.731E-04	1.326E-01	1.264E-01
2466.00	2.971E-01	3.508E+00	9.924E-01	8.475E-02	1.415E-01	1.213E-01	8.805E-05	1.923E-04	1.730E-04	8.477E-02	1.388E-01
2482.00	1.667E-01	4.056E+00	5.039E-01	3.575E-02	1.635E-01	6.233E-02	8.822E-05	1.923E-04	1.729E-04	3.580E-02	1.631E-01

TIME U V W U V W U V W GAMMA ERROR PSI ERROR

1686.00	3.377E+03	2.368E+03	1.552E+03	6.503E+00	1.148E+00	1.359E+00	7.584E-05	1.927E-04	1.783E-04	1.214E-03	2.333E-04
1686.00	3.009E+03	6.453E+02	2.995E+02	6.642E+00	1.136E+00	1.404E+00	7.584E-05	1.927E-04	1.783E-04	1.357E-03	2.892E-04
1746.00	7.728E+02	1.749E+02	4.731E+01	6.428E+00	1.812E+00	1.107E+00	7.735E-05	1.879E-04	1.827E-04	1.732E-03	2.942E-04
1806.00	4.131E+02	1.377E+02	1.628E+02	5.712E+00	1.270E+00	7.439E-01	7.921E-05	1.833E-04	1.866E-04	2.136E-03	2.744E-04
1806.00	1.904E+01	6.017E+01	1.755E+02	5.673E+00	1.001E+00	7.180E-01	7.921E-05	1.833E-04	1.866E-04	2.117E-03	2.653E-04
1866.00	2.965E+01	2.384E+01	6.951E+01	1.207E+00	4.691E-01	4.272E-01	8.049E-05	1.923E-04	1.767E-04	6.528E-04	2.234E-04
1926.00	2.685E+01	1.141E+01	3.808E+01	6.887E-01	2.346E-01	7.881E-01	8.150E-05	1.812E-04	1.876E-04	5.367E-04	6.023E-04
1986.00	3.304E+01	3.063E+01	3.562E+01	5.064E-01	4.113E-01	4.500E-01	8.256E-05	1.878E-04	1.809E-04	5.568E-04	4.668E-04
2046.00	1.707E+01	2.168E+01	2.883E+01	4.890E-01	3.750E-01	3.950E-01	8.350E-05	1.782E-04	1.898E-04	6.399E-04	4.853E-04
2092.00	2.809E+01	3.767E+01	4.886E+01	6.224E-01	2.336E-01	5.344E-01	8.431E-05	1.753E-04	1.919E-04	6.709E-04	6.115E-04
2106.00	3.174E+01	4.195E+01	4.819E+01	6.130E-01	2.534E-01	5.451E-01	8.456E-05	1.783E-04	1.899E-04	6.688E-04	6.277E-04
2166.00	2.233E+01	6.480E+01	3.831E+01	3.031E-01	4.149E-01	4.631E-01	8.545E-05	1.924E-04	1.743E-04	3.313E-04	5.799E-04
2226.00	7.159E+00	6.589E+01	7.747E+00	5.745E-02	3.969E-01	2.768E-01	8.604E-05	1.838E-04	1.830E-04	1.191E-04	3.677E-04
2286.00	4.448E+00	3.991E+01	5.148E+01	2.536E-01	5.551E-01	2.384E-01	8.637E-05	1.782E-04	1.883E-04	4.468E-04	3.913E-04
2292.00	5.392E+00	3.624E+01	5.486E+01	2.768E-01	5.625E-01	2.836E-01	8.641E-05	1.806E-04	1.860E-04	4.788E-04	4.173E-04
2292.00	5.067E+00	3.379E+01	5.144E+01	2.726E-01	5.373E-01	2.649E-01	8.641E-05	1.806E-04	1.860E-04	4.680E-04	3.896E-04
2346.00	9.160E+00	1.016E+01	2.048E+01	3.241E-01	2.790E-01	3.152E-01	8.688E-05	1.923E-04	1.737E-04	5.168E-04	4.995E-04
2406.00	8.241E+00	8.626E+00	8.857E+00	2.589E-01	1.904E-01	2.489E-01	8.748E-05	1.923E-04	1.734E-04	5.090E-04	5.131E-04
2430.00	8.348E+00	8.486E+00	7.302E+00	2.529E-01	1.866E-01	2.363E-01	8.770E-05	1.923E-04	1.732E-04	5.820E-04	5.252E-04
2430.00	7.274E+00	8.072E+00	6.672E+00	2.363E-01	1.812E-01	2.300E-01	8.770E-05	1.923E-04	1.732E-04	5.859E-04	5.111E-04
2449.50	1.399E+00	4.941E+00	1.157E+00	1.471E-01	1.450E-01	1.643E-01	8.790E-05	1.923E-04	1.731E-04	3.663E-04	3.817E-04
2449.50	7.332E-01	4.510E+00	1.090E+00	1.326E-01	1.391E-01	1.638E-01	8.790E-05	1.923E-04	1.731E-04	3.300E-04	3.806E-04
2466.00	2.966E-01	3.509E+00	9.908E-01	8.472E-02	1.416E-01	1.212E-01	8.806E-05	1.923E-04	1.730E-04	2.460E-04	3.325E-04
2482.00	1.667E-01	4.057E+00	5.028E-01	3.575E-02	1.635E-01	6.230E-02	8.822E-05	1.923E-04	1.730E-04	1.247E-04	2.058E-04

PRINTED

C-40

051111

R5960

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	5.330E+00	3.235E-01	1.172E+00	1.084E-02	6.917E-03	7.345E-03	0.000E+00	0.000E+00	0.000E+00	1.079E-02	9.860E-03
1806.00	1.229E+01	1.507E+00	3.391E+00	1.975E-02	1.825E-02	1.697E-02	0.000E+00	0.000E+00	0.000E+00	1.972E-02	2.219E-02
1806.00	5.787E-01	1.505E+00	1.655E+00	1.967E-02	1.138E-02	7.763E-03	0.000E+00	0.000E+00	0.000E+00	1.959E-02	1.002E-02
1866.00	1.243E+00	6.956E-01	1.460E+00	4.355E-02	1.779E-02	1.708E-02	0.000E+00	0.000E+00	0.000E+00	4.334E-02	1.579E-02
1926.00	1.674E+00	2.225E+00	4.748E-01	3.327E-02	3.171E-02	9.273E-03	0.000E+00	0.000E+00	0.000E+00	3.318E-02	9.634E-03
1986.00	2.079E+00	2.427E+00	5.133E-01	2.819E-02	2.555E-02	1.774E-02	0.000E+00	0.000E+00	0.000E+00	2.820E-02	2.459E-02
2046.00	9.805E-01	1.791E+00	1.237E+00	1.804E-02	1.870E-02	2.302E-02	0.000E+00	0.000E+00	0.000E+00	1.809E-02	2.127E-02
2092.00	1.036E+00	3.237E+00	3.542E-01	1.583E-02	2.231E-02	1.335E-02	0.000E+00	0.000E+00	0.000E+00	1.578E-02	9.355E-03
2106.00	1.071E+00	3.333E+00	2.315E-01	1.441E-02	2.259E-02	1.534E-02	0.000E+00	0.000E+00	0.000E+00	1.436E-02	1.182E-02
2166.00	5.696E-01	3.194E+00	2.027E+00	5.553E-03	1.954E-02	2.588E-02	0.000E+00	0.000E+00	0.000E+00	5.520E-03	1.953E-02
2226.00	1.814E-01	2.141E+00	3.286E+00	3.817E-03	1.313E-02	2.972E-02	0.000E+00	0.000E+00	0.000E+00	3.805E-03	2.678E-02
2286.00	1.288E-01	8.837E-01	4.132E+00	4.231E-03	1.275E-02	2.811E-02	0.000E+00	0.000E+00	0.000E+00	4.203E-03	2.702E-02
2292.00	1.377E-01	8.051E-01	4.251E+00	4.455E-03	1.313E-02	2.806E-02	0.000E+00	0.000E+00	0.000E+00	4.432E-03	2.583E-02
2292.00	1.272E-01	6.946E-01	3.873E+00	4.320E-03	1.719E-02	2.579E-02	0.000E+00	0.000E+00	0.000E+00	4.299E-03	2.419E-02
2346.00	1.862E-01	3.319E-01	1.008E+00	5.056E-03	8.293E-03	7.419E-03	0.000E+00	0.000E+00	0.000E+00	5.051E-03	7.568E-03
2406.00	1.405E-01	3.207E-01	2.491E-01	4.120E-03	7.608E-03	4.743E-03	0.000E+00	0.000E+00	0.000E+00	4.118E-03	7.127E-03
2430.00	1.399E-01	3.336E-01	2.013E-01	3.918E-03	7.633E-03	4.483E-03	0.000E+00	0.000E+00	0.000E+00	3.919E-03	7.229E-03
2430.00	1.222E-01	3.179E-01	1.855E-01	3.642E-03	7.454E-03	4.286E-03	0.000E+00	0.000E+00	0.000E+00	3.642E-03	7.071E-03
2449.50	2.164E-02	1.893E-01	2.177E-02	2.105E-03	5.993E-03	2.604E-03	0.000E+00	0.000E+00	0.000E+00	2.105E-03	5.799E-03
2449.50	1.131E-02	1.761E-01	1.993E-02	1.870E-03	5.844E-03	2.528E-03	0.000E+00	0.000E+00	0.000E+00	1.870E-03	5.689E-03
2466.00	4.959E-03	1.071E-01	1.767E-02	1.258E-03	5.202E-03	2.420E-03	0.000E+00	0.000E+00	0.000E+00	1.258E-03	5.185E-03
2482.00	2.677E-03	9.969E-02	1.237E-02	5.425E-04	5.072E-03	1.737E-03	0.000E+00	0.000E+00	0.000E+00	5.432E-04	5.069E-03

TIME	U	V	W	I	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	5.300E+00	1.242E+00	5.125E-01	1.878E-02	1.805E-02	1.486E-03	0.000E+00	0.000E+00	0.000E+00	2.894E-06	3.759E-07
1806.00	1.223E+01	3.898E+00	2.144E-01	1.958E-02	2.294E-02	1.007E-02	0.000E+00	0.000E+00	0.000E+00	7.619E-06	3.652E-06
1806.00	5.754E-01	8.478E-01	2.071E+00	1.956E-02	1.098E-02	8.569E-03	0.000E+00	0.000E+00	0.000E+00	7.432E-06	3.131E-06
1866.00	1.236E+00	1.771E-01	1.612E+00	4.333E-02	2.146E-02	1.292E-02	0.000E+00	0.000E+00	0.000E+00	2.384E-05	6.819E-06
1926.00	1.668E+00	5.651E-01	2.208E+00	3.315E-02	1.622E-02	2.893E-02	0.000E+00	0.000E+00	0.000E+00	2.672E-05	2.212E-05
1986.00	2.073E+00	1.985E+00	1.496E+00	2.811E-02	2.708E-02	1.543E-02	0.000E+00	0.000E+00	0.000E+00	3.142E-05	1.600E-05
2046.00	9.796E-01	1.614E+00	1.462E+00	1.803E-02	2.518E-02	1.574E-02	0.000E+00	0.000E+00	0.000E+00	2.716E-05	1.933E-05
2092.00	1.033E+00	1.739E+00	2.757E+00	1.584E-02	1.090E-02	2.359E-02	0.000E+00	0.000E+00	0.000E+00	1.881E-05	2.700E-05
2106.00	1.068E+00	2.105E+00	2.596E+00	1.443E-02	1.265E-02	2.419E-02	0.000E+00	0.000E+00	0.000E+00	1.709E-05	2.784E-05
2166.00	5.666E-01	3.196E+00	2.028E+00	5.613E-03	1.254E-02	2.586E-02	0.000E+00	0.000E+00	0.000E+00	6.954E-06	3.239E-05
2226.00	1.791E-01	3.902E+00	3.980E-01	3.897E-03	2.680E-02	1.835E-02	0.000E+00	0.000E+00	0.000E+00	5.476E-06	2.450E-05
2286.00	1.270E-01	2.481E+00	3.421E+00	4.280E-03	2.675E-02	1.540E-02	0.000E+00	0.000E+00	0.000E+00	2.739E-06	2.249E-05
2292.00	1.352E-01	2.176E+00	3.740E+00	4.499E-03	2.552E-02	1.756E-02	0.000E+00	0.000E+00	0.000E+00	2.907E-06	2.584E-05
2292.00	1.258E-01	2.020E+00	3.377E+00	4.362E-03	2.387E-02	1.608E-02	0.000E+00	0.000E+00	0.000E+00	2.844E-06	2.367E-05
2346.00	1.441E-01	3.335E-01	1.008E+00	5.050E-03	8.294E-03	7.423E-03	0.000E+00	0.000E+00	0.000E+00	8.612E-06	1.178E-05
2406.00	1.402E-01	3.205E-01	2.898E-01	4.115E-03	7.604E-03	4.753E-03	0.000E+00	0.000E+00	0.000E+00	9.891E-06	9.800E-06
2430.00	1.398E-01	3.336E-01	2.015E-01	3.916E-03	7.631E-03	4.488E-03	0.000E+00	0.000E+00	0.000E+00	1.006E-05	9.978E-06
2430.00	1.220E-01	3.179E-01	1.857E-01	3.639E-03	7.453E-03	4.291E-03	0.000E+00	0.000E+00	0.000E+00	9.447E-06	9.538E-06
2449.50	2.160E-02	1.883E-01	2.184E-02	2.104E-03	5.993E-03	2.606E-03	0.000E+00	0.000E+00	0.000E+00	5.915E-06	6.055E-06
2449.50	1.132E-02	1.761E-01	1.999E-02	1.869E-03	5.844E-03	2.530E-03	0.000E+00	0.000E+00	0.000E+00	5.247E-06	5.878E-06
2466.00	4.943E-03	1.071E-01	1.769E-02	1.258E-03	5.202E-03	2.421E-03	0.000E+00	0.000E+00	0.000E+00	3.631E-06	6.630E-06
2482.00	2.676E-03	9.969E-02	1.240E-02	5.424E-04	5.072E-03	1.738E-03	0.000E+00	0.000E+00	0.000E+00	1.879E-06	5.739E-06

UNCLASSIFIED

C-41

UNCLASSIFIED



SYSTEM B GROUP 6 GRAVITATIONAL ANOMALY

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATF ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.144E+01	1.532F+00	4.831E+00	6.977F-02	3.925F-02	3.622F-02	0.000E+00	0.000E+00	0.000F+00	6.948F-02	3.697F-02
1806.00	4.494E+01	5.842E+00	1.310E+01	1.204F-01	7.421F-02	7.412F-02	0.000F+00	0.000E+00	0.000E+00	1.200F-01	8.164E-02
1806.00	2.120F+00	6.607E+00	7.050E+00	1.198E-01	5.451F-02	5.401F-02	0.000E+00	0.000F+00	0.000F+00	1.194E-01	4.497E-02
1866.00	4.723E+00	4.272F+00	6.649E+00	1.619F-01	6.850F-02	9.799F-02	0.000F+00	0.000E+00	0.000E+00	1.631F-01	5.735E-02
1926.00	6.461E+00	9.693F+00	2.862E+00	1.353E-01	1.176E-01	7.262F-02	0.000E+00	0.000F+00	0.000E+00	1.350F-01	6.888F-02
1986.00	8.374E+00	9.090E+00	6.871E+00	1.287F-01	9.410F-02	1.185F-01	0.000F+00	0.000E+00	0.000F+00	1.287E-01	1.070E-01
2046.00	4.236F+00	7.208E+00	8.372E+00	1.362E-01	9.555F-02	1.311F-01	0.000F+00	0.000E+00	0.000F+00	1.351E-01	1.277E-01
2092.00	7.344E+00	1.468E+01	7.585F+00	1.691E-01	1.700E-01	1.016E-01	0.000E+00	0.000F+00	0.000F+00	1.688E-01	9.757E-02
2106.00	8.436E+00	1.560E+01	7.306E+00	1.702E-01	1.230E-01	1.059E-01	0.000E+00	0.000F+00	0.000E+00	1.700F-01	9.637F-02
2166.00	6.787F+00	1.588E+01	1.102E+01	1.252F-01	1.109F-01	1.473F-01	0.000E+00	0.000F+00	0.000E+00	1.250E-01	1.154E-01
2226.00	3.928F+00	1.226E+01	1.949F+01	1.066E-01	8.540E-02	1.771E-01	0.000E+00	0.000F+00	0.000E+00	1.063E-01	1.618E-01
2286.00	3.216F+00	5.308E+00	2.503E+01	1.017F-01	9.080E-02	1.814E-01	0.000E+00	0.000F+00	0.000F+00	1.016E-01	1.666F-01
2292.00	3.399E+00	4.864F+00	2.576E+01	1.038F-01	9.335E-02	1.828E-01	0.000E+00	0.000F+00	0.000E+00	1.037E-01	1.598E-01
2292.00	3.184E+00	4.201E+00	2.348E+01	1.010E-01	9.141E-02	1.700E-01	0.000E+00	0.000F+00	0.000E+00	1.010E-01	1.500E-01
2346.00	2.988E+00	2.581E+00	6.474E+00	9.454F-02	7.221E-02	1.006F-01	0.000F+00	0.000E+00	0.000F+00	9.451E-02	6.927E-02
2406.00	2.714E+00	2.755F+00	3.127E+00	8.667E-02	6.802E-02	9.504F-02	0.000F+00	0.000E+00	0.000E+00	8.666E-02	6.458E-02
2430.00	2.819E+00	2.891E+00	2.736F+00	8.765F-02	6.754F-02	8.950F-02	0.000F+00	0.000E+00	0.000E+00	8.765E-02	6.488E-02
2430.00	2.456E+00	2.744F+00	2.514E+00	8.202E-02	6.609F-02	8.707E-02	0.000E+00	0.000F+00	0.000E+00	8.202E-02	6.332E-02
2449.50	4.919E-01	1.610F+00	4.277E-01	5.380F-02	5.340E-02	6.011E-02	0.000E+00	0.000F+00	0.000E+00	5.380E-02	5.167E-02
2449.50	2.691F-01	1.504F+00	3.990E-01	4.897E-02	5.204E-02	5.950F-02	0.000E+00	0.000F+00	0.000E+00	4.896E-02	5.088E-02
2466.00	1.106F-01	1.030F+00	3.403E-01	2.930F-02	4.585E-02	4.155F-02	0.000E+00	0.000F+00	0.000E+00	2.931E-02	4.527E-02
2482.00	5.899F-02	1.183F+00	1.770E-01	1.214F-02	4.904E-02	2.236E-02	0.000E+00	0.000F+00	0.000E+00	1.214E-02	4.894F-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.132E+01	4.983F+00	2.470E+00	6.963F-02	3.751F-02	3.828E-02	0.000F+00	0.000E+00	0.000E+00	1.840F-05	1.012E-05
1806.00	4.472E+01	1.408E+01	3.944E+00	1.203F-01	8.237F-02	6.521E-02	0.000F+00	0.000E+00	0.000E+00	4.458E-05	2.409F-05
1806.00	2.107E+00	3.521F+00	9.001E+00	1.195F-01	4.734F-02	6.270E-02	0.000E+00	0.000F+00	0.000E+00	4.428E-05	2.324F-05
1866.00	4.697E+00	1.557E+00	7.764E+00	1.631F-01	6.117F-02	9.358F-02	0.000E+00	0.000E+00	0.000E+00	8.898E-05	4.938E-05
1926.00	6.437E+00	2.405E+00	9.832E+00	1.349F-01	8.594E-02	1.088F-01	0.000E+00	0.000E+00	0.000E+00	1.082E-04	8.319F-05
1986.00	8.352F+00	8.286E+00	7.846E+00	1.285F-01	1.171F-01	9.620F-02	0.000E+00	0.000E+00	0.000E+00	1.401E-04	9.989F-05
2046.00	4.233E+00	9.550E+00	5.540E+00	1.392E-01	1.350E-01	8.996F-02	0.000F+00	0.000E+00	0.000E+00	1.714E-04	1.105E-04
2092.00	7.330F+00	8.404F+00	1.423E+01	1.691F-01	9.082F-02	1.284F-01	0.000E+00	0.000F+00	0.000E+00	1.854E-04	1.468F-04
2106.00	8.420E+00	9.280F+00	1.452E+01	1.702F-01	9.242F-02	1.335E-01	0.000E+00	0.000F+00	0.000E+00	1.905E-04	1.537E-04
2166.00	6.774F+00	1.589F+01	1.101E+01	1.252F-01	1.109E-01	1.473F-01	0.000E+00	0.000F+00	0.000E+00	1.491F-04	1.844E-04
2226.00	3.918F+00	2.290F+01	2.481E+00	1.046F-01	1.599F-01	1.185F-01	0.000E+00	0.000F+00	0.000E+00	1.362E-04	1.529F-04
2286.00	3.211E+00	1.510E+01	2.066E+01	1.017E-01	1.670F-01	1.151E-01	0.000E+00	0.000F+00	0.000E+00	1.459E-04	1.477E-04
2292.00	3.394E+00	1.327F+01	2.261F+01	1.038F-01	1.600F-01	1.286F-01	0.000E+00	0.000F+00	0.000E+00	1.500E-04	1.898E-04
2292.00	3.180E+00	1.232E+01	2.042E+01	1.010F-01	1.503F-01	1.211E-01	0.000E+00	0.000F+00	0.000E+00	1.461E-04	1.780E-04
2346.00	2.967E+00	2.589E+00	6.472E+00	9.450F-02	7.209F-02	1.007E-01	0.000E+00	0.000E+00	0.000E+00	1.498E-04	1.595E-04
2406.00	2.713E+00	2.753E+00	3.130E+00	8.664E-02	6.798F-02	9.907E-02	0.000E+00	0.000F+00	0.000E+00	1.801E-04	1.960E-04
2430.00	2.818F+00	2.880E+00	2.738E+00	8.763F-02	6.753F-02	8.952E-02	0.000E+00	0.000F+00	0.000E+00	1.954E-04	1.952E-04
2430.00	2.456E+00	2.743F+00	2.516E+00	8.201E-02	6.608E-02	8.709E-02	0.000E+00	0.000F+00	0.000E+00	1.832E-04	1.935E-04
2449.50	4.917E-01	1.610E+00	4.279E-01	5.380F-02	5.340E-02	6.012F-02	0.000E+00	0.000F+00	0.000E+00	1.265E-04	1.397F-04
2449.50	2.692E-01	1.504F+00	3.992E-01	4.896F-02	5.204E-02	5.951E-02	0.000E+00	0.000F+00	0.000E+00	1.144E-04	1.385E-04
2466.00	1.105F-01	1.030E+00	3.402E-01	2.930E-02	4.586F-02	4.155E-02	0.000E+00	0.000F+00	0.000E+00	8.274E-05	1.189E-04
2482.00	5.898E-02	1.183F+00	1.769E-01	1.214F-02	4.904E-02	2.237E-02	0.000E+00	0.000E+00	0.000E+00	4.153F-05	7.387E-05

1000000000

C-42

0000000000

ORIGINAL PAGE'S  
OF POOR QUALITY

SYSTEM B GRUCP 7

(GYRO BIAS DRIFT - X,Y,Z)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	U	C	R	D	C		
1686.00	2.965E+03	8.749E+03	8.602E+03	1.312E+C1	7.397E+0J	5.907E+0J	6.298E-J4	3.305E-J4	5.736E-04	1.100E+01	4.874E+00
1686.00	2.255E+03	8.965E+02	1.050E+03	1.357E+01	7.649E+00	6.337E+0J	6.293E-04	3.305E-04	5.736E-04	1.357E+01	4.921E+00
1745.00	1.709E+03	4.541E+02	2.764E+02	1.195E+01	7.512E+00	6.727E+0J	6.279E-04	3.336E-04	5.785E-04	1.190E+01	2.298E+00
1806.00	2.626E+03	5.258E+02	5.850E+02	9.330E+00	7.145E+00	4.258E+0J	6.261E-04	3.367E-04	5.833E-04	9.346E+00	3.006E+00
1906.00	1.263E+02	2.032E+02	2.440E+02	9.286E+00	5.708E+00	5.077E+0J	6.261E-04	3.367E-04	5.833E-04	9.269E+00	1.915E+00
1866.00	1.200E+02	1.176E+02	1.476E+02	4.085E+00	3.654E+00	2.033E+0J	6.242E-04	3.398E-04	5.682E-04	4.069E+00	2.493E+00
1926.00	1.598E+02	3.053E+02	1.226E+02	3.403E+00	5.190E+00	1.365E+0J	6.223E-04	3.430E-04	5.931E-04	3.350E+00	9.578E-01
1986.00	2.399E+02	3.090E+02	6.320E+01	3.250E+00	3.699E+00	1.518E+00	6.204E-04	3.461E-04	5.976E-04	3.252E+00	3.137E+00
2046.00	1.191E+02	2.607E+02	1.412E+02	2.140E+00	3.447E+00	2.51E+00	6.134E-04	3.493E-04	6.026E-04	2.146E+00	2.716E+00
2092.00	1.272E+02	4.619E+02	2.659E+01	2.000E+00	4.205E+00	1.884E+00	6.170E-04	3.517E-04	6.063E-04	1.970E+00	1.533E+00
2105.00	1.315E+02	5.100E+02	3.094E+01	1.865E+00	4.234E+00	2.217E+0J	6.165E-04	3.524E-04	6.074E-04	1.852E+00	2.010E+00
2106.00	7.557E+01	5.036E+02	3.038E+02	8.422E-01	3.523E+00	3.513E+0J	5.145E-04	3.556E-04	6.122E-04	8.223E-01	3.619E+00
2226.00	1.896E+01	2.774E+02	5.700E+02	2.514E-01	2.010E+00	3.123E+0J	5.125E-04	3.588E-04	6.149E-04	2.601E-01	3.185E+00
2286.00	1.645E+01	9.580E+01	3.908E+02	8.607E-01	1.794E+00	2.750E+0J	6.107E-04	3.619E-04	6.217E-04	8.671E-01	2.860E+00
2292.00	1.932E+01	8.972E+01	4.027E+02	8.619E-01	1.693E+00	2.780E+0J	6.105E-04	3.622E-04	6.222E-04	8.602E-01	2.862E+00
2292.00	1.805E+01	7.907E+01	3.669E+02	8.674E-01	1.850E+00	2.568E+0J	6.135E-04	3.622E-04	6.222E-04	8.735E-01	2.726E+00
2346.00	1.911E+01	6.004E+01	1.037E+02	5.130E-01	1.790E+00	1.021E+0J	5.137E-04	3.651E-04	6.264E-04	5.140E-01	1.861E+00
2406.00	4.887E+00	6.674E+01	3.859E+01	1.239E-02	1.617E+00	8.029E-01	5.063E-04	3.683E-04	6.311E-04	1.268E-02	1.535E+00
2430.00	7.542E-01	7.003E+01	2.932E+01	7.285E-02	1.643E+00	7.870E-01	6.360E-04	3.696E-04	6.330E-04	7.274E-02	1.596E+00
2430.00	5.465E-01	4.662E+01	2.703E+01	7.618E-02	1.603E+00	7.582E-01	6.360E-04	3.696E-04	6.330E-04	7.603E-02	1.556E+00
2449.50	6.948E-01	4.056E+01	3.368E+00	8.578E-02	1.303E+00	4.922E-01	6.353E-04	3.706E-04	6.346E-04	8.987E-02	1.262E+00
2449.50	7.092E-01	3.862E+01	3.588E+00	5.971E-02	1.274E+00	4.839E-01	6.353E-04	3.706E-04	6.346E-04	5.977E-02	1.239E+00
2465.00	2.762E-01	2.308E+01	3.076E+00	6.011E-02	1.104E+00	4.059E-01	6.348E-04	3.715E-04	6.323E-04	6.359E-02	1.105E+00
2462.00	1.004E-01	2.135E+01	1.967E+00	4.212E-02	1.105E+00	2.767E-01	6.303E-04	3.723E-04	6.371E-04	4.241E-02	1.105E+00

C-48

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	3.267E+03	1.145E+04	4.190E+03	1.311E+01	4.481E+0J	8.398E+0J	6.390E-04	3.041E-04	5.774E-04	2.176E-03	1.504E-03
1686.00	2.241E+03	4.344E+02	1.335E+03	1.356E+C1	4.505E+00	8.073E+0J	6.393E-04	3.041E-04	5.774E-04	2.687E-03	1.793E-03
1746.00	1.700E+03	4.041E+02	3.911E+02	1.191E+01	2.575E+00	9.793E+0J	6.353E-04	4.005E-04	5.249E-04	3.153E-03	2.592E-03
1806.00	2.612E+03	7.752E+02	2.809E+02	9.392E+00	3.245E+00	7.543E+0J	6.305E-04	4.801E-04	4.665E-04	3.486E-03	2.823E-03
1866.00	1.254E+02	1.369E+02	2.845E+02	9.279E+00	2.014E+00	7.163E+0J	6.305E-04	4.801E-04	4.665E-04	3.490E-03	2.861E-03
1886.00	1.194E+02	6.392E+01	1.781E+02	4.009E+00	2.928E+00	3.367E+0J	6.290E-04	3.157E-04	5.986E-04	2.267E-03	1.775E-03
1926.00	1.592E+02	5.457E+01	3.247E+02	3.386E+00	1.583E+00	5.133E+0J	6.242E-04	5.114E-04	4.531E-04	2.710E-03	3.929E-03
1986.00	2.393E+02	2.357E+02	2.116E+02	3.241E+00	3.471E+00	2.567E+0J	6.211E-04	4.081E-04	4.561E-04	3.653E-03	2.663E-03
2046.00	1.139E+02	1.969E+02	2.217E+02	2.138E+00	3.170E+00	2.399E+0J	6.197E-04	5.550E-04	4.201E-04	3.255E-03	3.560E-03
2092.00	1.288E+02	2.456E+02	4.157E+02	2.000E+00	1.380E+00	4.394E+0J	6.159E-04	6.194E-04	3.301E-04	2.107E-03	5.023E-03
2106.00	1.311E+02	3.124E+02	4.045E+02	1.865E+00	1.815E+00	4.421E+0J	6.151E-04	6.194E-04	3.301E-04	2.63E-03	5.091E-03
2166.00	7.493E+01	5.038E+02	3.035E+02	6.412E-01	3.526E+00	3.515E+0J	6.122E-04	3.567E-04	6.140E-04	2.414E-04	4.402E-03
2226.00	1.837E+01	4.562E+02	6.205E+01	2.610E-01	3.242E+00	1.813E+0J	6.102E-04	4.748E-04	5.356E-04	8.031E-04	2.429E-03
2266.00	1.665E+01	2.307E+02	3.253E+02	8.692E-01	2.819E+00	1.679E+0J	6.074E-04	4.025E-04	4.025E-04	1.041E-03	2.448E-03
2292.00	1.354E+01	2.109E+02	3.544E+02	8.904E-01	2.810E+00	1.944E+0J	6.033E-04	5.690E-04	4.427E-04	1.018E-03	2.713E-03
2292.00	1.826E+01	1.904E+02	3.195E+02	8.757E-01	2.670E+00	1.095E+0J	6.033E-04	5.690E-04	4.427E-04	9.850E-04	2.494E-03
2346.00	1.932E+01	6.616E+01	1.038E+02	5.185E-01	1.795E+00	1.023E+0J	6.016E-04	3.677E-04	6.255E-04	2.549E-04	1.617E-03
2406.00	4.939E+00	6.670E+01	3.704E+01	1.323E-02	1.616E+00	8.044E-01	6.034E-04	3.694E-04	6.308E-04	6.411E-04	1.658E-03
2430.00	3.124E-01	7.001E+01	2.936E+01	7.124E-02	1.642E+00	7.880E-01	6.033E-04	3.702E-04	6.328E-04	8.555E-04	1.751E-03
2430.00	6.114E-01	6.681E+01	2.707E+01	7.463E-02	1.602E+00	7.591E-01	6.033E-04	3.702E-04	6.328E-04	8.555E-04	1.687E-03
2449.50	6.712E-01	4.096E+00	3.865E+00	8.902E-02	1.303E+00	4.925E-01	6.052E-04	3.710E-04	6.344E-04	7.684E-04	1.144E-03
2449.50	7.315E-01	3.862E+01	3.601E+00	5.898E-02	1.274E+00	4.842E-01	6.052E-04	3.710E-04	6.344E-04	6.882E-04	1.125E-03
2466.00	2.822E-01	2.308E+01	3.080E+00	5.982E-02	1.104E+00	4.061E-01	6.047E-04	3.718E-04	6.357E-04	3.198E-04	1.114E-03
2462.00	1.001E-01	2.138E+01	1.972E+00	4.210E-02	1.105E+00	2.791E-01	6.043E-04	3.725E-04	6.370E-04	1.930E-04	9.216E-04



TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	4.096E+03	2.780E+02	1.572E+03	3.643E+00	6.877E-01	1.106E+00	5.526E-05	1.504E-05	2.749E-05	3.411E+00	8.908E-01
1686.00	3.945E+03	6.486E+02	4.705E+02	3.731E+00	6.446E-01	1.130E+00	5.526E-05	1.504E-05	2.749E-05	3.403E+00	8.663E-01
1746.00	1.793E+03	2.736E+02	2.515E+02	3.691E+00	1.352E+00	1.631E+00	5.827E-05	1.688E-05	2.948E-05	3.689E+00	1.918E+00
1806.00	1.091E+03	3.122E+02	1.438E+02	3.266E+00	9.180E-01	1.183E+00	6.237E-05	1.764E-05	3.152E-05	3.261E+00	1.270E+00
1806.00	4.938E+01	6.782E+01	5.576E+01	3.237E+00	3.203E-01	6.290E-01	6.237E-05	1.764E-05	3.152E-05	3.226E+00	3.699E-01
1866.00	1.505E+01	2.045E+01	1.913E+01	6.672E-01	1.078E-01	1.636E-01	6.677E-05	1.599E-05	3.259E-05	6.663E-01	1.061E-01
1926.00	1.103E+01	1.458E+01	1.254E+01	2.528E-01	2.510E-01	1.435E-01	7.001E-05	1.845E-05	3.523E-05	2.524E-01	8.565E-02
1986.00	1.249E+01	1.411E+01	4.846E+00	1.745E-01	2.141E-01	9.594E-02	7.468E-05	1.919E-05	3.735E-05	1.745E-01	1.679E-01
2046.00	6.349E+00	1.381E+01	8.030E+00	1.181E-01	2.101E-01	1.464E-01	7.826E-05	2.107E-05	3.975E-05	1.184E-01	1.558E-01
2092.00	6.978E+00	2.731E+01	1.312E+00	1.144E-01	2.628E-01	1.226E-01	8.116E-05	2.268E-05	4.175E-05	1.138E-01	9.077E-02
2106.00	7.300E+00	2.942E+01	2.287E+00	1.081E-01	2.648E-01	1.458E-01	8.215E-05	2.292E-05	4.233E-05	1.074E-01	1.199E-01
2166.00	4.364E+00	3.083E+01	1.913E+01	5.173E-02	2.169E-01	2.283E-01	8.623E-05	2.354E-05	4.446E-05	5.055E-02	2.227E-01
2226.00	1.139E+00	1.771E+01	2.408E+01	1.888E-02	1.229E-01	2.003E-01	9.016E-05	2.392E-05	4.635E-05	1.956E-02	1.987E-01
2286.00	1.194E+00	6.126E+00	2.591E+01	6.072E-02	1.249E-01	2.031E-01	9.359E-05	2.527E-05	4.853E-05	6.116E-02	2.174E-01
2292.00	1.390E+00	5.823E+00	2.679E+01	6.224E-02	1.346E-01	2.083E-01	9.392E-05	2.554E-05	4.860E-05	6.162E-02	2.094E-01
2292.00	1.298E+00	5.136E+00	2.444E+01	6.118E-02	1.318E-01	1.959E-01	9.392E-05	2.554E-05	4.860E-05	6.162E-02	2.094E-01
2346.00	1.335E+00	5.147E+00	7.710E+00	3.593E-02	1.473E-01	1.120E-01	9.688E-05	2.791E-05	5.124E-05	3.624E-02	1.517E-01
2406.00	3.249E-01	5.304E+00	3.144E+00	1.358E-03	1.307E-01	7.767E-02	1.006E-04	2.975E-05	5.382E-05	1.390E-03	1.281E-01
2430.00	4.065E-02	5.601E+00	2.516E+00	5.790E-03	1.341E-01	7.252E-02	1.020E-04	3.049E-05	5.485E-05	5.778E-03	1.303E-01
2430.00	3.095E-02	5.344E+00	2.310E+00	5.972E-03	1.307E-01	7.016E-02	1.020E-04	3.049E-05	5.485E-05	5.958E-03	1.270E-01
2449.50	5.506E-02	3.357E+00	3.536E-01	6.738E-03	1.082E-01	4.722E-02	1.032E-04	3.108E-05	5.569E-05	6.744E-03	1.050E-01
2449.50	5.925E-02	3.168E+00	3.293E-01	4.298E-03	1.058E-01	4.663E-02	1.032E-04	3.108E-05	5.569E-05	4.302E-03	1.031E-01
2466.00	2.407E-02	1.934E+00	2.291E-01	4.679E-03	9.405E-02	3.716E-02	1.043E-04	3.166E-05	5.629E-05	4.888E-03	9.368E-02
2482.00	3.512E-03	1.825E+00	1.760E-01	3.629E-03	9.586E-02	2.478E-02	1.053E-04	3.217E-05	5.720E-05	3.654E-03	9.560E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	4.110E+03	8.442E+02	1.302E+03	3.602E+00	1.060E+00	9.336E-01	5.573E-05	1.521E-05	2.646E-05	6.921E-04	1.602E-04
1686.00	3.979E+03	7.700E+02	4.943E+02	3.690E+00	1.040E+00	9.577E-01	5.573E-05	1.521E-05	2.646E-05	7.704E-04	1.794E-04
1746.00	1.783E+03	4.115E+02	6.358E+01	3.653E+00	2.103E+00	5.879E-01	5.866E-05	2.145E-05	2.547E-05	9.993E-04	1.535E-04
1806.00	1.085E+03	2.734E+02	2.342E+02	3.251E+00	1.439E+00	5.171E-01	6.262E-05	2.667E-05	2.372E-05	1.237E-03	1.888E-04
1806.00	4.914E+01	2.386E+01	8.463E+01	3.229E+00	6.197E-01	4.105E-01	6.262E-05	2.667E-05	2.372E-05	1.207E-03	1.517E-04
1866.00	1.502E+01	1.011E+01	2.613E+01	6.658E-01	1.601E-01	1.957E-01	6.694E-05	1.663E-05	3.191E-05	3.531E-04	1.034E-04
1926.00	1.099E+01	7.879E+00	1.757E+01	2.519E-01	1.353E-01	2.567E-01	7.053E-05	3.112E-05	2.442E-05	2.088E-04	1.963E-04
1986.00	1.245E+01	1.210E+01	8.769E+00	1.739E-01	1.836E-01	1.466E-01	7.473E-05	2.661E-05	3.236E-05	1.959E-04	1.521E-04
2046.00	6.342E+00	1.088E+01	1.171E+01	1.180E-01	1.811E-01	1.811E-01	7.826E-05	3.702E-05	2.497E-05	1.811E-04	2.224E-04
2092.00	6.958E+00	1.350E+01	2.378E+01	1.104E-01	8.009E-02	2.775E-01	8.110E-05	4.103E-05	2.417E-05	1.220E-04	3.175E-04
2106.00	7.276E+00	1.762E+01	2.368E+01	1.082E-01	1.095E-01	2.817E-01	8.207E-05	3.885E-05	2.817E-05	1.098E-04	3.244E-04
2166.00	4.327E+00	3.085E+01	1.911E+01	5.171E-02	2.171E-01	2.281E-01	8.609E-05	2.363E-05	4.463E-05	1.611E-05	2.856E-04
2226.00	1.102E+00	2.964E+01	3.878E+00	1.945E-02	2.018E-01	1.204E-01	9.003E-05	3.733E-05	3.675E-05	5.423E-05	1.688E-04
2286.00	1.207E+00	1.586E+01	2.140E+01	6.133E-02	2.105E-01	1.115E-01	9.354E-05	4.362E-05	3.318E-05	6.411E-05	1.627E-04
2292.00	1.404E+00	1.025E+01	2.342E+01	6.287E-02	2.131E-01	1.285E-01	9.387E-05	4.123E-05	3.665E-05	6.291E-05	1.861E-04
2292.00	1.311E+00	1.329E+01	2.115E+01	6.179E-02	2.045E-01	1.175E-01	9.387E-05	4.123E-05	3.665E-05	6.076E-05	1.729E-04
2346.00	1.351E+00	5.164E+00	7.696E+00	3.639E-02	1.476E-01	1.115E-01	9.688E-05	2.807E-05	5.120E-05	1.339E-05	1.747E-04
2406.00	3.326E-01	5.304E+00	3.144E+00	1.321E-03	1.307E-01	7.746E-02	1.006E-04	2.982E-05	5.381E-05	5.310E-05	1.601E-04
2430.00	4.032E-02	5.601E+00	2.517E+00	5.659E-03	1.341E-01	7.253E-02	1.020E-04	3.053E-05	5.484E-05	7.030E-05	1.612E-04
2430.00	3.370E-02	5.343E+00	2.311E+00	5.804E-03	1.307E-01	7.016E-02	1.020E-04	3.053E-05	5.484E-05	6.925E-05	1.571E-04
2449.50	5.313E-02	3.357E+00	3.539E-01	6.675E-03	1.082E-01	4.722E-02	1.032E-04	3.110E-05	5.568E-05	6.221E-05	1.011E-04
2449.50	6.108E-02	3.168E+00	3.296E-01	4.237E-03	1.058E-01	4.663E-02	1.032E-04	3.110E-05	5.568E-05	5.569E-05	1.084E-04
2466.00	2.457E-02	1.934E+00	2.291E-01	4.854E-03	9.405E-02	3.717E-02	1.043E-04	3.167E-05	5.648E-05	2.697E-05	1.019E-04
2482.00	3.487E-03	1.825E+00	1.763E-01	3.627E-03	9.586E-02	2.480E-02	1.053E-04	3.218E-05	5.719E-05	1.666E-05	8.191E-05

PRINTED IN U.S.A.

C-44

02/11/11

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 9

(GYRO G-2 ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	3.279E+01	1.243E+01	2.715E+01	1.009E-01	4.662E-02	3.676E-02	5.560E-06	6.994E-07	2.487E-06	9.628E-02	5.208E-02
1686.00	2.906E+01	1.127E+01	5.481E+00	1.074E-01	4.642E-02	3.735E-02	5.560E-06	6.994E-07	2.487E-06	1.030E-01	5.179E-02
1746.00	2.554E+01	5.618E+00	2.764E+00	1.025E-01	7.863E-02	4.163E-02	4.378E-06	6.165E-07	2.036E-06	1.025E-01	3.581E-02
1806.00	1.402E+01	5.101E+00	2.234E+00	9.154E-02	1.673E-02	3.241E-02	3.583E-06	8.383E-07	1.820E-06	9.142E-02	2.620E-02
1806.00	6.159E-01	7.459E+00	2.187E+00	9.070E-02	1.149E-02	2.331E-02	3.583E-06	8.383E-07	1.820E-06	9.040E-02	1.423E-02
1866.00	6.151E-01	1.102E+00	1.232E+00	2.487E-02	7.920E-03	6.862E-03	4.228E-06	7.518E-07	2.049E-06	2.479E-02	4.815E-03
1926.00	6.363E-01	5.932E-01	4.239E-01	1.402E-02	1.583E-02	4.807E-03	3.421E-06	5.498E-07	1.693E-06	1.399E-02	3.647E-03
1986.00	7.674E-01	9.460E-01	1.657E-01	1.047E-02	1.370E-02	2.924E-03	3.354E-06	5.586E-07	1.662E-06	1.088E-02	9.559E-03
2046.00	3.716E-01	8.231E-01	3.681E-01	6.736E-03	1.146E-02	6.043E-03	2.902E-06	4.751E-07	1.491E-06	6.752E-03	7.048E-03
2092.00	3.967E-01	1.477E+00	1.058E-01	6.037E-03	1.300E-02	4.179E-03	2.382E-06	4.307E-07	1.276E-06	6.004E-03	3.725E-03
2106.00	4.055E-01	1.546E+00	5.752E-02	5.496E-03	1.271E-02	5.299E-03	2.237E-06	4.251E-07	1.218E-06	5.455E-03	5.296E-03
2166.00	2.184E-01	1.419E+00	8.144E-01	2.130E-03	9.055E-03	8.574E-03	1.972E-06	4.173E-07	1.115E-06	2.752E-03	9.299E-03
2226.00	4.772E-02	6.611E-01	7.723E-01	5.356E-04	3.698E-03	5.265E-03	2.076E-06	4.207E-07	1.167E-06	5.761E-04	6.016E-03
2256.00	3.685E-02	1.665E-01	3.968E-01	1.984E-03	2.593E-03	2.120E-03	2.282E-06	4.890E-07	1.275E-06	1.997E-03	3.118E-03
2292.00	4.366E-02	1.581E-01	3.907E-01	2.027E-03	2.837E-03	2.194E-03	2.271E-06	4.645E-07	1.270E-06	2.039E-03	3.055E-03
2292.00	4.099E-02	1.426E-01	3.514E-01	1.955E-03	2.775E-03	2.074E-03	2.271E-06	4.645E-07	1.270E-06	2.007E-03	3.418E-03
2346.00	4.396E-02	1.287E-01	8.569E-02	1.145E-03	3.519E-03	1.304E-03	2.012E-06	4.171E-07	1.156E-06	1.152E-03	3.679E-03
2406.00	1.259E-02	1.234E-01	5.864E-05	2.816E-03	4.507E-04	1.417E-06	4.289E-06	1.016E-06	5.989E-05	2.771E-03	1.799E-03
2430.00	3.977E-03	1.241E-01	1.062E-02	1.073E-04	2.707E-03	5.383E-04	1.518E-06	4.442E-07	9.674E-07	1.073E-04	2.632E-03
2430.00	3.305E-03	1.188E-01	9.965E-03	1.176E-04	2.633E-03	5.283E-04	1.518E-06	4.442E-07	9.674E-07	1.175E-04	2.558E-03
2449.50	1.140E-03	7.026E-02	3.124E-03	1.697E-04	2.001E-03	4.828E-04	1.417E-06	4.601E-07	9.333E-07	1.700E-04	1.933E-03
2449.50	1.246E-03	6.629E-02	2.882E-03	1.190E-04	1.951E-03	4.748E-04	1.417E-06	4.601E-07	9.333E-07	1.193E-04	1.893E-03
2456.00	4.234E-04	3.720E-02	3.027E-03	1.045E-04	1.596E-03	4.367E-04	1.237E-06	4.819E-07	8.902E-07	1.047E-04	1.588E-03
2482.00	1.534E-04	3.171E-02	2.363E-03	6.308E-05	1.536E-03	3.733E-04	1.176E-06	5.027E-07	8.560E-07	6.351E-05	1.535E-03

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	3.357E+01	1.611E+01	2.409E+01	9.951E-02	5.470E-02	2.842E-02	5.611E-06	6.340E-07	2.389E-06	1.957E-05	5.141E-06
1686.00	2.888E+01	8.898E+00	9.413E+00	1.010E-01	5.443E-02	2.944E-02	5.611E-06	6.340E-07	2.389E-06	2.090E-05	5.079E-06
1746.00	2.540E+01	5.941E+00	3.322E+00	1.015E-01	4.285E-02	3.048E-02	4.410E-06	1.177E-06	1.691E-06	2.771E-05	8.102E-06
1806.00	1.395E+01	3.288E+00	4.694E+00	9.109E-02	3.304E-02	1.793E-02	3.597E-06	1.446E-06	1.350E-06	3.462E-05	6.460E-06
1806.00	6.137E-01	9.068E-01	3.168E+00	9.045E-02	2.860E-02	1.719E-02	3.597E-06	1.446E-06	1.350E-06	3.388E-05	6.384E-06
1866.00	6.131E-01	4.846E-01	1.593E+00	2.480E-02	7.971E-03	7.936E-03	4.239E-06	7.109E-07	2.040E-06	1.321E-05	4.184E-06
1926.00	6.342E-01	3.564E-01	6.381E-01	1.397E-02	6.383E-03	1.531E-02	3.427E-06	1.391E-06	1.091E-06	1.119E-05	1.169E-05
1986.00	7.654E-01	7.354E-01	6.201E-01	1.045E-02	1.050E-02	9.308E-03	3.356E-06	9.508E-07	1.490E-06	1.172E-05	9.652E-06
2046.00	3.712E-01	5.539E-01	7.106E-01	6.730E-03	8.486E-03	9.793E-03	2.902E-06	1.337E-06	8.142E-07	9.944E-06	1.293E-05
2092.00	3.956E-01	7.771E-01	1.260E+00	6.036E-03	7.816E-03	1.336E-02	2.379E-06	1.325E-06	2.632E-07	6.167E-06	1.529E-05
2106.00	4.041E-01	9.652E-01	1.210E+00	5.495E-03	4.529E-03	1.300E-02	2.234E-06	1.194E-06	5.011E-07	5.361E-06	1.497E-05
2166.00	2.169E-01	1.820E+00	8.134E-01	2.128E-03	9.063E-03	8.566E-03	1.968E-06	4.228E-07	1.121E-06	4.705E-07	1.072E-05
2226.00	4.629E-02	1.027E+00	1.375E-01	5.403E-04	6.220E-03	1.645E-03	2.072E-06	7.565E-07	9.937E-07	2.205E-06	2.199E-06
2256.00	3.752E-02	2.130E-01	3.739E-01	1.095E-03	2.928E-03	1.611E-03	2.279E-06	1.230E-06	5.870E-07	2.809E-06	2.351E-06
2292.00	4.432E-02	1.840E-01	3.791E-01	2.039E-03	3.238E-03	1.525E-03	2.288E-06	1.148E-06	7.232E-07	2.375E-06	2.286E-06
2292.00	4.159E-02	1.712E-01	3.383E-01	2.007E-03	3.193E-03	1.324E-03	2.288E-06	1.148E-06	7.232E-07	2.299E-06	1.950E-06
2346.00	4.035E-02	1.288E-01	8.529E-02	1.155E-03	3.523E-03	1.283E-03	2.011E-06	4.398E-07	1.154E-06	2.070E-07	2.032E-06
2406.00	1.277E-02	1.253E-01	1.239E-02	6.234E-05	2.816E-03	4.486E-04	1.649E-06	4.332E-07	1.014E-06	1.031E-06	9.242E-07
2430.00	4.089E-03	1.240E-01	1.088E-02	1.046E-04	2.707E-03	5.392E-04	1.518E-06	4.466E-07	9.669E-07	1.401E-06	1.198E-06
2449.50	3.411E-03	1.188E-01	1.003E-02	1.150E-04	2.633E-03	5.291E-04	1.518E-06	4.466E-07	9.669E-07	1.390E-06	1.174E-06
2449.50	1.099E-03	7.026E-02	3.147E-03	1.685E-04	2.001E-03	4.832E-04	1.417E-06	4.614E-07	9.330E-07	1.264E-06	1.123E-06
2449.50	1.264E-03	6.629E-02	2.903E-03	1.180E-04	1.951E-03	4.752E-04	1.417E-06	4.614E-07	9.330E-07	1.119E-06	1.104E-06
2486.00	4.330E-04	3.720E-02	3.036E-03	1.041E-04	1.596E-03	4.372E-04	1.287E-06	4.826E-07	8.899E-07	5.085E-07	1.199E-06
2482.00	1.530E-04	3.171E-02	2.377E-03	6.305E-05	1.536E-03	3.741E-04	1.176E-06	5.031E-07	8.558E-07	2.832E-07	1.255E-06

VARIABLE

C-45

WIND

SYSTEM B GROUP 10 COME BIAS ERRORS - 1,2

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE FPROP	MAG FPROP
1686.00	0.800E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	8.840E+01	7.191E+03	6.540E+03	4.195E-01	2.269E-01	2.548E-01	0.000E+00	0.000E+00	0.000E+00	3.958E-01	3.729E-01
1746.00	3.072E+03	1.202E+04	9.669E+03	5.043E+01	1.748E+01	1.231E+01	0.000E+00	0.000E+00	0.000E+00	3.855E-02	2.061E-01
1806.00	3.498E+04	1.180E+04	2.800E+03	3.797E+01	2.332E+01	3.700E+01	0.000E+00	0.000E+00	0.000E+00	3.839E+01	4.101E+01
1806.00	1.665E+03	3.231E+03	2.135E+03	3.850E+01	3.362E+00	6.782E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.152E+00
1866.00	4.335E+02	2.729E+03	2.507E+03	1.545E+01	8.517E+00	6.263E+00	0.000E+00	0.000E+00	0.000E+00	8.528E+00	1.034E+00
1926.00	4.230E+02	1.788E+03	1.585E+03	8.489E+00	2.572E+00	3.903E+00	0.000E+00	0.000E+00	0.000E+00	7.506E+01	6.157E-01
1966.00	5.616E+01	1.428E+03	1.422E+03	7.627E-01	2.052E+00	2.772E+00	0.000E+00	0.000E+00	0.000E+00	1.119E+00	9.483E-01
2046.00	1.554E+02	1.458E+03	1.265E+03	1.129E+00	5.224E-01	1.064E+00	0.000E+00	0.000E+00	0.000E+00	8.032E-01	5.344E+00
2092.00	2.181E+02	8.908E+02	2.023E+02	7.952E-01	2.054E+00	5.106E+00	0.000E+00	0.000E+00	0.000E+00	4.484E-01	5.878E+00
2106.00	1.958E+02	8.022E+02	8.361E+01	4.344E-01	2.216E+00	5.983E+00	0.000E+00	0.000E+00	0.000E+00	1.151E+00	2.032E+00
2166.00	4.239E+01	6.498E+02	5.876E+02	1.158E+00	2.036E+00	7.101E+00	0.000E+00	0.000E+00	0.000E+00	1.079E+00	4.158E+00
2226.00	2.429E+01	5.196E+02	9.748E+02	1.068E+00	2.145E+00	6.787E+00	0.000E+00	0.000E+00	0.000E+00	5.836E-01	5.367E+00
2286.00	2.364E+01	2.222E+02	1.021E+03	5.750E-01	2.987E+00	4.777E+00	0.000E+00	0.000E+00	0.000E+00	5.433E-01	5.124E+00
2292.00	2.391E+01	2.140E+02	1.027E+03	5.361E-01	3.006E+00	4.053E+00	0.000E+00	0.000E+00	0.000E+00	5.279E-01	4.269E+00
2292.00	2.274E+01	2.031E+02	9.305E+02	5.212E-01	2.916E+00	4.053E+00	0.000E+00	0.000E+00	0.000E+00	4.833E-02	5.259E-01
2346.00	9.988E+00	2.143E+02	1.209E+02	7.811E-02	5.388E-01	1.151E+00	0.000E+00	0.000E+00	0.000E+00	6.754E-02	1.532E-01
2406.00	2.700E+00	2.164E+02	6.049E+01	7.022E-02	1.622E-01	1.621E+00	0.000E+00	0.000E+00	0.000E+00	6.253E-02	1.331E-01
2430.00	3.796E+00	2.193E+02	6.720E+01	6.318E-02	1.369E-01	1.322E+00	0.000E+00	0.000E+00	0.000E+00	5.305E-02	1.327E-01
2430.00	3.549E+00	2.195E+02	5.406E+01	6.162E-02	1.352E-01	1.287E+00	0.000E+00	0.000E+00	0.000E+00	2.048E-02	2.227E-01
2449.50	1.369E+00	2.218E+02	9.291E+00	2.896E-02	2.216E-01	4.222E-01	0.000E+00	0.000E+00	0.000E+00	1.607E-01	1.845E+01
2449.50	6.355E+00	2.219E+02	8.848E+00	1.652E-01	1.594E-01	3.980E-01	0.000E+00	0.000E+00	0.000E+00	1.507E-01	2.332E+00
2466.00	2.104E+00	7.699E+01	2.763E+00	1.494E-01	2.327E+00	9.577E-02	0.000E+00	0.000E+00	0.000E+00	1.167E-01	3.131E+00
2482.00	3.258E-01	5.921E+01	1.150E+00	1.161E-01	3.132E+00	9.539E-02	0.000E+00	0.000E+00	0.000E+00	1.167E-01	3.131E+00
TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.205E-05	1.577E-04
1686.00	0.111E+01	3.472E+03	9.079E+03	4.320E-01	3.023E-01	1.196E-01	0.000E+00	0.000E+00	0.000E+00	3.968E-04	1.750E-03
1746.00	3.060E+03	3.044E+02	1.543E+00	1.715E-02	2.066E+01	5.498E+00	0.000E+00	0.000E+00	0.000E+00	1.524E-02	1.860E-03
1806.00	3.481E+04	8.198E+03	9.586E+03	3.725E+01	4.405E+01	5.131E+00	0.000E+00	0.000E+00	0.000E+00	1.436E-02	1.680E-04
1806.00	1.650E+03	5.323E+02	3.840E+03	3.838E+01	8.180E+00	2.703E-01	0.000E+00	0.000E+00	0.000E+00	8.381E-03	5.016E-03
1866.00	4.337E+02	1.326E+03	3.460E+03	1.544E+01	4.930E+00	9.372E+00	0.000E+00	0.000E+00	0.000E+00	6.661E-03	2.988E-03
1926.00	4.218E+02	8.247E+02	2.242E+03	8.480E+00	2.705E+00	3.835E+00	0.000E+00	0.000E+00	0.000E+00	7.951E-04	3.959E-03
1966.00	5.888E+01	2.537E+02	2.147E+03	7.620E-01	6.390E-01	3.349E+00	0.000E+00	0.000E+00	0.000E+00	1.328E+03	9.619E-04
2046.00	1.554E+02	8.773E+02	1.712E+03	1.129E+00	9.199E-01	7.474E-01	0.000E+00	0.000E+00	0.000E+00	1.728E-03	7.208E-04
2092.00	2.179E+02	6.954E+02	6.954E+02	7.999E-01	5.467E+00	6.206E-01	0.000E+00	0.000E+00	0.000E+00	1.349E-03	2.553E-03
2106.00	1.958E+02	5.482E+02	5.916E+02	4.394E-01	5.983E+00	2.215E+00	0.000E+00	0.000E+00	0.000E+00	1.417E-03	6.894E-03
2166.00	4.291E+01	6.491E+02	5.874E+02	1.145E+00	2.036E+00	7.103E+00	0.000E+00	0.000E+00	0.000E+00	2.326E-03	7.224E-03
2226.00	2.335E+01	1.080E+03	2.313E+02	1.056E+00	4.628E+00	5.411E+00	0.000E+00	0.000E+00	0.000E+00	2.107E-03	1.589E-03
2286.00	2.303E+01	6.729E+02	8.019E+02	5.646E-01	5.532E+00	1.071E+00	0.000E+00	0.000E+00	0.000E+00	1.979E-03	2.428E-03
2292.00	2.332E+01	5.954E+02	8.633E+02	5.262E-01	5.272E+00	1.634E+00	0.000E+00	0.000E+00	0.000E+00	1.842E-03	1.858E-03
2292.00	2.210E+01	5.560E+02	7.732E+02	5.117E-01	4.836E+00	1.247E+00	0.000E+00	0.000E+00	0.000E+00	2.204E-04	1.821E-03
2346.00	9.341E+00	2.147E+02	1.204E+02	7.790E-02	5.330E-01	1.154E+00	0.000E+00	0.000E+00	0.000E+00	1.242E-04	3.340E-03
2406.00	2.566E+00	2.160E+02	6.062E+01	6.727E-01	1.647E-01	1.420E+00	0.000E+00	0.000E+00	0.000E+00	1.590E-04	2.938E-03
2430.00	3.796E+00	2.193E+02	6.727E+01	6.516E-02	1.374E-01	1.322E+00	0.000E+00	0.000E+00	0.000E+00	1.452E-04	2.868E-04
2430.00	3.548E+00	2.194E+02	6.414E+01	6.161E-02	1.356E-01	1.287E+00	0.000E+00	0.000E+00	0.000E+00	1.425E-04	9.819E-05
2449.50	1.379E+00	2.278E+02	9.350E+00	2.909E+02	2.212E-01	4.223E-01	0.000E+00	0.000E+00	0.000E+00	4.251E-05	9.258E-04
2449.50	6.482E+00	2.219E+02	8.900E+00	1.653E+01	1.590E-01	3.982E-01	0.000E+00	0.000E+00	0.000E+00	3.003E-04	9.258E-04
2466.00	2.124E+00	7.699E+01	2.711E+00	1.500E-01	2.327E+00	9.743E-02	0.000E+00	0.000E+00	0.000E+00	8.707E-05	2.671E-04
2482.00	3.263E-01	5.921E+01	1.163E+00	1.161E-01	3.132E+00	1.005E-01	0.000E+00	0.000E+00	0.000E+00	3.975E-04	3.320E-04

C-46

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 11 (DMF SCALE FACTOR ERROR = 182)

PRINTED IN USA

C-47 engine

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.601E+04	2.805E+03	2.019E+03	5.065F+00	1.586F+01	1.564E+01	0.000F+00	0.000E+00	0.000E+00	6.277F+00	2.231E+01
1806.00	4.384E+03	1.770E+03	1.645E+03	8.208F+00	1.964E+01	2.704E+01	0.000F+00	0.000E+00	0.000E+00	7.809E+00	3.194E+01
1806.00	1.908E+02	1.537F+03	1.579E+03	8.780E+00	1.956F+01	2.909F+01	0.000E+00	0.000E+00	0.000E+00	8.362E+00	3.355E+01
1866.00	1.428E+03	7.301F+02	1.596E+03	5.585F+01	1.404F+01	3.919E+01	0.000E+00	0.000E+00	0.000E+00	5.509F+01	2.184E+01
1926.00	1.874E+03	2.097F+03	2.274E+02	4.156F+01	2.395F+01	2.252F+01	0.000E+00	0.000E+00	0.000E+00	4.142E+01	2.089F+01
1986.00	2.112F+03	2.417E+03	4.810E+02	3.090F+01	1.412E+01	2.529E+01	0.000E+00	0.000E+00	0.000E+00	3.091E+01	2.441F+01
2046.00	9.225E+02	1.202E+03	1.119E+03	1.835E+01	3.383F+00	2.703E+01	0.000E+00	0.000E+00	0.000E+00	1.840F+01	2.275E+01
2092.00	9.722E+02	2.231E+03	4.355E+02	1.471E+01	4.685E+00	1.429F+01	0.000E+00	0.000E+00	0.000E+00	1.468F+01	2.960E+00
2106.00	9.859E+02	2.206F+03	1.863F+02	1.278E+01	4.019E+00	1.499F+01	0.000E+00	0.000E+00	0.000E+00	1.275E+01	6.999E+00
2166.00	4.211F+02	1.888F+03	1.156F+03	3.126F+00	1.104E+00	1.902F+01	0.000E+00	0.000E+00	0.000E+00	3.115E+00	1.369E+00
2226.00	2.352E+01	9.611E+02	1.441F+03	1.107E+00	4.830F+00	1.651F+01	0.000E+00	0.000E+00	0.000E+00	1.127F+00	1.095E+01
2286.00	6.357E+01	2.597F+02	1.409F+03	1.473E+00	7.361E+00	1.365F+01	0.000E+00	0.000E+00	0.000E+00	1.429E+00	1.486E+01
2292.00	6.553E+01	2.179F+02	1.434E+03	1.527E+00	7.408E+00	1.347E+01	0.000E+00	0.000E+00	0.000E+00	1.543E+00	1.424E+01
2292.00	6.200E+01	1.828F+02	1.308E+03	1.554E+00	7.302F+00	1.290F+01	0.000E+00	0.000E+00	0.000E+00	1.570E+00	1.377E+01
2346.00	2.770E+01	1.168E+02	2.995E+02	2.257F+00	3.717E+00	7.601F+00	0.000E+00	0.000E+00	0.000E+00	2.265F+00	4.103E+00
2406.00	2.731E+01	6.164E+01	1.056E+02	1.957E+00	1.087E+00	5.835E+00	0.000E+00	0.000E+00	0.000E+00	1.957E+00	1.401F+00
2430.00	3.533E+01	4.254E+01	1.036E+02	1.631E+00	5.480E+00	4.945E+00	0.000E+00	0.000E+00	0.000E+00	1.630E+00	8.951E-01
2430.00	3.075E+01	4.075E+01	9.484E+01	1.560E+00	5.159E-01	4.873E+00	0.000E+00	0.000E+00	0.000E+00	1.560E+00	7.551E-01
2449.50	6.816E+00	2.248E+01	1.970E+01	8.429E-01	3.414E-01	3.082E+00	0.000E+00	0.000E+00	0.000E+00	8.423E-01	3.000E-01
2449.50	4.370E+00	2.387E+01	1.829E+01	7.837E-01	3.309F-01	3.043F+00	0.000E+00	0.000E+00	0.000E+00	7.822E-01	2.964E-01
2466.00	1.121E+00	5.150F+00	1.342F+01	2.641E-01	5.206F-01	1.588F+00	0.000E+00	0.000E+00	0.000E+00	2.639E-01	5.971E-01
2482.00	3.377E-01	6.047E+00	1.969E+00	1.861F-01	4.838E-01	6.776F-01	0.000E+00	0.000E+00	0.000E+00	1.861E-01	4.810F-01

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	PSI ERROR
1686.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.592E+04	3.687F+03	1.073E+03	5.616E+00	2.198F+01	2.700F+00	0.000F+00	0.000E+00	0.000E+00	1.260E-03	7.487E-04	3.756E-03	3.138E-03
1806.00	4.364E+03	1.341F+03	2.054E+03	7.699F+00	3.255F+01	8.562F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.979E-03	2.973E-03
1806.00	1.902F+02	7.111F+02	2.047E+02	8.271F+00	3.423E+01	8.097F+00	0.000F+00	0.000E+00	0.000E+00	3.458E-02	1.596E-02	3.457E-02	1.201F-02
1866.00	1.428E+03	2.293F+02	1.746E+03	5.547E+01	2.932F+01	3.025F+01	0.000E+00	0.000E+00	0.000E+00	3.457E-02	1.201F-02	3.457E-02	1.201F-02
1926.00	1.867E+03	6.603F+02	2.009E+03	4.138F+01	2.914F+01	1.579E+01	0.000E+00	0.000E+00	0.000E+00	3.424E-02	1.064E-02	2.791E-02	6.501F-03
1986.00	2.106E+03	1.905F+03	1.570E+03	3.083F+01	2.718F+01	1.025E+01	0.000E+00	0.000E+00	0.000E+00	2.791E-02	6.501F-03	1.837E-02	1.201F-02
2046.00	9.219E+02	1.375F+03	8.989F+02	1.835F+01	2.672F+01	5.308F+00	0.000E+00	0.000E+00	0.000E+00	1.837E-02	1.201F-02	1.837E-02	1.201F-02
2092.00	9.700F+02	1.419F+03	1.777F+03	1.473E+01	1.075E+01	1.048E+01	0.000E+00	0.000E+00	0.000E+00	1.591E-02	1.045E-02	3.710E-03	2.382E-02
2106.00	9.833E+02	1.572F+03	1.560E+03	1.281F+01	9.112F+00	1.254F+01	0.000E+00	0.000E+00	0.000E+00	3.710E-03	2.382E-02	3.710E-03	2.382E-02
2166.00	4.189E+02	1.890E+03	1.155E+03	3.184F+00	1.108F+00	1.901E+01	0.000E+00	0.000E+00	0.000E+00	3.282E-03	1.734E-02	3.282E-03	1.734E-02
2226.00	2.261E+01	1.732F+03	4.070F+01	1.101F+00	1.116F+01	1.309E+01	0.000E+00	0.000E+00	0.000E+00	3.519F-03	5.823E-03	3.519F-03	5.823E-03
2286.00	6.402E+01	8.585E+02	1.147E+03	1.492F+00	1.499E+01	3.982F+00	0.000E+00	0.000E+00	0.000E+00	3.182E-03	8.264F-03	3.182E-03	8.264F-03
2292.00	6.592E+01	7.540F+02	1.239E+03	1.580E+00	1.434E+01	5.749F+00	0.000E+00	0.000E+00	0.000E+00	2.933E-03	7.834E-03	2.933E-03	7.834E-03
2292.00	6.229F+01	7.004F+02	1.120E+03	1.575E+00	1.383E+01	5.324E+00	0.000E+00	0.000E+00	0.000E+00	2.399F-03	1.200E-02	2.399F-03	1.200E-02
2346.00	2.241F+01	1.166F+02	2.988E+02	2.288F+00	3.754E+00	7.580E+00	0.000E+00	0.000E+00	0.000E+00	3.486E-03	1.202E-02	3.486E-03	1.202E-02
2406.00	2.739E+01	6.191E+01	1.055E+02	1.954E+00	1.056F+00	5.832F+00	0.000E+00	0.000E+00	0.000E+00	3.311F-03	1.103E-02	3.311F-03	1.103E-02
2430.00	3.537E+01	4.262F+01	1.036E+02	1.631E+00	5.514F-01	4.965E+00	0.000E+00	0.000E+00	0.000E+00	3.179E-03	1.083F-02	3.179E-03	1.083F-02
2430.00	3.079E+01	4.082E+01	9.484F+01	1.561F+00	5.192E-01	4.872F+00	0.000E+00	0.000E+00	0.000E+00	1.956F-03	7.161F-02	1.956F-03	7.161F-02
2449.50	6.828E+00	2.249E+01	1.968F+01	8.428E-01	3.406E-01	3.082E+00	0.000E+00	0.000E+00	0.000E+00	1.827E-03	7.071F-03	1.827E-03	7.071F-03
2449.50	4.384E+00	2.388E+01	1.828E+01	7.886E-01	3.301F-01	3.043E+00	0.000E+00	0.000E+00	0.000E+00	7.866E-04	4.355E-03	7.866E-04	4.355E-03
2466.00	1.121E+00	5.157E+00	1.341E+01	2.639E-01	5.197E-01	1.588F+00	0.000E+00	0.000E+00	0.000E+00	6.349E-04	2.239F-03	6.349E-04	2.239F-03
2482.00	3.378E-01	6.046F+00	1.971E+00	1.861F-01	4.834E-01	6.779F-01	0.000E+00	0.000E+00	0.000E+00				

24930

SYSTEM B GROUP 12 (RRR, ALT, BIAS & SCALE F.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	2.874E+03	7.390E+02	4.246E+02	5.159E-03	1.726E+00	2.608E+00	0.000E+00	0.000E+00	0.000E+00	4.998E-02	3.093E+00
1866.00	2.527E+03	8.146E+02	6.309E+02	8.786E+00	2.200E+00	8.653E-01	0.000E+00	0.000E+00	0.000E+00	8.713E+00	3.415E+00
1926.00	2.022E+03	6.627E+02	1.013E+03	9.618E+00	4.246E-01	2.470E+00	0.000E+00	0.000E+00	0.000E+00	9.557E+00	4.202E+00
1986.00	1.369E+03	1.120E+03	9.249E+02	1.139E+01	2.721E+00	1.184E+00	0.000E+00	0.000E+00	0.000E+00	1.133E+01	3.645E+00
2046.00	3.592E+02	1.457E+03	1.020E+03	1.424E+01	3.735E+00	2.033E+00	0.000E+00	0.000E+00	0.000E+00	1.419E+01	5.568E+00
2092.00	5.272E+01	2.104E+03	2.495E+02	1.091E+01	5.447E+00	2.596E+00	0.000E+00	0.000E+00	0.000E+00	1.095E+01	2.701E+00
2106.00	1.828E+01	1.900E+03	1.996E+02	8.087E+00	4.159E+00	2.628E+00	0.000E+00	0.000E+00	0.000E+00	8.142E+00	3.302E+00
2166.00	8.247E+02	1.336E+01	6.277E+02	4.247E+00	4.832E+00	5.708E+00	0.000E+00	0.000E+00	0.000E+00	4.248E+00	3.355E+00
2226.00	1.810E+03	3.758E+02	9.467E+02	3.511E+00	4.936E+00	5.471E+00	0.000E+00	0.000E+00	0.000E+00	3.558E+00	6.518E+00
2286.00	7.343E+02	4.552E+01	5.739E+02	5.464E-01	1.514E+00	1.577E+00	0.000E+00	0.000E+00	0.000E+00	5.306E-01	2.113E-01
2292.00	7.103E+02	7.505E+01	5.536E+02	7.717E-01	1.353E+00	1.371E+00	0.000E+00	0.000E+00	0.000E+00	7.572E-01	2.998E-02
2292.00	7.006E+02	5.445E+01	4.947E+02	8.896E-01	1.327E+00	1.005E+00	0.000E+00	0.000E+00	0.000E+00	8.754E-01	2.174E-01
2346.00	4.133E+02	3.999E+01	3.939E+01	3.213E+00	7.290E-01	1.737E+00	0.000E+00	0.000E+00	0.000E+00	3.209E+00	9.718E-02
2406.00	1.691E+02	3.298E+01	3.791E+01	3.815E+00	3.259E-01	1.582E+00	0.000E+00	0.000E+00	0.000E+00	3.814E+00	4.327E-01
2430.00	1.147E+02	2.795E+01	3.870E+01	3.655E+00	2.814E-01	1.248E+00	0.000E+00	0.000E+00	0.000E+00	3.655E+00	4.483E-01
2430.00	1.071E+02	2.593E+01	3.559E+01	3.700E+00	2.807E-01	1.212E+00	0.000E+00	0.000E+00	0.000E+00	3.699E+00	4.589E-01
2449.50	1.966E+01	7.535E+00	5.070E+00	3.715E+00	3.328E-01	5.948E-01	0.000E+00	0.000E+00	0.000E+00	3.715E+00	3.985E-01
2449.50	1.110E+01	6.730E+00	4.879E+00	3.652E+00	3.022E-01	6.046E-01	0.000E+00	0.000E+00	0.000E+00	3.652E+00	3.979E-01
2466.00	5.893E+00	3.614E+01	3.572E+00	1.359E+00	1.054E+00	3.616E-01	0.000E+00	0.000E+00	0.000E+00	1.350E+00	9.439E-01
2482.00	3.234E-01	3.602E+01	1.034E+00	1.399E-02	1.044E+00	7.273E-02	0.000E+00	0.000E+00	0.000E+00	1.358E-02	1.064E+00

