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The Ranger III Flight Path and Its Determination From Tracking Data

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ABSTRACT

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This Report describes the *Ranger III* tracking data obtained from the Deep Space Instrumentation Facility (DSIF) and the way in which these data were used to determine the spacecraft's orbit. The data are presented in the form of residual plots (i.e., the difference between the actual observed data and theoretical calculated data), and the resulting spacecraft orbit parameters are displayed in summary tables and the Orbit Determination Program (ODP) computer printout.

Ranger III executed a maneuver approximately 13½ hr from launch but missed the Moon by about 35,000 km because of booster-guidance errors. Its transmitter continued operating for another four days. Good tracking data were obtained both prior to and after the maneuver, which have given an estimate on the universal gravitational constant times the Earth's mass ($GM_{\oplus}$) as well as the spacecraft's position and velocity.

I. INTRODUCTION

At various times since the launching of *Ranger III* in 1962, some computations derived from the mission's data were used in reports on subsequent missions. However, because of the improved quality of the data on these later missions—*Ranger IV* through *VII*—reports on them have taken precedence over documentation of *Ranger III*. In fact, the quality of tracking data obtained on the later *Ranger* missions as well as on *Mariner* missions, including *Mariner IV*, so far surpasses the quality of *Ranger III* data that their analysis provides results far outweighing anything that could be achieved by more exhaustive analysis of *Ranger III* data. Comparison of *Ranger III* and *Ranger VII* data, for example, shows a remarkable difference in data quality as a result of tremendous advancements in the techniques of obtaining and handling data. Indeed, these techniques have become so far advanced that noise sources have now been reduced to the point where a double-precision orbit determination program is essential in the handling of present extremely accurate data.

Nevertheless, documentation of the types, amounts, and quality of tracking data derived from the *Ranger III* mission does have certain value. Therefore, this Report presents the results of *Ranger III* in terms of old existing high-speed computer computations.

There may be some apparent errors in these old calculations because of recent changes in thinking, but these

shortcomings will be pointed out, and the overall characteristics of the data will then be available for review. A final report will present results from all *Ranger* missions using the latest computational programs and most recent knowledge of data behavior. In the meantime, it is hoped that this abbreviated report will suffice.

Ranger III was launched January 26, 1962, at Cape Kennedy and was tracked for approximately five days by four Deep Space Instrumentation Facility (DSIF) stations, after which useful data for orbit calculations ended. About 13½ hr from launch, a maneuver was executed to reduce a 40,000-km lunar miss (total maneuver capability is $\approx$ 10,000 km). However, because of an error in the turn-angle sign convention, the maneuver executed was not the one planned, although it did result in a reduction of 5,000 km in the closest approach distance. After the maneuver, the spacecraft was tracked for another four days during which time the orbit was reestablished and the maneuver performance was measured. The actual trajectory characteristics of both the premaneuver and postmaneuver trajectories can be obtained from Ref. 1 and Appendices F and G.

The main body of this Report presents the tracking data in the form of residual plots and their statistics, along with comments and results on the spacecraft orbit parameters. The JPL Orbit Determination Program (Ref. 2) computer printouts are listed in the appendices, and—since the printout has the calculated data value and the residual—the raw doppler and angular data are available (i.e., calculated data plus residual equals raw data).

II. ANALYSIS OF DSIF TRANSPONDER DATA

A. Procedure

The Jet Propulsion Laboratory Orbit Determination Program (ODP) (Ref. 2) was the primary tool in analysis of the DSIF transponder data. Many additional capabilities have been added to the program since these computations were made back in May 1963, but their effects would cause no significant change in the calculations of the solution parameters. There are some anomalies in the data fits which will be pointed out, but these discrepancies should have minor effects on the final solution. The ODP does a modified weighted least-square fit to the data. It simultaneously estimates the six position and velocity components of the spacecraft at a given epoch, $GM_{\oplus}$, $GM_{☾}$, and station locations. Standard corrections are made on signal travel time, refraction, and station local vertical displacement. Each data point is weighted independently *a priori* and rejection limits are set to reject blunder points.

The final estimates and statistics are reported at various epochs and in two different coordinate systems. The estimates are made in two separate blocks, the premidcourse and the postmidcourse. These phases do not contain powered flight data and give strictly free-flight orbit parameters.

B. Method of Obtaining and Analyzing Data

1. Amount and Types of Data

Figure 1 shows the data coverage of tracking stations, the locations of which are shown in Table 1. At first glance there seems to be a huge amount of data available, but a closer look shows that there are only two doppler tracking stations: Station 1 at Johannesburg, South Africa, and Station 3, the Goldstone Tracking Station, in California. Neither of those stations have usable angular data. The doppler data covers only a few hours of the normal 10- to 12-hr view period. The angular data acquired at Station 4, Woomera, Australia, and Station 5, Johannesburg, South Africa, are good data, but they soon

Table 1. Deep-space station locations[a]

Station	Location	Geodetic latitude	Astronomic longitude
2, 3	Goldstone, California, U.S.A.	35.4°N	116.8°W
1, 5	Johannesburg, South Africa	25.9°S	27.7°E
4	Woomera, Australia	31.4°S	136.9°E

[a]Locations are approximate.

lose their effectiveness because the geometry becomes very weak as the probe leaves the Earth. These data are further broken down in Table 2, where the percentage of good data is tabulated as are percentages for various bad-data causes. The bad-format and blunder-point data are attributed to transmission errors at the station, over the teletype lines, or at the converter at the JPL control center in Pasadena, California. The "bad-data-condition code" reflects the out-of-lock condition of the station's hardware with the spacecraft. Better than 70% of transmitted data were good data.

There are three very noticeable areas in Fig. 1 where there is no doppler coverage, and these gaps will be explained. The first gap from injection plus 4 hr to injection plus 11 hr was a planned gap because the signal from the omniantenna was too weak to lock up in two-way doppler mode after 4 hr. Antenna switchover, incidentally, was made at Goldstone because that was the only station with command capability.

The next break at injection plus 14 hr to injection plus 20 hr was due to a failure in the doppler loop, and all

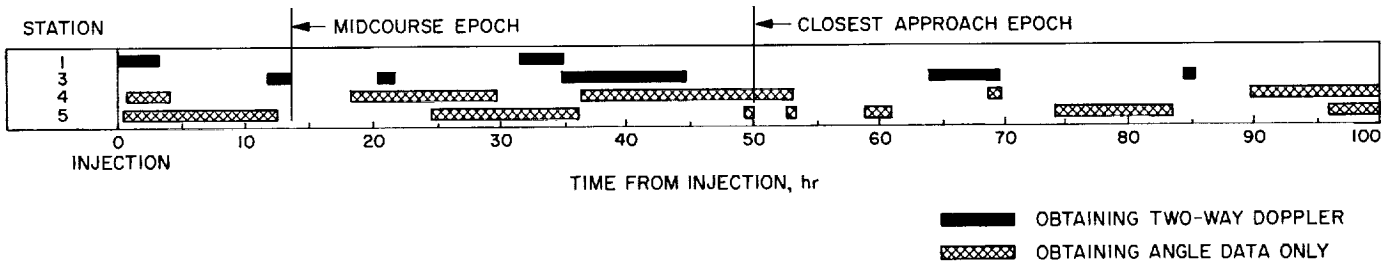

Fig. 1. *Ranger III* tracking station data coverage

Table 2. Summary of data

Station	Data type	Points received (%)	Points used (%)	Bad format (%)	Blunder points (%)	Bad data condition code (%)	Reject limits
Premidcourse							
1	Two-way doppler	1249 100%	903 72%	43 3.5%	7 0.5%	296 24%	2.0 cps
3	Two-way doppler	90 100%	66 73.5%	0 0%	4 4.5%	20 22%	1.0 cps
4	Hour angle to declination	479 100%	356 74%	10 2%	13 3%	100 21%	0.1 deg
5	Hour angle to declination	1008 100%	720 71.5%	193 19%	34 3.5%	61 6%	0.1 deg
Postmidcourse							
1	Two-way doppler	1423 100%	1183 83%	193 13.5%	5 0.5%	42 3%	3.0 cps
3	Two-way doppler	2105 100%	1841 87%	60 3%	19 1%	185 9%	1.8 cps
4	Hour angle to declination	1442 100%	968* 67%	263 18.4%	2 0.1%	209 14.5%	0.1 deg
5	Hour angle to declination	1524 100%	1064* 70%	207 13.5%	3 0.2%	250 16.3%	0.1 deg

*Usable but not used in orbit calculation.

data acquired at Station 3 at this time were bad data. This, however, is not reflected in Table 2. Station 1 could now get two-way doppler because the switchover to the high-gain antenna had increased the received power 28 db.

The last gap from injection plus 22 hr to injection plus 31 hr was caused partially because neither Station 1 nor Station 3 had a view of the spacecraft and partially because of a delay in setting up Station 1 for taking previously unplanned doppler data after the first pass. This setup was made because Station 3 had only 1 hr of good postmidcourse data. After the second pass, the received signal of Station 1 was too weak.

The other gaps in the doppler data are normal view periods for Station 3 and finally the weak-signal area. Reference 3 contains a discussion of peculiar characteristics of the station.

All doppler data taken on *Ranger III* were destruct-count doppler, meaning that the doppler count is reset to zero at the end of every count interval. This is in contrast to the present approach of sampling a cumulative counter (i.e., making a continuous count). The doppler count time was 1 sec at Station 1 with a 10-sec sample spacing, whereas at Station 3 the count time was 10 sec with the sampling interval varying from 20 sec to 1 min to 2 min. The angular data were taken at 20 sec and 1 min sample intervals. All these sampling rates and count times for exact periods can be seen in Appendices B and C under the residual format (i.e., block 7 explained in Appendix D).

2. Weighting the Data

The data are weighted *a priori* and reflect various noise sources with their correlation intervals such as counter roundoff, transmitter drift, refraction, cycle "drop" or "add-in," angle-correction error, angle jitter, and computer noise. Approximate data weights are shown in Table 3 and exactly in Appendices B and C under the residual printout. The number stated is actually the inverse weight, or the standard deviation of the "effective" noise, where effective noise is defined as the sum of the variance on the various noise sources mentioned above. The predominant noise sources in this doppler data are the rounding error and the transmitter drift, which have been significantly reduced in *Ranger VIII* and *Mariner IV* by continuous-count data over long sample times and rubidium-controlled transmitter oscillators. The angular data still have the same calibration problems and long correlation

Table 3. Data statistics

Station	Data type	Number of points	Doppler[a] count time in sec	Residual standard deviation[b]	Residual bias[b]	Weigh[b, c]	Remarks
Premidcourse							
1	Two-way doppler	903	1[d]	0.644	0.0047	0.71	All 10-sec sample
3	Two-way doppler	66	10[e]	0.282	−0.0076	0.33	All 1-min sample
4	Hour angle	356	—	0.011	−0.056	0.18	Weight for 1-min sample, some 20-sec sample
4	Declination	356	—	0.010	−0.038	0.18	Weight for 1-min sample, some 20-sec sample
5	Hour angle	720	—	0.010	0.018	0.18	Weight for 1-min sample, some 20-sec sample
5	Declination	720	—	0.020	0.016	0.18	Weight for 1-min sample
Postmidcourse							
1	Two-way doppler	1183	1	0.876	−0.051	2.5	All 10-sec sample
3	Two-way doppler	1841	10	0.389	−0.007	1.1	Weight for 20-sec sample, some 1- and 2-min samples

[a]This is a destructive count doppler; the counter restarts from 0 after each count-time interval.
[b]In cps when two-way doppler (1 cps = 0.156 m/sec), or in deg if hour-angle or declination.
[c]Approximate weight, see Appendix B and C, Orbit Determination Printout, for exact weight.
[d]Station 1 doppler is counted ±½ sec centered about the message time.
[e]Station 3 doppler is time-tagged at the end of the count interval.

intervals (i.e., 5 hr) which places its effective noise for a 1-min sample at 0.18 deg. As can be seen in Table 3 the (effective) weight is larger than the visible data noise. The weights applied to the postmidcourse doppler are conservative and will be revised in future data reduction.

3. Residuals

Residuals are the difference between observed data and calculated value based on the theoretical model. Figures 2 through 7 show premidcourse residuals and Fig. 8 through 15 show postmidcourse residuals. Table 3 is a tabulation of the standard deviation and bias of these residuals.

Some characteristics are clearly evident. For example, Fig. 2 and 3 show Station 1 and 3 residuals with a dramatic reduction in data noise. This is due to the longer count time at Station 3 (i.e., 1 sec vs 10 sec). Noise in transmitter drift degrades Station 3 more than Station 1 since Station 1 data are taken relatively close to Earth, whereas Station 3 has a range of $\approx$ 150,000 km. Figures 4 through 6 show the angle bias remaining after calibration.

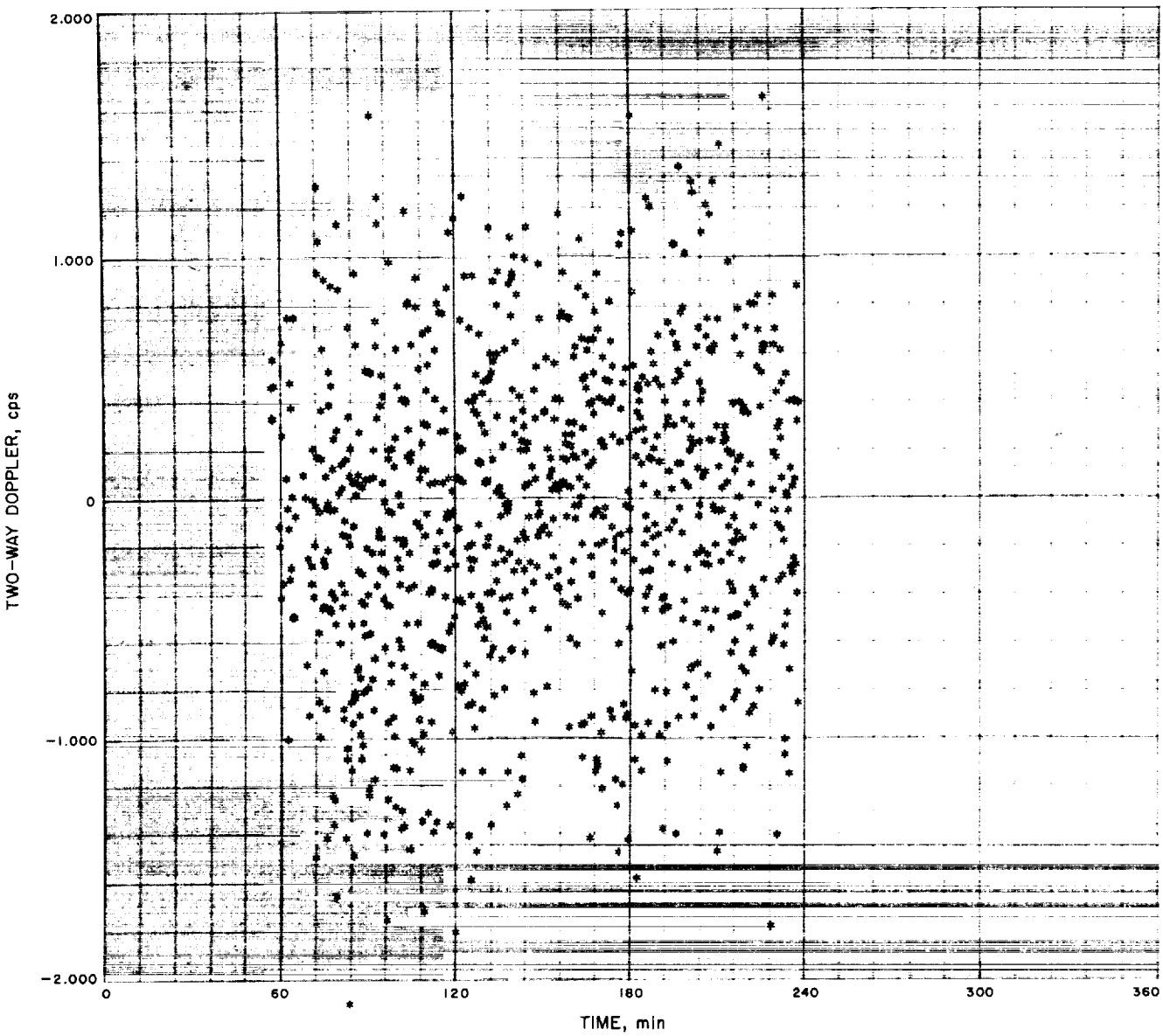

Fig. 2. Station 1 premidcourse residuals from January 26, 1962, 2000 hr GMT

Also evident is the angle "hitching" in declination when the declination motion is very small compared to hour angle.

Another comparison is Station 1 in Fig. 2, 8, and 9, where transmitter drift and cycle "add-in" and "drop-outs" have increased visible data noise (i.e., $\sigma_{pre} = 0.644$ cps, whereas $\sigma_{post} = 0.876$ cps). Also visible in Fig. 8 and 9 is the systematic parabolic residual chain which was discussed in the *Ranger IV* report (Ref. 4). These chains are caused by the rounding of the data and have been duplicated by simulation and published in an internal document by D. Chaney (Ref. 5).

Figures 3 and 12 show again the increase in noise due to transmitter instability. Figure 16, a residual plot from the *Ranger VII* report (Ref. 6), shows data at this same range but under a rubidium-controlled transmitter. Its noise level is 0.01 cps compared to this 0.39 cps. The 0.01-cps noise comes primarily from roundoff on a 1-min sample, and the transmitter drift effect is on the order of 0.001 cps.

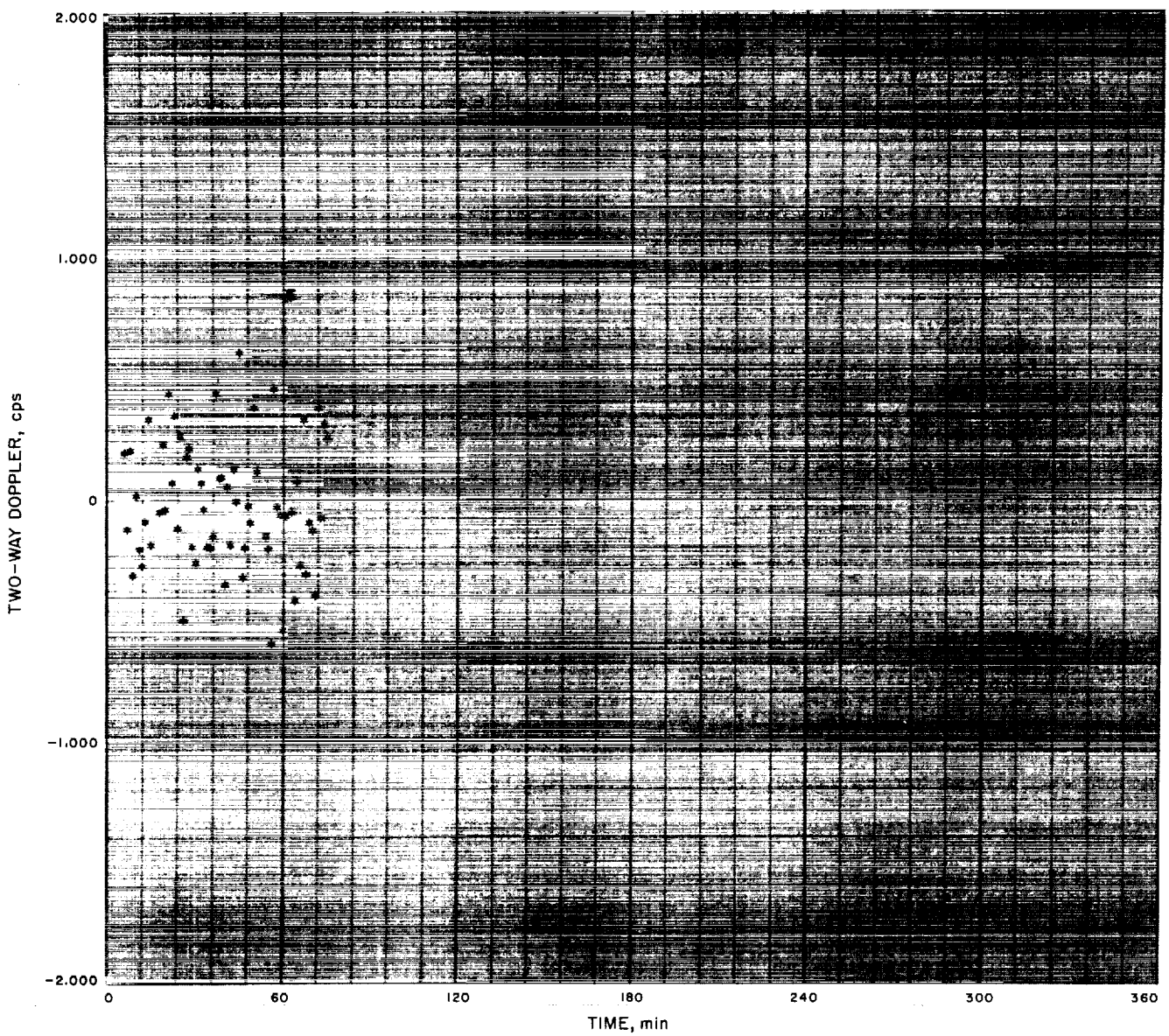

Fig. 3. Station 3 premidcourse residuals from January 27, 1962, 0900 hr GMT

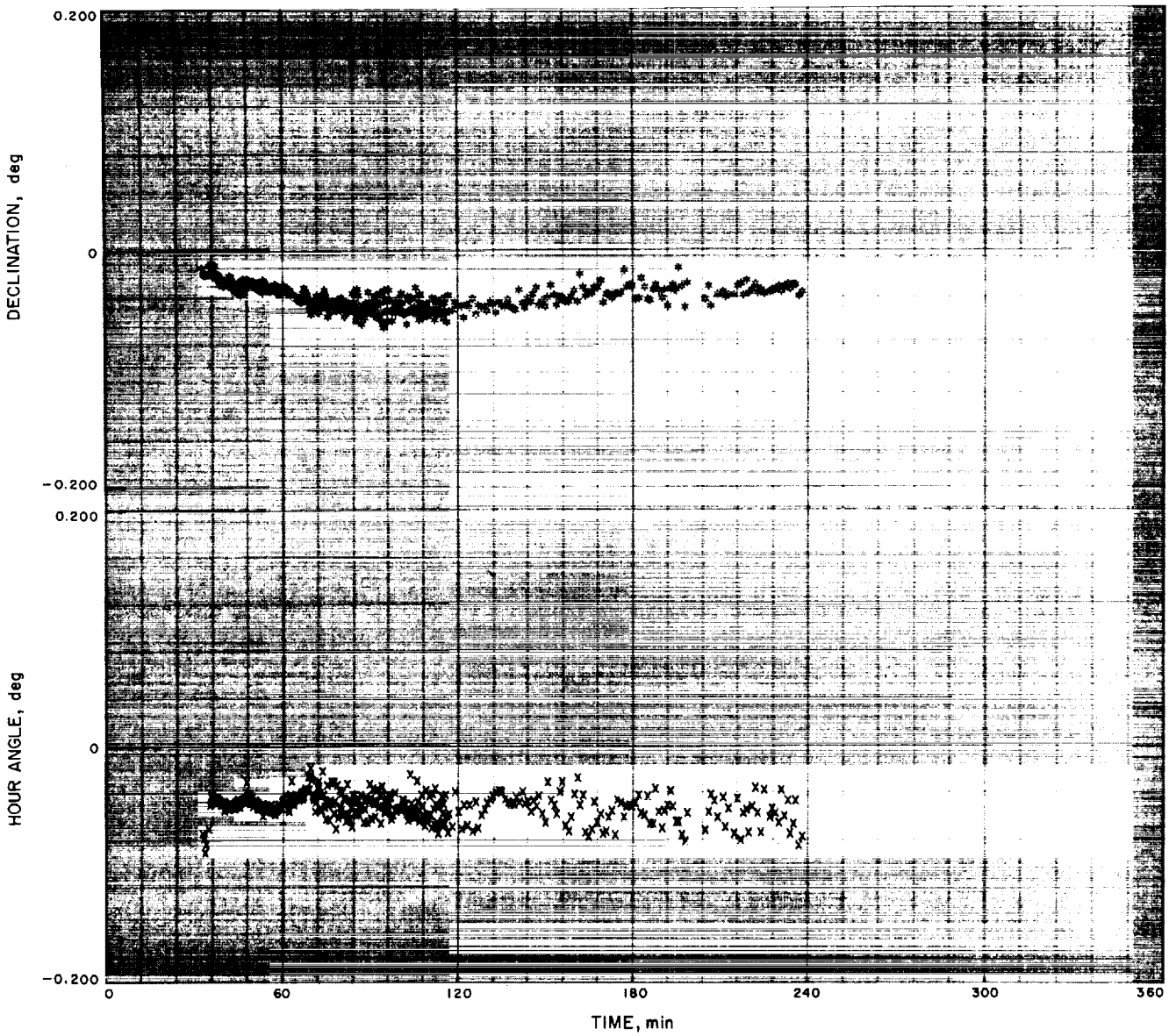

Fig. 4. Station 4 premidcourse residuals from January 26, 1962, 2100 hr GMT

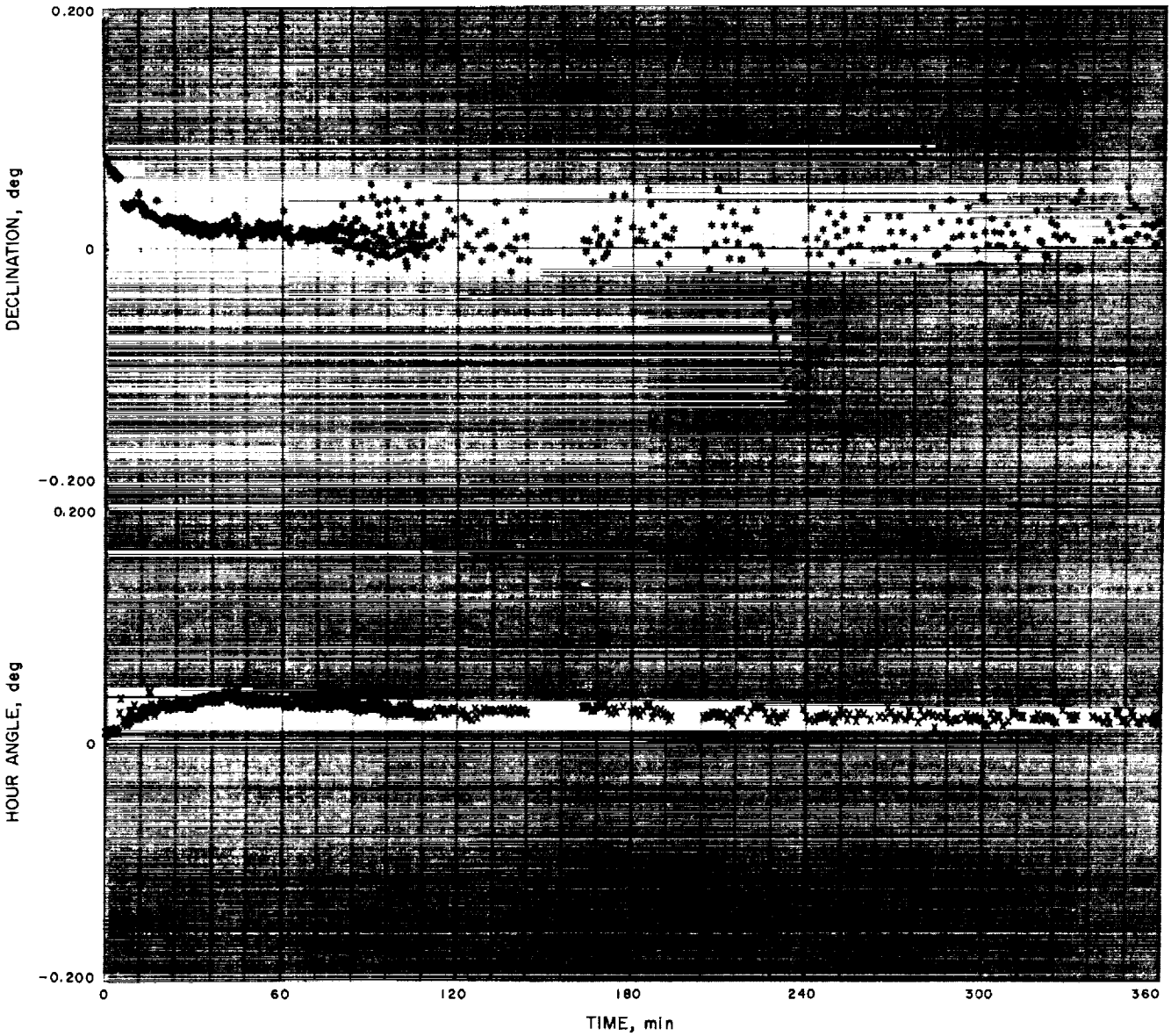

Fig. 5. Station 5 premidcourse residuals from January 26, 1962, 2100 hr GMT

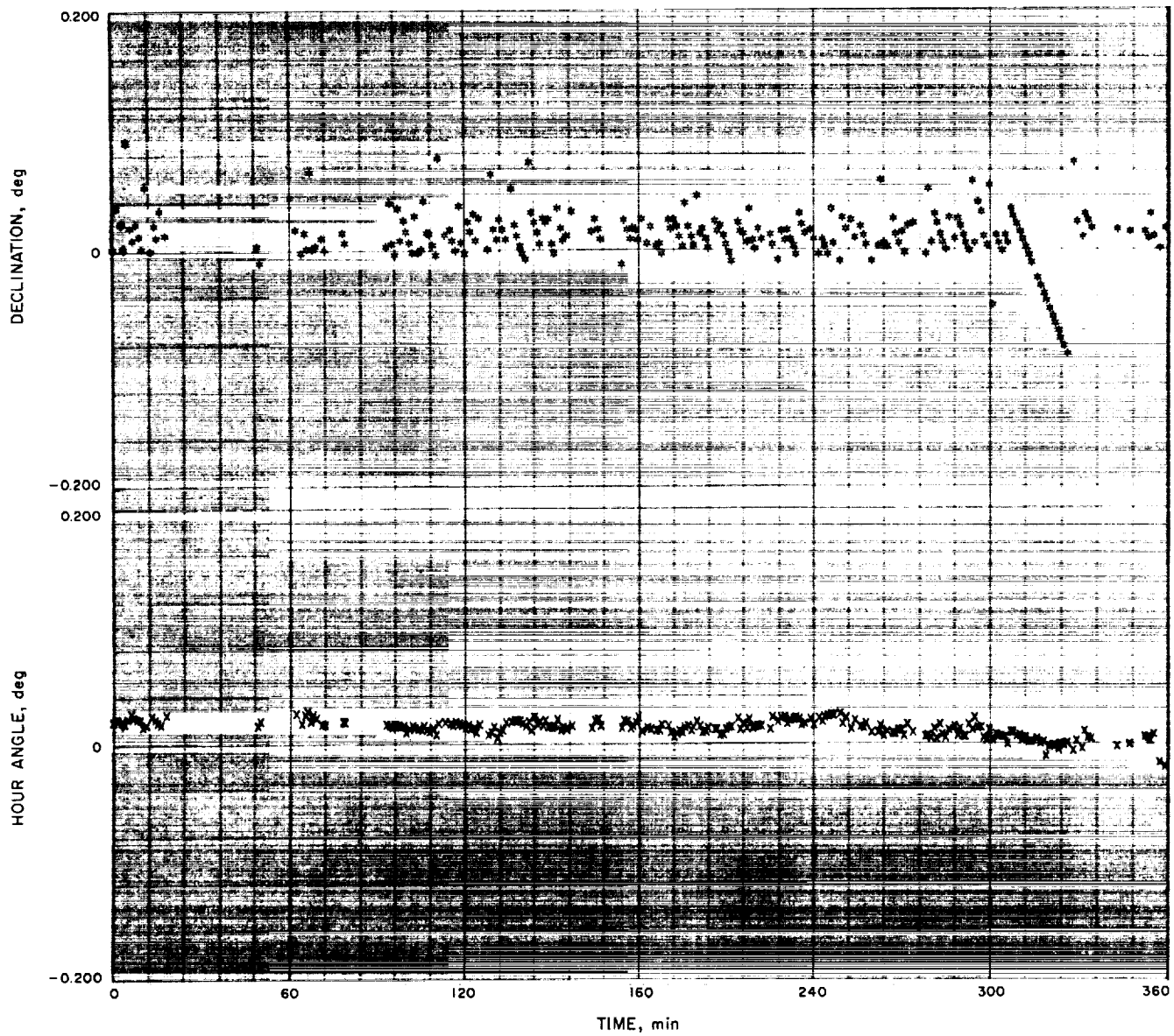

Fig. 6. Station 5 premidcourse residuals from January 27, 1962, 0300 hr GMT

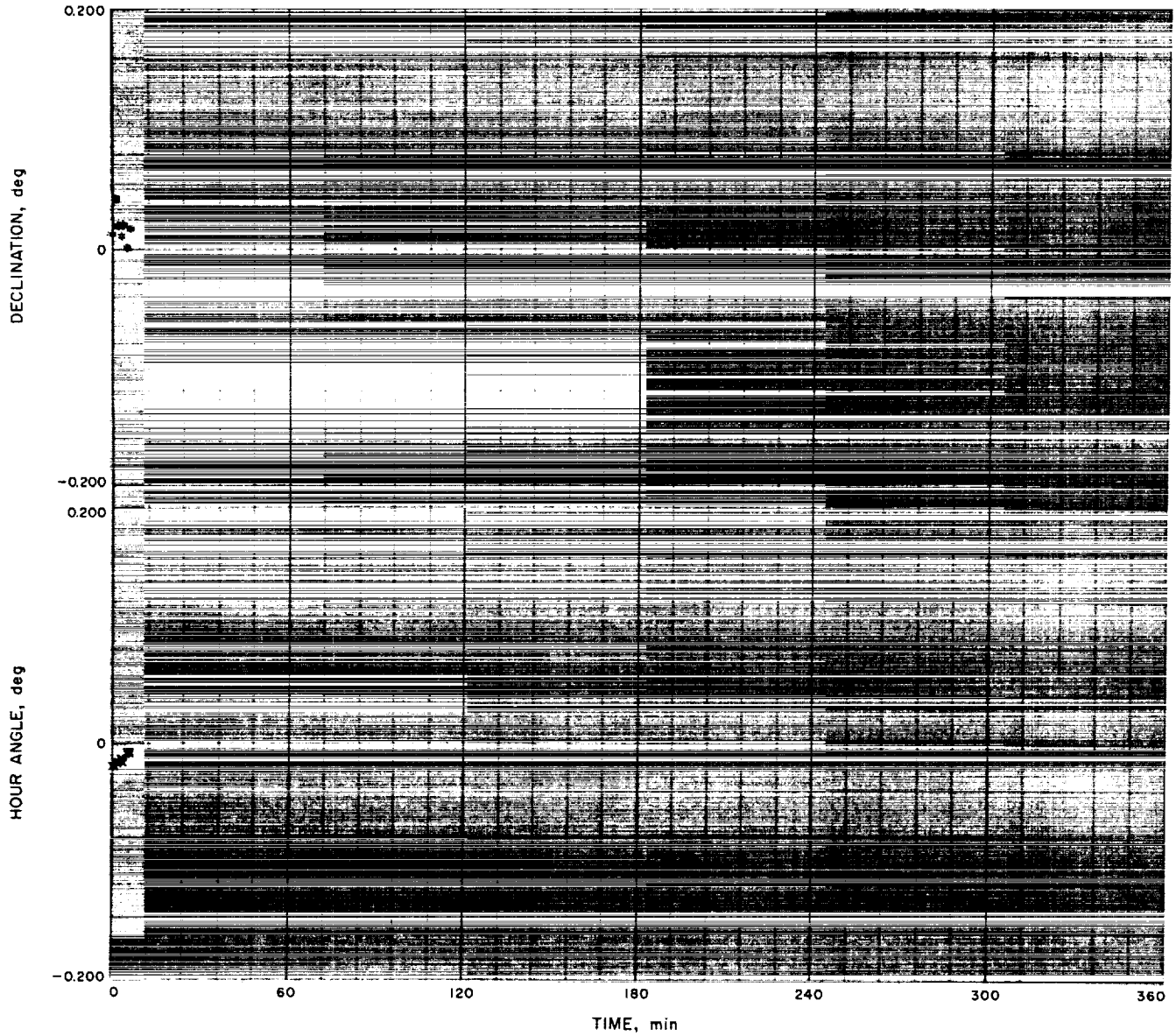

Fig. 7. Station 5 premidcourse residuals from January 27, 1962, 0900 hr GMT

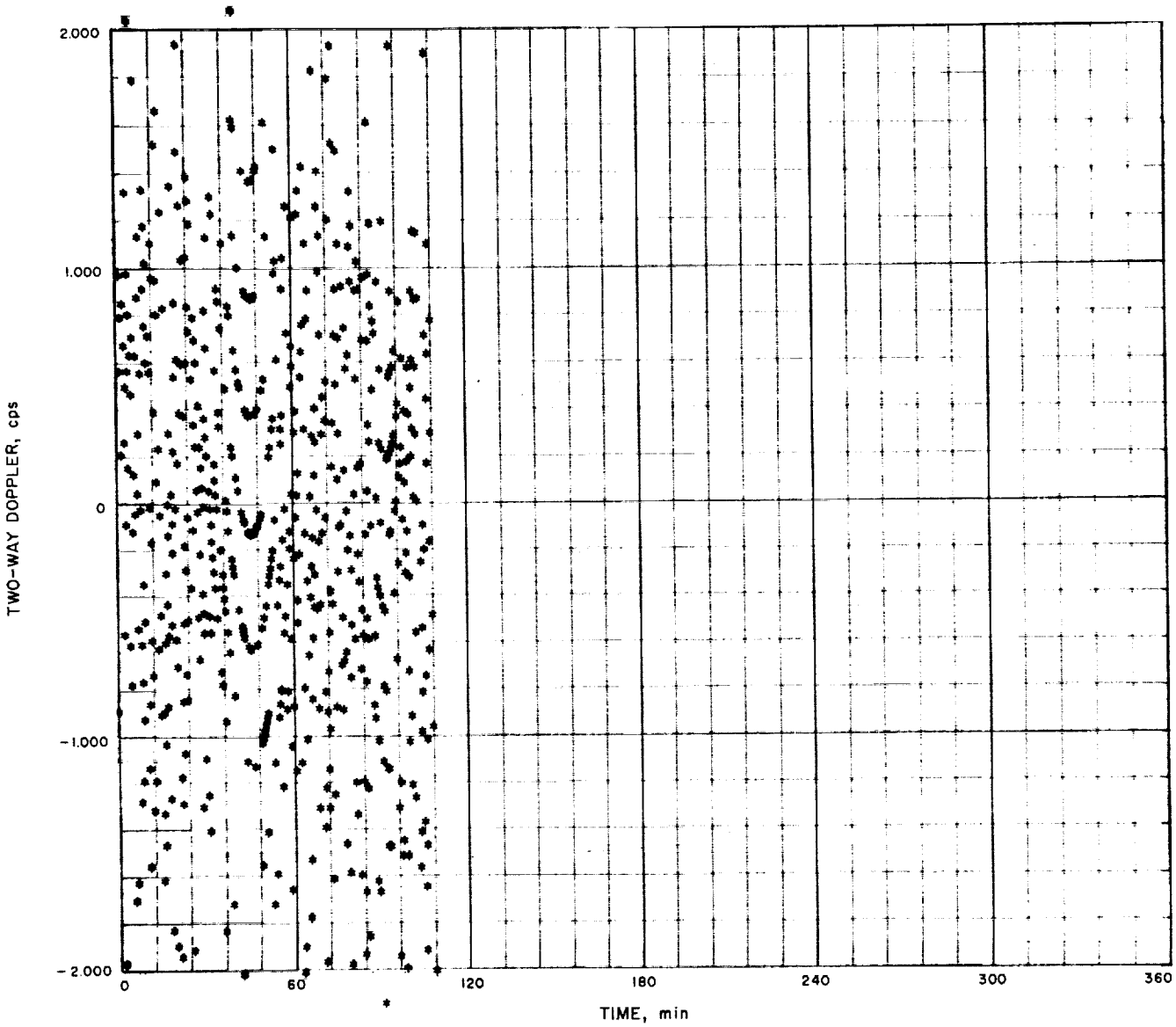

Fig. 8. Station 1 postmidcourse residuals from January 28, 1962, 0449 hr GMT

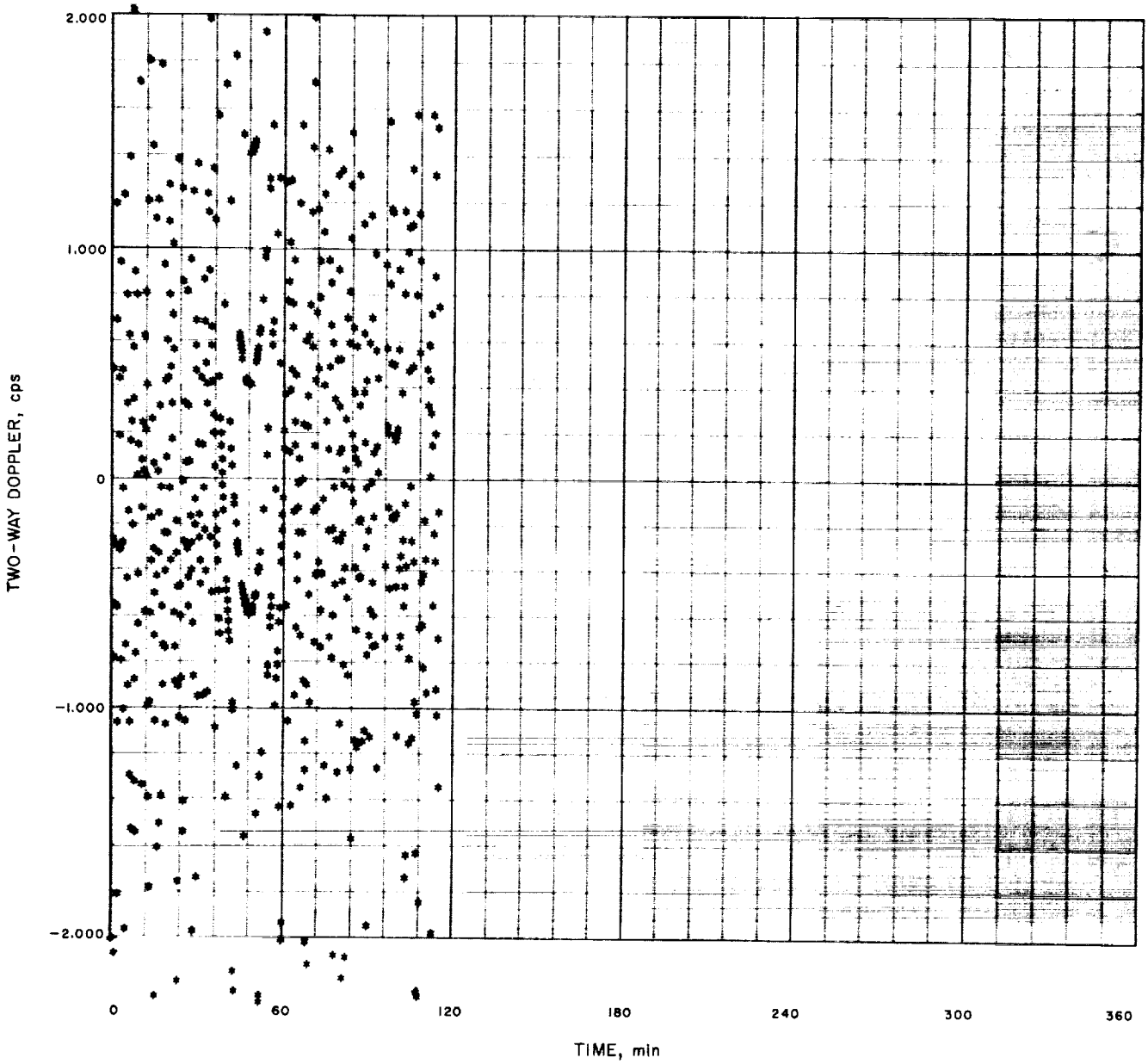

Fig. 9. Station 1 postmidcourse residuals from January 28, 1962, 0637 hr GMT

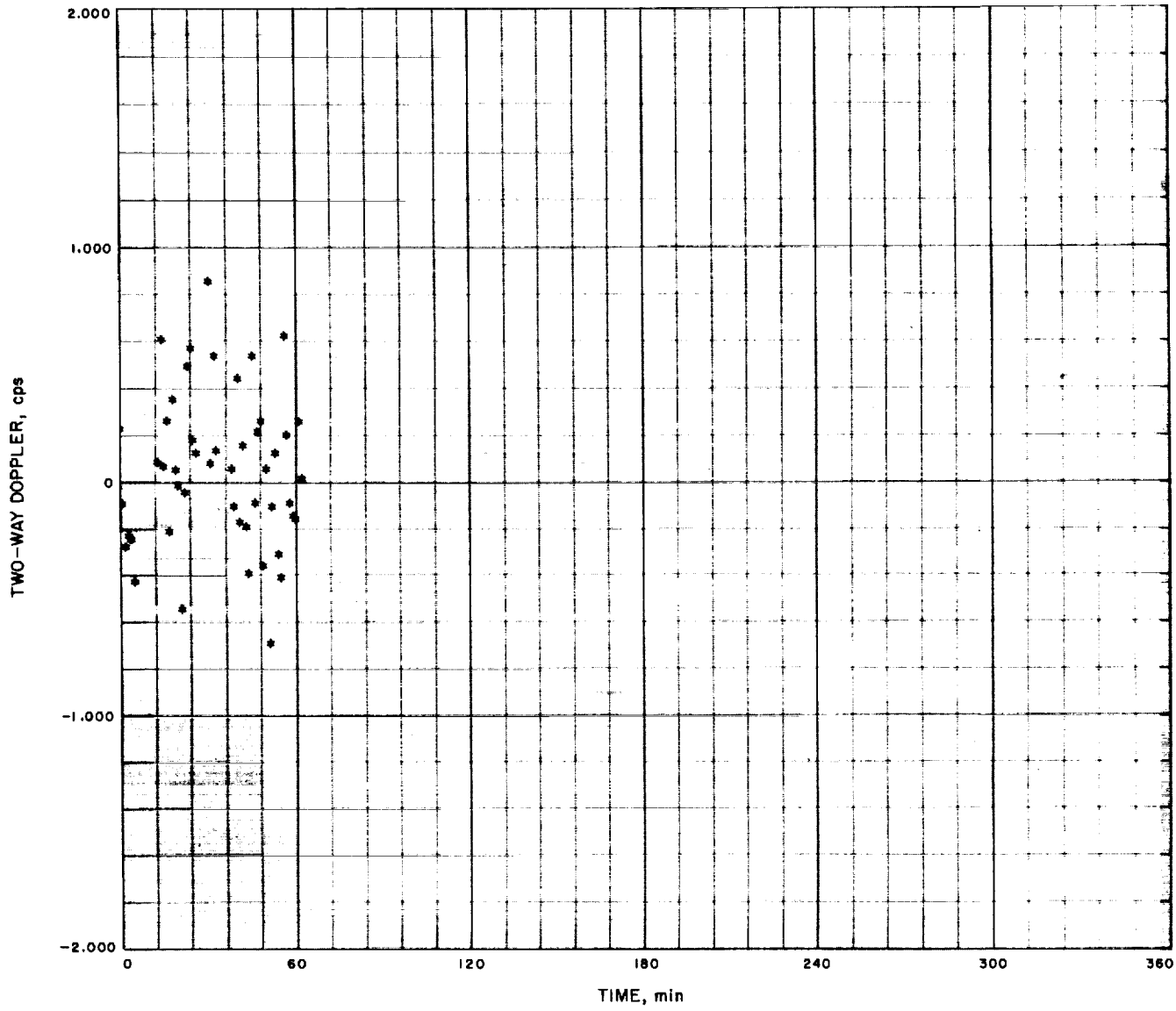

Fig. 10. Station 3 postmidcourse residuals from January 27, 1962, 1734 hr GMT

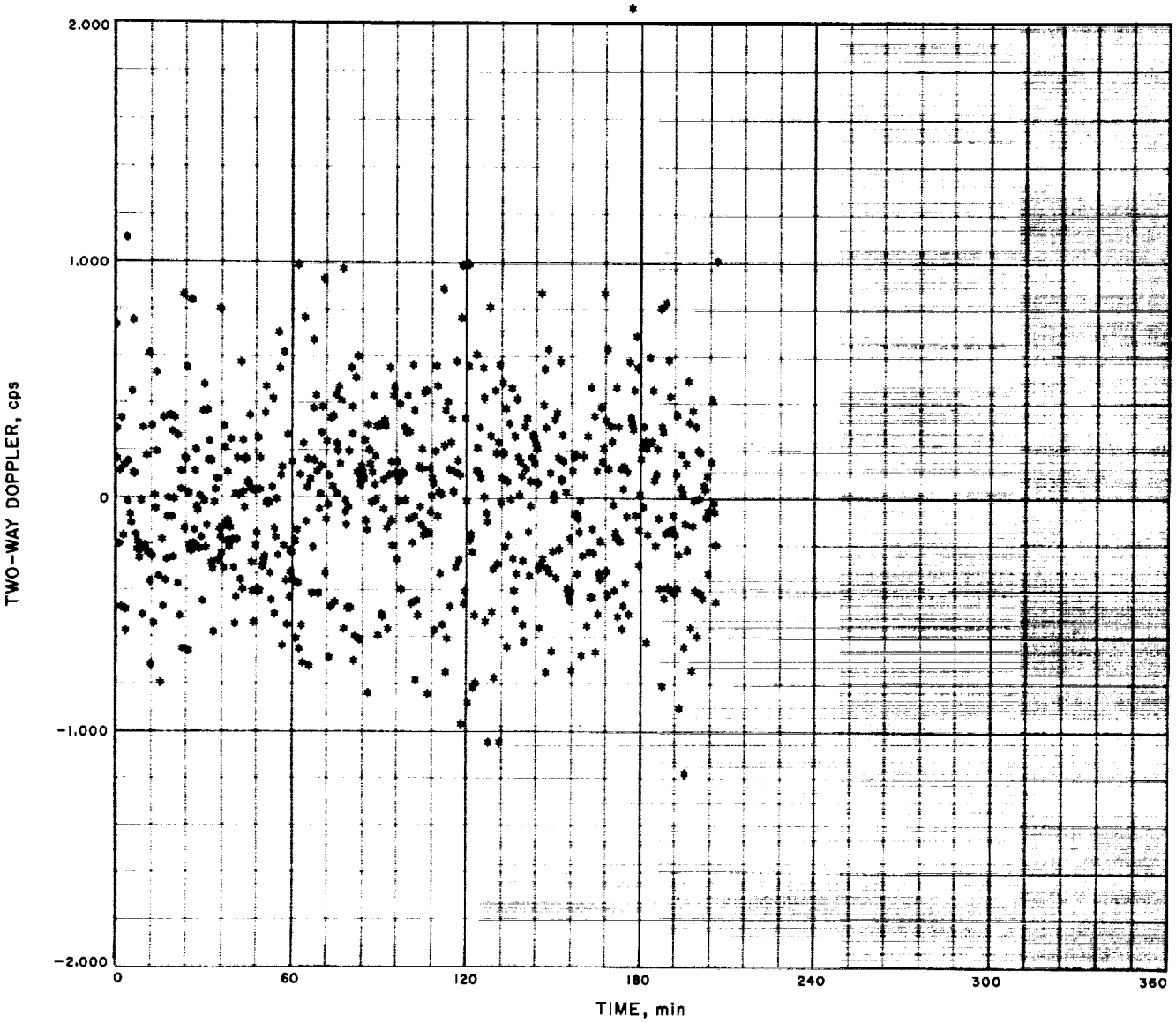

Fig. 11. Station 3 postmidcourse residuals from January 28, 1962, 0850 hr GMT

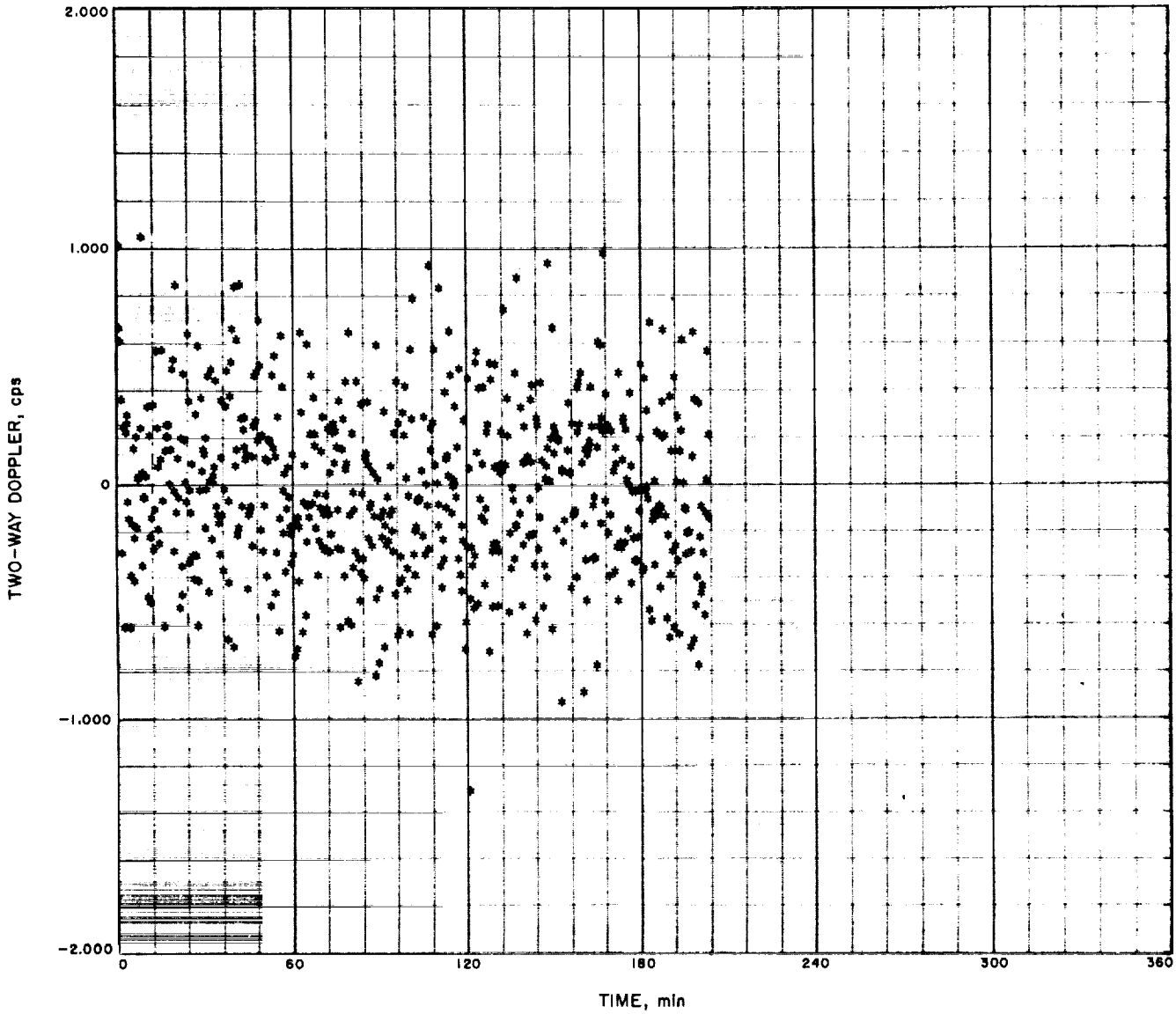

Fig. 12. Station 3 postmidcourse residuals from January 28, 1962, 1216 hr GMT

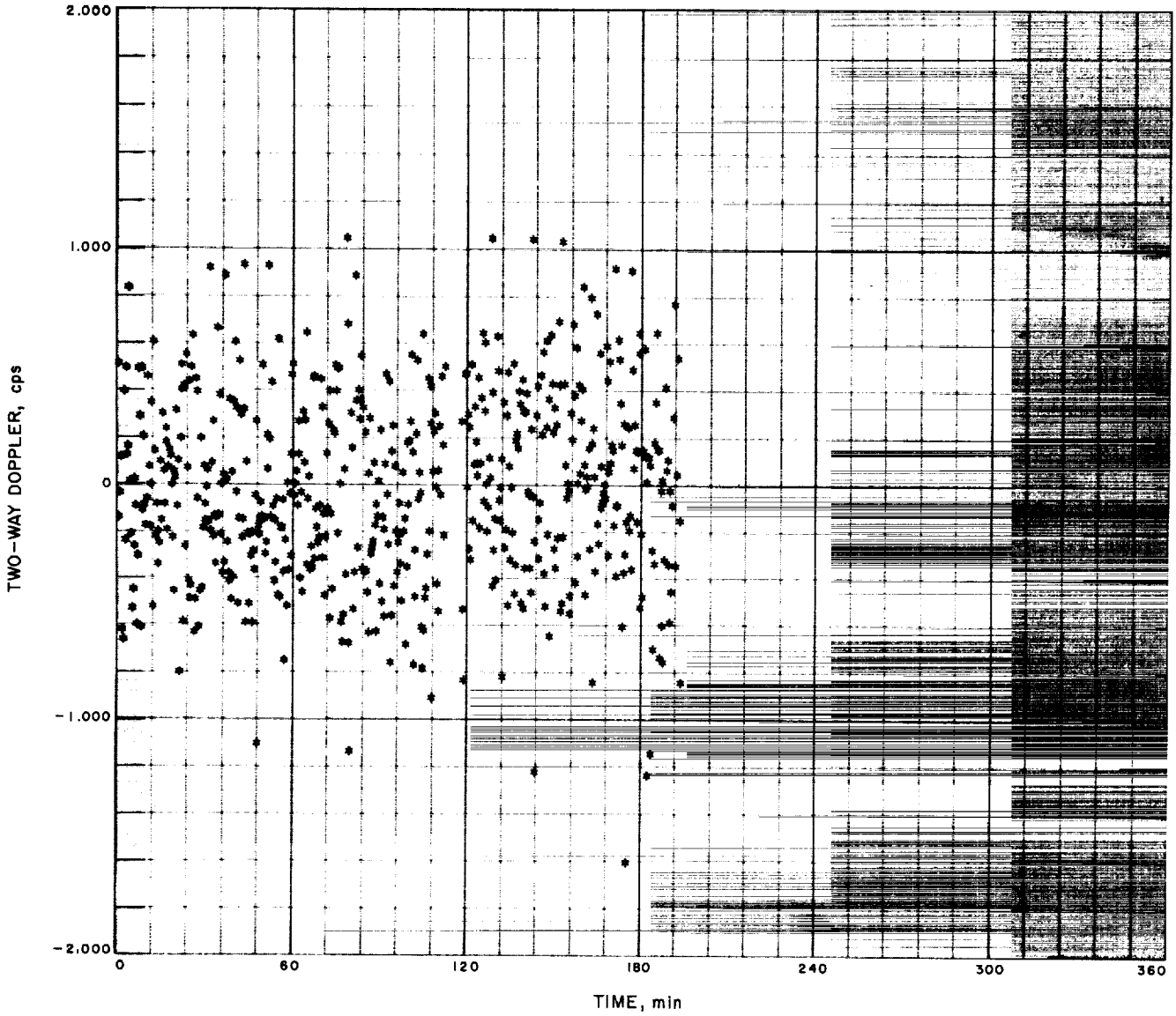

Fig. 13. Station 3 postmidcourse residuals from January 28, 1962, 1539 hr GMT

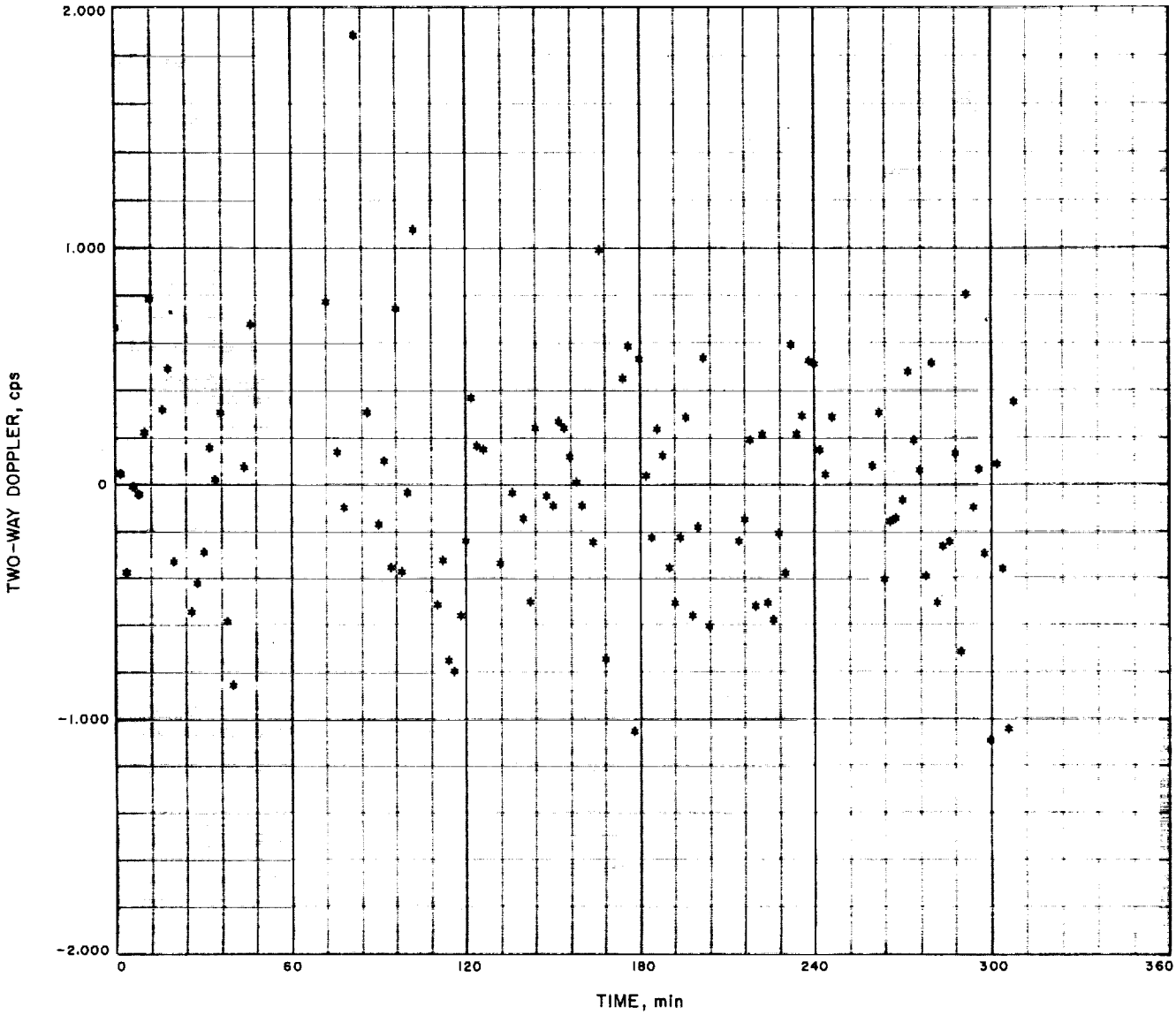

Fig. 14. Station 3 postmidcourse residuals from January 29, 1962, 1347 hr GMT