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	2.860E+03	7.489E+02	4.953E+02	4.612E-02	3.098E+00	4.222E-01	0.000E+00	0.000E+00	0.000E+00	1.083E-04	1.471E-04
1866.00	2.516E+03	1.036E+03	2.055E+02	8.807E+00	2.272E+00	2.482E-01	0.000E+00	0.000E+00	0.000E+00	4.347E-03	1.129E-04
1926.00	2.015E+03	1.199E+03	2.384E+02	9.631E+00	2.393E+00	5.513E-01	0.000E+00	0.000E+00	0.000E+00	6.680E-03	4.447E-04
1986.00	1.365E+03	1.446E+03	1.868E+02	1.140E+01	2.688E+00	1.185E+00	0.000E+00	0.000E+00	0.000E+00	1.142E-02	1.426E-03
2046.00	3.585E+02	1.353E+03	1.155E+03	1.424E+01	2.901E+00	3.101E+00	0.000E+00	0.000E+00	0.000E+00	1.612E-02	3.798E-03
2092.00	5.364E+01	7.553E+02	1.979E+03	1.092E+01	4.807E+00	3.624E+00	0.000E+00	0.000E+00	0.000E+00	1.309E-02	4.155E-03
2106.00	1.893E+01	1.094E+03	1.573E+03	8.097E+00	4.582E+00	1.457E+00	0.000E+00	0.000E+00	0.000E+00	9.990E-03	1.684E-03
2166.00	8.227E+02	1.562E+01	6.303E+02	4.244E+00	4.820E+00	5.819E+00	0.000E+00	0.000E+00	0.000E+00	6.233E-03	7.273E-03
2226.00	1.010E+03	9.961E+02	2.144E+02	3.522E+00	7.283E+00	1.081E+00	0.000E+00	0.000E+00	0.000E+00	6.355E-03	1.469E-03
2286.00	7.344E+02	3.661E+02	4.499E+02	5.405E-01	1.377E-01	2.183E+00	0.000E+00	0.000E+00	0.000E+00	7.224E-04	3.190E-03
2292.00	7.104E+02	3.007E+02	4.707E+02	7.661E-01	1.724E-01	1.921E+00	0.000E+00	0.000E+00	0.000E+00	1.117E-03	2.833E-03
2292.00	7.007E+02	2.790E+02	4.120E+02	8.838E-01	3.805E-01	1.624E+00	0.000E+00	0.000E+00	0.000E+00	1.338E-03	2.396E-03
2346.00	4.132E+02	4.148E+01	3.916E+01	3.211E+00	7.497E-01	1.732E+00	0.000E+00	0.000E+00	0.000E+00	5.108E-03	2.739E-03
2406.00	1.691E+02	3.316E+01	3.798E+01	3.815E+00	3.352E-01	1.582E+00	0.000E+00	0.000E+00	0.000E+00	7.660E-03	3.259E-03
2430.00	1.147E+02	2.712E+01	3.873E+01	3.655E+00	2.866E-01	1.248E+00	0.000E+00	0.000E+00	0.000E+00	7.929E-03	2.773E-03
2430.00	1.071E+02	2.599E+01	3.562E+01	3.700E+00	2.859E-01	1.211E+00	0.000E+00	0.000E+00	0.000E+00	8.015E-03	2.692E-03
2449.50	1.966E+01	7.539E+00	5.073E+00	3.715E+00	3.354E-01	5.945E-01	0.000E+00	0.000E+00	0.000E+00	8.459E-03	1.381E-03
2449.50	1.110E+01	6.733E+00	4.884E+00	3.652E+00	3.048E-01	6.043E-01	0.000E+00	0.000E+00	0.000E+00	8.306E-03	1.404E-03
2466.00	5.884E+00	3.615E+01	3.549E+00	1.359E+00	1.055E+00	3.609E-01	0.000E+00	0.000E+00	0.000E+00	3.866E-03	9.896E-04
2482.00	3.228E-01	3.602E+01	1.013E+00	1.400E-02	1.044E+00	7.207E-02	0.000E+00	0.000E+00	0.000E+00	2.758E-03	2.380E-04

VISA 01004

C-48

SYSTEM B GROUP 12 (BARO, ALT, MARKOV & MEAS. N.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.928E+01	4.953E+00	2.848E+00	3.461E-05	1.156E-02	1.750E-02	0.000E+00	0.000E+00	0.000E+00	3.353E-04	2.075E-02
1866.00	1.684E+01	6.077E+00	4.230E+00	7.276E-02	2.157E-02	5.628E-03	0.000E+00	0.000E+00	0.000E+00	7.246E-02	2.367E-02
1926.00	1.509E+01	7.361E+00	1.085E+01	8.071E-02	3.900E-02	5.869E-02	0.000E+00	0.000E+00	0.000E+00	8.810E-02	3.707E-02
1986.00	1.107E+01	9.389E+00	6.417E+00	7.386E-02	4.727E-02	9.426E-03	0.000E+00	0.000E+00	0.000E+00	7.350E-02	3.914E-02
2046.00	3.238E+00	1.162E+01	7.196E+00	9.304E-02	4.912E-02	2.115E-02	0.000E+00	0.000E+00	0.000E+00	9.270E-02	4.502E-02
2092.00	5.382E+00	1.725E+01	6.374E+00	8.678E-02	6.066E-02	3.349E-02	0.000E+00	0.000E+00	0.000E+00	8.875E-02	5.639E-02
2146.00	7.397E+00	1.542E+01	7.101E+00	9.214E-02	4.806E-02	3.592E-02	0.000E+00	0.000E+00	0.000E+00	9.200E-02	5.852E-02
2166.00	1.770E+01	4.558E+00	1.218E+01	1.350E-01	3.100E-02	5.991E-02	0.000E+00	0.000E+00	0.000E+00	1.350E-01	2.949E-02
2226.00	2.043E+01	3.644E+00	1.200E+01	1.237E-01	3.497E-02	4.570E-02	0.000E+00	0.000E+00	0.000E+00	1.237E-01	4.518E-02
2286.00	2.034E+01	3.249E+00	9.164E+00	1.363E-01	2.787E-02	1.586E-02	0.000E+00	0.000E+00	0.000E+00	1.364E-01	3.320E-02
2292.00	2.052E+01	3.278E+00	9.058E+00	1.302E-01	2.824E-02	1.475E-02	0.000E+00	0.000E+00	0.000E+00	1.383E-01	3.871E-02
2292.00	2.033E+01	3.273E+00	8.239E+00	1.390E-01	2.785E-02	1.256E-02	0.000E+00	0.000E+00	0.000E+00	1.391E-01	3.268E-02
2346.00	2.029E+01	3.666E+00	7.959E-01	1.628E-01	1.714E-02	3.951E-02	0.000E+00	0.000E+00	0.000E+00	1.628E-01	3.706E-02
2406.00	2.038E+01	3.590E+00	9.411E-01	1.781E-01	1.387E-02	3.071E-02	0.000E+00	0.000E+00	0.000E+00	1.781E-01	3.273E-02
2430.00	2.065E+01	3.560E+00	8.249E-01	1.808E-01	1.431E-02	2.308E-02	0.000E+00	0.000E+00	0.000E+00	1.808E-01	2.986E-02
2430.00	1.900E+01	3.375E+00	7.604E-01	1.688E-01	1.396E-02	2.236E-02	0.000E+00	0.000E+00	0.000E+00	1.688E-01	2.876E-02
2449.50	3.612E+00	1.268E+00	9.571E-02	2.084E-01	1.371E-02	1.334E-02	0.000E+00	0.000E+00	0.000E+00	2.084E-01	3.762E-02
2449.50	2.059E+00	8.440E-01	1.100E-01	2.245E-01	1.585E-02	1.631E-02	0.000E+00	0.000E+00	0.000E+00	2.245E-01	3.266E-02
2466.00	4.147E-01	2.782E+00	7.592E-02	1.034E-01	6.470E-02	6.723E-03	0.000E+00	0.000E+00	0.000E+00	1.034E-01	5.950E-02
2482.00	2.954E-02	2.668E+00	2.145E-02	1.568E-03	6.700E-02	1.193E-03	0.000E+00	0.000E+00	0.000E+00	1.576E-03	6.699E-02

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1686.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.918E+01	5.024E+00	3.323E+00	3.094E-04	2.079E-02	2.833E-03	0.000E+00	0.000E+00	0.000E+00	7.264E-02	9.866E-02
1866.00	1.677E+01	7.052E+00	2.721E+00	7.280E-02	2.880E-02	7.654E-03	0.000E+00	0.000E+00	0.000E+00	3.734E-05	4.046E-05
1926.00	1.504E+01	9.674E+00	8.940E+00	8.818E-02	4.113E-02	5.728E-02	0.000E+00	0.000E+00	0.000E+00	6.730E-05	4.405E-05
1986.00	1.104E+01	1.094E+01	3.201E+00	7.390E-02	3.634E-02	3.157E-02	0.000E+00	0.000E+00	0.000E+00	7.445E-05	3.267E-05
2046.00	3.812E+00	9.629E+00	9.637E+00	9.305E-02	3.153E-02	4.318E-02	0.000E+00	0.000E+00	0.000E+00	1.047E-04	5.301E-05
2092.00	5.346E+00	1.058E+01	1.505E+01	8.878E-02	5.090E-02	4.228E-02	0.000E+00	0.000E+00	0.000E+00	4.251E-05	4.874E-05
2146.00	7.376E+00	1.196E+01	1.207E+01	9.210E-02	5.337E-02	2.757E-02	0.000E+00	0.000E+00	0.000E+00	1.009E-04	3.177E-05
2166.00	1.767E+01	4.524E+00	1.223E+01	1.349E-01	3.062E-02	6.028E-02	0.000E+00	0.000E+00	0.000E+00	1.664E-04	7.537E-05
2226.00	2.041E+01	1.154E+01	5.013E+00	1.276E-01	5.087E-02	2.734E-02	0.000E+00	0.000E+00	0.000E+00	1.659E-04	3.647E-05
2286.00	2.033E+01	7.074E+00	6.717E+00	1.363E-01	2.499E-02	2.016E-02	0.000E+00	0.000E+00	0.000E+00	1.920E-04	2.020E-05
2292.00	2.050E+01	6.435E+00	7.211E+00	1.382E-01	2.613E-02	1.824E-02	0.000E+00	0.000E+00	0.000E+00	1.964E-04	2.664E-05
2292.00	2.031E+01	6.196E+00	6.477E+00	1.390E-01	2.389E-02	1.951E-02	0.000E+00	0.000E+00	0.000E+00	1.977E-04	2.846E-05
2346.00	2.028E+01	3.728E+00	7.915E-01	1.628E-01	1.703E-02	3.956E-02	0.000E+00	0.000E+00	0.000E+00	2.472E-04	6.257E-05
2406.00	2.035E+01	3.619E+00	9.432E-01	1.781E-01	1.398E-02	3.070E-02	0.000E+00	0.000E+00	0.000E+00	3.546E-04	6.326E-05
2430.00	2.064E+01	3.579E+00	8.260E-01	1.808E-01	1.042E-02	2.307E-02	0.000E+00	0.000E+00	0.000E+00	3.804E-04	5.128E-05
2430.00	1.899E+01	3.393E+00	7.616E-01	1.687E-01	1.406E-02	2.235E-02	0.000E+00	0.000E+00	0.000E+00	3.633E-04	4.967E-05
2449.50	3.612E+00	1.270E+00	9.549E-02	2.084E-01	1.375E-02	1.334E-02	0.000E+00	0.000E+00	0.000E+00	4.684E-04	3.100E-05
2449.50	2.059E+00	8.434E-01	1.102E-01	2.245E-01	1.594E-02	1.631E-02	0.000E+00	0.000E+00	0.000E+00	5.079E-04	3.790E-05
2466.00	4.140E-01	2.782E+00	7.689E-02	1.034E-01	6.473E-02	6.730E-03	0.000E+00	0.000E+00	0.000E+00	2.916E-04	1.846E-05
2482.00	2.951E-02	2.668E+00	2.232E-02	1.568E-03	6.700E-02	1.094E-03	0.000E+00	0.000E+00	0.000E+00	6.196E-06	3.614E-06

C-49

C-49



ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 12 (STATIC DEFECT IN BARO. ALT.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.065F+03	2.739E+02	1.573E+02	1.912E-03	6.395F-01	9.665E-01	9.665E-01	9.665E-01	9.665E-01	9.665E-01	1.852E-02
1866.00	6.796F+02	1.854E+02	2.126E+02	3.548E+00	3.479E-01	2.691E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.529E+00
1926.00	3.453E+02	2.013E+02	7.173F+01	3.726E+00	9.310E-01	5.709E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.715F+00
1986.00	1.803F+02	1.381F+02	1.657E+02	2.687E+00	1.827E-01	1.827E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.677E+00
2046.00	1.390F+01	1.357E+02	1.552E+02	2.719E+00	4.071F-02	9.192E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.711F+00
2092.00	7.132F+01	2.048F+02	1.002F+02	7.301E+00	1.805E-01	2.459E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.302E+00
2106.00	7.476E+01	1.870E+02	8.411F+01	1.919E+00	9.124E-02	3.192E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.917F+00
2166.00	3.236F+01	3.398F+01	6.447E+01	8.261E-02	8.371E-01	9.503E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.352E-02
2226.00	9.250F+01	0.266E+01	1.243E+02	4.949E-01	6.956E-01	9.130E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.012E-01
2286.00	9.951E+01	1.420E+01	7.849E+01	2.376E-01	1.985F-01	3.643E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.400E-01
2292.00	8.890F+01	1.242F+01	7.641E+01	2.145E-01	1.761F-01	3.361E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.165E-01
2322.00	8.796F+01	9.416E+00	6.821F+00	2.024E-01	1.725E-01	2.954E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.043E-01
2346.00	7.022E+01	6.147E+00	8.923F+00	7.469E-02	8.742E-02	1.177E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.424E-02
2406.00	4.310F+01	7.158F+00	2.541E+00	3.079E-01	1.805F-02	1.490E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.077E-01
2430.00	3.287F+01	6.610E+00	3.407F+00	3.409E-01	1.285F-02	1.246E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.407E-01
2430.00	3.050F+01	6.303E+00	3.167E+00	3.780E-01	1.358F-02	1.212E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.779E-01
2449.50	2.848F+00	2.093E+00	4.913E-01	6.589E-01	3.407E-02	5.470E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.589E-01
2449.50	1.644E+00	9.169E-01	4.167F-01	6.850E-01	4.748E-02	4.952E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.849E-01
2466.00	1.184F+00	7.589E+00	3.387E-01	2.347E-01	1.954F-01	3.693E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.849E-01
2482.00	7.567E-02	7.377E+00	1.011F-01	6.959E-04	1.969F-01	8.513E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.919E-04

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.060F+03	2.775F+02	1.835F+02	1.709E-02	1.149E+00	1.565E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.012E-05
1866.00	6.766F+02	2.678E+02	1.088E+02	3.552E+00	3.935E-01	7.276E-02	9.000E+00	0.000E+00	0.000E+00	0.000E+00	1.796E-03
1926.00	3.439F+02	1.775F+02	2.438F+02	3.726E+00	2.071E-01	1.077E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.761E-03
1986.00	1.797E+02	2.159E+02	1.176F+01	2.687E+00	1.764F-03	2.583E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.755F-03
2046.00	1.382F+01	1.892F+02	1.119F+02	2.716F+00	7.827E-02	6.353E-02	0.000F+00	0.000E+00	0.000E+00	0.000E+00	3.190F-03
2092.00	7.123F+01	6.115F+01	2.279E+02	2.301E+00	2.974F-01	4.635E-02	0.000F+00	0.000E+00	0.000E+00	0.000E+00	2.603F-03
2106.00	7.435F+01	5.747F+01	1.968E+02	1.914E+00	2.974F-01	1.369E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	2.203E-03
2166.00	3.226F+01	3.379E+01	6.451E+01	8.274E-02	8.370E-01	9.507E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	2.919E-04
2226.00	9.253F+01	1.397F+02	1.598E+01	4.962E-01	1.145F+00	7.361E-02	0.000F+00	0.000E+00	0.000E+00	0.000E+00	9.244E-04
2286.00	9.954F+01	4.824F+01	6.748E+01	2.384E-01	1.331F-01	3.925E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	3.720E-04
2292.00	8.893F+01	3.974E+01	6.679F+01	2.152E-01	8.086E-02	3.703E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	3.279E-04
2322.00	8.798E+01	3.679E+01	5.817E+01	2.031F-01	5.110E-02	3.291E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	3.029E-04
2346.00	7.020E+01	6.421E+00	8.784F+00	7.443E-02	8.435E-02	1.132E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.389E-04
2406.00	4.309F+01	7.219E+00	2.597E+00	3.078E-01	1.885E-02	1.490E-01	0.000F+00	0.000E+00	0.000E+00	0.000E+00	6.162F-04
2430.00	3.286E+01	6.638E+00	3.416F+00	3.409E-01	1.336E-02	1.746E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.327E-04
2430.00	3.049F+01	6.334F+00	3.176E+00	3.780E-01	1.411F-02	1.212E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.122F-04
2449.50	2.847E+00	2.094F+00	4.931E-01	6.589E-01	3.450E-02	5.476E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.490E-03
2449.50	1.644E+00	9.155E-01	4.175F-01	6.850E-01	4.832E-02	4.946E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.554E-03
2466.00	1.182F+00	7.589E+00	3.381E-01	2.847E-01	1.955E-01	3.685E-02	0.000F+00	0.000E+00	0.000E+00	0.000E+00	8.064E-04
2482.00	7.556F-02	7.377E+00	9.615E-02	6.988E-04	1.969F-01	8.380E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.497E-06

C-50

SYSTEM B GROUP 13 LOCALIZER BIAS

PRINTED IN USA

C-51

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1926.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	2.613E-02	1.204E+00	4.528E+00	2.643E-04	5.081E-03	2.722E-02	0.000E+00	0.000E+00	0.000E+00	2.334E-04	2.103E-02
2346.00	3.570E-02	2.027E+00	4.027E+01	1.044E-03	7.321E-02	1.870E-01	0.000E+00	0.000E+00	0.000E+00	7.614E-04	7.272E-02
2406.00	1.091E-01	2.388E+00	3.005E+01	3.257E-03	6.515E-03	4.637E-02	0.000E+00	0.000E+00	0.000E+00	3.301E-03	5.641E-03
2430.00	1.753E-01	3.166E+00	2.255E+01	3.594E-03	2.727E-02	3.197E-02	0.000E+00	0.000E+00	0.000E+00	3.935E-03	2.601E-02
2430.00	1.600E-01	3.146E+00	2.190E+01	3.714E-03	2.856E-02	3.915E-02	0.000E+00	0.000E+00	0.000E+00	3.753E-03	2.731E-02
2449.50	4.053E-02	3.164E+00	1.145E+01	8.021E-04	3.624E-02	1.470E-01	0.000E+00	0.000E+00	0.000E+00	8.463E-04	3.555E-02
2449.50	6.351E-02	3.048E+00	1.160E+01	1.486E-03	3.493E-02	1.485E-01	0.000E+00	0.000E+00	0.000E+00	1.443E-03	3.470E-02
2466.00	5.250E-02	1.948E+00	7.864E+00	3.455E-04	1.193E-02	1.836E-01	0.000E+00	0.000E+00	0.000E+00	3.767E-04	1.203E-02
2482.00	3.447E-04	8.000E+01	4.923E+00	2.103E-03	9.037E-03	1.813E-01	0.000E+00	0.000E+00	0.000E+00	2.115E-03	8.944E-03

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1926.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	2.199E-02	1.976E+00	4.248E+00	2.978E-04	2.133E-02	1.765E-02	0.000E+00	0.000E+00	0.000E+00	5.273E-06	2.601E-05
2346.00	2.964E-02	1.774E+00	4.028E+01	8.150E-04	7.436E-02	1.865E-01	0.000E+00	0.000E+00	0.000E+00	2.405E-05	2.965E-04
2406.00	1.054E-01	2.320E+00	3.005E+01	3.247E-03	6.415E-03	4.639E-02	0.000E+00	0.000E+00	0.000E+00	9.109E-06	9.662E-05
2430.00	1.721E-01	3.137E+00	2.255E+01	3.867E-03	2.732E-02	3.194E-02	0.000E+00	0.000E+00	0.000E+00	2.023E-05	7.014E-05
2430.00	1.568E-01	3.137E+00	2.191E+01	3.686E-03	2.862E-02	3.911E-02	0.000E+00	0.000E+00	0.000E+00	2.040E-05	8.610E-05
2449.50	3.868E-02	3.194E+00	1.165E+01	7.814E-04	3.637E-02	1.469E-01	0.000E+00	0.000E+00	0.000E+00	1.773E-05	3.410E-04
2449.50	6.529E-02	3.038E+00	1.160E+01	1.506E-03	3.506E-02	1.484E-01	0.000E+00	0.000E+00	0.000E+00	1.203E-05	3.445E-04
2466.00	5.303E-02	1.942E+00	7.866E+00	3.428E-04	1.206E-02	1.836E-01	0.000E+00	0.000E+00	0.000E+00	2.725E-06	5.031E-04
2482.00	3.223E-04	7.967E-01	4.923E+00	2.104E-03	8.915E-03	1.813E-01	0.000E+00	0.000E+00	0.000E+00	6.557E-06	5.987E-04

0174



ORIGINAL PAGE IS  
OF POOR QUALITY.

SYSTEM 8 GROUP 13 SLIDE SLOPE BIAS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	2.099E+00	2.093E+00	7.638E-02	4.554E-02	2.471E-02	8.029E-03	0.000E+00	0.000E+00	0.000E+00	4.557E-02	1.559E-02
2466.00	4.747E-01	2.898E+01	5.353E-01	7.505E-02	3.938E-01	3.164E-02	0.000E+00	0.000E+00	0.000E+00	7.464E-02	3.971E-01
2482.00	2.737E-01	2.236E+01	6.248E-02	3.043E-02	1.614E-01	6.028E-03	0.000E+00	0.000E+00	0.000E+00	3.011E-02	1.618E-01

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	2.097E+00	2.094E+00	7.817E-02	4.553E-02	2.473E-02	8.050E-03	0.000E+00	0.000E+00	0.000E+00	1.128E-04	1.871E-05
2466.00	4.672E-01	2.898E+01	5.566E-01	7.515E-02	3.938E-01	3.193E-02	0.000E+00	0.000E+00	0.000E+00	1.488E-04	8.756E-05
2482.00	2.740E-01	2.236E+01	7.761E-02	3.044E-02	1.614E-01	5.919E-03	0.000E+00	0.000E+00	0.000E+00	9.167E-05	1.254E-05

REPRODUCED

C-52 WITH

001

SYSTEM B GROUP 14 (LOCALIZER SECONDORDER MARKOV)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2266.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2292.00	2.927E-01	1.348E+01	5.071E+01	2.760E-03	5.691F-02	3.046E-01	0.000E+00	0.000F+00	0.000E+00	2.614E-03	2.355E-01
2346.00	2.92AE-01	2.991F+00	6.015F+01	1.035E-02	1.275F-01	3.112E-01	0.000E+00	0.000F+00	0.000E+00	1.008E-02	1.255F-01
2406.00	4.107E-01	2.577E+00	3.734E+01	1.005E-02	6.092E-02	2.913E-01	0.000E+00	0.000F+00	0.000E+00	1.001E-02	5.843E-07
2430.00	3.454E-01	3.263F+00	3.092E+01	7.314E-03	4.364E-02	3.117E-01	0.000E+00	0.000F+00	0.000E+00	7.280E-03	4.173E-02
2430.00	3.006E-01	3.306F+00	2.990E+01	6.775E-03	4.224E-02	3.133E-01	0.000E+00	0.000F+00	0.000E+00	6.740E-03	4.047E-02
2449.50	1.882E-01	5.685E+00	2.394E+01	2.282E-02	4.326F-02	5.491F-01	0.000E+00	0.000F+00	0.000E+00	2.287E-02	3.935E-02
2449.50	1.023E-01	5.396E+00	2.281E+01	2.019E-02	4.215E-02	5.528E-01	0.000E+00	0.000F+00	0.000E+00	2.023E-02	3.884E-02
2466.00	1.053E-01	2.927F+00	1.123E+01	1.378E-02	5.438F-02	6.142E-01	0.000E+00	0.000F+00	0.000E+00	1.37AE-02	5.426E-02
2482.00	8.516E-02	1.155E+00	6.933E+00	1.359E-02	2.465E-02	4.261E-01	0.000E+00	0.000F+00	0.000E+00	1.359E-02	2.458E-02

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2266.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00
2292.00	2.463F-01	2.213F+01	4.758E+01	3.335E-03	2.389F-01	1.977E-01	0.000F+00	0.000F+00	0.000E+00	5.906E-05	2.913E-04
2346.00	2.906E-01	2.641F+00	6.016E+01	1.008E-02	1.294F-01	3.104E-01	0.000E+00	0.000F+00	0.000E+00	5.106E-05	4.931E-04
2406.00	4.094E-01	2.516E+00	3.734E+01	9.994E-03	6.157E-02	2.911E-01	0.000E+00	0.000F+00	0.000E+00	4.400E-05	6.006E-04
2430.00	3.446E-01	3.231E+00	3.093E+01	7.273E-03	4.399E-02	3.117E-01	0.000E+00	0.000E+00	0.000E+00	3.422E-05	6.930E-04
2430.00	2.999E-01	3.274E+00	2.990E+01	6.736E-03	4.258F-02	3.133E-01	0.000E+00	0.000E+00	0.000E+00	3.237E-05	6.966E-04
2449.50	1.858E-01	5.646E+00	2.395E+01	2.280E-02	4.307E-02	5.491F-01	0.000E+00	0.000F+00	0.000E+00	6.577E-05	1.276E-03
2449.50	1.045E-01	5.379E+00	2.282E+01	2.018E-02	4.196F-02	5.528E-01	0.000E+00	0.000F+00	0.000E+00	5.868E-05	1.285E-03
2466.00	1.059E-01	2.919E+00	1.124E+01	1.379E-02	5.404F-02	6.142E-01	0.000E+00	0.000E+00	0.000E+00	3.534E-05	1.684E-03
2482.00	8.517E-02	1.155E+00	6.933E+00	1.359E-02	2.459E-02	4.261E-01	0.000E+00	0.000E+00	0.000E+00	4.497E-05	1.407E-03

FRONTIER-0000

C-53

021111

0510

SYSTEM B GROUP 14 (GLIDE SLOPE SECOND ORDER)

PRINTED IN 11A

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2136.00											
2166.00											
2226.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	7.296E+00	7.275E+00	2.655E-01	1.583E-01	8.592E-02	2.791E-02	0.000E+00	0.000E+00	0.000E+00	1.584E-01	5.420E-02
2466.00	9.575E-01	1.262E+01	3.313E-01	1.377E-01	1.814E-01	2.851E-02	0.000E+00	0.000E+00	0.000E+00	1.377E-01	1.793E-01
2482.00	2.357E-01	1.189E+01	2.111E-01	1.466E-02	2.174E-01	1.233E-02	0.000E+00	0.000E+00	0.000E+00	1.462E-02	2.174E-01

C-54

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2136.00											
2166.00											
2226.00											
2226.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	7.292E+00	7.279E+00	2.718E-01	1.583E-01	8.599E-02	2.799E-02	0.000E+00	0.000E+00	0.000E+00	3.921E-04	6.503E-05
2466.00	9.559E-01	1.262E+01	3.391E-01	1.377E-01	1.814E-01	2.862E-02	0.000E+00	0.000E+00	0.000E+00	5.846E-04	7.847E-05
2482.00	2.356E-01	1.189E+01	2.182E-01	1.466E-02	2.174E-01	1.247E-02	0.000E+00	0.000E+00	0.000E+00	4.724E-05	4.118E-05

11A

SYSTEM B GROUP 15 (RADAR ALTIMETER BIAS ERROR)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1685.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2306.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	7.056E-02	8.210E-03	5.907E-04	1.108E-03	2.651E-05	1.328E-05	0.000E+00	0.000E+00	0.000E+00	1.108E-03	1.933E-04
2449.50	8.470E-01	1.243E-01	3.225E-03	1.191E-02	6.628E-04	3.849E-04	0.000E+00	0.000E+00	0.000E+00	1.192E-02	1.616E-03
2449.50	5.197E-01	2.068E-01	8.976E-03	4.814E-03	3.258E-03	8.822E-04	0.000E+00	0.000E+00	0.000E+00	4.812E-03	4.114E-03
2465.00	7.647E-01	8.817E+00	1.896E-01	1.176E-02	1.252E-01	1.274E-02	0.000E+00	0.000E+00	0.000E+00	1.164E-02	1.257E-01
2482.00	1.028E+00	1.422E+01	1.303E-01	1.522E-02	1.727E-01	3.602E-03	0.000E+00	0.000E+00	0.000E+00	1.501E-02	1.729E-01
TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PST ERROR

1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2306.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	7.066E-02	8.211E-03	5.796E-04	1.108E-03	2.759E-05	1.332E-05	0.000E+00	0.000E+00	0.000E+00	2.377E-06	2.957E-08
2449.50	8.469E-01	1.247E-01	3.333E-03	1.191E-02	6.693E-04	3.855E-04	0.000E+00	0.000E+00	0.000E+00	2.697E-05	8.958E-07
2449.50	5.198E-01	2.065E-01	9.151E-03	4.816E-03	3.254E-03	8.850E-04	0.000E+00	0.000E+00	0.000E+00	9.356E-06	2.056E-06
2465.00	7.670E-01	8.816E+00	1.961E-01	1.179E-02	1.257E-01	1.283E-02	0.000E+00	0.000E+00	0.000E+00	1.423E-05	3.519E-05
2482.00	1.028E+00	1.422E+01	1.399E-01	1.522E-02	1.727E-01	3.719E-03	0.000E+00	0.000E+00	0.000E+00	4.128E-05	1.229E-05

10-11-11

C-55

02/11/11

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 15 (RADAR ALT. SCALE FACTOR)

PRINTED DATA

C-56 PRINTED DATA

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	4.336E+00	5.038F-01	3.625E-02	6.801F-02	1.627E-03	8.150F-04	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	2.468E+01	5.791E+00	5.888E-02	2.910F-01	2.665F-02	3.673F-03	0.000F+00	0.000E+00	0.000E+00	6.802E-02	1.186E-02
2449.50	1.460E+01	5.627F+00	2.895E-01	7.191F-02	8.322F-02	3.337F-02	0.000E+00	0.000E+00	0.000E+00	2.911E-01	2.921E-02
2466.00	4.973E+00	7.046F+01	1.623E+00	1.389E-01	9.105E-01	1.082E-01	0.000E+00	0.000E+00	0.000E+00	7.154E-02	9.535E-02
2482.00	3.758E-02	5.894E+01	3.536E-01	2.820E-01	4.351E-01	2.940F-03	0.000E+00	0.000E+00	0.000E+00	1.399F-01	9.022F-01
2482.00	3.758E-02	5.894E+01	3.536E-01	2.820E-01	4.351E-01	2.940F-03	0.000E+00	0.000E+00	0.000E+00	2.829F-01	4.310E-01

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PST ERROR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	4.336E+00	5.038E-01	3.557E-02	6.801F-02	1.693E-03	8.174F-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	2.468E+01	3.806F+00	6.216E-02	2.910F-01	2.682F-02	3.696F-03	0.000E+00	0.000E+00	0.000E+00	6.634F-04	8.589F-06
2449.50	1.460E+01	5.619F+00	2.943E-01	7.196E-02	8.315E-02	3.344F-02	0.000E+00	0.000E+00	0.000E+00	1.246E-04	7.770E-05
2466.00	4.991F+00	7.046E+01	1.675E+00	1.387E-01	9.105F-01	1.088F-01	0.000E+00	0.000E+00	0.000E+00	5.105F-04	2.985E-04
2482.00	3.843F-02	5.894E+01	3.935F-01	2.820F-01	4.351E-01	2.645F-03	0.000E+00	0.000E+00	0.000E+00	9.549E-04	8.726F-06

4942

SYSTEM B GROUP 15 (RADAR ALT. MARKOV ERROR)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	8.673E+00	1.003E+00	7.250E-02	1.360E-01	3.254E-03	1.637E-03	0.000E+00	0.000E+00	0.000E+00	1.360E-01	2.373E-02
2449.50	3.511E+01	5.259E+00	1.570E-01	4.982E-01	3.877E-02	2.585E-02	0.000E+00	0.000E+00	0.000E+00	4.982E-01	7.873E-02
2449.50	2.071E+01	8.168E+00	3.945E-01	2.423E-01	1.272E-01	4.742E-02	0.000E+00	0.000E+00	0.000E+00	2.422E-01	1.642E-01
2466.00	3.349E+00	4.414E+01	1.031E+00	3.254E-01	5.572E-01	6.763E-02	0.000E+00	0.000E+00	0.000E+00	3.257E-01	5.541E-01
2482.00	1.762E+00	3.217E+01	2.286E-01	2.048E-01	2.818E-01	9.343E-03	0.000E+00	0.000E+00	0.000E+00	2.051E-01	2.809E-01

C-57

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	9.672E+00	1.016E+00	7.114E-02	1.360E-01	3.386E-03	1.637E-03	0.000E+00	0.000E+00	0.000E+00	2.917E-04	3.629E-06
2449.50	3.511E+01	5.279E+00	1.600E-01	4.982E-01	3.894E-02	2.585E-02	0.000E+00	0.000E+00	0.000E+00	1.126E-03	6.009E-05
2449.50	2.071E+01	8.156E+00	4.010E-01	2.424E-01	1.271E-01	4.750E-02	0.000E+00	0.000E+00	0.000E+00	4.990E-04	1.104E-04
2466.00	3.359E+00	4.413E+01	1.063E+00	3.254E-01	5.572E-01	6.905E-02	0.000E+00	0.000E+00	0.000E+00	9.361E-04	1.865E-04
2482.00	1.762E+00	3.217E+01	2.479E-01	2.048E-01	2.818E-01	9.407E-03	0.000E+00	0.000E+00	0.000E+00	6.616E-04	3.107E-05

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM B GROUP 16 COMF SURVEY ERRORS - 1&2

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.998E-01	2.438E+01	2.217E+01	1.422E-03	7.689E-04	8.636E-04	0.000E+00	0.000E+00	0.000E+00	1.335E-03	1.095E-03
1746.00	1.042E+01	4.074E+01	3.276E+01	1.714E-03	5.922E-02	4.170E-02	0.000E+00	0.000E+00	0.000E+00	2.230E-04	6.983E-02
1806.00	1.185E+02	3.996E+01	4.500E+00	1.286E-01	1.253E-02	1.253E-01	0.000E+00	0.000E+00	0.000E+00	1.297E-01	1.389E-01
1806.00	5.634E+00	1.095E+01	7.238E+00	1.304E-01	1.189E-02	2.317E-02	0.000E+00	0.000E+00	0.000E+00	1.207E-01	1.750E-02
1866.00	1.466E+00	9.261E+00	8.508E+00	5.224E-02	3.049E-02	2.279E-02	0.000E+00	0.000E+00	0.000E+00	5.260E-02	1.088E-02
1926.00	1.236E+00	6.137E+00	5.419E+00	2.887E-02	1.456E-02	1.648E-02	0.000E+00	0.000E+00	0.000E+00	2.895E-02	5.519E-03
1986.00	2.929E-01	5.638E+00	4.889E+00	3.734E-03	1.579E-02	1.452E-02	0.000E+00	0.000E+00	0.000E+00	3.713E-03	2.821E-03
2046.00	5.952E-01	5.035E+00	4.282E+00	4.699E-03	1.922E-02	1.491E-02	0.000E+00	0.000E+00	0.000E+00	4.661E-03	9.971E-03
2092.00	7.827E-01	3.226E+00	9.983E-01	3.351E-03	2.042E-02	1.681E-02	0.000E+00	0.000E+00	0.000E+00	3.339E-03	2.218E-02
2106.00	6.295E-01	2.916E+00	7.239E-01	2.034E-03	1.972E-02	1.779E-02	0.000E+00	0.000E+00	0.000E+00	2.027E-03	2.379E-02
2166.00	1.669E-01	1.935E+00	1.666E+00	4.149E-03	1.081E-02	1.932E-02	0.000E+00	0.000E+00	0.000E+00	4.122E-03	1.888E-02
2226.00	9.348E-02	1.688E+00	2.871E+00	3.600E-03	6.006E-02	2.006E-02	0.000E+00	0.000E+00	0.000E+00	3.633E-03	1.320E-02
2286.00	7.444E-02	9.135E-01	3.257E+00	1.830E-03	8.442E-03	1.550E-02	0.000E+00	0.000E+00	0.000E+00	1.842E-03	1.659E-02
2292.00	7.690E-02	8.668E-01	3.291E+00	1.705E-03	8.549E-03	1.513E-02	0.000E+00	0.000E+00	0.000E+00	1.714E-03	1.579E-02
2292.00	7.275E-02	8.214E-01	2.990E+00	1.651E-03	8.296E-03	1.337E-02	0.000E+00	0.000E+00	0.000E+00	1.650E-03	1.449E-02
2346.00	3.193E-02	7.275E-01	5.170E-01	4.117E-04	2.030E-03	4.234E-03	0.000E+00	0.000E+00	0.000E+00	4.137E-04	1.001E-03
2406.00	1.089E-02	7.239E-01	1.930E-01	2.253E-04	4.478E-04	5.342E-03	0.000E+00	0.000E+00	0.000E+00	2.213E-04	4.277E-04
2430.00	1.242E-02	7.302E-01	1.903E-01	1.903E-04	4.550E-04	4.480E-03	0.000E+00	0.000E+00	0.000E+00	1.864E-04	4.525E-04
2430.00	1.158E-02	7.311E-01	1.814E-01	1.798E-04	5.127E-04	4.377E-03	0.000E+00	0.000E+00	0.000E+00	1.769E-04	5.887E-04
2449.50	4.344E-03	7.624E-01	2.461E-02	1.162E-04	1.921E-03	2.693E-03	0.000E+00	0.000E+00	0.000E+00	1.068E-04	1.884E-03
2449.50	2.114E-02	7.024E-01	2.327E-02	5.012E-04	1.900E-03	2.644E-03	0.000E+00	0.000E+00	0.000E+00	4.865E-04	1.881E-03
2466.00	1.059E-02	3.951E-01	9.855E-03	3.456E-04	5.357E-03	1.387E-03	0.000E+00	0.000E+00	0.000E+00	3.534E-04	5.366E-03
2482.00	9.147E-04	1.812E-01	3.325E-03	6.723E-04	7.534E-03	4.554E-04	0.000E+00	0.000E+00	0.000E+00	6.748E-04	7.541E-03
TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	3.088E-01	1.177E+01	3.078E+01	1.464E-03	1.025E-03	4.056E-04	0.000E+00	0.000E+00	0.000E+00	2.781E-07	5.304E-07
1746.00	1.038E+01	1.039E+00	5.228E+01	1.664E-04	7.000E-02	1.867E-02	0.000E+00	0.000E+00	0.000E+00	1.385E-06	5.937E-06
1806.00	1.179E+02	2.776E+01	3.246E+01	1.261E-01	1.492E-01	1.786E-02	0.000E+00	0.000E+00	0.000E+00	5.214E-05	6.483E-06
1806.00	5.602E+00	1.810E+00	1.301E+01	1.300E-01	1.746E-02	3.389E-03	0.000E+00	0.000E+00	0.000E+00	4.863E-05	1.725E-06
1866.00	1.467E+00	4.501E+00	1.174E+01	5.220E-02	1.746E-02	3.389E-03	0.000E+00	0.000E+00	0.000E+00	2.835E-05	1.811E-05
1926.00	1.431E+00	2.813E+00	7.689E+00	2.878E-02	1.035E-02	1.945E-02	0.000E+00	0.000E+00	0.000E+00	2.867E-05	1.502E-05
1986.00	2.941E-01	8.682E-01	7.410E+00	3.734E-03	2.840E-03	2.126E-02	0.000E+00	0.000E+00	0.000E+00	3.881E-06	2.216E-05
2046.00	5.949E-01	2.958E+00	5.911E+00	4.698E-03	9.762E-03	2.220E-02	0.000E+00	0.000E+00	0.000E+00	5.095E-06	2.734E-05
2092.00	7.815E-01	2.185E+00	2.568E+00	3.354E-03	2.261E-02	1.372E-02	0.000E+00	0.000E+00	0.000E+00	6.170E-06	1.572E-05
2106.00	6.989E-01	2.035E+00	2.211E+00	2.037E-03	2.360E-02	1.216E-02	0.000E+00	0.000E+00	0.000E+00	4.923E-06	1.402E-05
2166.00	1.665E-01	1.936E+00	1.665E+00	4.111E-03	1.082E-02	1.932E-02	0.000E+00	0.000E+00	0.000E+00	4.860E-06	2.428E-05
2226.00	1.665E-01	1.936E+00	1.665E+00	4.111E-03	1.082E-02	1.932E-02	0.000E+00	0.000E+00	0.000E+00	4.860E-06	2.428E-05
2226.00	7.646E-02	2.070E+00	2.675E+00	1.812E-03	1.701E-02	4.730E-03	0.000E+00	0.000E+00	0.000E+00	7.062E-06	2.109E-05
2292.00	7.692E-02	1.825E+00	2.872E+00	1.689E-03	1.616E-02	6.395E-03	0.000E+00	0.000E+00	0.000E+00	6.015E-06	6.949E-06
2292.00	7.264E-02	1.705E+00	2.590E+00	1.635E-03	1.483E-02	5.242E-03	0.000E+00	0.000E+00	0.000E+00	5.230E-06	7.772E-06
2346.00	3.133E-02	7.281E-01	5.163E-01	4.116E-04	2.031E-03	4.233E-03	0.000E+00	0.000E+00	0.000E+00	6.940E-07	6.688E-06
2406.00	1.084E-02	7.239E-01	1.932E-01	1.932E-04	4.514E-04	5.342E-03	0.000E+00	0.000E+00	0.000E+00	5.310E-07	1.101E-05
2430.00	1.247E-02	7.302E-01	1.905E-01	1.903E-04	4.509E-04	4.480E-03	0.000E+00	0.000E+00	0.000E+00	3.975E-07	9.957E-06
2430.00	1.162E-02	7.311E-01	1.815E-01	1.800E-04	5.083E-04	4.378E-03	0.000E+00	0.000E+00	0.000E+00	3.824E-07	9.728E-06
2449.50	4.357E-03	7.624E-01	2.481E-02	1.101E-04	1.919E-03	2.694E-03	0.000E+00	0.000E+00	0.000E+00	8.874E-07	6.259E-06
2449.50	2.156E-02	7.424E-01	2.346E-02	5.014E-04	1.898E-03	2.644E-03	0.000E+00	0.000E+00	0.000E+00	1.259E-06	6.147E-06
2466.00	1.069E-02	3.951E-01	9.788E-03	3.469E-04	5.356E-03	1.388E-03	0.000E+00	0.000E+00	0.000E+00	3.878E-07	3.805E-06
2482.00	9.128E-04	1.812E-01	3.222E-03	6.723E-04	7.534E-03	4.553E-04	0.000E+00	0.000E+00	0.000E+00	1.935E-06	1.500E-06

C-58

C-58

C-58

5405

SYSTEM B GROUP 17 LOCALIZER SURVER ERRORS

POSITION ESTIMATE ERROR VELOCITY ESTIMATE ERROR PLATFORM TILT ESTIMATE ERROR ALTITUDE VELOCITY

R D C R D C R D C RATE FRPR MAG FRPR

TIME	R	D	C	R	D	C	R	D	C	RATE FRPR	MAG FRPR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	4.795E-04	2.209E-02	8.310E-02	4.850E-06	9.325E-05	4.995E-04	0.000E+00	0.000E+00	0.000E+00	4.283E-06	3.560E-04
2346.00	3.456E-04	4.392E-02	9.023E-01	3.867E-05	1.707E-03	4.316E-03	0.000E+00	0.000E+00	0.000E+00	3.215E-05	1.692E-03
2406.00	1.495E-04	6.763E-02	1.058E+00	1.987E-05	3.075E-04	3.634E-03	0.000E+00	0.000E+00	0.000E+00	2.185E-05	3.135E-04
2430.00	1.652E-03	1.130E-01	1.054E+00	5.222E-05	4.230E-04	2.861E-03	0.000E+00	0.000E+00	0.000E+00	5.420E-05	4.006E-04
2430.00	1.647E-03	1.171E-01	1.046E+00	5.255E-05	4.908E-04	2.784E-03	0.000E+00	0.000E+00	0.000E+00	5.456E-05	4.670E-04
2449.50	1.814E-03	2.088E-01	1.006E+00	2.789E-05	1.597E-03	1.811E-03	0.000E+00	0.000E+00	0.000E+00	3.124E-05	1.561E-03
2449.50	4.710E-03	2.035E-01	1.005E+00	1.149E-04	1.538E-03	1.770E-03	0.000E+00	0.000E+00	0.000E+00	1.116E-04	1.530E-03
2466.00	4.678E-03	1.711E-01	1.002E+00	3.497E-05	6.564E-04	8.411E-04	0.000E+00	0.000E+00	0.000E+00	3.777E-05	6.532E-04
2482.00	2.228E-04	7.999E-02	9.994E-01	2.495E-04	9.521E-04	2.512E-04	0.000E+00	0.000E+00	0.000E+00	2.597E-04	9.557E-04

U V W U V W U V W GAMMA ERROR PSI FRPR

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI FRPR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	4.036E-04	3.626E-02	7.796E-02	5.465E-06	3.915E-04	3.239E-04	0.000E+00	0.000E+00	0.000E+00	9.677E-08	4.773E-07
2346.00	2.178E-04	3.836E-02	9.025E-01	3.330E-05	1.733E-03	4.305E-03	0.000E+00	0.000E+00	0.000E+00	5.825E-07	6.843E-06
2406.00	2.423E-04	6.524E-02	1.058E+00	2.034E-05	3.157E-04	3.633E-03	0.000E+00	0.000E+00	0.000E+00	8.366E-06	7.521E-06
2430.00	1.539E-03	1.116E-01	1.054E+00	5.180E-05	4.192E-04	2.862E-03	0.000E+00	0.000E+00	0.000E+00	2.973E-07	6.394E-06
2430.00	1.530E-03	1.157E-01	1.046E+00	5.206E-05	4.871E-04	2.785E-03	0.000E+00	0.000E+00	0.000E+00	3.274E-07	6.223E-06
2449.50	1.691E-03	2.080E-01	1.006E+00	2.696E-05	1.595E-03	1.813E-03	0.000E+00	0.000E+00	0.000E+00	7.645E-07	4.247E-06
2449.50	4.829E-03	2.027E-01	1.005E+00	1.158E-04	1.536E-03	1.771E-03	0.000E+00	0.000E+00	0.000E+00	4.191E-07	4.150E-06
2466.00	4.725E-03	1.704E-01	1.002E+00	3.480E-05	6.558E-04	8.416E-04	0.000E+00	0.000E+00	0.000E+00	1.955E-07	2.336E-06
2482.00	2.194E-04	7.932E-02	9.995E-01	2.495E-04	9.522E-04	2.506E-04	0.000E+00	0.000E+00	0.000E+00	7.820E-07	8.527E-07

C-59

15394



SYSTEM 8 GROUP 17 (GLIDE SLOPE SURVEY ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERPR	MAG ERROR
1626.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	3.886E-01	3.874E-01	1.414E-02	8.433E-03	4.576E-03	1.487E-03	0.000E+00	0.000E+00	0.000E+00	8.438E-03	2.887E-03
2466.00	2.593E-01	9.055E+00	1.006E-01	5.301E-03	1.277E-01	1.261E-02	0.000E+00	0.000E+00	0.000E+00	5.177E-03	1.278E-01
2482.00	2.633E-02	1.440E+01	1.300E-01	1.513E-02	1.750E-01	3.491E-03	0.000E+00	0.000E+00	0.000E+00	1.495E-02	1.752E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1626.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	3.886E-01	3.877E-01	1.447E-02	8.430E-03	4.580E-03	1.490E-03	0.000E+00	0.000E+00	0.000E+00	2.058E-05	3.463E-04
2466.00	2.569E-01	9.055E+00	1.973E-01	5.334E-03	1.277E-01	1.270E-02	0.000E+00	0.000E+00	0.000E+00	3.622E-06	3.484E-05
2482.00	2.654E-02	1.440E+01	1.398E-01	1.514E-02	1.749E-01	3.609E-03	0.000E+00	0.000E+00	0.000E+00	4.089E-05	1.192E-05

SYSTEM 8

C-60 DATA

05376

SYSTEM B GROUP 18 (LCL FIRST ORDER MARKOV)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	2.927E-01	1.346F+01	5.071E+01	2.960F-03	5.691E-02	3.048F+01	0.000E+00	0.000F+00	0.000E+00	2.618E-03	2.358E-01
2346.00	4.031E-01	4.421F+00	8.972E+01	1.416E-02	1.854F-01	4.549F-01	0.000F+00	0.000F+00	0.000E+00	1.379E-02	1.827E-01
2406.00	6.104E-01	3.244F+00	5.578E+01	1.484E-02	6.994F-02	4.177E-01	0.000E+00	0.000E+00	0.000E+00	1.473F-02	8.626E-02
2430.00	5.271E-01	4.810F+00	4.569E+01	1.104F-02	6.724F-02	4.495F-01	0.000E+00	0.000F+00	0.000E+00	1.194E-02	6.439E-02
2430.00	4.600F-01	4.853F+00	4.414E+01	1.029F-02	6.535E-02	4.520F-01	0.000F+00	0.000E+00	0.000E+00	1.025F-02	6.262E-02
2449.50	1.972F-01	8.105F+00	3.930F+01	2.383E-02	5.764E-02	7.021F-01	0.000F+00	0.000E+00	0.000E+00	2.387F-02	5.420E-02
2449.50	1.791E-01	7.758E+00	3.812E+01	2.237E-02	5.588E-02	7.043E-01	0.000E+00	0.000F+00	0.000E+00	2.239E-02	5.315E-02
2466.00	1.250F-01	4.289E+00	1.999E+01	1.768E-02	7.868F-02	9.352F-01	0.000F+00	0.000E+00	0.000E+00	1.769E-02	7.834E-02
2482.00	1.244E-01	1.865E+00	1.164E+01	1.820E-02	5.017E-02	7.441E-01	0.000E+00	0.000E+00	0.000E+00	1.822E-02	4.981E-02

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
	1686.00										
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
2292.00	2.483E-01	3.213E+01	4.758E+01	3.335E-03	2.389F-01	1.977E-01	0.000F+00	0.000E+00	0.000E+00	5.906E-05	2.913E-04
2346.00	3.998E-01	3.895E+00	8.975E+01	1.379F-02	1.862E-01	4.537E-01	0.000F+00	0.000F+00	0.000E+00	7.269E-05	7.210E-04
2406.00	6.067E-01	3.754E+00	5.578E+01	1.471E-02	9.087E-02	4.175E-01	0.000F+00	0.000E+00	0.000E+00	6.491E-05	8.513E-04
2430.00	5.257E-01	4.764E+00	4.569E+01	1.102E-02	6.774E-02	4.494E-01	0.000F+00	0.000F+00	0.000E+00	5.239E-05	9.993E-04
2430.00	4.586E-01	4.804E+00	4.414E+01	1.023F-02	6.586E-02	4.519E-01	0.000F+00	0.000F+00	0.000E+00	4.976E-05	1.005E-03
2449.50	1.946E-01	8.107E+00	3.930E+01	2.381F-02	5.754E-02	7.021E-01	0.000F+00	0.000F+00	0.000E+00	7.012E-05	1.632E-03
2449.50	1.829E-01	7.708E+00	3.812E+01	2.237F-02	5.578E-02	7.043E-01	0.000E+00	0.000F+00	0.000E+00	6.411F-05	1.637E-03
2466.00	1.259E-01	4.257E+00	1.999E+01	1.768E-02	7.834F-02	9.352F-01	0.000E+00	0.000F+00	0.000E+00	4.852E-05	2.565E-03
2482.00	1.244E-01	1.862E+00	1.164E+01	1.821E-02	4.987E-02	7.441E-01	0.000E+00	0.000E+00	0.000E+00	6.064E-05	2.457E-03

C-61

C-61

SYSTEM B GROUP 18 (CLS FIRST ORDER MARKOV)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00
2449.50	7.296E+00	7.275F+00	2.655E-01	1.583F-01	8.592E-02	2.791F-02	0.000E+00	0.000E+00	0.000E+00	1.584E-01	5.427E-02
2466.00	1.121E+00	2.375F+01	5.100E-01	1.706F-01	3.308E-01	3.608E-02	0.000E+00	0.000E+00	0.000E+00	1.705E-01	3.318E-01
2482.00	3.280E-01	1.791E+01	2.541E-01	2.635E-02	2.733E-01	1.619F-02	0.000F+00	0.000E+00	0.000E+00	2.516E-02	2.735F-01

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2292.00	0.000E+00	0.000F+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000F+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2449.50	7.297E+00	7.279E+00	2.718E-01	1.583F-01	8.599E-02	2.799F-02	0.000E+00	0.000E+00	0.000E+00	3.921E-04	6.503E-05
2466.00	1.118E+00	2.375F+01	5.258E-01	1.706E-01	3.308E-01	3.829E-02	0.000E+00	0.000E+00	0.000E+00	4.618F-04	1.450E-04
2482.00	3.281E-01	1.791E+01	2.625E-01	2.635F-02	2.733E-01	1.634E-02	0.000E+00	0.000E+00	0.000E+00	6.087E-05	5.396E-05

C-62

C-62

C-62

12762

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 1

(LOWD DCPM MARKOV = 8W

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1685.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.994E+01	4.242E+01	1.149E+00	6.513E-02	4.440E-02	6.104E-02	7.328E-08	2.968E-08	2.528E-08	5.558E-02	1.296E-02
1746.00	4.194E+01	2.512E+01	3.514E+01	1.070E-01	6.258E-02	5.549E-02	1.567E-07	1.511E-06	1.115E-06	1.022E-01	9.147E-03
1806.00	8.197E+01	2.280E+01	4.795E+01	1.949E-01	5.008E-02	2.532E-02	5.234E-07	2.216E-06	1.316E-06	1.881E-01	1.136E-02
1866.00	2.028E+01	6.264E+01	5.738E+01	4.333E-03	3.703E-02	4.022E-02	2.009E-06	4.597E-06	3.860E-06	1.743E-06	5.010E-02
1866.00	1.096E+01	3.792E+01	4.548E+01	3.214E-02	4.125E-02	4.070E-02	2.766E-06	4.189E-06	3.147E-06	2.822E-02	4.940E-02
1926.00	1.147E+01	2.387E+01	3.055E+01	2.844E-02	3.442E-02	5.522E-02	3.001E-06	4.286E-06	5.454E-06	6.441E-02	3.860E-02
1966.00	3.339E+01	1.171E+01	2.680E+01	6.558E-02	4.122E-02	7.806E-02	5.286E-06	5.079E-06	6.636E-06	5.646E-02	7.033E-02
2046.00	1.630E+01	1.262E+01	7.344E+00	5.676E-02	8.561E-02	1.134E-01	8.188E-02	1.079E-05	1.597E-05	8.593E-02	9.618E-02
2092.00	2.833E+01	7.179E+01	8.640E+00	8.561E-02	1.134E-01	8.188E-02	1.079E-05	1.417E-05	3.961E-05	1.665E-01	1.167E-01
2106.00	2.954E+01	1.772E+01	8.443E+00	1.663E-01	1.386E-01	1.908E-01	4.029E-05	1.412E-05	3.244E-05	9.909E-02	9.436E-02
2166.00	1.677E+01	2.837E+01	1.922E+01	9.923E-02	9.155E-02	2.452E-01	3.504E-05	4.126E-05	1.824E-05	1.329E-01	1.128E-01
2226.00	2.260E+01	1.776E+01	1.282E+01	1.329E-01	1.149E-01	1.053E-01	3.480E-05	2.553E-05	1.814E-05	1.633E-01	1.567E-01
2286.00	2.973E+01	2.433E+01	1.534E+01	1.631E-01	1.205E-01	1.775E-01	3.780E-05	2.943E-05	1.764E-05	1.602E-01	1.444E-01
2292.00	2.967E+01	2.485E+01	1.461E+01	1.600E-01	1.148E-01	1.836E-01	3.822E-05	2.943E-05	1.134E-05	1.121E-01	8.585E-02
2346.00	2.077E+01	7.819E+01	8.880E+00	1.118E-01	8.807E-02	1.715E-01	3.343E-05	2.507E-05	4.567E-05	8.370E-01	5.471E-02
2366.00	1.978E-02	1.029E+02	5.636E+01	6.348E-01	1.157E-01	7.831E-01	1.105E-04	2.889E-05	2.161E-05	4.752E-05	3.092E-01
2430.00	1.852E+01	4.742E+01	2.152E+01	4.598E-02	3.222E-01	2.666E-01	2.907E-05	2.157E-05	4.716E-05	3.652E-02	3.087E-01
2430.00	1.524E+01	4.151E+01	2.107E+01	3.615E-02	3.180E-01	2.052E-01	2.907E-05	2.604E-05	4.607E-05	8.571E-02	3.262E-01
2449.50	5.615E+00	4.252E+01	2.528E+01	8.609E-02	3.200E-01	2.451E-01	3.237E-05	1.084E-05	4.763E-05	8.750E-02	3.600E-01
2456.00	5.696E-01	4.969E+01	1.064E+01	8.803E-02	3.570E-01	9.863E-02	2.282E-05	1.084E-05	4.941E-05	1.530E-01	3.445E-01
2472.00	2.566E-01	1.019E+00	3.591E+00	1.533E-01	3.380E-01	8.109E-02	3.089E-05	8.241E-06	4.941E-05	1.153E-01	1.645E-01
2477.00	2.460E-01	1.070E+00	1.285E+00	1.153E-01	1.606E-01	7.980E-02	2.909E-05	9.843E-06	3.630E-05	1.153E-01	1.645E-01
2482.00	4.061E-01	1.804E+00	1.468E+00	9.564E-02	1.521E-01	7.916E-02	2.859E-05	9.462E-06	3.561E-05	9.361E-02	1.533E-01

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W	RATE ERROR	PSI ERROR	
1685.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1686.00	2.103E+01	3.766E+01	1.838E+01	6.451E-02	9.834E-03	7.537E-02	7.328E-08	1.251E-08	5.693E-08	1.102E-05	1.515E-05	
1746.00	4.266E+01	2.667E+01	3.310E+01	1.069E-01	1.317E-02	8.279E-02	1.574E-07	1.140E-07	1.874E-06	2.704E-05	2.277E-05	
1806.00	8.276E+01	5.079E+01	1.042E+01	1.945E-01	1.046E-02	5.546E-02	5.326E-07	2.823E-07	2.560E-06	6.952E-05	2.174E-05	
1866.00	1.889E+01	7.863E+01	3.256E+01	4.182E-03	5.028E-02	2.150E-02	1.979E-06	4.826E-07	4.905E-06	2.717E-06	9.054E-06	
1866.00	1.065E+01	5.411E+01	2.418E+01	3.168E-02	5.314E-02	2.372E-02	2.735E-06	3.621E-06	1.770E-06	1.739E-05	1.180E-05	
1926.00	1.147E+01	3.704E+01	1.150E+01	2.620E-02	3.168E-02	6.272E-02	1.773E-06	4.378E-06	2.906E-06	2.540E-05	1.407E-05	
1966.00	3.346E+01	2.682E+01	1.164E+01	6.559E-02	3.764E-02	8.010E-02	5.268E-06	6.912E-06	7.243E-07	6.596E-05	8.565E-05	
2046.00	1.631E+01	8.717E+00	1.171E+01	5.674E-02	8.045E-02	4.211E-02	3.557E-06	7.685E-06	3.283E-06	8.272E-05	5.182E-05	
2092.00	2.835E+01	1.543E+01	1.762E+01	8.564E-02	9.860E-02	9.917E-02	1.277E-05	9.314E-06	1.693E-05	1.984E-04	2.268E-04	
2106.00	2.955E+01	1.470E+01	1.299E+01	1.666E-01	1.280E-01	1.970E-01	4.022E-05	2.236E-05	3.571E-05	1.984E-04	2.268E-04	
2166.00	1.680E+01	2.835E+01	1.922E+01	9.942E-02	9.155E-02	2.431E-01	3.566E-05	4.117E-05	3.256E-05	1.189E-04	3.044E-04	
2226.00	2.260E+01	1.094E+01	1.896E+01	1.331E-01	1.048E-01	1.151E-01	3.480E-05	2.606E-05	1.732E-05	1.661E-04	1.539E-04	
2286.00	2.971E+01	2.252E+01	1.791E+01	1.631E-01	1.409E-01	1.618E-01	3.773E-05	1.511E-05	3.059E-05	2.115E-04	2.551E-04	
2292.00	2.965E+01	2.321E+01	1.713E+01	1.600E-01	1.310E-01	1.725E-01	3.844E-05	1.696E-05	2.967E-05	2.150E-04	2.529E-04	
2346.00	2.075E+01	2.618E+01	8.141E+00	1.117E-01	8.755E-02	1.718E-01	3.350E-05	2.494E-05	1.143E-05	1.143E-04	2.720E-04	
2366.00	1.976E+02	1.031E+02	5.659E+01	8.367E-01	1.153E-01	7.830E-01	1.106E-04	8.545E-05	2.560E-05	1.702E-03	1.616E-03	
2430.00	1.849E+01	4.241E+01	2.155E+01	4.575E-02	3.221E-01	2.087E-01	2.891E-05	2.189E-05	4.752E-05	2.223E-04	4.643E-04	
2430.00	1.521E+01	4.151E+01	2.110E+01	3.602E-02	3.179E-01	2.053E-01	2.908E-05	2.135E-05	4.609E-05	1.347E-04	5.756E-04	
2449.50	5.603E+00	4.252E+01	2.528E+01	8.622E-02	3.201E-01	2.450E-01	3.237E-05	1.084E-05	4.763E-05	2.035E-04	2.707E-04	
2456.00	5.696E-01	4.969E+01	1.064E+01	8.810E-02	3.569E-01	9.866E-02	2.283E-05	1.084E-05	4.941E-05	4.061E-04	2.589E-04	
2472.00	2.566E-01	1.016E+00	3.591E+00	1.530E-01	3.380E-01	8.075E-02	3.089E-05	8.232E-06	4.941E-05	3.438E-04	2.499E-04	
2477.00	2.461E-01	1.071E+00	1.284E+00	1.153E-01	1.607E-01	7.973E-02	2.909E-05	9.843E-06	3.631E-05	3.438E-04	2.499E-04	
2482.00	4.061E-01	1.805E+00	1.467E+00	9.564E-02	1.521E-01	7.909E-02	2.859E-05	9.447E-06	3.561E-05	3.028E-04	2.612E-04	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)  
 2.619E-08 3.884E-08 4.577E-08 7.332E-06 6.360E-06 4.394E-06 3.485E-05 2.152E-05 2.234E-05  
 3.648E-02 3.010E-04 -3.499E-01 1.406E-01

C-63

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 1

COMO DCPM MARKOV = EW

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLAT-OPM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.002E+00	2.131E+00	5.775E-02	3.272E-03	2.230E-03	3.066E-03	3.681E-09	1.491E-09	1.270E-09	2.792E-03	6.510E-04
1746.00	2.379E+00	1.664E+00	1.781E+00	6.165E-03	3.117E-03	2.974E-03	8.028E-09	7.753E-08	5.746E-08	5.861E-03	6.141E-04
1806.00	4.043E+00	1.277E+00	2.417E+00	9.641E-03	2.551E-03	1.303E-03	2.804E-08	1.088E+07	6.531E-08	9.298E-03	6.616E-04
1806.00	9.996E-01	3.088E+00	2.815E+00	2.989E-04	1.875E-03	2.075E-03	1.024E-07	2.249E-07	8.611E-08	5.688E-04	2.481E-03
1866.00	6.833E-01	1.859E+00	2.304E+00	1.869E-03	2.176E-03	2.017E-03	1.462E-07	1.874E-07	1.078E-07	1.707E-03	2.450E-03
1926.00	7.414E-01	1.713E+00	1.605E+00	1.833E-03	1.822E-03	2.763E-03	1.645E-07	2.062E-07	1.762E-07	1.749E-03	2.864E-03
1926.00	1.888E+00	7.857E-01	1.623E+00	3.957E-03	2.400E-03	4.024E-03	2.850E-07	2.139E-07	2.801E-07	3.883E-03	2.059E-03
1986.00	1.113E+00	8.682E-01	3.572E-01	3.496E-03	2.750E-03	4.350E-03	2.477E-07	2.955E-07	3.980E-07	3.481E-03	3.754E-03
2046.00	2.009E+00	1.527E+00	4.547E-01	5.757E-03	5.812E-03	5.616E-03	9.880E-07	6.978E-07	1.854E-06	5.789E-03	5.645E-03
2092.00	2.095E+00	1.251E+00	4.437E-01	1.177E-02	6.578E-03	1.325E-02	2.803E-06	9.765E-07	2.809E-06	1.179E-02	6.605E-03
2106.00	1.133E+00	1.976E+00	1.371E+00	1.371E+00	7.045E-03	1.733E-02	2.406E-06	2.926E-06	2.273E-06	7.034E-03	5.084E-03
2166.00	1.569E+00	1.116E+00	8.202E-01	9.328E-03	6.091E-03	7.460E-03	2.770E-06	1.722E-06	1.268E-06	9.328E-03	7.523E-03
2226.00	2.083E+00	1.447E+00	1.059E+00	1.155E-02	6.676E-03	1.215E-02	2.400E-06	1.910E-06	1.253E-06	1.157E-02	1.100E-02
2286.00	2.083E+00	1.471E+00	1.017E+00	1.134E-02	6.344E-03	1.247E-02	2.435E-06	1.930E-06	1.210E-06	1.135E-02	1.007E-02
2292.00	1.751E+00	1.575E+00	5.705E-01	7.929E-03	4.518E-03	1.110E-02	2.118E-06	1.619E-06	7.597E-07	7.951E-03	4.340E-03
2346.00	1.002E+01	5.045E+00	2.857E+00	4.218E-02	5.858E-03	3.909E-02	5.478E-06	4.290E-06	1.232E-06	4.228E-02	2.829E-03
2406.00	9.758E-01	1.100E+00	1.392E+00	2.815E-03	1.630E-02	1.378E-02	1.992E-06	1.463E-06	2.525E-06	2.839E-03	1.565E-02
2430.00	8.183E-01	2.058E+00	1.380E+00	2.460E-03	1.609E-02	1.372E-02	2.008E-06	1.462E-06	2.506E-06	2.479E-03	1.565E-02
2449.50	3.520E-01	2.086E+00	1.782E+00	5.184E-03	1.625E-02	1.712E-02	2.214E-06	1.800E-06	2.440E-06	5.174E-03	1.654E-02
2466.00	4.037E-02	2.419E+00	6.748E-01	5.216E-03	1.814E-02	6.874E-03	1.569E-06	7.681E-07	2.493E-06	5.197E-03	1.829E-02
2472.00	1.648E-02	7.210E-02	2.539E-01	7.907E-03	1.729E-02	5.202E-03	1.884E-06	5.824E-07	2.567E-06	7.909E-03	1.759E-02
2477.00	1.314E-02	5.954E-02	6.880E-02	6.094E-03	8.734E-03	4.908E-03	1.791E-06	6.344E-07	1.897E-06	6.093E-03	8.412E-03
2482.00	2.110E-02	9.263E-02	8.227E-02	4.952E-03	7.943E-03	4.919E-03	1.770E-06	6.206E-07	1.869E-06	4.951E-03	7.998E-03

TIME	U			V			W			K			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.057E+00	1.892E+00	9.230E-01	3.240E-03	4.939E-04	3.786E-03	3.681E-09	6.286E-10	1.855E-09	5.535E-07	7.611E-07	1.151E-06	1.151E-06	1.151E-06
1746.00	2.421E+00	1.639E+00	1.748E+00	6.150E-03	9.129E-04	4.147E-03	8.068E-09	5.794E-09	9.632E-08	1.554E-06	1.151E-06	1.151E-06	1.151E-06	1.151E-06
1806.00	4.063E+00	2.579E+00	7.018E-01	9.624E-03	6.553E-04	2.847E-03	2.804E-08	1.658E-08	1.256E-07	3.438E-06	1.115E-06	1.115E-06	1.115E-06	1.115E-06
1806.00	9.312E-01	3.856E+00	1.652E+00	2.947E-04	2.490E-03	1.274E-03	1.010E-07	2.477E-08	2.402E-07	1.571E-07	5.200E-07	7.006E-07	7.006E-07	7.006E-07
1866.00	6.767E-01	2.673E+00	1.280E+00	1.849E-03	2.641E-03	1.376E-03	1.447E-07	1.893E-07	1.062E-07	1.006E-06	1.006E-06	1.006E-06	1.006E-06	1.006E-06
1926.00	7.408E-01	1.920E+00	6.809E-01	1.822E-03	3.104E-03	1.165E-03	1.632E-07	2.320E-07	1.420E-07	1.566E-06	9.169E-07	9.169E-07	9.169E-07	9.169E-07
1986.00	1.891E+00	1.674E+00	6.578E-01	3.956E-03	2.113E-03	4.184E-03	2.841E-07	3.503E-07	4.468E-08	4.041E-06	4.370E-06	4.370E-06	4.370E-06	4.370E-06
2046.00	1.113E+00	4.518E-01	8.204E-01	3.495E-03	4.313E-03	2.809E-03	2.477E-07	4.585E-07	1.885E-07	4.915E-06	3.454E-06	3.454E-06	3.454E-06	3.454E-06
2092.00	2.011E+00	9.856E-01	1.250E+00	5.761E-03	6.017E-03	5.391E-03	6.079E-07	6.240E-07	1.100E-06	6.918E-06	6.161E-06	6.161E-06	6.161E-06	6.161E-06
2106.00	2.095E+00	9.704E-01	9.041E-01	1.179E-02	1.380E-02	1.380E-02	2.838E-06	1.584E-06	2.523E-06	1.402E-05	1.589E-05	1.589E-05	1.589E-05	1.589E-05
2166.00	2.095E+00	1.977E+00	1.271E+00	7.058E-03	4.736E-03	1.713E-02	2.407E-06	2.920E-06	2.280E-06	6.362E-06	2.145E-06	2.145E-06	2.145E-06	2.145E-06
2226.00	1.569E+00	7.765E-01	1.153E+00	9.540E-03	6.778E-03	6.826E-03	2.276E-06	2.774E-06	1.786E-06	1.165E-06	1.165E-06	1.165E-06	1.165E-06	1.165E-06
2286.00	2.081E+00	1.371E+00	1.160E+00	1.155E-02	9.876E-03	9.729E-03	2.409E-06	9.839E-07	2.052E-06	1.499E-05	1.414E-05	1.414E-05	1.414E-05	1.414E-05
2292.00	2.081E+00	1.396E+00	1.122E+00	1.134E-02	9.113E-03	1.062E-02	2.443E-06	1.999E-06	1.986E-06	1.515E-05	1.558E-05	1.558E-05	1.558E-05	1.558E-05
2346.00	1.750E+00	1.576E+00	5.741E-01	7.926E-03	4.895E-03	1.111E-02	2.122E-06	1.610E-06	7.652E-07	1.247E-05	1.760E-05	1.760E-05	1.760E-05	1.760E-05
2406.00	1.002E+01	5.053E+00	2.868E+00	4.217E-02	5.838E-03	3.911E-02	5.485E-06	4.289E-06	1.241E-06	6.598E-05	8.065E-05	8.065E-05	8.065E-05	8.065E-05
2430.00	9.744E-01	2.100E+00	1.394E+00	2.806E-03	1.630E-02	1.378E-02	1.993E-06	1.462E-06	2.525E-06	1.175E-05	3.065E-05	3.065E-05	3.065E-05	3.065E-05
2430.00	8.090E-01	2.058E+00	1.381E+00	2.455E-03	1.609E-02	1.372E-02	2.009E-06	1.460E-06	2.507E-06	1.001E-05	3.052E-05	3.052E-05	3.052E-05	3.052E-05
2449.50	3.516E-01	2.086E+00	1.742E+00	5.189E-03	1.625E-02	1.712E-02	2.215E-06	1.798E-06	2.441E-06	9.506E-06	3.983E-05	3.983E-05	3.983E-05	3.983E-05
2466.00	4.031E-02	2.418E+00	6.755E-01	5.219E-03	1.814E-02	6.874E-03	1.570E-06	7.674E-07	2.493E-06	1.273E-05	1.886E-05	1.886E-05	1.886E-05	1.886E-05
2472.00	1.648E-02	7.192E-02	2.540E-01	7.909E-03	1.729E-02	5.196E-03	1.884E-06	5.819E-07	2.567E-06	2.124E-05	1.533E-05	1.533E-05	1.533E-05	1.533E-05
2477.00	1.314E-02	5.954E-02	6.878E-02	6.094E-03	8.736E-03	4.905E-03	1.791E-06	6.336E-07	1.897E-06	1.830E-05	1.537E-05	1.537E-05	1.537E-05	1.537E-05
2482.00	2.110E-02	9.267E-02	8.221E-02	4.952E-03	7.945E-03	4.916E-03	1.770E-06	6.199E-07	1.869E-06	1.606E-05	1.624E-05	1.624E-05	1.624E-05	1.624E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