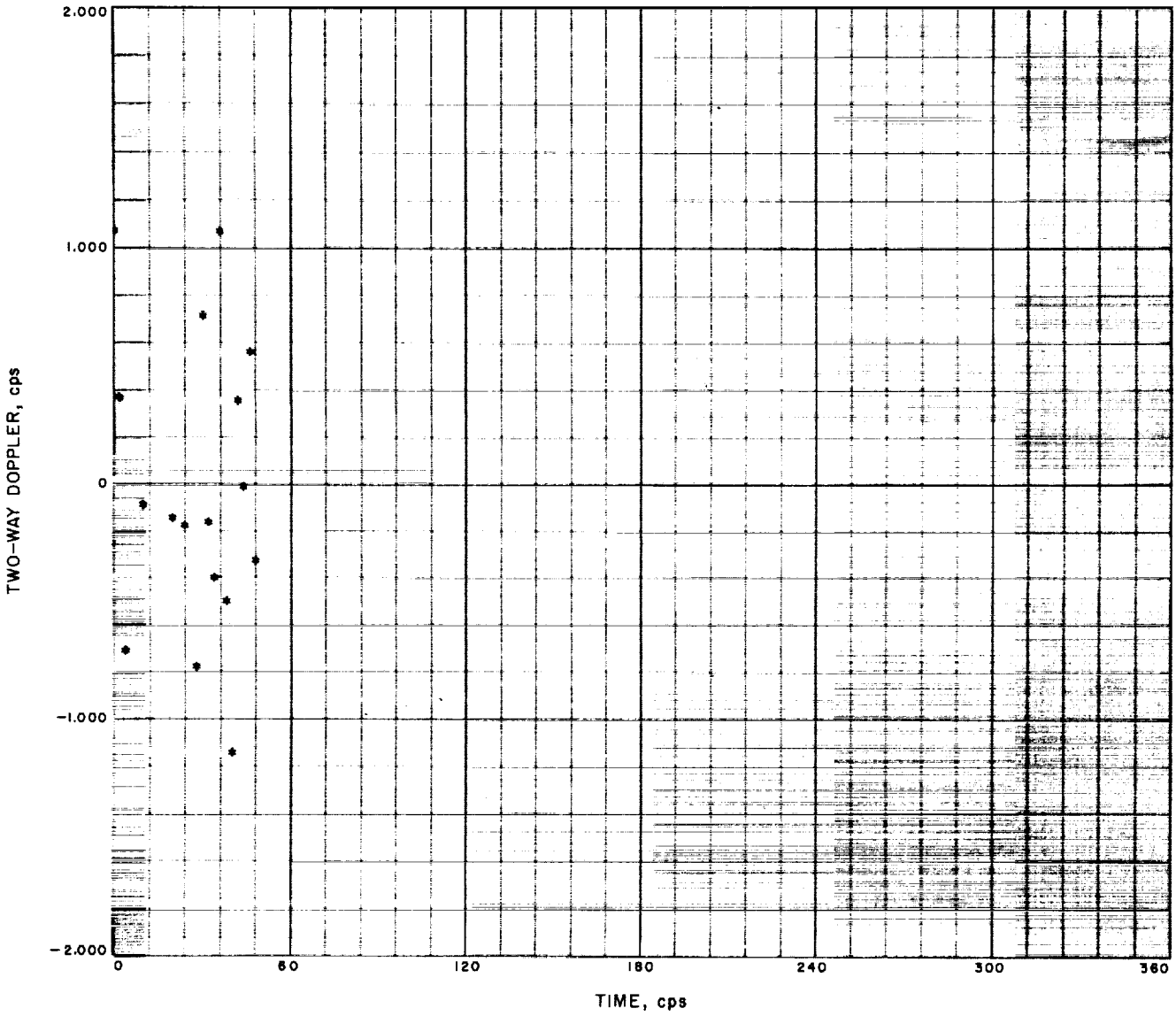

Fig. 15. Station 3 postmidcourse residuals from January 30, 1962, 0903 hr GMT

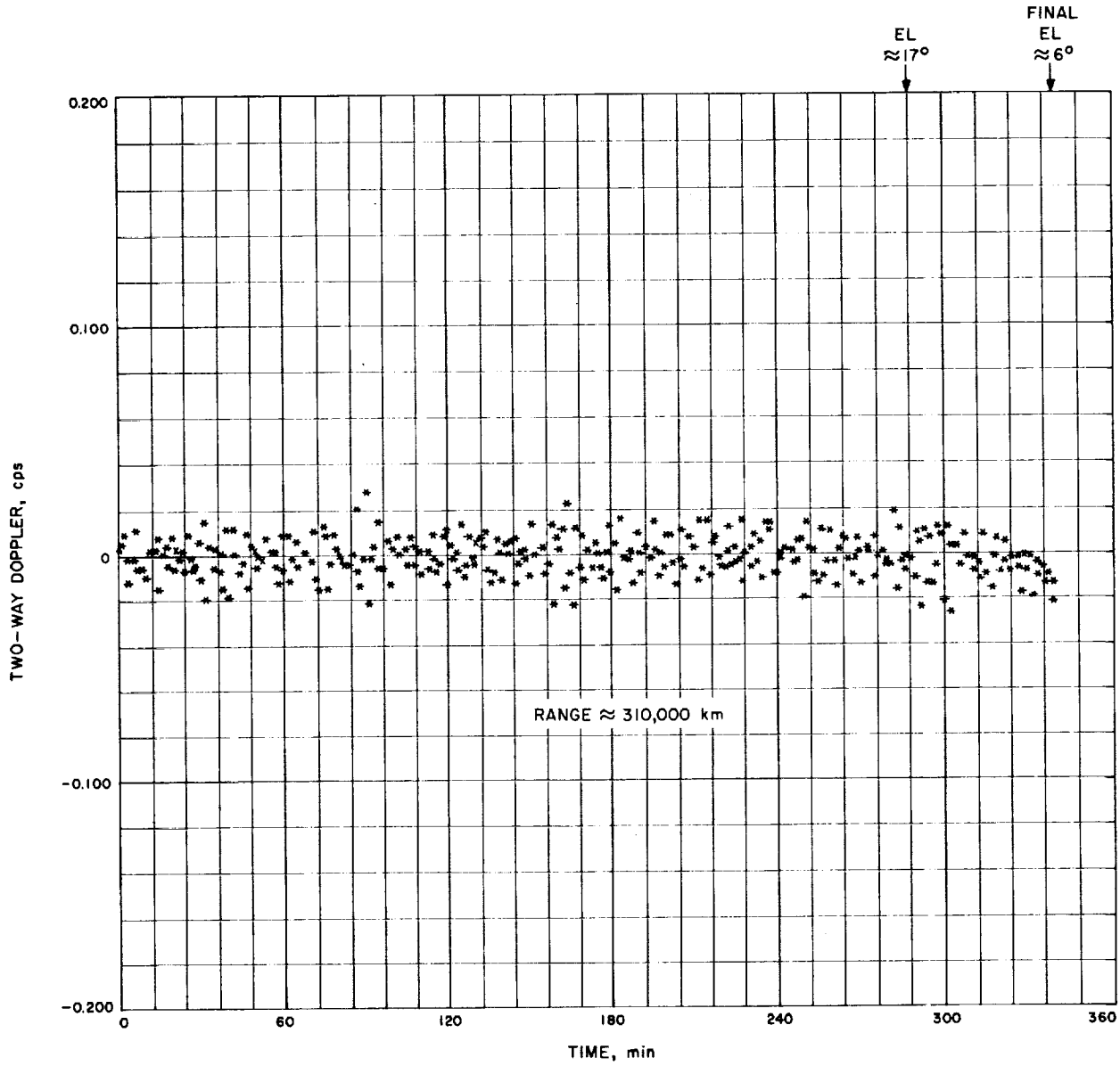

Fig. 16. *Ranger VII* station 12 residuals from July 30, 1964, 1318 hr GMT

C. *Orbit Estimate*

1. Premidcourse

The first calculations in the ODP involve fitting strictly to the premidcourse data. The parameters estimated were the six geocentric-space-fixed cartesian components of position and velocity, $GM_{\oplus}$, $GM_{☾}$, and the three components of station location of the four tracking stations (radius, latitude, and longitude), making a total of 20 solution parameters. These parameters are listed in Table 4 with their *a priori* uncertainty. Also tabulated are their statistics, both at injection and midcourse epoch after the data had been processed. Notice that for the first seven elements large *a priori* uncertainties were used because of the ability of the data to determine these parameters (i.e., $\sigma_x = 0.527$), whereas the others after the estimate virtually retain their *a priori* sigma (i.e., $GM_{☾}$ and station locations). Table 5 shows the actual parameter solution and the deviations from the "nominal" parameter solution. At the bottom of the table, it becomes quite apparent that the booster guidance error was large. The other parameter deviations, however, are well within