1.310E-09	1.972E-09	2.370E-09	3.873E-07	3.558E-07	2.502E-07	1.950E-06	1.228E-06	1.231E-06
6.012E-03	4.585E-03	1.816E-02	7.299E-03					

SYSTEM C GROUP 1 (RADAR ALT. MARKOV ERROR)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1666.00											
1666.00											
1746.00											
1806.00											
1866.00											
1866.00											
1926.00											
1986.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	2.395E+00	1.825E+00	8.545E-01	1.002E-02	3.723E-03	9.264E-03	5.299E-07	8.970E-07	1.631E-07	9.986E-03	5.620E-03
2449.50	6.333E+00	1.666E+01	1.396E+01	2.493E-02	3.098E-02	1.313E-01	8.500E-06	1.218E-05	-1.616E-06	2.476E-02	3.413E-02
2466.00	4.766E+00	6.583E+00	3.596E+00	7.132E-02	2.536E-02	3.237E-02	2.755E-06	4.368E-06	2.942E-06	7.135E-02	2.449E-02
2472.00	3.073E+00	3.122E-01	2.419E+00	8.156E-02	1.941E-02	2.184E-02	2.145E-06	3.183E-06	3.500E-06	8.155E-02	1.726E-02
2477.00	2.028E+00	9.769E-02	1.527E+00	9.810E-02	1.720E-02	1.325E-02	-1.307E-06	-2.683E-06	-3.900E-06	9.810E-02	1.416E-02
2482.00	1.684E+00	1.290E-01	1.332E+00	1.087E-01	1.709E-02	1.082E-02	1.072E-06	2.583E-06	4.083E-06	1.087E-01	1.585E-02

C-65

TIME	GAMMA ERROR			PSI ERROR		
	U	V	W	U	V	W
1666.00						
1666.00						
1746.00						
1806.00						
1866.00						
1866.00						
1926.00						
1986.00						
2046.00						
2092.00						
2106.00						
2166.00						
2226.00						
2286.00						
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	2.397E+00	1.821E+00	8.570E-01	1.003E-02	3.701E-03	9.269E-03
2449.50	6.333E+00	1.666E+01	1.397E+01	2.495E-02	3.088E-02	1.314E-01
2466.00	4.767E+00	6.584E+00	3.594E+00	7.132E-02	2.537E-02	3.235E-02
2472.00	3.073E+00	3.111E-01	2.419E+00	8.155E-02	1.943E-02	2.184E-02
2477.00	2.028E+00	9.701E-02	1.527E+00	9.810E-02	1.721E-02	1.325E-02
2482.00	1.684E+00	1.288E-01	1.332E+00	1.087E-01	1.709E-02	1.081E-02

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

2.002E-09	2.660E-09	3.960E-09	5.327E-06	4.155E-06	3.628E-06	3.514E-05	6.543E-06	1.521E-05
3.365E-03	8.007E-06	1.642E+00	1.847E+00					

SYSTEM C GROUP 1

ICWD MEASUREMENT NOISE

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	F	D	C	R	D	C	R	D	C	RATE ERROR	MAG. ERRCR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.061E+00	8.636E+00	2.341E-01	1.322E-02	9.043E-03	1.243E-02	1.492E-08	6.043E-09	5.148E-09	1.132E-02	2.640E-03
1746.00	7.759E+00	7.209E+00	3.165E+00	2.111E-02	2.891E-03	6.444E-03	3.044E-08	1.415E-07	1.055E-07	1.982E-02	2.713E-03
1806.00	8.829E+00	3.004E+00	3.624E+00	7.779E-03	3.735E-03	2.262E-03	7.934E-08	1.036E-07	7.222E-08	7.256E-03	1.371E-03
1806.00	6.753E-01	2.209E+00	2.186E+00	1.498E-03	2.569E-03	2.438E-03	1.233E-07	1.302E-07	7.702E-08	1.344E-03	1.683E-03
1866.00	1.649E+00	2.612E+00	4.482E+00	5.195E-03	5.742E-03	2.871E-03	2.816E-07	1.466E-07	1.852E-07	4.865E-03	3.637E-03
1926.00	3.093E+00	3.571E+00	5.222E+00	8.020E-03	5.666E-03	3.856E-03	3.613E-07	1.873E-07	2.257E-07	8.432E-03	2.893E-03
1986.00	3.409E+00	2.757E+00	3.753E+00	8.651E-03	4.127E-03	4.725E-03	4.085E-07	2.076E-07	2.529E-07	5.269E-02	1.877E-02
2046.00	1.803E+01	1.417E+01	1.852E+00	5.289E-02	2.900E-02	2.580E-02	2.471E-06	2.583E-06	4.018E-06	1.244E-01	6.571E-02
2092.00	4.545E+01	3.525E+01	5.929E+00	1.235E-01	6.145E-02	1.000E-01	2.241E-05	2.267E-05	2.293E-05	1.688E-01	6.707E-02
2106.00	4.334E+01	2.457E+01	3.728E+00	2.632E-01	1.776E-01	2.800E-01	6.611E-05	1.011E-04	8.171E-05	1.152E-01	7.659E-02
2166.00	2.538E+01	7.179E+01	4.615E+01	1.153E-01	6.852E-02	6.422E-01	6.246E-05	1.011E-04	8.171E-05	1.152E-01	7.659E-02
2226.00	2.854E+01	1.334E+01	1.402E+01	2.020E-01	1.013E-01	9.243E-02	4.979E-05	2.801E-05	1.590E-05	2.019E-01	1.403E-01
2286.00	3.354E+01	1.347E+01	1.332E+01	1.687E-01	6.623E-02	1.382E-01	4.082E-05	1.690E-05	1.643E-05	1.688E-01	1.349E-01
2292.00	3.789E+01	1.359E+01	1.313E+01	1.622E-01	6.358E-02	1.409E-01	4.082E-05	1.734E-05	1.557E-05	1.623E-01	1.233E-01
2346.00	5.450E+01	2.476E+01	6.613E+00	2.509E-01	4.013E-02	1.720E-01	3.891E-05	2.176E-05	8.402E-06	2.515E-01	1.753E-02
2406.00	5.863E+01	2.544E+01	1.659E+01	2.396E-01	1.517E-02	2.099E-01	4.277E-05	2.250E-05	9.350E-06	2.492E-01	4.315E-02
2430.00	2.160E+01	1.564E+01	1.334E+01	9.248E-02	3.750E-02	1.267E-01	3.326E-05	1.249E-05	8.265E-06	9.274E-02	4.850E-02
2430.00	1.984E+01	1.553E+01	1.314E+01	8.664E-02	3.858E-02	1.239E-01	3.521E-05	1.222E-05	8.403E-06	8.689E-02	4.817E-02
2449.50	1.214E+01	1.442E+01	1.558E+01	5.551E-02	4.824E-02	1.330E-01	3.454E-05	1.382E-05	8.695E-06	5.569E-02	4.970E-02
2466.00	8.173E-01	1.849E+01	9.116E+00	8.073E-02	2.100E-02	8.435E-02	3.354E-05	6.314E-06	6.626E-06	8.063E-02	2.162E-02
2472.00	2.041E-01	8.396E-01	2.822E+00	9.138E-02	2.117E-02	4.230E-02	3.394E-05	4.985E-06	5.232E-06	9.137E-02	2.323E-02
2477.00	1.105E-01	1.941E-01	3.403E-01	7.848E-02	2.594E-02	3.858E-02	3.402E-05	5.454E-06	5.200E-06	7.849E-02	2.679E-02
2482.00	2.338E-01	2.540E-01	4.891E-01	6.512E-02	3.045E-02	3.905E-02	3.406E-05	5.288E-06	5.359E-06	6.512E-02	3.066E-02

TIME	U			V			W			GAMMA ERROR	PSI ERRCR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.284E+00	7.669E+00	3.742E+00	1.314E-02	2.003E-03	1.535E-02	1.492E-08	2.549E-09	7.521E-09	2.243E-06	3.086E-06
1746.00	7.926E+00	6.646E+00	3.900E+00	2.101E-02	4.206E-03	6.052E-03	3.078E-08	1.678E-08	1.757E-07	5.286E-06	1.576E-06
1806.00	2.885E+00	4.333E+00	1.745E+00	7.749E-03	1.695E-03	4.081E-03	8.022E-08	5.454E-08	1.133E-07	2.706E-06	1.594E-06
1806.00	6.544E-01	2.638E+00	1.650E+00	1.491E-03	1.691E-03	3.115E-03	1.234E-07	5.751E-08	1.389E-07	4.942E-07	1.195E-06
1866.00	1.682E+00	4.114E+00	3.143E+00	5.170E-03	4.316E-03	4.700E-03	2.813E-07	1.455E-07	1.865E-07	2.774E-06	2.625E-06
1926.00	3.127E+00	6.070E+00	1.719E+00	8.793E-03	4.401E-03	5.299E-03	3.613E-07	2.325E-07	1.787E-07	6.767E-06	4.154E-06
1986.00	3.412E+00	4.496E+00	1.177E+00	8.638E-03	4.946E-03	3.891E-03	4.082E-07	3.043E-07	1.212E-07	9.105E-06	4.055E-06
2046.00	1.804E+01	4.998E+00	1.338E+01	5.288E-02	2.690E-02	2.800E-02	2.471E-06	4.526E-06	1.526E-06	6.763E-05	3.437E-05
2092.00	4.548E+01	2.136E+01	2.861E+01	1.237E-01	8.216E-02	8.369E-02	2.230E-05	1.438E-05	2.235E-05	1.504E-04	9.540E-05
2106.00	4.335E+01	1.771E+01	1.747E+01	2.636E-01	1.031E-01	3.148E-01	6.598E-05	3.697E-05	6.006E-05	3.122E-04	3.624E-04
2166.00	2.545E+01	7.173E+01	4.620E+01	1.148E-01	6.853E-02	6.473E-01	6.252E-05	1.009E-04	8.189E-05	1.351E-04	8.043E-04
2226.00	2.850E+01	1.204E+01	1.522E+01	2.018E-01	1.104E-01	8.161E-02	4.989E-05	2.494E-05	2.123E-05	2.401E-04	1.092E-04
2286.00	3.352E+01	1.349E+01	1.336E+01	1.687E-01	1.149E-01	1.015E-01	4.087E-05	8.231E-06	2.188E-05	2.188E-04	1.475E-04
2292.00	3.787E+01	1.365E+01	1.312E+01	1.621E-01	1.072E-01	1.115E-01	4.088E-05	7.787E-06	2.185E-05	2.168E-04	1.635E-04
2346.00	5.443E+01	2.487E+01	6.707E+00	2.508E-01	3.998E-02	1.722E-01	3.695E-05	2.165E-05	8.493E-06	3.939E-04	2.726E-04
2406.00	5.860E+01	2.542E+01	1.664E+01	2.396E-01	1.516E-02	2.099E-01	4.229E-05	2.244E-05	9.891E-06	4.779E-04	4.325E-04
2430.00	2.159E+01	1.567E+01	1.335E+01	9.250E-02	3.752E-02	1.267E-01	3.536E-05	1.247E-05	8.273E-06	1.905E-04	2.815E-04
2430.00	1.984E+01	1.553E+01	1.315E+01	8.666E-02	3.861E-02	1.239E-01	3.522E-05	1.220E-05	8.411E-06	1.784E-04	2.757E-04
2449.50	1.214E+01	1.442E+01	1.558E+01	5.551E-02	4.824E-02	1.330E-01	3.454E-05	1.382E-05	8.692E-06	1.240E-04	3.095E-04
2466.00	8.142E-01	1.848E+01	9.126E+00	8.073E-02	2.101E-02	8.435E-02	3.354E-05	6.309E-06	6.639E-06	2.203E-04	2.315E-04
2472.00	2.040E-01	8.376E-01	2.823E+00	9.138E-02	2.116E-02	4.230E-02	3.394E-05	4.983E-06	5.233E-06	2.678E-04	1.248E-04
2477.00	1.105E-01	1.941E-01	3.483E-01	7.848E-02	2.595E-02	3.858E-02	3.402E-05	5.453E-06	5.207E-06	2.447E-04	1.209E-04
2482.00	2.338E-01	2.540E-01	4.891E-01	6.513E-02	3.045E-02	3.904E-02	3.406E-05	5.288E-06	5.360E-06	2.147E-04	1.289E-04

ADDITIONAL STATE ESTIMATES AT TOUCHDOWN I10 TO 221

7.310E-09	6.711E-09	1.227E-08	3.884E-06	3.541E-06	3.328E-06	2.917E-05	1.409E-05	1.085E-05
5.419E-03	1.478E-05	1.960E-01	7.173E-02					

C-66







ORIGINAL PAGE IS  
OF POOR QUALITY

QUANTIZATION IN COMPUTER

SYSTEM C GROUP 1

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY RATE ERROR	
	R	D	C	R	D	C	R	D	C	MAG	ERR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1688.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.485E+02	9.923E+01	6.767E+01	3.909E-01	1.924E-01	2.022E-01	1.906E-07	3.426E-06	2.596E-06	3.681E-01	1.976E-01
1806.00	1.426E+02	7.538E+01	7.487E+01	3.843E-01	2.532E-01	2.460E-01	9.704E-07	2.830E-06	2.518E-06	3.714E-01	2.474E-01
1806.00	3.518E+01	8.648E+01	1.192E+02	2.077E-01	2.511E-01	2.777E-01	4.637E-06	6.759E-06	3.019E-06	2.020E-01	1.937E-01
1866.00	5.173E+01	9.759E+01	1.293E+02	2.447E-01	2.511E-01	2.413E-01	6.747E-06	6.619E-06	7.071E-06	2.842E-01	2.495E-01
1926.00	5.219E+01	8.469E+01	1.100E+02	2.874E-01	2.860E-01	2.644E-01	9.530E-06	8.107E-06	8.849E-06	5.111E-01	4.089E-01
1986.00	1.741E+02	7.450E+01	1.548E+02	5.198E-01	3.128E-01	3.205E-01	1.914E-05	1.729E-05	2.588E-05	1.710E-05	3.721E-01
2046.00	9.269E+01	6.746E+01	2.065E+01	3.736E-01	3.128E-01	3.866E-01	2.252E-05	1.729E-05	7.860E-05	5.047E-01	4.197E-01
2092.00	1.483E+02	1.140E+02	2.929E+01	5.030E-01	2.736E-01	5.000E-01	6.794E-05	7.253E-05	2.000E-04	8.914E-01	4.265E-01
2106.00	1.542E+02	9.741E+01	3.171E+01	8.905E-01	5.410E-01	9.853E-01	2.005E-04	7.253E-05	1.638E-04	6.040E-01	2.578E-01
2166.00	9.018E+01	1.366E+02	8.610E+01	6.051E-01	1.875E-01	1.183E+00	1.719E-04	2.048E-04	1.638E-04	7.169E-01	5.322E-01
2226.00	1.143E+02	7.249E+01	5.536E+01	7.173E-01	2.661E-01	5.421E-01	1.602E-04	1.299E-04	9.606E-05	7.169E-01	5.322E-01
2286.00	1.503E+02	8.641E+01	7.601E+01	8.657E-01	3.247E-01	3.747E-01	1.761E-04	1.473E-04	9.343E-05	8.667E-01	7.876E-01
2292.00	1.510E+02	8.935E+01	7.391E+01	8.506E-01	3.068E-01	8.933E-01	1.769E-04	1.479E-04	8.946E-05	8.557E-01	7.162E-01
2346.00	1.227E+02	6.572E+01	4.046E+01	6.093E-01	9.693E-02	7.628E-01	1.475E-04	1.116E-04	5.346E-05	3.280E-01	6.814E-02
2406.00	5.854E+01	7.407E+01	7.585E+01	3.271E-01	5.280E-02	8.624E-01	1.376E-04	1.116E-04	5.346E-05	3.280E-01	6.814E-02
2430.00	1.274E+01	7.154E+01	9.542E+01	2.497E-01	6.191E-02	9.925E-01	1.379E-04	1.123E-04	4.651E-05	2.694E-01	6.270E-02
2430.00	1.184E+01	7.154E+01	9.535E+01	2.682E-01	6.054E-02	9.919E-01	1.579E-04	1.233E-04	4.648E-05	2.694E-01	6.270E-02
2449.50	1.042E+01	6.777E+01	1.801E+02	2.578E-01	9.750E-02	9.512E-01	1.322E-04	1.008E-04	4.595E-05	2.584E-01	1.079E-01
2466.00	1.132E+00	6.168E+01	1.491E+02	2.592E-01	9.895E-02	3.615E-01	1.045E-04	5.571E-05	4.287E-05	2.399E-01	1.092E-01
2472.00	6.273E-01	1.432E+00	4.966E+00	1.657E-01	1.046E-01	3.370E-01	1.049E-04	5.506E-05	4.244E-05	1.657E-01	1.054E-01
2477.00	4.863E-01	3.634E-01	1.731E+00	1.384E-01	6.336E-02	3.440E-01	1.043E-04	5.547E-05	4.232E-05	1.384E-01	6.311E-02
2482.00	5.435E-01	6.305E-01	3.432E+00	1.181E-01	6.704E-02	3.535E-01	1.043E-04	5.556E-05	4.236E-05	1.181E-01	6.700E-02

TIME	U			V			W			GAMMA ERROR		PSI ERROR	
	U	V	W	U	V	W	U	V	W	PSI	ERR	PSI	ERR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1688.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.492E+02	1.088E+02	4.222E+01	3.856E-01	2.739E-01	1.785E-01	1.930E-07	2.308E-07	4.292E-06	1.007E-04	4.725E-05	8.751E-05	7.809E-05
1806.00	1.442E+02	9.429E+01	4.422E+01	3.807E-01	2.697E-01	2.354E-01	9.810E-07	1.059E-06	3.498E-06	1.428E-04	8.751E-05	7.809E-05	7.809E-05
1806.00	3.291E+01	1.424E+02	3.946E+01	2.025E-01	1.941E-01	2.096E-01	4.600E-06	6.969E-07	7.592E-06	1.301E-04	1.344E-04	1.344E-04	1.344E-04
1866.00	5.063E+01	1.431E+02	7.660E+01	2.441E-01	2.191E-01	2.529E-01	6.714E-06	4.780E-06	8.408E-06	7.150E-06	2.200E-04	2.230E-04	2.230E-04
1926.00	5.196E+01	1.315E+02	4.453E+01	2.871E-01	2.586E-01	2.916E-01	9.495E-06	9.710E-06	7.150E-06	2.200E-04	2.230E-04	2.230E-04	2.230E-04
1986.00	1.745E+02	1.401E+02	6.094E+01	5.180E-01	4.416E-01	4.280E-01	1.409E-05	1.790E-05	6.942E-06	5.350E-04	4.469E-04	4.469E-04	4.469E-04
2046.00	9.271E+01	2.840E+01	6.035E+01	3.736E-01	3.994E-01	2.961E-01	2.258E-05	2.914E-05	1.094E-05	1.094E-05	5.780E-04	4.374E-04	4.374E-04
2092.00	1.447E+02	6.422E+01	9.576E+01	5.032E-01	4.311E-01	3.432E-01	6.786E-05	4.595E-05	6.551E-05	5.780E-04	1.162E-03	1.162E-03	1.162E-03
2106.00	1.542E+02	7.177E+01	7.298E+01	8.917E-01	4.913E-01	1.010E+00	2.001E-04	1.119E-04	1.814E-04	1.049E-04	1.482E-03	1.482E-03	1.482E-03
2166.00	9.031E+01	1.365E+02	8.612E+01	6.056E-01	1.884E-01	1.183E+00	1.720E-04	2.043E-04	1.642E-04	7.118E-04	5.174E-04	5.174E-04	5.174E-04
2226.00	1.143E+02	5.417E+01	7.347E+01	7.176E-01	4.627E-01	3.873E-01	1.606E-04	1.332E-04	9.059E-05	8.781E-04	5.174E-04	5.174E-04	5.174E-04
2286.00	1.501E+02	8.913E+01	7.553E+01	8.850E-01	7.188E-01	5.075E-01	1.767E-04	7.728E-05	1.557E-04	1.148E-03	8.088E-04	8.088E-04	8.088E-04
2292.00	1.510E+02	8.947E+01	7.392E+01	8.541E-01	5.592E-01	6.810E-01	1.775E-04	8.709E-05	1.155E-04	1.155E-04	9.984E-04	9.984E-04	9.984E-04
2346.00	1.227E+02	6.571E+01	4.064E+01	6.090E-01	9.650E-02	7.632E-01	1.478E-04	1.192E-04	5.637E-05	9.576E-04	1.268E-03	1.268E-03	1.268E-03
2406.00	5.854E+01	7.400E+01	7.592E+01	3.271E-01	5.314E-02	8.624E-01	1.477E-04	1.113E-04	5.354E-05	6.574E-04	1.779E-03	1.779E-03	1.779E-03
2430.00	1.273E+01	7.147E+01	9.546E+01	2.697E-01	6.253E-02	9.925E-01	1.380E-04	1.122E-04	4.653E-05	5.848E-04	2.206E-03	2.206E-03	2.206E-03
2430.00	1.190E+01	7.126E+01	9.539E+01	2.682E-01	6.118E-02	9.919E-01	1.380E-04	1.122E-04	4.653E-05	5.848E-04	2.206E-03	2.206E-03	2.206E-03
2449.50	1.044E+01	6.714E+01	1.801E+02	2.578E-01	9.816E-02	9.512E-01	1.323E-04	1.007E-04	4.599E-05	5.804E-04	2.213E-03	2.213E-03	2.213E-03
2466.00	1.134E+00	6.167E+01	1.494E+01	2.592E-01	9.901E-02	3.615E-01	1.045E-04	5.569E-05	4.288E-05	6.555E-04	9.912E-04	9.912E-04	9.912E-04
2472.00	6.272E-01	1.432E+00	4.967E+00	1.657E-01	1.047E-01	3.370E-01	1.049E-04	5.505E-05	4.244E-05	4.870E-04	9.943E-04	9.943E-04	9.943E-04
2477.00	4.863E-01	3.630E-01	1.731E+00	1.384E-01	6.335E-02	3.440E-01	1.043E-04	5.547E-05	4.233E-05	4.356E-04	1.078E-03	1.078E-03	1.078E-03
2482.00	5.435E-01	6.299E-01	3.432E+00	1.181E-01	6.703E-02	3.535E-01	1.043E-04	5.558E-05	4.237E-05	3.900E-04	1.167E-03	1.167E-03	1.167E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

4.155E-08	6.940E-08	7.406E-08	1.013E-05	1.374E-05	3.1E-06	7.075E-05	3.826E-05	3.514E-05
1.551E-02	4.185E-05	4.753E-01	2.041E-01					

C-68

SYSTEM C GROUP 1

(INITIAL CONDITION ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	1.366E+04	1.018E+04	1.735E+04	2.646E+01	8.402E+00	8.724E+00	6.837E-04	3.894E-04	6.148E-04	3.386E+01	7.491E+00
1688.00	2.003E+04	1.918E+04	1.765E+04	5.670E+01	1.421E+01	2.309E+01	6.853E-04	3.890E-04	6.147E-04	5.133E+01	6.930E+00
1746.00	1.217E+04	1.302E+04	1.300E+04	3.370E+01	1.849E+01	2.431E+01	6.872E-04	5.100E-04	6.616E-04	3.070E+01	9.850E+00
1766.00	8.095E+03	9.291E+03	1.123E+04	2.397E+01	1.472E+01	1.811E+01	7.064E-04	6.619E-04	6.889E-04	2.258E+01	1.204E+01
1806.00	1.952E+03	7.022E+03	9.375E+03	5.843E+00	1.673E+01	1.679E+01	7.757E-04	6.900E-04	6.941E-04	5.770E+00	8.545E+00
1866.00	2.051E+03	3.035E+03	6.935E+03	6.004E+00	1.229E+01	1.555E+01	8.234E-04	7.177E-04	7.810E-04	5.756E+00	5.958E+00
1926.00	1.233E+03	4.241E+03	5.234E+03	3.756E+00	1.316E+01	1.270E+01	9.568E-04	7.075E-04	1.012E-03	3.777E+00	-7.981E+00
1986.00	4.881E+03	2.017E+03	4.055E+03	1.435E+01	2.146E+01	1.143E+01	1.100E-03	7.065E-04	1.515E-03	1.414E+01	1.305E+01
2046.00	2.067E+03	1.007E+03	3.461E+02	5.729E+00	1.152E+01	1.000E+01	1.670E-03	7.609E-04	1.373E-03	5.708E+00	9.810E+00
2092.00	5.436E+02	1.005E+03	3.756E+02	3.756E+02	4.310E+00	1.209E+01	1.882E-03	1.454E-03	4.516E-04	2.142E+00	9.249E+00
2100.00	5.058E+02	1.050E+03	5.550E+02	2.042E+00	3.772E+00	1.230E+01	1.894E-03	1.478E-03	3.841E-04	2.034E+00	7.413E+00
2166.00	2.621E+02	1.854E+02	5.597E+02	3.913E+00	5.143E-01	3.938E+00	2.186E-03	6.280E-04	3.360E-04	3.903E+00	1.592E+00
2226.00	1.846E+02	2.320E+02	2.886E+02	2.459E+00	1.687E+00	1.311E+00	2.120E-03	3.092E-04	4.915E-05	2.457E+00	1.706E+00
2286.00	2.636E+02	2.177E+02	2.453E+02	1.579E+00	1.337E+00	1.304E+00	2.103E-03	1.733E-04	4.765E-05	1.903E+00	7.503E-01
2292.00	2.851E+02	2.211E+02	2.344E+02	2.001E+00	1.190E+00	1.515E+00	2.107E-03	1.761E-04	4.251E-05	2.006E+00	6.564E-01
2346.00	1.800E+02	1.517E+02	1.372E+02	1.038E+00	1.426E-01	1.757E+00	2.115E-03	1.553E-04	2.028E-05	1.042E+00	7.252E-02
2406.00	1.765E+01	6.917E+01	8.701E+01	1.583E-01	1.571E-02	1.073E+00	2.073E-03	7.631E-05	2.056E-05	1.599E-01	4.888E-02
2430.00	8.313E+00	6.000E+01	7.745E+01	1.263E-01	8.037E-02	9.500E-01	2.072E-03	7.045E-05	1.636E-05	1.276E-01	1.039E-01
2436.00	8.282E+00	6.072E+01	7.732E+01	1.262E-01	8.128E-02	9.587E-01	2.072E-03	7.632E-05	1.635E-05	1.275E-01	1.043E-01
2449.50	7.053E+00	5.497E+01	6.592E+01	1.244E-01	1.045E-01	9.090E-01	2.074E-03	6.043E-05	1.714E-05	1.255E-01	1.265E-01
2466.00	3.024E-01	4.252E+01	8.381E+00	1.614E-01	5.008E-02	7.964E-01	2.086E-03	2.819E-05	2.185E-05	1.622E-01	1.073E-01
2472.00	3.024E-01	5.613E-01	1.079E+00	7.923E-02	1.176E-01	7.225E-01	2.083E-03	2.294E-05	7.925E-05	7.925E-02	1.214E-01
2477.00	2.100E-01	2.930E-01	3.625E+00	5.603E-02	1.009E-02	6.828E-01	2.082E-03	3.001E-05	2.698E-05	5.862E-02	2.011E-02
2482.00	2.537E-01	2.781E-01	6.903E+00	4.557E-02	1.285E-02	6.460E-01	2.082E-03	3.037E-05	2.768E-05	4.957E-02	1.360E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	1.413E+04	1.501E+04	1.291E+04	3.623E+01	8.181E+00	9.616E+00	6.932E-04	3.671E-04	6.180E-04	6.811E-03	1.707E-03
1688.00	2.083E+04	2.333E+04	8.059E+03	5.633E+01	6.855E+00	2.770E+01	6.947E-04	3.670E-04	6.177E-04	1.027E-02	5.171E-03
1746.00	1.253E+04	1.016E+04	4.615E+03	3.341E+01	1.157E+01	2.844E+01	6.948E-04	4.520E-04	6.950E-04	8.273E-03	7.358E-03
1766.00	8.250E+03	1.400E+04	3.697E+03	2.331E+01	1.369E+01	1.917E+01	7.112E-04	5.295E-04	7.909E-04	8.674E-03	7.021E-03
1806.00	1.333E+03	1.091E+04	3.554E+03	5.811E+00	8.732E+00	2.204E+01	7.834E-04	5.286E-04	8.202E-04	2.327E-03	8.176E-03
1866.00	2.092E+03	3.514E+03	3.535E+03	6.058E+00	5.555E+00	1.504E+01	8.259E-04	5.812E-04	8.849E-04	2.833E-03	9.985E-03
1926.00	1.245E+03	8.376E+03	2.168E+03	3.745E+00	6.128E+00	1.626E+01	9.590E-04	9.076E-04	8.349E-04	3.471E-03	1.242E-02
1986.00	4.992E+03	3.078E+03	2.318E+03	1.431E+01	1.429E+01	1.970E+01	1.100E-03	1.081E-03	1.275E-03	1.578E-02	2.051E-02
2046.00	2.069E+03	4.757E+02	1.040E+03	5.726E+00	1.099E+01	1.058E+01	1.670E-03	1.250E-03	9.489E-04	9.106E-03	1.313E-02
2092.00	5.435E+02	2.391E+02	1.104E+03	2.147E+00	3.378E+00	9.577E+00	1.832E-03	8.110E-04	1.266E-03	2.964E-03	1.095E-02
2100.00	5.060E+02	3.096E+02	1.147E+03	2.936E+00	7.413E+00	1.109E+01	1.895E-03	9.234E-04	1.216E-03	2.303E-03	1.276E-02
2166.00	2.607E+02	1.833E+02	5.604E+02	3.900E+00	9.247E-01	3.948E+00	2.186E-03	6.276E-04	3.373E-04	4.536E-03	4.940E-03
2226.00	1.332E+02	2.436E+02	2.759E+02	2.455E+00	1.286E+00	1.710E+00	2.120E-03	1.900E-04	2.471E-04	2.878E-03	2.284E-03
2286.00	2.675E+02	2.608E+02	1.937E+02	1.976E+00	4.428E-01	1.861E+00	2.103E-03	1.157E-04	1.378E-04	2.693E-03	2.697E-03
2292.00	2.840E+02	2.617E+02	1.858E+02	1.999E+00	2.589E-01	1.956E+00	2.107E-03	1.310E-04	1.252E-04	2.779E-03	2.772E-03
2346.00	1.749E+02	1.524E+02	1.371E+02	1.037E+00	1.367E-01	1.758E+00	2.115E-03	1.346E-04	2.068E-05	1.026E-03	2.841E-03
2406.00	1.760E+01	6.911E+01	8.707E+01	1.583E-01	2.162E-02	1.073E+00	2.072E-03	7.721E-05	2.048E-05	3.104E-04	2.209E-03
2430.00	8.369E+00	6.083E+01	7.749E+01	1.264E-01	8.194E-02	9.589E-01	2.072E-03	7.702E-05	1.631E-05	2.402E-04	2.130E-03
2436.00	8.341E+00	6.066E+01	7.737E+01	1.262E-01	8.224E-02	9.536E-01	2.072E-03	7.689E-05	1.630E-05	2.395E-04	2.129E-03
2449.50	7.084E+00	5.493E+01	6.555E+01	1.245E-01	1.050E-01	9.050E-01	2.074E-03	6.671E-05	1.711E-05	2.363E-04	2.103E-03
2466.00	3.013E-01	4.252E+01	8.406E+00	1.615E-01	5.934E-02	7.904E-01	2.086E-03	2.810E-05	2.184E-05	4.300E-04	2.184E-03
2472.00	3.024E-01	5.607E-01	1.079E+00	7.925E-02	1.180E-01	7.225E-01	2.083E-03	2.748E-05	2.293E-05	2.176E-04	2.132E-03
2477.00	2.100E-01	2.914E-01	3.625E+00	5.603E-02	1.845E-02	6.828E-01	2.082E-03	2.999E-05	2.696E-05	1.819E-04	2.140E-03
2482.00	2.537E-01	2.756E-01	6.903E+00	4.557E-02	1.326E-02	6.460E-01	2.082E-03	3.038E-05	2.766E-05	1.634E-04	2.134E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

9.421E-C3	1.896E-07	7.419E-08	3.574E-C5	2.058E-C5	6.392E-06	2.419E-04	1.138E-04	2.234E-05
2.815E-C3	4.338E-05	2.232E-01	9.778E-C2	8.964E-77	0.000E+00			

C-69

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 1

(POSITION & VELOCITY ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	1.366E+04	1.018E+04	1.735E+04	3.646E+01	8.402E+00	8.725E+00	0.000E+00	0.000E+00	0.000E+00	3.386E+01	7.491E+00
1686.00	2.003E+04	1.813E+04	1.785E+04	5.070E+01	1.421E+01	2.389E+01	2.425E-05	9.619E-06	8.365E-06	5.133E+01	6.930E+00
1746.00	1.255E+04	1.433E+04	1.351E+04	3.547E+01	1.799E+01	2.472E+01	4.640E-05	3.464E-04	2.538E-04	3.215E+01	1.002E+01
1806.00	8.471E+03	9.955E+03	1.177E+04	2.570E+01	1.302E+01	1.875E+01	1.354E-04	5.498E-04	3.306E-04	2.401E+01	1.241E+01
1806.00	2.018E+03	4.990E+03	7.033E+03	6.706E+00	1.638E+01	1.726E+01	3.175E-04	5.961E-04	3.356E-04	6.676E+00	8.455E+00
1866.00	2.321E+03	5.323E+03	5.750E+03	7.064E+00	1.101E+01	1.585E+01	4.480E-04	6.074E-04	3.344E-04	6.661E+00	4.578E+00
1926.00	1.523E+03	3.527E+03	4.335E+03	4.803E+00	1.149E+01	1.284E+01	6.432E-04	6.099E-04	4.600E-04	4.658E+00	7.542E+00
1986.00	3.372E+03	1.954E+03	2.774E+03	5.872E+00	1.464E+01	1.143E+01	9.619E-04	6.080E-04	8.679E-04	5.724E+00	8.124E+00
2046.00	1.822E+03	1.063E+03	2.450E+02	4.842E+00	7.111E+00	8.670E+00	1.206E-03	6.157E-04	7.924E-04	4.825E+00	7.460E+00
2092.00	3.516E+02	6.137E+02	2.592E+02	2.234E+00	2.296E+00	7.362E+00	1.603E-03	8.660E-04	4.846E-04	2.228E+00	5.654E+00
2106.00	3.296E+02	6.067E+02	3.544E+02	2.098E+00	1.990E+00	7.365E+00	1.679E-03	8.881E-04	4.116E-04	2.091E+00	4.546E+00
2166.00	1.788E+02	1.305E+02	3.561E+02	2.775E+00	7.455E-01	2.378E+00	2.055E-03	4.088E-04	2.178E-04	2.768E+00	1.213E+00
2226.00	1.400E+02	2.022E+02	2.232E+02	1.873E+00	1.323E+00	1.256E+00	1.918E-03	2.679E-04	4.525E-05	1.871E+00	1.395E+00
2286.00	2.011E+02	1.660E+02	2.092E+02	1.492E+00	1.080E+00	1.053E+00	1.928E-03	1.487E-04	3.768E-05	1.455E+00	6.688E-01
2292.00	2.112E+02	1.671E+02	2.011E+02	1.497E+00	9.489E-01	1.168E+00	1.931E-03	1.495E-04	3.456E-05	1.501E+00	5.810E-01
2346.00	1.244E+02	1.101E+02	1.325E+02	7.244E-01	1.013E-01	1.387E+00	1.938E-03	1.032E-04	1.921E-05	7.274E-01	4.851E-02
2406.00	1.567E+01	5.550E+01	8.635E+01	1.354E-01	1.317E-02	8.500E-01	1.920E-03	6.516E-05	1.708E-05	1.366E-01	3.754E-02
2430.00	5.984E+00	4.795E+01	7.618E+01	9.013E-02	5.237E-02	7.234E-01	1.919E-03	6.317E-05	1.556E-05	9.113E-02	6.754E-02
2430.00	6.036E+00	4.780E+01	7.665E+01	8.952E-02	5.204E-02	7.234E-01	1.919E-03	6.303E-05	1.555E-05	9.052E-02	6.788E-02
2449.50	5.685E+00	4.332E+01	6.284E+01	8.131E-02	7.245E-02	6.922E-01	1.923E-03	5.326E-05	1.620E-05	8.215E-02	8.649E-02
2466.00	2.764E-01	3.281E+01	7.855E+00	1.113E-01	6.086E-02	7.059E-01	1.940E-03	1.702E-05	2.036E-05	1.118E-01	7.226E-02
2472.00	2.218E-01	4.701E-01	9.815E-01	5.115E-02	8.099E-02	6.567E-01	1.940E-03	1.680E-05	2.121E-05	5.116E-02	8.302E-02
2477.00	1.454E-01	2.856E-01	3.155E+00	3.761E-02	1.265E-02	6.151E-01	1.940E-03	1.817E-05	2.302E-05	3.761E-02	1.358E-02
2482.00	1.667E-01	2.601E-01	6.163E+00	3.153E-02	1.051E-02	5.842E-01	1.939E-03	1.841E-05	2.350E-05	3.152E-02	1.090E-02

TIME U V W GAMMA ERROR PSI ERROR

1686.00	1.413E+04	1.501E+04	1.291E+04	3.628E+01	8.181E+00	9.616E+00	0.000E+00	0.000E+00	0.000E+00	4.811E-03	1.707E-03
1686.00	2.083E+04	2.333E+04	8.059E+03	5.833E+01	6.855E+00	2.770E+01	2.424E-05	4.141E-06	1.222E-05	1.027E-02	5.171E-03
1746.00	1.255E+04	1.391E+04	4.652E+03	3.517E+01	1.233E+01	2.837E+01	4.657E-05	2.685E-05	4.286E-04	8.675E-03	7.338E-03
1806.00	8.664E+03	1.474E+04	4.011E+03	2.552E+01	1.421E+01	1.870E+01	1.375E-04	6.350E-05	6.375E-04	9.218E-03	6.851E-03
1806.00	1.977E+03	9.332E+03	3.374E+03	6.729E+00	8.509E+00	2.208E+01	3.166E-04	9.005E-05	6.786E-04	2.596E-03	8.197E-03
1866.00	2.367E+03	7.282E+03	2.835E+03	7.034E+00	4.059E+00	1.923E+01	4.474E-04	4.521E-04	5.264E-04	3.315E-03	1.009E-02
1926.00	1.536E+03	5.258E+03	1.823E+03	4.795E+00	7.973E+00	1.528E+01	6.473E-04	4.503E-04	6.185E-04	4.044E-03	1.165E-02
1986.00	3.380E+03	2.340E+03	1.942E+03	5.849E+00	8.932E+00	1.630E+01	9.609E-04	7.232E-04	7.758E-04	1.074E-02	1.695E-02
2046.00	1.822E+03	4.295E+02	1.002E+03	4.841E+00	8.381E+00	7.444E+00	1.286E-03	7.460E-04	6.721E-04	7.416E-03	9.160E-03
2092.00	3.516E+02	1.711E+02	6.438E+02	2.233E+00	5.680E+00	5.217E+00	1.604E-03	5.553E-04	8.219E-04	2.574E-03	5.565E-03
2106.00	3.297E+02	1.975E+02	6.742E+02	2.094E+00	4.527E+00	6.142E+00	1.679E-03	5.725E-04	7.922E-04	2.224E-03	7.066E-03
2166.00	1.779E+02	1.305E+02	3.566E+02	2.768E+00	7.528E-01	2.344E+00	2.095E-03	4.068E-04	2.159E-04	3.203E-03	2.938E-03
2226.00	1.389E+02	2.249E+02	2.012E+02	1.872E+00	1.080E+00	1.505E+00	1.918E-03	1.730E-04	2.106E-04	2.168E-03	2.010E-03
2286.00	2.011E+02	1.647E+02	1.885E+02	1.491E+00	4.243E-01	1.449E+00	1.928E-03	8.967E-05	1.274E-04	2.002E-03	2.895E-03
2292.00	2.112E+02	1.821E+02	1.888E+02	1.497E+00	3.450E-01	1.406E+00	1.931E-03	1.048E-04	1.153E-04	2.054E-03	2.142E-03
2346.00	1.241E+02	1.104E+02	1.325E+02	7.241E-01	9.765E-02	1.380E+00	1.938E-03	1.044E-04	1.980E-05	1.136E-03	2.192E-03
2406.00	1.591E+01	5.548E+01	8.641E+01	1.354E-01	1.461E-02	3.560E-01	1.920E-03	6.683E-05	1.704E-05	2.668E-04	1.762E-03
2430.00	6.033E+00	4.788E+01	7.622E+01	9.017E-02	5.300E-02	7.234E-01	1.919E-03	6.431E-05	1.552E-05	1.758E-04	1.604E-03
2430.00	6.082E+00	4.773E+01	7.609E+01	8.956E-02	5.327E-02	7.234E-01	1.919E-03	6.417E-05	1.551E-05	1.742E-04	1.600E-03
2449.50	5.709E+00	4.328E+01	6.284E+01	8.135E-02	7.273E-02	6.921E-01	1.923E-03	5.309E-05	1.617E-05	1.536E-04	1.606E-03
2466.00	2.727E-01	3.281E+01	7.874E+00	1.113E-01	6.099E-02	7.059E-01	1.940E-03	1.710E-05	2.035E-05	2.971E-04	1.546E-03
2472.00	2.218E-01	4.099E-01	9.817E-01	5.116E-02	8.111E-02	6.567E-01	1.940E-03	1.687E-05	2.120E-05	1.415E-04	1.538E-03
2477.00	1.455E-01	2.839E-01	3.155E+00	3.761E-02	1.303E-02	6.151E-01	1.940E-03	1.819E-05	2.301E-05	1.172E-04	1.540E-03
2482.00	1.667E-01	2.567E-01	6.163E+00	3.153E-02	1.089E-02	5.842E-01	1.939E-03	1.842E-05	2.349E-05	1.041E-04	1.925E-03

ADDITIONAL STATE ESTIMATES AT TOUCH-DOWN (10 TO 22)

5.589E-08	1.144E-07	4.923E-08	2.397E-05	1.420E-05	4.898E-06	1.558E-04	7.060E-05	1.560E-05
2.309E-03	2.935E-05	1.473E-01	6.546E-02					

C-70

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 2

(ACC. BIAS ERRORS - X,Y,Z

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM ILT. ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	3.315E+03	2.062F+03	4.378E+03	1.744E+01	1.457E+00	3.882E+00	2.466E-05	5.969E-05	5.484E-05	1.701E+01	2.859E+00
1686.00	1.198E+04	8.132F+03	4.592E+03	2.934E+01	8.380E+00	9.682F+00	2.523E-05	5.850E-05	5.415E-05	2.719E+01	4.458E+00
1746.00	3.924F+03	2.653E+03	2.125E+03	6.208F+00	1.180E+01	8.972E+00	3.417E-05	2.522F-04	2.040F-04	7.941E+00	3.216E+00
1806.00	4.465E+03	1.764E+03	3.770E+03	1.735F+01	9.447E+00	5.304E+00	8.195E-05	3.801F-04	2.500F-04	1.516E+01	3.823E+00
1866.00	9.921F+02	2.762F+03	2.338E+03	4.170E+00	6.495E+00	5.257E+00	6.649E-05	4.862F-04	2.692F-04	4.405F+00	2.567E+00
1926.00	3.061E+02	1.464F+03	1.770E+03	1.731F+00	4.271E+00	4.731E+00	1.117F-04	4.699F-04	1.504F-04	1.857E+00	2.113F+00
1986.00	1.982E+02	9.150E+02	6.172E+02	1.479E+00	2.021E+00	4.267E+00	1.580E-04	4.836E-04	1.454E-04	2.048E+00	2.725E+00
2046.00	1.492E+03	6.043E+02	1.571E+03	4.715E+00	6.047E+00	4.822E+00	3.039E-04	4.871E-04	3.007F-04	4.640E+00	2.998E+00
2046.00	8.241F+02	4.023F+02	9.078E+01	1.918E+00	2.067E+00	4.367E+00	3.168E-04	4.753F-04	2.710E-04	1.911E+00	3.670E+00
2092.00	1.442E+02	1.924E+02	6.317E+01	5.236E-01	5.929E-01	2.534E+00	4.712E-04	2.833F-04	1.866F-04	5.245E-01	1.902E+00
2106.00	1.792E+02	1.779E+02	9.924E+01	4.372E-01	5.689E-01	2.403E+00	5.230F-04	2.976E-04	1.410F-04	4.383E-01	1.453E+00
2166.00	6.089F+01	1.050E+01	8.095F+01	6.528E-01	2.856E-01	4.407E-01	7.224E-04	2.358F-04	1.146F-04	6.512E-01	3.596E-01
2226.00	2.675E+01	5.946E+01	6.172E+01	5.546E-01	4.590E-01	3.602F-01	5.839E-04	1.554E-04	6.100F-05	5.539E-01	4.122E-01
2286.00	4.551E+01	4.332E+01	5.703E+01	4.450E-01	3.361E-01	2.832E-01	5.709E-04	1.026E-04	6.144E-05	4.655E-01	1.596E-01
2292.00	4.942E+01	4.309E+01	5.520E+01	4.534E-01	2.983E-01	3.228F-01	5.709E-04	1.026E-04	6.120E-05	4.539E-01	1.488E-01
2346.00	3.413E+01	2.723E+01	4.039E+01	3.726E-01	6.771E-02	3.731E-01	5.650E-04	8.947F-05	6.184F-05	3.728E-01	1.146E-02
2346.00	2.003F+01	1.598E+01	2.905E+01	3.404F-01	4.984E-02	2.225E-01	5.590E-04	7.837F-05	6.331E-05	3.400E-01	2.071E-02
2430.00	6.874E+00	1.730E+01	3.100E+01	2.909E-01	5.168E-02	1.765E-01	5.501E-04	7.815F-05	5.854E-05	2.906E-01	1.764E-02
2430.00	6.159E+00	1.736E+01	3.109E+01	2.868E-01	5.094E-02	1.759E-01	5.499E-04	7.814E-05	5.852E-05	2.865E-01	1.772E-02
2449.50	6.878E+00	1.623F+01	3.385E+01	2.792E-01	4.438E-02	1.715E-01	5.475E-04	7.674E-05	5.713F-05	2.790E-01	2.780E-02
2466.00	8.984F-01	7.861F+00	2.707E+00	2.121E-01	4.835E-02	2.236E-01	5.622F-04	5.898E-05	5.851E-05	2.121E-01	3.876E-02
2472.00	6.523E-01	1.653E-01	9.068E-01	1.707E-01	4.659E-02	1.947F-01	5.611E-04	5.828F-05	5.878F-05	1.797E-01	4.051E-02
2477.00	5.172E-01	1.452E-01	6.657E-01	1.499E-01	1.582E-02	1.744E-01	5.605E-04	5.865F-05	5.959F-05	1.409E-01	9.555E-03
2482.00	6.226E-01	1.811E-01	1.328E+00	1.247E-01	9.179E-03	1.609E-01	5.602E-04	5.871E-05	5.997E-05	1.247E-01	7.297E-03

TIME	U			V			W			GAMMA ERROR PSI ERROR	
	U	V	W	U	V	W	U	V	W		
1686.00	8.439E+03	2.424E+03	3.936E+03	1.746F+01	2.807E+00	2.918F+00	2.351E-05	5.975E-05	5.527E-05	3.405E-03	6.494E-04
1686.00	1.236E+04	8.642F+03	1.102E+03	2.926F+01	3.560E+00	1.249F+01	2.406E-05	5.940F-05	5.364F-05	5.418E-03	2.403E-03
1746.00	3.924E+03	1.496E+03	3.362E+03	8.130E+00	4.187E+00	1.427E+01	3.358F-05	5.719E-05	3.194F-04	2.139E-03	3.822E-03
1806.00	4.124E+03	4.098E+03	2.450E+02	1.366E+01	4.665E+00	9.909F+00	8.309F-05	5.290E-05	4.471E-04	4.963E-03	3.750E-03
1866.00	9.405E+02	3.235F+03	1.549F+03	4.138F+00	2.618F+00	7.952F+00	6.522E-05	6.823E-05	5.517F-04	1.646E-03	2.965E-03
1926.00	2.957E+02	2.093E+03	9.500E+02	1.718E+00	2.267E+00	5.961E+00	1.109E-04	3.688E-04	3.301E-04	1.070E-03	3.104E-03
1986.00	1.944E+02	1.652F+03	3.840E+02	2.019E+00	2.655E+00	5.465F+00	1.575E-04	2.399F-04	4.404F-04	1.441E-03	4.192E-03
1986.00	1.096E+03	1.464E+03	8.268E+02	4.707E+00	3.354F+00	7.013F+00	3.031E-04	4.534E-04	3.498F-04	5.037E-03	7.310E-03
2046.00	2.203F+02	1.745E+03	3.733F+02	1.918F+00	4.085E+00	2.520F+00	3.160E-04	3.170E-04	4.484F-04	3.160E-03	3.172E-03
2092.00	1.442E+02	4.743E+01	1.984E+02	5.259E-01	1.990F+00	1.676E+00	4.716E-04	2.915E-04	1.720E-04	8.810E-03	1.916E-03
2106.00	1.392E+02	4.300F+01	1.991E+02	4.391E-01	1.498E+00	1.947E+00	5.243E-04	2.903E-04	1.539E-04	6.478E-04	2.251E-03
2166.00	6.071E+01	1.051E+01	8.108E+01	6.510E-01	2.866E-01	4.426E-01	7.227E-04	2.331E-04	1.164E-04	7.564E-04	5.535E-04
2226.00	2.850F+01	6.821F+01	5.173E+01	5.539F-01	3.165E-01	4.910F-01	5.709E-04	8.861E-05	5.707E-04	6.405E-04	6.559E-04
2286.00	4.531F+01	4.394F+01	5.671E+01	4.443E-01	1.014F-01	4.284F-01	6.698E-04	6.898E-05	8.134E-05	6.107E-04	6.205E-04
2292.00	4.922E+01	4.129F+01	5.679E+01	4.527E-01	1.155E-02	4.304F-01	5.709E-04	9.127E-05	7.740F-05	6.321E-04	6.293E-04
2346.00	3.406E+01	2.724E+01	4.045E+01	3.724E-01	6.681E-02	3.735E-01	5.659E-04	8.987E-05	6.180F-05	5.871E-04	5.892E-04
2406.00	2.004E+01	1.593E+01	2.998E+01	3.403E-01	4.999E-02	2.225E-01	5.599F-04	6.329E-05	6.930E-04	6.930E-04	4.579E-04
2430.00	6.888E+00	1.726E+01	3.102E+01	2.909E-01	5.194E-02	1.765E-01	5.500E-04	7.835E-05	5.853E-05	6.415E-04	3.921E-04
2430.00	5.173E+00	1.732F+01	3.111E+01	2.867E-01	5.119E-02	1.759F-01	5.499E-04	7.834E-05	5.850E-05	6.329E-04	3.909E-04
2449.50	6.878E+00	1.626E+01	3.385E+01	2.792E-01	4.459E-02	1.715E-01	5.474E-04	7.834E-05	5.712E-05	6.411E-04	3.993E-04
2466.00	8.984E-01	7.861E+00	2.711E+00	2.121E-01	4.827E-02	2.236E-01	5.622E-04	5.801E-05	5.857E-05	5.862E-04	6.132E-04
2472.00	6.523E-01	1.653E-01	9.067E-01	1.797E-01	4.851E-02	1.947E-01	5.611E-04	5.829E-05	5.874E-05	5.353E-04	5.745E-04
2477.00	5.172E-01	1.449E-01	6.658E-01	1.499E-01	1.574E-02	1.744E-01	5.605E-04	5.866E-05	5.955E-05	4.711E-04	5.467E-04
2482.00	6.226E-01	1.804E-01	1.328E+00	1.247E-01	9.091E-03	1.609E-01	5.602E-04	5.872E-05	5.996E-05	4.120E-04	5.315E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

1.943E-08 6.144E-08 2.556E-08 8.142E-06 1.217E-05 1.054E-05 8.369E-05 2.309E-05 5.484E-05  
1.222E-03 1.366E-05 5.461E-01 2.360E-01 2.330E-78 0.000E+00

C-71

SYSTEM C GROUP 3

(ACC. SCALE FACTOR ERROR =XYZ)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	P	D	C	RATE ERROR	MAG ERROR
1666.00	9.561E+03	1.464E+03	1.340E+04	2.744E+01	3.547E+00	4.190E+00	2.330E-08	3.561E-06	4.967E-08	2.556E+01	4.677E+00
1746.00	1.475E+04	1.250E+04	1.370E+04	4.039E+01	6.018E+00	2.004E+01	1.970E-05	7.750E-06	6.582E-06	4.003E+01	1.346E+00
1806.00	1.099E+04	1.007E+04	8.412E+03	3.046E+01	1.091E+01	2.143E+01	3.495E-05	1.820E-04	1.318E-04	2.791E+01	8.054E+00
1806.00	5.791E+03	5.194E+03	5.939E+03	1.578E+01	7.638E+00	1.654E+01	9.853E-05	3.302E-04	1.893E-04	1.469E+01	1.059E+01
1806.00	1.377E+03	6.551E+02	1.484E+03	1.823E+00	1.357E+01	1.518E+01	2.725E-04	1.643E-04	1.607E-04	1.995E+00	7.647E+00
1866.00	1.775E+03	1.172E+03	2.348E+02	4.068E+00	9.502E+00	1.394E+01	3.907E-04	2.380E-04	2.127E-04	3.927E+00	2.683E+00
1926.00	9.400E+02	9.794E+01	1.526E+03	1.802E+00	9.029E+00	1.127E+01	5.658E-04	2.047E-04	1.578E-04	1.668E+00	6.583E+00
1956.00	1.854E+03	1.688E+03	6.227E+02	4.346E+00	4.059E+00	9.443E+00	8.170E-04	1.782E-04	3.531E-04	4.262E+00	3.791E+00
2046.00	1.493E+03	8.635E+02	1.285E+02	3.547E+00	1.961E+00	6.682E+00	1.093E-03	1.463E-04	3.210E-04	3.534E+00	5.195E+00
2092.00	2.139E+02	8.392E+01	4.728E+01	6.460E-01	4.725E-01	2.024E+00	1.382E-03	2.001E-05	3.862E-04	8.423E-01	1.844E+00
2106.00	2.098E+02	4.222E+01	7.329E+01	6.920E-01	3.548E-01	1.515E+00	1.455E-03	3.789E-05	3.088E-04	6.927E-01	1.279E+00
2166.00	5.458E+01	7.617E+01	3.455E+01	8.105E-01	2.324E-01	6.817E-01	1.820E-03	1.008E-04	7.355E-05	8.127E-01	3.816E-01
2226.00	5.157E+01	1.330E+02	1.485E+02	7.018E-01	8.188E-01	1.057E+00	1.825E-03	1.163E-04	2.822E-05	7.012E-01	5.804E-01
2256.00	7.346E+01	6.696E+01	1.693E+02	5.925E-01	8.096E-01	4.475E+00	1.655E-03	8.386E-05	1.420E-05	5.935E-01	3.505E-01
2292.00	7.341E+01	6.308E+01	1.642E+02	5.779E-01	6.968E-01	5.500E-01	1.657E-03	8.240E-05	1.026E-05	5.798E-01	2.927E-01
2346.00	2.999E+01	2.270E+01	1.156E+02	2.587E-01	4.320E-02	8.828E-01	1.667E-03	5.753E-05	6.140E-06	2.590E-01	9.495E-01
2406.00	1.821E+01	1.999E+01	7.396E+01	1.740E-01	2.183E-02	5.379E-01	1.662E-03	5.706E-05	1.425E-05	1.761E-01	1.346E-02
2436.00	3.923E+00	1.944E+01	6.294E+01	1.704E-01	1.861E-02	3.767E-01	1.662E-03	5.636E-05	1.656E-05	1.704E-01	1.595E-02
2436.00	3.755E+00	1.933E+01	6.292E+01	1.662E-01	1.817E-02	3.795E-01	1.662E-03	5.624E-05	1.653E-05	1.683E-01	1.603E-02
2449.50	4.820E+00	1.654E+01	4.942E+01	1.665E-01	1.955E-02	3.728E-01	1.666E-03	4.833E-05	1.734E-05	1.665E-01	2.590E-02
2466.00	5.366E-01	9.420E+00	5.399E+00	1.354E-01	1.582E-02	5.798E-01	1.665E-03	2.397E-05	2.207E-05	1.355E-01	9.529E-03
2472.00	3.975E-01	2.348E-01	5.262E-01	1.080E-01	1.464E-02	5.495E-01	1.688E-03	2.255E-05	2.309E-05	1.080E-01	9.658E-03
2477.00	3.693E-01	2.349E-01	2.452E+00	8.881E-02	1.093E-02	5.155E-01	1.688E-03	2.185E-05	2.444E-05	8.880E-02	9.156E-03
2482.00	3.697E-01	1.971E-01	4.978E+00	7.356E-02	1.094E-02	4.834E-01	1.688E-03	2.148E-05	2.497E-05	7.356E-02	1.681E-02

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W			
1666.00	9.964E+03	7.001E+03	1.117E+04	2.722E+01	6.006E+00	2.520E+00	2.236E-08	3.216E-08	5.234E-08	5.169E-03	1.750E-04	
1682.00	1.544E+04	1.690E+04	6.393E+03	4.001E+01	3.456E+00	2.210E+01	1.907E-05	3.280E-06	9.524E-06	8.036E-03	4.098E-03	
1746.00	1.130E+04	1.263E+04	2.347E+03	3.018E+01	1.022E+01	2.215E+01	3.566E-05	1.495E-05	2.242E-04	7.525E-03	5.661E-03	
1806.00	5.921E+03	7.512E+03	2.074E+03	1.566E+01	1.185E+01	1.397E+01	9.991E-05	2.880E-05	3.792E-04	5.575E-03	5.044E-03	
1806.00	1.352E+03	1.638E+03	1.273E+02	1.790E+00	7.810E+00	1.881E+01	2.732E-04	7.876E-05	2.161E-04	9.621E-04	7.012E-03	
1806.00	1.784E-03	1.110E+03	3.789E+02	4.028E+00	2.170E+00	1.678E+01	3.984E-04	1.400E-04	2.982E-04	1.889E-03	8.693E-03	
1826.00	9.326E+02	1.435E+03	5.412E+02	1.580E+00	7.012E+00	1.254E+01	5.657E-04	7.487E-05	2.475E-04	2.292E-03	9.634E-03	
1956.00	2.855E+03	1.586E+03	7.994E+02	4.335E+00	4.181E+00	9.415E+00	8.164E-04	1.450E-04	3.659E-04	4.759E-03	9.750E-03	
2046.00	1.640E+03	3.394E+02	8.037E+02	3.548E+00	5.978E+00	3.571E+00	1.093E-03	2.780E-04	2.195E-04	5.554E-03	4.391E-03	
2092.00	2.139E+02	2.932E+01	9.172E+01	8.432E-01	2.009E+00	5.300E+00	1.303E-03	3.480E-04	1.674E-04	1.295E-03	6.104E-04	
2106.00	2.099E+02	3.324E+01	7.748E+01	6.926E-01	1.375E-00	7.218E+01	1.458E-03	2.538E-04	1.742E-04	9.739E-04	8.294E-04	
2166.00	5.432E+01	7.633E+01	3.460E+01	8.154E-01	2.350E-01	6.798E+01	1.820E-03	9.547E-05	7.915E-05	9.303E-04	8.520E-04	
2226.00	5.123E+01	1.954E+02	4.011E+01	7.088E-01	4.625E-01	1.259E+00	1.624E-03	8.727E-05	9.044E-05	8.003E-04	1.672E-03	
2226.00	7.281E+01	8.461E+01	1.613E+02	5.900E-01	2.576E-01	8.868E-01	1.654E-03	5.378E-05	7.430E-05	7.761E-04	1.282E-03	
2292.00	7.337E+01	6.515E+01	1.635E+02	5.790E-01	2.075E-01	8.617E-01	1.657E-03	6.415E-05	6.255E-05	7.794E-04	1.257E-03	
2346.00	2.985E+01	2.221E+01	1.157E+02	2.588E-01	4.278E-02	8.598E-01	1.667E-03	6.187E-05	5.857E-06	4.069E-04	1.393E-03	
2406.00	1.821E+01	1.942E+01	7.460E+01	1.760E-01	2.704E-02	5.379E-01	1.662E-03	5.943E-05	1.414E-05	3.572E-04	1.105E-03	
2436.00	3.937E+00	1.935E+01	6.302E+01	1.704E-01	1.874E-02	3.787E-01	1.661E-03	5.794E-05	1.649E-05	3.717E-04	8.391E-04	
2436.00	3.771E+00	1.925E+01	6.295E+01	1.682E-01	1.829E-02	3.798E-01	1.662E-03	5.781E-05	1.644E-05	3.668E-04	8.409E-04	
2449.50	4.820E+00	1.654E+01	4.944E+01	1.655E-01	1.935E-02	3.726E-01	1.666E-03	4.927E-05	1.730E-05	3.772E-04	8.641E-04	
2466.00	5.365E-01	9.410E+00	5.405E+00	1.354E-01	1.574E-02	5.798E-01	1.685E-03	2.274E-05	2.205E-05	3.725E-04	1.597E-03	
2472.00	3.975E-01	2.349E-01	5.262E-01	1.080E-01	1.456E-02	5.496E-01	1.688E-03	2.274E-05	2.307E-05	3.199E-04	1.622E-03	
2477.00	3.693E-01	2.349E-01	2.452E+00	8.880E-02	1.116E-02	5.150E-01	1.688E-03	2.196E-05	2.442E-05	2.788E-04	1.614E-03	
2482.00	3.697E-01	1.938E-01	4.978E+00	7.356E-02	1.123E-02	4.834E-01	1.688E-03	2.151E-05	2.496E-05	2.431E-04	1.596E-03	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

4.217E-09	2.327E-08	1.872E-08	1.164E-05	9.194E-06	6.793E-06	7.667E-05	2.103E-05	2.578E-05
2.391E-03	3.676E-06	3.245E-01	1.406E-01					

C 72

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 4

(ACC. MISALIGNMENT - X,Y,Z)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1886.00	3.317E+03	1.519E+03	2.470E+03	6.505E+00	6.176E-01	1.650E+00	7.954E-05	1.925E-04	1.769E-04	6.073E+00	1.170E+00
1888.00	4.463E+03	3.304E+03	2.568E+03	9.576E+00	3.024E+00	3.347E+00	4.055E-05	1.917E-04	1.774E-04	9.087E+00	1.731E+00
1746.00	1.555E+03	1.864E+03	2.468E+03	4.504E+00	4.159E+00	2.785E+00	8.276E-05	1.602E-04	2.150E-04	4.001E+00	1.737E+00
1806.00	1.975E+03	1.022E+03	2.659E+03	6.977E+00	3.310E+00	1.608E+00	9.150E-05	1.694E-04	2.260E-04	6.547E+00	1.743E+00
1806.00	4.603E+02	6.195E+02	4.641E+02	2.294E+00	2.108E+00	1.655E+00	8.548E-05	1.745E-04	2.329E-04	2.306E+00	8.817E-01
1906.00	3.093E+02	4.737E+02	4.769E+02	1.636E+00	1.514E+00	1.535E+00	8.995E-05	1.726E-04	1.915E-04	1.618E+00	6.474E-01
1926.00	2.587E+02	3.154E+02	2.841E+02	1.287E+00	1.544E+00	1.301E+00	1.028E-04	1.745E-04	1.690E-04	1.271E+00	7.620E-01
1966.00	3.486E+02	2.425E+02	4.395E+02	1.280E+00	2.016E+00	1.595E+00	1.185E-04	1.749E-04	1.591E-04	1.260E+00	7.487E-01
2046.00	2.608E+02	1.273E+02	3.135E+01	5.134E-01	1.014E+00	1.520E+00	1.699E-04	1.710E-04	1.597E-04	5.116E-01	1.335E+00
2092.00	5.310E+01	1.101E+02	3.927E+01	5.208E-01	1.157E+00	2.002E-04	2.002E-04	1.400E-04	2.137E-04	4.570E-01	8.279E-01
2106.00	5.121E+01	1.103E+02	5.499E+01	4.932E-01	4.873E-01	1.239E+00	2.853E-04	1.425E-04	2.100E-04	4.920E-01	6.637E-01
2166.00	3.941E+01	2.859E+01	5.938E+01	5.680E-01	5.337E-02	4.054E-01	2.430E-04	1.375E-04	2.049E-04	5.060E-01	1.935E-01
2226.00	4.713E+01	4.620E+01	3.303E+01	4.603E-01	2.535E-01	2.243E-04	1.861E-04	1.974E-04	4.594E-01	2.872E-01	2.337E-01
2286.00	5.215E+01	1.972E+01	3.442E+01	2.661E-01	1.937E-01	3.807E-01	2.510E-04	1.971E-04	1.940E-04	2.659E-01	2.337E-01
2292.00	5.481E+01	1.929E+01	3.420E+01	2.947E-01	1.738E-01	4.200E-01	2.510E-04	1.973E-04	1.930E-04	2.945E-01	2.314E-01
2346.00	2.559E+01	7.765E+00	2.314E+01	4.933E-01	5.364E-02	4.554E-01	2.320E-04	1.853E-04	1.935E-04	4.926E-01	7.779E-03
2406.00	2.414E+01	1.342E+01	3.951E+01	5.225E-01	5.262E-02	6.576E-01	2.284E-04	1.904E-04	1.912E-04	5.622E-01	2.020E-02
2436.00	1.031E+01	1.785E+01	6.203E+01	6.710E-01	1.044E-01	8.634E-01	2.320E-04	1.986E-04	1.904E-04	6.006E-01	4.075E-02
2436.00	9.334E+00	1.742E+01	6.227E+01	5.940E-01	1.030E-01	8.634E-01	2.292E-04	2.043E-04	1.897E-04	5.904E-01	6.673E-02
2447.50	1.212E+01	1.905E+01	7.927E+01	5.537E-01	1.015E-01	9.136E-01	2.127E-04	1.628E-04	1.698E-04	4.848E-01	7.482E-02
2466.00	1.817E+00	2.272E+01	4.037E+00	4.646E-01	9.711E-02	3.056E-01	2.145E-04	1.647E-04	1.895E-04	3.849E-01	6.815E-02
2472.00	1.364E+00	3.347E-01	1.283E+00	3.849E-01	8.539E-02	3.013E-01	2.142E-04	1.647E-04	1.888E-04	3.188E-01	2.705E-02
2477.00	1.099E+00	1.717E-01	1.426E+00	3.188E-01	3.838E-02	2.947E-01	2.142E-04	1.673E-04	1.888E-04	2.641E-01	2.426E-02
2482.00	1.315E+00	2.630E-01	2.866E+00	2.541E-01	2.757E-02	2.572E-01	2.141E-04	1.689E-04	1.886E-04	2.641E-01	2.426E-02

C-73

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	PSI ERROR
1886.00	3.377E+03	2.765E+03	1.952E+03	6.503E+00	1.145E+00	1.359E+00	7.584E-05	1.927E-04	1.783E-04	1.214E-03	2.333E-04		
1886.00	4.588E+03	3.819E+03	1.236E+03	9.948E+00	1.465E+00	4.332E+00	7.669E-05	1.923E-04	1.784E-04	1.810E-03	8.249E-04		
1746.00	1.606E+03	2.821E+03	1.723E+03	4.560E+00	2.017E+00	4.021E+00	7.567E-05	1.853E-04	1.969E-04	1.130E-03	1.240E-03		
1806.00	2.022E+03	3.136E+03	5.342E+02	6.534E+00	2.247E+00	3.161E+00	8.977E-05	1.952E-04	2.049E-04	2.473E-03	1.207E-03		
1806.00	4.612E+02	6.393E+02	4.256E+02	2.280E+00	5.778E-01	2.511E+00	8.474E-05	1.840E-04	2.257E-04	8.669E-04	9.246E-04		
1866.00	3.142E+02	6.233E+02	2.280E+02	1.631E+00	7.716E-01	1.544E+00	8.953E-05	1.342E-04	2.171E-04	8.723E-04	1.011E-03		
1926.00	2.604E+02	3.734E+02	1.986E+02	1.286E+00	7.432E-01	1.878E+00	1.025E-04	1.457E-04	1.945E-04	9.341E-04	1.433E-03		
1926.00	3.497E+02	4.495E+02	2.368E+02	1.279E+00	7.349E-01	2.447E+00	1.105E-04	1.347E-04	1.944E-04	1.326E-03	2.547E-03		
2046.00	2.609E+02	4.750E+01	1.226E+02	5.135E-01	1.441E+00	1.124E+00	1.659E-04	1.439E-04	1.845E-04	8.982E-04	1.382E-03		
2092.00	5.103E+01	3.750E+01	1.107E+02	4.503E-01	8.177E-01	7.521E-01	2.005E-04	2.125E-04	1.415E-04	5.524E-04	1.134E-03		
2106.00	5.121E+01	4.547E+01	1.144E+02	4.934E-01	6.656E-01	1.142E+00	2.004E-04	1.977E-04	1.586E-04	5.675E-04	1.314E-03		
2166.00	3.575E+01	2.891E+01	5.418E+01	5.671E-01	5.495E-02	4.103E-01	2.434E-04	1.375E-04	2.045E-04	6.600E-04	5.135E-04		
2226.00	4.689E+01	4.071E+01	3.385E+01	4.604E-01	2.118E-01	2.553E-01	2.245E-04	1.810E-04	2.014E-04	5.489E-04	3.405E-04		
2286.00	5.297E+01	2.314E+01	3.246E+01	2.657E-01	2.738E-01	3.333E-01	2.523E-04	1.880E-04	2.022E-04	4.305E-04	4.834E-04		
2292.00	5.474E+01	2.399E+01	3.366E+01	2.943E-01	2.707E-01	3.908E-01	2.514E-04	1.884E-04	2.011E-04	4.776E-04	5.286E-04		
2346.00	2.599E+01	7.755E+00	2.313E+01	4.927E-01	5.612E-02	4.953E-01	2.330E-04	1.850E-04	1.936E-04	7.782E-04	7.033E-04		
2406.00	2.415E+01	1.341E+01	3.751E+01	5.624E-01	6.494E-02	6.575E-01	2.282E-04	1.902E-04	1.912E-04	1.150E-03	1.355E-03		
2436.00	1.032E+01	1.761E+01	6.204E+01	6.009E-01	1.037E-01	8.817E-01	2.327E-04	1.982E-04	1.904E-04	1.324E-03	1.916E-03		
2436.00	9.094E+00	1.741E+01	6.226E+01	5.939E-01	1.043E-01	8.817E-01	2.327E-04	1.982E-04	1.904E-04	1.309E-03	1.920E-03		
2447.50	1.213E+01	1.501E+01	7.929E+01	5.907E-01	1.024E-01	9.135E-01	2.127E-04	1.628E-04	1.878E-04	1.284E-03	6.378E-04		
2466.00	1.816E+00	2.272E+01	4.038E+00	4.646E-01	9.711E-02	3.056E-01	2.145E-04	1.647E-04	1.895E-04	1.145E-03	8.890E-04		
2472.00	1.364E+00	3.347E-01	1.283E+00	3.849E-01	8.539E-02	3.013E-01	2.142E-04	1.647E-04	1.888E-04	1.002E-03	9.236E-04		
2477.00	1.099E+00	1.715E-01	1.426E+00	3.188E-01	3.841E-02	2.947E-01	2.142E-04	1.673E-04	1.888E-04	8.733E-04	9.816E-04		
2482.00	1.315E+00	2.632E-01	2.866E+00	2.541E-01	2.760E-02	2.572E-01	2.141E-04	1.685E-04	1.886E-04	8.733E-04	9.816E-04		

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)  
 2.067E-03 4.577E-03 5.054E-03 2.312E-05 2.711E-05 1.954E-05 1.846E-04 5.227E-05 8.093E-05  
 5.013E-03 2.690E-05 1.153E+00 4.974E-01



SYSTEM C GROUP 5

(ACC. NONLINEARITY - X,Y,Z

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1688.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.205E+00	1.273E+00	1.250E+00	2.794E-03	9.901E-03	4.446E-03	1.136E-09	5.419E-09	4.055E-08	2.455E-03	3.333E-03
1806.00	3.386E+00	1.299E+00	1.193E+00	6.114E-03	1.500E-02	7.592E-03	2.024E-08	9.488E-09	5.571E-09	6.059E-03	4.271E-03
1866.00	8.430E-01	2.357E+00	3.234E+00	8.907E-03	1.274E-02	7.957E-03	7.765E-08	1.971E-07	7.620E-08	8.593E-03	3.421E-03
1864.00	1.537E+00	4.625E+00	4.523E+00	1.493E-02	1.164E-02	9.063E-03	7.488E-09	2.678E-07	3.292E-07	1.450E-02	8.233E-03
1926.00	1.201E+00	3.962E+00	3.766E+00	1.950E-02	1.686E-02	1.145E-02	1.029E-07	2.564E-07	4.969E-07	1.824E-02	9.375E-03
1986.00	4.111E+00	1.221E+00	4.209E+00	2.123E-02	2.354E-02	1.516E-02	1.754E-07	2.127E-07	5.620E-07	2.110E-02	1.269E-02
2046.00	2.059E+00	1.192E+00	1.117E+00	2.157E-02	1.147E-02	1.365E-02	1.018E-06	1.512E-07	3.714E-07	2.152E-02	1.661E-02
2092.00	9.163E-01	7.393E-01	2.019E+00	2.662E-02	4.105E-03	1.904E-02	1.251E-06	1.400E-06	1.766E-06	2.652E-02	2.276E-02
2106.00	4.076E-01	9.536E-01	2.322E+00	2.715E-02	3.713E-03	2.120E-02	1.351E-06	1.331E-06	1.449E-06	2.705E-02	2.189E-02
2166.00	1.569E+00	6.244E-01	2.579E+00	3.336E-02	6.979E-03	1.160E-02	2.015E-06	9.843E-07	6.654E-07	3.328E-02	1.311E-02
2226.00	1.950E+00	1.494E+00	1.027E+00	3.108E-02	8.647E-03	5.585E-03	3.236E-06	4.019E-06	4.313E-07	3.105E-02	1.482E-02
2286.00	3.208E+00	1.636E+00	4.815E-01	3.233E-02	6.779E-03	9.399E-03	2.634E-06	3.535E-06	2.332E-07	3.240E-02	8.224E-03
2292.00	3.400E+00	1.690E+00	4.753E-01	3.221E-02	6.943E-03	9.453E-03	2.607E-06	3.481E-06	2.545E-07	3.223E-02	6.438E-03
2346.00	2.224E+00	9.349E-01	2.629E-01	2.173E-02	3.621E-03	7.527E-03	2.312E-06	2.837E-06	2.701E-07	2.179E-02	7.552E-04
2406.00	7.053E-01	4.024E-01	1.344E-01	1.589E-02	2.117E-03	2.044E-03	1.849E-06	2.034E-06	3.142E-07	1.583E-02	1.069E-03
2430.00	3.267E-01	5.392E-01	3.364E-01	2.212E-02	2.724E-03	5.139E-03	1.370E-06	1.752E-06	4.524E-07	2.211E-02	1.729E-03
2430.00	2.850E-01	5.463E-01	3.481E-01	2.189E-02	2.676E-03	5.322E-03	1.876E-06	1.740E-06	4.504E-07	2.133E-02	1.721E-03
2449.50	3.853E-01	6.071E-01	1.080E+00	2.291E-02	1.860E-03	1.195E-02	2.043E-06	1.237E-06	4.389E-07	2.240E-02	2.541E-03
2464.00	7.163E-02	4.646E-01	2.103E-01	1.780E-02	2.498E-03	2.548E-03	1.827E-06	2.104E-06	4.122E-07	1.731E-02	1.598E-03
2472.00	5.297E-02	1.699E-03	5.503E-02	1.455E-02	2.407E-03	2.381E-03	1.795E-06	1.954E-06	4.289E-07	1.455E-02	1.695E-03
2477.00	4.142E-02	1.963E-03	2.354E-02	1.181E-02	1.068E-03	2.840E-03	1.810E-06	1.822E-06	5.223E-07	1.181E-02	6.175E-04
2482.00	4.897E-02	4.485E-03	6.016E-02	9.595E-03	6.882E-04	3.051E-03	1.818E-06	1.759E-06	5.791E-07	9.595E-03	5.574E-04

C-74

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1688.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.248E+00	1.667E+00	2.937E-01	2.719E-03	3.532E-03	1.028E-02	1.146E-09	3.677E-09	6.759E-08	7.096E-07	2.742E-06
1806.00	3.413E+00	1.509E+00	9.082E-01	6.086E-03	4.025E-03	1.707E-02	2.063E-08	1.024E-09	1.095E-07	1.095E-07	6.357E-06
1866.00	7.779E-01	3.911E+00	9.100E-01	8.955E-03	2.854E-03	1.472E-02	7.635E-09	1.911E-08	2.109E-07	3.101E-06	5.404E-06
1866.00	1.497E+00	6.173E+00	1.973E+00	1.502E-02	7.212E-03	1.287E-02	8.757E-09	1.508E-07	3.957E-07	7.334E-06	6.680E-06
1926.00	1.171E+00	4.941E+00	2.311E+00	1.853E-02	6.197E-03	1.939E-02	1.033E-07	4.515E-07	3.278E-07	1.262E-05	1.481E-05
1986.00	4.115E+00	3.974E+00	2.530E+00	2.124E-02	1.195E-02	2.531E-02	1.749E-07	4.788E-07	3.633E-07	2.144E-05	2.637E-05
2046.00	2.059E+00	1.436E+00	1.046E+00	2.157E-02	1.295E-02	1.226E-02	1.018E-06	3.345E-07	2.210E-07	2.272E-05	1.508E-05
2092.00	9.192E-01	1.591E+00	1.550E+00	2.657E-02	1.823E-02	7.002E-03	1.252E-06	9.697E-07	2.034E-06	2.554E-05	8.042E-06
2106.00	4.118E-01	1.267E+00	2.166E+00	2.710E-02	1.776E-02	1.226E-02	1.382E-06	3.461E-07	1.936E-06	2.707E-05	1.407E-05
2166.00	1.565E+00	6.237E-01	2.584E+00	3.331E-02	7.080E-03	1.170E-02	2.017E-06	9.846E-07	6.602E-07	3.859E-05	1.462E-05
2226.00	1.941E+00	3.093E-01	1.738E+00	3.105E-02	9.328E-03	4.555E-03	3.252E-06	2.471E-06	3.184E-06	3.795E-05	6.087E-06
2286.00	3.283E+00	1.430E+00	9.580E-01	3.235E-02	1.156E-03	1.146E-02	2.646E-06	2.364E-06	2.627E-06	4.481E-05	1.664E-05
2292.00	3.397E+00	1.575E+00	7.189E-01	3.215E-02	8.771E-04	1.178E-02	2.617E-06	2.719E-06	2.176E-06	4.551E-05	1.725E-05
2346.00	2.223E+00	9.459E-01	2.634E-01	2.177E-02	3.645E-03	7.548E-03	3.216E-06	2.834E-06	2.609E-07	3.425E-05	1.195E-05
2406.00	7.955E-01	4.023E-01	1.336E-01	1.588E-02	2.140E-03	2.045E-03	1.849E-06	2.034E-06	3.114E-07	3.226E-05	4.209E-06
2430.00	3.277E-01	5.367E-01	3.358E-01	2.212E-02	2.753E-03	5.166E-03	1.870E-06	1.753E-06	4.507E-07	4.836E-05	1.153E-05
2430.00	2.854E-01	5.463E-01	3.485E-01	2.189E-02	2.704E-03	5.318E-03	1.876E-06	1.740E-06	4.497E-07	4.785E-05	1.182E-05
2449.50	3.851E-01	6.062E-01	1.030E+00	2.291E-02	1.883E-03	1.195E-02	2.043E-06	1.237E-06	4.382E-07	5.209E-05	2.779E-05
2464.00	7.155E-02	4.645E-01	2.105E-01	1.780E-02	2.503E-03	2.549E-03	1.827E-06	2.104E-06	4.119E-07	4.904E-05	6.990E-06
2472.00	5.297E-02	1.699E-03	5.503E-02	1.455E-02	2.410E-03	2.380E-03	1.795E-06	1.954E-06	4.257E-07	4.319E-05	7.022E-06
2477.00	4.142E-02	1.974E-03	2.354E-02	1.181E-02	1.070E-03	2.840E-03	1.810E-06	1.822E-06	5.230E-07	3.709E-05	8.902E-06
2482.00	4.897E-02	4.511E-03	6.016E-02	9.595E-03	6.892E-04	3.050E-03	1.818E-06	1.759E-06	5.794E-07	3.171E-05	1.007E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

3.623E-10	7.113E-10	6.517E-10	1.192E-06	1.020E-06	8.084E-07	8.320E-06	1.846E-06	3.047E-06
9.442E-05	5.997E-07	4.305E-02	1.871E-02					





## SYSTEM C GROUP 7

(GYRO BIAS DRIFT - X,Y,Z)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	2.965E+03	8.749E+03	8.602E+03	1.312E+01	7.397E+00	5.969E+00	6.298E-04	3.305E-04	5.736E-04	1.100E+01	4.874E+00
1686.00	3.080E+03	8.810E+03	8.507E+03	1.359E+01	7.339E+00	6.550E+00	6.305E-04	3.306E-04	5.734E-04	1.144E+01	4.782E+00
1746.00	2.132E+03	7.839E+03	8.169E+03	8.933E+00	7.513E+00	5.609E+00	6.305E-04	3.712E-04	5.702E-04	7.376E+00	3.584E+00
1806.00	3.033E+03	6.765E+03	7.245E+03	7.843E+00	7.174E+00	3.807E+00	6.364E-04	3.937E-04	5.671E-04	7.499E+00	3.379E+00
1806.00	7.753E+02	6.959E+03	7.527E+03	1.997E+00	6.280E+00	3.503E+00	6.640E-04	4.277E-04	5.701E-04	1.577E+00	2.264E+00
1866.00	7.120E+02	5.579E+03	6.451E+03	3.384E+00	5.927E+00	3.748E+00	6.508E-04	4.542E-04	7.030E-04	2.895E+00	4.747E+00
1926.00	5.196E+02	3.935E+03	4.582E+03	1.413E+00	8.014E+00	3.130E+00	6.826E-04	4.437E-04	9.586E-04	1.358E+00	3.219E+00
1936.00	4.165E+03	8.215E+02	3.552E+03	1.209E+01	1.959E+01	3.299E+00	5.840E-04	4.509E-04	1.402E-03	1.191E+01	1.185E+01
2046.00	1.093E+03	4.848E+02	2.824E+02	1.564E+00	4.096E+00	1.197E+01	1.127E-03	5.466E-04	1.274E-03	3.665E+00	7.116E+00
2092.00	4.677E+02	1.095E+03	3.550E+02	1.564E+00	4.096E+00	1.197E+01	1.071E-03	1.362E-03	9.767E-05	1.556E+00	8.668E+00
2106.00	4.283E+02	1.006E+03	5.266E+02	1.569E+00	3.591E+00	1.219E+01	6.692E-04	1.403E-03	1.546E-04	1.560E+00	7.008E+00
2166.00	2.353E+02	1.519E+02	5.380E+02	3.607E+00	8.393E-01	3.750E+00	7.999E-04	5.556E-04	3.080E-04	3.593E+00	1.480E+00
2226.00	1.628E+02	1.719E+02	2.303E+02	2.246E+00	1.371E+00	5.949E-01	1.110E-03	2.735E-04	2.835E-05	2.243E+00	1.520E+00
2286.00	2.423E+02	1.968E+02	1.564E+02	1.807E+00	5.741E-01	1.223E+00	1.028E-03	1.534E-04	3.605E-05	1.811E+00	6.156E+00
2292.00	2.590E+02	2.018E+02	1.449E+02	1.835E+00	6.901E-01	1.344E+00	1.032E-03	1.571E-04	3.293E-05	1.839E+00	5.475E-01
2346.00	1.716E+02	1.441E+02	4.752E+01	9.916E-01	1.356E-01	1.466E+00	1.028E-03	1.252E-04	1.822E-05	9.955E-01	6.995E-02
2406.00	1.495E+01	6.350E+01	3.122E+01	1.394E-01	1.955E-02	8.417E-01	9.481E-04	6.050E-05	1.245E-05	1.408E-01	4.692E-02
2430.00	7.760E+00	5.605E+01	3.578E+01	1.137E-01	8.002E-02	8.153E-01	9.477E-04	5.955E-05	8.884E-06	1.149E-01	1.019E-01
2430.00	7.652E+00	5.592E+01	3.569E+01	1.141E-01	8.026E-02	8.146E-01	9.477E-04	5.947E-05	8.930E-06	1.154E-01	1.022E-01
2449.50	6.033E+00	5.100E+01	3.954E+01	1.199E-01	1.019E-01	7.608E-01	9.477E-04	5.371E-05	9.156E-06	1.209E-01	1.232E-01
2466.00	1.796E-01	4.000E+01	6.280E+00	1.524E-01	9.911E-02	4.433E-01	9.330E-04	2.401E-05	8.492E-06	1.531E-01	1.070E-01
2472.00	2.597E-01	5.074E-01	1.078E+00	7.357E-02	1.170E-01	3.649E-01	9.225E-04	2.253E-05	8.708E-06	7.359E-02	1.207E-01
2477.00	1.851E-01	1.175E-01	2.170E+00	5.414E-02	1.798E-02	3.466E-01	9.211E-04	2.496E-05	1.307E-05	5.414E-02	2.028E-02
2482.00	2.323E-01	1.576E-01	3.760E+00	4.608E-02	1.135E-02	3.313E-01	9.208E-04	2.519E-05	1.356E-05	4.608E-02	1.220E-02

TIME	GAMMA ERROR						PSI ERROR				
	U	V	W	U	V	W	U	V			
1686.00	3.267E+03	1.145E+04	4.198E+03	1.311E+01	4.481E+00	8.389E+00	6.396E-04	3.041E-04	5.774E-04	2.176E-03	1.504E-03
1686.00	3.385E+03	1.154E+04	4.057E+03	1.357E+01	4.394E+00	8.836E+00	6.402E-04	3.047E-04	5.772E-04	2.266E-03	1.592E-03
1746.00	2.332E+03	1.116E+04	1.647E+03	8.901E+00	2.719E+00	8.254E+00	6.365E-04	4.044E-04	5.378E-04	1.966E-03	2.057E-03
1806.00	3.045E+03	9.259E+03	2.682E+03	7.789E+00	3.894E+00	7.157E+00	6.411E-04	4.809E-04	4.312E-04	2.867E-03	2.555E-03
1806.00	6.949E+02	9.804E+03	3.037E+03	2.025E+00	2.293E+00	6.811E+00	6.682E-04	4.819E-04	5.193E-04	6.298E-04	2.393E-03
1866.00	7.905E+02	7.879E+03	3.249E+03	3.400E+00	4.407E+00	5.444E+00	6.538E-04	4.118E-04	7.260E-04	1.293E-03	2.760E-03
1926.00	5.528E+02	5.733E+03	1.992E+03	1.416E+00	3.339E+00	7.924E+00	6.656E-04	8.475E-04	6.272E-04	1.306E-03	5.974E-03
1936.00	4.174E+03	3.073E+03	1.942E+03	1.206E+01	1.294E+01	1.511E+01	5.843E-04	9.479E-04	1.127E-03	1.341E-02	1.576E-02
2046.00	1.093E+03	2.643E+02	4.943E+02	3.676E+00	7.894E+00	9.394E+00	1.127E-03	1.150E-03	7.724E-04	6.042E-03	1.155E-02
2092.00	4.676E+02	2.041E+02	1.055E+03	1.559E+00	8.741E+00	9.149E+00	1.071E-03	6.466E-04	1.204E-03	2.150E-03	1.046E-02
2106.00	4.289E+02	2.793E+02	1.101E+03	1.559E+00	6.976E+00	1.061E+01	9.604E-04	6.114E-04	1.155E-03	1.603E-03	1.220E-02
2166.00	2.340E+02	1.513E+02	5.395E+02	3.594E+00	8.493E-01	3.760E+00	7.995E-04	5.569E-04	3.075E-04	4.174E-03	4.705E-03
2226.00	1.614E+02	1.124E+02	2.651E+02	2.240E+00	1.135E+00	9.863E-01	1.111E-03	1.592E-04	2.192E-04	2.636E-03	1.317E-03
2236.00	2.413E+02	2.423E+02	6.871E+01	1.803E+00	2.226E-01	1.538E+00	1.029E-03	1.023E-04	1.151E-04	2.473E-03	2.231E-03
2292.00	2.580E+02	2.422E+02	5.993E+01	1.832E+00	2.634E-01	1.595E+00	1.033E-03	1.140E-04	1.070E-04	2.553E-03	2.333E-03
2346.00	1.711E+02	1.445E+02	4.703E+01	9.912E-01	1.293E-01	1.467E+00	1.029E-03	1.226E-04	1.881E-05	1.553E-03	2.319E-03
2406.00	1.404E+01	6.356E+01	3.128E+01	1.394E-01	2.121E-02	3.417E-01	9.481E-04	5.955E-05	1.246E-05	2.714E-04	1.734E-03
2430.00	7.814E+00	5.600E+01	3.533E+01	1.137E-01	8.096E-02	8.152E-01	9.475E-04	5.830E-05	8.920E-05	2.104E-04	1.812E-03
2430.00	7.707E+00	5.597E+01	3.575E+01	1.142E-01	8.120E-02	8.145E-01	9.478E-04	5.882E-05	8.936E-06	2.113E-04	1.810E-03
2449.50	6.062E+00	5.097E+01	3.957E+01	1.199E-01	1.025E-01	7.608E-01	9.445E-04	5.331E-05	9.176E-06	2.270E-04	1.765E-03
2466.00	1.897E-01	4.003E+01	6.307E+00	1.525E-01	9.937E-02	4.432E-01	9.330E-04	2.379E-05	8.489E-06	4.049E-04	1.215E-03
2472.00	2.596E-01	5.067E-01	1.078E+00	7.358E-02	1.172E-01	3.648E-01	9.225E-04	2.239E-05	8.704E-06	1.949E-04	1.077E-03
2477.00	1.351E-01	1.191E-01	2.170E+00	5.414E-02	1.820E-02	3.466E-01	9.211E-04	2.469E-05	1.306E-05	1.672E-04	1.086E-03
2482.00	2.323E-01	1.592E-01	3.760E+00	4.608E-02	1.156E-02	3.313E-01	9.208E-04	2.518E-05	1.365E-05	1.516E-04	1.094E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

9.853E-03	1.311E-07	7.916E-08	3.273E-05	1.946E-05	5.687E-06	2.260E-04	1.103E-04	1.975E-05
2.384E-03	4.377E-05	2.046E-01	8.903E-02					

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 7

IGYRO BIAS DRIFT - X,Y,Z

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERRJR
1686.00	2.965E+03	8.749E+03	8.602E+03	1.312E+01	7.397E+00	5.969E+00	6.298E-04	3.305E-04	5.736E-04	1.100E+01	4.874E+00
1686.00	3.080E+03	8.810E+03	8.507E+03	1.359E+01	7.339E+00	6.550E+00	6.304E-04	3.306E-04	5.734E-04	1.144E+01	4.782E+00
1746.00	2.132E+03	7.839E+03	8.169E+03	8.933E+00	7.513E+00	5.050E+00	6.306E-04	3.712E-04	5.702E-04	7.376E+00	3.584E+00
1806.00	3.033E+03	6.365E+03	7.245E+03	7.843E+00	7.174E+00	3.807E+00	6.364E-04	3.937E-04	5.671E-04	7.499E+00	3.379E+00
1806.00	7.753E+02	6.969E+03	7.527E+03	1.997E+00	6.280E+00	3.503E+00	6.640E-04	4.277E-04	5.701E-04	1.577E+00	2.264E+00
1866.00	7.120E+02	5.579E+03	6.451E+03	3.384E+00	5.927E+00	3.748E+00	6.508E-04	4.542E-04	7.030E-04	2.885E+00	4.747E+00
1926.00	5.196E+02	3.985E+03	4.582E+03	1.413E+00	8.014E+00	3.130E+00	6.826E-04	4.437E-04	9.586E-04	1.358E+00	3.219E+00
1926.00	4.165E+03	8.216E+02	3.552E+03	1.209E+01	1.959E+01	3.299E+00	5.843E-04	4.509E-04	1.432E-03	1.191E+01	1.185E+01
1986.00	1.093E+03	4.849E+02	2.824E+02	3.679E+00	1.086E+01	5.767E+00	1.127E-03	5.466E-04	1.274E-03	3.665E+00	7.115E+00
2046.00	4.677E+02	1.085E+03	3.550E+02	1.584E+00	4.096E+00	1.197E+01	1.071E-03	1.362E-03	9.767E-05	1.556E+00	8.668E+00
2092.00	4.288E+02	1.006E+03	5.266E+02	1.569E+00	3.591E+00	1.218E+01	9.692E-04	1.403E-03	1.546E-04	1.560E+00	7.008E+00
2106.00	2.535E+02	1.519E+02	5.388E+02	3.607E+00	8.393E-01	3.750E+00	7.999E-04	5.556E-04	3.086E-04	3.593E+00	1.480E+00
2166.00	2.535E+02	1.719E+02	2.303E+02	2.246E+00	1.371E+00	5.949E-01	1.110E-03	2.755E-04	2.835E-05	2.243E+00	1.520E+00
2226.00	1.628E+02	1.968E+02	1.564E+02	1.807E+00	1.835E+00	8.901E-01	1.028E-03	1.534E-04	3.605E-05	1.811E+00	6.156E-01
2286.00	2.423E+02	2.019E+02	1.449E+02	1.835E+00	8.901E-01	1.344E+00	1.032E-03	1.571E-04	3.293E-05	1.839E+00	5.475E-01
2292.00	2.590E+02	1.441E+02	4.752E+01	9.916E-01	1.356E-01	1.466E+00	1.028E-03	1.252E-04	1.822E-05	9.955E-01	6.995E-02
2346.00	1.716E+02	1.441E+02	3.122E+01	1.394E-01	1.955E-02	8.417E-01	9.481E-04	6.050E-05	1.245E-05	1.408E-01	4.692E-02
2406.00	1.495E+01	6.358E+01	3.578E+01	1.37E-01	8.002E-02	8.153E-01	9.477E-04	5.955E-05	8.884E-05	1.149E-01	1.019E-01
2430.00	7.760E+00	5.592E+01	3.549E+01	1.141E-01	8.026E-02	8.146E-01	9.477E-04	5.947E-05	8.900E-06	1.154E-01	1.022E-01
2430.00	7.652E+00	5.592E+01	3.549E+01	1.141E-01	8.026E-02	8.146E-01	9.477E-04	5.947E-05	8.900E-06	1.154E-01	1.022E-01
2449.50	6.033E+00	5.100E+01	3.954E+01	1.199E-01	1.019E-01	7.608E-01	9.445E-04	5.371E-05	9.156E-06	1.209E-01	1.232E-01
2466.00	1.796E-01	4.000E+01	6.280E+00	1.524E-01	9.911E-02	4.433E-01	9.330E-04	2.401E-05	8.492E-06	1.531E-01	1.070E-01
2472.00	2.597E-01	5.074E-01	1.078E+00	7.357E-02	1.170E-01	3.649E-01	9.225E-04	2.253E-05	6.708E-06	1.359E-02	1.207E-01
2477.00	1.851E-01	1.175E-01	2.170E+00	5.414E-02	1.798E-02	3.466E-01	9.211E-04	2.496E-05	1.307E-05	5.414E-02	2.026E-02
2482.00	2.323E-01	1.576E-01	3.760E+00	4.608E-02	1.135E-02	3.313E-01	9.203E-04	2.519E-05	1.356E-05	4.608E-02	1.220E-02

C-76

TIME	U			V			W			GAMMA ERROR PSI ERRJR		
	U	V	W	U	V	W	U	V	W	U	V	W
1686.00	3.267E+03	1.145E+04	4.198E+03	1.311E+01	4.481E+00	8.398E+00	6.396E-04	3.041E-04	5.774E-04	2.176E-03	1.504E-03	1.592E-03
1686.00	3.385E+03	1.154E+04	4.357E+03	1.357E+01	4.394E+00	8.836E+00	6.402E-04	3.042E-04	5.772E-04	2.266E-03	1.592E-03	2.057E-03
1746.00	2.332E+03	1.116E+04	1.647E+03	8.901E+00	2.719E+00	8.254E+00	6.365E-04	4.044E-04	5.378E-04	1.956E-03	2.555E-03	2.555E-03
1806.00	3.045E+03	9.259E+03	2.652E+03	7.789E+00	3.894E+00	7.187E+00	6.411E-04	4.809E-04	4.332E-04	2.967E-03	2.555E-03	2.555E-03
1806.00	6.949E+02	9.094E+03	3.037E+03	2.025E+00	2.293E+00	6.811E+00	6.682E-04	4.819E-04	5.198E-04	6.298E-04	2.393E-03	2.393E-03
1866.00	7.905E+02	7.879E+03	3.249E+03	3.400E+00	4.407E+00	5.444E+00	6.538E-04	4.118E-04	7.260E-04	1.293E-03	2.760E-03	2.760E-03
1866.00	5.523E+02	5.733E+03	1.992E+03	1.416E+00	3.339E+00	7.929E+00	6.656E-04	8.475E-04	6.272E-04	1.306E-03	5.974E-03	5.974E-03
1926.00	4.174E+03	3.073E+03	1.942E+03	1.206E+01	1.294E+01	1.911E+01	5.843E-04	9.479E-04	1.127E-03	1.341E-02	1.576E-02	1.576E-02
1986.00	1.093E+03	2.645E+02	4.948E+02	3.676E+00	7.894E+00	9.394E+00	1.127E-03	1.150E-03	7.734E-04	6.042E-03	1.155E-02	1.155E-02
2046.00	4.676E+02	2.041E+02	1.056E+03	1.559E+00	8.741E+00	9.149E+00	1.071E-03	6.456E-04	1.234E-03	2.153E-03	1.046E-02	1.046E-02
2106.00	4.259E+02	2.783E+02	1.101E+03	1.559E+00	6.978E+00	1.061E+01	9.664E-04	8.114E-04	1.155E-03	1.633E-03	1.220E-02	1.220E-02
2166.00	2.340E+02	1.513E+02	5.395E+02	3.594E+00	8.493E-01	3.760E+00	7.995E-04	5.549E-04	3.075E-04	4.174E-03	4.705E-03	4.705E-03
2226.00	1.614E+02	1.124E+02	2.651E+02	2.240E+00	1.135E+00	9.863E-01	1.111E-03	1.592E-04	2.192E-04	2.636E-03	1.317E-03	1.317E-03
2286.00	2.413E+02	2.428E+02	6.871E+01	1.803E+00	3.226E-01	1.538E+00	1.029E-03	1.023E-04	1.151E-04	2.473E-03	2.231E-03	2.231E-03
2292.00	2.580E+02	2.422E+02	5.993E+01	1.832E+00	2.634E-01	1.595E+00	1.033E-03	1.149E-04	1.070E-04	2.558E-03	2.333E-03	2.333E-03
2346.00	1.711E+02	1.449E+02	4.703E+01	9.912E-01	1.298E-01	1.467E+00	1.029E-03	1.226E-04	1.981E-05	1.553E-03	2.317E-03	2.317E-03
2406.00	1.491E+01	6.356E+01	3.128E+01	1.394E-01	2.121E-02	8.417E-01	9.491E-04	5.955E-05	1.246E-05	2.714E-04	1.734E-03	1.734E-03
2430.00	7.914E+00	5.603E+01	3.583E+01	1.137E-01	8.074E-02	8.152E-01	9.475E-04	5.837E-05	8.920E-05	2.134E-04	1.312E-03	1.312E-03
2430.00	7.707E+00	5.597E+01	3.575E+01	1.142E-01	8.120E-02	8.145E-01	9.478E-04	5.892E-05	8.936E-06	2.113E-04	1.810E-03	1.810E-03
2449.50	6.062E+00	5.097E+01	3.957E+01	1.199E-01	1.025E-01	7.608E-01	9.445E-04	5.331E-05	9.176E-06	2.270E-04	1.769E-03	1.769E-03
2466.00	1.897E-01	4.000E+01	6.307E+00	1.425E-01	5.937E-02	4.432E-01	9.330E-04	2.379E-05	8.400E-06	4.409E-04	1.215E-03	1.215E-03
2472.00	2.594E-01	5.067E-01	1.076E+00	7.358E-02	1.172E-01	3.648E-01	9.225E-04	2.239E-05	6.704E-06	1.999E-04	1.077E-03	1.077E-03
2477.00	1.351E-01	1.191E-01	2.170E+00	5.414E-02	1.826E-02	3.466E-01	9.211E-04	2.469E-05	1.306E-05	1.672E-04	1.085E-03	1.085E-03
2482.00	2.325E-01	1.592E-01	3.760E+00	4.608E-02	1.156E-02	3.313E-01	9.208E-04	2.518E-05	1.355E-05	1.516E-04	1.094E-03	1.094E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

9.653E-08	1.811E-07	7.916E-08	3.273E-05	1.944E-05	5.687E-06	2.260E-04	1.108E-04	1.975E-05
2.384E-03	4.377E-05	2.046E-01	8.903E-02					

## SYSTEM C GROUP 8

## IGYRD MASS UNBALANCE - ICS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	-C	RATE ERROR	MAG ERROR
1686.00	4.096E+03	2.380E+02	1.572E+03	3.543E+00	6.877E-01	1.106E+00	5.525E-05	1.544E-05	2.749E-05	3.411E+00	8.908E-01
1686.00	4.977E+03	2.091E+03	1.506E+03	6.121E+00	1.491E+00	3.151E+00	5.568E-05	1.597E-05	2.804E-05	5.526E+00	6.935E-01
1746.00	2.063E+03	1.152E+03	2.055E+03	6.603E+00	2.466E+00	2.978E+00	5.944E-05	8.554E-05	7.992E-05	6.175E+00	1.386E+00
1806.00	1.103E+03	1.558E+03	2.300E+03	9.117E+00	1.862E+00	2.301E+00	6.524E-05	1.208E-04	9.311E-05	8.740E+00	1.669E+00
1806.00	2.575E+02	1.042E+03	1.622E+03	7.571E+00	2.054E+00	2.066E+00	7.808E-05	1.273E-04	9.487E-05	7.329E+00	1.137E+00
1866.00	2.394E+02	1.324E+03	1.400E+03	6.585E+00	1.291E+00	1.962E+00	9.322E-05	1.237E-04	5.318E-05	6.415E+00	2.048E-01
1926.00	3.009E+02	1.218E+03	1.408E+03	6.189E+00	1.260E+00	1.533E+00	1.124E-04	1.321E-04	5.024E-05	6.081E+00	1.371E+00
1986.00	4.358E+02	5.161E+02	6.045E+02	4.450E+00	3.336E-01	1.482E+00	1.576E-04	1.432E-04	1.007E-04	4.416E+00	1.337E+00
2046.00	3.604E+02	1.334E+02	2.004E+02	3.289E+00	5.398E-01	1.815E+00	1.695E-04	1.526E-04	1.030E-04	3.290E+00	2.333E+00
2052.00	1.395E+02	9.903E+01	2.996E+02	3.403E+00	3.531E-01	2.525E+00	1.993E-04	2.723E-04	1.078E-04	3.390E+00	2.950E+00
2106.00	8.871E+01	1.203E+02	3.308E+02	3.270E+00	2.399E-01	2.747E+00	2.158E-04	2.625E-04	6.700E-05	3.257E+00	2.740E+00
2166.00	1.781E+02	9.048E+01	3.345E+02	3.358E+00	8.350E-01	1.057E+00	2.637E-04	5.650E-05	4.033E-05	3.349E+00	1.450E+00
2225.00	1.827E+02	2.043E+02	1.276E+02	2.345E+00	8.973E-01	1.018E+00	3.527E-04	3.096E-04	5.852E-05	2.343E+00	1.742E+00
2286.00	2.574E+02	2.013E+02	4.305E+01	1.905E+00	4.625E-01	1.207E+00	2.830E-04	1.954E-04	4.856E-05	1.908E+00	9.190E-01
2292.00	2.655E+02	2.040E+02	3.880E+01	1.887E+00	4.492E-01	1.232E+00	2.815E-04	1.942E-04	4.461E-05	1.892E+00	7.789E-01
2346.00	1.508E+02	1.356E+02	2.765E+01	8.831E-01	1.263E-01	9.382E-01	2.548E-04	1.209E-04	2.769E-05	8.888E-01	5.442E-02
2406.00	2.262E+01	7.174E+01	4.127E+01	1.894E-01	1.222E-02	5.407E-01	2.306E-04	6.157E-05	1.157E-05	1.911E-01	5.051E-02
2430.00	6.057E+00	5.908E+01	4.480E+01	8.858E-02	5.038E-02	4.966E-01	2.392E-04	5.283E-05	9.369E-06	8.990E-02	6.749E-02
2430.00	6.186E+00	5.938E+01	4.466E+01	8.767E-02	5.093E-02	4.952E-01	2.392E-04	5.268E-05	9.405E-06	8.998E-02	6.785E-02
2449.50	5.776E+00	5.443E+01	4.631E+01	8.365E-02	7.618E-02	4.543E-01	2.405E-04	4.600E-05	9.091E-06	8.481E-02	9.104E-02
2446.00	1.266E-01	4.297E+01	3.812E+00	1.210E-01	7.035E-02	1.262E-01	2.443E-04	1.105E-05	5.343E-06	1.218E-01	7.649E-02
2472.00	1.868E-01	4.405E-01	1.303E+00	3.790E-02	8.909E-02	9.173E-02	2.470E-04	8.881E-05	4.616E-06	3.792E-02	9.087E-02
2477.00	1.099E-01	1.458E-01	6.227E-01	2.565E-02	6.308E-03	8.756E-02	2.475E-04	1.016E-05	6.748E-06	2.565E-02	7.273E-03
2482.00	1.270E-01	1.444E-01	9.404E-01	2.259E-02	2.187E-03	8.407E-02	2.477E-04	1.025E-05	7.386E-06	2.259E-02	2.286E-03

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	4.110E+03	8.442E+02	1.302E+03	3.602E+00	1.060E+00	9.336E-01	5.573E-05	1.521E-05	2.666E-05	6.921E-04	1.602E-04
1686.00	5.043E+03	2.277E+03	1.053E+03	6.060E+00	8.430E-01	3.490E+00	5.614E-05	1.518E-05	2.758E-05	1.110E-03	6.713E-04
1746.00	2.061E+03	2.178E+03	9.010E+02	6.565E+00	1.796E+00	3.497E+00	5.981E-05	1.920E-05	1.153E-04	1.653E-03	9.404E-04
1806.00	1.132E+03	2.734E+03	4.080E+02	9.089E+00	2.107E+00	2.197E+00	6.759E-05	3.750E-05	1.477E-04	3.265E-03	3.414E-04
1806.00	2.585E+02	1.911E+03	2.528E+02	7.556E+00	1.342E+00	2.631E+00	7.909E-05	3.480E-05	1.548E-04	2.722E-03	1.003E-03
1866.00	2.434E+02	1.809E+03	6.610E+02	6.577E+00	8.177E-01	2.220E+00	9.333E-05	9.387E-05	9.641E-05	3.370E-03	1.174E-03
1926.00	3.098E+02	1.756E+03	6.124E+02	6.187E+00	1.079E+00	1.675E+00	1.123E-04	5.454E-05	1.304E-04	4.512E-03	1.301E-03
1986.00	4.363E+02	7.916E+02	6.847E+01	4.451E+00	1.187E+00	9.428E-01	1.575E-04	8.460E-05	1.535E-04	4.517E-03	3.821E-04
2046.00	3.604E+02	2.186E+02	1.010E+02	3.289E+00	1.871E+00	2.842E-01	1.695E-04	7.841E-05	1.666E-04	3.577E-03	3.478E-04
2052.00	1.403E+02	2.241E+02	2.218E+02	3.399E+00	2.377E+00	9.380E-01	1.994E-04	7.649E-05	2.827E-04	3.265E-03	1.067E-03
2106.00	3.927E+01	1.768E+02	3.042E+02	3.264E+00	2.246E+00	1.620E+00	2.158E-04	1.379E-04	2.331E-04	3.242E-03	1.859E-03
2166.00	1.768E+02	9.115E+01	3.351E+02	3.352E+00	8.452E-01	1.067E+00	2.636E-04	5.638E-05	4.055E-05	3.862E-03	1.332E-03
2225.00	1.814E+02	2.722E+01	2.404E+02	2.343E+00	1.335E+00	2.598E-01	3.537E-04	2.193E-04	2.246E-04	2.710E-03	3.466E-04
2286.00	2.544E+02	1.649E+02	1.253E+02	1.903E+00	5.714E-01	1.162E+00	2.835E-04	9.679E-05	1.758E-04	2.521E-03	1.688E-03
2292.00	2.645E+02	1.782E+02	1.091E+02	1.886E+00	4.427E-01	1.237E+00	2.820E-04	1.201E-04	1.582E-04	2.563E-03	1.812E-03
2346.00	1.504E+02	1.370E+02	2.834E+01	8.827E-01	1.233E-01	9.390E-01	2.550E-04	1.204E-04	2.843E-05	1.386E-03	1.485E-03
2406.00	2.252E+01	7.169E+01	4.142E+01	1.894E-01	1.315E-02	5.407E-01	2.386E-04	6.153E-05	1.171E-05	3.729E-04	1.115E-03
2430.00	6.115E+00	5.901E+01	4.487E+01	8.863E-02	5.094E-02	4.966E-01	2.392E-04	5.282E-05	9.434E-06	1.695E-04	1.135E-03
2430.00	6.244E+00	5.883E+01	4.474E+01	8.772E-02	5.149E-02	4.951E-01	2.392E-04	5.267E-05	9.470E-06	1.678E-04	1.101E-03
2449.50	5.308E+00	5.439E+01	4.636E+01	8.369E-02	7.651E-02	4.542E-01	2.405E-04	4.599E-05	9.126E-06	1.568E-04	1.057E-03
2446.00	1.155E-01	4.297E+01	8.844E+00	1.211E-01	7.038E-02	1.262E-01	2.443E-04	1.103E-05	5.349E-06	3.232E-04	3.462E-04
2472.00	1.867E-01	4.397E-01	1.304E+00	3.791E-02	8.909E-02	9.173E-02	2.470E-04	8.865E-05	4.619E-06	9.853E-05	2.707E-04
2477.00	1.099E-01	1.447E-01	6.226E-01	2.565E-02	6.315E-03	8.756E-02	2.475E-04	1.015E-05	6.745E-06	7.953E-05	2.745E-04
2482.00	1.270E-01	1.445E-01	9.404E-01	2.259E-02	2.216E-03	8.407E-02	2.477E-04	1.026E-05	7.382E-06	7.456E-05	2.777E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

4.622E-03 6.741E-08 5.556E-08 2.518E-05 1.533E-05 7.185E-06 1.434E-04 6.324E-05 1.484E-05  
 8.282E-04 2.777E-05 1.130E-01 5.138E-02

ORIGINAL PAGE IS  
OF POOR QUALITY

C-77

SYSTEM C GROUP 9

CGYRO G-2 ERRORS

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1656.00	3.279E+01	1.243E+01	2.715E+01	1.009E-01	4.662E-02	3.674E-02	5.560E-06	6.994E-07	2.487E-06	9.628E-02	5.208E-02
1656.00	4.245E+01	2.817E+01	2.749E+01	1.309E-01	5.400E-02	6.268E-02	5.539E-06	7.147E-07	2.495E-06	1.219E-01	5.177E-02
1746.00	3.599E+01	1.093E+01	1.493E+01	1.001E-01	5.041E-02	6.609E-02	4.334E-06	1.061E-06	2.139E-06	9.533E-02	4.611E-02
1806.00	3.616E+01	6.825E+00	1.511E+01	9.386E-02	4.073E-02	5.721E-02	3.389E-06	1.807E-06	2.035E-06	9.119E-02	4.813E-02
1806.00	9.559E+00	3.538E+01	3.327E+01	1.213E-02	3.463E-02	5.077E-02	4.071E-06	1.977E-06	2.061E-06	1.411E-02	3.140E-02
1866.00	4.451E+00	2.142E+01	2.546E+01	2.267E-02	2.301E-02	4.772E-02	4.910E-06	1.871E-06	2.118E-06	2.176E-02	1.365E-02
1926.00	2.530E+00	1.543E+01	2.384E+01	1.579E-02	1.930E-02	3.855E-02	4.200E-06	1.687E-06	2.271E-06	1.552E-02	2.836E-02
1986.00	2.002E+01	6.017E+00	1.542E+01	7.130E-02	5.510E-02	3.080E-02	5.698E-06	1.652E-06	4.421E-06	5.044E-02	4.413E-02
2046.00	6.718E+00	2.797E+00	1.133E+00	2.169E-02	2.255E-02	3.034E-02	3.397E-06	1.460E-06	3.942E-06	2.161E-02	2.907E-02
2046.00	1.413E+00	2.446E+00	1.341E+00	1.255E-02	5.523E-03	3.228E-02	3.981E-06	2.481E-06	1.227E-06	1.251E-02	2.730E-02
2106.00	1.489E+00	2.300E+00	1.732E+00	1.191E-02	4.894E-03	3.147E-02	4.329E-06	2.560E-06	8.160E-07	1.187E-02	2.273E-02
2166.00	7.423E-01	2.623E-01	1.657E+00	1.487E-02	5.295E-03	6.547E-03	5.663E-06	8.648E-07	1.012E-06	1.463E-02	7.989E-03
2226.00	7.779E-01	1.171E+00	5.562E-01	1.165E-02	4.218E-03	6.829E-03	4.401E-06	1.931E-06	2.974E-07	1.164E-02	9.409E-03
2286.00	1.167E+00	1.005E+00	3.911E-01	9.059E-03	2.194E-03	5.143E-03	4.811E-06	1.057E-06	2.794E-07	9.077E-03	4.360E-03
2286.00	1.227E+00	1.009E+00	3.916E-01	9.072E-03	1.981E-03	5.328E-03	4.798E-06	1.061E-06	2.727E-07	9.072E-03	3.427E-03
2346.00	6.542E-01	4.436E-01	4.267E-01	4.044E-03	5.785E-04	4.174E-03	4.757E-06	7.511E-07	1.536E-07	4.081E-03	2.489E-04
2406.00	9.211E-02	3.563E-01	4.210E-01	9.382E-04	7.700E-05	2.809E-03	4.830E-06	6.028E-07	2.324E-07	9.465E-04	2.309E-04
2430.00	3.755E-02	3.676E-01	4.465E-01	5.949E-04	2.540E-04	2.982E-03	4.784E-06	7.675E-07	5.048E-07	6.035E-04	3.422E-04
2430.00	4.042E-02	3.652E-01	4.450E-01	5.791E-04	2.522E-04	2.963E-03	4.795E-06	7.660E-07	5.042E-07	5.657E-04	3.443E-04
2449.50	4.926E-02	2.446E-01	3.970E-01	3.780E-04	4.294E-04	2.320E-03	4.852E-06	7.710E-07	5.979E-07	3.834E-04	4.940E-04
2466.00	1.823E-03	1.768E-01	5.914E-02	6.017E-04	4.108E-04	7.679E-04	5.015E-06	6.086E-07	6.592E-07	6.048E-04	4.285E-04
2472.00	1.402E-03	5.344E-03	1.936E-02	2.377E-04	4.574E-04	9.760E-04	5.039E-06	6.221E-07	6.699E-07	2.377E-04	4.637E-04
2477.00	6.166E-04	1.560E-03	3.042E-03	1.632E-04	2.405E-04	1.009E-03	5.040E-06	6.350E-07	6.774E-07	1.632E-04	2.392E-04
2482.00	8.020E-04	2.497E-03	8.346E-03	1.323E-04	2.849E-04	1.024E-03	5.043E-06	6.475E-07	6.884E-07	1.323E-04	2.842E-04

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1656.00	3.357E+01	1.611E+01	2.409E+01	9.951E-02	5.470E-02	2.842E-02	5.611E-06	6.340E-07	2.389E-06	1.957E-05	5.141E-06
1656.00	4.337E+01	3.400E+01	1.709E+01	1.294E-01	5.461E-02	6.582E-02	5.590E-06	6.345E-07	2.402E-06	2.459E-05	1.261E-05
1746.00	3.550E-01	2.260E+01	1.494E+01	9.866E-01	5.266E-02	6.623E-02	4.366E-06	1.175E-06	2.012E-06	7.598E-05	1.738E-05
1806.00	3.833E+01	1.457E+01	6.802E+00	9.302E-02	5.532E-02	4.503E-02	3.402E-06	1.400E-06	2.317E-06	3.517E-05	1.678E-05
1806.00	8.760E+00	4.532E+01	1.787E+01	1.198E-02	3.226E-02	5.234E-02	4.074E-06	1.392E-06	2.486E-06	6.093E-06	1.986E-05
1866.00	4.737E+00	3.057E+01	1.328E+01	2.222E-02	1.173E-02	5.169E-02	4.908E-06	1.390E-06	2.464E-06	1.086E-05	2.761E-05
1926.00	2.472E+00	2.499E+01	4.929E+00	1.574E-02	3.034E-02	3.076E-02	4.192E-06	1.819E-06	1.446E-06	1.446E-05	2.373E-05
1986.00	2.004E+01	1.010E+01	6.402E+00	5.117E-02	4.871E-02	4.045E-02	5.649E-06	3.594E-06	3.604E-06	1.466E-06	3.241E-05
2046.00	6.718E+00	1.781E+00	2.433E+00	2.188E-02	3.318E-02	1.815E-02	3.396E-06	1.741E-06	2.148E-06	1.320E-05	2.127E-05
2046.00	1.614E+00	7.563E-01	2.704E+00	1.254E-02	2.698E-02	1.861E-02	3.983E-06	1.742E-06	2.044E-06	1.197E-05	2.642E-05
2106.00	1.490E+00	6.556E-01	2.269E+00	1.189E-02	2.207E-02	2.297E-02	4.332E-06	1.742E-06	2.044E-06	1.197E-05	2.642E-05
2166.00	7.368E-01	2.095E-01	1.459E+00	1.484E-02	5.340E-03	6.592E-03	5.663E-06	8.495E-07	1.028E-06	1.674E-05	8.237E-06
2226.00	7.712E-01	5.339E-01	1.186E+00	1.145E-02	7.466E-03	2.955E-03	4.398E-06	1.275E-06	1.491E-06	1.326E-05	3.947E-06
2286.00	1.182E+00	6.699E-01	8.512E-01	9.057E-03	2.827E-03	4.828E-03	4.609E-06	5.338E-07	9.642E-07	1.198E-05	7.011E-06
2286.00	1.222E+00	7.333E-01	8.036E-01	9.070E-03	2.333E-03	5.188E-03	4.796E-06	6.577E-07	8.689E-07	1.228E-05	7.601E-06
2346.00	6.522E-01	4.437E-01	4.296E-01	4.062E-03	5.696E-04	4.177E-03	4.755E-06	7.609E-07	1.550E-07	6.379E-06	6.612E-06
2406.00	9.172E-02	3.554E-01	4.218E-01	9.382E-04	7.806E-05	2.809E-03	4.829E-06	6.097E-07	2.318E-07	1.259E-06	5.795E-06
2430.00	3.785E-02	3.070E-01	4.469E-01	5.970E-04	2.543E-04	2.982E-03	4.793E-06	7.724E-07	5.043E-07	1.214E-06	6.636E-06
2430.00	4.091E-02	3.052E-01	4.454E-01	5.793E-04	2.562E-04	2.963E-03	4.794E-06	7.710E-07	5.037E-07	1.171E-06	6.595E-06
2449.50	4.917E-02	2.636E-01	3.972E-01	3.782E-04	4.308E-04	2.320E-03	4.852E-06	7.739E-07	5.977E-07	6.753E-07	5.403E-06
2466.00	1.786E-03	1.766E-01	5.922E-02	6.012E-04	4.104E-04	7.681E-04	5.015E-06	6.099E-07	6.591E-07	1.621E-06	2.105E-06
2472.00	1.402E-03	5.351E-03	1.937E-02	2.377E-04	4.567E-04	9.762E-04	5.039E-06	6.229E-07	6.699E-07	6.598E-07	2.860E-06
2477.00	6.166E-04	1.558E-03	3.043E-03	1.632E-04	2.403E-04	1.009E-03	5.040E-06	6.355E-07	6.774E-07	1.632E-04	2.392E-04
2482.00	8.020E-04	2.493E-03	8.347E-03	1.323E-04	2.846E-04	1.024E-03	5.043E-06	6.477E-07	6.883E-07	1.323E-04	2.842E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

2.763E-10 2.381E-10 5.436E-10 1.069E-07 7.328E-08 2.787E-08 8.120E-07 3.533E-07 1.653E-07  
 6.025E-05 1.828E-07 7.187E-04 3.337E-04

C-78

SYSTEM C GROUP 10

(ONE-WAY DOPPLER ERRORS - RW)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000F+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000F+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.277E+00	4.842F+00	1.312E-01	7.435E-03	5.069E-03	6.968E-03	8.366E-09	3.388E-09	2.886E-09	6.345E-03	1.480E-03
1746.00	1.012E+01	9.305F+00	4.339E+00	2.731F-02	5.900E-03	9.377E-03	2.717E-08	1.589E-07	1.589E-07	2.570E-02	3.485E-03
1806.00	6.590E+00	4.922F+00	5.582E+00	1.669E-02	6.099E-03	4.385E-03	1.137E-07	1.635E-07	1.225E-07	1.588E-02	2.584E-03
1806.00	1.607E+00	5.042F+00	4.347E+00	1.951E-03	4.325E-03	5.016E-03	2.420E-07	3.232F-07	1.471E-07	1.994E-03	4.180E-03
1866.00	2.597E+00	4.300F+00	6.614E+00	7.362E-03	8.178E-03	4.523E-03	4.587E-07	3.904E-07	4.521E-07	6.967E-03	5.725E-03
1926.00	3.758E+00	4.341E+00	6.473E+00	1.044E-02	7.795E-03	5.709E-03	5.640E-07	3.528F-07	5.558E-07	9.983E-03	4.712E-03
1986.00	5.637E+00	3.717E+00	6.037E+00	1.382E-02	7.407E-03	8.658E-03	7.481E-07	4.033E-07	1.506E-06	2.126E-06	1.276E-02
2046.00	7.644E+00	6.461E+00	9.832E-01	2.234E-02	1.599E-02	1.704E-02	1.528F-06	4.551E-06	7.193F-06	3.10E-02	2.829E-02
2092.00	1.570F+01	1.176E+01	1.494E+00	4.279E-02	2.225E-02	3.808E-02	7.143F+06	7.337E-06	2.210E-05	9.266E-02	3.188F-02
2106.00	1.635E+01	9.411E+00	1.672E+00	9.252E-02	5.850E-02	1.002E-01	2.233F-05	2.760E-05	1.693E-05	5.425E-02	2.355E-02
2166.00	8.689F+00	1.531E+01	9.213E+00	5.435E-02	1.750E-02	1.312E-01	1.677E-05	2.760E-05	8.590F-06	7.116E-02	5.308E-02
2226.00	1.134F+01	7.357E+00	5.251E+00	7.119E-02	2.710E-02	5.350F-02	1.471E-05	1.127E-05	8.105F-06	6.718E-02	7.600E-02
2286.00	1.535E+01	8.644E+00	7.088E+00	8.707F-02	3.175E-02	8.245E-02	1.460F-05	1.169F-05	1.183E-05	7.643E-06	6.534E-02
2292.00	1.532E+01	8.719F+00	6.795E+00	8.522E-02	2.955E-02	8.372E-02	1.479E-05	1.294E-05	9.933E-06	3.452E-06	6.102F-02
2346.00	1.348E+01	8.446E+00	3.955F+00	6.085E-02	1.321E-02	7.012E-02	1.294E-05	8.806E-06	3.302E-06	2.456E-02	1.029E-02
2406.00	6.057E+00	7.088E+00	7.042E+00	2.424E-02	9.559E-03	7.314E-02	1.191F-05	8.806E-06	2.607E-06	1.466E-02	1.012E-02
2430.00	1.154E+00	6.786E+00	8.559E+00	1.453E-02	1.020E-02	8.137E-02	1.190E-05	8.680E-06	2.604E-06	1.473E-02	1.011E-02
2430.00	1.121F+00	6.766E+00	8.551E+00	1.467E-02	1.015E-02	8.130E-02	1.190E-05	8.680E-06	1.447E-02	1.165E-02	
2449.50	9.552E+01	6.439E+00	8.848F+00	1.437F-02	1.142E-02	7.704E-02	1.145E-05	7.663E-06	2.206E-06	1.614E-02	1.097E-02
2466.00	9.591F-02	5.869F+00	1.407F+00	1.686E-02	1.087E-02	2.821E-02	9.115E-06	3.561E-06	2.206E-06	8.503E-03	1.102E-02
2472.00	3.919E-02	1.353E-01	4.727E-01	8.502F-03	1.093E-02	2.600E-02	9.455E-06	3.499E-06	2.152E-06	6.938E-03	6.178E-03
2477.00	2.163E-02	3.721E-02	1.348E-01	6.938E-03	6.187E-03	2.628E-02	9.422E-06	3.519E-06	2.000E-06	6.938E-03	6.178E-03
2482.00	2.547E-02	6.810E-02	2.621E-01	5.605E-03	7.006E-03	2.679E-02	9.428E-06	3.529E-06	2.029E-06	5.605E-03	7.000E-03

C-79

TIME	GAMMA ERROR						PSI ERROR	
	U	V	W	X	Y	Z		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.401E+00	4.299E+00	2.098E+00	7.364E-03	1.123E-03	8.604F-03	8.365F-09	1.429F-09
1746.00	1.037F+01	5.310E+00	5.666E+00	2.718F-02	5.556E-03	1.006F-02	2.744F-08	1.600F-08
1806.00	6.685F+00	6.570E+00	3.310E+00	1.665F-02	3.022F-03	6.994E-03	1.151E-07	7.771F-08
1806.00	1.527F+00	5.652E+00	3.585E+00	1.948F-03	4.198E-03	5.174E-03	2.411F-07	7.266F-08
1866.00	2.618E+00	6.455E+00	4.524E+00	7.326E-03	6.466E-03	6.786F-03	4.568F-07	3.112E-07
1926.00	3.794E+00	7.405E+00	2.295E+00	1.041E-02	6.106E-03	7.533E-03	5.642E-07	5.047E-07
1986.00	5.655F+00	6.691E+00	2.301E+00	1.380E-02	7.424F-03	8.673E-03	7.470F-07	6.520F-07
2046.00	7.644F+00	2.046E+00	6.203E+00	2.234E-02	1.540E-02	1.758F-02	1.528F-06	2.430E-06
2092.00	1.571F+01	6.990F+00	9.623E+00	4.284F-02	3.367E-02	2.801E-02	7.134E-06	4.349E-06
2106.00	1.635E+01	6.997F+00	6.499E+00	9.268E-02	4.520E-02	1.076F-01	2.229E-05	1.971F-05
2166.00	8.702E+00	1.530F+01	9.217E+00	5.444E-02	1.757E-02	1.312F-01	1.679E-05	2.256E-05
2226.00	1.133E+01	5.860E+00	7.129E-02	4.527E-02	3.894E-02	1.475E-05	1.158E-05	7.881F-06
2286.00	1.533E+01	7.734E+00	8.097E+00	8.706E-02	6.676E-02	5.788E-02	1.464E-05	5.832E-06
2292.00	1.529E+01	7.850F+00	7.824F+00	8.520E-02	6.045E-02	6.505E-02	1.484E-05	6.438F-06
2346.00	1.354F+01	8.456E+00	3.979E+00	6.082E-02	1.318E-02	7.015F-02	1.297E-05	9.883F-06
2406.00	6.055E+00	7.082F+00	7.050E+00	2.423E-02	9.575E-03	7.314E-02	1.192E-05	6.787E-06
2430.00	1.160E+00	6.780E+00	8.563E+00	1.453E-02	1.022E-02	8.137E-02	1.191F-05	8.677E-06
2430.00	1.126E+00	6.760E+00	8.555E+00	1.461E-02	1.017E-02	8.130E-02	1.191E-05	8.677E-06
2449.50	9.530E-01	6.434F+00	6.450F+00	1.437E-02	1.146E-02	7.703E-02	1.145E-05	7.676E-06
2466.00	9.616E-02	5.868E+00	1.410E+00	1.686E-02	1.087E-02	2.821F-02	9.115E-06	3.559E-06
2472.00	3.919E-02	1.350E-01	4.727E-01	8.503E-03	1.093E-02	2.600E-02	9.455E-06	3.498E-06
2477.00	2.163E-02	3.720E-02	1.348E-01	6.938E-03	6.180E-03	2.628E-02	9.422E-06	3.516E-06
2482.00	2.547E-02	6.809E-02	2.621E-01	5.605E-03	7.006E-03	2.679E-02	9.428E-06	3.529E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)  
 2.611E-09 4.251E-09 4.825E-09 4.291E-07 8.177E-07 5.889E-07 2.720E-06 2.988E-06 2.038E-06  
 2.844E-03 7.341E-06 2.232E-02 9.719E-03



ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 10

(CONF-WAY DOPPLER ERRORS - AH)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.337E+00	1.235E+00	5.391E-01	3.634E-03	5.017E-04	1.110E-03	5.204E-09	2.441E-08	1.829E-08	3.413E-03	4.643E-04
1806.00	1.033E+00	1.754E+00	5.482E+00	2.659E-03	7.184E-03	4.472E-03	8.922E-08	1.950E-07	8.801E-08	2.340E-03	1.061E-03
1806.00	2.651E-01	1.618E+00	5.741E+00	2.005E-03	7.356E-03	4.157E-03	7.841E-08	1.998E-07	8.444E-08	1.270E-03	7.251E-04
1866.00	1.126E+00	2.247E+00	2.010E+00	3.450E-03	2.336E-03	7.076E-04	1.897E-07	4.766E-08	1.037E-07	3.191E-03	1.513E-03
1926.00	2.066E+00	3.656E+00	2.690E+00	6.018E-03	3.647E-03	5.901E-03	4.623E-07	7.713E-08	1.636E-07	5.792E-03	3.918E-03
1986.00	3.104E+00	2.969E+00	2.645E+00	7.644E-03	3.385E-03	5.947E-03	4.985E-07	9.874E-08	1.088E-07	7.484E-03	3.307E-03
2046.00	8.556E+00	7.602E+00	6.154E-01	2.516E-02	1.432E-02	9.572E-03	1.023E-06	1.513E-06	2.190E-06	2.507E-02	6.909E-03
2092.00	1.468E+01	1.153E+01	2.001E+00	3.670E-02	1.788E-02	3.492E-02	6.548E-06	3.655E-06	6.359E-06	3.698E-02	2.591E-02
2106.00	7.023E+02	7.360E+02	1.093E+01	7.069E+00	5.228E+00	8.591E+00	1.977E-03	5.450E-04	1.985E-03	7.063E+00	1.917E+00
2166.00	7.093E+02	2.480E+02	1.377E+03	3.011E-01	2.745E+00	2.098E+01	2.014E-03	3.224E-03	2.937E-03	2.870E-01	2.643E+00
2226.00	5.551E+02	3.421E+02	2.741E+02	4.889E+00	2.212E+00	3.169E+00	1.706E-03	7.277E-04	4.792E-04	4.855E+00	4.121E+00
2286.00	8.655E+02	3.163E+02	4.100E+02	4.604E+00	1.926E+00	4.898E+00	1.520E-03	5.233E-04	5.994E-04	4.609E+00	4.905E+00
2292.00	6.226E+02	3.205E+02	2.378E+02	3.717E+00	1.032E+00	4.052E+00	1.469E-03	4.780E-04	2.958E-04	3.722E+00	3.020E+00
2346.00	3.281E+02	2.257E+02	8.455E+01	1.396E+00	2.368E-01	1.716E+00	1.240E-03	1.404E-04	1.051E-04	1.400E+00	6.278E-02
2406.00	1.586E+02	1.977E+02	7.038E+01	5.967E-01	8.342E-02	1.105E+00	1.190E-03	6.274E-05	6.375E-05	6.004E-01	9.908E-02
2430.00	2.576E+01	1.799E+02	5.482E+01	3.385E-01	7.389E-01	1.352E-01	1.150E-03	7.773E-05	5.162E-05	3.412E-01	1.040E-01
2430.00	2.500E+01	1.742E+02	5.444E+01	3.196E-01	1.330E-01	7.385E-01	1.150E-03	7.845E-05	5.147E-05	3.423E-01	1.032E-01
2449.50	1.775E+01	1.754E+02	4.554E+01	3.280E-01	1.247E-01	7.593E-01	1.154E-03	8.661E-05	4.669E-05	3.304E-01	1.048E-01
2449.50	9.797E-01	1.670E+02	2.049E+01	3.787E-01	1.078E-01	5.431E-01	1.146E-03	7.892E-05	4.203E-05	3.811E-01	1.050E-01
2472.00	4.519E-01	6.216E+01	1.828E+00	1.677E-01	1.061E-01	6.831E-01	1.169E-03	7.950E-05	4.417E-05	1.677E-01	1.100E-01
2477.00	3.946E-01	3.869E-01	2.437E+00	1.295E-01	9.695E-02	6.536E-01	1.170E-03	7.651E-05	5.301E-05	1.295E-01	9.846E-02
2482.00	4.989E-01	7.561E-01	5.641E+00	1.004E-01	1.090E-01	6.473E-01	1.171E-03	7.569E-05	5.374E-05	1.004E-01	1.097E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	1.366E+00	1.134E+00	6.736E-01	3.616E-03	7.217E-04	1.044E-03	5.261E-09	2.778E-09	3.003E-08	9.104E-07	2.727E-07
1806.00	1.012E+00	5.497E+00	1.718E+00	2.640E-03	1.114E-03	8.395E-03	9.041E-08	4.660E-08	2.083E-07	8.801E-07	3.254E-06
1806.00	2.343E-01	5.784E+00	1.468E+00	1.974E-03	6.157E-04	8.434E-03	7.924E-08	5.721E-08	2.089E-07	4.563E-07	3.276E-06
1866.00	1.153E+00	2.794E+00	1.106E+00	3.437E-03	1.936E-03	1.537E-03	1.891E-07	4.715E-08	1.050E-07	1.770E-03	8.499E-07
1926.00	2.088E+00	3.501E+00	2.886E+00	5.997E-03	4.870E-03	4.960E-03	4.623E-07	1.425E-07	1.112E-07	4.840E-06	3.834E-06
1986.00	3.118E+00	3.288E+00	2.224E+00	7.633E-03	3.953E-03	5.599E-03	4.984E-07	1.205E-07	8.439E-08	8.042E-06	5.829E-06
2046.00	8.559E+00	2.262E+00	7.280E+00	2.515E-02	1.047E-02	1.370E-02	1.024E-06	2.496E-06	9.240E-07	3.167E-05	1.679E-05
2092.00	1.469E+01	7.049E+00	9.328E+00	3.674E-02	3.114E-02	2.378E-02	6.540E-06	4.050E-06	6.111E-06	4.590E-05	2.711E-05
2106.00	7.016E+02	4.877E+02	5.522E+02	7.083E+00	3.113E+00	9.554E+00	1.973E-03	1.158E-03	1.706E-03	8.489E-03	1.100E-02
2166.00	7.124E+02	2.478E+03	1.389E+03	3.548E-01	2.741E+00	2.098E+01	2.015E-03	3.218E-03	2.943E-03	8.806E+04	2.672E-02
2226.00	5.534E+02	3.049E+02	3.130E+02	4.888E+00	3.297E+00	2.016E+00	1.711E-03	7.640E-04	4.088E-04	5.547E-03	2.696E-03
2286.00	8.075E+02	2.906E+02	4.318E+02	4.609E+00	4.196E+00	3.170E+00	1.521E-03	2.694E-04	7.445E-04	5.487E-03	4.610E-03
2292.00	6.213E+02	1.990E+02	3.427E+02	3.716E+00	2.492E+00	3.354E+00	1.470E-03	1.889E-04	5.248E-04	4.765E-03	4.924E-03
2346.00	3.277E+02	2.260E+02	8.534E+01	1.395E+00	2.322E-01	1.717E+00	1.240E-03	1.371E-04	1.054E-04	2.199E-03	2.715E-03
2406.00	1.565E+02	1.977E+02	7.077E+01	5.966E-01	8.423E-02	1.105E+00	1.190E-03	6.139E-04	6.384E-04	1.208E-03	2.277E-03
2430.00	2.591E+01	1.798E+02	5.499E+01	3.384E-01	1.358E-01	7.389E-01	1.150E-03	7.753E-05	5.170E-05	7.674E-04	1.641E-03
2430.00	2.556E+01	1.791E+02	5.461E+01	3.395E-01	1.333E-01	7.384E-01	1.150E-03	7.826E-05	5.156E-05	7.680E-04	1.640E-03
2449.50	1.785E+01	1.737E+02	4.560E+01	3.279E-01	1.251E-01	7.592E-01	1.154E-03	8.651E-05	4.675E-05	7.663E-04	1.764E-03
2449.50	1.017E+00	1.669E+02	2.001E+01	3.787E-01	1.079E-01	5.431E-01	1.148E-03	7.892E-05	4.207E-05	1.966E-03	1.488E-03
2472.00	4.519E-01	6.204E+01	1.828E+00	1.677E-01	1.058E-01	6.831E-01	1.169E-03	7.949E-05	4.422E-05	4.863E-04	2.016E-03
2477.00	3.946E-01	3.864E-01	2.437E+00	1.295E-01	9.727E-02	6.536E-01	1.170E-03	7.630E-05	5.305E-05	4.026E-04	2.049E-03
2482.00	4.989E-01	7.576E-01	5.641E+00	1.004E-01	1.094E-01	6.473E-01	1.171E-03	7.566E-05	5.378E-05	3.303E-04	2.138E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

1.826E-07	7.769E-08	2.452E-07	1.506E-05	2.755E-05	2.388E-05	7.027E-05	4.312E-05	2.992E-05
2.832E-02	5.612E-05	4.371E-01	1.861E-01					

C-80

SYSTEM C GROUP 12

(BARO, ALT, BIAS & SCALE F)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1886.00											
1886.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	2.236E+03	2.979E+03	3.808E+03	7.100E+00	3.076E+00	6.664E-01	8.730E+05	8.768E+05	1.814E-05	6.455E+00	1.490E+00
1866.00	2.190E+03	3.213E+03	3.549E+03	6.724E+00	2.665E+00	1.582E+00	8.480E+05	9.336E+05	7.383E-05	6.291E+00	2.244E+00
1926.00	2.28E+03	2.612E+03	3.166E+03	6.358E+00	3.041E+00	1.513E+00	4.373E+05	8.333E+05	6.489E+05	6.097E+00	1.310E+00
1986.00	1.569E+03	1.266E+03	1.559E+03	3.959E+00	1.578E+00	1.464E+00	5.381E+05	7.057E+05	5.614E-06	3.861E+00	1.808E+00
2046.00	1.390E+02	1.050E+02	2.283E+00	2.730E-01	1.906E-01	4.420E-01	2.909E+05	2.210E+05	2.141E-05	2.720E-01	3.211E-01
2092.00	2.531E-01	4.218E+00	1.574E+00	2.823E-02	1.463E-02	2.599E-02	6.084E+07	3.069E+06	1.111E-06	2.812E+02	1.006E-02
2106.00	1.844E-01	3.667E+00	1.117E+00	2.511E-02	1.095E-02	2.302E-02	1.590E+06	3.365E+06	2.213E+06	2.501E-02	6.126E+03
2166.00	8.389E-01	1.709E+00	1.027E+00	1.836E-02	2.906E-03	5.279E-05	1.183E+06	9.272E+07	1.381E+06	1.830E-02	6.309E+03
2226.00	1.063E+00	1.110E+00	5.266E-01	1.209E-02	3.676E-03	5.682E-03	1.224E+06	1.283E+06	5.501E+07	1.208E-02	8.873E-03
2286.00	1.413E+00	1.125E+00	8.524E-02	1.032E-02	1.996E-03	7.433E-03	9.643E+07	1.020E+06	4.487E+07	1.034E-02	5.924E+03
2292.00	1.415E+00	1.139E+00	8.703E-02	1.003E-02	2.046E-03	7.289E-03	9.151E+07	9.867E+07	3.819E+07	1.006E-02	4.834E+03
2346.00	7.699E-01	7.933E-01	1.081E-01	4.512E-03	6.722E-04	4.572E-03	4.650E+07	4.620E+07	1.838E-07	4.534E-03	2.508E-04
2406.00	1.732E-01	4.847E-01	1.915E-01	1.131E-03	4.782E-05	2.383E-03	6.162E+08	1.494E+07	1.031E+07	1.143E+03	2.755E-04
2430.00	3.862E-02	3.979E-01	1.796E-01	2.876E-04	1.731E-04	1.673E-03	2.184E+08	6.840E+08	6.188E+08	2.963E-04	2.888E-04
2430.00	3.948E-02	3.967E-01	1.787E-01	2.815E-04	1.767E-04	1.664E-03	2.276E+08	6.743E+08	6.214E+08	2.902E-04	2.511E-04
2449.50	3.605E-02	3.787E-01	1.673E-01	2.956E-04	2.728E-04	1.442E-03	3.893E+08	4.307E+08	5.994E+08	3.035E+04	3.253E-04
2466.00	1.015E-03	3.262E-01	5.670E-02	5.669E-04	3.001E-04	1.168E+04	1.165E+07	8.056E+08	3.647E+08	5.726E+04	3.287E+04
2472.00	1.810E-04	2.064E-03	5.578E-03	1.677E-05	4.684E-04	4.240E-04	2.259E+07	9.360E+08	2.538E+08	1.666E+05	4.667E+04
2477.00	4.825E-05	6.488E-04	6.848E-04	4.149E-05	2.231E-05	4.594E+04	2.330E+07	8.287E+08	1.475E+08	4.150E+05	2.423E+05
2482.00	6.081E-04	3.163E-04	1.696E-03	8.965E-05	6.048E-05	4.764E-04	2.337E+07	8.231E+08	2.042E+08	8.965E+05	6.099E+05

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1886.00											
1886.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	2.316E+03	4.687E+03	1.019E+03	7.657E+00	2.048E+00	2.516E+00	8.650E+05	2.490E+05	8.641E-05	2.437E+03	1.024E-03
1866.00	2.239E+03	4.446E+03	1.715E+03	6.694E+00	3.156E+00	2.366E+01	8.471E+05	5.091E+05	1.077E-04	3.466E-03	2.446E-05
1926.00	2.312E+03	3.901E+03	1.233E+03	6.340E+00	2.578E+00	2.763E+00	4.375E+05	2.873E+05	1.016E-04	4.848E-03	1.797E-03
1986.00	1.574E+03	2.013E+03	1.206E+02	3.953E+00	2.158E+00	1.582E-01	5.364E+05	5.234E+05	4.784E-05	4.166E-03	2.044E-04
2046.00	1.396E+02	2.647E+01	1.010E+02	2.731E-01	3.803E-01	2.952E-01	2.908E+05	2.627E+05	1.604E-05	4.095E-04	3.635E-04
2092.00	2.525E-01	3.351E+00	3.007E+00	2.826E-02	1.557E-02	2.464E-02	6.088E+07	4.380E+07	3.235E+06	3.428E+05	2.829E-05
2106.00	1.783E-01	3.246E+00	2.075E+00	2.515E-02	1.036E-02	2.311E-02	1.588E+06	5.031E+07	3.996E-06	2.994E+05	2.686E-05
2166.00	8.004E-01	1.711E+00	1.030E+00	1.837E-02	2.964E-03	5.222E-03	1.181E+06	9.238E+07	1.584E-06	2.148E+05	6.563E-06
2226.00	1.056E+00	1.741E-01	1.222E+00	1.208E-02	6.776E-03	3.306E-06	1.231E+06	1.169E+06	7.571E+07	1.400E+05	7.029E-09
2286.00	1.407E+00	8.324E-01	7.717E-01	1.032E-02	4.057E-03	6.550E-03	9.690E+07	3.607E+07	1.050E-06	1.341E+05	9.518E-06
2292.00	1.410E+00	9.354E-01	6.866E-01	1.003E-02	3.058E-03	4.936E-03	9.194E+07	5.096E+07	9.228E-07	1.344E+05	1.017E-05
2346.00	7.675E-01	7.954E-01	1.130E-01	4.510E-03	6.581E-04	4.576E-03	4.664E+07	4.994E+07	1.867E+07	7.095E+06	7.244E-06
2406.00	1.725E-01	4.644E-01	1.926E-01	1.131E-03	5.149E-05	2.383E-03	8.184E+08	1.490E+07	1.034E-07	2.241E-06	4.916E-06
2430.00	3.901E-02	3.974E-02	1.801E-01	2.877E-04	1.751E-04	1.673E-03	2.177E+08	6.835E+08	6.197E+08	5.571E+07	3.723E-04
2430.00	3.988E-02	3.964E-01	1.793E-01	2.816E-04	1.787E-04	1.663E-03	2.278E+08	6.737E+08	6.223E+08	5.425E+07	3.701E-06
2449.50	3.877E-02	3.785E-01	1.870E-01	2.957E-04	2.739E-04	1.442E-03	3.891E+08	4.304E+08	5.994E+08	5.610E+07	3.356E+06
2466.00	1.100E-03	3.262E-01	5.694E-02	5.669E-04	3.000E-04	1.166E+04	1.165E+07	8.058E+08	3.642E+08	1.524E+06	3.213E-07
2472.00	1.807E-04	2.060E-03	5.580E-03	1.669E-05	4.681E-04	4.247E+04	2.259E+07	9.550E+08	2.532E-08	1.180E+07	1.253E-06
2477.00	4.819E-05	6.493E-04	6.845E-04	4.149E-05	2.262E-05	4.594E+04	2.331E+07	8.264E+08	1.481E+08	1.271E+07	1.440E+06
2482.00	6.081E-04	3.151E-04	1.696E-03	8.965E-05	6.080E-05	4.764E-04	2.337E+07	8.230E+08	2.048E+08	2.956E+07	1.573E+06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