the solution statistics quoted in Table 4. This is pointed out because in Appendix B premidcourse ODP printout block 5 has two bad elements in $\sigma^2_{LA\,(4)}$ and $\sigma^2_{LA\,(5)}$, but they appear to have caused no trouble in the solution. Also following block 5 in Appendix B is the correlation matrix on the solution vector.

This solution has also been mapped to encounter and here the parameters are expressed in selenographic and B-plane (see explanation in Appendix A) coordinates as shown in Table 6. The bottom block of items in this table are the statistics in the B plane. The abbreviation SMAA stands for the semimajor axis of the 40% dispersion ellipse in the B plane, SMIA the semiminor axis, *THETA* the orientation angle for the dispersion ellipse, and *DEL T* the 1-sigma uncertainty in linearized time of flight as defined in Ref. 7.

2. Postmidcourse

The second and last step in these *Ranger* III ODP computations was to fit the postmidcourse data with the premidcourse data as *a priori* data. This was done by taking the covariance matrix on the premidcourse data-only fit just described and mapping it to midcourse epoch by pre- and post-multiplying it by the matrix of first order partial derivatives, i.e.,

$$\frac{\partial X_M}{\partial X_O} = \begin{bmatrix} 6\text{x}6 & 0 & 0 \\ 6\text{x}2 & \text{I} & 0 \\ 0 & 0 & \text{I} \end{bmatrix} = U \tag{1}$$

$$\Lambda_M = U^T \Lambda_o U$$

Once the covariance matrix at midcourse (Λ_M) is obtained, the lower 3x3 of the upper by 6x6 (the covariance on velocity) is corrupted so that all velocity information has

Table 4. Statistics on estimated parameters

Estimated parameters	Units	*A priori* (1-σ)	Premidcourse data only		Postmidcourse data with *a priori* from premidcourse	
			Injection epoch	Midcourse epoch	Midcourse epoch	Encounter epoch
X	km	1×10^4	0.527	5.93	5.65	13.5
Y	km	1×10^4	0.334	6.20	6.05	17.9
Z	km	1×10^4	1.021	20.80	11.69	29.1
DX	m/sec	1×10^7	0.586	0.153	0.124	0.103
DY	m/sec	1×10^7	0.863	0.115	0.150	0.128
DZ	m/sec	1×10^7	1.076	0.375	0.231	0.136
$GM_{\oplus}$	km³/sec²	1×10^4	4.09		2.53	
$GM_{☾}$	km³/sec²	5.0	5.00		4.37	
RI(1)	km	0.06	0.060		0.057	
LA(1)	deg	0.001	0.00100		0.00097	
LO(1)	deg	0.001	0.00099		0.00094	
RI(3)	km	0.06	0.060		0.057	
LA(3)	deg	0.001	0.00100		0.00094	
LO(3)	deg	0.001	0.00100		0.00098	
RI(4)	km	0.06	0.060		——[b]	
LA(4)	deg	0.001	——[a]		——[b]	
LO(4)	deg	0.001	0.00100		——[b]	
RI(5)	km	0.06	0.060		——[b]	
LA(5)	deg	0.001	——[a]		——[b]	
LO(5)	deg	0.001	0.00099		——[b]	

[a]Inversion problem; see Appendix B, Blocks.
[b]These parameters were not estimated in the postmidcourse calculation.

Table 5. Estimated parameter solution vector

Estimated parameters	Units	Premidcourse data only		Postmidcourse with *a priori* from premidcourse	
		Value	Change from nominal	Value	Change from premidcourse value
X	km	−129823.13[b]	——	−129825.26	−2.13[e]
Y	km	−82373.281[b]	——	−82372.683	+0.598[e]
Z	km	−49540.038[b]	——	−49526.645	+13.393[e]
DX	m/sec	−1707.2911[b]	——	−1695.4419	+11.8492[e]
DY	m/sec	−1572.6162[b]	——	−1545.3654	+27.2508[e]
DZ	m/sec	−542.91970[b]	——	−521.16175	+21.7580[e]
$GM_{\oplus}$	km^3/sec^2	398600.41	−2.79	398601.63	+1.22
$GM_{☾}$	km^3/sec^2	4900.63	−0.13	4900.58	−0.05
RI(1)	km	6375.6470	−0.010	6375.6455	−0.002
LA(1)	deg	−25.732403	−0.00020	−25.732475	−0.00007
LO(1)	deg	27.705739	0.00046	27.705492	−0.00024
RI(3)[a]	km	6372.0881	0.005	6372.1053	0.017
LA(3)[a]	deg	35.119391	−0.00011	35.119004	−0.00039
LO(3)[a]	deg	243.19258	−0.00012	243.19265	0.00007
RI(4)	km	6372.6058	−0.002	——[d]	——
LA(4)	deg	−31.212356	0.00000	——[d]	——
LO(4)	deg	136.88583	−0.00033	——[d]	——
RI(5)	km	6375.4851	−0.010	——[d]	——
LA(5)	deg	−25.735023	−0.00020	——[d]	——
LO(5)	deg	27.685239	0.00046	——[d]	——
X	km	3394.4723[c]	−124.6	——	——
Y	km	5711.2334[c]	+205.9	——	——
Z	km	513.62575[c]	−185.1	——	——
DX	m/sec	−7793.1342[c]	−163.7	——	——
DY	m/sec	5615.8511[c]	−290.2	——	——
DZ	m/sec	−5307.1322[c]	−108.0	——	——

[a]This is *not* the present Goldstone station 12. This antenna does not exist at this site presently; it was moved to another Goldstone site.
[b]Conditions at midcourse epoch.
[c]Conditions at injection epoch.
[d]Not estimated (no data from these stations in postmidcourse phase).
[e]Effect of midcourse maneuver.

been deleted. This used as *a priori* data then allows the postmidcourse data to solve for velocity independent of premidcourse velocity. The net result is an independent estimate of the maneuver as can be seen in the last column of Table 5.

Again as in the premidcourse discussion, parameter statistics are shown in Table 4 and encounter parameters and statistics are displayed in Table 6. The complete postmidcourse ODP printout is shown in Appendix C and, specifically, the correlation matrix on the estimated parameters is shown in printout block 6 (Appendix C).

3. Maneuver Estimate

The orbit determination (OD) maneuver estimate (Table 7) as mentioned in the previous section comes directly from the difference in the velocity components for the two ODP computations (pre–post). There is also the estimate of the maneuver which was commanded (having corrected for the sign error). It is interesting to compare the two results. It appears that the magnitude of the maneuver was within 0.21 m/s of the commanded maneuver. However, there appears to have been some pointing errors of about 2 deg.

4. $GM_{\oplus}$* Estimate

The solution for $GM_{\oplus}$ using *Ranger III* data has been quoted in Ref. 6 and 8. However, this solution is the one obtained solely from premidcourse data (the solution of 398600.41 ±4.1 km^3/sec^2 as shown in Tables 4 and 5).

*$GM_{\oplus}$ = Universal gravitational constant times mass of Earth.

When postmidcourse data are used with premidcourse data as *a priori* data, the solution of 398601.63 ±2.5 km³/sec² is produced. This is in close agreement with the *Ranger VII* result (Ref. 5) and is consistent with the preliminary results of *Rangers VIII* and *IX*. Figure 17 shows the various $GM_{\oplus}$ estimates for the series of *Ranger* missions with an update on *Ranger III*. They all appear consistently lower than the nominal value of 398603.2 km³/sec² set by Symposium 21 International Astronomical Union in Paris in 1963.

Other interesting comparisons are shown in Table 8. Here the solutions for $GM_{\oplus}$ for the *Ranger III* through *IX* missions using premidcourse data only and then pre-

Table 6. Encounter parameters (closest approach)

Encounter parameters	Units	Premidcourse	Postmidcourse
Latitude	deg	−42.2	−45.2
Longitude	deg	227.3	227.8
Altitude	km	39,082	35,134
Flight time[a]	hrs	50.0532	50.5957
GMT[b]	mo-day-yr	Jan. 28, 1962	Jan. 28, 1962
	hr-min-sec	22-53-20.5	23-24-53.4
B[c]	km	42,217	38,354
$B \cdot R$[c]	km	30,965	29,345
$B \cdot T$[c]	km	−28.697	−24.696
SMAA[c]	km	63.9	28.9
SMIA[c]	km	16.9	20.7
THETA[c]	deg	26.9	11.3
DEL T[c]	sec	16.6	4.5

[a]Time from injection.
[b]Time of closest approach, GMT.
[c]Defined in Appendix D, Orbit Determination Format Description; see also Appendix A, Definition of the Miss Parameter B.

Table 7. Maneuver estimate

Parameters m/s	O.D. maneuver estimate	Commanded maneuver estimate	Difference commanded minus O.D.	O.D. 1-σ
$\dot{X}$	11.85	11.00	−0.85	0.12
$\dot{Y}$	27.25	27.97	+0.72	0.15
$\dot{Z}$	21.76	20.92	−0.84	0.23
ΔV	36.83	36.62	+0.21	—

Table 8. Estimated values of universal gravitational constant times mass of Earth ($GM_{\oplus}$)

Source	Premidcourse data only		
	Value km³/sec²	Std. dev. km³/sec²	Remarks
JPL Nominal[a]	398603.20	4.0	————
RANGER III	398600.41	4.1	13 hr of tracking
RANGER IV	398601.87	13.3	8 hr of tracking; Total mission data
RANGER V	398599.20	13.2	8 hr of tracking; Total mission data
RANGER VI	398603.04	4.3	17 hr of tracking
RANGER VII	398601.77	6.3	17 hr of tracking
RANGER VIII[b]	398601.29	2.8	17 hr of tracking
RANGER IX[b]	398600.83	0.8	39 hr of tracking
Source	**Postmidcourse data with premidcourse as *a priori***		
	Value km³/sec²	Std. dev. km³/sec²	Remarks
RANGER III	398601.63	2.5	4 days of tracking
RANGER VI	398600.61	1.1	65 hr of tracking
RANGER VII	398601.28	1.5	68 hr of tracking
RANGER VIII[b]	398601.23	0.7	65 hr of tracking
RANGER IX[b]	398601.54	0.6	65 hr of tracking

[a]Value set by Symposium 21, International Union, Paris, 1963.
[b]Preliminary Results.

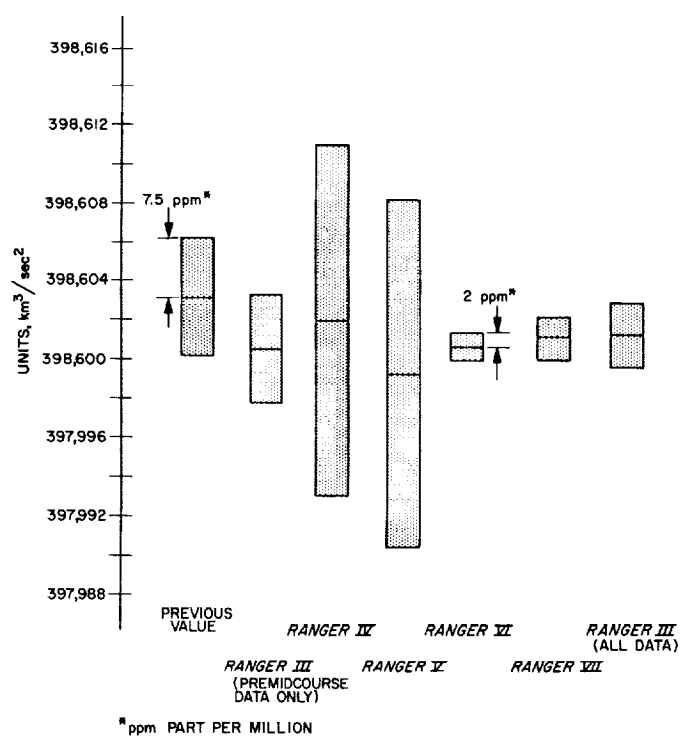

Fig. 17. Mass of Earth with probable errors

midcourse as *a priori* data for the postmidcourse (i.e., all data) still remain within the one-sigma uncertainty, and "pre" solutions seem randomly higher and lower than the final solution for that mission.

There is no estimate on $GM_{☾}$, because the spacecraft missed the Moon by some 35,000 km. There were insufficient data from any station to give an estimate on station location.

III. SUMMARY

The most striking observation in compiling this short report on *Ranger III* is the amazing advancement in data-gathering hardware and procedures. Data noise sources which were predominant in *Ranger III* have now been reduced to the point that computer computation noise is the largest contributor.

Although this Report makes available the raw tracking data on *Ranger III*, the results are not as significant as those provided by data on *Rangers VI, VII, VIII,* and *IX*. The results do give an estimate on $GM_{\oplus}$, which will stand as one more independent observation when the series of *Ranger* missions are analyzed together.

APPENDIX A

Definition of the Miss Parameter B

The miss parameter **B** is used at JPL to measure miss distances for lunar and interplanetary trajectories and is described by W. Kizner in Ref. 9. **B** has the desirable feature of being very nearly a linear function of changes in injection conditions.

The osculating conic at closest approach to the target body is used in defining **B**. **B** is the vector from the target's center of mass perpendicular to the incoming asymptote. Let $\mathbf{S}_I$ be a unit vector in the direction of the incoming asymptote. The orientation of **B** in the plane normal to $\mathbf{S}_I$ is described in terms of two unit vectors ***R*** and **T**, normal to $\mathbf{S}_I$. **T** is taken parallel to a fixed *reference plane* and **R** completes a right-handed orthogonal system. Figure A-1 illustrates the situation.

The *Ranger III* work has used the orbital plane of the Moon as the reference plane. If **W** is a unit vector normal to the orbital plane (**W** in direction of $\mathbf{R}_M \times \mathbf{V}_M$, where $\mathbf{R}_M$ is radius vector to Moon from Earth and $\mathbf{V}_M$ is the space-fixed velocity of the Moon relative to the Earth's center) then $\mathbf{T} = \mathbf{S}_I \times \mathbf{W}$ defines our coordinate system.

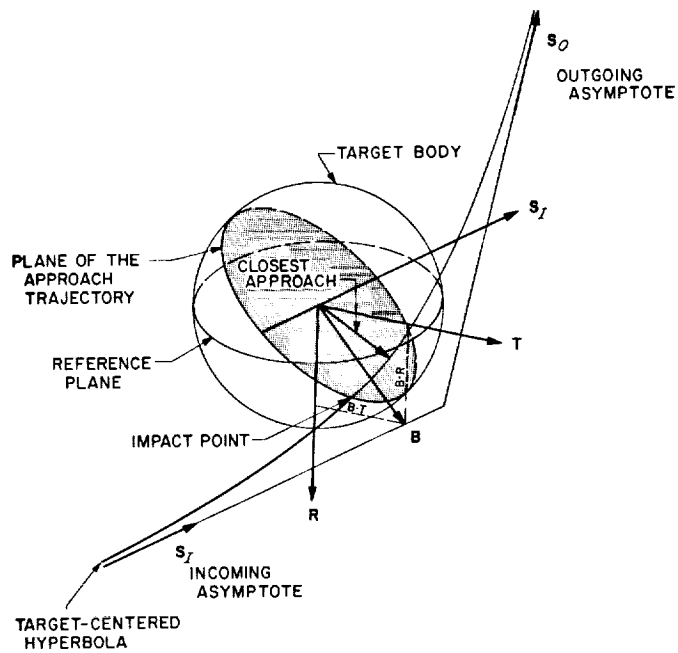

Fig. A-1. Definition of *B·T, B·R* system

APPENDIX B

Ranger III Premidcourse Orbit Determination Program Printout

The material in this appendix is a data-processing printout of data derived from the premidcourse orbit determination program (ODP) for the *Ranger III* mission.

```
PAGE HEADING                                                          (23
TRA-3 PRE M/C ND APRIORI KE EST KM STA LOC COR STA   6 MAY 63)
EPOCH                                                                 (01
620102620,5009000
PROBE POSITION AND VELOCITY AT EPOCH                                  (02
X=.33947685E4 Y=.57116786E4 Z=.51300110E3
DX=-.77930812E1 DY=.56148520E1 DZ=-.53075344E1
OTHER PARAMETER VALUES                                                (03
RI(4)=6372.6077 LA(4)=-31.21236 LO(4)=136.88617
NHR=5
SCLAR PRESSURE CFF
RI(3)=6372.083 LA(3)=35.1195 LO(3)=243.1927
ESTIMATE THESE PARAMETERS                                             (04
X Y Z DX DY DZ KE KM RI(1) LA(1) LO(1) RI(3) LA(3) LO(3)
RI(4) LA(4) LO(4) RI(5) LA(5) LO(5)
REJECTION SIGMAS                                                      (06
CC3(1)=1. CC3(3)=.5
AZ(3)=.2 HA(3)=.2
AZ(4)=.2 HA(4)=.2
AZ(5)=.2 HA(5)=.2
EL(3)=.2 DEC(3)=.2
EL(4)=.2 DEC(4)=.2
EL(5)=.2 DEC(5)=.2
COVARIANCE MATRIX OF ESTIMATED PARAMETERS                             (10
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 RO2=0,1.E8
RO3=0,0,1.E8
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 RO7=0,0,0,0,0,0,1.E8
 RO8=0,0,0,0,0,0,0,25.
 RO9=0,0,0,0,0,0,0,0,.0036,0,0,0,0,0,0,0,0,.00359928
 R10=0,0,0,0,0,0,0,0,0,1.E-6,0,0,0,0,0,0,0,0,.9998E-6
 R11=0,0,0,0,0,0,0,0,0,0,1.E-6,0,0,0,0,0,0,0,0,.9998E-6
 R12=0,0,0,0,0,0,0,0,0,0,0,.0036
 R13=0,0,0,0,0,0,0,0,0,0,0,0,.1E-5
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 R19=0,0,0,0,0,0,0,0,0,0,.9998E-6,0,0,0,0,0,0,0,0,1.E-6
 R20=0,0,0,0,0,0,0,0,0,0,0,.9998E-6,0,0,0,0,0,0,0,0,1.E-6
DELETE THESE DATA TYPES                                               (13
 C1(1) AZ(1) EL(1) C3(1) C3(4) C3(5)
WEIGHTS BY DATA TYPE AND STATION                                      (16
CC3(1)=.286 CC3(3)=.3 EL(3)=.18 AZ(3)=.18
MAP COVARIANCE MATRIX TO                                              (24
620102710,2806000
WEIGHT TABLES                                                         (25
 SSC=.1E-2,.5E-2,.15E-1,.3E-1,.2E-2,.5E-2,.15E-1,.5E-1,
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 OFFLINE CONTROL                                                      (27
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 END DATA                                                             (00
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INPUT COVARIANCE MATRIX OF ESTIMATED PARAMETERS

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X	.99999999 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Y	.00000000 00	.99999999 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00	.99999999 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00	.00000000 00	.99999999 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999 08	.00000000 00	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999 08	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.25000000 02	.00000000 00
RI01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.36000000-02
LA01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.35992799-02
LA05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

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Y	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.35992799-02
LA01	.99999999-04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO01	.00000000 00	.99999999-06	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI03	.00000000 00	.00000000 00	.36000000-02	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA03	.00000000 00	.00000000 00	.00000000 00	.99999999-06	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999-06	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.36000000-02	.00000000 00	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999-06	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.99999999-06	.00000000 00
RI05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.36000000-02
LA05	.99979998-06	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO05	.00000000 00	.99979998-06	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

	LA05	LO05
X	.00000000 00	.00000000 00
Y	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00
RI01	.00000000 00	.00000000 00
LA01	.99979998-06	.00000000 00
LO01	.00000000 00	.99979998-06
RI03	.00000000 00	.00000000 00
LA03	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00
RI05	.00000000 00	.00000000 00
LA05	.99999999-06	.00000000 00
LO05	.00000000 00	.99999999-06

RA-3 PRE M/C NO APRIORI KE EST KM STA LOC COR STA 6 MAY 63

EPOCH 62/01/26 205009.000 CLOCK 022310 SOS .83612 03 QSOS .83654 03

Q	DQ	STDEVDQ	OLD Q	NEW Q	NOMINAL Q	DQ (NOM)
X	-.78966623-03	.52722052 00	.33944731 04	.33944723 04	.33947685 04	-.29614258 00
Y	-.16250624-03	.33353612 00	.57112335 04	.57112334 04	.57116786 04	-.44512939 00
Z	.14574340-02	.10214293 01	.51362430 03	.51362575 03	.51300109 03	.62465668 00
DX	-.47671121-06	.58646901-03	-.77931337 01	-.77931342 01	-.77930811 01	-.53048133-04
DY	.48995741-06	.86306214-03	.56158506 01	.56158511 01	.56148519 01	.99915265-03
DZ	.74700268-06	.10762454-02	-.53071330 01	-.53071322 01	-.53075343 01	.40215253-03
KE	-.12235134-02	.40863467 01	.39860041 06	.39860041 06	.39860320 06	-.27851562 01
KM	.15236342-04	.49992496 01	.49006276 04	.49006276 04	.49007589 04	-.13134766 00
STA 1						
RI	.37187959-04	.59771188-01	.63756470 04	.63756470 04	.63756566 04	-.96435547-02
LA	-.14790840-06	.99593260-03	-.25732403 02	-.25732403 02	-.25732200 02	-.20337105-03
LO	-.10570454-07	.98959906-03	.27705739 02	.27705739 02	.27705280 02	.45943259-03
STA 3						
RI	.42281137-04	.59853869-01	.63720881 04	.63720881 04	.63720830 04	.51269531-02
LA	.32936381-06	.99713472-03	.35119391 02	.35119391 02	.35119500 02	-.10871887-03
LO	.39059582-06	.99464284-03	.24319258 03	.24319258 03	.24319270 03	-.12207031-03
STA 4						
RI	.22178153-04	.55998726-01	.63726058 04	.63726058 04	.63726077 04	-.18920898-02
LA	-.33915028-07	.79214814 19	-.31212356 02	-.31212356 02	-.31212360 02	.40531158-05
LO	.13344639-05	.99741545-03	.13688583 03	.13688583 03	.13688617 03	-.33378601-03
STA 5						
RI	.38895115-04	.59771277-01	.63754851 04	.63754851 04	.63754947 04	-.96435547-02
LA	-.12965362-06	.28335882 19	-.25735023 02	-.25735023 02	-.25734820 02	-.20337105-03
LO	-.72209746-08	.98960526-03	.27685240 02	.27685239 02	.27684780 02	.45943259-03

J MATRIX

	X	Y	Z	DX	DY	DZ	KE	KM	RI01
X	.11050715 06	.17093003 06	.21262290 05	-.17230999 09	.12433541 09	-.11813024 09	-.31190562 04	.62223082 01	.44037787 04
Y	.17093003 06	.29585584 06	.25655305 05	-.29233603 09	.21612929 09	-.20012481 09	-.52669484 04	.10669204 02	-.63678407 04
Z	.21262290 05	.25655305 05	.60376813 04	-.25027401 08	.17819690 08	-.17319617 08	-.47953742 03	.91459938 00	.36165117 04
DX	-.17230999 09	-.29233603 09	-.25027401 08	.30758802 12	-.21836356 12	.20983700 12	.53611578 07	-.10634519 05	.22580550 07
DY	.12433541 09	.21612929 09	.17819690 08	-.21836356 12	.15932553 12	-.14926822 12	-.38848473 07	.78439509 04	-.44729721 07
DZ	-.11813024 09	-.20012481 09	-.17319617 08	.20983700 12	-.14926822 12	.14319034 12	.36660180 07	-.72790137 04	.14804121 07
KE	-.31190562 04	-.52669484 04	-.47953742 03	.53611578 07	-.38848473 07	.36660180 07	.95744462 02	-.19914246 00	.37581841 02
KM	.62223082 01	.10669204 02	.91459938 00	-.10634519 05	.78439509 04	-.72790137 04	-.19914246 00	.40606927-01	-.68070918-02
RI01	.44037787 04	-.63678407 04	.36165117 04	.22580550 07	-.44729721 07	.14804121 07	.37581841 02	-.68070918-02	.70062336 06
LA01	-.41283951 06	-.27232004 06	-.25508557 06	-.38305462 09	.17803886 08	-.22705844 09	.62320593 03	-.58021606 00	-.92590965 05
LO01	.79123563 06	.47797579 05	.55275235 06	.79608053 09	-.29465374 09	.48596011 09	.20619776 04	.58298919 00	.42915745 06
RI03	-.17762853 04	-.30480628 04	-.26050068 03	.30374866 07	-.22407206 07	.20789261 07	.57025229 02	-.17809185 00	-.00000000 00
LA03	.13418516 06	.23025808 06	.19679389 05	-.22945958 09	.16926917 09	-.15704743 09	-.43078224 04	.13452490 02	.00000000 00
LO03	.11931119 06	.20477616 06	.17449966 05	-.20402162 09	.15056631 09	-.13963880 09	-.38312868 04	.12060253 02	.00000000 00
RI04	.23957806-01	.10920792 00	-.40495563-01	-.26180615 02	.10600824 03	-.14022337 02	-.13750103-02	-.10351077-07	.00000000 00
LA04	.11535854-01	.12958240 02	.18105268 01	-.16089701 04	.10148323 05	-.72233837 04	-.15386779 00	-.14732506-04	.00000000 00
LO04	.18185574 02	.10213095 03	-.23691824 02	-.28196697 05	.94970887 05	-.28445727 05	-.13259872 01	-.44729709-04	.00000000 00
RI05	-.28491967-01	-.18833692 00	.28615646-01	.14437244 02	-.14995310 03	.57977387 02	.18330181-02	.60820500-06	-.69437499 06
LA05	-.24113327 01	.41273256 01	.37733295 01	-.25639542 03	.10211858 04	-.15707311 05	-.86641152-01	-.11113785-03	.00000000 00
LO05	.12218288 03	.39897387 03	-.72548370 02	-.19393124 06	.35920584 06	-.16198847 06	-.58314746 01	.11968571-02	.00000000 00

	LA01	LO01	RI03	LA03	LO03	RI04	LA04	LO04	RI05
X	-.41283951 06	.79123563 06	-.17762853 04	.13418516 06	.11931119 06	.23957806-01	.11535854-01	.18185574 02	-.28491967-01
Y	-.27232004 06	.47797579 05	-.30480628 04	.23025808 06	.20477616 06	.10920792 00	.12958240 02	.10213095 03	-.18833692 00
Z	-.25508557 06	.55275235 06	-.26050068 03	.19679389 05	.17449966 05	-.40495563-01	.18105268 01	-.23691824 02	.28615646-01
DX	-.38305462 09	.79608053 09	.30374866 07	-.22945958 09	-.20402162 09	-.26180615 02	-.16089701 04	-.28196697 05	.14437244 02
DY	.17803886 08	-.29465374 09	-.22407206 07	.16926917 09	.15056631 09	.10600824 03	.10148323 05	.94970887 05	-.14995310 03
DZ	-.22705844 09	.48596011 09	.20789261 07	-.15704743 09	-.13963880 09	-.14022337 02	-.72233837 04	-.28445727 05	.57977387 02
KE	.62320593 03	.20619776 04	.57025229 02	-.43078224 04	-.38312868 04	-.13750103-02	-.15386779 00	-.13259872 01	.18330181-02
KM	-.58021606 00	.58298919 00	-.17809185 00	.13452490 02	.12060253 02	-.10351077-07	-.14732506-04	-.44729709-04	.60820500-06
RI01	-.92590965 05	.42915745 06	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	-.69437499 06
LA01	.25360978 10	-.60141666 08	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO01	-.60141666 08	.26142386 10	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI03	-.00000000 00	-.00000000 00	.33069507 03	-.39979237 04	-.35149714 04	-.00000000 00	-.00000000 00	-.00000000 00	-.00000000 00
LA03	.00000000 00	.00000000 00	-.39979237 04	.13020457 07	.26546793 06	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00	-.35149714 04	.26546793 06	.12420509 07	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.27779052 03	.14124398 00	.71890703 01	.00000000 00
LA04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.14124398 00	.10001940 07	.41686844 03	.00000000 00
LO04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.71890703 01	.41686844 03	.10054759 07	.00000000 00
RI05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.69451392 06
LA05	-.24997499 10	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	-.87691649 00
LO05	.00000000 00	-.24997499 10	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	-.96277937 01

	LA05	LO05
X	-.24113327 01	.12218288 03
Y	.41273256 01	.39897387 03
Z	.37733295 01	-.72548370 02
DX	-.25639542 03	-.19393124 06
DY	.10211858 04	.35920584 06
DZ	-.15707311 05	-.16198847 06
KE	-.86641152-01	-.58314746 01
KM	-.11113785-03	.11968571-02
RI01	.00000000 00	.00000000 00
LA01	-.24997499 10	.00000000 00
LO01	.00000000 00	-.24997499 10
RI03	-.00000000 00	-.00000000 00
LA03	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00
RI05	-.87691649 00	-.96277937 01
LA05	.25002512 10	-.31557744 03
LO05	-.31557744 03	.25002671 10

COVARIANCE MATRIX OF ESTIMATED PARAMETERS

	X	Y	Z	DX	DY	DZ	KE	KM	RI01
X	.27796149 00	.67626337-01	-.51488084 00	.15942605-03	-.24916147-03	-.26198747-03	.11956299 01	.97240385-02	-.27949103-02
Y	.67626337-01	.11124634 00	-.20480404 00	.12230496-03	-.27954489-03	-.27655375-03	-.31006490 00	-.24300668-01	.20691274-02
Z	-.51488084 00	-.20480404 00	.10433178 01	-.35244945-03	.65468344-03	.65896574-03	-.17480056 01	-.16428951-02	.17994698-02
DX	.15942605-03	.12230496-03	-.35244945-03	.34394591-06	-.34651356-06	-.61190680-06	.27372057-03	.23788277-04	-.43121167-05
DY	-.24916147-03	-.27954489-03	.65468344-03	-.34651356-06	.74467627-06	.75446194-06	.53141265-03	.54711336-04	.12664388-05
DZ	-.26198747-03	-.27655375-03	.65896574-03	-.61190680-06	.75446194-06	.11583041-05	.71529912-04	-.24086958-04	.65868153-05
KE	.11956299 01	-.31006490 00	-.17480056 01	.27372057-03	.53141265-03	.71529912-04	.16714530 02	.83311544 00	.70988750-01
KM	.97240385-02	-.24300668-01	-.16428951-02	.23788277-04	.54711336-04	-.24086958-04	.83311544 00	.24992497 02	-.20807322-03
RI01	-.27949103-02	.20691274-02	.17994698-02	-.43121167-05	.12664388-05	.65868153-05	.70988750-01	-.20807322-03	.35725950-02
LA01	.22027013-04	-.22608542-05	.43381432-04	.13594981-07	.72579425-07	.53383719-07	.94290247-03	-.60232662-05	-.16249933-06
LO01	-.10330128-03	.75354588-04	-.70312502-05	-.11839850-06	-.17364451-06	.26390176-07	-.60407443-03	.10897908-04	.29051219-06
RI03	-.79434209-03	.12377294-02	.58155468-03	-.10552706-05	-.26726201-05	.88718039-06	-.40313875-01	.23819464-03	.10607269-04
LA03	.16790113-04	-.25990811-04	-.12393208-04	.22161848-07	.56086621-07	-.18609597-07	.84685364-03	-.49562638-05	-.22263110-06
LO03	.32038298-05	-.21326116-04	.72637802-05	.17982239-07	.49401526-07	-.17267699-07	.66544879-03	-.84657788-05	-.19359915-06
RI04	-.22767140-04	.23177307-04	.18589919-04	.21859431-07	-.49121654-07	-.59194341-07	-.32540644-03	-.72050978-05	-.51387839-06
LA04	.11298558-05	-.84959211-07	-.19484743-05	-.12570825-08	-.14119893-09	.21330109-08	.53246627-05	-.24381853-06	.87044977-08
LO04	-.18588851-05	.42521917-05	-.68409058-06	.18135434-08	-.97007243-08	-.72018584-08	-.49769430-04	-.18283310-05	-.77801429-07
RI05	-.27943400-02	.20687169-02	.17990885-02	-.43112331-05	.12661738-05	.65854639-05	.70974638-01	-.20802647-03	.35718803-02
LA05	.22022031-04	-.22618215-05	.43374777-04	.13589065-07	.72568505-07	.53379141-07	.94271853-03	-.60221466-05	-.16243141-06
LO05	-.10028588-03	.75343015-04	-.70244452-05	-.11837410-06	-.17361656-06	.26380161-07	-.60402024-03	.10893363-04	.29040035-06

	LA01	LO01	RI03	LA03	LO03	RI04	LA04	LO04	RI05
X	.22027013-04	-.10030128-03	-.79434209-03	.16790113-04	.32038298-05	-.22767140-04	.11298558-05	-.18588851-05	-.27943400-02
Y	-.22608542-05	.75354588-04	.12377294-02	-.25990811-04	-.21326116-04	.23177307-04	-.84959211-07	.42521917-05	.20687169-02
Z	.43381432-04	-.70312502-05	.58155468-03	-.12393208-04	.72637802-05	.18589919-04	-.19484743-05	-.68409058-06	.17990885-02
DX	.13594981-07	-.11839850-06	-.10552706-05	.22161848-07	.17982239-07	.21859431-07	-.12570825-08	.18135434-08	-.43112331-05
DY	.72579425-07	-.17364451-06	-.26726201-05	.56086621-07	.49401526-07	-.49121654-07	-.14119893-09	-.97007243-08	.12661738-05
DZ	.53383719-07	.26390176-07	.88718039-06	-.18609597-07	-.17267699-07	-.59194341-07	.21330109-08	-.72018584-08	.65854639-05
KE	.94290247-03	-.60407443-03	-.40313875-01	.84685364-03	.66544879-03	-.32540644-03	.53246627-05	-.49769490-04	.70974638-01
KM	-.60232662-05	.10897908-04	.23819464-03	-.49562638-05	-.84657788-05	-.72050978-05	-.24381853-06	-.18283310-05	-.20802647-03
RI01	-.16249933-06	.29051219-06	.10607269-04	-.22263110-06	-.19359915-06	-.51387839-06	.87044977-08	-.77801429-07	.35718803-02
LA01	.99188177-06	.94983203-08	.24139426-06	-.50518330-08	-.58133779-08	-.13666575-07	-.23225087-09	-.28667761-08	-.16245849-06
LO01	.94983203-08	.97930630-06	-.32393527-06	.67283186-08	.12682119-07	.31267414-07	.70373510-09	.70248520-08	.29044862-06
RI03	.24139426-06	-.32393527-06	.35872756-02	.26745730-06	.19559977-06	.42986450-06	.85054078-08	.97121497-07	.10604899-04
LA03	-.50518330-08	.67283186-08	.26745730-06	.99437735-06	-.40311737-08	-.90462855-08	-.17772186-09	-.20413242-08	-.22258135-06
LO03	-.58133779-08	.12682119-07	.19559977-06	-.40311737-08	.98931439-06	-.55299741-08	-.23092121-09	-.14932847-08	-.19355622-06
RI04	-.13666575-07	.31267414-07	.42986450-06	-.90462855-08	-.55299741-08	.35998471-02	-.26761741-09	-.24093774-07	-.51377585-06
LA04	-.23225087-09	.70373510-09	.85054078-08	-.17772186-09	-.23092121-09	-.26761741-09	.62749869-38	-.42678684-09	.87026730-08
LO04	-.28667761-08	.70248520-08	.97121497-07	-.20413242-08	-.14932847-08	-.24093774-07	-.42678684-09	.99483761-06	-.77786067-07
RI05	-.16245849-06	.29044862-06	.10604899-04	-.22258135-06	-.19355622-06	-.51377585-06	.87026730-08	-.77786067-07	.35726057-02
LA05	.99168321-06	.94965330-08	.24134730-06	-.50508498-08	-.58122873-08	-.13664280-07	-.23218653-09	-.28662512-08	-.16239059-06
LO05	.94933081-08	.97911245-06	-.32374443-06	.67243233-08	.12677682-07	.31263055-07	.70356472-09	.70237422-08	.29033682-06

	LA05	LO05
X	.22022031-04	-.10029588-03