1.344E-10 1.777E-10 2.781E-10 7.941E+08 3.783E+00 2.793E+08 3.718E+07 1.630E+07 1.436E+08  
 2.123E-05 9.447E+08 9.862E+01 2.631E+04

C-181

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 12

(BARO. ALT. MARKOV & NOISE N.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00											
1806.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.667E+00	2.220E+00	2.838E+00	5.292E-03	2.293E-03	4.967E-04	6.507E-08	6.535E-08	1.203E-08	4.811E-03	1.110E-03
1866.00	1.632E+00	2.395E+00	2.645E+00	5.012E-03	1.987E-03	1.179E-03	6.320E-08	6.959E-08	5.503E-08	4.689E-03	1.673E-03
1926.00	1.706E+00	1.947E+00	2.360E+00	4.739E-03	2.267E-03	1.128E-03	3.260E-08	6.211E-08	4.837E-08	4.544E-03	9.764E-04
1986.00	1.169E+00	9.586E-01	1.162E+00	2.951E-03	1.177E-03	1.091E-03	4.011E-08	5.260E-08	4.185E-09	2.878E-03	1.347E-03
2046.00	1.036E-01	7.823E-02	1.702E-03	2.035E-04	1.421E-04	3.295E-04	2.168E-08	1.647E-08	1.556E-08	2.027E-04	2.393E-04
2092.00	1.866E-04	3.174E-03	1.174E-03	2.104E-05	1.090E-05	1.885E-05	4.535E-10	2.288E-09	2.096E-09	7.496E-06	7.496E-06
2196.00	1.374E-04	2.748E-03	8.325E-04	1.871E-05	1.721E-06	1.721E-05	1.185E-09	2.508E-09	1.649E-09	1.864E-05	4.566E-06
2166.00	6.029E-04	1.274E-03	7.657E-04	1.369E-05	2.166E-06	3.935E-06	8.815E-10	6.911E-10	1.029E-09	1.364E-05	4.702E-06
2226.00	7.921E-04	8.272E-04	3.925E-04	9.012E-06	2.740E-06	4.235E-06	9.141E-10	9.567E-10	4.130E-10	9.003E-06	6.614E-06
2286.00	1.053E-03	8.385E-04	6.354E-05	7.695E-06	1.488E-06	5.540E-06	7.187E-10	7.602E-10	3.344E-10	7.711E-06	4.416E-06
2292.00	1.055E-03	8.490E-04	6.407E-05	7.478E-06	1.525E-06	5.433E-06	6.821E-10	7.355E-10	2.847E-10	7.495E-06	3.603E-06
2346.00	5.739E-04	5.913E-04	8.056E-05	3.363E-06	5.010E-07	3.408E-06	3.466E-10	3.444E-10	1.370E-10	3.380E-06	1.869E-07
2406.00	1.751E-04	3.613E-04	1.427E-04	8.432E-07	3.564E-08	1.776E-06	6.083E-11	1.113E-10	7.684E-11	8.517E-07	2.053E-07
2430.00	2.878E-05	2.766E-04	1.339E-04	2.143E-07	1.291E-07	1.247E-06	1.627E-11	5.098E-11	4.612E-11	2.208E-07	1.705E-07
2430.00	2.943E-05	2.957E-04	1.332E-04	2.098E-07	1.317E-07	1.240E-06	1.697E-11	5.026E-11	4.631E-11	2.163E-07	1.723E-07
2449.50	2.687E-05	2.823E-04	1.396E-04	2.203E-07	2.034E-07	1.075E-06	2.902E-11	3.210E-11	4.167E-11	2.262E-07	2.425E-07
2466.00	7.564E-07	2.431E-04	4.226E-05	4.225E-07	2.237E-07	8.708E-08	8.682E-11	6.005E-11	2.719E-11	4.268E-07	2.450E-07
2472.00	1.768E-07	1.538E-06	4.158E-06	1.896E-08	3.491E-07	3.163E-07	1.683E-10	6.977E-11	1.892E-11	1.891E-08	3.478E-07
2477.00	2.574E-06	4.838E-07	7.007E-07	4.364E-07	2.633E-08	3.427E-07	1.737E-10	6.257E-11	1.635E-11	4.364E-07	1.853E-08
2482.00	4.652E-04	1.182E-06	1.068E-04	6.830E-05	2.522E-06	6.182E-07	4.375E-10	1.491E-09	1.841E-09	6.830E-05	1.552E-06

C-82

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	
1686.00													
1806.00													
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.726E+00	3.494E+00	7.598E-01	5.260E-03	1.527E-03	1.875E-03	6.447E-08	1.856E-08	6.441E-08	1.817E-06	7.529E-07	7.529E-07	
1866.00	1.669E+00	3.314E+00	1.277E+00	4.989E-03	2.352E-03	1.763E-04	6.314E-08	3.794E-08	8.025E-08	2.583E-06	1.823E-08	1.823E-08	
1926.00	1.724E+00	2.908E+00	9.193E-01	4.726E-03	1.922E-03	1.686E-03	3.261E-08	2.141E-08	7.575E-08	3.613E-06	1.339E-06	1.339E-06	
1986.00	1.173E+00	1.503E+00	8.989E-02	2.947E-03	1.609E-03	1.179E-04	4.000E-08	3.901E-08	3.566E-08	3.105E-06	1.524E-07	1.524E-07	
2046.00	1.036E-01	2.122E-02	7.527E-02	2.036E-04	2.834E-04	2.200E-04	2.167E-08	1.958E-08	1.196E-08	3.652E-07	2.709E-07	2.709E-07	
2092.00	1.987E-04	2.498E-03	2.241E-03	2.106E-05	1.160E-05	1.843E-05	4.536E-10	3.265E-10	2.411E-09	2.555E-08	2.109E-08	2.109E-08	
2196.00	1.329E-04	2.420E-03	1.547E-03	1.874E-05	7.723E-06	1.738E-05	1.184E-09	3.750E-10	2.979E-09	2.231E-08	2.003E-08	2.003E-08	
2166.00	5.966E-04	1.275E-03	7.678E-04	1.369E-05	2.209E-05	3.892E-06	8.805E-10	6.885E-10	1.032E-09	1.601E-08	4.891E-09	4.891E-09	
2226.00	7.870E-04	1.297E-04	9.108E-04	9.008E-06	5.051E-06	2.463E-09	9.179E-10	8.712E-10	5.643E-10	1.943E-08	5.238E-12	5.238E-12	
2286.00	1.049E-03	6.204E-04	5.752E-04	7.690E-06	3.024E-06	4.882E-06	7.223E-10	2.689E-10	7.826E-10	5.953E-09	7.094E-09	7.094E-09	
2292.00	1.051E-03	6.976E-04	4.969E-04	7.472E-06	2.279E-06	5.170E-06	6.854E-10	3.798E-10	6.878E-10	1.002E-08	7.577E-09	7.577E-09	
2346.00	5.720E-04	5.926E-04	8.422E-05	3.362E-06	4.905E-07	3.411E-06	3.477E-10	3.424E-10	1.392E-10	5.289E-09	5.399E-09	5.399E-09	
2406.00	1.286E-04	3.817E-04	1.435E-04	8.433E-07	3.838E-08	1.776E-06	6.100E-11	1.111E-10	7.709E-11	1.670E-09	3.664E-09	3.664E-09	
2430.00	2.908E-05	2.964E-04	1.343E-04	2.145E-07	1.305E-07	1.247E-06	1.622E-11	5.093E-11	4.619E-11	4.152E-10	2.775E-09	2.775E-09	
2430.00	2.972E-05	2.955E-04	1.336E-04	2.099E-07	1.332E-07	1.240E-06	1.692E-11	5.021E-11	4.638E-11	4.044E-10	2.759E-09	2.759E-09	
2449.50	2.703E-05	2.821E-04	1.398E-04	2.204E-07	2.041E-07	1.075E-06	2.900E-11	3.208E-11	4.165E-11	4.181E-10	2.501E-09	2.501E-09	
2466.00	8.199E-07	2.431E-04	4.244E-05	4.226E-07	2.236E-07	8.692E-08	8.683E-11	6.005E-11	2.714E-11	1.136E-09	2.395E-10	2.395E-10	
2472.00	1.766E-07	1.535E-06	4.159E-06	1.892E-08	3.489E-07	3.165E-07	1.684E-10	6.975E-11	1.888E-11	9.751E-11	9.339E-10	9.339E-10	
2477.00	2.574E-06	4.842E-07	7.004E-07	4.364E-07	2.650E-08	3.427E-07	1.738E-10	6.255E-11	1.638E-11	1.368E-09	1.074E-09	1.074E-09	
2482.00	4.652E-04	1.197E-06	1.068E-04	6.830E-05	2.522E-06	6.197E-07	4.375E-10	1.492E-09	1.840E-09	2.256E-07	2.044E-09	2.044E-09	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

6.505E-13	1.187E-12	1.050E-12	3.283E-09	2.417E-09	2.103E-09	2.090E-08	4.557E-09	8.681E-09
7.948E-07	1.648E-09	1.987E+00	2.009E-04					



## SYSTEM C GROUP 12

(STATIC DEFECT IN BARD. ALT.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1866.00	8.285E+02	1.104E+03	1.411E+03	2.631E+00	1.140E+00	2.469E-01	3.255E-05	3.249E-05	5.981E-06	2.392E+00	5.520E-01
1926.00	8.115E+02	1.191E+03	1.315E+03	2.492E+00	9.876E-01	5.863E-01	3.142E-05	3.460E-05	2.726E-05	2.331E+00	8.317E-01
1986.00	8.480E+02	9.679E+02	1.172E+03	2.356E+00	1.127E+00	5.608E-01	1.621E-05	3.008E-05	2.405E-05	2.259E+00	4.654E-01
2046.00	5.813E+02	4.766E+02	5.777E+02	1.467E+00	5.849E-01	5.425E-01	1.994E-05	2.615E-05	2.020E-05	1.431E+00	6.698E-01
2106.00	5.149E+01	3.890E+01	8.461E-01	1.012E-01	7.064E-02	1.638E-01	1.078E-05	8.189E-06	7.924E-06	1.008E-01	1.190E-01
2166.00	9.377E-02	1.563E+00	5.834E-01	1.046E-02	5.422E-03	9.372E-03	2.255E-07	1.137E-06	4.118E-07	1.042E-02	3.727E-03
2226.00	6.832E-02	1.366E+00	4.134E-01	9.303E-03	4.050E-03	8.554E-03	5.892E-07	1.247E-06	8.159E-07	9.266E-03	2.270E-03
2286.00	2.977E-01	6.333E-01	3.807E-01	6.804E-03	1.077E-03	1.956E-03	4.383E-07	3.436E-07	5.116E-07	6.783E-03	2.336E-03
2346.00	3.938E-01	4.113E-01	1.951E-01	4.480E-03	1.362E-03	2.106E-03	4.544E-07	4.753E-07	2.053E-07	4.476E-03	3.204E-03
2406.00	5.236E-01	4.164E-01	3.159E-02	3.826E-03	7.396E-04	2.754E-03	3.573E-07	3.780E-07	1.663E-07	3.833E-03	2.195E-03
2466.00	5.245E-01	4.221E-01	3.225E-02	3.718E-03	7.583E-04	2.701E-03	3.391E-07	3.656E-07	1.415E-07	3.726E-03	1.791E-03
2526.00	2.853E-01	2.940E-01	4.805E-02	1.672E-03	2.451E-04	1.694E-03	1.723E-07	1.712E-07	6.813E-08	1.688E-03	9.293E-04
2586.00	6.420E-02	1.790E-01	7.055E-02	4.192E-04	1.772E-05	8.631E-04	3.024E-08	5.535E-08	3.820E-08	4.234E-04	1.021E-04
2646.00	1.431E-02	1.474E-01	6.656E-02	1.066E-04	6.416E-05	6.201E-04	8.091E-09	2.535E-08	2.293E-08	1.058E-04	8.478E-05
2706.00	1.463E-02	1.470E-01	6.623E-02	1.043E-04	6.500E-05	6.165E-04	8.435E-09	2.499E-08	2.303E-08	1.075E-04	8.564E-05
2766.00	1.336E-02	1.403E-01	6.939E-02	1.095E-04	1.011E-04	5.343E-04	1.443E-08	1.596E-08	2.072E-08	1.125E-04	1.235E-04
2826.00	3.760E-04	1.208E-01	2.101E-02	2.101E-02	1.112E-04	4.329E-05	4.316E-08	2.985E-08	1.352E-08	2.122E-04	1.218E-04
2886.00	6.706E-05	7.648E-04	2.067E-03	6.216E-06	1.736E-04	1.573E-04	8.370E-08	3.466E-08	9.407E-09	6.175E-06	1.725E-06
2946.00	1.799E-05	2.404E-04	2.537E-04	1.540E-05	8.265E-06	1.703E-04	8.636E-08	3.063E-08	5.466E-09	1.541E-05	8.977E-06
3006.00	2.868E-05	1.173E-04	6.230E-04	9.056E-06	2.226E-05	1.766E-04	8.661E-08	3.054E-08	7.454E-09	9.057E-06	2.251E-06

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1866.00	8.581E+02	1.737E+03	3.777E+02	2.615E+00	7.590E-01	9.323E-01	3.205E-05	9.227E-06	3.202E-05	5.032E-04	3.793E-04
1926.00	8.296E+02	1.647E+03	6.248E+02	2.481E+00	1.170E+00	8.767E-02	3.139E-05	1.866E-05	3.950E-05	1.284E-03	9.065E-04
1986.00	8.569E+02	1.446E+03	4.571E+02	2.350E+00	9.554E-01	8.385E-01	1.621E-05	1.065E-05	3.766E-05	1.796E-03	6.657E-04
2046.00	5.834E+02	7.460E+02	4.469E+01	1.465E+00	7.997E-01	5.862E-02	1.989E-05	1.940E-05	1.773E-05	1.544E-03	7.576E-04
2106.00	5.151E+01	1.055E+01	3.742E+01	1.012E-01	1.409E-01	1.094E-01	1.078E-05	9.733E-06	5.946E-06	1.517E-04	1.347E-04
2166.00	9.520E-02	1.242E+00	1.114E+00	1.047E-02	5.769E-03	9.148E-03	2.255E-07	1.623E-07	1.159E-06	1.270E-05	1.048E-05
2226.00	6.007E-02	1.203E+00	7.690E-01	9.318E-03	3.640E-03	8.636E-03	5.866E-07	1.864E-07	1.481E-06	1.105E-05	9.555E-06
2286.00	2.966E-01	6.341E-01	3.817E-01	6.807E-03	1.096E-03	1.935E-03	4.377E-07	3.423E-07	5.129E-07	7.961E-06	2.432E-06
2346.00	3.913E-01	6.450E-02	4.528E-01	4.478E-03	2.511E-03	1.225E-06	4.563E-07	4.331E-07	2.806E-07	5.187E-06	2.655E-06
2406.00	5.219E-01	3.385E-01	2.860E-01	3.623E-03	1.503E-03	2.427E-03	3.591E-07	1.337E-07	3.891E-07	4.960E-06	3.527E-06
2466.00	5.229E-01	3.468E-01	2.470E-01	3.715E-03	1.133E-03	2.570E-03	3.408E-07	1.888E-07	3.419E-07	4.981E-06	3.767E-06
2526.00	2.844E-01	2.646E-01	4.187E-02	1.671E-03	2.439E-04	1.696E-03	1.728E-07	1.702E-07	6.918E-08	2.629E-06	2.644E-06
2586.00	6.392E-02	1.796E-01	7.135E-02	4.193E-04	1.908E-05	8.831E-04	3.033E-08	5.522E-08	3.833E-08	8.303E-07	1.822E-06
2646.00	1.446E-02	1.472E-01	6.875E-02	1.066E-04	6.480E-05	6.200E-04	8.066E-09	2.532E-08	2.256E-08	2.064E-07	1.380E-06
2706.00	1.478E-02	1.469E-01	6.642E-02	1.044E-04	6.621E-05	6.164E-04	8.410E-09	2.456E-08	2.306E-08	2.016E-07	1.372E-06
2766.00	1.344E-02	1.403E-01	6.951E-02	1.096E-04	1.015E-04	5.342E-04	1.442E-08	1.595E-08	2.073E-08	2.079E-07	1.264E-06
2826.00	4.075E-04	1.208E-01	2.110E-02	2.101E-04	1.112E-04	4.321E-05	4.317E-08	2.985E-08	1.349E-08	5.647E-07	1.191E-07
2886.00	6.693E-05	7.634E-04	2.068E-03	6.188E-06	1.735E-04	1.574E-04	8.370E-08	3.468E-08	9.382E-09	4.375E-08	4.653E-07
2946.00	1.797E-05	2.404E-04	2.536E-04	1.540E-05	8.308E-06	1.702E-04	8.636E-08	3.062E-08	5.487E-09	4.718E-08	5.336E-07
3006.00	2.867E-05	1.169E-04	6.231E-04	9.055E-06	2.238E-05	1.766E-04	8.661E-08	3.053E-08	7.474E-09	2.883E-08	5.831E-07

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (IG TO 22)

4.979E-11 6.580E-11 1.030E-10 2.949E-08 1.405E-08 1.037E-08 1.381E-07 6.051E-08 3.574E-09  
 7.833E-06 3.505E-08 1.377E-01 6.313E-04

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 15

(RADAR ALT. SCALE FACTOR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALJITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1926.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.107E+00	8.435E-01	3.951E-01	4.633E-03	1.721E-03	4.263E-03	2.450E-07	3.222E-07	7.539E-08	4.617E-03	2.595E-03
2449.50	3.851E+00	6.614E+00	7.930E+00	9.898E-03	2.080E-02	7.435E-02	4.819E-06	6.906E-06	1.124E-06	5.774E-03	2.224E-02
2466.00	5.253E+00	7.444E+00	3.486E+00	1.782E-02	2.689E-02	3.066E-02	1.410E-06	4.200E-06	1.557E-06	1.769E-02	2.775E-02
2472.00	3.477E+00	2.519E-01	2.759E+00	1.887E-02	2.049E-02	2.456E-02	2.206E-06	1.538E-06	2.951E-06	1.887E-02	1.954E-02
2477.00	1.749E+00	4.116E-02	1.658E+00	8.268E-02	1.248E-02	1.308E-02	8.131E-07	8.617E-07	4.224E-06	8.268E-02	1.626E-02
2482.00	6.032E-01	7.999E-02	1.415E+00	1.196E-01	2.164E-02	9.270E-03	3.129E-07	1.977E-06	5.193E-06	1.196E-01	1.591E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1926.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.108E+00	8.419E-01	3.962E-01	4.633E-03	1.711E-03	4.285E-03	2.453E-07	3.221E-07	7.497E-08	9.108E-03	5.533E-06
2449.50	3.855E+00	6.614E+00	7.935E+00	9.898E-03	2.073E-02	7.437E-02	4.823E-06	6.904E-06	1.118E-06	1.285E-02	1.731E-04
2466.00	5.255E+00	7.445E+00	3.481E+00	1.782E-02	2.651E-02	3.066E-02	1.411E-06	4.199E-06	1.560E-06	4.460E-02	8.417E-05
2472.00	3.477E+00	2.505E-01	2.759E+00	1.887E-02	2.051E-02	2.454E-02	2.206E-06	1.535E-06	2.952E-06	5.855E-05	7.249E-05
2477.00	1.749E+00	4.117E-02	1.658E+00	8.268E-02	1.950E-02	1.307E-02	8.130E-07	8.646E-07	4.224E-06	2.611E-04	4.100E-05
2482.00	6.032E-01	8.094E-02	1.415E+00	1.196E-01	2.105E-02	9.255E-03	3.128E-07	1.981E-06	5.192E-06	3.555E-04	3.060E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

2.490E-09	3.160E-09	5.059E-09	5.977E-06	4.740E-06	4.103E-06	3.981E-05	7.217E-06	1.714E-05
3.855E-03	8.985E-06	6.604E-01	2.340E-01					

C-84

SYSTEM C GROUP 15

RADAR ALTIMETER BIAS ERROR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1685.00											
1686.00											
1746.00											
1806.00											
1806.00											
1856.00											
1926.00											
1966.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.804E-02	1.375E-02	6.436E-03	7.550E-05	2.805E-05	6.980E-05	3.992E-09	5.241E-09	1.229E-09	7.523E-05	4.234E-05
2449.50	1.513E-01	2.545E-01	3.281E-01	5.199E-04	7.303E-04	3.083E-03	1.991E-07	2.853E-07	2.782E-08	5.151E-04	8.133E-04
2466.00	9.109E-01	7.719E-01	5.696E-01	8.060E-03	2.685E-03	5.137E-03	3.613E-07	7.586E-07	6.663E-08	8.067E-03	3.095E-03
2472.00	9.815E-01	5.090E-02	7.214E-01	9.971E-03	2.174E-03	6.540E-03	6.435E-07	7.907E-07	7.618E-08	9.972E-03	2.673E-03
2477.00	1.007E+00	3.970E-02	7.408E-01	8.893E-03	1.507E-03	6.552E-03	6.182E-07	7.788E-07	4.963E-08	8.894E-03	1.852E-03
2482.00	1.023E+00	2.802E-02	7.645E-01	7.362E-03	2.244E-03	6.625E-03	6.160E-07	7.409E-07	1.543E-07	7.363E-03	2.355E-03

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686.00											
1686.00											
1746.00											
1806.00											
1806.00											
1866.00											
1926.00											
1966.00											
2046.00											
2092.00											
2106.00											
2166.00											
2226.00											
2286.00											
2292.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	1.804E-02	1.372E-02	6.456E-03	7.553E-05	2.788E-05	6.983E-05	3.997E-09	5.249E-09	1.222E-09	1.404E-07	1.553E-07
2449.50	1.515E-01	2.541E-01	3.265E-01	5.204E-04	7.274E-04	3.084E-03	1.992E-07	2.852E-07	2.758E-08	8.362E-07	7.177E-06
2466.00	9.111E-01	7.721E-01	5.691E-01	8.080E-03	2.687E-03	5.135E-03	3.615E-07	7.584E-07	6.719E-08	2.168E-05	1.410E-05
2472.00	9.815E-01	5.055E-02	7.215E-01	9.971E-03	2.177E-03	6.539E-03	6.436E-07	7.905E-07	7.673E-08	2.903E-05	1.931E-05
2477.00	1.007E+00	3.927E-02	7.408E-01	8.893E-03	1.511E-03	6.551E-03	6.183E-07	7.787E-07	5.016E-08	2.765E-05	2.055E-05
2482.00	1.023E+00	2.752E-02	7.645E-01	7.362E-03	2.249E-03	6.624E-03	6.160E-07	7.408E-07	1.548E-07	2.420E-05	2.189E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)  
 6.976E-11 1.216E-10 4.043E-10 2.787E-07 2.007E-07 2.170E-07 1.859E-06 6.025E-07 7.538E-07  
 1.822E-04 6.845E-07 1.005E-00 5.951E-03

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM C GROUP 16

(DNE-WAY DOPPLER SURVEY ERROR)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1586.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	5.463E-01	1.162E+00	3.148E-02	1.784E-03	1.216E-03	1.672E-03	2.007E-09	8.129E-10	6.925E-10	1.523E-03	3.551E-04
1746.00	9.154E-01	1.384E+00	4.782E-01	2.540E-03	1.467E-03	1.947E-03	3.292E-09	2.032E-08	1.500E-08	2.372E-03	5.094E-04
1806.00	1.165E+00	1.185E+00	6.100E-01	2.840E-03	1.124E-03	1.464E-03	9.198E-09	3.135E-08	1.699E-08	2.747E-03	8.254E-04
1866.00	2.897E-01	1.173E+00	1.135E+00	2.230E-04	1.528E-03	1.433E-03	3.344E-08	6.072E-08	2.444E-08	2.978E-04	8.440E-04
1926.00	3.098E-01	1.172E+00	1.019E+00	4.342E-04	1.187E-03	1.289E-03	4.047E-08	6.157E-08	2.716E-08	3.819E-04	9.302E-04
1986.00	3.181E-01	1.001E+00	1.055E+00	2.539E-04	1.184E-03	1.074E-03	5.108E-08	6.122E-08	3.149E-08	2.934E-04	1.004E-03
2046.00	5.761E-01	1.157E+00	1.217E+00	1.246E-03	1.423E-03	1.087E-03	7.701E-08	6.121E-08	6.689E-08	1.209E-03	1.298E-03
2106.00	8.842E-01	1.051E+00	1.030E+00	1.623E-03	6.038E-04	9.608E-04	1.001E-07	5.141E-08	5.655E-08	1.612E-03	1.172E-03
2166.00	9.442E-01	9.582E-01	1.000E+00	1.724E-03	4.918E-04	1.313E-03	1.118E-07	1.126E-07	5.814E-08	1.718E-03	1.374E-03
2226.00	9.769E-01	9.410E-01	9.909E-01	1.708E-03	4.366E-04	1.373E-03	1.148E-07	1.129E-07	5.181E-08	1.700E-03	1.298E-03
2286.00	1.091E+00	9.983E-01	9.893E-01	1.858E-03	4.305E-04	5.980E-04	1.500E-07	3.357E-08	7.755E-08	1.851E-03	7.673E-04
2346.00	1.107E+00	1.013E+00	9.924E-01	1.497E-03	5.042E-04	4.113E-04	1.873E-07	1.569E-07	4.654E-08	1.442E-03	8.716E-04
2406.00	1.165E+00	1.006E+00	9.867E-01	1.428E-03	3.521E-04	5.047E-04	1.580E-07	1.073E-07	4.924E-08	1.429E-03	3.971E-04
2466.00	1.171E+00	1.068E+00	9.888E-01	1.435E-03	3.517E-04	5.153E-04	1.577E-07	1.066E-07	5.026E-08	1.458E-03	3.188E-04
2526.00	1.105E+00	1.001E+00	9.936E-01	9.408E-04	1.575E-04	4.379E-04	1.566E-07	8.211E-08	5.099E-08	9.422E-04	6.032E-05
2586.00	1.032E+00	9.977E-01	9.925E-01	5.922E-04	8.295E-05	1.160E-04	1.435E-07	4.840E-08	5.117E-08	5.922E-04	6.577E-05
2646.00	1.006E+00	9.976E-01	9.920E-01	5.206E-04	6.498E-05	2.572E-05	1.423E-07	4.530E-08	4.731E-08	5.208E-04	7.070E-05
2706.00	9.672E-01	9.978E-01	9.919E-01	4.384E-04	8.659E-05	6.444E-05	1.421E-07	4.503E-08	4.752E-08	4.386E-04	4.587E-05
2766.00	8.559E-01	1.031E+00	1.039E+00	2.333E-05	7.523E-04	2.941E-03	2.257E-07	2.868E-07	5.685E-08	1.329E-05	7.389E-04
2826.00	9.059E-02	1.275E+00	1.146E+00	7.661E-03	2.720E-03	5.033E-03	3.984E-07	7.407E-07	8.312E-08	7.648E-03	3.111E-03
2886.00	1.943E-02	1.001E+00	1.232E+00	9.647E-03	2.198E-03	6.493E-03	6.799E-07	7.770E-07	9.075E-08	9.648E-03	2.679E-03
2946.00	5.881E-03	1.001E+00	1.245E+00	8.626E-03	1.531E-03	6.518E-03	6.570E-07	7.678E-07	6.779E-08	8.627E-03	1.871E-03
3006.00	2.225E-02	1.000E+00	1.259E+00	7.140E-03	2.260E-03	6.596E-03	6.555E-07	7.317E-07	1.598E-07	7.141E-03	2.368E-03

C886

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1586.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	5.762E-01	1.832E+00	5.034E-01	1.767E-03	2.698E-04	2.065E-03	2.007E-09	3.428E-10	1.012E-09	3.017E-07	4.151E-07
1746.00	9.359E-01	6.575E-01	1.171E+00	2.523E-03	6.684E-04	2.374E-03	3.299E-09	1.502E-09	2.521E-08	6.346E-07	6.386E-07
1806.00	1.173E+00	6.756E-01	1.136E+00	2.833E-03	9.300E-04	1.625E-03	9.318E-09	4.196E-09	3.638E-08	1.027E-06	6.174E-07
1866.00	2.675E-01	1.160E+00	1.051E+00	2.210E-04	8.796E-04	1.901E-03	3.311E-08	5.774E-09	6.536E-08	1.211E-07	7.318E-07
1926.00	2.988E-01	1.171E+00	1.022E+00	4.309E-04	9.225E-04	1.491E-03	4.032E-08	4.383E-08	5.118E-08	1.768E-07	8.033E-07
1986.00	3.127E-01	1.003E+00	1.055E+00	2.555E-04	1.020E-03	1.234E-03	5.095E-08	2.760E-08	6.310E-08	2.585E-07	9.350E-07
2046.00	9.770E-01	1.270E+00	1.099E+00	1.247E-03	1.335E-03	1.195E-03	7.691E-08	6.150E-08	6.674E-08	1.285E-06	1.269E-06
2106.00	8.243E-01	1.029E+00	1.052E+00	1.623E-03	1.053E-03	6.781E-04	1.001E-07	5.065E-08	5.725E-08	1.839E-06	8.594E-07
2166.00	9.439E-01	1.024E+00	9.318E-01	1.722E-03	1.132E-03	8.314E-04	1.118E-07	2.504E-08	1.242E-07	1.719E-06	9.643E-07
2226.00	9.705E-01	1.020E+00	9.302E-01	1.743E-03	1.040E-03	1.010E-03	1.168E-07	3.441E-08	1.193E-07	1.742E-06	1.173E-06
2286.00	1.090E+00	9.952E-01	9.898E-01	1.855E-03	4.361E-04	6.034E-04	1.500E-07	3.326E-08	7.778E-08	2.143E-06	7.618E-07
2346.00	1.105E+00	9.980E-01	1.009E+00	1.409E-03	6.105E-04	2.355E-04	1.878E-07	9.520E-08	1.324E-07	1.785E-06	3.164E-07
2406.00	1.166E+00	9.988E-01	1.002E+00	1.428E-03	1.765E-04	6.035E-04	1.565E-07	8.645E-08	7.979E-08	1.968E-06	6.766E-07
2466.00	1.171E+00	9.986E-01	9.950E-01	1.433E-03	6.674E-05	6.237E-04	1.588E-07	9.371E-08	7.079E-08	2.019E-06	9.138E-07
2526.00	1.108E+00	1.001E+00	9.936E-01	9.403E-04	1.578E-04	4.338E-04	1.568E-07	8.184E-08	5.094E-08	1.479E-06	6.895E-07
2586.00	1.032E+00	9.977E-01	9.925E-01	5.921E-04	8.347E-05	1.161E-04	1.435E-07	4.871E-08	5.115E-08	1.200E-06	2.357E-07
2646.00	1.006E+00	9.976E-01	9.919E-01	5.206E-04	6.536E-05	2.573E-05	1.424E-07	4.324E-08	4.730E-08	1.132E-06	5.402E-08
2706.00	9.872E-01	9.978E-01	9.919E-01	4.384E-04	8.688E-05	6.454E-05	1.421E-07	4.977E-08	4.750E-08	9.683E-07	1.422E-07
2766.00	8.559E-01	1.031E+00	1.039E+00	2.341E-05	7.498E-04	2.941E-03	2.259E-07	2.867E-07	5.670E-08	3.055E-07	6.844E-06
2826.00	9.059E-02	1.276E+00	1.145E+00	7.667E-03	2.722E-03	5.031E-03	3.986E-07	7.406E-07	8.358E-08	2.053E-05	1.381E-05
2886.00	1.943E-02	1.001E+00	1.232E+00	9.647E-03	2.199E-03	6.492E-03	6.800E-07	7.769E-07	9.122E-08	2.807E-05	1.918E-05
2946.00	5.875E-03	1.001E+00	1.245E+00	8.626E-03	1.535E-03	6.517E-03	6.571E-07	7.677E-07	6.818E-08	2.681E-05	2.045E-05
3006.00	2.225E-02	1.000E+00	1.259E+00	7.140E-03	2.264E-03	6.595E-03	6.555E-07	7.316E-07	1.603E-07	2.347E-05	2.180E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 22)

7.764E-11 9.463E-11 3.931E-10 3.120E-07 2.306E-07 2.379E-07 2.097E-06 6.656E-07 8.273E-07  
1.435E-04 4.867E-07 1.808E-02 5.533E-03

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 1

16X6 INITIAL COVARIANCE

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	8.046E+02	6.513E+03	1.370E+04	1.118E+01	1.346E+01	6.823E+00	0.000E+00	0.000E+00	0.000E+00	9.291E+00	1.352E+01
1686.00	6.849E+02	2.177E+03	3.950E+03	5.572E+00	1.093E+01	5.529E+00	3.021E+05	2.923E+05	5.591E+05	5.362E+00	1.070E+01
1746.00	1.575E+03	1.226E+03	5.609E+02	6.510E+00	3.337E+00	6.402E+00	1.406E+04	1.041E+04	8.936E+05	6.480E+00	3.891E+00
1806.00	2.016E+03	6.576E+02	2.102E+02	6.678E+00	2.961E+00	5.439E+00	1.766E+04	1.229E+04	9.552E+05	6.689E+00	3.656E+00
1806.00	7.651E+02	2.400E+02	1.319E+02	3.658E+00	3.820E+00	4.423E+00	2.393E+04	1.101E+04	1.466E+04	3.559E+00	2.296E+00
1866.00	4.443E+02	7.745E+01	2.171E+02	2.087E+00	1.793E+00	2.744E+00	2.786E+04	1.042E+04	1.959E+04	2.062E+00	7.482E+01
1926.00	3.048E+02	7.694E+01	1.805E+02	1.690E+00	8.457E+01	1.357E+00	3.078E+04	1.099E+04	2.666E+04	1.689E+00	9.629E+01
1986.00	6.793E+01	5.303E+01	6.563E+01	1.416E+00	5.152E+01	4.146E+01	3.395E+04	1.322E+04	1.906E+04	1.413E+00	5.060E+01
2046.00	3.330E+00	3.592E+01	8.079E+01	1.396E+00	5.056E+01	3.555E+01	3.481E+04	1.479E+04	1.678E+04	1.392E+00	2.718E+01
2106.00	8.529E+01	9.183E+00	7.593E+01	1.426E+00	5.746E+01	6.340E+01	3.607E+04	1.304E+04	1.429E+04	1.423E+00	7.614E+01
2166.00	1.725E+02	4.466E+01	7.001E+01	1.493E+00	5.681E+01	7.406E+01	3.647E+04	1.094E+04	8.740E+05	1.491E+00	8.225E+01
2226.00	2.592E+02	6.394E+01	9.080E+01	1.541E+00	5.725E+01	8.126E+01	3.925E+04	1.073E+04	5.854E+05	1.540E+00	6.451E+01
2286.00	3.512E+02	8.976E+01	1.053E+02	1.577E+00	6.497E+01	6.869E+01	3.974E+04	1.027E+04	5.235E+05	1.577E+00	6.406E+01
2292.00	3.601E+02	9.335E+01	1.059E+02	1.576E+00	6.452E+01	6.050E+01	4.041E+04	6.272E+05	3.908E+05	1.586E+00	3.346E+01
2292.00	3.614E+02	9.492E+01	5.549E+01	1.586E+00	5.956E+01	5.414E+01	4.041E+04	6.272E+05	3.908E+05	1.586E+00	3.346E+01
2346.00	4.053E+02	1.477E+02	8.231E+00	1.490E+00	7.456E+01	4.680E+01	4.217E+04	5.603E+05	4.329E+05	1.416E+00	1.568E+01
2406.00	3.402E+02	1.807E+02	5.994E+00	1.113E+00	8.085E+01	2.134E+01	4.386E+04	4.017E+05	5.195E+05	1.116E+00	1.568E+01
2430.00	3.220E+02	1.912E+02	4.157E+00	1.007E+00	8.193E+01	1.505E+01	4.468E+04	3.700E+05	5.381E+05	1.010E+00	2.971E+01
2450.00	1.404E+01	1.404E+01	7.359E+01	1.569E+01	1.862E+01	9.330E+02	4.581E+04	3.525E+05	3.170E+05	1.469E+01	2.436E+01
2450.00	1.848E+00	1.225E+01	6.356E+01	1.406E+01	2.004E+01	9.143E+02	4.581E+04	3.499E+05	3.342E+05	1.469E+01	2.436E+01
2466.00	1.591E+01	2.744E+00	1.196E+00	1.265E+01	2.547E+01	9.082E+02	4.588E+04	2.879E+05	3.452E+05	1.265E+01	2.842E+01
2472.00	1.195E+01	4.055E+00	9.538E+01	1.155E+01	2.531E+01	6.850E+02	4.578E+04	2.274E+05	3.252E+05	1.155E+01	2.775E+01
2477.00	9.373E+03	4.815E+00	6.381E+01	8.668E+02	2.415E+01	5.159E+02	4.569E+04	1.861E+05	3.075E+05	8.663E+02	2.530E+01
2482.00	1.128E+01	5.399E+00	4.627E+01	5.240E+02	2.299E+01	4.492E+02	4.561E+04	1.615E+05	2.928E+05	5.233E+02	2.307E+01

C-87

TIME	GAMMA ERROR					PSI ERROR
	U	V	W	U	V	
1686.00	1.112E+03	9.082E+03	1.212E+04	1.083E+01	1.388E+01	6.547E+00
1686.00	7.146E+02	1.230E+03	4.334E+03	5.354E+00	1.084E+01	5.916E+00
1746.00	1.566E+03	4.424E+02	1.285E+03	6.407E+00	4.313E+00	6.343E+00
1806.00	2.006E+03	4.887E+02	5.271E+02	6.630E+00	4.153E+00	6.663E+00
1806.00	7.613E+02	2.043E+02	1.979E+02	3.639E+00	2.528E+00	5.283E+00
1866.00	4.424E+02	1.415E+02	1.866E+02	2.076E+00	9.490E+01	3.144E+00
1926.00	3.037E+02	1.946E+02	3.582E+01	1.686E+00	1.173E+00	1.694E+00
1986.00	6.770E+01	8.319E+01	1.519E+01	1.415E+00	6.003E+01	2.039E+01
2046.00	3.346E+00	8.563E+01	2.203E+01	1.395E+00	3.211E+01	5.286E+01
2106.00	8.512E+01	6.109E+01	4.634E+01	1.426E+00	6.657E+01	5.388E+01
2166.00	1.722E+02	4.509E+01	7.048E+01	1.492E+00	5.724E+01	7.365E+01
2226.00	2.588E+02	8.643E+01	7.111E+01	1.540E+00	6.917E+01	7.139E+01
2286.00	3.508E+02	9.497E+01	1.021E+02	1.575E+00	5.053E+01	7.305E+01
2292.00	3.595E+02	9.457E+01	1.063E+02	1.574E+00	5.733E+01	7.504E+01
2292.00	3.610E+02	7.857E+01	7.900E+01	1.584E+00	3.219E+01	7.422E+01
2346.00	4.049E+02	1.489E+02	9.115E+00	1.408E+00	7.475E+01	4.723E+01
2406.00	3.399E+02	1.812E+02	6.389E+00	1.112E+00	8.097E+01	2.152E+01
2430.00	3.218E+02	1.915E+02	4.413E+00	1.006E+00	8.201E+01	1.515E+01
2450.00	1.235E+01	1.404E+01	7.454E+01	1.570E+01	1.862E+01	9.318E+02
2450.00	1.843E+00	1.225E+01	6.437E+01	1.407E+01	2.004E+01	9.130E+02
2466.00	1.585E+01	2.744E+00	1.195E+00	1.265E+01	2.547E+01	9.075E+02
2472.00	1.190E+01	4.055E+00	9.534E+01	1.155E+01	2.531E+01	6.848E+02
2477.00	9.763E+03	4.815E+00	6.385E+01	8.670E+02	2.415E+01	5.168E+02
2482.00	1.129E+01	5.399E+00	4.604E+01	5.240E+02	2.299E+01	4.487E+02

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 1.100E+08 4.821E+08 3.381E+08 9.883E+06 5.302E+06 5.415E+06 9.237E+05 4.794E+05 6.486E+05  
 4.952E+00 2.263E+05 8.264E+02 1.792E+05 1.124E+02

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	6.279E+03	7.458E+03	4.123E+03	1.917E+01	1.971E+01	1.081E+01	0.000E+00	0.000E+00	0.000E+00	2.043E+01	2.221E+01
1686.00	6.309E+03	1.816E+03	1.200E+03	2.286E+01	2.066E+01	1.209E+01	4.185E-06	5.577E-07	3.247E-05	2.255E+01	2.356E+01
1746.00	8.805E+03	3.310E+03	1.835E+02	2.774E+01	7.477E+00	1.550E+01	1.347E-04	7.629E-05	1.170E-04	2.770E+01	1.539E+01
1806.00	9.915E+03	3.295E+03	0.471E+02	2.793E+01	5.973E+00	1.455E+01	1.690E-04	4.974E-05	1.648E-04	2.799E+01	1.392E+01
1806.00	3.780E+03	1.164E+03	4.325E+02	1.181E+01	1.358E+00	9.415E+00	3.155E-04	3.541E-05	5.220E-04	1.193E+01	7.139E+00
1866.00	2.207E+03	4.978E+02	7.735E+02	5.302E+00	1.744E+00	6.533E+00	6.280E-04	2.449E-04	7.272E-04	5.314E+00	3.818E+00
1926.00	1.378E+03	4.266E+02	7.157E+02	3.619E+00	2.001E+00	4.727E+00	7.246E-04	2.375E-04	7.381E-04	3.642E+00	4.165E+00
1986.00	2.661E+02	2.177E+02	2.110E+02	1.278E+00	2.104E+00	2.057E+00	8.682E-04	5.689E-07	6.351E-04	1.288E+00	2.822E+00
2046.00	2.742E+01	6.595E+01	5.185E+01	1.258E+00	1.703E+00	3.126E-01	9.212E-04	2.105E-04	5.151E-04	1.256E+00	1.185E+00
2106.00	1.004E+02	4.840E+01	6.644E+01	1.514E+00	1.663E+00	1.074E+00	9.587E-04	1.948E-04	4.260E-04	1.507E+00	2.121E+00
2166.00	1.492E+02	6.692E+01	9.002E+01	1.112E+00	1.315E+00	1.016E+00	1.032E-03	1.300E-04	2.476E-04	1.105E+00	1.500E+00
2226.00	1.742E+02	2.133E+01	1.732E+02	7.646E-01	1.431E+00	9.768E-01	1.062E-03	1.293E-04	1.423E-04	7.606E-01	5.831E-02
2286.00	2.157E+02	4.455E+01	2.182E+02	6.795E-01	1.406E+00	3.002E-01	1.073E-03	1.297E-04	1.143E-04	6.788E-01	1.116E+00
2292.00	2.192E+02	5.207E+01	2.166E+02	6.816E-01	1.349E+00	2.411E-01	1.074E-03	1.280E-04	1.123E-04	6.810E-01	1.134E+00
2292.00	1.950E+02	4.008E+01	1.158E+02	5.712E-01	1.132E+00	3.054E-01	1.086E-03	7.814E-05	8.125E-05	5.694E-01	6.270E-01
2346.00	1.995E+02	5.732E+01	1.223E+01	5.096E-01	4.895E-01	7.998E-01	1.092E-03	4.050E-05	4.526E-05	5.098E-01	3.976E-01
2406.00	1.720E+02	7.343E+01	7.849E+01	1.223E+01	5.715E-01	1.267E-01	1.021E-03	8.355E-05	4.817E-05	3.585E-01	4.020E-01
2430.00	1.696E+02	8.260E+01	2.798E+00	3.329E-01	5.980E-01	5.253E-02	1.008E-03	9.324E-05	4.707E-05	3.341E-01	3.869E-01
2450.00	2.049E+01	3.501E-01	2.954E+01	6.694E-02	1.287E-01	1.542E-01	1.003E-03	8.301E-05	6.701E-05	6.701E-02	1.451E-01
2450.00	3.481E+00	2.094E-01	2.940E-01	1.060E-01	1.025E-01	1.518E-01	1.003E-03	8.841E-05	8.910E-07	1.061E-01	1.412E-01
2466.00	2.057E+01	1.441E+00	1.654E+00	1.065E-01	2.865E-02	1.963E-01	1.004E-03	7.659E-05	5.918E-06	1.065E-01	1.199E-01
2472.00	9.980E-02	1.384E+00	1.657E+00	9.526E-02	5.860E-02	1.769E-01	1.001E-03	6.577E-05	9.341E-06	9.524E-02	9.677E-02
2477.00	8.268E+03	1.108E+00	1.325E+00	7.033E-02	3.761E-02	1.471E-01	9.983E-04	5.670E-05	1.220E-05	7.031E-02	6.695E-02
2482.00	9.114E+02	7.354E+01	1.143E+00	4.231E-02	1.933E-02	1.328E-01	9.946E-04	4.932E-05	1.433E-05	4.230E-02	2.003E-02

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR	
1686.00	5.982E+03	8.731E+03	3.996E+02	1.836E+01	2.313E+01	1.011E+00	0.000E+00	0.000E+00	0.000E+00	4.311E+03	3.046E-04	
1686.00	6.225E+03	2.382E+03	3.370E+02	2.190E+01	2.488E+01	1.781E+00	3.292E-06	1.427E-05	2.928E-05	4.750E-03	3.903E-04	
1746.00	8.755E+03	2.200E+03	2.644E+03	2.730E+01	1.739E+01	4.254E+00	1.311E-04	1.421E-04	1.689E-05	7.609E-03	1.114E-03	
1806.00	9.866E+03	2.351E+03	2.649E+03	2.766E+01	1.614E+01	7.995E-01	1.672E-04	1.727E-04	2.592E-05	1.079E-02	3.103E-04	
1806.00	3.781E+03	9.548E+02	8.788E+02	1.171E+01	8.079E+00	5.253E+00	5.095E-04	4.630E-04	2.560E-04	4.596E-03	1.957E-03	
1866.00	2.197E+03	8.139E+02	4.744E+02	5.240E+00	4.550E+00	5.066E+00	6.242E-04	1.149E-04	7.619E-04	3.061E-03	2.688E-03	
1926.00	1.373E+03	8.313E+02	1.296E+02	3.590E+00	5.153E+00	9.106E-02	7.219E-04	3.997E-04	4.955E-04	3.422E-03	5.231E-05	
1986.00	2.653E+02	3.035E+02	1.564E+01	1.270E+00	2.943E+00	1.386E-01	8.670E-04	4.669E-04	4.331E-04	1.585E-03	1.383E-04	
2046.00	2.759E+01	3.368E+01	7.685E+01	1.257E+00	1.241E-01	1.727E+00	9.210E-04	5.515E-04	7.511E-04	1.515E-03	2.124E-03	
2106.00	1.002E+02	8.218E+01	6.490E+00	1.510E+00	1.901E+00	5.638E-01	9.594E-04	1.947E+04	4.243E+04	1.336E-03	6.506E-04	
2166.00	1.490E+02	1.114E+00	9.048E+01	1.105E+00	1.318E+00	1.019E+00	1.033E-03	1.332E-04	2.444E-04	1.030E-03	1.276E-03	
2226.00	1.739E+02	1.561E+02	7.876E+01	7.551E-01	2.625E-02	1.737E+00	1.062E-03	1.909E-04	3.514E-05	1.010E-03	2.322E-03	
2286.00	2.154E+02	1.911E+02	1.150E+02	6.725E-01	1.179E+00	0.295E-01	1.072E-03	8.266E-06	1.764E-04	1.125E-03	1.198E-03	
2292.00	2.189E+02	1.795E+02	1.324E+02	6.751E-01	1.193E+00	6.806E-01	1.074E-03	3.052E-05	1.712E-04	1.133E-03	9.988E-04	
2292.00	1.947E+02	1.057E+02	6.270E+01	5.659E-01	6.755E-01	9.621E-01	1.066E-03	1.217E-05	1.155E-04	9.090E-04	1.406E-03	
2346.00	1.993E+02	5.787E+01	1.259E+01	5.081E-01	4.861E-01	8.028E-01	1.091E-03	4.374E-05	4.552E-05	9.087E-04	1.270E-03	
2406.00	1.719E+02	7.368E+01	8.015E+00	3.560E-01	5.718E-01	1.280E-01	1.021E-03	6.500E-05	4.837E-05	1.041E-03	2.639E-04	
2430.00	1.695E+02	8.276E+01	2.909E+00	3.323E-01	5.940E-01	5.173E-02	1.008E-03	9.417E-05	4.720E-05	1.126E-03	1.147E-04	
2450.00	2.049E+01	3.620E-01	2.951E-01	7.702E-02	1.288E-01	1.541E-01	1.003E-03	8.976E-05	2.088E-06	8.763E-06	3.586E-04	
2450.00	3.480E+00	2.116E-01	2.938E-01	1.061E-01	1.025E-01	1.517E-01	1.003E-03	6.895E-05	8.265E-07	8.657E-05	3.532E-04	
2466.00	2.053E-01	1.441E+00	1.653E+00	1.065E-01	8.089E-02	1.963E-01	1.004E-03	5.889E-06	1.446E-06	5.362E-04	1.446E-04	
2472.00	9.959E-02	1.384E+00	1.657E+00	9.527E-02	5.881E-02	1.769E-01	1.001E-03	6.693E-05	9.331E-06	1.464E-04	5.220E-04	
2477.00	8.355E-03	1.108E+00	1.325E+00	7.033E-02	3.759E-02	1.471E-01	9.983E-04	5.678E-05	1.221E-05	1.167E-04	4.610E-04	
2482.00	9.115E-02	7.362E+01	1.143E+00	4.231E-02	1.942E-02	1.327E-01	9.946E-04	4.935E-05	1.430E-05	1.387E-04	4.384E-04	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 3.034E+08 4.001E+09 5.152E+08 3.347E+06 9.284E+07 3.999E+07 1.167E+05 2.610E+05 6.271E+06  
 7.254E+01 4.074E+03 6.676E+02 4.227E+05 9.170E+03

C-88



SYSTEM D GROUP 1

(INITIAL AZIMUTH MISALIGNMENT)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,656E-04	2,484E-05	1,172E-04	0,000E+00	0,000E+00
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,656E-04	2,484E-05	1,172E-04	0,000E+00	0,000E+00
1746,00	1,150E+02	5,333E+01	6,970E+01	4,369E+01	2,559E+01	6,346E-01	2,534E-04	1,637E-05	1,215E-04	4,318E-01	3,018E-01
1806,00	2,000E+02	4,960E+01	1,206E+02	3,891E+01	1,318E-01	7,517E-01	2,463E-04	1,285E-05	1,243E-04	6,892E-01	6,892E-01
1806,00	7,672E+01	9,180E+01	1,114E+02	3,607E-01	6,249E-03	6,389E-01	2,391E-04	1,451E-05	1,317E-04	3,606E-01	5,421E-01
1866,00	1,621E+02	2,233E+01	1,080E+02	4,402E-01	2,576E-01	2,607E-01	2,339E-04	6,582E-06	1,326E-04	1,326E-01	2,909E-01
1926,00	1,284E+02	1,751E+01	8,149E+01	4,426E-01	6,825E-01	3,282E-01	2,252E-04	3,905E-06	1,352E-04	4,639E-01	4,586E-01
1986,00	3,017E+01	1,450E+01	3,199E+01	2,165E-01	5,941E-01	3,402E-02	2,118E-04	1,966E-05	1,242E-04	2,169E-01	4,100E-01
2046,00	3,120E+00	1,287E+01	1,336E+01	2,331E-01	6,217E-01	1,641E-01	2,050E-04	4,731E-05	1,026E-04	1,026E-01	4,731E-02
2106,00	1,701E+01	2,504E+01	9,845E+00	2,884E-01	5,755E-01	9,483E-03	1,979E-04	4,305E-05	9,193E-05	2,869E-01	4,239E-01
2166,00	2,575E+01	2,361E+01	9,199E+01	2,087E-01	2,564E-01	8,447E-02	1,838E-04	3,003E-05	5,804E-05	2,073E-01	2,911E-01
2224,00	2,955E+01	1,300E+01	2,218E+00	1,331E-01	4,261E-01	1,430E-02	1,782E-04	3,091E-05	3,804E-05	1,324E-01	4,032E-03
2284,00	3,652E+01	1,243E+01	1,566E+01	1,066E-01	1,087E-01	2,922E-01	1,765E-04	3,152E-05	3,304E-05	1,058E-01	2,784E-01
2282,00	3,706E+01	1,295E+01	1,678E+01	1,067E-01	1,248E-01	3,049E-01	1,763E-04	3,118E-05	3,365E-05	1,007E-01	2,891E-01
2292,00	3,525E+01	1,199E+01	9,139E+00	9,841E-02	1,081E-01	2,633E-01	1,753E-04	2,735E-05	3,126E-05	2,432E-02	2,431E-01
2346,00	4,340E+01	1,654E+01	4,653E+00	1,101E-01	1,806E-01	2,054E-01	1,651E-04	1,675E-05	2,394E-05	1,160E-01	1,610E-01
2406,00	5,770E+01	3,289E+01	2,791E+00	1,535E-01	2,141E-01	7,316E-02	1,434E-04	2,795E-06	2,035E-05	1,539E-01	1,434E-01
2430,00	6,119E+01	3,981E+01	1,146E+00	1,604E-01	2,243E-01	2,683E-02	1,370E-04	2,298E-06	1,916E-05	1,610E-01	1,238E-01
2450,00	1,817E+00	6,151E+00	2,349E-01	2,255E-03	2,617E-02	7,653E-03	1,345E-04	8,285E-06	7,255E-07	2,366E-03	2,175E-02
2450,00	2,091E-01	5,339E+00	2,460E-01	1,595E-03	2,052E-02	8,162E-03	1,347E-04	8,417E-06	1,713E-07	1,447E-03	1,569E-02
2466,00	1,325E-02	4,426E-02	2,362E-01	3,406E-03	1,081E-02	1,221E-02	1,344E-04	7,307E-06	1,229E-06	5,406E-03	5,550E-04
2472,00	4,611E-03	2,140E-02	1,746E-01	3,945E-03	4,124E-04	1,020E-02	1,341E-04	6,051E-06	9,336E-07	3,946E-03	2,222E-03
2477,00	2,251E-04	2,142E-03	1,157E-01	3,370E-03	1,116E-03	8,459E-03	1,337E-04	5,223E-06	7,856E-07	3,370E-03	2,694E-03
2482,00	4,675E-03	2,641E-03	8,763E-02	2,217E-03	1,077E-03	8,533E-03	1,333E-04	4,729E-06	7,407E-07	2,216E-03	1,103E-03

C-89

TIME	POSITION ESTIMATE ERROR						VELOCITY ESTIMATE ERROR						GAMMA ERROR		PSI ERROR	
	U	V	W	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,680E-04	2,128E-05	1,122E-04	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,680E-04	2,128E-05	1,122E-04	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00		
1746,00	1,144E+02	2,212E+01	8,578E+01	4,278E-01	3,533E-01	6,041E-01	2,555E-04	7,592E-05	9,008E-05	1,198E-04	1,617E-04	1,617E-04	1,617E-04	1,617E-04		
1806,00	1,999E+02	9,027E+01	9,606E+01	6,783E-01	7,444E-01	2,041E-01	2,477E-04	1,025E-04	6,674E-05	2,759E-04	7,913E-05	7,913E-05	7,913E-05	7,913E-05		
1806,00	7,638E+01	6,177E+01	1,307E+02	3,529E-01	5,785E-01	2,812E-01	2,405E-04	1,085E-04	1,498E-04	1,498E-04	1,076E-04	1,076E-04	1,076E-04	1,076E-04		
1866,00	1,614E+02	3,026E+01	1,071E+02	4,365E-01	3,516E-01	1,183E-01	2,349E-04	5,161E-05	1,205E-04	2,513E-04	6,570E-05	6,570E-05	6,570E-05	6,570E-05		
1926,00	1,279E+02	8,296E+01	1,381E+01	4,587E-01	5,536E-01	4,926E-01	2,254E-04	1,227E-04	5,457E-05	4,064E-04	3,739E-04	3,739E-04	3,739E-04	3,739E-04		
1986,00	3,007E+01	3,338E+01	1,118E+01	4,133E-01	4,302E-01	4,117E-01	2,127E-04	1,037E-04	7,022E-05	2,617E-04	4,261E-04	4,261E-04	4,261E-04	4,261E-04		
2046,00	3,115E+00	9,713E+00	1,591E+01	2,324E-01	3,118E-03	6,431E-01	2,050E-04	1,170E-04	1,851E-05	2,744E-04	7,408E-04	7,408E-04	7,408E-04	7,408E-04		
2106,00	1,646E+01	2,380E+01	1,261E+01	2,878E-01	3,821E-01	4,309E-01	1,977E-04	4,251E-05	9,262E-05	2,507E-04	4,935E-04	4,935E-04	4,935E-04	4,935E-04		
2166,00	2,568E+01	2,369E+01	8,358E-01	2,082E-01	2,571E-01	8,378E-02	1,837E-04	3,007E-05	5,865E-05	1,924E-04	1,086E-04	1,086E-04	1,086E-04	1,086E-04		
2226,00	2,940E+01	5,678E+01	1,273E+01	1,326E-01	1,897E-02	8,643E-02	1,783E-04	4,855E-05	3,794E-06	1,779E-04	1,104E-04	1,104E-04	1,104E-04	1,104E-04		
2286,00	3,645E+01	2,172E+01	1,370E+00	1,061E-01	2,886E-01	1,185E-01	1,756E-04	4,115E-06	4,561E-05	1,097E-04	1,728E-04	1,728E-04	1,728E-04	1,728E-04		
2292,00	3,706E+01	2,083E+01	4,495E+00	1,600E-01	2,915E-01	1,540E-01	1,764E-04	1,711E-06	4,533E-05	1,960E-04	2,260E-04	2,260E-04	2,260E-04	2,260E-04		
2292,00	3,519E+01	1,520E+01	7,620E-01	9,780E-02	2,520E-01	1,327E-01	1,754E-04	3,284E-07	4,106E-05	1,731E-04	1,946E-04	1,946E-04	1,946E-04	1,946E-04		
2346,00	4,335E+01	1,671E+01	4,750E+00	1,155E-01	1,823E-01	2,053E-01	1,652E-04	1,608E-05	2,494E-05	2,251E-04	3,284E-04	3,284E-04	3,284E-04	3,284E-04		
2406,00	5,765E+01	3,294E+01	2,716E+00	1,531E-01	2,145E-01	7,267E-02	1,454E-04	2,533E-05	2,034E-05	1,497E-04	1,497E-04	1,497E-04	1,497E-04	1,497E-04		
2430,00	6,115E+01	3,987E+01	1,093E+00	1,602E-01	2,245E-01	2,652E-02	1,370E-04	2,459E-06	1,916E-05	4,854E-04	5,895E-05	5,895E-05	5,895E-05	5,895E-05		
2450,00	1,814E+00	6,157E+00	2,391E-01	2,246E-03	2,616E-02	7,671E-03	1,346E-04	8,362E-06	7,195E-07	3,019E-05	1,785E-05	1,785E-05	1,785E-05	1,785E-05		
2450,00	2,061E-01	5,339E+00	2,496E-01	1,606E-03	2,051E-02	8,176E-03	1,347E-04	8,494E-06	1,553E-07	1,773E-05	1,404E-05	1,404E-05	1,404E-05	1,404E-05		
2466,00	1,327E+02	4,434E+02	2,362E+01	3,406E-03	1,086E-03	1,221E-02	1,344E-04	7,302E-06	1,231E-06	6,656E-06	3,014E-05	3,014E-05	3,014E-05	3,014E-05		
2472,00	4,614E-03	2,142E-02	1,746E-01	3,945E-03	4,124E-04	1,020E-02	1,341E-04	6,073E-06	9,346E-07	8,551E-06	3,014E-05	3,014E-05	3,014E-05	3,014E-05		
2477,00	2,251E-04	2,131E-03	1,157E-01	3,370E-03	1,116E-03	8,459E-03	1,337E-04	5,234E-06	7,854E-07	6,601E-06	2,651E-05	2,651E-05	2,651E-05	2,651E-05		
2482,00	4,676E-03	2,701E-03	8,763E-02	2,217E-03	1,071E-03	8,534E-03	1,333E-04	4,730E-06	7,442E-07	7,270E-06	2,813E-05	2,813E-05	2,813E-05	2,813E-05		

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1,307E-08	1,533E-07	1,032E-08	5,071E-07	4,499E-07	3,651E-06	4,113E-06	7,958E-06	5,474E-07
7,393E-03	1,002E-05	3,296E-03	3,272E-05	4,400E-04				

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 1

(FOR MARKOV ERROR)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR		VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C	R	C	
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.767E+02	7.100E+03	6.062E+03	2.194E+00	3.901E+00	4.092E-03	3.979E-05	3.180E-05	2.951E-06	2.950E+00	3.453E+00	6.072E+00
1746.00	1.421E+02	3.395E+03	2.469E+03	6.539E+01	1.394E+01	3.989E+00	8.055E-05	3.771E-05	6.599E-05	5.883E-01	6.472E+00	8.504E-01
1806.00	1.496E+03	9.931E+02	3.015E+02	3.294E+00	6.768E+00	5.511E+00	4.727E-05	8.783E-05	6.791E-05	4.340E-05	1.145E+00	1.264E+00
1806.00	5.983E+02	6.685E+02	3.519E+02	1.154E+00	5.680E+00	4.094E+00	8.800E-05	7.896E-05	4.340E-05	1.244E+00	3.635E+00	1.625E+00
1866.00	1.078E+02	7.586E+02	6.054E+02	1.275E+00	6.671E+00	5.435E+00	1.277E-04	4.829E-05	8.573E-05	1.625E+00	5.017E-01	6.306E-01
1926.00	2.500E+02	6.750E+02	5.742E+02	1.611E+00	5.377E+00	4.199E+00	8.900E-05	2.588E-05	1.409E-04	3.536E-01	5.017E-01	6.306E-01
1986.00	4.468E+01	4.643E+02	3.346E+02	3.564E+01	2.967E+00	1.209E+00	4.892E-05	5.835E-05	1.625E+00	3.193E-01	6.306E-01	6.306E-01
2046.00	2.810E+01	3.815E+02	2.381E+02	3.155E+01	2.067E+00	1.209E+00	7.762E-05	1.180E-04	1.247E-04	4.166E-01	6.679E-01	6.679E-01
2106.00	4.412E+01	2.032E+02	5.819E+01	4.150E+01	1.284E+00	9.019E-01	7.762E-05	1.180E-04	9.501E-05	4.998E-01	6.679E-01	6.679E-01
2166.00	9.500E+01	1.548E+02	1.540E+02	4.985E-01	6.011E-01	1.432E+00	5.962E-05	1.478E-04	8.632E-05	4.744E-01	1.359E+00	1.359E+00
2226.00	1.315E+02	1.067E+02	2.522E+02	4.734E-01	6.005E-01	1.794E+00	7.958E-05	1.790E-04	1.186E-04	4.501E-01	2.134E+00	2.134E+00
2286.00	1.576E+02	5.357E+01	3.581E+02	4.497E-01	9.982E-01	2.129E+00	7.958E-05	1.790E-04	1.223E-04	4.500E-01	2.398E+00	2.398E+00
2292.00	1.605E+02	5.655E+01	3.738E+02	4.559E-01	1.040E+00	2.165E+00	8.217E-05	1.823E-04	1.223E-04	3.675E-01	1.271E+00	1.271E+00
2292.00	1.478E+02	5.250E+01	2.004E+02	3.893E-01	7.624E-01	1.256E+00	6.673E-05	1.004E-04	8.359E-05	4.340E-01	5.128E-01	5.128E-01
2346.00	1.717E+02	5.178E+01	2.628E+01	4.348E-01	6.359E-01	3.952E-01	7.353E-05	1.004E-04	6.725E-05	4.418E-01	5.427E-01	5.427E-01
2406.00	1.871E+02	7.530E+01	2.461E+01	4.413E-01	7.362E-01	4.133E-01	7.998E-05	5.644E-05	6.699E-05	4.406E-01	5.427E-01	5.427E-01
2430.00	1.922E+02	8.828E+01	2.482E+01	4.395E-01	7.720E-01	4.029E-01	6.798E-05	6.699E-05	6.699E-05	4.406E-01	5.427E-01	5.427E-01
2450.00	4.356E+01	3.136E+01	7.805E+00	4.315E-02	3.644E-01	1.918E-01	2.653E-05	3.467E-05	2.764E-05	1.057E-01	3.277E-01	3.277E-01
2450.00	7.730E+00	2.813E+01	7.314E+00	1.052E-01	3.233E-01	1.820E-01	2.653E-05	3.467E-05	2.957E-05	1.147E-01	3.603E-01	3.603E-01
2450.00	9.611E-01	7.050E+00	2.385E+00	1.147E-01	3.492E-01	9.748E-02	2.286E-05	2.957E-05	2.222E-05	1.110E-01	3.459E-01	3.459E-01
2466.00	1.582E-01	8.895E+00	1.357E+00	1.111E-01	3.402E-01	1.015E-01	2.419E-05	2.902E-05	2.222E-05	1.110E-01	3.459E-01	3.459E-01
2472.00	1.582E-01	8.895E+00	1.357E+00	1.111E-01	3.402E-01	1.015E-01	2.419E-05	2.902E-05	2.222E-05	1.110E-01	3.459E-01	3.459E-01
2477.00	8.347E-03	1.009E+01	6.960E-01	8.608E-02	3.289E-01	1.069E-01	2.553E-05	2.861E-05	2.167E-05	8.598E-02	3.263E-01	3.263E-01
2482.00	1.093E-01	1.099E+01	5.426E-01	5.301E-02	3.152E-01	1.040E-01	2.677E-05	2.738E-05	2.137E-05	5.286E-02	3.158E-01	3.158E-01

C-90

TIME	U			V			W			GAMMA ERROR			PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.659E+02	3.610E+03	8.610E+03	2.094E+00	3.559E+00	1.726E+00	3.904E-05	2.844E-05	1.044E-05	6.250E-04	5.147E-04	5.147E-04	5.147E-04
1746.00	1.406E+02	2.903E+02	4.188E+03	5.545E-01	6.111E+00	1.316E+01	7.865E-05	7.470E-05	2.233E-05	2.458E-04	3.556E-03	3.556E-03	3.556E-03
1806.00	1.488E+03	1.925E+02	1.031E+03	3.256E+00	9.637E-01	7.525E+00	4.662E-05	4.128E-05	1.034E-04	1.225E-05	2.802E-03	2.802E-03	2.802E-03
1806.00	5.949E+02	3.226E+01	7.574E+02	1.144E+00	6.889E+00	6.889E+00	8.697E-05	5.314E-05	7.408E-05	4.220E-04	2.566E-03	2.566E-03	2.566E-03
1866.00	1.071E+02	4.075E+02	8.795E+02	1.280E+00	3.498E+00	7.861E+00	1.268E-04	8.199E-05	5.653E-05	4.045E-04	4.156E-03	4.156E-03	4.156E-03
1866.00	1.071E+02	4.075E+02	8.795E+02	1.280E+00	3.498E+00	7.861E+00	1.268E-04	8.199E-05	5.653E-05	4.045E-04	4.156E-03	4.156E-03	4.156E-03
1926.00	2.494E+02	2.880E+02	8.366E+02	1.609E+00	1.905E+00	6.551E+00	4.224E-05	1.225E-04	3.186E-05	3.255E-04	3.837E-03	3.837E-03	3.837E-03
1986.00	4.451E+01	9.793E+01	5.639E+02	3.577E-01	4.749E-01	3.690E+00	4.895E-05	1.168E-04	4.070E-05	4.555E-04	2.837E-03	2.837E-03	2.837E-03
2046.00	2.825E+01	1.365E+02	4.285E+02	3.159E-01	6.607E-01	2.301E+00	1.133E+00	7.741E-05	1.133E-04	1.291E-04	4.314E-04	1.304E-03	1.304E-03
2106.00	4.420E+01	9.492E+01	1.888E+02	4.136E-01	1.085E+00	1.133E+00	1.433E+00	5.964E-05	1.477E-04	9.514E-05	5.704E-04	1.794E-03	1.794E-03
2166.00	9.512E+01	1.546E+02	1.541E+02	4.952E-01	6.616E-01	1.433E+00	5.829E-05	1.413E-04	1.150E-04	7.247E-04	1.723E-03	1.723E-03	1.723E-03
2226.00	1.316E+02	2.639E+02	7.281E+01	4.689E-01	1.384E+00	1.291E+00	8.032E-05	6.200E-05	2.053E-04	8.431E-04	1.344E-03	1.344E-03	1.344E-03
2286.00	1.576E+02	2.746E+02	2.361E+02	4.454E-01	2.166E+00	9.194E-01	8.292E-05	7.936E-05	2.044E-04	8.508E-04	1.708E-03	1.708E-03	1.708E-03
2292.00	1.605E+02	2.604E+02	2.737E+02	4.515E-01	2.159E+00	1.159E+00	8.292E-05	7.936E-05	1.194E-04	6.359E-04	1.048E-03	1.048E-03	1.048E-03
2292.00	1.478E+02	1.389E+02	1.537E+02	3.869E-01	1.286E+00	7.118E-01	6.713E-05	5.249E-05	4.857E-05	8.057E-04	6.246E-04	6.246E-04	6.246E-04
2346.00	1.716E+02	5.192E+01	2.630E+01	4.331E-01	6.374E-01	3.944E-01	7.366E-05	4.857E-05	0.731E-05	1.278E-03	8.519E-04	8.519E-04	8.519E-04
2406.00	1.870E+02	7.550E+01	2.466E+01	4.402E-01	7.368E-01	4.132E-01	7.906E-05	5.627E-05	0.731E-05	1.278E-03	8.519E-04	8.519E-04	8.519E-04
2430.00	1.921E+02	8.843E+01	2.484E+01	4.388E-01	7.724E-01	4.028E-01	6.803E-05	5.627E-05	6.702E-05	1.445E-03	8.958E-04	8.958E-04	8.958E-04
2450.00	4.357E+01	3.134E+01	7.801E+00	4.321E-02	3.645E-01	1.918E-01	2.954E-05	3.544E-05	3.033E-05	3.458E-04	4.466E-04	4.466E-04	4.466E-04
2450.00	7.740E+00	2.813E+01	7.310E+00	1.054E-01	3.233E-01	1.819E-01	2.854E-05	3.464E-05	2.766E-05	1.806E-04	4.236E-04	4.236E-04	4.236E-04
2450.00	9.595E+00	7.050E+00	2.384E+00	1.148E-01	3.492E-01	9.751E-02	2.286E-05	2.956E-05	2.337E-05	1.761E-04	2.674E-04	2.674E-04	2.674E-04
2466.00	1.570E-01	8.895E+00	1.357E+00	1.111E-01	3.402E-01	1.015E-01	2.419E-05	2.901E-05	2.222E-05	2.072E-04	2.995E-04	2.995E-04	2.995E-04
2472.00	1.570E-01	8.895E+00	1.357E+00	1.111E-01	3.402E-01	1.015E-01	2.419E-05	2.901E-05	2.222E-05	2.072E-04	2.995E-04	2.995E-04	2.995E-04
2477.00	7.782E-03	1.009E+01	6.959E-01	8.610E-02	3.289E-01	1.069E-01	2.553E-05	2.861E-05	2.167E-05	2.615E-04	3.550E-04	3.550E-04	3.550E-04
2482.00	1.094E-01	1.099E+01	5.451E-01	5.501E-02	3.151E-01	1.041E-01	2.677E-05	2.737E-05	2.136E-05	1.611E-04	3.438E-04	3.438E-04	3.438E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 9.809E+09 2.506E+08 1.710E+08 2.437E+06 2.084E+06 1.202E+06 3.283E+05 1.177E+05 1.685E+05  
 1.045E+01 2.450E+03 7.687E+02 1.932E+05 8.704E+03



SYSTEM D GROUP 1

(LCL FIRST ORDER MARKOV)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686,00											
1806,00											
1926,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,925E+01	3,355E+01	2,866E+02	3,153E+01	6,123E-01	1,554E+00	3,360E-05	1,415E-04	8,776E-05	3,187E-01	1,436E+00
2346,00	5,302E+01	2,853E+01	1,041E+02	2,220E+01	2,247E-01	6,226E-01	1,030E-04	5,986E-05	2,673E-05	2,224E-01	2,635E-01
2406,00	9,005E+01	6,771E+01	5,658E+01	3,438E-01	1,869E-01	7,927E-01	1,848E-04	9,001E-05	1,354E-05	3,451E-01	8,376E-02
2430,00	8,419E+01	6,997E+01	3,935E+01	3,079E-01	1,797E-01	6,917E-01	1,654E-04	8,060E-05	9,054E-06	3,092E-01	5,106E-02
2450,00	1,115E+01	5,956E+01	1,897E+01	5,644E-02	2,284E-01	5,685E-01	1,353E-04	7,269E-05	2,722E-05	5,775E-02	2,002E-01
2450,00	2,046E+00	6,197E+01	1,795E+01	6,421E-02	2,383E-01	5,637E-01	1,353E-04	7,247E-05	2,682E-05	6,481E-02	2,165E-01
2466,00	6,687E-01	8,991E+00	8,549E+00	5,503E-02	1,933E-01	6,975E-01	1,335E-04	1,056E-04	3,058E-05	6,504E-02	2,015E-01
2472,00	7,911E-02	9,220E+00	1,124E+01	5,507E-02	1,774E-01	6,953E-01	1,403E-04	1,069E-04	2,689E-05	5,505E-02	1,820E-01
2477,00	8,510E-03	9,177E+00	1,090E+01	3,300E-02	1,330E-01	5,660E-01	1,493E-04	8,947E-05	2,014E-05	3,297E-02	1,318E-01
2482,00	3,375E-02	9,149E+00	9,666E+00	1,596E-02	9,733E-02	4,411E-01	1,588E-04	7,258E-05	1,472E-05	1,545E-02	9,776E-02