Y	-.22618215-05	.75343015-04
Z	.43374777-04	-.70244452-05
DX	.13589065-07	-.11837410-06
DY	.72568505-07	-.17361656-06
DZ	.53379141-07	.25380161-07
KE	.94271853-03	-.60402024-03
KM	-.60221466-05	.10893363-04
RI01	-.16243141-06	.29040035-06
LA01	.99168321-06	.94933081-08
LO01	.94965330-08	.97911245-06
RI03	.24134730-06	-.32374443-06
LA03	-.50508498-08	.67243233-08
LO03	-.58122873-08	.12677682-07
RI04	-.13664280-07	.31263055-07
LA04	-.23218653-09	.70356472-09
LO04	-.28662512-08	.70237422-08
RI05	-.16239059-06	.29033682-06
LA05	.80292224-37	.94915216-08
LO05	.94915216-08	.97931859-06

CORRELATION MATRIX OF ESTIMATED PARAMETERS

	X	Y	Z	DX	DY	DZ	KE	KM	RI01
X	.10000000 01	.38457468 00	-.95610616 00	.51561067 00	-.54757865 00	-.46171810 00	.55469899 00	.36893472-02	-.88691841-01
Y	.38457468 00	.99999999 00	-.60115623 00	.62525361 00	-.97110595 00	-.77041614 00	-.22738544 00	-.14573723-01	.10378927 00
Z	-.95610616 00	-.60115623 00	.10000000 01	-.58836044 00	.74264453 00	.59943657 00	-.41858864 00	-.32173381-03	.29474359-01
DX	.51561067 00	.62525361 00	-.58836044 00	.10000000 01	-.68459400 00	-.96945778 00	.11416035 00	.81135903-02	-.12301371 00
DY	-.54757865 00	-.97110595 00	.74264453 00	-.68459400 00	.99999999 00	.81223924 00	.15060616 00	.12680326-01	.24549929-01
DZ	-.46171810 00	-.77041614 00	.59943657 00	-.96945778 00	.81223924 00	.99999999 00	.16256584-01	-.44767808-02	.10239348 00
KE	.55469899 00	-.22738544 00	-.41858864 00	.11416035 00	.15060616 00	.16256584-01	.99999999 00	.40761792-01	.29050295 00
KM	.36893472-02	-.14573723-01	-.32173381-03	.81135903-02	.12680326-01	-.44767808-02	.40761792-01	.10000000 01	-.69633698-03
RI01	-.88691841-01	.10378927 00	.29474359-01	-.12301371 00	.24549929-01	.10239348 00	.29050295 00	-.69633698-03	.10000000 01
LA01	.41950133-01	-.68061219-02	.42644755-01	.23275743-01	.84438691-01	.49804383-01	.23157396 00	-.12097546-02	-.27297931-02
LO01	-.19224493 00	.22830087 00	-.69560865-02	-.20400548 00	-.20331045 00	.24778311-01	-.14930835 00	.22028202-02	.49114890-02
RI03	-.25155496-01	.61958436-01	.95060452-02	-.30042523-01	-.51702646-01	.13763163-01	-.16463611 00	.79550841-03	.29629839-02
LA03	.31936381-01	-.78145025-01	-.12167457-01	.37895294-01	.65169080-01	-.17340038-01	.20772351 00	-.99420048-03	-.37352383-02
LO03	.61095603-02	-.64283830-01	.71496902-02	.30827019-01	.57548117-01	-.16130803-01	.16364412 00	-.17025306-02	-.32564497-02
RI04	-.71973751-03	.11581854-02	.30333824-03	.62122904-03	-.94861257-03	-.91669919-03	-.13265909-02	-.24021107-04	-.14329348-03
LA04	.27053553-24	-.32155938-25	-.24081302-24	-.27059035-24	-.20652989-25	.25019311-24	.16441393-24	-.61568059-26	.18384228-25
LO04	-.35349570-02	.12781854-01	-.67147401-01	.31003218-02	-.11269016-01	-.67089903-02	-.12205062-01	-.36666874-03	-.13050272-02
RI05	-.88673611-01	.10376853 00	.29468069-01	-.12298832 00	.24544755-01	.10237232 00	.29044477 00	-.69617949-03	.99979847 00
LA05	.14741046-22	-.23931984-23	.14986223-22	.81772586-23	.29673539-22	.17503444-22	.81376349-22	-.42511825-24	-.95905028-24
LO05	-.19221420 00	.22826437 00	-.69493107-02	-.20396216 00	-.20327646 00	.24768753-01	-.14929402 00	.22018876-02	.49095676-02

	LA01	LO01	RI03	LA03	LO03	RI04	LA04	LO04	RI05
X	.41950133-01	-.19224493 00	-.25155496-01	.31936381-01	.61095603-02	-.71973751-03	.27053553-24	-.35349570-02	-.88673611-01
Y	-.68061219-02	.22830087 00	.61958436-01	-.78145025-01	-.64283830-01	.11581854-02	-.32155938-25	.12781854-01	.10376853 00
Z	.42644755-01	-.69560865-02	.95060452-02	-.12167457-01	.71496902-02	.30333824-03	-.24081302-24	-.67147401-01	.29468069-01
DX	.23275743-01	-.20400548 00	-.30042523-01	.37895294-01	.30827019-01	.62122904-03	-.27059035-24	.31003218-02	-.12298832 00
DY	.84438691-01	-.20331045 00	-.51702646-01	.65169080-01	.57548117-01	-.94861257-03	-.20652989-25	-.11269016-01	.24544755-01
DZ	.49804383-01	.24778311-01	.13763163-01	-.17340038-01	-.16130803-01	-.91669919-03	.25019311-24	-.67089903-02	.10237232 00
KE	.23157396 00	-.14930835 00	-.16463611 00	.20772351 00	.16364412 00	-.13265909-02	.16441393-24	-.12205062-01	.29044477 00
KM	-.12097546-02	.22028202-02	.79550841-03	-.99420048-03	-.17025306-02	-.24021107-04	-.61568059-26	-.36666874-03	-.69617949-03
RI01	-.27297931-02	.49114890-02	.29629839-02	-.37352383-02	-.32564497-02	-.14329348-03	.18384228-25	-.13050272-02	.99979847 00
LA01	.10000000 01	.96373487-02	.40468268-02	-.50867853-02	-.56885504-02	-.22871134-03	-.29438859-25	-.28859428-02	-.27291030-02
LO01	.96373487-02	.99999999 00	-.54653323-02	.68182302-02	.12884435-01	.52661188-03	.89772540-25	.71170792-02	.49104071-02
RI03	.40468268-02	-.54653323-02	.10000000 01	.44781275-02	.32833623-02	.11962093-03	.17926947-25	.16257617-02	.29623175-02
LA03	-.50867853-02	.68182302-02	.44781275-02	.99999999 00	-.40643277-02	-.15120029-03	-.22498771-25	-.20523918-02	-.37343982-02
LO03	-.56885504-02	.12884435-01	.32833623-02	-.40643277-02	.10000000 01	-.92664609-04	-.29308274-25	-.15052178-02	-.32557229-02
RI04	-.22871134-03	.52661188-03	.11962093-03	-.15120029-03	-.92664609-04	.99999999 00	-.56307457-27	-.40261199-03	-.14326467-03
LA04	-.29438859-25	.89772540-25	.17926947-25	-.22498771-25	-.29308274-25	-.56307457-27	.99999999 00	-.54016756-25	.18380347-25
LO04	-.28859428-02	.71170792-02	.16257617-02	-.20523918-02	-.15052178-02	-.40261199-03	-.54016756-25	.10000000 01	-.13047676-02
RI05	-.27291030-02	.49104071-02	.29623175-02	-.37343982-02	-.32557229-02	-.14326467-03	.18380347-25	-.13047676-02	.99999999 00
LA05	.35140364-21	.33866401-23	.14220777-23	-.17875248-23	-.20622588-23	-.80372594-25	-.11977681 31	-.10141481-23	-.95880782-24
LO05	.96322027-02	.99979578 00	-.54620783-02	.68141387-02	.12879846-01	.52653515-03	.89750244-25	.71159102-02	.49084862-02

	LA05	LO05
X	.14741046-22	-.19221420 00
Y	-.23931984-23	.22826437 00
Z	.14986223-22	-.69493107-02
DX	.81772586-23	-.20396216 00
DY	.29673539-22	-.20327646 00
DZ	.17503444-22	.24768753-01
KE	.81376349-22	-.14929402 00
KM	-.42511825-24	.22018876-02
RI01	-.95905028-24	.49095676-02
LA01	.35140364-21	.96322027-02
LO01	.33866401-23	.99979578 00
RI03	.14220777-23	-.54620783-02
LA03	-.17875248-23	.68141387-02
LO03	-.20622588-23	.12879846-01
RI04	-.80372594-25	.52653515-03
LA04	-.11977681 31	.89750244-25
LO04	-.10141481-23	.71159102-02
RI05	-.95880782-24	.49084862-02
LA05	.99999999 00	.33848317-23
LO05	.33848317-23	.10000000 01

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TIME	TC	Q	FRQ	CC3
205721	1	1	8135.0	.68768592 05 .736 00 .4072
205731	1	1	8135.0	.70368768 05 .730 00 .2314
205741	1	1	8135.0	.72043818 05 .727 00 .1816
205751	1	1	8135.0	.73793620 05 .723 00 .3799
205811	1	1	8135.0	.77512799 05 .717 00 .2002
205941	1	1	8135.0	.96981488 05 .707 00 -.4883
210011	1	1	8135.0	.10378151 06 .705 00 -.5098
210021	1	1	8135.0	.10599370 06 .705 00 -.6973
210041	1	1	8135.0	.11027796 06 .703 00 .0352
210051	1	1	8135.0	.11233354 06 .703 00 .4551
210111	1	1	8135.0	.11623849 06 .703 00 -.4912
210221	1	1	8135.0	.12740287 06 .703 00 .1289
210231	1	1	8135.0	.12867319 06 .703 00 .8105
210241	1	1	8135.0	.12986696 06 .703 00 .0381
210251	1	1	8135.0	.13098691 06 .703 00 -.9141
210301	1	1	8135.0	.13203602 06 .703 00 -.0156
210321	1	1	8135.0	.13393438 06 .703 00 .6152
210331	1	1	8135.0	.13479020 06 .703 00 -.1953
210341	1	1	8135.0	.13558814 06 .703 00 -.1367
210351	1	1	8135.0	.13633146 06 .703 00 .5391
210401	1	1	8135.0	.13702333 06 .703 00 -.3281
210411	1	1	8135.0	.13766681 06 .703 00 .1855
210451	1	1	8135.0	.13981405 06 .703 00 .9473
210501	1	1	8135.0	.14025729 06 .703 00 -.2949
210511	1	1	8135.0	.14066787 06 .703 00 .1328
210751	1	1	8135.0	.14418366 06 .705 00 .3359
210841	1	1	8139.0	.14455275 06 .705 00 .2461
210911	1	1	8139.0	.14467945 06 .705 00 -.4531
210941	1	1	8139.0	.14475000 06 .705 00 .0000
211001	1	1	8139.0	.14477065 06 .705 00 -.6523
211031	1	1	8139.0	.14476810 06 .705 00 -.0996
211051	1	1	8139.0	.14474703 06 .705 00 -.0273
211059	1	1	8139.0	.14473475 06 .705 00 .2500
211111	1	1	8139.0	.14471253 06 .705 00 .4688
211131	1	1	8139.0	.14466615 06 .705 00 -.1504
211141	1	1	8139.0	.14463894 06 .705 00 .0645
211201	1	1	8139.0	.14457723 06 .705 00 -1.2344
211221	1	1	8139.0	.14450676 06 .705 00 .2363
211231	1	1	8139.0	.14446856 06 .705 00 .4375
211251	1	1	8139.0	.14438660 06 .705 00 1.2031
211301	1	1	8139.0	.14434345 06 .705 00 1.5508
211311	1	1	8139.0	.14429858 06 .705 00 -.5840
211321	1	1	8139.0	.14425229 06 .705 00 -.2949
211331	1	1	8139.0	.14420467 06 .705 00 1.3320
211341	1	1	8139.0	.14415579 06 .705 00 .2109
211351	1	1	8139.0	.14410573 06 .707 00 -.7305
211401	1	1	8139.0	.14405457 06 .707 00 .4336
211411	1	1	8139.0	.14400236 06 .707 00 .6348
211421	1	1	8139.0	.14394919 06 .707 00 -.1934
211431	1	1	8139.0	.14389511 06 .707 00 .8867
211441	1	1	8139.0	.14384018 06 .707 00 -.1816
211451	1	1	8139.0	.14378445 06 .707 00 -.4551
211501	1	1	8139.0	.14372799 06 .707 00 .0137
211511	1	1	8139.0	.14367082 06 .707 00 1.1758
211521	1	1	8139.0	.14361301 06 .707 00 -.0156
211531	1	1	8139.0	.14355461 06 .707 00 -.6074
211541	1	1	8139.0	.14349564 06 .707 00 .3633
211551	1	1	8139.0	.14343615 06 .707 00 -1.1523
211601	1	1	8139.0	.14337618 06 .707 00 -.1836
211611	1	1	8139.0	.14331577 06 .707 00 .2266
211621	1	1	8139.0	.14325495 06 .707 00 .0488
211631	1	1	8139.0	.14319375 06 .707 00 .2480
211641	1	1	8139.0	.14313221 06 .707 00 .7930
211651	1	1	8139.0	.14307034 06 .707 00 .6563
211701	1	1	8139.0	.14300819 06 .707 00 -.1914
211711	1	1	8139.0	.14294578 06 .707 00 .2227
211721	1	1	8139.0	.14288313 06 .707 00 -.1270
211729	1	1	8139.0	.14283285 06 .707 00 1.1523
211731	1	1	8139.0	.14282026 06 .707 00 .7402
211741	1	1	8139.0	.14275720 06 .707 00 -.2031
211751	1	1	8139.0	.14269398 06 .707 00 -.9785
211801	1	1	8139.0	.14263060 06 .707 00 .3965
211811	1	1	8139.0	.14256710 06 .707 00 -1.0977
211821	1	1	8139.0	.14250348 06 .707 00 .5156
211831	1	1	8139.0	.14243978 06 .707 00 .2246
211841	1	1	8139.0	.14237599 06 .707 00 -.9922
211851	1	1	8139.0	.14231214 06 .707 00 -.1465
211901	1	1	8139.0	.14224825 06 .707 00 -.2559
211921	1	1	8139.0	.14212039 06 .707 00 -1.3945
211931	1	1	8139.0	.14205645 06 .707 00 .5508
211951	1	1	8139.0	.14192860 06 .707 00 1.4023
212001	1	1	8139.0	.14186471 06 .707 00 .2871
212011	1	1	8139.0	.14180087 06 .707 00 1.1328
212031	1	1	8139.0	.14167334 06 .707 00 -.3398
212051	1	1	8139.0	.14154609 06 .707 00 -.0938
212101	1	1	8139.0	.14148259 06 .709 00 .4063
212111	1	1	8139.0	.14141919 06 .709 00 -.1914
212121	1	1	8139.0	.14135589 06 .709 00 .1113
212131	1	1	8139.0	.14129269 06 .709 00 .3047
212141	1	1	8139.0	.14122962 06 .709 00 -.6172
212151	1	1	8139.0	.14116666 06 .709 00 -.6602
212201	1	1	8139.0	.14110383 06 .709 00 .1699
212211	1	1	8139.0	.14104113 06 .709 00 -.1348
212221	1	1	8139.0	.14097858 06 .709 00 .4219
212231	1	1	8139.0	.14091616 06 .709 00 -1.1641
212241	1	1	8139.0	.14085389 06 .709 00 .1035
212251	1	1	8139.0	.14079178 06 .709 00 -.7832
212301	1	1	8139.0	.14072983 06 .709 00 -.8281
212311	1	1	8139.0	.14066803 06 .709 00 .9688
212321	1	1	8139.0	.14060640 06 .709 00 .5977
212331	1	1	8139.0	.14054494 06 .709 00 .0586
212341	1	1	8139.0	.14048365 06 .709 00 .3477
212351	1	1	8139.0	.14042253 06 .709 00 .4648
212401	1	1	8139.0	.14036160 06 .709 00 -.5977
212411	1	1	8139.0	.14030084 06 .709 00 -1.8438
212421	1	1	8139.0	.14024027 06 .709 00 -.2695
212431	1	1	8139.0	.14017988 06 .709 00 -.8828
212441	1	1	8139.0	.14011969 06 .709 00 -.6875

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TIME	TC	Q	FRQ	CC3
212451	1	1	8139.0	.14005968 06 .709 00 .3223
212501	1	1	8139.0	.13999986 06 .709 00 .1367
212511	1	1	8139.0	.13994024 06 .709 00 -1.2422
212521	1	1	8139.0	.13988082 06 .709 00 1.1836
212531	1	1	8139.0	.13982159 06 .709 00 -.5898
212541	1	1	8139.0	.13976256 06 .709 00 -.5625
212551	1	1	8139.0	.13970374 06 .709 00 .2637
212601	1	1	8139.0	.13964511 06 .709 00 .8906
212611	1	1	8139.0	.13958669 06 .709 00 .3125
212621	1	1	8139.0	.13952847 06 .709 00 -.4707
212631	1	1	8139.0	.13947046 06 .709 00 -.4590
212641	1	1	8139.0	.13941265 06 .709 00 .3457
212651	1	1	8139.0	.13935505 06 .709 00 -.0547
212701	1	1	8139.0	.13929766 06 .709 00 -.6641
212711	1	1	8139.0	.13924048 06 .709 00 .5215
212721	1	1	8139.0	.13918350 06 .709 00 -.5059
212731	1	1	8139.0	.13912674 06 .709 00 -.7422
212741	1	1	8139.0	.13907019 06 .709 00 -.1875
212751	1	1	8139.0	.13901384 06 .709 00 -.8438
212801	1	1	8139.0	.13895771 06 .709 00 .2910
212811	1	1	8139.0	.13890179 06 .709 00 -.7852
212821	1	1	8139.0	.13884607 06 .709 00 -.0742
212831	1	1	8139.0	.13879057 06 .709 00 -.5723
212841	1	1	8139.0	.13873529 06 .709 00 -.2852
212851	1	1	8139.0	.13868020 06 .709 00 -.2051
212901	1	1	8139.0	.13862534 06 .709 00 -.3379
212911	1	1	8139.0	.13857068 06 .709 00 .3184
212921	1	1	8139.0	.13851624 06 .709 00 .7637
212941	1	1	8139.0	.13840798 06 .709 00 .0195
212951	1	1	8139.0	.13835416 06 .709 00 -1.1641
213001	1	1	8139.0	.13830056 06 .709 00 -.5605
213011	1	1	8139.0	.13824717 06 .709 00 -.1680
213021	1	1	8139.0	.13819398 06 .709 00 -.9824
213031	1	1	8139.0	.13814101 06 .709 00 -1.0117
213041	1	1	8139.0	.13808824 06 .709 00 .7559
213051	1	1	8139.0	.13803568 06 .711 00 .3145
213101	1	1	8139.0	.13798333 06 .711 00 -.3340
213111	1	1	8139.0	.13793119 06 .711 00 1.8086
213121	1	1	8139.0	.13787925 06 .711 00 .7441
213131	1	1	8139.0	.13782753 06 .711 00 -.5273
213141	1	1	8139.0	.13777600 06 .711 00 -.0039
213151	1	1	8139.0	.13772468 06 .711 00 .3164
213201	1	1	8139.0	.13767357 06 .711 00 .4277
213211	1	1	8139.0	.13762266 06 .711 00 -.6602
213221	1	1	8139.0	.13757195 06 .711 00 -.9531
213231	1	1	8139.0	.13752145 06 .711 00 -.4492
213241	1	1	8139.0	.13747115 06 .711 00 .8535
213251	1	1	8139.0	.13742104 06 .711 00 .9551
213301	1	1	8139.0	.13737114 06 .711 00 -.1445
213311	1	1	8139.0	.13732144 06 .711 00 .5566
213321	1	1	8139.0	.13727194 06 .711 00 .0566
213331	1	1	8139.0	.13722264 06 .711 00 1.3594
213341	1	1	8139.0	.13717353 06 .711 00 1.6648
213401	1	1	8139.0	.13707592 06 .711 00 .0840
213411	1	1	8139.0	.13702740 06 .711 00 .6016
213421	1	1	8139.0	.13697908 06 .711 00 -.0762
213431	1	1	8139.0	.13693095 06 .711 00 .0508
213441	1	1	8139.0	.13688301 06 .711 00 -.0156
213451	1	1	8139.0	.13683527 06 .711 00 .7266
213501	1	1	8139.0	.13678772 06 .711 00 .2793
213511	1	1	8139.0	.13674036 06 .711 00 .6387
213521	1	1	8139.0	.13669319 06 .711 00 -1.1914
213531	1	1	8139.0	.13664621 06 .711 00 -.2070
213541	1	1	8139.0	.13659941 06 .711 00 -.4141
213551	1	1	8139.0	.13655281 06 .711 00 .1934
213621	1	1	8139.0	.13641410 06 .711 00 -.0996
213631	1	1	8139.0	.13636823 06 .711 00 -.2344
213641	1	1	8139.0	.13632255 06 .711 00 -1.5547
213651	1	1	8139.0	.13627705 06 .711 00 -1.0508
213701	1	1	8139.0	.13623173 06 .711 00 -.7305
213711	1	1	8139.0	.13618659 06 .711 00 .4102
213721	1	1	8139.0	.13614163 06 .711 00 .3691
213731	1	1	8139.0	.13609685 06 .711 00 .1504
213741	1	1	8139.0	.13605225 06 .711 00 -.2461
213751	1	1	8139.0	.13600782 06 .711 00 1.1797
213801	1	1	8139.0	.13596357 06 .711 00 -.5664
213811	1	1	8139.0	.13591949 06 .711 00 -.4922
213821	1	1	8139.0	.13587559 06 .711 00 .4082
213831	1	1	8139.0	.13583186 06 .711 00 .1367
213851	1	1	8139.0	.13574492 06 .711 00 -.9238
213901	1	1	8139.0	.13570171 06 .711 00 -.7129
213911	1	1	8139.0	.13565867 06 .711 00 .3301
213921	1	1	8139.0	.13561580 06 .711 00 -.7969
213931	1	1	8139.0	.13557309 06 .711 00 -1.0898
213941	1	1	8139.0	.13553055 06 .711 00 .4473
213951	1	1	8139.0	.13548818 06 .711 00 .8184
214001	1	1	8139.0	.13544597 06 .711 00 .0254
214011	1	1	8139.0	.13540393 06 .711 00 -.9336
214021	1	1	8139.0	.13536206 06 .711 00 -.0566
214031	1	1	8139.0	.13532034 06 .711 00 .6563
214041	1	1	8139.0	.13527879 06 .711 00 .2070
214051	1	1	8139.0	.13523740 06 .711 00 -.4004
214101	1	1	8139.0	.13519617 06 .711 00 -.1719
214111	1	1	8139.0	.13515510 06 .711 00 -.0996
214121	1	1	8139.0	.13511419 06 .711 00 -1.1914
214131	1	1	8139.0	.13507343 06 .711 00 -.4355
214141	1	1	8139.0	.13503264 06 .711 00 .1602
214151	1	1	8139.0	.13499240 06 .711 00 .5996
214201	1	1	8139.0	.13495211 06 .711 00 -1.1172
214211	1	1	8139.0	.13491198 06 .711 00 .0156
214221	1	1	8139.0	.13487201 06 .711 00 -.0098
214231	1	1	8139.0	.13483219 06 .711 00 -1.1875
214241	1	1	8139.0	.13479252 06 .711 00 -.5176
214251	1	1	8139.0	.13475299 06 .711 00 .0039
214301	1	1	8139.0	.13471363 06 .711 00 1.3711
214311	1	1	8139.0	.13467441 06 .711 00 .5898
214321	1	1	8139.0	.13463534 06 .711 00 -.3418
214331	1	1	8139.0	.13459642 06 .711 00 .5801

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TIME	TC	Q	FRQ	CC3
214341	1	1	8139.0	.13455765 06 .711 00 .3535
214351	1	1	8139.0	.13451902 06 .711 00 .9805
214401	1	1	8139.0	.13448054 06 .711 00 .4629
214411	1	1	8139.0	.13444220 06 .711 00 -.2012
214421	1	1	8139.0	.13440401 06 .711 00 .9927
214431	1	1	8139.0	.13436596 06 .711 00 -.9590
214441	1	1	8139.0	.13432805 06 .711 00 -.0527
214451	1	1	8139.0	.13429029 06 .711 00 -1.2891
214501	1	1	8139.0	.13425267 06 .711 00 .3320
214511	1	1	8139.0	.13421518 06 .711 00 .8164
214521	1	1	8139.0	.13417784 06 .711 00 -.8418
214531	1	1	8139.0	.13414063 06 .711 00 .3633
214541	1	1	8139.0	.13410357 06 .711 00 -.5723
214551	1	1	8139.0	.13406664 06 .711 00 -.6426
214601	1	1	8139.0	.13402985 06 .711 00 -.8516
214611	1	1	8139.0	.13399319 06 .711 00 -.1953
214621	1	1	8139.0	.13395667 06 .711 00 -.6738
214641	1	1	8139.0	.13388404 06 .711 00 .9648
214651	1	1	8139.0	.13384791 06 .711 00 1.0859
214701	1	1	8139.0	.13381193 06 .711 00 .0703
214721	1	1	8139.0	.13374035 06 .711 00 -.3496
214731	1	1	8139.0	.13370476 06 .711 00 -.7559
214741	1	1	8139.0	.13366929 06 .711 00 .7090
214751	1	1	8139.0	.13363395 06 .711 00 .0449
214801	1	1	8139.0	.13359874 06 .711 00 .2539
214811	1	1	8139.0	.13356367 06 .711 00 -.6660
214821	1	1	8139.0	.13352871 06 .711 00 .2871
214831	1	1	8139.0	.13349388 06 .711 00 -.8848
214841	1	1	8139.0	.13345918 06 .711 00 -1.1836
214851	1	1	8139.0	.13342460 06 .711 00 .3965
214901	1	1	8139.0	.13339015 06 .711 00 .8496
214911	1	1	8139.0	.13335582 06 .711 00 -.8203
214921	1	1	8139.0	.13332161 06 .711 00 -.6133
214931	1	1	8139.0	.13328753 06 .711 00 .4727
214941	1	1	8139.0	.13325356 06 .711 00 -1.5625
214951	1	1	8139.0	.13321972 06 .711 00 .2813
215001	1	1	8139.0	.13318599 06 .711 00 .0059
215011	1	1	8139.0	.13315239 06 .711 00 .6094
215021	1	1	8139.0	.13311890 06 .711 00 .0957
215031	1	1	8139.0	.13308554 06 .711 00 .4629
215041	1	1	8139.0	.13305229 06 .711 00 .7109
215051	1	1	8139.0	.13301915 06 .711 00 -1.1563
215101	1	1	8139.0	.13298614 06 .711 00 .8594
215111	1	1	8139.0	.13295324 06 .711 00 -.2492
215121	1	1	8139.0	.13292045 06 .711 00 -.4531
215131	1	1	8139.0	.13288778 06 .711 00 .2168
215141	1	1	8139.0	.13285522 06 .711 00 -.2246
215151	1	1	8139.0	.13282278 06 .711 00 -.7813
215201	1	1	8139.0	.13279045 06 .713 00 -.4492
215211	1	1	8139.0	.13275823 06 .713 00 -.2305
215221	1	1	8139.0	.13272612 06 .713 00 -.1230
215231	1	1	8139.0	.13269412 06 .713 00 -.1250
215241	1	1	8139.0	.13266224 06 .713 00 -1.2383
215251	1	1	8139.0	.13263046 06 .713 00 -.4609
215311	1	1	8139.0	.13256723 06 .713 00 .7656
215321	1	1	8139.0	.13253578 06 .713 00 .2168
215331	1	1	8139.0	.13250444 06 .713 00 .5625
215341	1	1	8139.0	.13247320 06 .713 00 -1.2031
215351	1	1	8139.0	.13244207 06 .713 00 -.0703
215401	1	1	8139.0	.13241104 06 .713 00 .9551
215411	1	1	8139.0	.13238012 06 .713 00 -.1250
215431	1	1	8139.0	.13231860 06 .713 00 -.5977
215441	1	1	8139.0	.13228799 06 .713 00 .0098
215451	1	1	8139.0	.13225749 06 .713 00 -.4863
215501	1	1	8139.0	.13222708 06 .713 00 .9180
215521	1	1	8139.0	.13216658 06 .713 00 .4160
215531	1	1	8139.0	.13213648 06 .713 00 -.4863
215541	1	1	8139.0	.13210649 06 .713 00 -.4902
215601	1	1	8139.0	.13204679 06 .713 00 .2070
215611	1	1	8139.0	.13201709 06 .713 00 .9063
215621	1	1	8139.0	.13198749 06 .713 00 .5078
215641	1	1	8139.0	.13192858 06 .713 00 .4180
215651	1	1	8139.0	.13189927 06 .713 00 -.2715
215701	1	1	8139.0	.13187006 06 .713 00 -.0586
215711	1	1	8139.0	.13184094 06 .713 00 .0586
215721	1	1	8139.0	.13181192 06 .713 00 .0801
215731	1	1	8139.0	.13178299 06 .713 00 1.0078
215741	1	1	8139.0	.13175416 06 .713 00 -.1602
215751	1	1	8139.0	.13172542 06 .713 00 -.4219
215801	1	1	8139.0	.13169678 06 .713 00 .2227
215811	1	1	8139.0	.13166822 06 .713 00 -1.2266
215821	1	1	8139.0	.13163977 06 .713 00 1.2344
215831	1	1	8139.0	.13161140 06 .713 00 -.3965
215841	1	1	8139.0	.13158312 06 .713 00 -2.1250
215841	1	1	8139.0	.13158312 06 .713 00 -2.1250
215851	1	1	8139.0	.13155494 06 .713 00 .0645
215901	1	1	8139.0	.13152684 06 .713 00 -.8418
215911	1	1	8139.0	.13149884 06 .713 00 .1621
215921	1	1	8139.0	.13147092 06 .713 00 .0781
215931	1	1	8139.0	.13144310 06 .713 00 -.0977
215941	1	1	8139.0	.13141538 06 .713 00 -.3613
215951	1	1	8139.0	.13138771 06 .713 00 1.2891
220001	1	1	8139.0	.13136015 06 .713 00 -.1523
220011	1	1	8139.0	.13133268 06 .713 00 -1.6797
220021	1	1	8139.0	.13130529 06 .713 00 -.2949
220031	1	1	8139.0	.13127800 06 .713 00 .0039
220041	1	1	8139.0	.13125078 06 .713 00 .2168
220051	1	1	8139.0	.13122366 06 .713 00 -.6563
220101	1	1	8139.0	.13119661 06 .713 00 .3848
220111	1	1	8139.0	.13116966 06 .713 00 .3418
220121	1	1	8139.0	.13114279 06 .713 00 .2129
220131	1	1	8139.0	.13111600 06 .713 00 .0020
220141	1	1	8139.0	.13108929 06 .713 00 -.2949
220151	1	1	8139.0	.13106267 06 .713 00 .3252
220201	1	1	8139.0	.13103614 06 .713 00 .8652
220211	1	1	8139.0	.13100968 06 .713 00 -.6816
220221	1	1	8139.0	.13098331 06 .713 00 -.3076
220231	1	1	8139.0	.13095701 06 .713 00 -1.0156

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TIME	TC	Q	FRQ	CC3
220241	1	1	8139.0	.13090380 06 .713 00 .1953
220251	1	1	8139.0	.13090467 06 .713 00 .3252
220301	1	1	8139.0	.13087863 06 .713 00 1.3750
220311	1	1	8139.0	.13085266 06 .713 00 -.6582
220331	1	1	8139.0	.13080096 06 .713 00 1.0430
220351	1	1	8139.0	.13074957 06 .713 00 -.5762
220421	1	1	8139.0	.13047308 06 .713 00 -.0850
220431	1	1	8139.0	.13064774 06 .713 00 -.7422
220441	1	1	8139.0	.13062248 06 .713 00 .5234
220451	1	1	8139.0	.13059729 06 .713 00 -1.2891
220501	1	1	8139.0	.13057217 06 .713 00 .8242
220511	1	1	8139.0	.13054714 06 .713 00 -.1396
220521	1	1	8139.0	.13052218 06 .713 00 -.1777
220531	1	1	8139.0	.13049729 06 .713 00 -.2900
220541	1	1	8139.0	.13047248 06 .713 00 -1.4766
220551	1	1	8139.0	.13044774 06 .713 00 -.7402
220601	1	1	8139.0	.13042307 06 .713 00 -.0742
220611	1	1	8139.0	.13039848 06 .713 00 .5156
220621	1	1	8139.0	.13037397 06 .713 00 1.0352
220631	1	1	8139.0	.13034952 06 .713 00 .4795
220641	1	1	8139.0	.13032515 06 .713 00 -.1475
220651	1	1	8139.0	.13030085 06 .713 00 -.8477
220701	1	1	8139.0	.13027662 06 .713 00 -.6191
220711	1	1	8139.0	.13025246 06 .713 00 .5391
220721	1	1	8139.0	.13022837 06 .713 00 .6270
220731	1	1	8139.0	.13020436 06 .713 00 -1.3594
220741	1	1	8139.0	.13018041 06 .713 00 -.4150
220751	1	1	8139.0	.13015654 06 .713 00 .4600
220801	1	1	8139.0	.13013274 06 .713 00 .2637
220811	1	1	8139.0	.13010900 06 .713 00 .0000
220821	1	1	8139.0	.13008533 06 .713 00 -.3340
220831	1	1	8139.0	.13006174 06 .713 00 .2627
220841	1	1	8139.0	.13003821 06 .713 00 .7910
220851	1	1	8139.0	.13001475 06 .713 00 .2529
220901	1	1	8139.0	.12999135 06 .713 00 -.3545
220911	1	1	8139.0	.12996803 06 .713 00 -1.0313
220921	1	1	8139.0	.12994477 06 .713 00 -.7715
220931	1	1	8139.0	.12992158 06 .713 00 .4189
220941	1	1	8139.0	.12989846 06 .713 00 .5430
220951	1	1	8139.0	.12987540 06 .713 00 -.4014
221001	1	1	8139.0	.12985241 06 .713 00 .5918
221011	1	1	8139.0	.12982948 06 .713 00 -.4814
221021	1	1	8139.0	.12980662 06 .713 00 .3779
221031	1	1	8139.0	.12978383 06 .713 00 .1738
221041	1	1	8139.0	.12976110 06 .711 00 -.0957
221051	1	1	8139.0	.12973843 06 .711 00 -.4307
221101	1	1	8139.0	.12971583 06 .711 00 .1709
221111	1	1	8139.0	.12969329 06 .711 00 -.2920
221121	1	1	8139.0	.12967082 06 .711 00 .1816
221131	1	1	8139.0	.12964841 06 .711 00 .5918
221141	1	1	8139.0	.12962606 06 .711 00 -.0605
221151	1	1	8139.0	.12960378 06 .711 00 1.2227
221201	1	1	8139.0	.12958155 06 .711 00 -.5566
221211	1	1	8139.0	.12955939 06 .711 00 .6055
221221	1	1	8139.0	.12953730 06 .711 00 .7012
221231	1	1	8139.0	.12951526 06 .711 00 -1.2656
221241	1	1	8139.0	.12949329 06 .711 00 -.2910
221251	1	1	8139.0	.12947138 06 .711 00 .6230
221301	1	1	8139.0	.12944952 06 .711 00 -.5254
221311	1	1	8139.0	.12942773 06 .711 00 .2646
221321	1	1	8139.0	.12940600 06 .711 00 .9961
221331	1	1	8139.0	.12938433 06 .711 00 .6660
221341	1	1	8139.0	.12936272 06 .711 00 -.7246
221351	1	1	8139.0	.12934117 06 .711 00 -.1738
221411	1	1	8139.0	.12929825 06 .711 00 -.2490
221421	1	1	8139.0	.12927687 06 .711 00 .1240
221431	1	1	8139.0	.12925556 06 .711 00 .4385
221441	1	1	8139.0	.12923430 06 .711 00 .6953
221451	1	1	8139.0	.12921311 06 .711 00 .8945
221501	1	1	8139.0	.12919196 06 .711 00 1.0352
221521	1	1	8139.0	.12914986 06 .711 00 .1426
221541	1	1	8139.0	.12910798 06 .711 00 .0225
221551	1	1	8139.0	.12908712 06 .711 00 -.1221
221601	1	1	8139.0	.12906632 06 .711 00 -.3232
221611	1	1	8139.0	.12904558 06 .711 00 -.5820
221621	1	1	8139.0	.12902489 06 .711 00 .1055
221641	1	1	8139.0	.12898369 06 .711 00 .3115
221651	1	1	8139.0	.12896317 06 .711 00 -.1670
221701	1	1	8139.0	.12894270 06 .711 00 -.7031
221711	1	1	8139.0	.12892229 06 .711 00 .7090
221721	1	1	8139.0	.12890193 06 .711 00 .0645
221741	1	1	8139.0	.12886138 06 .711 00 -.3848
221751	1	1	8139.0	.12884119 06 .711 00 -1.1914
221801	1	1	8139.0	.12882105 06 .711 00 -1.0508
221811	1	1	8139.0	.12880096 06 .711 00 .0361
221821	1	1	8139.0	.12878093 06 .711 00 .0703
221831	1	1	8139.0	.12876095 06 .711 00 .0508
221841	1	1	8139.0	.12874102 06 .711 00 .9805
221851	1	1	8139.0	.12872114 06 .711 00 -.1436
221901	1	1	8139.0	.12870132 06 .711 00 -.3203
221911	1	1	8139.0	.12868155 06 .711 00 -.5488
221921	1	1	8139.0	.12866183 06 .711 00 1.1719
221931	1	1	8139.0	.12864216 06 .711 00 .8418
221941	1	1	8139.0	.12862254 06 .711 00 -.5449
221951	1	1	8139.0	.12860298 06 .711 00 1.0234
222001	1	1	8139.0	.12858346 06 .711 00 .5371
222011	1	1	8139.0	.12856400 06 .711 00 1.0000
222021	1	1	8139.0	.12854458 06 .711 00 .4150
222031	1	1	8139.0	.12852522 06 .711 00 -.2227
222041	1	1	8139.0	.12850591 06 .711 00 1.0898
222051	1	1	8139.0	.12848665 06 .711 00 .3525
222101	1	1	8139.0	.12846743 06 .711 00 -.4326
222111	1	1	8139.0	.12844827 06 .711 00 .7305
222121	1	1	8139.0	.12842916 06 .711 00 -1.1563
222131	1	1	8139.0	.12841009 06 .711 00 -.0898
222141	1	1	8139.0	.12839107 06 .711 00 .9277
222201	1	1	8139.0	.12835319 06 .711 00 -.1865
222221	1	1	8139.0	.12831549 06 .711 00 .5078

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TIME	TC	Q	FRQ	CC3
222231	1	1	8139.0	.12829672 06 .711 00 .2822
222241	1	1	8139.0	.12827799 06 .711 00 -.9922
222301	1	1	8139.0	.12824068 06 .711 00 .3203
222311	1	1	8139.0	.12822209 06 .711 00 -1.0938
222321	1	1	8139.0	.12820356 06 .711 00 .4434
222331	1	1	8139.0	.12818507 06 .711 00 -.0664
222341	1	1	8139.0	.12816662 06 .711 00 .3779
222351	1	1	8139.0	.12814822 06 .711 00 -.2236
222401	1	1	8139.0	.12812987 06 .711 00 .1279
222411	1	1	8139.0	.12811157 06 .711 00 -.5664
222421	1	1	8139.0	.12809331 06 .711 00 -.3066
222431	1	1	8139.0	.12807509 06 .711 00 -.0928
222441	1	1	8139.0	.12805692 06 .711 00 1.0781
222451	1	1	8139.0	.12803880 06 .711 00 1.1992
222501	1	1	8139.0	.12802072 06 .711 00 .2773
222511	1	1	8139.0	.12800269 06 .711 00 .3096
222541	1	1	8139.0	.12794886 06 .711 00 .1416
222551	1	1	8139.0	.12793100 06 .711 00 -.0049
222601	1	1	8139.0	.12791319 06 .711 00 -.1943
222641	1	1	8139.0	.12784239 06 .711 00 -.3896
222651	1	1	8139.0	.12782480 06 .711 00 .2031
222711	1	1	8139.0	.12778974 06 .711 00 -.7422
222721	1	1	8139.0	.12777228 06 .711 00 -.2773
222731	1	1	8139.0	.12775486 06 .711 00 -.8574
222741	1	1	8139.0	.12773748 06 .711 00 .5234
222801	1	1	8139.0	.12770285 06 .711 00 .1533
222811	1	1	8139.0	.12768559 06 .711 00 .4053
222821	1	1	8139.0	.12766838 06 .711 00 .6152
222831	1	1	8139.0	.12765121 06 .711 00 -.2158
222841	1	1	8139.0	.12763409 06 .711 00 -.0879
222851	1	1	8139.0	.12761700 06 .711 00 -.0020
222901	1	1	8139.0	.12759996 06 .711 00 1.0430
222911	1	1	8139.0	.12758295 06 .711 00 .0459
222921	1	1	8139.0	.12756599 06 .711 00 .0088
222931	1	1	8139.0	.12754907 06 .711 00 -.0684
222941	1	1	8139.0	.12753219 06 .711 00 .8125
223101	1	1	8139.0	.12739858 06 .711 00 .4229
223111	1	1	8139.0	.12738205 06 .711 00 -.0547
223121	1	1	8139.0	.12736557 06 .711 00 .4307
223141	1	1	8139.0	.12733272 06 .711 00 -.7188
223151	1	1	8139.0	.12731635 06 .711 00 .6504
223211	1	1	8139.0	.12728373 06 .711 00 .2695
223221	1	1	8139.0	.12726748 06 .711 00 -.4785
223231	1	1	8139.0	.12725126 06 .711 00 -.2637
223241	1	1	8139.0	.12723509 06 .711 00 -.0869
223301	1	1	8139.0	.12720285 06 .711 00 .1523
223331	1	1	8139.0	.12715477 06 .711 00 .2314
223341	1	1	8139.0	.12713882 06 .711 00 .1826
223351	1	1	8139.0	.12712290 06 .711 00 .0977
223401	1	1	8139.0	.12710702 06 .711 00 -.0244
223411	1	1	8139.0	.12709118 06 .711 00 -.1836
223421	1	1	8139.0	.12707538 06 .711 00 .6230
223431	1	1	8139.0	.12705961 06 .711 00 .3906
223441	1	1	8139.0	.12704388 06 .711 00 .1211
223501	1	1	8139.0	.12701252 06 .711 00 .4766
223511	1	1	8139.0	.12699690 06 .711 00 .0996
223521	1	1	8139.0	.12698131 06 .711 00 -.3115
223541	1	1	8139.0	.12695024 06 .711 00 -.2441
223551	1	1	8139.0	.12693476 06 .711 00 1.2383
223601	1	1	8139.0	.12691932 06 .711 00 -.3174
223611	1	1	8139.0	.12690390 06 .711 00 .0938
223621	1	1	8139.0	.12688853 06 .711 00 .4688
223631	1	1	8139.0	.12687319 06 .711 00 .8105
223641	1	1	8139.0	.12685788 06 .711 00 .1152
223701	1	1	8139.0	.12682738 06 .711 00 -.3779
223711	1	1	8139.0	.12681217 06 .711 00 .8242
223721	1	1	8139.0	.12679701 06 .711 00 .9922
223731	1	1	8139.0	.12678187 06 .711 00 .1250
223741	1	1	8139.0	.12676677 06 .711 00 .2246
223811	1	1	8139.0	.12672168 06 .711 00 .3193
223821	1	1	8139.0	.12670672 06 .711 00 .2832
223831	1	1	8139.0	.12669179 06 .711 00 .2139
223841	1	1	8139.0	.12667689 06 .711 00 .1113
223851	1	1	8139.0	.12666202 06 .711 00 -.0244
223901	1	1	8139.0	.12664719 06 .711 00 .8066
223911	1	1	8139.0	.12663240 06 .711 00 -.3965
223921	1	1	8139.0	.12661763 06 .711 00 .3691
223931	1	1	8139.0	.12660290 06 .711 00 -.9004
223941	1	1	8139.0	.12658820 06 .711 00 .8008
223951	1	1	8139.0	.12657353 06 .711 00 -.5332
224001	1	1	8139.0	.12655890 06 .711 00 .1016
224011	1	1	8139.0	.12654430 06 .711 00 -.2979
224021	1	1	8139.0	.12652973 06 .711 00 .2725
224041	1	1	8139.0	.12650068 06 .711 00 .3154
224051	1	1	8139.0	.12648621 06 .711 00 -.2119
224101	1	1	8139.0	.12647177 06 .711 00 .2295
224111	1	1	8139.0	.12645736 06 .711 00 .6406
224121	1	1	8139.0	.12644298 06 .711 00 .0176
224131	1	1	8139.0	.12642864 06 .711 00 .3643
224141	1	1	8139.0	.12641432 06 .711 00 .6797
224151	1	1	8139.0	.12640004 06 .711 00 -.0361
224201	1	1	8139.0	.12638578 06 .711 00 .2168
224211	1	1	8139.0	.12637156 06 .711 00 -.5625
224221	1	1	8139.0	.12635737 06 .711 00 -.3711
224241	1	1	8139.0	.12632908 06 .711 00 .9180
224251	1	1	8139.0	.12631498 06 .711 00 .0176
224311	1	1	8139.0	.12628688 06 .711 00 1.1211
224321	1	1	8139.0	.12627287 06 .711 00 .1269
224331	1	1	8139.0	.12625889 06 .711 00 -.8945
224341	1	1	8139.0	.12624495 06 .711 00 .0527
224351	1	1	8139.0	.12623103 06 .711 00 -1.0313
224401	1	1	8139.0	.12621714 06 .711 00 -.1445
224411	1	1	8139.0	.12620329 06 .711 00 .7129
224421	1	1	8139.0	.12618946 06 .711 00 .5391
224431	1	1	8139.0	.12617566 06 .711 00 .3369
224441	1	1	8139.0	.12616189 06 .711 00 -.8965
224501	1	1	8139.0	.12613445 06 .711 00 .5508
224511	1	1	8139.0	.12612077 06 .711 00 .2305

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TIME	TC	Q	FRQ	CC3
224521	1	1	8139.0	.12610712 06 .711 00 .8809
224531	1	1	8139.0	.12609350 06 .711 00 .5039
224541	1	1	8139.0	.12607991 06 .711 00 .0938
224551	1	1	8139.0	.12606634 06 .711 00 .6582
224611	1	1	8139.0	.12603930 06 .711 00 .6992
224621	1	1	8139.0	.12602582 06 .711 00 .1758
224631	1	1	8139.0	.12601237 06 .711 00 -1.3750
224651	1	1	8139.0	.12598556 06 .711 00 .4355
224701	1	1	8139.0	.12597220 06 .711 00 -.2012
224711	1	1	8139.0	.12595887 06 .711 00 -.8672
224721	1	1	8139.0	.12594556 06 .711 00 .4414
224731	1	1	8139.0	.12593228 06 .711 00 -.2783
224741	1	1	8139.0	.12591903 06 .711 00 -.0283
224751	1	1	8139.0	.12590580 06 .711 00 .1963
224801	1	1	8139.0	.12589261 06 .711 00 .3926
224811	1	1	8139.0	.12587944 06 .711 00 .5605
224821	1	1	8139.0	.12586630 06 .711 00 .7012
224831	1	1	8139.0	.12585319 06 .709 00 .8145
224841	1	1	8139.0	.12584010 06 .709 00 -1.1016
224851	1	1	8139.0	.12582704 06 .709 00 -1.0430
224901	1	1	8139.0	.12581401 06 .709 00 -.0107
224911	1	1	8139.0	.12580101 06 .709 00 -.0068
224921	1	1	8139.0	.12578803 06 .709 00 .9707
224931	1	1	8139.0	.12577508 06 .709 00 -1.0781
224941	1	1	8139.0	.12576216 06 .709 00 -.1563
224951	1	1	8139.0	.12574926 06 .709 00 .7402
225011	1	1	8139.0	.12572355 06 .709 00 .4531
225021	1	1	8139.0	.12571073 06 .709 00 .2695
225031	1	1	8139.0	.12569794 06 .709 00 -.9395
225041	1	1	8139.0	.12568517 06 .709 00 -1.1758
225051	1	1	8139.0	.12567244 06 .709 00 -.4385
225101	1	1	8139.0	.12565973 06 .709 00 .2734
225111	1	1	8139.0	.12564704 06 .709 00 -.0410
225121	1	1	8139.0	.12563438 06 .709 00 .6191
225131	1	1	8139.0	.12562175 06 .709 00 .2510
225141	1	1	8139.0	.12560914 06 .709 00 -.1416
225151	1	1	8139.0	.12559656 06 .709 00 .4404
225201	1	1	8139.0	.12558400 06 .709 00 -.0039
225211	1	1	8139.0	.12557147 06 .709 00 .5273
225221	1	1	8139.0	.12555897 06 .709 00 3.0313
225321	1	1	8146.0	.12548448 06 .709 00 .5215
225331	1	1	8146.0	.12547215 06 .709 00 .8496
225341	1	1	8146.0	.12545985 06 .709 00 -.8496
225351	1	1	8146.0	.12544757 06 .709 00 .4247
225401	1	1	8146.0	.12543532 06 .709 00 .6836
225411	1	1	8146.0	.12542309 06 .709 00 -.0889
225421	1	1	8146.0	.12541088 06 .709 00 -.8848
225431	1	1	8146.0	.12539870 06 .709 00 .2949
225441	1	1	8146.0	.12538655 06 .709 00 .4502
225451	1	1	8146.0	.12537442 06 .709 00 .5801
225501	1	1	8146.0	.12536231 06 .709 00 -.3135
225511	1	1	8146.0	.12535023 06 .709 00 -.2334
225521	1	1	8146.0	.12533817 06 .709 00 -.1748
225531	1	1	8146.0	.12532614 06 .709 00 -1.1406
225541	1	1	8146.0	.12531413 06 .709 00 -.1318
225551	1	1	8146.0	.12530215 06 .709 00 -.1465
225601	1	1	8146.0	.12529018 06 .709 00 -.1846
225611	1	1	8146.0	.12527825 06 .709 00 -1.2461