C-91

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686,00											
1806,00											
1926,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,899E+01	2,096E+02	1,984E+02	3,119E-01	1,467E+00	8,001E-01	3,424E-05	5,219E-05	1,578E-04	6,388E-04	1,180E-03
2346,00	5,294E+01	2,914E+01	1,040E+02	2,215E-01	2,277E-01	6,217E-01	1,031E-04	5,945E-05	2,705E-05	3,820E-04	9,860E-04
2406,00	8,995E+01	6,783E+01	5,660E+01	3,435E-01	1,863E-01	7,930E-01	1,849E-04	8,971E-05	1,375E-05	7,349E-04	1,634E-03
2430,00	8,412E+01	7,004E+01	3,937E+01	3,077E-01	1,793E-01	6,919E-01	1,655E-04	8,043E-05	9,114E-06	7,035E-04	1,538E-03
2450,00	1,115E+01	5,955E+01	1,901E+01	5,693E-02	2,284E-01	5,684E-01	1,358E-04	7,261E-05	2,726E-05	2,562E-04	1,323E-03
2450,00	2,058E+00	6,196E+01	1,799E+01	6,423E-02	2,383E-01	5,657E-01	1,335E-04	7,239E-05	2,686E-05	2,436E-04	1,312E-03
2466,00	6,667E-01	8,993E+00	8,547E+00	6,508E-02	1,935E-01	6,975E-01	1,335E-04	1,056E-04	3,061E-05	8,040E-05	1,913E-03
2472,00	7,826E-02	9,221E+00	1,124E+01	5,510E-02	1,775E-01	6,953E-01	1,403E-04	1,069E-04	2,690E-05	9,845E-05	2,052E-03
2477,00	7,904E-03	9,177E+00	1,090E+01	3,301E-02	1,329E-01	5,660E-01	1,493E-04	8,948E-05	2,013E-05	1,029E-04	1,774E-03
2482,00	3,376E-02	9,150E+00	9,665E+00	1,596E-02	9,756E-02	4,410E-01	1,588E-04	7,257E-05	1,476E-05	4,621E-05	1,457E-03

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

5,246E-08 9,974E-08 6,890E-08 1,630E-06 2,983E-06 2,657E-06 3,040E-05 3,232E-05 5,830E-05  
 9,111E+00 9,304E-04 2,486E-02 2,043E-03 3,742E-03

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 1

(RADAR ALT. MARKOV ERROR )

C-92

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	U	C	R	D	C	R	D	C		
1686.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2106.00											
2166.00											
2226.00											
2286.00											
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	8.558E+01	6.822E+00	1.086E-01	1.941E-01	1.054E-01	1.612E-02	1.162E-06	4.467E-06	1.589E-05	1.959E-01	2.473E-03
2466.00	1.857E+01	6.486E+00	8.636E-01	8.272E-02	1.000E-01	4.034E-03	6.877E-06	1.509E-06	1.191E-05	8.271E-02	9.024E-02
2472.00	4.394E+00	4.266E+00	4.145E-01	1.531E-01	5.236E-02	2.391E-02	8.801E-06	4.144E-06	3.844E-06	1.350E-01	1.049E-01
2477.00	2.129E+00	4.959E+00	1.112E-01	2.141E-01	7.584E-02	3.543E-02	1.195E-05	6.175E-06	4.628E-06	2.140E-01	1.694E-01
2482.00	1.443E+00	5.363E+00	7.839E-02	2.360E-01	8.308E-02	3.450E-02	1.238E-05	6.651E-06	4.887E-06	2.359E-01	6.647E-02

TIME	U			V			H			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	H	U	V	H		
1686.00											
1686.00											
1746.00											
1806.00											
1866.00											
1926.00											
1986.00											
2046.00											
2106.00											
2166.00											
2226.00											
2286.00											
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2406.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	8.558E+01	6.773E+00	1.130E-01	1.940E-01	1.056E-01	1.604E-02	1.159E-06	4.457E-06	1.589E-05	4.483E-04	3.734E-05
2466.00	1.836E+01	6.491E+00	8.620E-01	8.271E-02	1.000E-01	4.005E-03	6.877E-06	1.305E-06	1.191E-05	2.288E-04	1.099E-05
2472.00	4.394E+00	4.266E+00	4.141E-01	1.531E-01	5.234E-02	2.391E-02	8.800E-06	4.145E-06	3.844E-06	2.527E-04	7.052E-05
2477.00	2.129E+00	4.980E+00	1.116E-01	2.141E-01	7.583E-02	3.342E-02	1.195E-05	6.175E-06	4.628E-06	4.145E-04	1.047E-04
2482.00	1.443E+00	5.363E+00	7.998E-02	2.360E-01	8.307E-02	3.451E-02	1.238E-05	6.650E-06	4.889E-06	7.749E-04	1.140E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

2.224E-04	1.077E-08	5.739E-09	1.065E-05	9.254E-06	6.965E-06	1.550E-04	3.405E-05	5.584E-05
5.204E+00	1.650E-05	1.403E+00	2.241E-06	1.460E+00				

SYSTEM D GROUP 1

(DME MEASUREMENT NOISE)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATUUM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	2.502E+01	1.457E+01	1.397E+01	1.403E-02	5.804E-03	4.392E-03	1.195E-08	2.286E-08	1.127E-07	9.160E-03	6.971E-03
1746.00	2.591E+02	5.030E+02	4.216E+02	4.500E-01	1.327E+00	2.676E-01	2.703E-05	2.291E+05	3.920E-06	8.147E-01	4.507E-01
1806.00	2.734E+02	1.195E+02	1.031E+02	1.031E+02	5.175E-01	1.095E+00	8.714E-01	1.840E-05	1.177E-05	1.820E-05	5.215E-01
1866.00	1.174E+02	1.046E+02	9.094E+01	9.094E+01	3.795E-01	9.065E-01	5.676E-01	1.127E-05	1.695E-05	1.070E-05	5.051E-01
1866.00	1.576E+02	1.368E+02	6.792E+01	3.795E-01	3.976E-01	4.594E-01	5.044E-01	1.796E-05	1.015E-05	1.044E-05	4.013E-01
1926.00	1.442E+02	4.274E+01	1.010E+02	1.010E+02	1.060E+01	2.951E-01	3.479E-01	1.135E-05	3.547E-05	2.062E-05	1.079E-01
1986.00	7.722E+01	5.194E+01	5.116E+01	1.060E+01	2.951E-01	3.479E-01	1.135E-05	3.547E-05	2.062E-05	4.969E-02	2.951E-01
2046.00	1.039E+01	1.265E+01	4.436E+01	5.004E-02	2.015E-01	3.249E-01	7.100E-05	2.704E-05	5.444E-05	1.109E-01	5.590E-01
2106.00	1.176E+01	1.940E+01	1.651E+01	1.121E-01	5.155E-01	2.079E-01	1.468E-05	2.073E-05	5.444E-05	1.038E-01	2.044E-01
2166.00	1.525E+01	2.494E+01	8.962E+00	1.046E+01	2.540E-01	6.205E-02	1.381E-05	1.209E-05	3.490E-05	1.790E-02	1.842E-01
2226.00	1.974E+01	2.152E+01	2.125E+01	7.821E+02	1.646E-01	1.278E-01	1.090E-05	1.498E-05	2.521E-05	1.498E-05	1.597E-01
2286.00	2.490E+01	1.164E+01	2.474E+01	7.785E-02	1.044E-01	1.397E-01	1.020E-05	1.550E-05	1.971E-05	7.796E-02	1.697E-01
2286.00	2.585E+01	1.157E+01	2.401E+01	8.055E-02	1.055E-01	1.341E-01	1.024E-05	1.512E-05	1.950E-05	8.065E-02	1.602E-01
2292.00	2.463E+01	1.191E+01	1.209E+01	7.358E-02	1.108E-01	7.372E-02	1.025E-05	1.099E-05	1.961E-05	7.355E-02	8.895E-02
2346.00	3.872E+01	9.414E+00	1.321E+01	1.164E-01	1.073E-01	4.275E-02	1.264E-05	8.013E-06	1.643E-05	1.104E-01	1.025E-01
2406.00	5.197E+01	1.650E+01	7.294E-01	1.474E-01	1.332E-01	2.471E-02	8.387E-06	5.702E-06	1.010E-05	1.476E-01	9.275E-02
2430.00	4.385E+01	2.044E+01	3.642E+01	1.196E-01	1.458E-01	1.513E-02	6.467E-06	4.588E-06	1.633E-05	1.196E-01	9.421E-02
2450.00	5.074E+01	3.574E+01	1.632E+00	1.317E-01	1.982E-01	1.512E-02	5.800E-06	5.015E-06	1.781E-05	1.525E-01	1.151E-01
2450.00	8.534E+00	3.508E+01	1.787E+00	3.761E-02	1.384E-01	5.169E-02	5.700E-06	7.150E-06	1.084E-05	3.220E-02	1.067E-01
2466.00	1.974E+00	6.066E+00	1.417E+00	1.351E-02	6.507E-02	8.514E-03	7.034E-06	3.064E-06	8.876E-06	1.351E-02	5.463E-02
2472.00	1.085E-01	6.045E+00	6.573E-01	1.821E-02	6.905E-02	4.734E-02	7.474E-06	8.847E-06	9.354E-06	1.821E-02	5.944E-02
2477.00	2.277E-02	6.135E+00	1.442E-01	1.676E-02	6.948E-02	6.204E-02	8.561E-06	1.094E-05	9.327E-06	1.676E-02	5.944E-02
2482.00	1.666E-02	6.303E+00	1.564E-01	1.160E-02	7.075E-02	6.311E-02	6.388E-06	1.091E-05	9.317E-06	1.160E-02	7.075E-02

C-93

TIME	U			V			W			GAMMA ERROR		PSI ERROR
	U	V	W	U	V	W	U	V	W			
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.000E+00	1.929E+01	5.849E+00	1.375E-02	7.649E-03	1.490E-05	1.458E-08	2.946E-08	1.104E-07	1.908E-06	4.672E-06	1.908E-06
1746.00	2.582E+02	1.320E+01	6.565E+02	4.688E-01	7.839E-01	1.096E+00	1.096E+00	1.792E-05	1.557E-05	1.092E-04	2.998E-04	2.998E-04
1806.00	2.727E+02	7.858E+01	1.392E+02	5.689E-01	4.963E-01	1.347E+00	2.320E-05	1.842E-05	2.140E-05	3.374E-04	5.010E-04	5.010E-04
1866.00	1.174E+02	4.554E+01	1.313E+02	5.169E-01	3.565E+01	1.358E+00	1.832E-05	1.284E-05	1.766E-05	2.016E-04	4.747E-04	4.747E-04
1866.00	1.570E+02	9.897E+01	1.171E+02	3.777E-01	5.704E-01	9.056E-01	1.120E-05	1.306E-05	1.520E-05	2.251E-04	4.777E-04	4.777E-04
1926.00	1.438E+02	8.457E+01	7.059E+01	3.961E-01	3.519E-01	5.855E-01	1.745E-05	8.640E-05	1.177E-05	5.436E-04	4.486E-04	4.486E-04
1986.00	7.702E+01	7.075E+01	1.840E+01	1.052E-01	3.487E-01	2.944E-01	1.133E-05	1.825E-05	3.674E-05	1.825E-05	3.022E-04	3.022E-04
2046.00	1.038E+01	4.446E+01	1.503E+01	5.007E-02	2.998E-01	2.440E-01	7.044E-06	1.846E-05	2.877E-05	1.603E-04	1.547E-04	1.547E-04
2106.00	1.173E+01	2.326E+01	1.115E+01	1.116E-01	3.535E-01	1.342E-01	1.463E-05	1.763E-05	3.615E-05	1.603E-04	1.547E-04	1.547E-04
2106.00	1.521E+01	2.495E+01	8.974E+00	1.041E-01	2.542E-01	6.203E-02	1.574E-05	1.205E-05	1.205E-05	9.475E-05	7.766E-05	7.766E-05
2226.00	1.922E+01	2.676E+01	9.594E+00	7.787E-02	1.859E-01	9.442E-02	1.090E-05	2.375E-05	1.720E-05	1.032E-04	1.267E-04	1.267E-04
2286.00	2.490E+01	1.573E+01	2.367E+01	7.761E-02	1.158E-01	1.306E-01	1.032E-05	1.276E-05	2.165E-05	1.249E-04	1.493E-04	1.493E-04
2286.00	2.585E+01	1.106E+01	2.587E+01	8.035E-02	1.139E-01	1.273E-01	1.033E-05	1.147E-05	2.190E-05	1.287E-04	1.876E-04	1.876E-04
2292.00	2.463E+01	6.841E+00	1.554E+01	7.344E-02	9.178E-02	9.651E-02	1.029E-05	9.715E-06	2.029E-05	1.136E-04	1.416E-04	1.416E-04
2346.00	3.871E+01	9.443E+00	1.290E+00	1.163E-01	1.076E-01	4.237E-02	1.271E-05	2.457E-06	7.897E-06	1.887E-04	6.705E-05	6.705E-05
2406.00	5.195E+01	1.665E+01	7.211E-01	1.473E-01	1.534E-01	2.457E-02	6.391E-06	5.662E-06	1.614E-05	3.576E-04	5.062E-05	5.062E-05
2430.00	4.383E+01	2.004E+01	3.560E-01	1.195E-01	1.459E-01	1.501E-02	6.469E-06	4.565E-06	1.634E-05	3.195E-04	3.334E-05	3.334E-05
2450.00	5.022E+01	3.576E+01	1.652E+00	1.316E-01	1.983E-01	4.162E-02	5.802E-06	5.011E-06	5.011E-06	1.781E-05	4.247E-04	4.247E-04
2450.00	8.519E+00	3.509E+01	1.804E+00	3.755E-02	1.384E-01	5.176E-02	5.703E-06	7.150E-06	1.084E-05	1.902E-04	1.235E-04	1.235E-04
2466.00	1.974E+00	6.066E+00	1.415E+00	1.351E-02	6.507E-02	8.506E-03	7.034E-06	3.063E-06	8.876E-06	7.206E-05	2.326E-05	2.326E-05
2472.00	1.085E-01	6.045E+00	6.569E-01	1.826E-02	6.905E-02	4.734E-02	7.474E-06	8.847E-06	9.354E-06	1.011E-04	1.396E-04	1.396E-04
2477.00	2.277E-02	6.135E+00	1.485E-01	1.676E-02	6.948E-02	6.204E-02	8.561E-06	1.094E-05	9.327E-06	1.089E-04	1.444E-04	1.444E-04
2482.00	1.666E-02	6.303E+00	1.592E-01	1.160E-02	7.076E-02	6.310E-02	8.388E-06	1.091E-05	9.319E-06	3.948E-05	2.084E-04	2.084E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

4.375E-09	1.418E-08	1.011E-08	5.770E-07	8.079E-07	4.458E-07	1.005E-05	4.688E-06	7.833E-06
1.024E+01	5.427E-05	1.060E-02	4.265E-06	4.334E-03				

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 1

(VOR MEASUREMENT NOISE )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1886.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1886.00	8.052E+01	3.235E+03	2.762E+03	9.997E-01	1.777E+00	1.865E-03	1.813E-05	1.449E-05	1.345E-06	1.344E+00	1.573E+00
1746.00	6.490E+01	1.336E+03	9.604E+02	6.298E-02	6.194E+00	2.038E+00	2.220E-05	1.560E-05	1.503E-05	5.030E-02	2.437E+00
1806.00	3.767E+02	2.768E+02	1.020E+02	6.685E-01	2.245E+00	1.326E+00	2.169E-05	2.525E-05	1.083E-05	6.644E-01	2.945E-01
1806.00	1.501E+02	1.935E+02	1.125E+02	1.493E-01	1.961E+00	1.467E+00	3.264E-05	2.329E-05	1.366E-05	1.468E-01	4.410E-01
1866.00	5.906E+01	2.443E+02	1.796E+02	3.870E-01	2.296E+00	1.815E+00	3.156E-05	1.546E-05	3.313E-05	3.768E-01	1.269E+00
1926.00	8.662E+01	2.208E+02	1.905E+02	5.193E-01	1.921E+00	1.512E+00	2.522E-05	1.444E-05	5.119E-05	5.246E-01	5.815E-01
1986.00	2.164E+01	1.840E+02	1.265E+02	1.061E+01	1.349E+00	9.468E-01	7.840E-06	2.896E-05	5.190E-05	1.050E-01	2.729E-01
2046.00	1.503E+01	1.794E+02	9.963E+01	1.338E-01	1.066E+00	5.664E-01	1.150E-05	9.048E-06	5.069E-05	1.357E-01	2.600E-01
2106.00	3.027E+01	8.662E+01	1.417E+01	2.023E-01	1.835E-01	2.906E-01	2.033E-05	4.520E-05	2.571E-05	2.038E-01	2.441E-01
2166.00	4.953E+01	5.991E+01	4.505E+01	2.458E-01	2.641E-01	4.979E-01	2.764E-05	5.904E-05	4.677E-05	2.459E-01	5.035E-01
2226.00	6.096E+01	4.475E+01	8.184E+01	2.019E-01	3.120E-01	6.454E-01	2.806E-05	6.293E-05	4.408E-05	2.019E-01	3.806E-01
2286.00	7.136E+01	2.140E+01	1.263E+02	1.036E-01	4.788E-01	7.921E-01	3.354E-05	6.892E-05	5.467E-05	1.836E-01	8.755E-01
2292.00	7.221E+01	2.148E+01	1.319E+02	1.851E-01	4.957E-01	8.109E-01	3.424E-05	6.979E-05	5.577E-05	1.850E-01	8.696E-01
2292.00	6.086E+01	2.171E+01	7.047E+01	1.315E-01	3.787E-01	4.793E-01	2.750E-05	3.989E-05	3.833E-05	1.307E-01	5.700E-01
2346.00	6.383E+01	1.782E+01	9.619E+00	1.305E-01	2.740E-01	1.634E-01	2.993E-05	1.677E-05	1.826E-05	1.299E-01	2.547E-01
2406.00	7.297E+01	2.123E+01	1.073E+01	1.463E-01	3.002E-01	1.896E-01	3.366E-05	2.410E-05	1.738E-05	1.464E-01	2.320E-01
2430.00	7.474E+01	2.458E+01	1.323E+01	1.440E-01	3.105E-01	2.260E-01	3.317E-05	2.988E-05	1.836E-05	1.442E-01	2.199E-01
2450.00	2.014E+01	3.275E+01	5.283E+00	1.650E-02	2.248E-01	1.374E-01	1.369E-05	2.218E-05	1.602E-05	1.680E-02	2.010E-01
2450.00	3.533E+00	3.420E+01	4.972E+00	5.292E-02	2.150E-01	1.309E-01	1.315E-05	2.151E-05	1.500E-05	5.308E-02	2.068E-01
2466.00	8.352E-01	8.907E+00	2.304E+00	5.838E-02	1.567E-01	2.623E-02	8.146E-06	1.186E-05	4.367E-06	5.856E-02	1.661E-01
2472.00	9.420E-02	9.162E+00	1.083E+00	5.775E-02	1.532E-01	8.108E-02	1.082E-05	1.826E-05	5.432E-06	5.769E-02	1.621E-01
2477.00	9.043E-03	9.411E+00	2.916E-01	4.513E-02	1.480E-01	1.035E-01	1.247E-05	2.093E-05	5.961E-06	4.505E-02	1.511E-01
2482.00	5.666E-02	9.610E+00	2.746E-01	2.792E-02	1.402E-01	1.044E-01	1.279E-05	2.056E-05	6.088E-06	2.783E-02	1.406E-01

C-94

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1886.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1886.00	7.557E+01	1.645E+03	3.923E+03	9.540E-01	1.622E+00	7.866E-01	1.779E-05	1.296E-05	7.492E-06	2.848E-04	2.545E-04
1746.00	6.305E+01	1.233E+02	1.641E+03	5.350E-02	2.442E+00	6.036E+00	2.165E-05	2.209E-05	3.446E-06	4.912E-04	1.625E-03
1806.00	3.747E+02	4.298E+01	2.944E+02	6.590E-01	2.770E-01	2.595E+00	2.139E-05	1.445E-05	2.365E-05	2.429E-04	9.061E-04
1806.00	1.492E+02	1.921E+01	2.236E+02	1.477E-01	4.931E-01	2.411E+00	3.223E-05	2.216E-05	1.627E-05	5.775E-04	8.978E-04
1866.00	5.876E+01	1.384E+02	2.699E+02	3.889E-01	1.230E+00	2.656E+00	3.721E-05	2.878E-05	2.312E-05	1.133E-04	1.403E-03
1926.00	8.642E+01	9.734E-01	2.749E+02	5.187E-01	6.935E-01	2.345E+00	2.497E-05	4.951E-05	1.977E-05	4.854E-04	1.798E-03
1986.00	2.154E+01	4.647E+01	2.184E+02	1.068E-01	2.655E-01	1.827E+00	7.844E-06	5.495E-05	2.265E-05	8.708E-04	1.091E-03
2046.00	1.510E+01	5.258E+01	1.984E+02	1.342E-01	2.857E-01	1.172E+00	1.150E-05	5.077E-05	4.386E-06	2.173E-04	1.444E-03
2106.00	3.033E+01	4.984E-01	7.222E+01	2.019E-01	2.263E-01	2.590E-01	2.031E-05	2.421E-05	4.777E-05	2.605E-04	2.983E-04
2166.00	4.959E+01	5.976E+01	4.516E+01	2.438E-01	2.647E-01	4.966E-01	2.769E-05	5.697E-05	4.664E-05	2.409E-04	6.242E-04
2226.00	6.101E+01	9.137E-01	1.854E+01	1.991E-01	3.980E-01	5.950E-01	2.827E-05	6.965E-05	3.225E-05	3.108E-04	7.945E-04
2286.00	7.137E+01	9.384E+01	8.723E+01	1.811E-01	8.926E-01	2.469E-01	3.385E-05	1.440E-05	8.679E-05	3.672E-04	3.616E-04
2292.00	7.220E+01	8.909E+01	9.456E+01	1.826E-01	8.859E-01	3.454E-01	3.455E-05	2.132E-05	8.051E-05	3.673E-04	5.095E-04
2292.00	6.090E+01	4.637E+01	5.729E+01	1.298E-01	5.807E-01	1.996E-01	2.767E-05	1.327E-05	5.362E-05	2.481E-04	2.805E-04
2346.00	6.384E+01	1.775E+01	9.679E+00	1.298E-01	2.747E-01	1.629E-01	2.998E-05	1.666E-05	1.828E-05	2.584E-04	2.579E-04
2406.00	7.295E+01	2.129E+01	1.075E+01	1.459E-01	3.004E-01	1.896E-01	3.370E-05	2.405E-05	1.739E-05	4.596E-04	3.939E-04
2430.00	7.472E+01	2.465E+01	1.324E+01	1.437E-01	3.106E-01	2.259E-01	3.320E-05	2.984E-05	1.833E-05	5.222E-04	5.024E-04
2450.00	2.015E+01	3.273E+01	5.286E+00	1.656E-02	2.248E-01	1.373E-01	1.370E-05	2.216E-05	1.603E-05	2.084E-04	3.199E-04
2450.00	3.537E+00	3.420E+01	4.954E+00	5.306E-02	2.150E-01	1.308E-01	1.316E-05	2.150E-05	1.601E-05	1.625E-04	3.406E-04
2466.00	8.329E-01	8.907E+00	2.305E+00	5.842E-02	1.567E-01	2.826E-02	8.147E-06	1.186E-05	4.370E-06	4.797E-05	7.197E-05
2472.00	9.301E-02	9.162E+00	1.083E+00	5.778E-02	1.532E-01	8.108E-02	1.082E-05	1.826E-05	5.434E-06	6.069E-05	2.592E-04
2477.00	8.337E-03	9.411E+00	2.912E-01	4.514E-02	1.480E-01	1.035E-01	1.247E-05	2.093E-05	5.966E-06	3.166E-05	3.422E-04
2482.00	5.676E-02	9.610E+00	2.752E-01	2.793E-02	1.402E-01	1.044E-01	1.279E-05	2.056E-05	6.100E-06	8.529E-05	3.447E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

6.387E-09 2.214E-08 1.454E-08 1.067E-06 9.551E-07 8.247E-07 1.562E-05 8.351E-06 1.401E-05  
9.407E+00 1.657E-03 4.072E-02 8.853E-06 4.418E-03

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 1

(RADAR ALT, MEAS, NOISE )

POSITION ESTIMATE ERROR VELOCITY ESTIMATE ERROR PLATFORM TILT ESTIMATE ERROR ALTITUDE VELOCITY  
RATE ERROR MAG ERROR

TIME	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00											
1746,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2346,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2406,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2430,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2450,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2450,00	2,666E+00	2,125E+01	3,482E+03	6,046E+03	3,285E+03	5,021E+04	3,620E+08	1,392E-07	4,951E-07	6,040E-03	7,704E-05
2466,00	9,771E+00	2,154E+00	2,812E+02	5,088E+02	4,063E+02	8,934E+04	3,617E-07	7,495E+08	5,695E+06	5,090E-02	1,361E-02
2472,00	2,289E+00	5,675E-01	2,258E-02	7,131E-02	1,581E-02	1,982E+03	2,714E-06	1,163E-06	1,120E-06	7,130E-02	4,536E-02
2477,00	1,586E+00	1,817E+00	2,801E-02	1,597E+01	4,579E+02	3,614E+03	6,710E-06	2,484E+06	2,311E-06	1,596E-01	1,171E-01
2482,00	1,305E+00	2,538E+00	1,782E-02	1,761E+01	5,500E+02	3,608E+03	7,129E-06	2,650E-06	2,753E-06	1,761E-01	5,755E-02

TIME U V W U V W U V W GAMMA ERROR PSI ERROR

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686,00											
1746,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2346,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2406,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2430,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2450,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2450,00	2,666E+00	2,110E+01	3,521E+03	6,044E+03	3,289E+03	4,999E+04	3,612E+08	1,389E-07	4,952E-07	1,397E-05	1,164E-06
2466,00	9,770E+00	2,157E+00	2,756E+02	5,087E+02	4,064E+02	8,796E+04	3,617E-07	7,674E+08	5,695E+06	1,561E-04	2,413E-06
2472,00	2,289E+00	5,676E-01	2,254E-02	7,131E-02	1,580E-02	1,981E+03	2,715E-06	1,162E-06	1,120E-06	1,489E-04	5,645E-06
2477,00	1,586E+00	1,817E+00	2,817E-02	1,597E+01	4,577E+02	3,616E+03	6,710E-06	2,484E-06	2,311E-06	3,227E-04	1,133E-05
2482,00	1,305E+00	2,538E+00	1,705E-02	1,761E+01	5,500E+02	3,612E+03	7,129E+06	2,646E-06	2,755E+06	5,787E-04	1,193E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

4,569E-10	3,680E+09	2,069E+09	7,973E+06	6,826E+06	5,219E+06	1,117E-04	2,512E-05	4,103E-05
7,422E+00	3,164E+05	1,214E+00	9,570E+07	3,041E-01				

08261 C  
C-95

SYSTEM D GROUP 1

(QUANTIZATION IN COMPUTER )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	U	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.975E+01	2.746E+01	2.574E+01	1.629E-01	1.529E-01	1.731E-01	3.268E-06	2.449E-06	8.994E-07	1.622E-01	1.768E-02
1806.00	4.078E+01	2.434E+01	2.886E+01	2.237E-01	1.838E-01	2.095E-01	4.561E-06	2.954E-06	1.602E-06	2.252E-01	1.768E-01
1806.00	1.571E+01	2.734E+01	2.787E+01	2.075E-01	1.751E-01	2.017E-01	5.904E-06	2.665E-06	2.894E-06	2.067E-01	1.619E-01
1866.00	7.614E+01	2.082E+01	3.270E+01	2.640E-01	2.272E-01	2.593E-01	6.673E-06	8.327E-06	6.537E-06	2.635E-01	2.257E-01
1926.00	6.151E+01	2.555E+01	3.023E+01	2.410E-01	2.211E-01	2.746E-01	8.523E-06	9.880E-06	6.842E-06	2.408E-01	2.046E-01
1986.00	2.577E+01	1.536E+01	2.294E+01	2.416E-01	2.001E-01	2.339E-01	1.139E-05	2.027E-05	1.145E-05	2.410E-01	2.424E-01
2046.00	2.542E+00	1.255E+01	1.906E+01	2.845E-01	2.217E-01	2.153E-01	1.206E-05	2.962E-05	1.540E-05	2.438E-01	2.273E-01
2106.00	1.745E+01	1.043E+01	1.755E+01	3.250E-01	2.236E-01	1.742E-01	1.520E-05	3.035E-05	1.901E-05	2.451E-01	1.767E-01
2166.00	3.819E+01	1.552E+01	2.499E+01	3.778E-01	2.055E-01	2.307E-01	1.520E-05	3.071E-05	2.643E-05	3.775E-01	2.513E-01
2226.00	6.077E+01	1.444E+01	2.917E+01	4.202E-01	1.833E-01	2.776E-01	1.536E-05	3.034E-05	2.937E-05	4.201E-01	2.886E-01
2286.00	8.357E+01	1.970E+01	2.542E+01	4.483E-01	2.238E-01	2.676E-01	1.551E-05	2.914E-05	3.049E-05	4.483E-01	2.567E-01
2292.00	8.551E+01	2.066E+01	2.574E+01	4.507E-01	2.302E-01	2.617E-01	1.552E-05	2.913E-05	3.054E-05	4.507E-01	2.530E-01
2292.00	8.477E+01	2.077E+01	1.540E+01	4.489E-01	2.197E-01	2.298E-01	1.591E-05	2.959E-05	3.065E-05	4.489E-01	1.678E-01
2346.00	9.567E+01	3.339E+01	4.540E+00	4.469E-01	2.719E-01	2.251E-01	1.822E-05	3.053E-05	3.243E-05	4.473E-01	2.242E-01
2406.00	8.776E+01	4.503E+01	3.544E+00	3.920E-01	3.429E-01	1.708E-01	3.648E-05	2.981E-05	3.453E-05	3.925E-01	2.555E-01
2430.00	8.767E+01	5.154E+01	2.540E+00	3.811E-01	3.692E-01	1.462E-01	4.404E-05	3.070E-05	3.506E-05	3.817E-01	2.619E-01
2450.00	9.163E+00	7.700E+00	5.472E-01	2.455E-01	2.349E-01	1.153E-01	5.045E-05	3.245E-05	3.243E-05	2.465E-01	2.549E-01
2450.00	1.544E+00	6.970E+00	5.227E-01	2.486E-01	2.252E-01	1.141E-01	5.054E-05	3.243E-05	3.092E-05	2.465E-01	2.549E-01
2466.00	4.121E-01	2.114E+00	1.019E+00	2.507E-01	2.191E-01	1.057E-01	5.067E-05	3.332E-05	3.104E-05	2.507E-01	2.581E-01
2472.00	2.174E-01	3.339E+00	8.946E-01	2.361E-01	2.249E-01	8.525E-02	5.050E-05	3.458E-05	3.114E-05	2.361E-01	2.427E-01
2477.00	4.280E-02	4.116E+00	6.473E-01	1.838E-01	2.264E-01	7.695E-02	5.073E-05	3.590E-05	3.108E-05	1.838E-01	2.254E-01
2482.00	2.500E-01	4.902E+00	5.176E-01	1.187E-01	2.278E-01	7.837E-02	5.143E-05	3.676E-05	3.093E-05	1.187E-01	2.279E-01

C-96

TIME	U			V			H			GAMMA ERROR	FSI ERROR
	U	V	H	U	V	H	U	V	H		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.956E+01	5.743E+00	3.715E+01	1.618E-01	8.307E-02	2.164E-01	3.212E-06	2.306E-06	1.562E-06	4.346E-05	5.754E-05
1806.00	4.058E+01	1.855E+01	3.333E+01	2.228E-01	1.818E-01	2.127E-01	4.512E-06	2.602E-06	2.230E-06	8.406E-05	7.579E-05
1806.00	1.544E+01	1.386E+01	3.053E+01	2.071E-01	1.637E-01	2.115E-01	5.841E-06	3.718E-06	1.544E-06	1.761E-05	1.055E-05
1866.00	7.542E+01	2.756E+01	2.810E+01	2.623E-01	2.473E-01	2.422E-01	6.631E-06	6.489E-06	6.748E-06	1.473E-04	1.214E-04
1926.00	6.129E+01	3.646E+01	1.627E+01	2.405E-01	2.871E-01	2.055E-01	8.493E-06	5.088E-06	1.091E-05	1.996E-04	1.589E-04
1986.00	2.590E+01	2.666E+01	6.628E+00	2.415E-01	2.430E-01	1.860E-01	1.137E-05	8.505E-06	2.105E-05	2.564E-04	1.450E-04
2046.00	2.539E+00	2.094E+01	9.069E+00	2.845E-01	2.144E-01	2.227E-01	1.205E-05	9.150E-06	3.156E-05	3.504E-04	2.731E-04
2106.00	1.761E+01	1.195E+01	1.658E+01	3.250E-01	1.621E-01	1.325E-01	1.325E-05	3.101E-05	1.793E-05	3.597E-04	2.677E-04
2166.00	3.813E+01	1.553E+01	2.298E+01	3.776E-01	2.056E-01	2.308E-01	1.519E-05	3.072E-05	2.647E-05	4.460E-04	2.091E-04
2226.00	6.086E+01	2.838E+01	1.667E+01	4.198E-01	2.821E-01	1.773E-01	1.525E-05	2.636E-05	3.503E-05	5.330E-04	2.569E-04
2286.00	8.328E+01	2.408E+01	2.191E+01	4.478E-01	2.422E-01	2.520E-01	1.547E-05	3.329E-05	2.592E-05	6.529E-04	3.061E-04
2292.00	8.544E+01	2.393E+01	2.309E+01	4.502E-01	2.405E-01	2.609E-01	1.549E-05	3.313E-05	2.618E-05	6.598E-04	3.024E-04
2292.00	8.476E+01	1.879E+01	1.662E+01	4.484E-01	1.947E-01	2.522E-01	1.589E-05	3.322E-05	2.608E-05	6.598E-04	3.024E-04
2346.00	9.557E+01	3.367E+01	4.235E+00	4.464E-01	2.722E-01	2.258E-01	1.882E-05	3.056E-05	3.288E-05	7.344E-04	3.572E-04
2406.00	8.764E+01	4.576E+01	3.875E+00	3.917E-01	3.432E-01	1.709E-01	3.604E-05	2.960E-05	3.453E-05	8.171E-04	3.521E-04
2430.00	8.762E+01	5.164E+01	2.574E+00	3.808E-01	3.694E-01	1.463E-01	4.405E-05	3.068E-05	3.508E-05	9.190E-04	3.250E-04
2450.00	9.160E+00	7.703E+00	5.516E-01	2.435E-01	2.349E-01	1.154E-01	5.044E-05	3.244E-05	3.114E-05	4.406E-04	2.685E-04
2450.00	1.533E+00	6.970E+00	5.270E-01	2.486E-01	2.252E-01	1.141E-01	5.055E-05	3.242E-05	3.092E-05	4.763E-04	2.606E-04
2466.00	4.118E-01	2.114E+00	1.019E+00	2.507E-01	2.191E-01	1.057E-01	5.067E-05	3.331E-05	3.104E-05	5.704E-04	2.607E-04
2472.00	2.171E-01	3.339E+00	8.937E-01	2.361E-01	2.249E-01	8.525E-02	5.051E-05	3.458E-05	3.115E-05	5.667E-04	2.515E-04
2477.00	4.284E-02	4.116E+00	6.472E-01	1.838E-01	2.264E-01	7.695E-02	5.073E-05	3.590E-05	3.108E-05	5.073E-04	2.412E-04
2482.00	2.500E-01	4.902E+00	5.192E-01	1.187E-01	2.278E-01	7.836E-02	5.143E-05	3.676E-05	3.093E-05	3.920E-04	2.588E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

6.735E-04 3.359E-08 1.723E-08 7.627E-06 6.362E-06 4.747E-06 1.053E-04 2.656E-05 4.213E-05  
 4.466E+00 4.262E-05 1.487E-01 1.905E+05 3.113E-02



SYSTEM D GROUP 2

(ACC. BIAS ERRORS = X,Y,Z )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY YAG ERROR
	R	D	C	R	D	C	R	D	C		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,606E-05	1,575E-05	7,939E-05	0,000E+00	0,000E+00
1746,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,606E-05	1,575E-05	7,939E-05	0,000E+00	0,000E+00
1806,00	1,651E+01	1,395E+01	1,468E+01	1,597E+01	1,422E-01	1,370E-01	2,451E-05	1,496E-05	7,860E-05	1,594E-01	1,962E-02
1866,00	2,084E+01	2,365E+01	2,621E+01	2,812E-01	1,387E-01	1,961E-01	2,364E-05	1,451E-05	7,842E-05	2,799E-01	1,275E-01
1926,00	8,169E+00	2,744E+01	2,755E+01	3,014E-01	1,520E-01	1,840E-01	2,321E-05	1,449E-05	7,731E-05	3,001E-01	1,129E-01
1986,00	5,815E+01	1,146E+01	2,875E+01	1,986E-01	8,808E-02	2,245E-01	2,246E-05	1,554E-05	7,931E-05	1,979E-01	7,565E-02
2046,00	6,436E+01	1,958E+01	3,536E+01	2,818E-01	5,010E-02	2,513E-01	2,304E-05	1,612E-05	7,812E-05	2,803E-01	2,445E-01
2106,00	3,237E+01	2,006E+01	3,191E+01	3,650E-01	6,395E-02	1,948E-01	2,326E-05	2,503E-05	7,881E-05	3,636E-01	1,448E-01
2166,00	1,742E+00	1,546E+01	3,209E+01	4,818E-01	1,250E-01	1,707E-01	2,374E-05	3,143E-05	7,767E-05	4,805E-01	2,057E-01
2226,00	2,996E+01	5,694E+00	3,178E+01	5,954E-01	1,126E-01	9,990E-02	2,358E-05	4,222E-05	7,539E-05	5,943E-01	2,143E-01
2286,00	7,107E+01	4,505E+00	3,629E+01	7,370E-01	1,343E-01	1,030E-01	2,403E-05	4,582E-05	7,212E-05	7,362E-01	2,668E-01
2346,00	1,194E+02	1,566E+01	3,866E+01	8,597E-01	1,807E-01	1,125E-01	2,493E-05	4,684E-05	6,985E-05	8,595E-01	1,719E-01
2406,00	1,704E+02	3,879E+01	2,379E+01	9,528E-01	2,681E-01	1,352E-01	2,548E-05	5,167E-05	7,104E-05	9,529E-01	1,241E-01
2466,00	1,754E+02	4,097E+01	2,249E+01	9,814E-01	2,737E-01	1,419E-01	2,552E-05	5,218E-05	7,105E-05	9,615E-01	1,538E-01
2526,00	1,737E+02	4,062E+01	1,251E+01	9,543E-01	2,602E-01	1,457E-01	2,614E-05	5,646E-05	6,933E-05	9,544E-01	3,565E-02
2586,00	1,978E+02	6,679E+01	2,247E+00	9,783E-01	3,555E-01	1,491E-01	2,806E-05	6,097E-05	7,156E-05	9,742E-01	1,976E-01
2646,00	1,652E+02	8,392E+01	1,612E+00	8,597E-01	3,916E-01	6,172E-02	4,472E-05	6,071E-05	7,584E-05	8,610E-01	7,879E-02
2706,00	1,554E+02	8,900E+01	1,228E+00	8,302E-01	3,951E-01	4,143E-02	5,067E-05	6,117E-05	7,422E-05	8,317E-01	6,726E-02
2766,00	2,938E+00	1,708E+00	1,466E-01	4,377E-01	9,240E-02	1,245E-02	5,824E-05	6,255E-05	5,874E-05	4,378E-01	2,933E-01
2826,00	4,717E-01	1,559E+00	2,038E-01	4,362E-01	9,470E-02	1,100E-02	5,837E-05	6,255E-05	5,830E-05	4,363E-01	2,933E-01
2886,00	3,272E-01	2,653E+00	2,417E-01	4,421E-01	1,165E-01	1,837E-02	5,848E-05	6,229E-05	5,859E-05	4,421E-01	3,012E-01
2946,00	3,616E-01	3,846E+00	1,855E-01	4,176E-01	1,254E-01	1,906E-02	5,885E-05	6,164E-05	5,897E-05	4,175E-01	3,071E-01
3006,00	5,424E-02	3,513E+00	9,794E-02	3,247E-01	1,005E-01	1,496E-02	6,265E-05	6,107E-05	5,869E-05	3,247E-01	2,449E-01
3066,00	4,449E-01	2,269E+00	7,764E-02	2,050E-01	6,324E-02	1,317E-02	6,764E-05	6,065E-05	5,827E-05	2,049E-01	6,619E-02

TIME	U			V			H			GAMMA ERROR	PSI ERROR
	U	V	H	U	V	H	U	V	H		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,360E-05	4,667E-05	6,704E-05	0,000E+00	0,000E+00
1746,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	2,360E-05	4,667E-05	6,704E-05	0,000E+00	0,000E+00
1806,00	1,642E+01	2,758E+00	2,014E+01	1,598E-01	1,769E-02	1,965E-01	2,280E-05	6,664E-05	4,553E-05	4,196E-05	5,236E-05
1866,00	2,075E+01	1,563E+01	3,358E+01	2,815E-01	1,158E-01	2,101E-01	2,261E-05	7,419E-05	3,006E-05	1,016E-04	7,871E-05
1926,00	8,138E+00	1,287E+01	3,655E+01	3,016E-01	9,885E-02	2,170E-01	2,219E-05	7,371E-05	2,982E-05	1,091E-04	8,125E-05
1986,00	5,790E+01	1,846E+01	2,541E+01	1,989E-01	6,445E-02	2,322E-01	2,235E-05	4,052E-05	7,013E-05	1,015E-04	1,230E-04
2046,00	6,412E+01	3,984E+01	8,741E+00	2,823E-01	2,236E-01	1,252E-01	2,267E-05	7,341E-05	3,145E-05	1,966E-04	9,628E-05
2106,00	3,227E+01	3,672E+01	7,298E+00	3,652E-01	1,234E-01	1,633E-01	2,311E-05	5,633E-05	5,713E-05	3,675E-04	1,698E-04
2166,00	1,737E+00	3,471E+01	6,024E+00	4,818E-01	1,398E-01	1,588E-01	2,373E-05	7,362E-05	4,001E-05	5,502E-04	1,954E-04
2226,00	2,990E+01	2,145E+01	2,421E+01	5,952E-01	1,492E-01	2,488E-01	2,371E-05	6,975E-05	3,694E-05	6,520E-04	2,884E-05
2286,00	7,095E+01	4,715E+00	3,651E+01	7,364E-01	1,564E-01	1,044E-01	2,424E-05	4,582E-05	7,235E-05	8,619E-04	1,505E-04
2346,00	1,192E+02	2,470E+01	3,420E+01	8,588E-01	9,415E-02	1,933E-01	2,508E-05	5,953E-05	5,935E-05	1,127E-03	2,606E-04
2406,00	1,702E+02	4,161E+01	2,017E+01	9,516E-01	1,665E-01	2,544E-01	2,550E-05	6,970E-05	5,545E-05	1,588E-03	3,091E-04
2466,00	1,752E+02	4,340E+01	1,928E+01	9,602E-01	1,852E-01	2,512E-01	2,550E-05	6,784E-05	5,627E-05	1,416E-03	3,725E-04
2526,00	1,735E+02	3,802E+01	2,073E+01	9,532E-01	1,388E-01	2,681E-01	2,619E-05	6,974E-05	5,568E-05	1,402E-03	3,923E-04
2586,00	1,975E+02	6,740E+01	2,623E+00	9,772E-01	3,576E-01	1,512E-01	2,808E-05	6,108E-05	7,147E-05	1,547E-03	2,592E-04
2646,00	1,651E+02	8,417E+01	1,784E+00	8,591E-01	3,928E-01	6,254E-02	4,471E-05	6,075E-05	7,382E-05	1,808E-03	1,282E-04
2706,00	1,553E+02	8,916E+01	1,342E+00	8,298E-01	3,959E-01	4,192E-02	5,067E-05	6,118E-05	7,421E-05	1,826E-03	9,316E-05
2766,00	2,937E+00	1,710E+00	1,470E-01	4,578E-01	9,223E-02	1,240E-02	5,824E-05	6,255E-05	5,874E-05	8,868E-04	2,685E-05
2826,00	4,709E-01	1,539E+00	2,043E-01	4,363E-01	9,446E-02	1,095E-02	5,837E-05	6,255E-05	5,830E-05	6,827E-04	2,547E-05
2886,00	3,278E-01	2,657E+00	2,409E-01	4,422E-01	1,164E-01	1,833E-02	5,840E-05	6,229E-05	5,859E-05	8,428E-04	5,027E-05
2946,00	3,610E-01	3,846E+00	1,852E-01	4,176E-01	1,253E-01	1,905E-02	5,885E-05	6,164E-05	5,897E-05	8,049E-04	5,620E-05
3006,00	5,424E-02	3,513E+00	9,821E-02	3,247E-01	1,005E-01	1,496E-02	6,265E-05	6,107E-05	5,869E-05	6,549E-04	4,689E-05
3066,00	4,450E-01	2,269E+00	7,704E-02	2,050E-01	6,324E-02	1,317E-02	6,764E-05	6,065E-05	5,827E-05	6,736E-04	4,343E-05

ADDITIONAL STAT ESTIMATES AT TOUCH DOWN (10 TO 23)

3,764E-09 6,777E-09 8,541E-09 1,597E-05 1,234E-05 9,534E-06 2,074E-04 5,646E-05 8,108E-05  
 2,141E+00 1,425E+05 3,269E-01 3,000E-06 4,858E-02

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 3

(ACC, SCALE FACTOR ERROR =XYZ)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE MAG ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.300E-08	3.778E-08	5.201E-08	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.300E-08	3.778E-08	5.201E-08	0.000E+00	0.000E+00
1746.00	3.457E+00	2.735E+00	2.853E+00	3.717E-02	5.422E-02	3.656E-02	5.307E-07	3.655E-07	1.576E-07	3.714E-02	8.223E-03
1806.00	3.742E+00	6.190E+00	6.894E+00	8.736E-02	7.296E-02	5.699E-02	6.734E-07	6.618E-07	1.061E-07	8.715E-02	3.165E-02
1806.00	1.668E+00	7.017E+00	6.882E+00	9.178E-02	7.116E-02	5.670E-02	7.779E-07	6.583E-07	1.751E-07	9.158E-02	3.041E-02
1866.00	2.548E+01	6.690E+00	8.338E+00	8.317E-02	3.525E-02	7.726E-02	1.839E-07	3.667E-06	2.101E-06	8.282E-02	5.087E-02
1926.00	2.846E+01	1.101E+01	1.365E+01	1.029E-01	6.091E-02	9.210E-02	4.807E-07	4.024E-06	2.405E-06	1.023E+01	1.006E-01
1986.00	1.595E+01	1.055E+01	1.495E+01	1.709E-01	3.641E-02	8.066E-02	7.526E-07	6.240E-06	2.974E-06	1.702E-01	7.586E-02
2046.00	6.184E-01	7.766E+00	1.584E+01	2.250E-01	5.292E-02	7.594E-02	8.907E-07	8.346E-06	4.043E-06	2.243E-01	1.053E-01
2106.00	1.312E+01	2.765E+00	1.490E+01	2.732E-01	6.057E-02	4.867E-02	4.075E-02	1.225E-05	5.957E-06	2.727E-01	1.001E-01
2166.00	3.241E+01	2.622E+00	1.719E+01	3.540E-01	6.341E-02	4.151E-02	2.690E-06	1.261E-05	1.001E-05	3.566E-01	1.277E-01
2226.00	5.608E+01	7.494E+00	1.835E+01	4.318E-01	8.600E-02	4.023E-02	2.805E-06	1.360E-05	1.105E-05	4.317E-01	7.017E-02
2286.00	8.212E+01	1.097E+01	9.825E+00	4.834E-01	1.362E-01	5.047E-02	2.612E-06	1.856E-05	1.223E-05	4.834E-01	5.254E-02
2292.00	8.467E+01	2.006E+01	8.944E+00	4.867E-01	1.397E-01	5.579E-02	2.584E-06	1.896E-05	1.227E-05	4.868E-01	6.235E-02
2292.00	8.370E+01	1.985E+01	5.129E+00	4.825E-01	1.335E-01	6.279E-02	2.327E-06	2.057E-05	1.132E-05	4.825E-01	4.585E-02
2346.00	9.629E+01	3.274E+01	1.261E+00	4.840E-01	1.821E-01	7.838E-02	6.597E-06	2.091E-05	1.383E-05	4.844E-01	1.356E-01
2406.00	8.144E+01	4.159E+01	9.858E-01	4.240E-01	2.012E-01	3.731E-02	2.108E-05	1.805E-05	1.517E-05	4.247E-01	4.053E-02
2430.00	7.693E+01	4.426E+01	7.134E-01	4.076E-01	2.041E-01	2.551E-02	2.492E-05	1.830E-05	1.536E-05	4.084E-01	2.572E-02
2451.00	1.192E+00	7.735E-01	7.042E-02	2.126E-01	5.075E-02	9.966E-03	2.435E-05	1.942E-05	8.584E-06	2.110E-01	1.403E-01
2451.00	1.739E-01	6.026E-01	8.960E-02	2.110E-01	5.132E-02	9.301E-03	2.442E-05	1.932E-05	8.635E-06	2.110E-01	1.403E-01
2451.00	1.739E-01	6.026E-01	8.960E-02	2.110E-01	5.132E-02	9.301E-03	2.442E-05	1.932E-05	8.635E-06	2.110E-01	1.403E-01
2456.00	1.737E-01	1.276E+00	1.509E-01	2.150E-01	6.062E-02	1.064E-02	2.943E-05	1.946E-05	9.557E-06	2.150E-01	1.456E-01
2472.00	1.845E-01	1.851E+00	1.134E-01	2.076E-01	6.502E-02	6.504E-03	2.954E-05	1.876E-05	9.979E-06	2.076E-01	1.505E-01
2477.00	2.678E-02	1.709E+00	6.076E-02	1.623E-01	5.475E-02	3.335E-03	3.135E-05	1.785E-05	9.437E-06	1.623E-01	1.266E-01
2482.00	2.242E-01	1.189E+00	3.256E-02	1.029E-01	4.116E-02	2.360E-03	3.374E-05	1.702E-05	8.642E-06	1.029E-01	4.212E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.205E-08	3.391E-08	5.500E-08	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.205E-08	3.391E-08	5.500E-08	0.000E+00	0.000E+00
1746.00	3.438E+00	6.296E-01	3.918E+00	3.723E-02	7.342E-03	6.495E-02	5.218E-07	3.658E-07	9.739E-07	1.843E-06	1.717E-05
1806.00	3.726E+00	3.601E+00	8.544E+00	8.758E-02	2.644E-02	8.850E-02	6.652E-07	3.539E-07	5.787E-07	3.158E-05	3.283E-05
1806.00	1.662E+00	3.183E+00	9.300E+00	9.196E-02	2.530E-02	8.721E-02	7.685E-07	4.408E-07	5.532E-07	3.324E-05	3.256E-05
1866.00	2.537E+01	9.936E+00	4.598E+00	8.357E-02	4.534E-02	7.134E-02	1.834E-07	4.828E-07	4.828E-06	4.151E-05	3.772E-05
1926.00	2.836E+01	1.694E+01	5.150E+00	1.033E-01	8.325E-02	7.194E-02	4.828E-07	7.899E-07	4.621E-06	6.403E-05	5.501E-05
1986.00	1.590E+01	1.816E+01	2.508E+00	1.711E-01	6.159E-02	6.311E-02	7.498E-07	2.584E-06	6.411E-06	1.698E-04	6.572E-05
2046.00	8.138E-01	1.724E+01	3.728E+00	2.250E-01	6.695E-02	6.391E-02	8.881E-07	2.219E-06	9.005E-06	2.522E-04	7.872E-05
2106.00	1.309E+01	1.016E+01	1.128E+01	2.731E-01	6.591E-02	3.221E-02	1.209E-06	1.165E-05	8.056E-06	2.976E-04	3.715E-05
2166.00	3.235E+01	2.703E+00	1.729E+01	3.537E-01	6.446E-02	4.251E-02	2.658E-06	1.281E-05	1.006E-05	4.139E-04	5.302E-05
2226.00	5.600E+01	1.130E+01	1.656E+01	4.313E-01	2.884E-02	9.286E-02	2.768E-06	9.350E-06	1.483E-05	5.679E-04	1.239E-04
2286.00	8.202E+01	2.018E+01	8.082E+00	4.828E-01	8.454E-02	1.207E-01	2.588E-06	1.925E-05	1.112E-05	7.059E-04	1.750E-04
2292.00	8.457E+01	2.120E+01	7.071E+00	4.861E-01	9.580E-02	1.186E-01	2.588E-06	2.021E-05	1.009E-05	7.165E-04	1.735E-04
2292.00	8.361E+01	1.870E+01	9.309E+00	4.819E-01	7.760E-02	1.278E-01	2.511E-06	2.092E-05	1.054E-05	7.102E-04	1.871E-04
2346.00	9.614E+01	3.594E+01	1.409E+00	4.834E-01	8.832E-01	7.939E-02	6.539E-06	2.100E-05	1.373E-05	7.916E-04	1.256E-04
2406.00	8.138E+01	4.171E+01	1.051E+00	4.237E-01	2.017E-01	3.771E-02	2.105E-05	1.851E-05	1.514E-05	8.962E-04	7.769E-05
2430.00	7.688E+01	4.434E+01	7.649E-01	4.074E-01	2.044E-01	2.575E-02	2.491E-05	1.831E-05	1.534E-05	9.064E-04	5.725E-05
2451.00	1.192E+00	7.740E-01	7.060E-02	2.126E-01	5.066E-02	9.958E-03	2.934E-05	1.943E-05	8.593E-06	3.413E-04	2.317E-05
2451.00	1.737E-01	6.026E-01	8.972E-02	2.110E-01	5.123E-02	9.293E-03	2.942E-05	1.933E-05	8.644E-06	3.367E-04	2.163E-05
2456.00	1.740E-01	1.276E+00	1.505E-01	2.151E-01	6.058E-02	1.063E-02	2.943E-05	1.946E-05	9.541E-06	4.154E-04	2.914E-05
2472.00	1.842E-01	1.851E+00	1.132E-01	2.076E-01	6.499E-02	6.499E-03	2.959E-05	1.876E-05	9.980E-06	4.087E-04	1.911E-05
2477.00	2.685E-02	1.709E+00	6.080E-02	1.623E-01	5.474E-02	3.339E-03	3.135E-05	1.785E-05	9.436E-06	3.324E-04	1.046E-05
2482.00	2.242E-01	1.189E+00	3.213E-02	1.029E-01	4.116E-02	2.360E-03	3.374E-05	1.701E-05	8.646E-06	3.305E-04	7.796E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1.592E-09 5.970E-09 3.701E-09 7.631E-06 6.060E-06 4.721E-04 1.018E-04 2.746E-05 4.039E-05  
1.116E+00 6.154E+06 1.649E+01 1.380E+06 2.513E+02

C-98



SYSTEM D GROUP 4

(ACC. MISALIGNMENT - X,Y,Z)

C-99

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG. ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.982E-05	1.932E-04	1.775E-04	0.000E+00	0.000E+00
1746.00	8.057E+01	4.922E+01	5.680E+01	6.022E-01	3.636E-01	4.796E-01	7.819E-05	1.924E-04	1.765E-04	5.997E-01	1.961E-01
1806.00	1.325E+02	7.189E+01	1.035E+02	9.505E-01	3.034E-01	5.097E-01	7.783E-05	1.921E-04	1.760E-04	9.468E-01	4.668E-01
1866.00	5.083E+01	9.186E+01	9.827E+01	9.113E-01	2.858E-01	4.385E-01	7.837E-05	1.921E-04	1.758E-04	9.072E-01	3.756E-01
1926.00	1.414E+02	2.452E+01	8.759E+01	5.458E-01	3.322E-01	1.868E-01	7.996E-05	1.940E-04	1.791E-04	5.440E-01	3.153E-01
1986.00	1.184E+02	2.677E+01	7.254E+01	8.129E-01	4.611E-01	2.269E-01	8.302E-05	1.946E-04	1.789E-04	8.105E-01	3.429E-01
2046.00	5.012E+01	2.570E+01	5.341E+01	7.826E-01	3.501E-01	1.758E-01	8.780E-05	2.026E-04	1.767E-04	7.802E-01	2.395E-01
2106.00	2.013E+00	2.843E+01	5.669E+01	9.940E-01	3.235E-01	2.262E-01	9.067E-05	2.118E-04	1.740E-04	9.916E-01	2.599E-01
2166.00	6.806E+01	1.648E+01	6.465E+01	1.282E+00	3.085E-01	1.576E-01	8.964E-05	2.037E-04	1.820E-04	1.290E+00	4.006E-01
2226.00	1.527E+02	1.718E+01	7.172E+01	1.441E+00	3.015E-01	1.594E-01	8.943E-05	1.997E-04	1.962E-04	1.440E+00	5.545E-01
2286.00	2.416E+02	3.211E+01	7.192E+01	1.473E+00	3.470E-01	2.131E-01	9.117E-05	1.985E-04	1.987E-04	1.473E+00	4.166E-01
2346.00	3.234E+02	7.254E+01	3.881E+01	1.469E+00	5.360E-01	4.241E-01	9.155E-05	1.906E-04	2.037E-04	1.470E+00	2.873E-01
2406.00	3.310E+02	7.643E+01	3.620E+01	1.484E+00	5.541E-01	4.447E-01	9.153E-05	1.898E-04	2.040E-04	1.484E+00	3.099E-01
2466.00	3.280E+02	7.576E+01	2.046E+01	1.469E+00	5.308E-01	4.511E-01	9.149E-05	1.849E-04	2.036E-04	1.469E+00	2.495E-01
2526.00	3.632E+02	1.217E+02	8.114E+00	1.552E+00	7.189E-01	4.314E-01	8.205E-05	1.784E-04	2.153E-04	1.553E+00	5.055E-01
2586.00	3.085E+02	1.551E+02	5.754E+00	1.371E+00	8.164E-01	1.870E-01	8.925E-05	1.748E-04	2.223E-04	1.371E+00	4.125E-01
2646.00	2.947E+02	1.673E+02	3.530E+00	1.327E+00	8.413E-01	1.088E-01	9.740E-05	1.729E-04	2.239E-04	1.330E+00	3.947E-01
2706.00	1.482E+01	1.080E+01	6.810E-01	7.134E-01	2.359E-01	4.133E-02	1.069E-04	1.695E-04	1.808E-04	7.135E-01	5.030E-01
2766.00	2.368E+00	9.858E+00	7.048E-01	7.154E-01	2.290E-01	4.181E-02	1.071E-04	1.698E-04	1.794E-04	7.154E-01	5.024E-01
2826.00	5.906E-01	4.389E+00	4.309E-01	7.368E-01	2.332E-01	2.741E-02	1.072E-04	1.681E-04	1.792E-04	7.388E-01	5.083E-01
2886.00	6.385E-01	6.487E+00	2.970E-01	7.181E-01	2.659E-01	2.199E-02	1.076E-04	1.685E-04	1.798E-04	7.180E-01	5.297E-01
2946.00	9.315E-02	6.147E+00	1.819E-01	5.637E-01	2.117E-01	2.079E-02	1.106E-04	1.700E-04	1.801E-04	5.636E-01	4.297E-01
3006.00	7.819E-01	4.571E+00	1.367E-01	3.592E-01	1.665E-01	2.057E-02	1.151E-04	1.718E-04	1.802E-04	3.592E-01	1.695E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.611E-05	1.934E-04	1.789E-04	0.000E+00	0.000E+00
1746.00	8.013E+01	1.496E+01	7.414E+01	5.992E-01	2.195E-01	5.637E-01	7.545E-05	1.865E-04	1.838E-04	1.602E-04	1.506E-04
1806.00	1.319E+02	6.742E+01	1.072E+02	9.470E-01	4.856E-01	3.501E-01	7.633E-05	1.811E-04	1.879E-04	3.537E-04	1.321E-04
1866.00	5.061E+01	4.991E+01	1.250E+02	9.094E-01	3.766E-01	3.680E-01	7.608E-05	1.811E-04	1.877E-04	3.357E-04	1.390E-04
1926.00	1.408E+02	3.394E+01	8.537E+01	5.439E-01	3.535E-01	1.496E-01	7.906E-05	1.889E-04	1.849E-04	2.949E-04	7.809E-04
1986.00	1.180E+02	7.580E+01	1.827E+01	8.121E-01	3.665E-01	3.620E-01	8.239E-05	1.787E-04	1.951E-04	6.152E-04	2.749E-04
2046.00	4.997E+01	5.654E+01	1.822E+01	7.824E-01	2.472E-01	3.043E-01	8.753E-05	1.826E-04	1.974E-04	8.085E-04	3.145E-04
2106.00	2.014E+00	6.151E+01	1.542E+01	9.940E-01	1.635E-01	3.495E-01	9.067E-05	1.733E-04	2.124E-04	1.175E-03	4.294E-04
2166.00	6.793E+01	4.404E+01	5.029E+01	1.202E+00	2.532E-01	2.378E-01	8.998E-05	1.975E-04	1.886E-04	1.410E-03	2.740E-04
2226.00	1.524E+02	1.747E+01	7.219E+01	1.440E+00	3.055E-01	1.612E-01	8.985E-05	1.998E-04	1.969E-04	1.680E-03	2.014E-04
2286.00	2.413E+02	4.557E+01	6.544E+01	1.471E+00	2.824E-01	3.017E-01	9.145E-05	1.895E-04	2.072E-04	1.916E-03	4.026E-04
2346.00	3.231E+02	7.518E+01	3.683E+01	1.467E+00	3.306E-01	6.037E-01	9.159E-05	2.092E-04	1.844E-04	2.139E-03	8.761E-04
2406.00	3.307E+02	7.885E+01	3.438E+01	1.482E+00	3.715E-01	6.111E-01	9.155E-05	2.074E-04	1.860E-04	2.188E-03	8.947E-04
2466.00	3.277E+02	7.016E+01	3.844E+01	1.467E+00	2.981E-01	6.345E-01	9.150E-05	2.064E-04	1.818E-04	2.158E-03	9.292E-04
2526.00	3.629E+02	1.228E+02	8.654E+00	1.550E+00	7.213E-01	4.345E-01	8.203E-05	1.786E-04	2.152E-04	2.544E-03	6.875E-04
2586.00	3.083E+02	1.555E+02	5.978E+00	1.370E+00	8.180E-01	1.881E-01	8.927E-05	1.747E-04	2.223E-04	2.961E-03	3.875E-04
2646.00	2.945E+02	1.675E+02	3.684E+00	1.326E+00	8.424E-01	1.092E-01	9.742E-05	1.729E-04	2.239E-04	3.029E-03	4.266E-04
2706.00	1.482E+01	1.080E+01	6.814E-01	7.135E-01	2.357E-01	4.132E-02	1.069E-04	1.695E-04	1.808E-04	1.134E-03	9.818E-05
2766.00	2.363E+00	9.858E+00	7.106E-01	7.155E-01	2.208E-01	4.180E-02	1.071E-04	1.698E-04	1.794E-04	1.134E-03	9.731E-05
2826.00	5.914E-01	4.388E+00	4.387E-01	7.388E-01	2.331E-01	2.736E-02	1.072E-04	1.681E-04	1.792E-04	1.433E-03	7.502E-05
2886.00	6.375E-01	6.487E+00	2.969E-01	7.181E-01	2.458E-01	2.197E-02	1.076E-04	1.685E-04	1.798E-04	1.416E-03	6.483E-05
2946.00	9.360E-02	6.147E+00	1.819E-01	5.637E-01	2.117E-01	2.079E-02	1.106E-04	1.700E-04	1.801E-04	1.156E-03	6.516E-05
3006.00	7.820E-01	4.571E+00	1.363E-01	3.592E-01	1.665E-01	2.054E-02	1.151E-04	1.718E-04	1.802E-04	1.181E-03	6.785E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

8.876E-09	3.496E-08	2.000E-08	2.628E-05	2.090E-05	1.548E-05	3.482E-04	8.859E-05	1.272E-04
4.248E+00	3.881E-05	5.750E-01	5.262E-06	8.806E-02				

SYSTEM D GROUP 5

(ACC, NONLINEARITY = X,Y,Z )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1685,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1746,00	3,452E+01	2,162E-01	2,427E-01	2,964E-03	6,584E-03	4,290E-03	5,120E-08	3,804E-08	1,483E-08	2,963E-03	1,950E-03
1806,00	4,005E-01	5,270E-01	6,174E-01	8,229E-03	1,065E-02	7,162E-03	5,330E-08	6,519E-08	2,959E-04	8,221E-03	3,032E-03
1806,00	1,833E+01	6,191E-01	6,218E+01	8,637E-03	1,031E-02	7,151E-03	6,539E-08	6,523E-08	8,182E-09	8,630E-03	2,958E-03
1866,00	2,775E+00	8,595E-01	7,904E-01	8,313E-03	8,501E-03	8,829E-03	5,611E-08	3,830E-07	2,545E-07	8,279E-03	7,284E-03
1926,00	3,043E+00	1,257E+00	1,409E+00	9,924E-03	8,529E-03	1,021E-02	1,011E-07	4,165E-07	9,862E-07	9,862E-03	1,076E-02
1986,00	1,680E+00	1,159E+00	1,552E+00	1,765E-02	4,630E-03	9,205E-03	5,525E-08	6,500E-07	4,443E-07	1,778E-02	8,043E-03
2046,00	8,968E-02	7,974E-01	1,639E+00	2,277E-02	4,469E-03	7,948E-03	5,491E-08	9,145E-07	5,825E-07	2,270E-02	1,075E-02
2106,00	1,291E+00	1,998E-01	1,492E+00	2,724E-02	4,725E-03	3,659E-03	6,914E-08	1,387E-06	7,705E-07	2,719E-02	9,770E-03
2166,00	3,220E+00	2,631E-01	1,701E+00	3,575E-02	6,874E-03	3,778E-03	1,664E-07	1,569E-06	1,039E-06	3,571E-02	1,345E-02
2226,00	5,610E+00	7,824E-01	1,809E+00	4,430E-02	8,970E-03	3,460E-03	1,517E-07	1,446E-06	1,027E-06	4,429E-02	7,247E-03
2286,00	8,288E+00	1,943E+00	9,277E-01	4,931E-02	1,351E-02	3,179E-03	1,572E-07	1,435E-06	1,155E-06	4,931E-02	3,485E-03
2292,00	8,549E+00	2,053E+00	8,283E-01	4,955E-02	1,585E-02	3,849E-03	1,354E-07	1,975E-06	1,161E-06	4,955E-02	4,491E-03
2292,00	8,455E+00	2,032E+00	4,825E-01	4,913E-02	1,326E-02	5,522E-03	1,179E-07	2,138E-06	1,082E-06	4,913E-02	3,375E-03
2346,00	-9,728E+00	3,333E+00	1,097E-01	4,839E-02	1,824E-02	7,554E-03	6,014E-07	2,154E-06	1,569E-06	4,844E-02	1,036E-02
2406,00	8,218E+00	4,215E+00	8,804E-02	4,173E-02	2,023E-02	3,533E-03	2,075E-06	1,804E-06	1,511E-06	4,160E-02	4,464E-03
2430,00	7,764E+00	4,482E+00	6,888E-02	3,991E-02	2,054E-02	2,508E-03	2,654E-06	1,721E-06	1,542E-06	3,998E-02	2,951E-03
2450,00	5,977E-01	7,964E-01	1,185E-01	1,012E-01	9,923E-03	3,502E-02	2,685E-06	2,197E-06	1,254E-06	1,012E-01	5,388E-02
2450,00	1,196E-01	8,851E-01	1,114E-01	1,022E-01	9,727E-03	3,555E-02	2,657E-06	2,194E-06	1,190E-06	1,022E-01	5,388E-02
2466,00	1,380E-01	7,057E-01	4,903E-01	1,953E-01	1,932E-02	6,154E-02	2,461E-06	5,288E-06	2,642E-06	1,953E-01	9,614E-02
2472,00	1,745E-01	1,252E+00	6,113E-01	3,239E-01	3,358E-02	1,067E-01	3,750E-06	8,859E-06	4,418E-06	3,239E-01	1,643E-01
2477,00	1,632E-01	7,001E-01	7,646E-01	3,750E-01	4,968E-02	1,511E-01	9,907E-06	1,201E-05	4,406E-06	3,750E-01	1,718E-01
2482,00	6,002E-01	1,790E+00	9,088E-01	2,436E-01	7,789E-02	1,349E-01	1,982E-05	1,472E-05	3,130E-06	2,436E-01	7,525E-02

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1746,00	3,432E-01	6,630E-02	3,202E-01	2,973E-03	9,577E-04	7,798E-03	5,039E-08	3,703E-08	1,968E-08	7,711E-07	2,056E-06
1806,00	3,986E-01	3,366E-01	7,396E-01	8,262E-03	2,547E-03	1,256E-02	5,258E-08	2,749E-08	5,982E-08	2,979E-06	4,054E-06
1806,00	1,826E-01	2,947E-01	8,266E-01	8,667E-03	2,497E-03	1,227E-02	6,250E-08	3,608E-08	5,590E-08	3,137E-06	4,547E-06
1866,00	2,763E+00	1,148E+00	3,354E-01	8,369E-03	6,818E-03	9,973E-03	5,653E-08	2,262E-07	4,033E-07	4,108E-06	5,257E-06
1926,00	3,032E+00	1,792E+00	6,501E-01	9,971E-03	9,073E-03	9,678E-03	1,009E-07	1,581E-07	5,009E-07	5,988E-06	7,596E-06
1986,00	1,675E+00	1,916E+00	2,249E-01	1,787E-02	6,539E-03	7,923E-03	5,510E-08	2,704E-07	7,495E-07	1,772E-05	8,244E-06
2046,00	8,920E-02	1,783E+00	3,781E-01	2,277E-02	6,775E-03	6,300E-03	5,969E-08	3,916E-07	1,011E-06	2,547E-05	7,522E-06
2106,00	1,288E+00	1,031E+00	1,100E+00	2,723E-02	5,891E-03	1,249E-03	6,720E-08	1,337E-06	8,550E-07	2,458E-05	1,466E-06
2166,00	3,214E+00	2,728E-01	1,711E+00	3,577E-02	6,983E-03	3,882E-03	1,616E-07	1,370E-06	1,039E-06	4,165E-05	4,834E-06
2226,00	5,602E+00	1,074E+00	1,680E+00	4,425E-02	2,671E-03	9,488E-03	1,465E-07	7,794E-07	1,545E-06	5,825E-05	1,260E-05
2286,00	8,278E+00	2,050E+00	8,240E-01	4,244E-02	7,443E-03	1,198E-02	1,357E-07	1,996E-06	1,047E-06	7,197E-05	1,738E-05
2292,00	8,538E+00	2,138E+00	7,079E-01	4,948E-02	8,742E-03	1,169E-02	1,325E-07	2,102E-06	9,107E-07	7,311E-05	1,710E-05
2292,00	8,445E+00	1,901E+00	9,567E-01	4,907E-02	7,096E-03	1,273E-02	1,165E-07	2,175E-06	1,006E-06	7,250E-05	1,863E-05
2346,00	9,717E+00	3,363E+00	1,279E-01	4,834E-02	1,834E-02	7,662E-03	5,948E-07	2,163E-06	1,588E-06	7,919E-05	1,212E-05
2406,00	8,211E+00	4,227E+00	4,685E-02	4,170E-02	2,028E-02	3,578E-03	2,072E-06	1,810E-06	1,515E-06	8,868E-05	7,371E-06
2430,00	7,760E+00	4,490E+00	7,475E-02	3,969E-02	2,058E-02	2,536E-03	2,462E-06	1,725E-06	1,540E-06	8,919E-05	5,054E-06
2450,00	5,972E-01	7,903E-01	1,191E-01	1,012E-01	9,882E-03	3,562E-02	2,683E-06	2,198E-06	1,253E-06	1,754E-04	8,290E-05
2450,00	1,191E-01	8,851E-01	1,125E-01	1,022E-01	9,688E-03	3,564E-02	2,660E-06	2,195E-06	1,191E-06	1,775E-04	8,275E-05
2466,00	1,382E-01	7,055E-01	4,905E-01	1,953E-01	1,424E-02	6,154E-02	2,460E-06	5,268E-06	2,693E-06	4,192E-04	1,689E-04
2472,00	1,745E-01	1,252E+00	6,115E-01	3,239E-01	3,356E-02	1,067E-01	3,749E-06	8,859E-06	4,419E-06	7,315E-04	5,107E-04
2477,00	1,632E-01	7,002E-01	7,645E-01	3,750E-01	4,969E-02	1,511E-01	9,906E-06	1,201E-05	4,405E-06	9,240E-04	4,734E-04
2482,00	6,002E-01	1,790E+00	9,078E-01	2,436E-01	7,795E-02	1,349E-01	1,982E-05	1,472E-05	3,140E-06	8,072E-04	4,455E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

4,038E-09 2,333E-08 1,559E-08 1,247E-05 1,166E-05 8,071E-06 1,859E-04 3,542E-05 5,971E-05  
 1,657E+00 2,065E-05 4,584E-01 3,313E-05 9,882E-02

C-100

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 6

(GRAVITATIONAL ANOMALY )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	7.263E+00	5.623E+00	5.752E+00	6.875E-02	3.937E-02	4.451E-02	8.426E-07	6.329E-07	2.207E-07	6.648E-02	1.757E-02
1806.00	1.120E+01	7.937E+00	9.250E+00	1.272E-01	4.792E-02	6.023E-02	1.241E-06	9.199E-07	3.600E-07	1.268E-01	5.201E-02
1806.00	4.330E+00	8.958E+00	9.027E+00	1.227E-01	4.557E-02	5.700E-02	1.581E-06	8.694E-07	7.247E-07	1.223E-01	4.677E-02
1866.00	2.828E+01	7.393E+00	1.079E+01	1.339E-01	6.541E-02	8.775E-02	1.709E-06	3.818E-06	2.471E-06	1.535E-01	7.545E-02
1866.00	2.828E+01	7.393E+00	1.079E+01	1.339E-01	6.541E-02	8.775E-02	1.709E-06	3.818E-06	2.471E-06	1.535E-01	7.545E-02
1926.00	2.819E+01	1.118E+01	1.351E+01	1.570E-01	7.157E-02	1.069E-01	2.679E-06	4.171E-06	2.866E-06	1.565E-01	1.113E-01
1926.00	2.819E+01	1.118E+01	1.351E+01	1.570E-01	7.157E-02	1.069E-01	2.679E-06	4.171E-06	2.866E-06	1.565E-01	1.113E-01
1986.00	1.554E+01	9.951E+00	1.478E+01	1.990E-01	6.829E-02	9.972E-02	3.954E-06	7.647E-06	4.132E-06	1.484E-01	1.053E-01
1986.00	1.554E+01	9.951E+00	1.478E+01	1.990E-01	6.829E-02	9.972E-02	3.954E-06	7.647E-06	4.132E-06	1.484E-01	1.053E-01
2046.00	1.100E+00	8.917E+00	1.660E+01	2.621E-01	8.137E-02	9.565E-02	4.375E-06	1.167E-05	6.082E-06	2.614E-01	1.202E-01
2046.00	1.100E+00	8.917E+00	1.660E+01	2.621E-01	8.137E-02	9.565E-02	4.375E-06	1.167E-05	6.082E-06	2.614E-01	1.202E-01
2106.00	1.671E+01	4.608E+00	1.708E+01	3.236E-01	8.990E-02	7.520E-02	4.626E-06	1.443E-05	8.127E-06	3.251E-01	1.047E-01
2106.00	1.671E+01	4.608E+00	1.708E+01	3.236E-01	8.990E-02	7.520E-02	4.626E-06	1.443E-05	8.127E-06	3.251E-01	1.047E-01
2166.00	3.915E+01	6.844E+00	1.984E+01	4.046E-01	1.003E-01	1.270E-01	5.831E-06	1.472E-05	1.010E-05	4.792E-01	1.542E-01
2166.00	3.915E+01	6.844E+00	1.984E+01	4.046E-01	1.003E-01	1.270E-01	5.831E-06	1.472E-05	1.010E-05	4.792E-01	1.542E-01
2226.00	6.588E+01	1.042E+01	2.157E+01	4.793E-01	1.077E-01	1.206E-01	5.966E-06	1.666E-05	1.815E-05	5.395E-01	9.515E-02
2226.00	6.588E+01	1.042E+01	2.157E+01	4.793E-01	1.077E-01	1.206E-01	5.966E-06	1.666E-05	1.815E-05	5.395E-01	9.515E-02
2286.00	9.446E+01	2.162E+01	1.311E+01	5.395E-01	1.520E-01	1.316E-01	5.985E-06	1.710E-05	1.825E-05	5.449E-01	9.398E-02
2286.00	9.446E+01	2.162E+01	1.311E+01	5.395E-01	1.520E-01	1.316E-01	5.985E-06	1.710E-05	1.825E-05	5.449E-01	9.398E-02
2292.00	9.728E+01	2.279E+01	1.258E+01	5.448E-01	1.567E-01	1.340E-01	6.251E-06	1.855E-05	1.815E-05	5.417E-01	7.021E-02
2292.00	9.728E+01	2.279E+01	1.258E+01	5.448E-01	1.567E-01	1.340E-01	6.251E-06	1.855E-05	1.815E-05	5.417E-01	7.021E-02
2346.00	9.653E+01	2.275E+01	6.816E+00	5.417E-01	1.519E-01	1.257E-01	1.249E-01	1.026E-05	1.964E-05	2.197E-05	5.568E-01
2346.00	9.653E+01	2.275E+01	6.816E+00	5.417E-01	1.519E-01	1.257E-01	1.249E-01	1.026E-05	1.964E-05	2.197E-05	5.568E-01
2406.00	1.104E+02	3.756E+01	2.290E+00	5.503E-01	2.126E-01	1.249E-01	1.249E-01	1.026E-05	1.964E-05	2.197E-05	5.568E-01
2406.00	1.104E+02	3.756E+01	2.290E+00	5.503E-01	2.126E-01	1.249E-01	1.249E-01	1.026E-05	1.964E-05	2.197E-05	5.568E-01
2430.00	9.336E+01	4.772E+01	2.034E+00	4.895E-01	2.462E-01	1.067E-01	4.168E-02	3.852E-05	2.133E-05	1.855E-05	2.692E-01
2430.00	9.336E+01	4.772E+01	2.034E+00	4.895E-01	2.462E-01	1.067E-01	4.168E-02	3.852E-05	2.133E-05	1.855E-05	2.692E-01
2430.00	8.865E+01	5.112E+01	1.392E+00	4.733E-01	2.560E-01	6.434E-02	3.288E-05	2.007E-05	2.404E-05	2.680E-01	1.900E-01
2430.00	8.865E+01	5.112E+01	1.392E+00	4.733E-01	2.560E-01	6.434E-02	3.288E-05	2.007E-05	2.404E-05	2.680E-01	1.900E-01
2450.00	4.338E+00	3.471E+00	2.574E-01	2.680E-01	1.067E-01	4.168E-02	3.852E-05	2.133E-05	1.855E-05	2.692E-01	1.899E-01
2450.00	4.338E+00	3.471E+00	2.574E-01	2.680E-01	1.067E-01	4.168E-02	3.852E-05	2.133E-05	1.855E-05	2.692E-01	1.899E-01
2450.00	7.299E+01	3.164E+00	2.595E-01	2.692E-01	1.034E-01	4.116E-02	3.862E-05	2.129E-05	1.910E-05	2.737E-01	1.423E-01
2450.00	7.299E+01	3.164E+00	2.595E-01	2.692E-01	1.034E-01	4.116E-02	3.862E-05	2.129E-05	1.910E-05	2.737E-01	1.423E-01
2466.00	2.557E-01	1.695E+00	3.939E-01	2.737E-01	1.080E-01	3.737E-02	3.869E-05	2.202E-05	1.941E-05	2.586E-01	1.967E-01
2466.00	2.557E-01	1.695E+00	3.939E-01	2.737E-01	1.080E-01	3.737E-02	3.869E-05	2.202E-05	1.941E-05	2.586E-01	1.967E-01
2472.00	2.363E-01	2.521E+00	3.431E-01	2.586E-01	1.136E-01	2.690E-02	3.869E-05	2.244E-05	1.941E-05	2.012E-01	1.633E-01
2472.00	2.363E-01	2.521E+00	3.431E-01	2.586E-01	1.136E-01	2.690E-02	3.869E-05	2.244E-05	1.941E-05	2.012E-01	1.633E-01
2477.00	3.390E-02	2.557E+00	2.423E-01	2.012E-01	1.073E-01	1.996E-02	4.005E-05	2.274E-05	1.478E-05	1.270E-01	1.008E-01
2477.00	3.390E-02	2.557E+00	2.423E-01	2.012E-01	1.073E-01	1.996E-02	4.005E-05	2.274E-05	1.478E-05	1.270E-01	1.008E-01
2482.00	2.759E-01	2.373E+00	1.787E-01	1.271E-01	1.003E-01	1.730E-02	4.207E-05	2.292E-05	1.678E-05	1.270E-01	1.008E-01
2482.00	2.759E-01	2.373E+00	1.787E-01	1.271E-01	1.003E-01	1.730E-02	4.207E-05	2.292E-05	1.678E-05	1.270E-01	1.008E-01

C-101

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	7.224E+00	1.357E+00	7.965E+00	6.844E-02	2.040E-02	5.619E-02	8.282E-07	5.937E-07	3.478E-07	1.825E-05	1.497E-05
1746.00	7.224E+00	1.357E+00	7.965E+00	6.844E-02	2.040E-02	5.619E-02	8.282E-07	5.937E-07	3.478E-07	1.825E-05	1.497E-05
1806.00	1.114E+01	5.617E+00	1.087E+01	1.269E-01	5.185E-02	5.562E-02	1.227E-06	6.861E-07	7.344E-07	4.719E-05	2.071E-05
1806.00	1.114E+01	5.617E+00	1.087E+01	1.269E-01	5.185E-02	5.562E-02	1.227E-06	6.861E-07	7.344E-07	4.719E-05	2.071E-05
1806.00	4.310E+00	4.387E+00	1.194E+01	1.269E-01	5.185E-02	5.562E-02	1.227E-06	6.861E-07	7.344E-07	4.719E-05	2.071E-05
1806.00	4.310E+00	4.387E+00	1.194E+01	1.269E-01	5.185E-02	5.562E-02	1.227E-06	6.861E-07	7.344E-07	4.719E-05	2.071E-05
1866.00	2.816E+01	1.658E+01	8.125E+00	1.336E-01	7.697E-02	7.833E-02	1.699E-06	2.530E-06	3.784E-06	7.126E-05	4.035E-05
1866.00	2.816E+01	1.658E+01	8.125E+00	1.336E-01	7.697E-02	7.833E-02	1.699E-06	2.530E-06	3.784E-06	7.126E-05	4.035E-05
1926.00	2.808E+01	1.672E+01	5.820E+00	1.569E-01	1.121E-01	6.326E-02	1.699E-06	2.530E-06	3.784E-06	7.126E-05	4.035E-05
1926.00	2.808E+01	1.672E+01	5.820E+00	1.569E-01	1.121E-01	6.326E-02	1.699E-06	2.530E-06	3.784E-06	7.126E-05	4.035E-05
1986.00	1.549E+01	1.761E+01	3.003E+00	1.990E-01	9.974E-02	6.814E-02	3.449E-06	3.053E-06	8.141E-06	2.030E-04	7.081E-05
1986.00	1.549E+01	1.761E+01	3.003E+00	1.990E-01	9.974E-02	6.814E-02	3.449E-06	3.053E-06	8.141E-06	2.030E-04	7.081E-05
2046.00	1.098E+00	1.819E+01	4.902E+00	2.621E-01	9.440E-02	8.282E-02	4.379E-06	3.408E-06	1.289E-05	3.022E-04	1.018E-04
2046.00	1.098E+00	1.819E+01	4.902E+00	2.621E-01	9.440E-02	8.282E-02	4.379E-06	3.408E-06	1.289E-05	3.022E-04	1.018E-04
2106.00	1.667E+01	1.142E+01	1.355E+01	3.235E-01	7.094E-02	9.354E-02	4.613E-06	1.403E-05	8.809E-06	5.635E-04	1.077E-04
2106.00	1.667E+01	1.142E+01	1.355E+01	3.235E-01	7.094E-02	9.354E-02	4.613E-06	1.403E-05	8.809E-06	5.635E-04	1.077E-04
2166.00	3.908E+01	6.894E+00	1.995E+01	4.043E-01	1.012E-01	1.039E-01	5.497E-06	1.452E-05	1.338E-05	4.748E-04	1.300E-04
2166.00	3.908E+01	6.894E+00	1.995E+01	4.043E-01	1.012E-01	1.039E-01	5.497E-06	1.452E-05	1.338E-05	4.748E-04	1.300E-04
2226.00	6.579E+01	1.590E+01	1.825E+01	4.788E-01	1.320E-01	1.038E-01	5.788E-06	1.363E-05	1.705E-05	6.286E-04	1.386E-04
2226.00	6.579E+01	1.590E+01	1.825E+01	4.788E-01	1.320E-01	1.038E-01	5.788E-06	1.363E-05	1.705E-05	6.286E-04	1.386E-04
2286.00	9.435E+01	2.167E+01	1.380E+01	5.388E-01	1.114E-01	1.700E-01	5.949E-06	2.105E-05	1.307E-05	7.856E-04	2.466E-04
2286.00	9.435E+01	2.167E+01	1.380E+01	5.388E-01	1.114E-01	1.700E-01	5.949E-06	2.105E-05	1.307E-05	7.856E-04	2.466E-04
2292.00	9.717E+01	2.273E+01	1.350E+01	5.442E-01	1.162E-01	1.729E-01	5.971E-06	2.114E-05	1.338E-05	8.017E-04	2.532E-04
2292.00	9.717E+01	2.273E+01	1.350E+01	5.442E-01	1.162E-01	1.729E-01	5.971E-06	2.114E-05	1.338E-05	8.017E-04	2.532E-04
2292.00	9.64										

SYSTEM D GROUP 7

(GYRO BIAS DRIFT - X,Y,Z)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE	MAG
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.995E-04	2.966E-04	3.130E-04	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.995E-04	2.966E-04	3.130E-04	0.000E+00	0.000E+00
1746.00	1.349E+02	7.187E+01	8.762E+01	7.235E+01	6.772E-01	5.544E-01	2.915E-04	2.931E-04	3.165E-04	7.165E-01	9.492E-01
1806.00	2.393E+02	8.590E+01	1.567E+02	1.217E+00	9.260E-01	1.165E+00	2.679E-04	2.924E-04	3.195E-04	1.212E+00	9.703E-01
1806.00	9.236E+01	1.277E+02	1.466E+02	9.896E-01	8.911E-01	1.049E+00	2.023E-04	2.932E-04	3.234E-04	9.632E-01	8.114E-01
1866.00	3.486E+02	9.071E+01	1.654E+02	1.553E+00	1.228E+00	1.240E+00	2.767E-04	2.759E-04	3.159E-04	1.549E+00	1.190E+00
1866.00	3.486E+02	9.071E+01	1.654E+02	1.553E+00	1.228E+00	1.240E+00	2.767E-04	2.759E-04	3.159E-04	1.549E+00	1.190E+00
1926.00	3.118E+02	1.034E+02	1.665E+02	1.546E+00	1.324E+00	1.414E+00	2.748E-04	2.722E-04	3.110E-04	1.546E+00	1.362E+00
1986.00	8.396E+01	5.543E+01	7.635E+01	1.126E+00	1.124E+00	1.145E+00	2.791E-04	2.236E-04	2.600E-04	1.125E+00	1.255E+00
2046.00	1.255E+01	1.743E+01	6.705E+01	1.129E+00	1.164E+00	7.943E-01	1.781E-04	2.555E-04	1.125E+00	6.356E-01	1.100E+00
2106.00	8.054E+01	3.787E+01	5.874E+01	1.245E+00	1.134E+00	5.184E-01	2.071E-04	1.528E-04	2.160E-04	1.262E+00	1.100E+00
2166.00	1.447E+02	4.645E+01	5.459E+01	1.195E+00	8.203E-01	5.467E-01	2.933E-04	1.106E-04	1.341E-04	1.195E+00	1.025E+00
2226.00	1.999E+02	4.633E+01	1.121E+00	6.536E-01	7.205E-01	2.997E-04	1.649E-04	7.329E-05	1.114E+00	6.226E-01	1.124E+00
2286.00	2.656E+02	7.014E+01	1.024E+02	1.130E+00	7.295E-01	5.506E-01	3.027E-04	9.814E-05	4.550E-05	1.130E+00	7.770E-01
2292.00	2.753E+02	7.410E+01	1.033E+02	1.130E+00	7.292E-01	6.635E-01	3.024E-04	9.695E-05	4.510E-05	1.130E+00	7.582E-01
2292.00	2.728E+02	7.292E+01	5.491E+01	1.123E+00	6.576E-01	7.059E-01	3.043E-04	7.711E-05	7.264E-05	1.123E+00	5.274E-01
2346.00	3.088E+02	1.127E+02	1.167E+01	1.070E+00	6.805E-01	5.684E-01	2.922E-04	4.818E-05	6.226E-05	1.071E+00	5.092E-01
2406.00	2.720E+02	1.435E+02	7.398E+00	8.701E-01	7.771E-01	2.159E-01	2.476E-04	2.533E-05	6.717E-05	1.071E+00	4.792E-01
2436.00	2.643E+02	1.551E+02	4.124E+00	7.573E-01	8.066E-01	1.117E-01	2.389E-04	2.506E-05	6.826E-05	7.592E-01	5.982E-01
2450.00	1.336E+01	1.415E+01	6.451E-01	7.845E-02	1.175E-01	4.295E-02	2.346E-04	2.866E-05	1.731E-05	7.072E-02	1.221E-01
2450.00	2.002E+00	1.239E+01	5.979E-01	5.964E-02	1.124E-01	4.205E-02	2.345E-04	2.866E-05	1.731E-05	5.972E-02	1.210E-01
2450.00	2.002E+00	1.239E+01	5.979E-01	5.964E-02	1.124E-01	4.205E-02	2.345E-04	2.866E-05	1.731E-05	5.972E-02	1.210E-01
2456.00	1.498E-01	1.281E+00	5.570E-01	5.138E-02	1.234E-01	4.575E-02	2.352E-04	2.147E-05	1.723E-05	5.138E-02	1.530E-01
2472.00	4.914E+02	1.961E+00	4.184E-01	4.703E-02	1.245E-01	4.552E-02	2.348E-04	2.049E-05	1.662E-05	4.703E-02	1.517E-01
2477.00	4.128E+03	2.394E+00	3.043E-01	3.542E-02	1.200E-01	4.205E-02	2.341E-04	1.872E-05	1.590E-05	3.542E-02	1.627E-01
2482.00	4.611E+02	2.748E+00	2.774E-01	2.142E-02	1.169E-01	4.120E-02	2.331E-04	1.754E-05	1.535E-05	2.142E-02	1.472E-01

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.995E-04	2.966E-04	3.128E-04	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.995E-04	2.966E-04	3.128E-04	0.000E+00	0.000E+00
1746.00	1.342E+02	2.561E+01	1.113E+02	7.153E-01	5.899E-01	1.024E+00	2.920E-04	3.066E-04	3.066E-04	1.742E-04	2.724E+04
1806.00	2.381E+02	1.116E+02	1.415E+02	1.204E+00	1.032E+00	1.027E+00	2.882E-04	3.115E-04	3.004E-04	4.569E-04	4.569E-04
1806.00	9.195E+01	7.865E+01	1.700E+02	9.804E-01	8.423E-01	1.097E+00	2.828E-04	3.131E-04	3.039E-04	3.753E-04	4.097E-04
1866.00	3.471E+02	1.189E+02	1.503E+02	1.538E+00	1.409E+00	1.063E+00	2.770E-04	2.859E-04	3.048E-04	8.957E-04	5.633E-04
1926.00	3.107E+02	1.893E+02	6.655E+01	1.537E+00	1.639E+00	1.048E+00	2.750E-04	3.079E-04	2.755E-04	1.347E-03	7.957E-04
1986.00	8.371E+01	9.327E+01	2.451E+01	1.123E+00	1.349E+00	8.793E-01	2.792E-04	2.822E-04	2.216E-04	1.273E-03	4.127E-04
1986.00	8.371E+01	9.327E+01	2.451E+01	1.123E+00	1.349E+00	8.793E-01	2.792E-04	2.822E-04	2.216E-04	1.273E-03	4.127E-04
2046.00	1.285E+01	6.162E+01	3.177E+01	1.120E+00	6.906E-01	1.234E+00	2.859E-04	2.772E-04	1.543E-04	1.397E-03	1.516E-03
2106.00	8.039E+01	6.625E+01	2.280E+01	1.264E+00	9.633E-01	7.959E-01	2.877E-04	1.222E-04	2.220E-04	1.285E-03	9.173E-03
2166.00	1.444E+02	4.704E+01	5.501E+01	1.193E+00	8.239E-01	5.457E-01	2.934E-04	1.102E-04	1.384E-04	1.261E-03	6.526E-04
2166.00	1.444E+02	4.704E+01	5.501E+01	1.193E+00	8.239E-01	5.457E-01	2.934E-04	1.102E-04	1.384E-04	1.261E-03	6.526E-04
2226.00	1.996E+02	7.362E+01	6.195E+01	1.118E+00	7.245E-01	6.837E-01	2.999E-04	1.241E-04	7.110E-05	1.394E-03	9.135E-04
2286.00	2.682E+02	1.013E+02	7.312E+01	1.127E+00	7.845E-01	8.019E-01	3.026E-04	5.219E-05	1.192E-04	1.643E-03	1.165E-03
2292.00	2.749E+02	1.002E+02	7.943E+01	1.127E+00	7.845E-01	8.019E-01	3.026E-04	5.219E-05	1.192E-04	1.643E-03	1.165E-03
2292.00	2.749E+02	1.002E+02	7.943E+01	1.127E+00	7.845E-01	8.019E-01	3.026E-04	5.219E-05	1.192E-04	1.643E-03	1.165E-03
2346.00	3.055E+02	1.136E+02	1.220E+01	1.068E+00	6.811E-01	5.713E-01	2.922E-04	4.563E-05	6.222E-05	1.815E-03	9.039E-04
2406.00	2.717E+02	1.439E+02	7.546E+00	8.190E-01	7.780E-01	2.170E-01	2.476E-04	2.526E-05	6.114E-05	2.002E-03	4.471E-04
2436.00	2.541E+02	1.564E+02	4.255E+02	7.565E-01	8.073E-01	1.124E-01	2.454E-04	2.519E-05	6.834E-05	2.056E-03	2.497E-04
2450.00	1.335E+01	1.416E+01	6.546E-01	7.848E-02	1.175E-01	4.290E-02	2.346E-04	2.274E-05	1.731E-05	1.452E-04	9.775E-05
2450.00	1.335E+01	1.416E+01	6.546E-01	7.848E-02	1.175E-01	4.290E-02	2.346E-04	2.274E-05	1.731E-05	1.452E-04	9.775E-05
2450.00	1.995E+00	1.239E+01	6.054E-01	5.964E-02	1.124E-01	4.197E-02	2.345E-04	2.253E-05	1.723E-05	3.229E-05	1.254E-04
2466.00	1.497E-01	1.281E+00	5.567E-01	5.141E-02	1.234E-01	4.574E-02	2.352E-04	2.153E-05	1.723E-05	4.982E-05	1.545E-04
2472.00	4.883E-02	1.961E+00	4.183E-01	4.705E-02	1.245E-01	4.552E-02	2.348E-04	2.012E-05	1.652E-05	4.703E-05	1.537E-04
2477.00	4.296E-03	2.394E+00	3.044E-01	3.543E-02	1.200E-01	4.205E-02	2.341E-04	1.873E-05	1.590E-05	3.543E-05	1.537E-04
2482.00	4.615E+02	2.748E+00	2.775E-01	2.142E-02	1.169E-01	4.122E-02	2.331E-04	1.755E-05	1.535E-05	6.509E-05	1.361E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1.438E-06	5.235E-08	3.355E-08	4.464E-06	2.822E-06	3.434E-06	4.526E-05	3.062E-05	5.034E-05
2.517E+00	1.829E+05	3.378E-02	1.013E-05	4.586E-03				

C-102

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 8

(GYRD MASS UNBALANCE - ICS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG' ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.475E+01	1.189E+01	1.528E+01	9.681E-02	6.307E-02	1.388E-01	5.635E-05	1.617E-05	3.022E-05	9.572E-02	6.519E-02
1806.00	4.365E+01	1.197E+01	2.703E+01	1.505E-01	5.408E-02	1.711E-01	5.904E-05	1.658E-05	3.255E-05	1.566E-01	1.545E-01
1806.00	1.669E+01	2.095E+01	2.505E+01	9.042E-02	4.577E-02	1.471E-01	5.752E-05	1.668E-05	3.397E-05	9.027E-02	1.243E-01
1866.00	3.774E+01	7.216E+00	2.450E+01	1.190E-01	7.764E-02	8.318E-02	6.075E-05	1.347E-05	3.501E-05	1.193E-01	8.089E-02
1926.00	3.241E+01	6.505E+00	2.005E+01	1.203E-01	1.042E-01	1.049E-01	6.285E-05	1.577E-05	3.772E-05	1.265E-01	1.309E-01
1986.00	8.650E+00	4.485E+00	9.975E+00	7.694E-02	1.528E-01	6.465E-02	6.438E-05	1.417E-05	3.686E-05	7.697E-02	1.223E-01
2046.00	1.090E+00	3.487E+00	4.443E+00	8.135E-02	1.701E-01	5.544E-02	6.654E-05	1.635E-05	3.493E-05	8.120E-02	3.937E-02
2106.00	6.372E+00	7.186E+00	3.754E+00	1.035E-01	1.723E-01	4.009E-02	6.937E-05	1.544E-05	3.286E-05	1.034E-01	1.228E-01
2166.00	1.072E+01	8.244E+00	3.282E+00	9.069E-02	6.251E-02	6.998E-05	1.293E-05	2.507E-05	9.026E-02	1.116E-01	1.166E-01
2226.00	1.366E+01	5.858E+00	5.713E+00	7.452E-02	5.378E-02	6.449E-02	7.256E-05	1.279E-05	1.986E-05	7.433E-02	7.196E-02
2286.00	1.828E+01	5.803E+00	8.716E+00	6.955E-02	7.009E-02	1.198E-01	7.564E-05	1.306E-05	1.986E-05	6.944E-02	1.177E-01
2292.00	1.873E+01	6.102E+00	7.110E+00	6.927E-02	7.553E-02	1.248E-01	7.591E-05	1.314E-05	1.997E-05	6.917E-02	1.202E-01
2292.00	1.853E+01	5.927E+00	4.852E+00	6.937E-02	6.945E-02	1.066E-01	7.566E-05	1.128E-05	1.901E-05	6.927E-02	1.022E-01
2346.00	2.355E+01	9.206E+00	1.887E+00	7.207E-02	1.129E-01	8.340E-02	7.450E-05	9.376E-06	1.802E-05	7.208E-02	9.264E-02
2406.00	2.957E+01	1.637E+01	1.106E+00	1.342E-01	3.293E-02	7.026E-05	7.854E-06	1.928E-05	8.039E-02	9.704E-02	9.474E-02
2430.00	3.194E+01	1.990E+01	5.596E-01	8.404E-02	1.468E-01	2.077E-02	6.979E-02	7.674E-06	1.989E-05	8.433E-02	9.474E-02
2450.00	2.436E+00	3.447E+00	1.824E-01	6.079E-03	5.813E-02	1.664E-02	7.106E-05	8.136E-06	1.213E-05	6.105E-02	4.917E-02
2450.00	3.702E-01	3.071E+00	1.799E-01	4.488E-03	5.363E-02	1.667E-02	7.106E-05	8.177E-06	1.152E-05	4.485E-03	4.755E-02
2466.00	3.183E-02	3.524E-01	2.066E-01	4.531E-03	4.395E-02	1.554E-02	7.203E-05	7.316E-06	1.130E-05	4.534E-03	4.221E-02
2472.00	0.352E-03	6.109E-01	1.673E-01	4.563E-03	4.997E-02	1.211E-02	7.250E-05	6.408E-06	1.172E-05	4.559E-03	4.546E-02
2477.00	1.255E-03	8.410E-01	1.154E-01	3.572E-03	5.144E-02	9.047E-03	7.247E-05	5.692E-06	1.187E-05	3.566E-03	4.614E-02
2482.00	4.387E-03	1.068E+00	8.728E-02	2.180E-03	5.250E-02	7.852E-03	7.242E-05	5.296E-06	1.196E-05	2.157E-03	5.252E-02

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	2.461E+01	4.736E+00	1.894E+01	9.491E-02	7.197E-02	1.357E-01	5.678E-05	2.262E-05	2.477E-05	2.649E-05	3.631E-05
1806.00	4.344E+01	1.993E+01	2.223E+01	1.541E-01	1.666E-01	7.213E-02	5.934E-05	2.840E-05	2.221E-05	6.233E-05	2.733E-05
1806.00	1.661E+01	1.375E+01	2.966E+01	8.879E-02	1.106E-01	8.350E-02	5.783E-05	2.947E-05	2.299E-05	3.659E-05	3.159E-05
1866.00	3.750E+01	8.341E+00	2.438E+01	1.186E-01	7.712E-02	6.132E-02	6.097E-05	1.345E-05	3.225E-05	6.329E-05	3.275E-05
1866.00	3.750E+01	8.341E+00	2.438E+01	1.186E-01	7.712E-02	6.132E-02	6.097E-05	1.345E-05	3.225E-05	6.329E-05	3.275E-05
1926.00	3.230E+01	2.073E+01	4.714E+00	1.253E-01	1.565E-01	1.212E-01	6.298E-05	3.479E-05	2.103E-05	1.147E-04	3.203E-05
1986.00	8.624E+00	9.536E+00	3.193E+00	7.661E-02	1.290E-01	1.045E-01	6.445E-05	3.126E-05	2.394E-05	9.011E-05	1.082E-04
2046.00	1.089E+00	3.647E+00	4.313E+00	8.132E-02	4.468E-02	1.732E-01	6.655E-05	3.695E-05	1.099E-05	1.813E-04	2.129E-04
2106.00	6.358E+00	7.130E+00	3.882E+00	1.037E-01	1.093E-01	1.392E-01	6.902E-05	1.908E-05	3.100E-05	9.885E-05	1.604E-04
2166.00	1.070E+01	8.273E+00	3.282E+00	9.054E-02	9.721E-02	6.230E-02	6.944E-05	1.282E-05	2.524E-05	8.843E-05	7.806E-05
2226.00	1.364E+01	6.768E+00	4.675E+00	7.445E-02	6.558E-02	5.270E-02	7.255E-05	2.145E-05	9.939E-06	9.070E-05	7.046E-05
2286.00	1.825E+01	8.529E+00	6.163E+00	6.930E-02	1.193E-01	7.114E-02	7.567E-05	1.117E-05	2.088E-05	1.045E-04	1.034E-04
2286.00	1.825E+01	8.529E+00	6.163E+00	6.930E-02	1.193E-01	7.114E-02	7.567E-05	1.117E-05	2.088E-05	1.045E-04	1.034E-04
2292.00	1.870E+01	8.692E+00	6.768E+00	6.901E-02	1.221E-01	7.974E-02	7.595E-05	1.007E-05	2.158E-05	1.058E-04	1.169E-04
2292.00	1.850E+01	6.298E+00	4.480E+00	6.912E-02	1.039E-01	7.357E-02	7.569E-05	1.008E-05	1.975E-05	1.049E-04	1.078E-04
2346.00	2.352E+01	9.281E+00	1.879E+00	7.181E-02	1.033E-01	8.310E-02	7.457E-05	9.283E-06	1.803E-05	1.333E-04	1.315E-04
2406.00	2.954E+01	1.641E+01	1.097E+00	8.001E-02	1.544E-01	3.288E-02	7.026E-05	7.096E-06	1.928E-05	2.355E-04	6.775E-05
2430.00	3.172E+01	1.993E+01	5.605E-01	8.399E-02	1.469E-01	2.031E-02	6.979E-05	7.720E-06	1.988E-05	4.624E-05	3.879E-05
2450.00	2.434E+00	3.448E+00	1.847E-01	6.099E-03	5.813E-02	1.666E-02	7.106E-05	8.159E-06	1.162E-05	5.135E-05	3.884E-05
2450.00	3.685E-01	3.071E+00	1.820E-01	4.497E-03	5.362E-02	1.669E-02	7.105E-05	8.210E-06	1.162E-05	5.135E-05	3.884E-05
2466.00	3.174E-02	3.523E-01	2.067E-01	4.538E-03	4.594E-02	1.555E-02	7.202E-05	7.331E-06	1.130E-05	4.587E-05	4.254E-05
2472.00	2.259E-03	5.109E-01	1.674E-01	4.563E-03	4.977E-02	1.212E-02	7.249E-05	6.416E-06	1.172E-05	5.530E-05	3.575E-05
2477.00	1.192E-03	8.410E-01	1.133E-01	3.575E-03	5.144E-02	9.045E-03	7.246E-05	5.695E-06	1.197E-05	6.320E-05	2.835E-05
2482.00	4.395E-03	1.068E+00	8.772E-02	2.107E-03	5.250E-02	7.863E-03	7.242E-05	5.299E-06	1.196E-05	6.940E-06	2.592E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

4.413E-09	8.371E-09	5.207E-09	4.580E-07	1.654E-07	2.896E-07	2.249E-06	4.343E-06	5.590E-06
9.633E-01	1.119E-05	3.154E-03	3.158E-06	4.075E-04				

C-103



ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D. GROUP 9

(GYRO-G-2-ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.582E-06	6.977E-07	2.498E-06	0.000E+00	0.000E+00
1586.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.582E-06	6.977E-07	2.498E-06	0.000E+00	0.000E+00
1746.00	2.211E+00	9.379E-01	1.275E+00	8.537E-03	5.097E-03	1.210E-02	4.177E-06	4.902E-07	2.107E-06	8.286E-03	5.642E-03
1806.00	3.705E+00	6.911E-01	2.023E+00	1.241E-02	2.968E-03	1.290E-02	3.266E-06	7.275E-07	1.926E-05	1.242E-02	1.191E-02
1806.00	1.415E+00	1.468E+00	1.856E+00	6.397E-03	1.464E-03	1.085E-02	3.135E-06	7.383E-07	2.054E-06	6.398E-03	9.327E-03
1866.00	2.961E+00	3.511E-01	1.844E+00	8.377E-03	5.281E-03	5.564E-03	3.701E-05	5.423E-07	2.277E-05	8.359E-03	5.933E-03
1926.00	2.281E+00	4.155E-01	1.400E+00	7.873E-03	1.094E-02	5.960E-03	2.750E-06	2.584E-07	1.951E-06	7.898E-03	7.830E-03
1986.00	4.893E-01	2.625E-01	5.024E-01	3.882E-03	9.133E-03	1.650E-03	2.460E-06	3.808E-07	1.725E-06	3.878E-03	6.517E-03
2046.00	4.815E-02	1.863E-01	2.405E-01	3.912E-03	8.970E-03	3.208E-03	1.908E-06	8.069E-07	1.285E-06	3.901E-03	1.537E-03
2106.00	2.483E-01	3.205E-01	1.805E-01	4.071E-03	7.223E-03	1.469E-03	1.133E-06	7.270E-07	7.400E-07	4.047E-03	6.366E-03
2166.00	3.716E-01	2.118E-01	1.286E-01	2.732E-03	2.495E-03	7.602E-04	6.715E-07	5.544E-07	1.827E-07	2.716E-03	2.898E-03
2226.00	4.666E-01	1.002E-01	2.121E-01	2.148E-03	4.406E-04	2.026E-03	7.148E-07	5.438E-07	1.433E-07	2.148E-03	1.423E-03
2286.00	5.677E-01	1.404E-01	2.264E-01	2.124E-03	4.791E-04	2.911E-03	9.113E-07	4.396E-07	6.480E-08	2.129E-03	2.243E-03
2292.00	5.748E-01	1.454E-01	2.281E-01	2.131E-03	2.495E-03	2.962E-03	8.988E-07	4.335E-07	6.007E-08	2.136E-03	2.094E-03
2292.00	5.510E-01	1.359E-01	1.213E-01	2.028E-03	3.036E-04	2.307E-03	8.870E-07	3.809E-07	6.555E-08	2.032E-03	1.579E-03
2346.00	5.323E-01	1.725E-01	4.612E-02	1.790E-03	4.135E-04	3.939E-03	5.855E-07	3.612E-07	2.253E-07	1.800E-03	3.418E-04
2406.00	3.793E-01	2.066E-01	3.495E-02	1.130E-03	5.568E-04	1.219E-03	1.321E-07	3.405E-07	4.271E-07	1.141E-03	8.543E-04
2430.00	3.116E-01	2.045E-01	2.053E-02	9.040E-04	8.915E-04	3.702E-04	1.606E-07	3.291E-07	5.047E-07	9.097E-04	1.157E-03
2450.00	5.374E-02	3.714E-02	4.691E-03	8.718E-05	3.129E-03	1.127E-03	4.818E-06	2.193E-06	3.308E-06	8.582E-05	2.694E-03
2450.00	9.828E-03	3.657E-02	4.382E-03	3.093E-05	3.069E-03	1.122E-03	4.819E-06	2.193E-06	3.300E-06	3.139E-05	2.690E-03
2466.00	6.092E-03	3.679E-02	1.712E-02	2.468E-04	5.745E-03	2.640E-03	1.033E-05	4.347E-06	6.454E-06	2.480E-04	5.032E-03
2472.00	2.934E-04	7.323E-02	2.115E-02	3.039E-04	9.100E-03	4.225E-03	1.844E-05	7.575E-06	1.118E-06	3.955E-04	7.855E-03
2477.00	3.476E-04	1.145E-01	2.220E-02	5.158E-04	1.200E-02	5.493E-03	2.683E-05	1.091E-05	1.607E-05	5.164E-04	1.027E-02
2482.00	1.209E-03	1.775E-01	3.219E-02	5.619E-04	1.490E-02	6.742E-03	2.851E-05	1.147E-05	1.705E-05	5.641E-04	1.489E-02

C-104

TIME	U			V			W			GAMMA ERROR	PSI ERRJR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.633E-06	6.386E-07	2.397E-06	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.633E-06	6.386E-07	2.397E-06	0.000E+00	0.000E+00
1746.00	2.199E+00	4.319E-01	1.541E+00	8.208E-03	6.244E-03	1.167E-02	4.213E-06	1.338E-06	1.619E-06	2.296E-06	3.123E-06
1806.00	3.688E+00	1.583E+00	1.481E+00	1.222E-02	1.290E-02	3.662E-03	3.285E-06	1.629E-06	1.209E-06	4.950E-06	1.410E-06
1806.00	1.408E+00	1.058E+00	2.121E+00	6.267E-03	9.840E-03	4.966E-03	3.155E-06	1.731E-06	1.292E-06	2.639E-06	1.894E-06
1866.00	2.949E+00	6.460E-01	1.779E+00	8.301E-03	7.082E-03	3.157E-03	3.717E-06	9.949E-07	2.092E-06	4.806E-06	1.708E-06
1926.00	2.273E+00	1.457E+00	2.180E-01	7.808E-03	9.500E-03	8.124E-03	2.759E-06	1.775E-06	8.203E-07	7.133E-06	6.167E-06
1986.00	4.878E-01	5.459E-01	1.572E-01	3.863E-03	6.859E-03	6.513E-03	2.464E-06	1.499E-06	9.233E-07	4.603E-06	6.741E-06
2046.00	4.810E-02	1.905E-01	2.372E-01	3.909E-03	9.577E-04	9.481E-03	1.909E-06	1.441E-06	4.732E-07	4.469E-06	1.166E-06
2106.00	2.481E-01	3.362E-01	1.502E-01	4.061E-03	5.813E-03	4.540E-03	1.132E-06	2.717E-07	1.002E-06	5.532E-06	5.231E-06
2166.00	3.707E-01	2.127E-01	1.297E-01	2.723E-03	2.502E-03	7.677E-04	6.723E-07	5.526E-07	1.842E-07	2.823E-06	9.604E-07
2226.00	4.658E-01	1.402E-01	1.903E-01	2.143E-03	1.631E-03	1.289E-03	7.173E-07	2.428E-07	5.038E-07	3.048E-06	1.721E-06
2286.00	2.669E-01	2.592E-01	4.786E-02	2.121E-03	2.392E-03	1.731E-03	9.134E-07	2.850E-07	3.354E-07	3.308E-06	2.519E-06
2292.00	5.741E-01	2.552E-01	9.442E-02	2.123E-03	2.235E-03	2.017E-03	9.006E-07	3.246E-07	2.875E-07	3.321E-06	2.961E-06
2292.00	5.504E-01	1.803E-01	3.591E-02	2.027E-03	1.705E-03	1.715E-03	8.887E-07	3.040E-07	2.316E-07	3.112E-06	2.516E-06
2346.00	5.318E-01	1.743E-01	4.526E-02	1.795E-03	4.223E-04	1.938E-03	5.863E-07	3.609E-07	2.237E-07	2.835E-06	3.066E-06
2406.00	3.790E-01	2.072E-01	3.456E-02	1.137E-03	5.515E-04	1.220E-03	1.520E-07	3.411E-07	4.257E-07	1.794E-06	2.514E-06
2430.00	3.114E-01	2.043E-01	2.031E-02	9.053E-04	8.097E-04	8.712E-04	1.603E-07	3.295E-07	5.046E-07	1.047E-06	1.936E-06
2450.00	5.375E-02	3.715E-02	4.714E-03	8.552E-05	3.128E-03	1.128E-03	4.818E-06	2.194E-06	3.307E-06	3.235E-06	2.626E-06
2450.00	9.616E-03	3.657E-02	4.406E-03	3.214E-05	3.069E-03	1.123E-03	4.819E-06	2.193E-06	3.299E-06	3.002E-06	2.613E-06
2466.00	6.082E-03	3.678E-02	1.713E-02	2.474E-04	5.744E-03	2.640E-03	1.030E-05	4.347E-06	6.454E-06	6.821E-06	7.240E-06
2472.00	2.844E-04	7.323E-02	2.115E-02	3.440E-04	9.100E-03	4.226E-03	1.844E-05	7.575E-06	1.118E-05	1.200E-05	1.247E-05
2477.00	3.383E-04	1.145E-01	2.220E-02	5.147E-04	1.200E-02	5.493E-03	2.683E-05	1.091E-05	1.607E-05	1.711E-05	1.721E-05
2482.00	1.206E-03	1.775E-01	3.225E-02	5.617E-04	1.490E-02	6.745E-03	2.851E-05	1.147E-05	1.705E-05	2.561E-06	2.227E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1.400E-10 7.594E-10 3.937E-10 1.440E-08 2.465E-08 2.210E-08 2.502E-07 1.892E-07 4.400E-07  
1.506E-01 8.740E-07 8.913E-04 1.117E-06 2.099E-04

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 10

(DME BIAS ERROR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	3,075E+01	1,791E+02	1,717E+02	1,725E+01	7,134E+02	5,399E+02	1,468E+07	2,810E+07	1,386E+06	1,128E+01	8,569E+02
1746,00	4,275E+00	1,703E+02	2,373E+02	2,373E+01	1,643E+02	9,870E+02	2,291E+06	1,307E+06	2,653E+06	2,228E+01	5,235E+02
1806,00	6,481E+01	1,855E+02	2,204E+02	3,061E+01	5,122E+02	1,335E+01	2,389E+06	1,649E+06	2,447E+06	2,693E+01	7,872E+02
1806,00	2,211E+01	2,011E+02	2,227E+02	1,958E+01	1,099E+01	1,034E+01	4,697E+06	1,098E+06	4,827E+06	1,588E+01	3,312E+02
1866,00	7,480E+01	1,903E+02	2,157E+02	3,140E+01	5,291E+02	1,384E+01	3,639E+06	5,041E+06	1,955E+06	2,892E+01	2,345E+02
1926,00	1,185E+02	1,488E+02	2,278E+02	3,457E+01	2,503E+01	3,504E+02	5,603E+06	5,546E+06	6,523E+06	4,568E+01	2,638E+01
1926,00	1,185E+02	1,488E+02	2,278E+02	3,457E+01	2,503E+01	3,504E+02	5,603E+06	5,546E+06	6,523E+06	4,568E+01	2,638E+01
1986,00	1,903E+02	1,353E+02	1,851E+02	4,681E+01	2,302E+01	2,012E+01	5,966E+07	8,510E+06	7,253E+06	5,609E+01	7,154E+01
2046,00	2,811E+02	5,162E+01	8,269E+01	5,648E+01	5,982E+01	7,119E+01	1,078E+05	6,030E+05	5,777E+05	4,537E+01	9,377E+01
2106,00	2,961E+02	1,253E+01	8,079E+01	4,475E+01	3,706E+01	1,667E+00	1,103E+06	1,384E+04	1,742E+05	5,603E+01	2,869E+01
2166,00	3,149E+02	4,871E+00	1,855E+02	5,548E+01	1,845E+01	1,902E+00	8,877E+06	1,402E+04	7,259E+06	6,429E+01	1,559E+00
2226,00	3,347E+02	4,771E+01	2,729E+02	6,443E+01	2,360E+01	1,949E+00	1,542E+05	1,252E+04	4,768E+05	6,429E+01	1,559E+00
2286,00	3,968E+02	1,004E+02	2,650E+02	8,667E+01	5,011E+01	1,445E+00	4,457E+06	6,367E+05	5,448E+05	8,611E+01	1,467E+00
2292,00	4,342E+02	1,110E+02	2,654E+02	8,835E+01	4,993E+01	1,407E+00	2,803E+06	5,923E+05	5,275E+05	8,781E+01	1,549E+00
2292,00	4,342E+02	1,110E+02	2,654E+02	8,835E+01	4,993E+01	1,407E+00	2,803E+06	5,923E+05	5,275E+05	8,781E+01	1,549E+00
2346,00	4,736E+02	2,061E+01	2,970E+00	1,078E+00	2,932E+01	7,381E+01	1,202E+05	1,618E+06	4,656E+05	1,075E+00	1,180E+01
2406,00	4,087E+02	2,810E+01	5,938E+00	8,006E+01	3,791E+01	2,776E+01	7,054E+05	6,705E+05	4,702E+05	7,994E+01	6,246E+02
2430,00	3,949E+01	1,827E+01	4,483E+00	7,460E+01	3,924E+01	2,151E+01	5,888E+05	5,390E+05	4,427E+05	7,452E+01	2,249E+01
2450,00	1,556E+02	1,249E+02	8,056E+00	9,981E+02	2,020E+01	3,153E+01	7,043E+05	5,653E+05	7,544E+06	9,736E+02	2,249E+01
2450,00	1,556E+02	1,249E+02	8,056E+00	9,981E+02	2,020E+01	3,153E+01	7,043E+05	5,653E+05	7,544E+06	9,736E+02	2,249E+01
2450,00	2,831E+01	1,070E+02	8,681E+00	1,940E+01	3,192E+01	3,146E+01	7,467E+05	5,347E+05	7,759E+05	1,924E+01	1,858E+01
2466,00	1,321E+00	9,968E+00	4,482E+00	2,270E+01	7,724E+02	4,403E+02	7,908E+05	1,126E+05	5,070E+06	2,269E+01	1,708E+01
2472,00	2,656E+01	1,035E+01	2,347E+00	2,092E+01	5,705E+02	6,607E+02	8,305E+05	9,953E+06	7,741E+06	2,091E+01	1,489E+01
2477,00	4,946E+03	1,040E+01	7,712E+01	1,593E+01	4,618E+02	1,434E+01	8,481E+05	1,942E+05	7,985E+06	1,591E+01	1,176E+01
2482,00	2,044E+01	1,019E+01	1,581E+01	9,761E+02	3,802E+02	1,562E+01	8,353E+05	2,163E+05	7,237E+06	9,746E+02	3,933E+02

C-105

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	1,239E+01	2,371E+02	7,238E+01	1,690E+01	9,402E+02	1,832E+02	1,782E+07	3,662E+07	1,361E+06	2,344E+05	5,743E+07
1746,00	5,019E+01	2,901E+02	2,171E+01	2,750E+01	7,222E+02	7,636E+02	2,216E+06	2,950E+06	7,042E+07	5,986E+05	1,429E+05
1806,00	6,958E+01	2,780E+02	7,106E+01	3,050E+01	1,029E+01	1,026E+01	2,340E+06	2,953E+06	4,372E+07	1,022E+04	3,286E+05
1806,00	2,709E+01	2,876E+02	8,441E+01	1,957E+01	4,859E+02	1,430E+01	4,625E+06	4,899E+06	1,084E+06	5,988E+05	4,781E+05
1866,00	7,773E+01	2,663E+02	1,065E+02	3,133E+01	1,808E+02	1,485E+01	3,590E+06	5,380E+06	4,936E+07	1,503E+04	7,204E+05
1866,00	7,773E+01	2,663E+02	1,065E+02	3,133E+01	1,808E+02	1,485E+01	3,590E+06	5,380E+06	4,936E+07	1,503E+04	7,204E+05
1926,00	1,201E+02	2,662E+02	5,252E+01	3,450E+01	6,319E+02	2,457E+01	5,553E+06	8,157E+06	2,709E+06	2,501E+04	1,929E+04
1926,00	1,201E+02	2,662E+02	5,252E+01	3,450E+01	6,319E+02	2,457E+01	5,553E+06	8,157E+06	2,709E+06	2,501E+04	1,929E+04
1986,00	1,910E+02	2,258E+02	2,850E+01	4,672E+01	3,054E+01	3,143E+02	5,495E+07	3,532E+07	1,102E+05	4,974E+04	3,745E+05
1986,00	1,910E+02	2,258E+02	2,850E+01	4,672E+01	3,054E+01	3,143E+02	5,495E+07	3,532E+07	1,102E+05	4,974E+04	3,745E+05
2046,00	2,811E+02	9,293E+01	2,915E+01	5,645E+01	8,387E+01	3,992E+01	1,076E+05	2,146E+05	6,784E+05	6,569E+04	4,922E+04
2046,00	2,811E+02	9,293E+01	2,915E+01	5,645E+01	8,387E+01	3,992E+01	1,076E+05	2,146E+05	6,784E+05	6,569E+04	4,922E+04
2106,00	2,961E+02	6,885E+01	4,261E+01	4,508E+01	1,025E+00	1,365E+00	1,277E+06	1,032E+04	9,386E+05	6,980E+04	1,570E+03
2106,00	2,961E+02	6,885E+01	4,261E+01	4,508E+01	1,025E+00	1,365E+00	1,277E+06	1,032E+04	9,386E+05	6,980E+04	1,570E+03
2166,00	3,154E+02	3,865E+00	1,846E+02	5,802E+01	1,865E+01	1,901E+00	9,288E+06	1,402E+04	7,263E+06	6,359E+04	2,379E+03
2166,00	3,154E+02	3,865E+00	1,846E+02	5,802E+01	1,865E+01	1,901E+00	9,288E+06	1,402E+04	7,263E+06	6,359E+04	2,379E+03
2226,00	3,356E+02	2,015E+02	1,885E+02	6,500E+01	1,496E+00	1,269E+00	1,594E+05	1,088E+04	7,801E+05	6,213E+04	1,692E+03
2226,00	3,356E+02	2,015E+02	1,885E+02	6,500E+01	1,496E+00	1,269E+00	1,594E+05	1,088E+04	7,801E+05	6,213E+04	1,692E+03
2286,00	3,975E+02	2,666E+02	1,019E+02	8,698E+01	1,397E+00	6,176E+01	4,742E+06	3,162E+06	7,844E+05	1,125E+03	1,125E+03
2286,00	3,975E+02	2,666E+02	1,019E+02	8,698E+01	1,397E+00	6,176E+01	4,742E+06	3,162E+06	7,844E+05	1,125E+03	1,125E+03
2292,00	4,048E+02	2,537E+02	1,338E+02	8,864E+01	1,281E+00	7,629E+01	5,065E+06	1,169E+05	1,091E+05	1,064E+05	1,394E+03
2292,00	4,048E+02	2,537E+02	1,338E+02	8,864E+01	1,281E+00	7,629E+01	5,065E+06	1,169E+05	1,091E+05	1,064E+05	1,394E+03
2292,00	4,345E+02	1,638E+02	4,858E+01	1,020E+00	6,513E+01	4,174E+01	2,033E+05	1,091E+05	1,091E+05	1,064E+05	1,394E+03
2292,00	4,345E+02	1,638E+02	4,858E+01	1,020E+00	6,513E+01	4,174E+01	2,033E+05	1,091E+05	1,091E+05	1,064E+05	1,394E+03
2346,00	4,737E+02	4,915E+01	2,664E+00	1,077E+00	2,979E+01	2,104E+01	6,370E+05	7,773E+05	4,704E+05	1,731E+03	5,327E+04
2346,00	4,737E+02	4,915E+01	2,664E+00	1,077E+00	2,979E+01	2,104E+01	6,370E+05	7,773E+05	4,704E+05	1,731E+03	5,327E+04
2406,00	4,087E+02	2,746E+01	6,000E+00	8,000E+01	3,010E+01	2,768E+01	7,064E+05	6,683E+05	4,717E+05	1,893E+03	5,701E+04
2406,00	4,087E+02	2,746E+01	6,000E+00	8,000E+01	3,010E+01	2,768E+01	7,064E+05	6,683E+05	4,717E+05	1,893E+03	5,701E+04
2430,00	3,949E+02	1,787E+01	4,507E+00	7,456E+01	3,934E+01	2,146E+01	5,693E+05	5,378E+05	4,434E+05	1,874E+03	4,768E+04
2430,00	3,949E+02	1,787E+01	4,507E+00	7,456E+01	3,934E+01	2,146E+01	5,693E+05	5,378E+05	4,434E+05	1,874E+03	4,768E+04
2450,00	1,556E+02	1,249E+02	8,141E+00	9,993E+02	2,017E+01	3,154E+01	7,046E+05	5,649E+05	7,506E+05	2,753E+05	7,330E+04
2450,00	1,556E+02	1,249E+02	8,141E+00	9,993E+02	2,017E+01	3,154E+01	7,046E+05	5,649E+05	7,506E+05	2,753E+05	7,330E+04
2450,00	2,838E+01	1,070E+02	8,754E+00	1,902E+01	3,191E+01	3,148E+01	7,408E+05	1,124E+05	5,066E+06	4,121E+04	1,209E+04
2450,00	2,838E+01	1,070E+02	8,754E+00	1,902E+01	3,191E+01	3,148E+01	7,408E+05	1,124E+05	5,066E+06	4,121E+04	1,209E+04
2466,00	1,318E+00	9,970E+00	4,479E+00	2,271E+01	7,719E+02	4,400E+02	7,908E+05	9,965E+06	7,743E+06	4,094E+04	2,538E+04
2466,00	1,318E+00	9,970E+00	4,479E+00	2,271E+01	7,719E+02	4,400E+02	7,908E+05	9,965E+06	7,743E+06	4,094E+04	2,538E+04
2472,00	2,640E+01	1,035E+01	2,347E+00	2,093E+01	5,700E+02	8,608E+02	8,305E+05	9,965E+06	1,942E+05	7,985E+06	3,202E+04
2472,00	2,640E+01	1,035E+01	2,347E+00	2,093E+01	5,700E+02	8,608E+02	8,305E+05	9,965E+06	1,942E+05	7,985E+06	3,202E+04
2477,00	5,790E+03	1,040E+01	7,722E+01	1,593E+01	4,618E+02	1,434E+01	8,481E+05	1,942E+05	7,985E+06	1,591E+01	1,176E+01
2477,00	5,790E+03	1,040E+01	7,722E+01	1,593E+01	4,618E+02	1,434E+01	8,481E+05	1,942E+05	7,985E+06	1,591E+01	1,176E+01
2482,00	2,045E+01	1,019E+01	1,650E+01	9,761E+02	3,791E+02	1,563E+01	8,353E+05	2,163E+05	7,252E+06	3,200E+04	5,160E+04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

2,070E+08	5,845E+08	1,286E+08	1,656E+06	6,599E+07	3,049E+06
-----------	-----------	-----------	-----------	-----------	-----------

SYSTEM D GROUP 11

(DME SCALE FACTOR ERROR )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR		VELOCITY MAG ERROR	
	R	D	C	R	D	C	R	D	C	R	C	R	C
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	8,273E+01	4,820E+01	4,620E+01	4,640E-02	1,920E-02	1,453E-02	3,951E-08	7,561E-08	3,728E-07	3,036E-02	2,305E-02	3,467E-01	2,305E-02
1746,00	9,176E+01	1,758E+02	1,319E+02	1,453E-01	6,055E+01	1,204E-01	1,016E-05	7,804E-06	2,837E-06	1,596E-01	3,467E-01	2,305E-01	2,305E-01
1806,00	7,950E+01	7,665E+01	4,723E+01	1,303E-01	6,630E-01	3,086E-01	1,030E-05	5,373E-06	5,211E-06	1,354E-01	2,305E-01	2,305E-01	2,305E-01
1806,00	3,085E+01	6,576E+01	4,581E+01	9,224E-02	6,678E-01	3,322E-01	1,271E-05	4,684E-06	6,981E-06	8,886E-02	2,810E-01	4,606E-01	4,606E-01
1866,00	7,657E+01	2,836E+01	3,602E+01	3,088E-01	5,565E-01	3,077E-01	1,561E-05	6,259E-06	1,581E-05	3,058E-01	4,606E-01	2,593E-01	2,593E-01
1926,00	4,552E+01	1,755E+01	2,057E+01	2,160E-01	3,820E-01	2,703E-01	1,400E-05	6,966E-06	1,507E-05	2,150E-01	1,845E-01	1,845E-01	1,845E-01
1986,00	1,046E+01	5,428E+00	7,515E+00	1,425E-01	1,833E-01	1,929E-01	1,052E-05	1,423E-05	2,180E-05	1,420E-01	1,067E-01	5,804E-02	5,804E-02
2046,00	6,337E+00	4,815E+00	9,225E+00	1,244E-01	1,200E-01	1,281E-01	9,107E-06	1,936E-05	2,514E-05	1,240E-01	1,067E-01	5,804E-02	5,804E-02
2106,00	1,222E+01	4,481E+00	4,640E+00	1,046E-01	7,132E-02	7,759E-02	1,033E-05	1,739E-05	2,822E-05	9,672E-02	7,576E-02	7,576E-02	7,576E-02
2166,00	1,809E+01	6,108E+00	9,905E+00	1,001E-01	9,258E-02	7,288E-02	1,089E-05	1,691E-05	2,425E-05	1,004E-01	7,576E-02	7,576E-02	7,576E-02
2226,00	2,465E+01	6,108E+00	9,905E+00	1,001E-01	9,258E-02	7,288E-02	1,089E-05	1,691E-05	2,425E-05	1,004E-01	7,576E-02	7,576E-02	7,576E-02
2286,00	2,960E+01	4,956E+00	1,500E+01	1,104E-01	9,218E-02	6,921E-02	1,129E-05	1,293E-05	2,050E-05	1,144E-01	1,029E-01	1,029E-01	1,029E-01
2292,00	2,996E+01	5,096E+00	1,556E+01	1,112E-01	9,352E-02	6,920E-02	1,135E-05	1,270E-05	2,026E-05	1,112E-01	1,055E-01	1,055E-01	1,055E-01
2292,00	3,084E+01	4,427E+00	8,430E+00	1,155E-01	8,055E-02	4,252E-02	1,176E-05	1,391E-05	1,844E-05	1,156E-01	7,576E-02	7,576E-02	7,576E-02
2346,00	2,747E+01	5,575E+00	1,261E+00	9,567E-02	6,589E-02	7,217E-02	1,159E-05	1,578E-05	1,514E-05	9,579E-02	6,590E-02	6,590E-02	6,590E-02
2406,00	1,956E+01	9,293E+00	1,496E+00	5,767E-02	8,135E-02	5,485E-02	1,243E-05	1,061E-05	1,310E-05	5,781E-02	7,511E-02	7,511E-02	7,511E-02
2430,00	1,965E+01	1,121E+01	9,212E-01	5,382E-02	9,792E-02	3,719E-02	9,525E-06	7,573E-06	1,326E-05	7,060E-02	7,060E-02	7,060E-02	7,060E-02
2450,00	4,065E+00	2,556E+00	1,989E-01	7,094E-03	8,065E-02	7,376E-02	4,548E-06	4,548E-06	1,176E-05	7,102E-03	7,244E-02	7,244E-02	7,244E-02
2450,00	6,970E-01	2,197E+00	1,921E-01	1,130E-02	7,636E-02	2,146E-02	7,322E-06	4,535E-06	1,116E-05	1,131E-02	7,160E-02	7,160E-02	7,160E-02
2466,00	1,539E-01	5,929E-01	1,839E-01	1,281E-02	7,158E-02	1,361E-02	7,382E-06	2,971E-06	1,021E-05	1,282E-02	6,926E-02	6,926E-02	6,926E-02
2477,00	2,135E-02	9,861E-01	1,442E-01	1,333E-02	7,425E-02	8,269E-03	7,726E-06	1,965E-06	1,003E-05	1,333E-02	7,132E-02	7,132E-02	7,132E-02
2477,00	1,729E-03	1,298E+00	9,216E-02	1,057E-02	7,409E-02	4,686E-03	8,225E-06	1,412E-06	9,806E-06	1,056E-02	6,956E-02	6,956E-02	6,956E-02
2482,00	1,341E+02	1,576E+00	5,865E-02	6,579E-03	7,315E-02	3,112E-03	8,728E-06	1,129E-06	9,503E-06	6,559E-03	7,323E-02	7,323E-02	7,323E-02

TIME	U			V			W			X			Y			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W	U	V	W	U	V	W		
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
1686,00	3,332E+00	6,378E+01	1,947E+01	4,548E-02	2,530E-02	4,929E-03	4,795E-08	9,907E-08	3,663E-07	6,311E-06	1,545E-07	1,545E-07	1,545E-07	1,545E-07	1,545E-07	1,545E-07	
1746,00	9,059E+01	7,038E+01	2,087E+02	1,525E-01	3,378E-01	5,147E-01	9,995E-06	6,925E-06	4,335E-06	3,618E-05	1,569E-04	1,569E-04	1,569E-04	1,569E-04	1,569E-04	1,569E-04	
1806,00	7,872E+01	4,804E+01	7,696E+01	1,320E-01	2,345E-01	6,924E-01	1,025E-05	6,412E-06	4,141E-06	4,836E-05	2,567E-04	2,567E-04	2,567E-04	2,567E-04	2,567E-04	2,567E-04	
1806,00	3,032E+01	3,988E+01	6,975E+01	9,030E-02	2,862E-01	6,891E-01	1,258E-05	8,171E-06	2,685E-06	3,820E-05	2,555E-04	2,555E-04	2,555E-04	2,555E-04	2,555E-04	2,555E-04	
1866,00	7,637E+01	2,701E+01	3,746E+01	3,050E-01	4,962E-01	4,005E-01	1,552E-05	5,260E-06	1,430E-05	1,864E-04	2,106E-04	2,106E-04	2,106E-04	2,106E-04	2,106E-04	2,106E-04	
1926,00	4,542E+01	2,099E+01	1,706E+01	2,142E-01	3,032E-01	3,576E-01	1,595E-05	1,249E-05	1,100E-05	1,996E-04	1,730E-04	1,730E-04	1,730E-04	1,730E-04	1,730E-04	1,730E-04	
1986,00	1,046E+01	7,719E+00	4,847E+00	1,426E-01	1,961E-01	1,808E-01	1,050E-05	8,162E-06	2,473E-05	1,619E-04	1,975E-04	1,975E-04	1,975E-04	1,975E-04	1,975E-04	1,975E-04	
2046,00	6,339E+00	9,673E+00	3,833E+00	1,244E-01	1,184E-01	1,293E-01	9,112E-06	1,984E-05	2,477E-05	1,623E-04	1,589E-04	1,589E-04	1,589E-04	1,589E-04	1,589E-04	1,589E-04	
2106,00	1,222E+01	2,518E+00	5,949E+00	1,047E-01	6,930E-02	7,922E-02	9,436E-06	3,000E-05	1,176E-05	1,276E-04	9,116E-05	9,116E-05	9,116E-05	9,116E-05	9,116E-05	9,116E-05	
2166,00	1,810E+01	5,997E+00	6,970E+00	9,61E-02	8,352E-02	7,189E-02	1,041E-05	1,736E-05	2,822E-05	1,268E-04	9,002E-05	9,002E-05	9,002E-05	9,002E-05	9,002E-05	9,002E-05	
2226,00	2,467E+01	8,940E+00	7,429E+00	1,003E-01	8,157E-02	8,469E-02	1,099E-05	1,718E-05	2,401E-05	1,390E-04	1,135E-04	1,135E-04	1,135E-04	1,135E-04	1,135E-04	1,135E-04	
2286,00	2,961E+01	1,348E+01	8,210E+00	1,107E-01	9,902E-02	5,851E-02	1,135E-05	1,967E-05	1,810E-05	1,546E-04	6,487E-05	6,487E-05	6,487E-05	6,487E-05	6,487E-05	6,487E-05	
2292,00	2,997E+01	1,294E+01	1,001E+01	1,114E-01	1,026E-01	5,427E-02	1,142E-05	1,846E-05	1,515E-05	1,570E-04	7,946E-05	7,946E-05	7,946E-05	7,946E-05	7,946E-05	7,946E-05	
2292,00	3,084E+01	7,831E+00	5,385E+00	1,157E-01	7,024E-02	5,766E-02	1,183E-05	1,923E-05	1,274E-05	1,656E-04	8,455E-05	8,455E-05	8,455E-05	8,455E-05	8,455E-05	8,455E-05	
2346,00	2,740E+01	5,649E+00	1,240E+00	9,566E-02	6,583E-02	7,224E-02	1,599E-05	1,576E-05	1,310E-05	1,495E-04	1,143E-04	1,143E-04	1,143E-04	1,143E-04	1,143E-04	1,143E-04	
2406,00	1,954E+01	9,323E+00	1,488E+00	5,761E-02	8,813E-02	5,491E-02	1,244E-05	1,061E-05	1,309E-05	1,309E-04	1,131E-04	1,131E-04	1,131E-04	1,131E-04	1,131E-04	1,131E-04	
2430,00	1,964E+01	1,123E+01	9,174E-01	5,377E-02	9,793E-02	3,723E-02	9,533E-06	7,571E-06	1,328E-05	1,631E-04	8,274E-05	8,274E-05	8,274E-05	8,274E-05	8,274E-05	8,274E-05	
2450,00	4,064E+00	2,357E+00	2,005E-01	7,116E-03	8,084E-02	2,137E-02	7,379E-06	4,457E-06	1,176E-05	7,483E-05	4,974E-05	4,974E-05	4,974E-05	4,974E-05	4,974E-05	4,974E-05	
2450,00	6,962E-01	2,197E+00	1,935E-01	1,134E-02	7,635E-02	2,150E-02	7,325E-06	4,535E-06	1,117E-05	5,867E-05	5,004E-05	5,004E-05	5,004E-05	5,004E-05	5,004E-05	5,004E-05	
2466,00	1,538E-01	5,928E-01	1,839E-01	1,283E-02	7,157E-02	7,382E-06	2,972E-06	1,021E-05	5,417E-05	3,738E-05	3,738E-05	3,738E-05	3,738E-05	3,738E-05	3,738E-05	3,738E-05	
2477,00	2,117E-02	9,861E-01	1,443E-01	1,334E-02	7,424E-02	8,295E-03	7,726E-06	1,963E-06	1,003E-05	2,446E-05	2,446E-05	2,446E-05	2,446E-05	2,446E-05	2,446E-05	2,446E-05	
2477,00	1,666E-03	1,298E+00	9,206E-02	1,057E-02	7,409E-02	4,683E-03	8,225E-06	1,411E-06	9,806E-06	1,577E-05	1,468E-05	1,468E-05	1,468E-05	1,468E-05	1,468E-05	1,468E-05	
2482,00	1,343E-02	1,576E+00	5,947E-02	6,588E-03	7,315E-02	3,116E-03	8,728E-06	1,150E-06	9,503E-06	1,850E-05	1,029E-05	1,029E-05	1,029E-05	1,029E-05	1,029E-05	1,029E-05	

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

3,906E-09	1,270E-04	1,946E-09	1,316E-06	9,055E-07	1,054E-01	1,563E-05	4,475E-06	3,208E-06
2,042E+00	1,225E-05	9,655E-03	2,056E-06	1,145E-03				

C-106



SYSTEM D GROUP 12

(BARO, ALT, BIAS & SCALE F.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	O	C	R	O	C	R	O	C		
1636.00											
1656.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.845E+03	6.591E+02	1.124E+02	4.807E+00	2.349E+00	1.447E+00	1.028E+04	2.363E+05	1.054E+04	4.816E+00	2.020E+00
1806.00	7.002E+02	1.940E+02	1.962E+02	1.040E+00	1.386E+00	5.197E+01	6.202E+05	1.145E+04	4.230E+06	1.052E+00	1.297E+00
1926.00	3.396E+02	7.986E+01	1.775E+02	1.861E+01	4.740E+01	8.010E+01	4.270E+05	1.216E+04	3.922E+06	1.929E+01	8.693E-01
1986.00	7.499E+01	4.396E+01	5.563E+01	2.510E+01	1.915E+01	3.079E+01	1.415E+05	7.232E+05	1.386E+05	2.487E-01	3.756E-01
2046.00	1.206E+01	1.130E+01	2.390E+01	3.018E+01	3.314E+02	1.623E+01	7.791E+06	4.343E+05	2.907E+05	3.006E-01	2.037E-01
2106.00	3.790E+00	2.586E+00	2.190E+01	2.865E+01	7.492E+02	1.425E+01	8.966E+06	3.253E+05	2.858E+05	2.853E-01	2.053E-01
2166.00	1.927E+01	3.536E+00	2.940E+01	2.566E+01	7.286E+02	1.739E+01	1.176E+05	2.940E+05	2.453E+05	2.562E-01	1.197E-01
2226.00	3.336E+01	2.380E+01	3.948E+01	2.280E+01	1.050E+01	2.115E+01	1.276E+05	2.773E+05	2.063E+05	2.282E-01	9.179E-02
2286.00	4.400E+01	1.265E+01	3.758E+01	2.030E+01	1.659E+01	1.634E+01	1.410E+05	2.016E+05	2.158E+05	2.033E-01	2.152E-01
2292.00	4.482E+01	1.374E+01	3.727E+01	2.019E+01	1.684E+01	1.589E+01	1.429E+05	1.948E+05	2.141E+05	2.022E-01	2.147E-01
2292.00	4.056E+01	1.181E+01	1.989E+01	1.826E+01	1.321E+01	6.459E+02	1.635E+05	1.089E+05	1.618E+05	1.827E-01	1.282E-01
2346.00	4.340E+01	1.560E+01	2.466E+01	1.638E+01	1.062E+01	3.542E+02	1.925E+05	1.194E+06	1.095E+05	1.639E+01	7.839E-02
2406.00	4.089E+01	2.163E+01	3.558E+01	1.366E+01	1.234E+01	1.436E+02	1.504E+05	2.150E+06	1.134E+05	1.369E-01	6.533E-02
2433.00	4.032E+01	2.409E+01	2.946E+01	1.286E+01	1.286E+01	7.600E+05	1.389E+04	2.456E+06	1.139E+05	1.290E+01	5.191E-02
2450.00	1.814E+00	2.159E+00	8.971E+02	2.325E+02	7.235E+03	1.628E+03	1.246E+05	1.418E+06	5.775E+07	2.327E+02	5.004E-03
2450.00	2.612E+01	1.874E+00	8.310E+02	1.958E+02	3.866E+03	1.664E+03	1.244E+05	1.367E+06	1.999E+07	1.961E+02	6.165E-03
2466.00	3.094E+02	1.216E+01	5.522E+02	1.748E+02	4.809E+03	1.905E+03	1.250E+05	1.587E+06	4.538E+07	1.747E+02	1.213E-02
2472.00	1.396E+02	1.821E+01	1.697E+02	1.592E+02	5.077E+03	4.071E+03	1.248E+05	1.778E+06	4.787E+07	1.591E+02	1.198E-02
2477.00	1.976E+03	1.750E+01	6.049E+03	1.205E+02	3.168E+03	4.737E+03	1.250E+05	1.836E+06	4.370E+07	1.205E+02	9.482E-03
2482.00	1.610E+02	1.345E+01	2.015E+02	7.356E+03	2.903E+03	4.820E+03	1.205E+05	1.817E+06	3.813E+07	7.354E+03	3.006E+03

TIME	U			V			W			GAUSS ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1636.00											
1656.00											
1746.00											
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	1.836E+03	4.164E+02	5.539E+02	4.763E+00	2.400E+00	1.511E+00	1.017E+04	8.632E+05	6.655E+05	1.845E+03	5.592E+04
1806.00	6.974E+02	2.682E+02	9.030E+01	1.027E+00	1.446E+00	1.384E+01	6.126E+05	1.009E+04	5.512E+05	6.433E+04	6.718E+05
1926.00	3.385E+02	1.964E+02	8.082E+00	1.807E+01	9.213E+01	1.400E+01	4.230E+05	4.211E+05	1.142E+04	2.750E+04	1.024E+04
1986.00	7.479E+01	7.068E+01	5.714E+00	2.519E+01	3.552E+01	6.962E+02	1.598E+05	5.945E+05	4.350E+05	2.241E+04	7.365E+05
2046.00	1.205E+01	2.597E+01	4.958E+00	3.016E+01	1.488E+01	7.267E+02	7.770E+06	3.903E+05	3.477E+05	3.215E+04	9.009E+05
2106.00	3.744E+00	1.497E+01	1.621E+01	2.859E+01	1.609E+01	3.211E+02	8.997E+06	5.423E+07	4.329E+05	2.898E+04	3.652E+05
2166.00	1.919E+01	3.482E+00	2.938E+01	2.586E+01	1.747E+01	1.747E+01	1.174E+05	2.944E+05	2.249E+05	2.944E+04	2.189E+04
2226.00	3.327E+01	3.303E+01	2.177E+01	2.270E+01	1.179E+01	2.060E+01	1.267E+05	3.252E+05	1.182E+05	3.192E+04	2.749E+04
2286.00	4.192E+01	3.632E+01	1.612E+01	2.021E+01	2.334E+01	1.126E+02	1.401E+05	2.073E+06	2.956E+05	3.220E+04	1.532E+05
2292.00	4.474E+01	3.466E+01	1.970E+01	2.011E+01	2.319E+01	1.366E+02	1.421E+05	1.302E+06	2.895E+05	3.218E+04	2.103E+05
2292.00	4.056E+01	2.197E+01	7.604E+00	1.620E+01	1.435E+01	3.552E+02	1.630E+05	1.931E+06	1.945E+05	2.829E+04	5.149E+05
2346.00	4.335E+01	1.574E+01	1.498E+01	1.654E+01	1.065E+01	3.598E+02	1.923E+05	1.187E+06	1.096E+05	2.795E+04	5.690E+05
2406.00	4.086E+01	2.169E+01	4.049E+01	1.364E+01	1.237E+01	1.464E+02	1.504E+05	2.148E+06	1.135E+05	3.211E+04	3.015E+05
2433.00	4.032E+01	2.409E+01	2.946E+01	1.285E+01	1.269E+01	7.760E+03	1.389E+05	2.454E+06	1.139E+05	3.440E+04	1.729E+05
2450.00	1.813E+00	2.160E+00	8.119E+02	2.323E+02	7.247E+03	1.635E+03	1.246E+05	1.425E+06	5.785E+07	4.848E+05	3.805E+06
2450.00	2.602E+01	1.874E+00	4.438E+02	1.957E+02	3.874E+03	1.667E+03	1.244E+05	1.374E+06	2.009E+07	3.864E+05	3.865E+06
2466.00	3.097E+02	1.216E+01	5.514E+02	1.748E+02	4.804E+03	1.906E+03	1.250E+05	1.590E+06	4.532E+07	3.300E+05	5.224E+06
2472.00	1.393E+02	1.821E+01	1.697E+02	1.592E+02	5.077E+03	4.072E+03	1.248E+05	1.720E+06	4.784E+07	3.030E+05	1.201E+06
2477.00	1.996E+03	1.750E+01	6.053E+03	1.205E+02	4.168E+03	4.736E+03	1.250E+05	1.837E+06	4.371E+07	2.335E+05	1.484E+05
2482.00	1.610E+02	1.345E+01	2.025E+02	7.336E+03	2.899E+03	4.822E+03	1.205E+05	1.817E+06	3.801E+07	2.408E+05	1.592E+05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

5.366E+10	1.495E+09	1.109E+09	7.111E+07	7.446E+07	5.462E+07	1.287E+05	1.888E+06	2.653E+06
1.281E+01	2.031E+06	9.662E+01	6.715E+07	1.735E+03				

C-107

SYSTEM D GROUP 12

(BARU, ALT, MARKOV & MEAS, N.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00											
1746,00											
1806,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1806,00	1,238E+01	4,421E+00	7,539E+01	3,225E+02	1,576E+02	9,710E+03	6,894E+07	1,585E+07	7,071E+07	3,231E+02	1,355E+02
1866,00	4,697E+00	1,301E+00	1,316E+00	6,980E+03	9,028E+03	3,486E+03	4,160E+07	7,680E+07	2,837E+08	7,054E+03	8,702E+03
1926,00	2,278E+00	5,357E+01	1,191E+00	1,249E+03	3,180E+03	5,373E+03	2,865E+07	8,154E+07	2,631E+08	1,294E+03	5,832E+03
1986,00	5,031E+01	2,949E+01	3,732E+01	1,683E+03	1,284E+03	2,065E+03	9,489E+08	4,852E+07	9,295E+08	1,668E+03	2,520E+03
2046,00	8,088E+02	7,580E+02	1,603E+01	2,023E+03	2,223E+04	1,089E+03	5,227E+08	2,913E+07	1,950E+07	2,016E+03	1,366E+03
2106,00	2,543E+02	1,735E+02	1,469E+01	1,920E+03	5,361E+04	9,558E+04	6,014E+08	2,182E+07	1,917E+07	1,914E+03	1,377E+03
2166,00	1,293E+01	2,372E+02	1,966E+01	1,723E+03	4,886E+04	1,166E+03	7,887E+08	1,972E+07	1,512E+07	1,710E+03	8,029E+04
2226,00	2,238E+01	1,597E+03	2,648E+01	1,530E+03	7,087E+04	1,419E+03	8,561E+08	1,860E+07	1,584E+07	1,531E+03	6,157E+04
2286,00	2,951E+01	8,489E+02	2,521E+01	1,361E+03	1,113E+03	1,095E+03	9,459E+08	1,352E+07	1,448E+07	1,363E+03	1,444E+03
2292,00	3,006E+01	9,216E+02	2,500E+01	1,354E+03	1,130E+03	1,066E+03	9,588E+08	1,307E+07	1,435E+07	1,356E+03	1,440E+03
2292,00	2,721E+01	7,920E+02	1,335E+01	1,225E+03	8,862E+04	4,333E+04	1,097E+07	7,308E+08	1,085E+07	1,225E+03	6,598E+04
2346,00	2,911E+01	1,047E+01	1,654E+03	1,099E+03	7,125E+04	2,370E+04	1,290E+07	8,010E+09	7,347E+08	1,100E+03	5,258E+04
2406,00	2,743E+01	1,451E+01	2,387E+03	9,164E+04	8,286E+04	4,333E+04	1,009E+07	1,443E+08	7,609E+08	1,185E+04	4,383E+04
2430,00	2,705E+01	1,610E+01	1,976E+03	8,630E+04	8,639E+04	5,103E+05	9,520E+08	1,647E+08	7,640E+08	8,656E+04	3,885E+04
2450,00	1,217E+02	1,448E+02	6,018E+04	1,559E+04	4,853E+05	1,092E+05	8,357E+08	9,515E+09	3,874E+09	1,561E+04	3,356E+05
2450,00	1,752E+03	1,257E+02	5,575E+04	1,313E+04	1,172E+05	1,116E+05	8,345E+08	9,158E+09	1,541E+09	1,318E+04	4,136E+05
2466,00	2,075E+04	8,154E+04	3,570E+04	1,172E+04	3,226E+05	1,278E+05	8,388E+08	1,065E+08	3,044E+09	1,172E+04	8,136E+05
2472,00	9,366E+05	1,222E+03	1,139E+04	1,068E+04	3,406E+05	2,731E+05	8,571E+08	1,193E+08	3,211E+09	1,068E+04	8,033E+05
2477,00	1,332E+05	1,174E+03	4,058E+05	8,083E+05	2,796E+05	3,178E+05	8,254E+08	1,232E+08	2,932E+09	8,081E+05	8,361E+05
2482,00	1,484E+03	8,362E+03	1,372E+04	5,494E+04	1,789E+04	3,239E+05	8,366E+08	1,479E+08	9,341E+09	5,493E+04	1,868E+04

C-108

TIME	GAMMA ERROR						PSI ERROR	
	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686,00								
1746,00								
1806,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1806,00	1,232E+01	2,795E+00	3,715E+00	3,195E+02	1,610E+02	1,013E+02	6,824E+07	5,791E+07
1866,00	4,678E+00	1,799E+00	6,058E+01	6,891E+03	9,697E+03	9,287E+04	4,104E+07	6,768E+07
1926,00	2,271E+00	1,318E+00	5,422E+02	1,212E+03	6,180E+03	9,390E+04	2,838E+07	2,825E+07
1986,00	5,017E+01	4,755E+01	3,833E+02	1,690E+03	2,382E+03	4,670E+04	9,378E+08	3,986E+07
2046,00	8,083E+02	1,742E+01	3,326E+02	2,023E+03	9,982E+04	4,888E+04	5,212E+08	2,618E+07
2106,00	2,512E+02	1,004E+01	1,087E+01	1,918E+03	1,079E+03	2,154E+04	6,035E+08	3,638E+09
2166,00	1,287E+01	2,336E+02	1,970E+01	1,718E+03	4,939E+04	1,172E+03	7,873E+08	1,975E+07
2226,00	2,232E+01	2,216E+01	1,460E+01	1,523E+03	7,909E+04	1,382E+03	8,500E+08	2,181E+07
2286,00	2,946E+01	2,437E+01	1,081E+01	1,355E+03	1,566E+03	7,553E+05	9,400E+08	1,390E+08
2292,00	3,001E+01	2,321E+01	1,321E+01	1,349E+03	1,556E+03	9,161E+05	9,531E+08	8,734E+09
2292,00	2,717E+01	1,474E+01	5,101E+02	1,221E+03	9,628E+04	2,383E+04	1,094E+07	1,245E+08
2346,00	2,908E+01	1,056E+01	1,005E+03	1,096E+03	7,145E+04	2,414E+04	1,290E+07	7,961E+08
2406,00	2,741E+01	1,455E+01	2,716E+03	9,151E+04	8,298E+04	9,818E+05	1,009E+07	1,441E+08
2430,00	2,703E+01	1,612E+01	2,193E+03	8,621E+04	8,647E+04	5,219E+05	9,318E+08	1,646E+08
2450,00	1,216E+02	1,449E+02	6,117E+04	1,558E+04	4,861E+05	1,095E+05	8,356E+08	9,560E+09
2450,00	1,745E+03	1,257E+02	5,660E+04	1,313E+04	2,599E+05	1,118E+05	8,345E+08	9,215E+09
2466,00	2,077E+04	8,155E+04	3,567E+04	1,172E+04	3,223E+05	1,279E+05	8,388E+08	1,067E+08
2472,00	9,347E+05	1,222E+03	1,137E+04	1,068E+04	3,404E+05	2,732E+05	8,571E+08	1,194E+08
2477,00	1,341E+05	1,174E+03	4,047E+05	8,083E+05	2,796E+05	3,177E+05	8,254E+08	1,232E+08
2482,00	1,485E+03	8,362E+03	1,370E+04	5,494E+04	1,789E+04	3,241E+05	8,366E+08	1,479E+08

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

3,779E+12	1,523E+11	9,804E+12	2,579E+08	2,215E+08	1,691E+08	3,602E+07	8,041E+08	1,292E+07
7,488E+03	1,394E+08	1,979E+01	5,102E+09	2,949E+04				

ORIGINAL PAGE IS  
OF POOR QUALITY

SYSTEM D GROUP 12

(STATIC DEFECT IN BARO. ALT.)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	U	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1806.00	6.837E+02	2.442E+02	4.164E+01	1.781E+00	8.704E-01	5.364E-01	3.808E-05	8.757E-06	5.906E-05	1.785E+00	7.484E-01
1806.00	2.595E+02	7.184E+01	7.264E+01	3.856E-01	4.987E-01	1.926E-01	2.298E-05	4.242E-05	1.567E-06	3.897E-01	4.807E-01
1806.00	2.595E+02	7.184E+01	7.264E+01	3.856E-01	4.987E-01	1.926E-01	2.298E-05	4.242E-05	1.567E-06	3.897E-01	4.807E-01
1926.00	1.258E+02	2.954E+01	8.578E+01	6.898E-01	1.757E-01	2.968E-01	1.582E-05	4.504E-05	1.453E-06	7.150E-02	3.221E-01
1926.00	1.258E+02	2.954E+01	8.578E+01	6.898E-01	1.757E-01	2.968E-01	1.582E-05	4.504E-05	1.453E-06	7.150E-02	3.221E-01
1985.00	2.774E+01	1.629E+01	2.061E+01	9.299E-02	7.095E-02	1.141E-01	5.242E-06	2.680E-05	5.134E-06	9.215E-02	1.392E-01
1985.00	2.774E+01	1.629E+01	2.061E+01	9.299E-02	7.095E-02	1.141E-01	5.242E-06	2.680E-05	5.134E-06	9.215E-02	1.392E-01
2045.00	4.468E+00	4.187E+00	8.857E+00	1.118E-01	1.228E-02	6.016E-02	2.687E-05	1.609E-05	1.077E-05	1.144E-01	7.548E-02
2045.00	4.468E+00	4.187E+00	8.857E+00	1.118E-01	1.228E-02	6.016E-02	2.687E-05	1.609E-05	1.077E-05	1.144E-01	7.548E-02
2176.00	1.404E+00	9.541E-01	8.116E+00	1.001E-01	2.700E-02	6.443E-02	4.357E-06	1.069E-05	8.351E-06	9.493E-02	4.435E-02
2176.00	1.404E+00	9.541E-01	8.116E+00	1.001E-01	2.700E-02	6.443E-02	4.357E-06	1.069E-05	8.351E-06	9.493E-02	4.435E-02
2276.00	7.141E+00	1.310E+00	1.084E+01	9.517E-02	2.700E-02	6.443E-02	4.357E-06	1.069E-05	8.351E-06	9.493E-02	4.435E-02
2276.00	7.141E+00	1.310E+00	1.084E+01	9.517E-02	2.700E-02	6.443E-02	4.357E-06	1.069E-05	8.351E-06	9.493E-02	4.435E-02
2276.00	1.236E+01	8.821E-02	1.465E+01	8.450E-02	5.915E-02	7.837E-02	4.729E-06	1.028E-05	7.044E-06	8.455E-02	3.401E-02
2276.00	1.236E+01	8.821E-02	1.465E+01	8.450E-02	5.915E-02	7.837E-02	4.729E-06	1.028E-05	7.044E-06	8.455E-02	3.401E-02
2276.00	1.636E+01	4.689E+00	1.592E+01	7.521E-02	6.149E-02	6.057E-02	5.225E-06	1.470E-06	7.997E-06	7.532E-02	1.974E-02
2276.00	1.636E+01	4.689E+00	1.592E+01	7.521E-02	6.149E-02	6.057E-02	5.225E-06	1.470E-06	7.997E-06	7.532E-02	1.974E-02
2276.00	1.661E+01	5.091E+00	1.381E+01	7.402E-07	6.240E-02	5.890E-02	5.276E-06	1.217E-06	7.932E-06	7.492E-02	1.955E-02
2276.00	1.661E+01	5.091E+00	1.381E+01	7.402E-07	6.240E-02	5.890E-02	5.276E-06	1.217E-06	7.932E-06	7.492E-02	1.955E-02
2276.00	1.503E+01	4.375E+00	7.372E+00	6.767E-02	4.896E-02	2.393E-02	6.056E-06	4.037E-06	5.494E-06	6.769E-02	4.756E-02
2276.00	1.503E+01	4.375E+00	7.372E+00	6.767E-02	4.896E-02	2.393E-02	6.056E-06	4.037E-06	5.494E-06	6.769E-02	4.756E-02
2346.00	1.608E+01	5.722E+00	9.138E-02	6.069E-02	5.430E-02	1.309E-02	7.126E-06	4.425E-07	4.054E-06	6.074E-02	2.405E-02
2346.00	1.608E+01	5.722E+00	9.138E-02	6.069E-02	5.430E-02	1.309E-02	7.126E-06	4.425E-07	4.054E-06	6.074E-02	2.405E-02
2346.00	1.515E+01	8.014E+00	1.319E-01	5.062E-02	4.577E-02	5.320E-03	5.574E-06	7.469E-07	4.203E-06	5.074E-02	2.421E-02
2346.00	1.515E+01	8.014E+00	1.319E-01	5.062E-02	4.577E-02	5.320E-03	5.574E-06	7.469E-07	4.203E-06	5.074E-02	2.421E-02
2346.00	1.494E+01	8.872E+00	1.092E-01	4.767E-02	4.772E-02	2.819E-03	5.148E-06	9.101E-07	4.220E-06	4.781E-02	2.146E-02
2346.00	1.494E+01	8.872E+00	1.092E-01	4.767E-02	4.772E-02	2.819E-03	5.148E-06	9.101E-07	4.220E-06	4.781E-02	2.146E-02
2450.00	6.722E-01	8.000E-01	3.324E-02	8.009E-03	2.681E-03	6.033E-04	4.610E-06	5.256E-07	2.140E-07	8.624E-03	1.854E-03
2450.00	6.722E-01	8.000E-01	3.324E-02	8.009E-03	2.681E-03	6.033E-04	4.610E-06	5.256E-07	2.140E-07	8.624E-03	1.854E-03
2450.00	6.722E-01	8.000E-01	3.324E-02	8.009E-03	2.681E-03	6.033E-04	4.610E-06	5.256E-07	2.140E-07	8.624E-03	1.854E-03
2450.00	6.722E-01	8.000E-01	3.324E-02	8.009E-03	2.681E-03	6.033E-04	4.610E-06	5.256E-07	2.140E-07	8.624E-03	1.854E-03
2450.00	9.680E-02	6.944E-01	5.079E-02	7.254E-03	1.432E-03	6.166E-04	4.010E-06	5.065E-07	7.408E-08	7.267E-03	2.285E-03
2450.00	9.680E-02	6.944E-01	5.079E-02	7.254E-03	1.432E-03	6.166E-04	4.010E-06	5.065E-07	7.408E-08	7.267E-03	2.285E-03
2450.00	1.146E-02	4.504E-02	1.972E-02	6.476E-03	1.782E-03	7.058E-04	4.033E-06	5.881E-07	1.682E-07	6.476E-03	4.435E-03
2450.00	1.146E-02	4.504E-02	1.972E-02	6.476E-03	1.782E-03	7.058E-04	4.033E-06	5.881E-07	1.682E-07	6.476E-03	4.435E-03
2472.00	5.174E-03	6.754E-02	6.290E-03	5.898E-03	1.881E-03	1.509E-03	4.624E-06	6.590E-07	1.774E-07	5.897E-03	4.435E-03
2472.00	5.174E-03	6.754E-02	6.290E-03	5.898E-03	1.881E-03	1.509E-03	4.624E-06	6.590E-07	1.774E-07	5.897E-03	4.435E-03
2472.00	7.314E-04	6.444E-02	2.242E-03	4.464E-03	1.544E-03	1.753E-03	4.560E-06	6.805E-07	1.614E-07	4.463E-03	3.513E-03
2472.00	7.314E-04	6.444E-02	2.242E-03	4.464E-03	1.544E-03	1.753E-03	4.560E-06	6.805E-07	1.614E-07	4.463E-03	3.513E-03
2472.00	5.927E-03	4.967E-02	7.464E-03	2.705E-03	1.072E-03	1.786E-03	4.463E-06	6.733E-07	1.412E-07	2.704E-03	1.110E-03
2472.00	5.927E-03	4.967E-02	7.464E-03	2.705E-03	1.072E-03	1.786E-03	4.463E-06	6.733E-07	1.412E-07	2.704E-03	1.110E-03

TIME	GAMMA ERROR									PSI ERROR	
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1746.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1806.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	
1806.00	6.803E+02	1.544E+02	2.052E+02	1.765E+00	8.892E-01	5.596E-01	3.770E-05	3.199E-05	2.468E-05	6.837E-04	2.072E-04
1806.00	6.803E+02	1.544E+02	2.052E+02	1.765E+00	8.892E-01	5.596E-01	3.770E-05	3.199E-05	2.468E-05	6.837E-04	2.072E-04
1806.00	2.584E+02	9.940E+01	3.346E+01	3.807E-01	5.357E-01	5.130E-02	2.270E-05	5.739E-05	2.042E-05	2.384E-04	2.489E-05
1806.00	2.584E+02	9.940E+01	3.346E+01	3.807E-01	5.357E-01	5.130E-02	2.270E-05	5.739E-05	2.042E-05	2.384E-04	2.489E-05
1926.00	1.254E+02	7.274E+01	2.995E+00	6.095E-02	3.414E-01	5.187E-02	1.567E-05	1.560E-05	4.233E-05	1.019E-04	3.794E-05
1926.00	1.254E+02	7.274E+01	2.995E+00	6.095E-02	3.414E-01	5.187E-02	1.567E-05	1.560E-05	4.233E-05	1.019E-04	3.794E-05
1926.00	2.772E+01	2.627E+01	2.118E+00	9.356E-02	1.316E-01	2.580E-02	5.180E-06	2.293E-05	1.612E-05	8.366E-05	2.729E-05
1926.00	2.772E+01	2.627E+01	2.118E+00	9.356E-02	1.316E-01	2.580E-02	5.180E-06	2.293E-05	1.612E-05	8.366E-05	2.729E-05
2045.00	4.465E+00	9.624E+00	1.637E+00	1.118E-01	5.514E-02	2.700E-02	2.879E-06	1.446E-05	1.283E-05	1.191E-04	3.533E-05
2045.00	4.465E+00	9.624E+00	1.637E+00	1.118E-01	5.514E-02	2.700E-02	2.879E-06	1.446E-05	1.283E-05	1.191E-04	3.533E-05
2176.00	1.388E+00	5.546E+00	6.006E+00	1.059E-01	5.962E-02	1.190E-02	3.334E-06	2.010E-07	1.604E-05	1.074E-04	1.333E-05
2176.00	1.388E+00	5.546E+00	6.006E+00	1.059E-01	5.962E-02	1.190E-02	3.334E-06	2.010E-07	1.604E-05	1.074E-04	1.333E-05
2176.00	7.111E+00	1.240E+00	1.088E+01	9.488E-02	2.728E-02	6.473E-02	4.349E-06	1.091E-05	8.335E-06	1.087E-04	8.095E-05
2176.00	7.111E+00	1.240E+00	1.088E+01	9.488E-02	2.728E-02	6.473E-02	4.349E-06	1.091E-05	8.335E-06	1.087E-04	8.095E-05
2226.00	1.233E+01	1.274E+01	8.066E+00	4.412E-02	3.369E-02	7.635E-02	4.696E-06	1.205E-05	4.379E-06	1.183E-04	1.019E-04
2226.00	1.233E+01	1.274E+01	8.066E+00	4.412E-02	3.369E-02	7.635E-02	4.696E-06	1.205E-05	4.379E-06	1.183E-04	1.019E-04
2276.00	1.627E+01	1.346E+01	5.973E+00	7.488E-02	6.650E-02	4.172E-03	5.192E-06	7.681E-07	1.093E-05	1.193E-04	5.670E-06
2276.00	1.627E+01	1.346E+01	5.973E+00	7.488E-02	6.650E-02	4.172E-03	5.192E-06	7.681E-07	1.093E-05	1.193E-04	5.670E-06
2276.00	1.558E+01	1.282E+01	7.300E+00	7.450E-02	8.593E-02	5.061E-03	5.265E-06	4.824E-07	1.073E-05	1.048E-04	1.408E-05
2276.00	1.558E+01	1.282E+01	7.300E+00	7.450E-02	8.593E-02	5.061E-03	5.265E-06	4.824E-07	1.073E-05	1.048E-04	1.408E-05
2276.00	1.501E+01	8.140E+00	2.818E+00	6.743E-02	5.319E-02	1.316E-02	7.041E-05	4.398E-07	4.051E-06	1.036E-04</	

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686,00											
1686,00											
1746,00											
1806,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,183E+00	2,996E+00	2,559E+01	2,815E+02	5,467E-02	1,387E-01	3,000E-06	1,262E-05	7,836E-06	2,846E-02	1,282E-01
2346,00	1,748E+01	1,103E+01	4,701E+01	7,200E+02	1,024E-01	1,813E-01	7,084E-06	1,321E-05	1,029E-05	7,202E-02	9,090E-02
2406,00	3,788E+01	2,830E+01	2,609E+01	1,405E+01	1,062E-01	1,123E-01	5,630E-05	1,857E-05	2,758E-06	1,410E-01	4,757E-02
2430,00	4,078E+01	3,477E+01	1,578E+01	1,503E-01	1,012E-01	2,252E-01	7,115E-05	3,073E-05	3,431E-08	1,509E-01	2,328E-02
2450,00	7,650E+00	6,852E+00	6,455E+00	2,676E-02	1,462E-01	3,581E-01	8,206E-05	4,822E-05	2,251E-05	2,670E-02	1,410E-01
2450,00	1,217E+00	9,433E+00	6,309E+00	4,186E-02	1,489E-01	3,623E-01	8,275E-05	4,876E-05	2,227E-05	4,175E-02	1,506E-01
2466,00	2,638E-01	4,098E+00	3,975E-02	2,498E-02	4,430E+02	2,401E-01	8,534E-05	2,332E-05	4,462E-06	2,507E-02	5,687E-02
2472,00	2,037E-02	5,342E+00	2,852E+00	4,752E-03	1,066E-02	1,284E-02	9,324E-05	1,404E-05	9,231E-07	4,858E-03	7,112E-03
2477,00	7,398E-03	5,990E+00	4,504E+00	1,739E-03	3,047E-02	8,415E-02	9,952E-05	2,926E-05	1,991E-06	1,649E-03	2,750E-02
2482,00	5,580E-04	6,188E+00	5,261E+00	1,931E-03	3,238E-02	1,049E-01	1,012E-04	3,185E-05	2,247E-06	1,841E-03	3,247E-02

TIME	U			V			H			GAMMA ERROR	PSI ERROR
	U	V	H	U	V	H	U	V	H		
1686,00											
1686,00											
1746,00											
1806,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,160E+00	1,871E+01	1,771E+01	2,785E+02	1,309E-01	7,144E-02	3,057E-06	4,660E-06	1,409E-05	3,703E-05	1,054E-04
2346,00	1,745E+01	1,138E+01	4,694E+01	7,167E-02	1,037E-01	1,806E-01	7,042E-06	1,317E-05	1,038E-05	1,373E-04	2,872E-04
2406,00	3,784E+01	2,841E+01	2,603E+01	1,403E-01	1,061E-01	1,126E-01	5,633E-05	1,849E-05	2,716E-06	3,260E-04	2,306E-04
2430,00	4,075E+01	3,443E+01	1,573E+01	1,502E-01	1,010E-01	2,253E-01	7,118E-05	3,065E-05	6,743E-09	3,583E-04	4,996E-04
2450,00	7,650E+00	6,851E+00	6,459E+00	2,684E-02	1,465E-01	3,580E-01	8,208E-05	4,816E-05	2,255E-05	9,786E-05	8,327E-04
2450,00	1,211E+00	9,429E+00	6,316E+00	4,195E-02	1,491E-01	3,622E-01	8,270E-05	4,869E-05	2,231E-05	7,380E-05	8,427E-04
2466,00	2,627E-01	4,098E+00	4,114E-02	2,499E-02	4,437E-02	2,401E-01	8,535E-05	2,330E-05	9,470E-06	6,203E-06	6,583E-04
2472,00	1,951E-02	5,342E+00	2,852E+00	4,750E-03	1,066E-02	1,284E-02	9,324E-05	1,406E-05	9,213E-07	2,416E-05	3,773E-05
2477,00	6,421E-03	5,990E+00	4,505E+00	1,741E-03	3,047E-02	8,415E-02	9,952E-05	2,927E-05	1,988E-06	3,657E-05	2,639E-04
2482,00	6,354E-04	6,191E+00	5,257E+00	1,931E-03	3,245E-02	1,049E-01	1,012E-04	3,185E-05	2,269E-06	4,522E-06	3,465E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

2,045E-08	5,596E-08	4,483E-08	5,924E-07	8,964E-07	1,877E-06	3,227E-06	2,252E-05	3,651E-05
6,230E+00	5,933E-04	2,547E-04	3,351E-06	1,458E-03				

C-110

SYSTEM D' GROUP 14

(LOCALIZER SECOND ORDER )

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00											
1746,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,925E+01	3,355E+01	2,866E+02	3,153E-01	6,123E-01	1,554E+00	3,360E+05	1,413E-04	8,776E-05	3,187E-01	1,436E+00
2346,00	3,648E+01	1,902E+01	7,093E+01	1,532E-01	1,485E-01	4,494E+01	7,560E+05	4,361E-05	1,860E-05	1,535E-01	1,359E-01
2406,00	5,933E+01	4,467E+01	3,883E+01	2,277E-01	1,208E-01	5,483E-01	1,253E-04	6,176E-05	1,017E-05	2,286E-01	5,137E-02
2430,00	5,480E+01	4,563E+01	2,716E+01	2,011E-01	1,161E-01	7,691E-01	1,102E-04	5,411E-05	7,058E-06	2,020E-01	3,775E-02
2450,00	7,722E+00	4,500E+01	1,370E+01	3,864E-02	1,598E-01	4,004E-01	8,930E+05	5,196E-05	1,804E-05	3,926E-02	1,382E-01
2450,00	1,532E+00	4,627E+01	1,270E+01	4,354E-02	1,658E-01	3,973E-01	8,886E+05	5,191E-05	1,776E-05	4,404E-02	1,482E-01
2466,00	4,630E-01	4,879E+00	6,436E+00	4,720E-02	1,454E-01	5,306E-01	8,734E+05	6,228E-05	2,312E-05	4,728E-02	1,510E-01
2472,00	5,261E-02	4,739E+00	8,125E+00	3,797E-02	1,247E-01	5,101E-01	9,300E-05	7,975E-05	1,917E-05	3,796E-02	1,275E-01
2477,00	4,257E-03	4,450E+00	7,393E+00	2,070E-02	8,483E-02	3,944E-01	1,001E+04	6,387E-05	1,529E-05	2,069E-02	8,373E-02
2482,00	1,935E-02	4,309E+00	6,238E+00	9,001E-03	5,582E-02	2,969E-01	1,070E-04	5,117E-05	9,950E-06	8,994E-03	5,009E-02

TIME	U	V	W	U	V	W	U	V	W	GAMMA ERROR	PSI ERROR
1686,00											
1746,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	6,899E+01	2,096E+02	1,984E+02	3,119E-01	1,467E+00	8,001E-01	3,424E-05	5,219E-05	1,578E-04	6,388E-04	1,180E-03
2346,00	3,642E+01	1,940E+01	7,085E+01	1,530E-01	1,506E-01	4,493E-01	7,571E-05	4,351E-05	1,884E-05	2,602E-04	7,124E-04
2406,00	5,927E+01	4,474E+01	3,885E+01	2,275E-01	1,204E-01	5,485E-01	1,254E-04	6,155E-05	1,028E-05	4,851E-04	1,130E-03
2430,00	5,476E+01	4,568E+01	2,717E+01	2,010E-01	1,159E-01	4,693E-01	1,102E-04	5,400E-05	7,112E-06	4,570E-04	1,043E-03
2450,00	7,722E+00	4,499E+01	1,373E+01	3,865E-02	1,549E-01	4,004E-01	8,932E-05	5,191E-05	1,806E-05	1,830E-04	9,321E-04
2450,00	1,545E+00	4,626E+01	1,273E+01	4,355E-02	1,659E-01	3,973E-01	8,886E-05	5,188E-05	1,776E-05	1,774E-04	9,248E-04
2466,00	4,621E-01	4,881E+00	6,435E+00	4,731E-02	1,456E-01	5,306E-01	8,734E-05	6,227E-05	2,315E-05	6,231E-05	1,455E-03
2472,00	5,219E-02	4,739E+00	8,124E+00	3,798E-02	1,247E-01	5,101E-01	9,306E-05	7,975E-05	1,918E-05	7,101E-05	1,505E-03
2477,00	4,009E-03	4,450E+00	7,393E+00	2,071E-02	8,479E-02	3,944E-01	1,001E-04	6,387E-05	1,528E-05	6,759E-05	1,236E-03
2482,00	1,934E-02	4,309E+00	6,238E+00	9,001E-03	5,598E-02	2,968E-01	1,070E-04	5,117E-05	9,974E-06	2,735E-05	9,804E-04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 2,344E-08 7,220E-08 5,053E-08 1,021E-06 2,114E-06 1,916E-06 1,800E-05 2,221E-05 3,929E-05  
 4,290E+00 5,763E-04 1,431E-02 9,615E-04 2,144E-03

C-111

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR	
1686,00												
1686,00												
1746,00												
1806,00												
1806,00												
1866,00												
1926,00												
1986,00												
2046,00												
2106,00												
2166,00												
2226,00												
2286,00												
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2346,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2406,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2450,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2450,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2450,00	8,151E-01	6,498E-02	1,034E-03	1,848E-03	1,004E-03	1,535E-04	1,107E-08	1,558E-07	3,098E-08	5,582E-07	2,324E-03	2,925E-03
2456,00	8,827E-01	2,551E-01	1,115E-02	2,321E-03	4,435E-03	1,483E-04	1,558E-07	3,098E-08	5,582E-07	2,324E-03	2,925E-03	3,194E-03
2472,00	9,909E-01	3,063E-01	5,670E-03	2,988E-03	5,217E-03	2,178E-04	1,847E-07	3,309E-08	6,401E-07	2,544E-03	3,490E-03	3,490E-03
2477,00	9,986E-01	3,351E-01	1,287E-03	2,539E-03	5,595E-03	3,865E-04	2,153E-07	5,368E-08	6,401E-07	2,544E-03	3,490E-03	3,490E-03
2482,00	1,003E+00	3,717E-01	1,539E-03	1,670E-03	5,683E-03	4,398E-04	2,517E-07	4,806E-08	6,434E-07	1,675E-03	5,658E-03	5,658E-03

TIME	U			V			W			GAMMA ERROR	PSI ERROR	
	U	V	W	U	V	W	U	V	W			
1686,00												
1686,00												
1746,00												
1806,00												
1806,00												
1866,00												
1926,00												
1986,00												
2046,00												
2106,00												
2166,00												
2226,00												
2286,00												
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2346,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2406,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2430,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2450,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	
2450,00	8,151E-01	6,451E-02	1,077E-03	1,848E-03	1,005E-03	1,528E-04	3,104E-08	4,245E-08	1,514E-07	4,270E-06	3,557E-07	4,030E-07
2456,00	8,826E-01	2,534E-01	1,107E-02	2,320E-03	4,436E-03	1,468E-04	1,558E-07	3,075E-08	5,582E-07	9,966E-06	4,030E-07	6,440E-07
2472,00	9,909E-01	3,064E-01	5,632E-03	2,987E-03	5,218E-03	2,184E-04	1,847E-07	3,319E-08	6,401E-07	1,327E-05	1,216E-06	1,216E-06
2477,00	9,987E-01	3,352E-01	1,516E-03	2,539E-03	5,595E-03	3,861E-04	2,152E-07	5,364E-08	6,401E-07	1,327E-05	1,216E-06	1,216E-06
2482,00	1,003E+00	3,717E-01	1,793E-03	1,670E-03	5,683E-03	4,437E-04	2,517E-07	4,849E-08	6,434E-07	5,804E-06	1,465E-06	1,465E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 2,327E-10 4,592E-10 1,987E-10 5,166E-08 2,390E-08 5,465E-09 4,355E-07 2,690E-07 1,401E-07  
 3,611E-01 1,318E-06 9,882E-01 1,418E-08 4,405E-05

C-112



ORIGINAL PAGE IS  
OF POOR QUALITY

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1646.00											
1646.00											
1746.00											
1846.00											
1846.00											
1926.00											
1946.00											
2046.00											
2146.00											
2146.00											
2226.00											
2226.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2242.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2242.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2446.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	5.006E+01	3.991E+00	5.451E-02	1.155E-01	6.104E-02	9.429E-03	5.797E-07	2.013E-06	4.296E-06	1.154E-01	1.447E-03
2446.00	9.662E+00	4.775E+00	5.433E-01	2.648E-02	6.735E-02	2.532E-03	5.320E-06	8.297E-07	7.124E-06	2.642E-02	7.206E-02
2472.00	3.259E+00	3.688E+00	2.622E-01	6.423E-02	4.200E-02	1.320E-02	5.039E-06	1.560E-06	3.222E-06	6.418E-02	6.755E-02
2477.00	1.205E+00	4.766E+00	8.666E-02	1.713E-01	6.467E-02	1.834E-02	1.664E-05	9.357E-07	3.861E-06	1.712E-01	1.404E-01
2442.00	1.597E-01	5.526E+00	3.009E-02	2.096E-01	7.494E-02	1.919E-02	1.234E-05	6.035E-07	4.132E-06	2.095E-01	7.798E-02

TIME	U			V			N			GAMMA ERROR	PSI ERROR
	U	V	N	U	V	N	U	V	N		
1646.00											
1646.00											
1746.00											
1846.00											
1846.00											
1926.00											
1946.00											
2046.00											
2146.00											
2146.00											
2226.00											
2226.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2242.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2242.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2346.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2446.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2430.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2450.00	5.007E+01	3.962E+00	6.612E-02	1.155E-01	6.175E-02	9.386E-03	6.782E-07	2.608E-06	9.296E-06	2.623E-04	2.185E-05
2446.00	9.661E+00	4.778E+00	5.417E-01	2.650E-02	6.732E-02	2.509E-03	5.320E-06	8.297E-07	7.124E-06	1.613E-05	6.907E-06
2472.00	3.258E+00	3.687E+00	2.617E-01	6.424E-02	4.207E-02	1.321E-02	6.039E-06	1.561E-06	3.222E-06	9.565E-05	5.895E-05
2477.00	1.206E+00	4.766E+00	8.710E-02	1.713E-01	6.566E-02	1.833E-02	1.664E-05	9.362E-07	3.861E-06	3.234E-04	5.744E-05
2442.00	1.598E-01	5.526E+00	3.383E-02	2.096E-01	7.494E-02	1.924E-02	1.234E-05	6.063E-07	4.132E-06	6.882E-04	6.353E-05

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

2.033E-09	1.004E-08	4.809E-09	9.388E-06	8.520E-06	6.103E-06	1.599E-04	2.403E-05	4.851E-05
5.558E+00	7.715E-06	4.273E-02	1.602E-07	1.371E-01				

C-113



SYSTEM D GROUP 16

(DME SURVEY ERRORS)

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE	VELOCITY
	R	D	C	R'	D	C	R'	D	C	RATE ERROR	MAG ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	1.042E+02	6.073E+01	5.820E+01	5.847E+04	2.418E+04	1.830E+04	4.978E+10	9.526E+10	4.697E+09	3.825E+04	2.903E+04
1746.00	2.227E+01	7.132E+01	8.991E+01	9.989E+04	1.844E+03	5.856E+04	2.178E+08	1.407E+08	1.452E+08	8.444E+04	6.958E+04
1806.00	3.747E+01	8.934E+01	9.526E+01	1.130E+03	1.498E+03	6.795E+04	2.657E+08	2.521E+08	1.664E+08	1.039E+03	6.242E+04
1806.00	1.419E+01	9.576E+01	9.549E+01	6.323E+04	1.632E+03	7.176E+04	3.897E+08	2.369E+08	2.459E+08	5.110E+04	7.866E+04
1866.00	4.796E+01	8.630E+01	8.784E+01	1.340E+03	2.036E+03	1.593E+03	4.449E+08	5.412E+08	2.087E+08	1.308E+03	1.403E+03
1926.00	6.619E+01	7.071E+01	8.828E+01	1.684E+03	2.827E+03	2.270E+03	5.564E+08	5.346E+08	5.708E+08	1.666E+03	1.215E+03
1986.00	8.524E+01	6.157E+01	8.238E+01	1.785E+03	3.812E+03	2.786E+03	4.261E+08	4.615E+08	8.456E+08	1.772E+03	7.950E+04
2046.00	9.930E+01	4.859E+01	8.951E+01	1.998E+03	4.104E+03	2.207E+03	4.014E+08	4.122E+08	1.251E+07	1.905E+03	1.113E+03
2106.00	1.130E+00	1.850E+01	1.060E+00	2.813E+03	1.827E+03	3.765E+03	1.384E+07	5.531E+07	1.056E+07	2.795E+03	2.270E+03
2166.00	1.317E+00	3.090E+01	1.234E+00	3.287E+03	1.996E+03	5.934E+03	2.660E+07	6.752E+07	4.063E+07	3.262E+03	2.509E+03
2226.00	1.510E+00	4.982E+01	1.435E+00	3.180E+03	3.144E+03	6.684E+03	2.661E+07	6.264E+07	4.638E+07	3.176E+03	3.703E+03
2286.00	1.661E+00	8.144E+01	1.392E+00	2.986E+03	4.388E+03	5.589E+03	2.190E+07	4.164E+07	4.671E+07	2.996E+03	6.882E+03
2292.00	1.674E+00	8.191E+01	1.583E+00	2.988E+03	4.437E+03	5.481E+03	2.123E+07	3.984E+07	4.594E+07	2.995E+03	6.721E+03
2292.00	1.627E+00	8.006E+01	7.413E+01	2.799E+03	3.545E+03	4.036E+03	1.709E+07	2.726E+07	3.505E+07	2.802E+03	4.958E+03
2346.00	1.692E+00	8.938E+01	8.256E+02	2.800E+03	3.121E+03	4.799E+03	3.355E+08	3.638E+07	2.791E+07	2.887E+03	2.017E+03
2406.00	1.681E+00	1.129E+00	7.106E+02	2.995E+03	3.413E+03	2.407E+03	4.602E+07	1.369E+07	2.254E+07	3.008E+03	2.382E+03
2430.00	1.680E+00	1.224E+00	3.773E+02	3.022E+03	3.484E+03	1.320E+03	6.545E+07	1.558E+07	2.051E+07	3.038E+03	2.133E+03
2450.00	1.059E+00	7.041E+01	4.042E+02	8.291E+04	9.815E+04	1.244E+03	7.667E+07	3.519E+07	1.520E+07	8.273E+04	1.078E+03
2450.00	1.960E+01	6.753E+01	4.530E+02	1.275E+03	1.412E+03	1.425E+03	7.767E+07	3.729E+07	2.394E+07	1.269E+03	1.042E+03
2466.00	1.217E+01	7.149E+01	2.944E+02	1.647E+03	4.813E+03	3.651E+04	7.281E+07	2.763E+07	6.045E+07	1.649E+03	3.682E+03
2472.00	8.636E+03	7.239E+01	1.192E+02	2.340E+03	5.584E+03	1.279E+03	7.275E+07	3.825E+07	6.859E+07	2.345E+03	3.480E+03
2477.00	1.372E+03	7.341E+01	1.916E+03	2.038E+03	5.708E+03	1.628E+03	7.242E+07	4.246E+07	6.829E+07	2.044E+03	4.064E+03
2482.00	2.230E+03	7.516E+01	7.602E+03	1.359E+03	5.923E+03	1.651E+03	7.154E+07	4.196E+07	6.812E+07	1.365E+03	5.903E+03

TIME	U	V	W	X	Y	Z	U	V	W	GAMMA ERROR	PSI ERROR
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.198E+02	8.036E+01	2.454E+01	5.730E+04	3.187E+04	6.209E+05	6.042E+10	1.248E+09	4.615E+09	7.951E+08	1.947E+09
1746.00	2.383E+01	9.840E+01	5.844E+01	1.000E+03	8.873E+04	1.719E+03	2.151E+08	1.918E+08	4.434E+07	7.791E+07	4.434E+07
1806.00	3.837E+01	9.794E+01	8.600E+01	1.132E+03	6.235E+04	1.521E+03	2.352E+08	1.872E+08	2.422E+08	3.824E+07	5.495E+07
1806.00	1.513E+01	1.003E+00	9.052E+01	6.342E+04	7.842E+04	1.660E+03	3.850E+08	2.829E+08	1.934E+08	1.609E+07	5.794E+07
1866.00	4.832E+01	9.656E+01	7.618E+01	1.345E+03	1.282E+03	2.466E+03	4.454E+08	4.454E+08	3.888E+08	6.109E+07	1.163E+06
1926.00	6.634E+01	9.772E+01	5.676E+01	1.691E+03	1.219E+03	3.414E+03	5.531E+08	5.701E+08	5.425E+08	1.250E+06	2.599E+06
1986.00	8.524E+01	9.872E+01	2.864E+01	1.786E+03	7.098E+04	4.667E+03	4.233E+08	9.194E+08	2.910E+08	1.702E+03	4.634E+06
2046.00	9.930E+01	9.880E+01	2.475E+01	1.998E+03	1.177E+03	4.524E+03	4.013E+08	1.174E+07	5.975E+08	4.005E+06	5.599E+06
2106.00	1.129E+00	6.954E+01	8.221E+01	2.809E+03	1.927E+03	3.719E+03	1.393E+07	3.097E+07	4.733E+07	2.569E+06	4.275E+06
2166.00	1.316E+00	3.103E+01	1.236E+00	3.269E+03	2.005E+03	5.941E+03	2.669E+07	6.744E+07	4.070E+07	3.504E+06	7.435E+06
2226.00	1.508E+00	1.108E+00	1.044E+00	3.159E+03	3.898E+03	6.287E+03	2.682E+07	7.305E+07	2.696E+07	4.529E+06	8.394E+06
2286.00	1.659E+00	1.415E+00	7.774E+01	2.973E+03	7.021E+03	1.130E+03	2.208E+07	9.538E+08	6.178E+07	4.788E+06	1.648E+06
2292.00	1.672E+00	1.368E+00	8.675E+01	2.973E+03	6.852E+03	1.688E+03	2.141E+07	7.565E+08	6.020E+07	4.797E+06	2.489E+06
2292.00	1.425E+00	9.594E+01	5.250E+01	2.791E+03	5.045E+03	1.058E+03	1.719E+07	1.265E+07	4.252E+07	4.317E+05	2.700E+06
2346.00	1.691E+00	8.969E+01	7.920E+02	2.874E+03	3.142E+03	4.789E+03	3.399E+08	3.627E+07	2.805E+07	5.003E+06	7.574E+06
2406.00	1.680E+00	1.127E+00	7.609E+02	2.990E+03	3.419E+03	2.404E+03	4.602E+07	1.372E+07	2.233E+07	7.457E+06	4.935E+06
2430.00	1.679E+00	1.225E+00	3.737E+02	3.019E+03	3.487E+03	1.319E+03	6.545E+07	1.557E+07	2.049E+07	8.175E+06	2.931E+06
2450.00	1.059E+00	7.042E+01	4.090E+02	8.293E+04	9.868E+04	1.247E+03	7.669E+07	3.515E+07	1.523E+07	1.439E+06	2.993E+06
2450.00	1.959E+01	6.753E+01	4.576E+02	1.275E+03	1.412E+03	1.425E+03	7.764E+07	3.725E+07	2.401E+07	3.222E+06	3.314E+06
2466.00	1.218E+01	7.149E+01	2.920E+02	1.646E+03	4.813E+03	3.644E+03	7.282E+07	2.761E+07	6.046E+07	8.613E+06	9.985E+07
2472.00	8.703E+03	7.239E+01	1.184E+02	2.340E+03	5.585E+03	1.279E+03	7.275E+07	3.825E+07	6.859E+07	1.202E+05	3.773E+06
2477.00	1.412E+03	7.341E+01	1.913E+03	2.038E+03	5.709E+03	1.628E+03	7.242E+07	4.246E+07	6.829E+07	1.251E+05	5.101E+06
2482.00	2.225E+03	7.518E+01	8.082E+03	1.359E+03	5.923E+03	1.652E+03	7.154E+07	4.196E+07	6.812E+07	4.778E+06	5.457E+06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

2.308E+10	6.386E+10	2.508E+10	3.454E+08	2.316E+08	2.996E+08	4.492E+07	2.251E+07	4.880E+07
5.070E+01	4.810E+06	1.451E+03	1.492E+07	1.465E+04				

C-114

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE VELOCITY	
	R	D	C	R	D	C	R	D	C	RATE ERROR	MAG ERROR
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	1,207E-02	4,848E-01	4,139E-01	1,498E-04	2,665E-04	2,794E-07	2,717E-09	2,171E-09	2,015E-10	2,014E-04	2,358E-04
1746,00	2,983E-03	3,467E-01	2,529E-01	5,920E-05	1,547E-03	3,205E-04	8,402E-09	3,738E-09	6,776E-09	5,014E-05	6,160E-04
1806,00	2,344E-01	1,568E-01	4,757E-02	5,213E-04	9,197E-04	3,832E-04	4,280E-09	1,436E-08	9,001E-09	5,192E-04	2,662E-04
1806,00	9,526E-02	1,074E-01	5,679E-02	1,574E-04	7,585E-04	5,045E-04	1,255E-08	1,316E-08	1,126E-08	1,547E-04	1,591E-04
1866,00	2,065E-02	2,101E-01	1,673E-01	3,274E-04	1,739E-03	1,422E-03	3,525E-08	1,252E-08	1,252E-08	3,184E-09	9,443E-04
1926,00	1,249E-01	3,468E-01	3,004E-01	8,278E-04	2,667E-03	2,124E-03	4,590E-08	5,525E-09	5,066E-08	6,362E-04	7,442E-04
1986,00	7,611E-03	6,075E-01	4,242E-01	4,064E-04	3,720E-03	2,660E-03	3,655E-08	3,821E-08	9,194E-08	6,202E-04	6,202E-04
2046,00	6,104E-02	8,252E-01	4,951E-01	5,332E-04	3,949E-03	2,091E-03	3,474E-08	1,308E-07	8,430E-08	1,968E-03	2,323E-03
2106,00	2,492E-01	9,762E-01	1,965E-01	1,975E-03	1,599E-03	3,822E-03	1,373E-07	5,566E-07	8,430E-08	1,968E-03	2,323E-03
2166,00	4,522E-01	7,293E-01	5,606E-01	2,364E-03	1,985E-03	4,970E-03	2,545E-07	6,755E-07	6,269E-07	4,261E-01	1,955E-03
2226,00	6,049E-01	5,235E-01	8,714E-01	1,951E-03	3,146E-03	6,743E-03	2,519E-07	4,261E-07	4,261E-07	1,524E-03	6,977E-03
2286,00	6,477E-01	1,993E-01	8,790E-01	1,331E-03	4,379E-03	5,639E-03	2,021E-07	3,948E-07	4,184E-07	1,244E-03	6,615E-03
2292,00	6,467E-01	1,753E-01	8,791E-01	1,303E-03	4,427E-03	5,527E-03	1,450E-07	3,948E-07	2,685E-07	8,194E-04	4,685E-03
2292,00	5,437E-01	2,254E-01	4,530E-01	4,334E-04	3,527E-03	3,212E-03	1,439E-07	1,840E-07	2,685E-07	6,609E-04	2,434E-03
2346,00	5,398E-01	1,662E-01	3,001E-02	6,800E-04	2,574E-03	3,043E-04	4,132E-08	8,333E-08	1,123E-07	6,609E-04	2,434E-03
2406,00	6,470E-01	5,779E-02	7,527E-02	1,054E-03	2,771E-03	1,223E-03	2,444E-07	1,955E-07	1,010E-07	1,051E-03	2,214E-03
2430,00	6,704E-01	1,509E-01	1,856E-01	1,224E-03	3,784E-03	2,977E-03	4,923E-07	3,931E-07	1,173E-07	1,225E-03	2,031E-03
2450,00	2,295E-01	1,435E+00	4,183E-01	2,914E-04	8,114E-03	9,990E-03	1,174E-06	1,429E-06	8,873E-07	2,739E-04	7,222E-03
2450,00	3,774E-02	1,587E+00	4,326E-01	7,769E-04	6,716E-03	1,049E-02	1,251E-06	1,507E-06	9,447E-07	7,601E-04	7,422E-03
2456,00	6,070E-02	5,976E-01	7,125E-01	9,553E-04	3,784E-03	8,011E-04	1,486E-06	7,174E-07	3,581E-07	9,447E-04	3,813E-03
2472,00	6,781E-03	7,352E-01	3,416E-01	2,694E-03	6,741E-03	2,173E-02	2,199E-06	4,070E-06	1,065E-06	2,665E-03	8,400E-03
2477,00	8,902E-04	8,051E-01	6,748E-02	2,525E-03	1,010E-02	2,955E-02	2,708E-06	5,187E-06	1,256E-06	2,514E-03	1,006E-02
2482,00	2,463E-03	8,323E-01	5,910E-02	1,603E-03	4,796E-03	3,038E-02	2,741E-06	5,188E-06	1,210E-06	1,542E-03	9,434E-03

GAMMA ERROR PSI ERROR

TIME	U			V			W			GAMMA ERROR			PSI ERROR		
	U	V	W	U	V	W	U	V	W	U	V	W	U	V	W
1686,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
1686,00	1,132E-02	2,465E-01	5,879E-01	1,430E-04	2,430E-04	1,179E-04	2,066E-09	1,942E-09	1,123E-09	4,267E-08	3,515E-08	3,352E-07	2,497E-08	3,352E-07	3,352E-07
1746,00	2,713E-03	2,871E-02	4,282E-01	4,500E-05	6,203E-04	1,238E-03	8,204E-09	7,804E-09	1,507E-09	2,497E-08	3,515E-08	3,352E-07	1,935E-08	3,352E-07	3,352E-07
1806,00	2,352E-01	2,699E-02	1,631E-01	5,155E-04	6,507E-05	9,972E-04	4,226E-09	1,942E-09	1,942E-09	1,935E-08	3,515E-08	3,352E-07	5,342E-07	3,352E-07	3,352E-07
1806,00	9,473E-02	3,029E-03	1,221E-01	1,531E-04	1,275E-04	9,050E-04	1,241E-08	5,179E-09	1,224E-08	5,342E-07	3,515E-08	3,352E-07	1,224E-08	3,352E-07	3,352E-07
1866,00	2,047E-02	1,124E-01	2,434E-01	2,386E-04	9,084E-04	2,054E-03	3,500E-08	2,091E-08	1,312E-08	1,019E-07	1,019E-07	2,552E-06	2,670E-08	2,552E-06	2,552E-06
1926,00	1,247E-01	1,446E-01	4,338E-01	4,040E-04	5,871E-04	4,535E-03	3,629E-08	9,524E-08	3,518E-08	3,623E-07	4,717E-06	4,717E-06	3,518E-08	3,623E-07	3,623E-07
1986,00	7,445E-03	1,038E-01	7,336E-01	4,040E-04	5,871E-04	4,535E-03	3,476E-08	1,210E-07	5,566E-08	8,446E-07	1,867E-06	4,156E-06	4,633E-07	1,867E-06	4,156E-06
2046,00	6,136E-02	2,727E-01	9,229E-01	5,347E-04	1,036E-03	4,346E-03	3,476E-08	1,577E-07	3,244E-07	4,633E-07	1,867E-06	4,156E-06	4,633E-07	1,867E-06	4,156E-06
2106,00	2,407E-01	4,853E-01	8,693E-01	1,968E-03	2,039E-03	3,611E-03	2,554E-07	6,747E-07	3,747E-07	3,244E-07	4,633E-07	1,867E-06	4,633E-07	1,867E-06	4,156E-06
2166,00	4,527E-01	7,280E-01	5,675E-01	2,339E-03	1,991E-03	5,974E-03	2,554E-07	6,747E-07	3,747E-07	3,244E-07	4,633E-07	1,867E-06	4,633E-07	1,867E-06	4,156E-06
2226,00	6,094E-01	1,015E+00	5,126E-02	1,919E-03	3,890E-03	6,353E-03	2,540E-07	7,009E-07	2,666E-07	3,164E-06	2,424E-06	7,484E-06	2,666E-07	3,164E-06	2,424E-06
2286,00	6,442E-01	5,154E-01	7,349E-01	1,307E-03	7,110E-03	6,379E-04	1,417E-03	1,967E-07	4,110E-08	5,767E-07	2,711E-06	2,711E-06	4,253E-08	3,422E-07	2,711E-06
2292,00	6,472E-01	4,348E-01	7,824E-01	1,280E-03	6,943E-03	6,943E-03	1,417E-03	1,967E-07	4,110E-08	5,767E-07	2,711E-06	2,711E-06	4,253E-08	3,422E-07	2,711E-06
2292,00	5,446E-01	1,301E-01	4,870E-01	8,157E-04	4,767E-03	2,346E-04	1,447E-07	4,253E-08	3,422E-07	1,116E-07	1,683E-06	5,052E-07	1,116E-07	1,683E-06	5,052E-07
2346,00	5,403E-01	1,643E-01	3,072E-02	6,719E-04	2,578E-03	3,558E-04	4,148E-08	4,148E-08	1,116E-07	1,683E-06	5,052E-07	1,683E-06	4,148E-08	4,148E-08	1,116E-07
2406,00	6,469E-01	5,803E-02	7,540E-02	1,050E-03	2,772E-03	1,226E-03	2,487E-07	1,952E-07	1,007E-07	3,779E-06	2,527E-06	2,527E-06	1,952E-07	1,007E-07	3,779E-06
2430,00	6,783E-01	1,511E-01	1,858E-01	1,222E-03	2,794E-03	2,978E-03	4,927E-07	3,926E-07	3,926E-07	4,525E-06	6,525E-06	6,525E-06	3,926E-07	3,926E-07	4,525E-06
2450,00	2,290E-01	1,430E+00	4,175E-01	2,955E-04	8,121E-03	9,894E-03	1,175E-06	1,428E-06	8,683E-07	7,660E-06	2,443E-05	2,443E-05	1,428E-06	8,683E-07	7,660E-06
2450,00	3,801E-02	1,587E+00	4,315E-01	7,808E-04	8,725E-03	1,049E-02	1,251E-06	1,505E-06	9,457E-07	7,660E-06	2,443E-05	2,443E-05	1,251E-06	1,505E-06	9,457E-07
2456,00	6,055E-02	5,974E-01	7,127E-01	9,563E-04	3,784E-03	7,999E-03	1,456E-06	7,182E-07	3,583E-07	2,049E-06	2,158E-06	2,158E-06	1,456E-06	7,182E-07	3,583E-07
2472,00	6,687E-03	7,352E-01	3,417E-01	2,696E-03	6,741E-03	2,172E-02	2,199E-06	4,070E-06	1,066E-06	4,540E-06	6,407E-06	6,407E-06	2,199E-06	4,070E-06	1,066E-06
2477,00	8,247E-04	8,031E-01	6,747E-02	2,526E-03	1,010E-02	2,955E-02	2,708E-06	5,187E-06	1,256E-06	7,410E-06	9,258E-06	9,258E-06	2,708E-06	5,187E-06	1,256E-06
2482,00	2,974E-03	8,323E-01	5,858E-02	1,604E-03	4,816E-03	3,037E-02	2,741E-06	5,187E-06	1,214E-06	4,788E-06	1,003E-04	1,003E-04	2,741E-06	5,187E-06	1,214E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)  
 1,381E-09 6,559E-09 4,010E-09 4,813E-08 1,868E-07 1,621E-07 1,383E-06 1,986E-06 3,632E-06  
 8,117E-01 1,112E-04 2,058E-03 1,454E-06 1,037E-04

C-115

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686,00											
1686,00											
1746,00											
1806,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	1,134E+01	5,496E+02	4,695E+01	5,165E+04	1,003E+03	2,545E+03	5,503E+08	2,315E+07	1,438E+07	5,221E+04	2,353E+03
2346,00	3,410E+01	2,264E-01	1,056E+00	1,398E+03	2,260E+03	4,513E+03	4,144E+08	3,487E-07	2,419E-07	1,306E+03	2,035E-03
2406,00	7,161E+01	5,407E-01	9,939E+01	2,571E+03	2,649E+03	1,120E+03	7,044E-07	6,324E-08	1,528E-07	2,580E+03	1,535E-03
2430,00	7,971E-01	7,121E+01	8,502E-01	2,925E+03	2,521E+03	1,739E+03	1,121E+06	4,104E-07	6,665E+08	2,938E+03	9,505E-04
2450,00	3,759E-01	1,297E+00	5,806E-01	3,241E+04	6,443E+03	9,707E+03	1,894E+06	1,593E+06	1,019E+06	3,025E+04	7,473E-03
2450,00	4,373E-02	1,476E+00	5,664E-01	1,136E+03	9,373E+03	1,017E+02	1,454E+06	1,659E+06	1,038E+06	1,111E+03	8,745E-03
2466,00	3,757E-02	4,874E-01	2,866E+01	3,602E+04	3,097E+03	9,528E+04	2,204E+06	5,243E+07	2,666E+07	3,525E+04	2,431E+03
2472,00	5,013E+03	5,407E+03	6,586E+01	2,040E+03	6,190E+03	2,183E+02	2,917E+06	3,831E+06	1,003E+06	2,051E+03	6,184E+03
2477,00	6,235E+04	7,148E+01	9,151E-01	1,992E+03	9,613E+03	2,961E+02	3,417E+06	4,996E+06	1,202E+06	1,982E+03	9,573E+03
2482,00	2,311E+03	7,483E-01	1,060E+00	1,263E+03	9,381E+03	3,040E+02	3,439E+06	4,996E+06	1,102E+06	1,252E+03	9,413E+03

TIME	U	V	W	U	V	W	U	Y	H	GAMMA ERROR	PSI ERROR
1686,00											
1686,00											
1746,00											
1806,00											
1806,00											
1866,00											
1926,00											
1986,00											
2046,00											
2106,00											
2166,00											
2226,00											
2286,00											
2292,00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00	0,000E+00
2292,00	1,130E-01	3,433E-01	3,250E-01	5,109E+04	2,402E+03	1,311E+03	5,608E+08	6,550E+08	2,585E+07	1,045E+06	1,933E+06
2346,00	3,403E+01	2,339E-01	1,055E+00	1,389E+03	2,292E+03	4,499E+03	4,043E+08	3,473E-07	2,441E-07	2,733E+06	1,151E+06
2406,00	7,153E+01	5,441E+01	9,927E+01	2,567E+03	2,656E+03	1,114E+03	7,045E+07	6,251E+08	1,526E+07	6,466E+06	2,338E+06
2430,00	7,964E-01	7,100E-01	8,493E-01	2,927E+03	2,522E+03	1,743E+03	1,121E+06	4,094E+07	6,610E+08	7,467E+06	3,620E+06
2450,00	3,752E-01	1,297E+00	5,815E-01	3,292E+04	6,444E+03	9,701E+03	1,895E+06	1,591E+06	1,020E+06	8,346E+06	2,255E+05
2450,00	4,240E-02	1,476E+00	5,674E-01	1,141E+03	9,374E+03	1,017E+02	1,455E+06	1,657E+06	1,039E+06	7,341E+06	2,563E+05
2466,00	3,744E-02	4,875E-01	2,865E-01	3,610E+04	3,098E+03	9,518E+04	2,209E+06	5,247E+07	2,684E+07	2,636E+06	2,624E+06
2472,00	4,912E+03	6,407E-01	6,585E-01	2,042E+03	6,192E+03	2,183E+02	2,916E+06	3,832E+06	1,004E+06	5,393E+06	6,445E+05
2477,00	5,674E+04	7,147E-01	9,131E-01	1,993E+03	9,610E+03	2,961E+02	3,417E+06	4,996E+06	1,202E+06	8,016E+06	9,285E+05
2482,00	2,320E+03	7,491E-01	1,059E+00	1,263E+03	9,401E+03	3,040E+02	3,439E+06	4,995E+06	1,105E+06	3,663E+06	1,004E+04

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1,384E-09	6,024E-09	3,984E-09	2,587E-08	1,677E-07	1,574E-07	1,071E-06	1,984E-06	3,497E+06
7,541E-01	1,111E+04	1,629E+03	1,868E-06	6,243E+03				

ORIGINAL PAGE IS  
OF POOR QUALITY

C-116

SYSTEM D GROUP 19

(VDR BIAS ERROR

TIME	POSITION ESTIMATE ERROR			VELOCITY ESTIMATE ERROR			PLATFORM TILT ESTIMATE ERROR			ALTITUDE RATE ERROR	VELOCITY MAG ERROR
	R	D	C	R	D	C	R	D	C		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.737E+01	1.903E+03	1.625E+03	5.881E-01	1.045E+00	1.097E-03	1.067E-05	6.523E-06	7.910E-07	7.906E-01	9.254E-01
1746.00	1.636E+01	6.359E+02	4.698E+02	1.791E-01	2.085E+00	2.953E-01	1.932E-05	6.262E-06	1.660E-05	1.614E-01	1.105E+00
1806.00	2.152E+02	1.357E+02	3.734E+01	6.335E-01	3.385E-01	7.813E-02	2.478E-06	1.442E-05	1.651E-05	6.324E-01	1.775E-01
1806.00	8.537E+01	8.958E+01	4.557E+01	2.946E-01	1.798E-01	3.113E-02	4.995E-06	1.500E-05	9.026E-06	2.926E-01	3.160E-02
1866.00	4.076E+00	7.605E+01	6.723E+01	7.857E-02	3.876E-01	3.455E-01	1.398E-05	5.206E-06	3.279E-06	7.501E-02	1.993E-01
1926.00	3.608E+01	6.729E+01	6.713E+01	1.503E-01	3.505E-01	3.139E-01	1.251E-05	8.536E-07	1.602E-06	1.523E-01	1.288E-01
1966.00	2.281E-03	4.956E+01	3.510E+01	1.366E-02	1.416E-01	8.861E-02	7.707E-06	1.266E-06	1.224E-06	1.338E-02	3.262E-02
2045.00	2.335E+00	3.308E+01	2.073E+01	1.005E-02	4.983E-03	2.892E-02	8.254E-06	6.060E-06	2.173E-06	1.052E-02	3.161E-02
2105.00	4.522E+00	2.282E+01	7.433E+00	4.401E-02	2.454E-01	1.978E-02	1.154E-05	5.542E-06	1.581E-05	4.467E-02	1.650E-01
2155.00	7.058E+00	1.530E+01	1.903E+01	6.521E-02	8.608E-02	1.134E-01	4.705E-06	1.620E-05	1.253E-06	6.570E-02	7.235E-02
2226.00	1.248E+01	8.649E+00	3.185E+01	7.389E-02	2.596E-03	1.857E-01	1.657E-05	2.151E-05	7.791E-06	7.455E-02	1.442E-01
2286.00	1.691E+01	4.245E+00	4.660E+01	7.038E-02	1.046E-01	2.474E-01	2.954E-06	2.459E-05	1.699E-05	7.677E-02	2.459E-01
2292.00	1.723E+01	5.418E+00	4.855E+01	7.075E-02	1.127E-01	2.551E-01	3.286E-06	2.494E-05	1.755E-05	7.128E-02	2.430E-01
2292.00	1.169E+01	3.012E+00	2.612E+01	4.558E-02	6.635E-02	1.338E-01	7.924E-07	1.592E-05	1.087E-05	4.584E-02	1.327E-01
2346.00	6.312E+00	1.457E+00	2.776E+00	1.799E-02	2.274E-02	1.585E-02	6.029E-06	3.059E-06	3.994E-06	1.796E-02	1.466E-02
2406.00	5.634E+00	1.845E+00	2.063E+00	1.358E-02	2.479E-02	2.074E-02	1.510E-06	3.441E-06	3.791E-06	1.399E-02	1.430E-02
2430.00	6.225E+00	2.616E+00	1.965E+00	1.454E-02	2.799E-02	2.069E-02	1.190E-06	3.369E-06	3.656E-06	1.457E-02	1.859E-02
2450.00	7.770E-01	7.213E-01	4.798E-01	1.633E-03	1.093E-02	6.650E-04	1.437E-06	6.587E-07	1.706E-06	1.641E-03	8.751E-03
2450.00	1.187E-01	5.813E-01	4.493E-01	1.467E-04	9.218E-03	5.073E-05	1.494E-06	5.345E-07	1.506E-06	1.534E-03	1.978E-03
2456.00	1.977E-02	1.890E-01	1.392E-01	4.267E-04	5.420E-03	1.092E-02	1.908E-06	1.066E-06	9.593E-07	4.285E-04	4.651E-03
2472.00	7.661E-04	1.542E-01	1.151E-01	1.417E-04	6.527E-03	6.728E-03	1.655E-06	3.965E-07	1.106E-06	1.451E-04	5.689E-03
2477.00	2.510E-04	1.681E-01	7.723E-02	5.721E-06	7.244E-03	3.700E-03	1.859E-06	5.966E-08	1.196E-06	7.694E-06	1.335E-03
2482.00	7.529E-05	1.941E-01	5.116E-02	9.042E-06	7.642E-03	2.012E-03	1.902E-06	3.025E-07	1.234E-06	6.346E-06	7.640E-03

TIME	U			V			W			GAMMA ERROR	PSI ERROR
	U	V	W	U	V	W	U	V	W		
1686.00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
1686.00	4.445E+01	9.677E+02	2.308E+03	5.612E+00	9.539E-01	4.627E-01	1.046E-05	7.623E-06	4.407E-06	1.675E-04	1.380E-04
1746.00	1.659E+01	4.764E+01	7.692E+02	1.529E-01	1.119E+00	1.791E+00	1.888E-05	1.726E-05	5.905E-06	6.556E-05	4.677E-04
1806.00	2.141E+02	2.870E+01	1.395E+02	6.287E-01	2.274E-01	2.741E-01	2.436E-06	8.651E-06	2.014E-05	2.397E-04	1.651E-04
1806.00	8.490E+01	8.156E-01	1.009E+02	2.929E-01	5.459E-02	1.769E-01	4.959E-06	2.407E-06	1.566E-05	1.095E-04	6.713E-05
1866.00	4.096E+01	3.758E+01	9.429E+01	7.842E-02	1.896E-01	4.833E-01	1.590E-05	6.258E-06	6.336E-07	2.568E-05	2.566E-04
1926.00	3.599E+01	3.726E+01	8.748E+01	1.506E-01	1.607E-01	4.423E-01	1.247E-05	6.801E-06	3.619E-06	1.352E-04	5.402E-04
1986.00	2.056E-02	8.068E+00	6.019E+01	1.375E-02	3.155E-02	1.640E-01	7.707E-06	4.123E-06	1.775E-06	1.094E-05	1.712E-04
2046.00	2.348E+00	1.178E+01	5.722E+01	1.006E-02	3.025E-02	1.449E-03	8.256E-06	3.620E-06	5.519E-06	5.506E-06	2.660E-06
2106.00	4.528E+00	9.177E+00	2.217E+01	4.429E-02	1.745E-01	1.736E-01	1.156E-05	1.565E-05	6.080E-06	8.255E-05	1.999E-04
2166.00	7.026E+00	1.526E+01	1.905E+01	6.512E-02	8.590E-02	1.136E-01	4.651E-06	1.622E-05	1.268E-06	9.913E-05	1.420E-04
2226.00	1.245E+01	3.133E+01	1.043E+01	7.344E-02	1.533E-01	1.050E-01	9.689E-07	1.826E-05	1.340E-05	1.214E-04	1.393E-04
2286.00	1.687E+01	3.712E+01	2.851E+01	6.975E-02	2.528E-01	9.123E-02	3.066E-06	4.249E-06	2.957E-05	1.337E-04	1.334E-04
2292.00	1.719E+01	3.533E+01	3.377E+01	7.013E-02	2.502E-01	1.236E-01	3.592E-06	7.894E-06	2.444E-05	1.356E-04	1.623E-04
2292.00	1.167E+01	1.909E+01	1.810E+01	4.521E-02	1.368E-01	6.013E-02	8.546E-07	3.725E-06	1.726E-05	8.302E-05	8.681E-05
2346.00	6.308E+00	1.494E+00	2.767E+00	1.791E-02	2.289E-02	1.570E-02	6.984E-06	3.034E-06	4.013E-06	3.340E-05	2.493E-05
2406.00	5.632E+00	1.857E+00	2.059E+00	1.334E-02	2.406E-02	2.406E-02	1.515E-06	3.430E-06	3.799E-06	4.131E-05	4.266E-05
2430.00	6.223E+00	2.625E+00	1.961E+00	1.451E-02	2.803E-02	2.065E-02	1.193E-06	3.583E-06	3.866E-06	5.680E-05	4.596E-05
2450.00	7.766E-01	7.221E-01	4.793E-01	1.626E-03	1.093E-02	6.575E-04	1.436E-06	6.583E-07	1.706E-06	1.375E-05	1.555E-06
2450.00	1.184E+01	5.816E-01	4.489E-01	1.415E-04	9.218E-03	8.701E-05	1.495E-06	5.343E-07	1.508E-06	9.413E-06	1.769E-07
2466.00	1.972E-02	1.869E-01	1.393E-01	4.252E-04	5.417E-03	1.092E-02	1.908E-06	1.066E-06	9.589E-07	6.891E-06	2.994E-05
2472.00	7.612E-04	1.542E-01	1.152E-01	1.406E-04	6.526E-03	6.729E-03	1.635E-06	3.967E-07	1.106E-06	1.106E-06	1.986E-05
2477.00	2.372E-04	1.681E-01	7.722E-02	5.124E-06	7.244E-03	3.994E-03	1.859E-06	5.993E-08	1.196E-06	9.640E-06	1.166E-05
2482.00	7.238E-05	1.941E-01	5.129E-02	9.157E-06	7.640E-03	2.018E-03	1.902E-06	3.017E-07	1.235E-06	3.458E-07	6.664E-06

ADDITIONAL STATE ESTIMATES AT TOUCH DOWN (10 TO 23)

1.098E-10	6.778E-10	9.737E-11	8.692E-08	6.788E-08	1.109E-08	8.855E-07	4.342E-08	1.357E-07
1.773E-01	4.911E-03	7.887E-05	1.928E-06	6.207E-05				

C-117