225631	1	1	8146.0	.12525444 06 .709 00 -1.4453
225641	1	1	8146.0	.12524258 06 .709 00 -.5762
225651	1	1	8146.0	.12523073 06 .709 00 .2656
225651	1	1	8146.0	.12523073 06 .709 00 .2656
225701	1	1	8146.0	.12521891 06 .709 00 1.0859
225711	1	1	8146.0	.12520712 06 .709 00 -.1182
225721	1	1	8146.0	.12519534 06 .709 00 -.3447
225731	1	1	8146.0	.12518359 06 .709 00 .4043
225741	1	1	8146.0	.12517187 06 .709 00 1.1289
225751	1	1	8146.0	.12516017 06 .709 00 -1.1680
225801	1	1	8146.0	.12514849 06 .709 00 .5137
225811	1	1	8146.0	.12513683 06 .709 00 -.8301
225821	1	1	8146.0	.12512520 06 .709 00 -.1953
225841	1	1	8146.0	.12510200 06 .709 00 .0029
225851	1	1	8146.0	.12509043 06 .709 00 .5703
225901	1	1	8146.0	.12507889 06 .709 00 -.8887
225911	1	1	8146.0	.12506737 06 .709 00 -.3682
225921	1	1	8146.0	.12505587 06 .709 00 -.8711
225931	1	1	8146.0	.12504439 06 .709 00 -1.3945
225941	1	1	8146.0	.12503294 06 .709 00 .0576
225951	1	1	8146.0	.12502151 06 .709 00 -.5117
230001	1	1	8146.0	.12501010 06 .709 00 -.1045
230011	1	1	8146.0	.12499872 06 .709 00 .2832
230021	1	1	8146.0	.12498735 06 .709 00 -.3535
230031	1	1	8146.0	.12497601 06 .709 00 -.0117
230041	1	1	8146.0	.12496469 06 .709 00 -.6934
230051	1	1	8146.0	.12495339 06 .709 00 1.6055
230101	1	1	8146.0	.12494212 06 .709 00 .8809
230111	1	1	8146.0	.12493086 06 .709 00 1.1367
230131	1	1	8146.0	.12490842 06 .709 00 .5781
230141	1	1	8146.0	.12489723 06 .709 00 -.2344
230151	1	1	8146.0	.12488607 06 .709 00 -1.0664
230201	1	1	8146.0	.12487492 06 .709 00 -.9219
230211	1	1	8146.0	.12486380 06 .709 00 .2021
230221	1	1	8146.0	.12485269 06 .709 00 .3057
230231	1	1	8146.0	.12484161 06 .709 00 .3867
230241	1	1	8146.0	.12483055 06 .709 00 -1.5547
230251	1	1	8146.0	.12481951 06 .709 00 .4844
230311	1	1	8146.0	.12479750 06 .709 00 .4990
230321	1	1	8146.0	.12478652 06 .709 00 .4746
230331	1	1	8146.0	.12477557 06 .709 00 .4287
230341	1	1	8146.0	.12476464 06 .709 00 .3623
230401	1	1	8146.0	.12474283 06 .709 00 .1660
230411	1	1	8146.0	.12473196 06 .709 00 -.9629
230421	1	1	8146.0	.12472111 06 .709 00 -1.1133
230431	1	1	8146.0	.12471028 06 .709 00 -.2822
230441	1	1	8146.0	.12469947 06 .709 00 .5273
230451	1	1	8146.0	.12468868 06 .709 00 .3145
230501	1	1	8146.0	.12467792 06 .709 00 .0820
230511	1	1	8146.0	.12466717 06 .709 00 -.1699

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TIME	TC	Q	FRQ	CC3
230521	1	1	8146.0	.12465644 06 .709 00 -.4424
230531	1	1	8146.0	.12464574 06 .709 00 .2637
230541	1	1	8146.0	.12463505 06 .709 00 -.0498
230551	1	1	8146.0	.12462438 06 .709 00 -.3828
230601	1	1	8146.0	.12461374 06 .709 00 1.2656
230611	1	1	8146.0	.12460311 06 .709 00 -.1104
230621	1	1	8146.0	.12459250 06 .709 00 .4961
230631	1	1	8146.0	.12458192 06 .709 00 -.9180
230641	1	1	8146.0	.12457135 06 .709 00 -.3516
230651	1	1	8146.0	.12456080 06 .709 00 .1943
230701	1	1	8146.0	.12455028 06 .709 00 -.2793
230711	1	1	8146.0	.12453977 06 .709 00 1.2266
230721	1	1	8146.0	.12452928 06 .709 00 -.2852
230731	1	1	8146.0	.12451882 06 .709 00 .1826
230741	1	1	8146.0	.12450837 06 .709 00 .6309
230811	1	1	8146.0	.12447714 06 .709 00 -.1436
230821	1	1	8146.0	.12446677 06 .709 00 .2256
230831	1	1	8146.0	.12445642 06 .709 00 .5781
230841	1	1	8146.0	.12444609 06 .709 00 -.0918
230851	1	1	8146.0	.12443578 06 .709 00 -.7813
230901	1	1	8146.0	.12442549 06 .709 00 .5137
230911	1	1	8146.0	.12441521 06 .709 00 -.2129
230921	1	1	8146.0	.12440496 06 .709 00 .0410
230931	1	1	8146.0	.12439472 06 .709 00 .2764
230951	1	1	8146.0	.12437431 06 .709 00 .6914
231001	1	1	8146.0	.12436413 06 .709 00 -.1299
231011	1	1	8146.0	.12435397 06 .709 00 -.9707
231021	1	1	8146.0	.12434383 06 .709 00 .1709
231041	1	1	8146.0	.12432360 06 .709 00 -.6035
231051	1	1	8146.0	.12431352 06 .709 00 .4824
231101	1	1	8146.0	.12430345 06 .709 00 -.4502
231111	1	1	8146.0	.12429340 06 .709 00 -.4023
231131	1	1	8146.0	.12427336 06 .709 00 -1.3633
231151	1	1	8146.0	.12425339 06 .709 00 -.3945
231201	1	1	8146.0	.12424344 06 .709 00 -.4385
231221	1	1	8146.0	.12422358 06 .709 00 .4189
231231	1	1	8146.0	.12421368 06 .709 00 .3203
231241	1	1	8146.0	.12420380 06 .709 00 -.7969
231251	1	1	8146.0	.12419393 06 .709 00 -.9316
231301	1	1	8146.0	.12418408 06 .709 00 -1.0820
231311	1	1	8146.0	.12417425 06 .709 00 .7461
231321	1	1	8146.0	.12416444 06 .709 00 -.4424
231331	1	1	8146.0	.12415465 06 .709 00 .3536
231341	1	1	8146.0	.12414487 06 .709 00 .1270
231351	1	1	8146.0	.12413511 06 .709 00 -.1152
231421	1	1	8146.0	.12410595 06 .709 00 .0527
231431	1	1	8146.0	.12409626 06 .709 00 -.2598
231441	1	1	8146.0	.12408659 06 .709 00 -.5898
231451	1	1	8146.0	.12407694 06 .709 00 1.0625
231501	1	1	8146.0	.12406730 06 .709 00 .6973
231511	1	1	8146.0	.12405768 06 .709 00 .3154
231521	1	1	8146.0	.12404808 06 .709 00 -.0850
231531	1	1	8146.0	.12403850 06 .709 00 .4980
231541	1	1	8146.0	.12402894 06 .709 00 1.0625
231551	1	1	8146.0	.12401939 06 .709 00 -1.3867
231611	1	1	8146.0	.12400034 06 .709 00 .6563
231621	1	1	8146.0	.12399085 06 .709 00 .1533
231631	1	1	8146.0	.12398137 06 .709 00 .6348
231641	1	1	8146.0	.12397190 06 .709 00 -.9043
231651	1	1	8146.0	.12396246 06 .709 00 .5430
231701	1	1	8146.0	.12395303 06 .709 00 -.0293
231711	1	1	8146.0	.12394361 06 .709 00 1.3828
231721	1	1	8146.0	.12393422 06 .709 00 .7793
231731	1	1	8146.0	.12392484 06 .709 00 .1572
231741	1	1	8146.0	.12391548 06 .709 00 .5176
231751	1	1	8146.0	.12390614 06 .709 00 -.1377
231811	1	1	8146.0	.12388750 06 .709 00 -.4971
231821	1	1	8146.0	.12387820 06 .709 00 .7969
231831	1	1	8146.0	.12386892 06 .709 00 .0752
231841	1	1	8146.0	.12385966 06 .709 00 .3379
231851	1	1	8146.0	.12385042 06 .709 00 -.4170
231911	1	1	8146.0	.12381198 06 .709 00 1.0234
231921	1	1	8146.0	.12382278 06 .709 00 -.7793
231931	1	1	8146.0	.12381360 06 .709 00 .4004
231941	1	1	8146.0	.12380444 06 .709 00 .5645
231951	1	1	8146.0	.12379529 06 .709 00 -.2891
232021	1	1	8146.0	.12376794 06 .709 00 .0576
232041	1	1	8146.0	.12374979 06 .709 00 .2070
232051	1	1	8146.0	.12374074 06 .707 00 .2578
232101	1	1	8146.0	.12373171 06 .707 00 -.7070
232111	1	1	8146.0	.12372269 06 .707 00 .3115
232121	1	1	8146.0	.12371368 06 .707 00 1.3164
232131	1	1	8146.0	.12370470 06 .707 00 -.6973
232141	1	1	8146.0	.12369573 06 .707 00 1.2734
232151	1	1	8146.0	.12368677 06 .707 00 .2295
232201	1	1	8146.0	.12367783 06 .707 00 -.8301
232211	1	1	8146.0	.12366891 06 .707 00 -.9063
232221	1	1	8146.0	.12366000 06 .707 00 .0029
232241	1	1	8146.0	.12364223 06 .707 00 -.2266
232251	1	1	8146.0	.12363336 06 .707 00 .6367
232301	1	1	8146.0	.12362452 06 .707 00 -.5176
232311	1	1	8146.0	.12361569 06 .707 00 -.6875
232321	1	1	8146.0	.12360687 06 .707 00 .1289
232331	1	1	8146.0	.12359807 06 .707 00 -.0703
232341	1	1	8146.0	.12358928 06 .707 00 .7148
232351	1	1	8146.0	.12358052 06 .707 00 .4844
232401	1	1	8146.0	.12357176 06 .707 00 .2363
232411	1	1	8146.0	.12356302 06 .707 00 -.0225
232431	1	1	8146.0	.12354559 06 .707 00 .4102
232441	1	1	8146.0	.12353690 06 .707 00 1.1055
232451	1	1	8146.0	.12352822 06 .707 00 -.2168
232501	1	1	8146.0	.12351955 06 .707 00 .4463
232511	1	1	8146.0	.12351090 06 .707 00 .0947
232521	1	1	8146.0	.12350227 06 .707 00 -.2715
232551	1	1	8146.0	.12347646 06 .707 00 -.4600
232601	1	1	8146.0	.12346789 06 .707 00 .1133
232611	1	1	8146.0	.12345933 06 .707 00 .6738
232621	1	1	8146.0	.12345078 06 .707 00 1.2188

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TIME	TC	Q	FRQ	CC3
232631	1	1	8146.0	.12344225 06 .707 00 .7480
232641	1	1	8146.0	.12343374 06 .707 00 -.7383
232651	1	1	8146.0	.12342524 06 .707 00 -.2383
232701	1	1	8146.0	.12341675 06 .707 00 .2480
232711	1	1	8146.0	.12340828 06 .707 00 -.2803
232721	1	1	8146.0	.12339982 06 .707 00 1.1758
232731	1	1	8146.0	.12339138 06 .707 00 .6191
232741	1	1	8146.0	.12338295 06 .707 00 -.9551
232751	1	1	8146.0	.12337454 06 .707 00 -.5430
232811	1	1	8146.0	.12335776 06 .707 00 .2412
232821	1	1	8146.0	.12334939 06 .707 00 .6133
232831	1	1	8146.0	.12334103 06 .707 00 -.0322
232841	1	1	8146.0	.12333269 06 .707 00 1.3086
232851	1	1	8146.0	.12332436 06 .707 00 .6348
232901	1	1	8146.0	.12331605 06 .707 00 -.0518
232921	1	1	8146.0	.12329947 06 .707 00 -.4688
232931	1	1	8146.0	.12329120 06 .707 00 -.1982
232951	1	1	8146.0	.12327470 06 .707 00 .2998
233001	1	1	8146.0	.12326647 06 .707 00 -1.4727
233011	1	1	8146.0	.12325826 06 .707 00 .7422
233021	1	1	8146.0	.12325006 06 .707 00 -.0576
233031	1	1	8146.0	.12324187 06 .707 00 .1279
233051	1	1	8146.0	.12322554 06 .707 00 1.4609
233101	1	1	8146.0	.12321740 06 .707 00 -1.3984
233111	1	1	8146.0	.12320927 06 .707 00 -.2666
233121	1	1	8146.0	.12320115 06 .707 00 -1.1484
233131	1	1	8146.0	.12319304 06 .707 00 -.0459
233141	1	1	8146.0	.12318496 06 .707 00 .0439
233151	1	1	8146.0	.12317688 06 .707 00 -.8789
233211	1	1	8146.0	.12316077 06 .707 00 .2314
233221	1	1	8146.0	.12315273 06 .707 00 .2666
233241	1	1	8146.0	.12313670 06 .707 00 .2959
233311	1	1	8146.0	.12311276 06 .707 00 .2393
233321	1	1	8146.0	.12310481 06 .707 00 .1934
233341	1	1	8146.0	.12308894 06 .707 00 .0605
233351	1	1	8146.0	.12308102 06 .707 00 .9766
233401	1	1	8146.0	.12307312 06 .707 00 -.1230
233411	1	1	8146.0	.12306523 06 .707 00 -.2354
233421	1	1	8146.0	.12305736 06 .707 00 -.3613
233431	1	1	8146.0	.12304950 06 .707 00 -.5000
233441	1	1	8146.0	.12304165 06 .707 00 -.6523
233451	1	1	8146.0	.12303382 06 .707 00 .1826
233511	1	1	8146.0	.12301819 06 .707 00 -.1875
233521	1	1	8146.0	.12301039 06 .707 00 -.3916
233531	1	1	8146.0	.12300261 06 .707 00 .3906
233541	1	1	8146.0	.12299484 06 .707 00 -.8398
233551	1	1	8146.0	.12298708 06 .707 00 -.0830
233601	1	1	8146.0	.12297934 06 .707 00 .6621
233611	1	1	8146.0	.12297161 06 .707 00 -.6074
233621	1	1	8146.0	.12296389 06 .707 00 .1104
233631	1	1	8146.0	.12295619 06 .707 00 -.1855
233641	1	1	8146.0	.12294849 06 .707 00 -.4932
233651	1	1	8146.0	.12294081 06 .707 00 -.8145
233701	1	1	8146.0	.12293315 06 .707 00 -.1465
233711	1	1	8146.0	.12292549 06 .707 00 -.4932
233721	1	1	8146.0	.12291785 06 .707 00 .1484
233731	1	1	8146.0	.12291022 06 .707 00 .7773
233741	1	1	8146.0	.12290261 06 .707 00 .3926
233751	1	1	8146.0	.12289500 06 .707 00 -.0039
233801	1	1	8146.0	.12288741 06 .707 00 .5879
233811	1	1	8146.0	.12287983 06 .707 00 .1650
233821	1	1	8146.0	.12287227 06 .707 00 -.2695
233831	1	1	8146.0	.12286472 06 .707 00 -.7168
233841	1	1	8146.0	.12285718 06 .707 00 -.1758
233851	1	1	8146.0	.12284965 06 .707 00 .3525
233901	1	1	8146.0	.12284213 06 .707 00 -1.1328
233911	1	1	8146.0	.12283463 06 .707 00 .3711
233921	1	1	8146.0	.12282714 06 .707 00 -1.1367
233951	1	1	8146.0	.12280474 06 .707 00 -.7402
234001	1	1	8146.0	.12279730 06 .707 00 .7031
234021	1	1	8146.0	.12278245 06 .707 00 -.4512
234031	1	1	8146.0	.12277505 06 .707 00 -1.0469
234041	1	1	8146.0	.12276765 06 .707 00 .3467
234101	1	1	8146.0	.12275290 06 .707 00 -.9063
234121	1	1	8146.0	.12273820 06 .707 00 .7969
234131	1	1	8146.0	.12273087 06 .707 00 .1289
234141	1	1	8146.0	.12272355 06 .707 00 -.5508
234201	1	1	8146.0	.12270894 06 .707 00 .0537
234211	1	1	8146.0	.12270166 06 .707 00 -.6621
234221	1	1	8146.0	.12269439 06 .707 00 -.3887
234231	1	1	8146.0	.12268713 06 .707 00 -.1289
234241	1	1	8146.0	.12267988 06 .707 00 -.8809
234251	1	1	8146.0	.12267264 06 .707 00 -.6445
234301	1	1	8146.0	.12266542 06 .707 00 -.4180
234311	1	1	8146.0	.12265821 06 .707 00 .7949
234351	1	1	8146.0	.12262947 06 .707 00 .5313
234401	1	1	8146.0	.12262231 06 .707 00 .6855
234411	1	1	8146.0	.12261517 06 .707 00 .8281
234421	1	1	8146.0	.12260804 06 .707 00 -.0400
234441	1	1	8146.0	.12259381 06 .707 00 -.8125
234501	1	1	8146.0	.12257963 06 .707 00 .3701
234521	1	1	8146.0	.12256549 06 .707 00 .5059
234541	1	1	8146.0	.12255140 06 .707 00 .5957
234551	1	1	8146.0	.12254438 06 .707 00 .6250
234601	1	1	8146.0	.12253736 06 .707 00 1.6406
234611	1	1	8146.0	.12253035 06 .707 00 -.3545
234631	1	1	8146.0	.12251638 06 .707 00 -.6230
234841	1	1	8146.0	.12242662 06 .707 00 -.6230
234851	1	1	8146.0	.12241980 06 .707 00 -1.7969
234901	1	1	8146.0	.12241298 06 .707 00 .0195
234911	1	1	8146.0	.12240618 06 .707 00 .8242
234921	1	1	8146.0	.12239938 06 .707 00 .6191
234931	1	1	8146.0	.12239260 06 .707 00 -.5996
234941	1	1	8146.0	.12238583 06 .707 00 .1738
234951	1	1	8146.0	.12237906 06 .707 00 -.0654
235001	1	1	8146.0	.12237231 06 .707 00 .8855
235011	1	1	8146.0	.12236557 06 .707 00 .4248
235021	1	1	8146.0	.12235885 06 .707 00 .1533

STATION NUMBER 1 62/01/26

TIME	TC	Q	FRQ	CC3
235031	1	1	8146.0	.12235213 06 .707 00 -.1279
235041	1	1	8146.0	.12234542 06 .707 00 -1.4219
235051	1	1	8146.0	.12233872 06 .707 00 .2754
235111	1	1	8146.0	.12232536 06 .707 00 -.3633
235121	1	1	8146.0	.12231870 06 .707 00 .3018
235141	1	1	8146.0	.12230540 06 .707 00 .5996
235151	1	1	8146.0	.12229877 06 .707 00 .2314
235201	1	1	8146.0	.12229215 06 .707 00 -.1475
235211	1	1	8146.0	.12228553 06 .707 00 .4648
235221	1	1	8146.0	.12227893 06 .707 00 .0654
235231	1	1	8146.0	.12227234 06 .707 00 -.3438
235251	1	1	8146.0	.12225919 06 .707 00 -.1943
235301	1	1	8146.0	.12225264 06 .707 00 -.6367
235311	1	1	8146.0	.12224609 06 .707 00 -1.0859
235321	1	1	8146.0	.12223955 06 .707 00 -.5488
235331	1	1	8146.0	.12223302 06 .707 00 -1.0195
235341	1	1	8146.0	.12222650 06 .707 00 .4971
235351	1	1	8146.0	.12222000 06 .707 00 .0029
235401	1	1	8146.0	.12221350 06 .707 00 -.4990
235411	1	1	8146.0	.12220701 06 .707 00 -.0127
235431	1	1	8146.0	.12219407 06 .707 00 -.0703
235441	1	1	8146.0	.12218761 06 .707 00 .3857
235451	1	1	8146.0	.12218117 06 .707 00 -1.1680
235501	1	1	8146.0	.12217473 06 .707 00 -.7344
235511	1	1	8146.0	.12216831 06 .707 00 -.3096
235521	1	1	8146.0	.12216189 06 .707 00 .1055
235601	1	1	8146.0	.12213634 06 .707 00 -.3359
235611	1	1	8146.0	.12212997 06 .707 00 .0283
235621	1	1	8146.0	.12212362 06 .707 00 .3818
235631	1	1	8146.0	.12211727 06 .707 00 -.2734
235641	1	1	8146.0	.12211094 06 .707 00 .0605
235651	1	1	8146.0	.12210461 06 .707 00 .3857
235701	1	1	8146.0	.12209830 06 .707 00 -.3008
235721	1	1	8146.0	.12208570 06 .707 00 .2979
235731	1	1	8146.0	.12207942 06 .707 00 -.4170
235741	1	1	8146.0	.12207314 06 .707 00 .8574
235751	1	1	8146.0	.12206688 06 .707 00 -.8789
235801	1	1	8146.0	.12206062 06 .707 00 .3770
235801	1	1	8146.0	.12206062 06 .707 00 .3770

STATISTICS STATION 1

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
CC3	1/26-205721	1/26-235801	903	.644 00	.644 00	.469-02	.415 00

STATION NUMBER 3 62/01/27

TIME	TC	Q	FRQ	CC3
090606	10	3	9099.0	.11338830 06 .423 00 .2021
090706	10	3	9099.0	.11338552 06 .417 00 -.1172
090806	10	3	9099.0	.11338278 06 .411 00 .2148
090906	10	3	9099.0	.11338010 06 .405 00 -.3047
091006	10	3	9099.0	.11337747 06 .400 00 .0244
091106	10	3	9099.0	.11337489 06 .396 00 -.1963
091206	10	3	9099.0	.11337237 06 .392 00 -.2666
091306	10	3	9099.0	.11336989 06 .388 00 -.0869
091406	10	3	9099.0	.11336746 06 .384 00 .3408
091506	10	3	9099.0	.11336508 06 .380 00 -.1807
091806	10	3	9099.0	.11335824 06 .371 00 -.0449
091906	10	3	9099.0	.11335606 06 .368 00 .2344
092006	10	3	9099.0	.11335393 06 .365 00 -.0361
092106	10	3	9099.0	.11335185 06 .363 00 .4443
092206	10	3	9099.0	.11334983 06 .360 00 .0737
092306	10	3	9099.0	.11334784 06 .358 00 .3535
092406	10	3	9099.0	.11334591 06 .356 00 -.1143
092506	10	3	9099.0	.11334403 06 .354 00 .2676
092606	10	3	9099.0	.11334220 06 .353 00 -.5020
092706	10	3	9099.0	.11334042 06 .351 00 .1836
092806	10	3	9099.0	.11333868 06 .350 00 .2178
092906	10	3	9099.0	.11333700 06 .348 00 -.1963
093006	10	3	9099.0	.11333536 06 .346 00 -.2598
093106	10	3	9099.0	.11333377 06 .345 00 .1289
093206	10	3	9099.0	.11333223 06 .344 00 .0684
093306	10	3	9099.0	.11333074 06 .342 00 -.0410
093406	10	3	9099.0	.11332930 06 .341 00 -.1982
093506	10	3	9099.0	.11332790 06 .340 00 -.2041
093606	10	3	9099.0	.11332656 06 .339 00 -.1542
093706	10	3	9099.0	.11332526 06 .337 00 .4395
093806	10	3	9099.0	.11332401 06 .336 00 .0889
093906	10	3	9099.0	.11332281 06 .335 00 .0908
094006	10	3	9099.0	.11332165 06 .334 00 -.3545
094106	10	3	9099.0	.11332055 06 .333 00 .0518
094206	10	3	9099.0	.11331949 06 .333 00 -.1904
094306	10	3	9099.0	.11331848 06 .332 00 .1211
094406	10	3	9099.0	.11331751 06 .331 00 -.0156
094506	10	3	9099.0	.11331660 06 .330 00 .6016
094606	10	3	9099.0	.11331573 06 .329 00 -.3301
094706	10	3	9099.0	.11331491 06 .329 00 -.2090
094806	10	3	9099.0	.11331413 06 .328 00 -.0332
094906	10	3	9099.0	.11331340 06 .327 00 -.1045
095006	10	3	9099.0	.11331272 06 .327 00 .3760
095106	10	3	9099.0	.11331209 06 .326 00 .1104
095406	10	3	8869.0	.11331036 06 .324 00 -.1611
095506	10	3	8869.0	.11330991 06 .324 00 -.2119
095606	10	3	8869.0	.11330951 06 .323 00 -.6094
095706	10	3	8869.0	.11330915 06 .323 00 .4492
095806	10	3	8869.0	.11330884 06 .322 00 -.0400
095906	10	3	8869.0	.11330857 06 .322 00 -.0742
100006	10	3	8869.0	.11330835 06 .321 00 -.5547
100106	10	3	8869.0	.11330818 06 .321 00 -.0801
100206	10	3	8869.0	.11330805 06 .320 00 .8496
100306	10	3	8869.0	.11330797 06 .320 00 -.0674

STATION NUMBER 3 62/01/27

TIME	TC	Q	FRQ	CC3
100406	10	3	8869.0	.11330793 06 .320 00 -.4287
100506	10	3	8869.0	.11330793 06 .319 00 .0645
100606	10	3	8869.0	.11330799 06 .319 00 -.2871
100706	10	3	8869.0	.11330808 06 .318 00 .3174
100806	10	3	8869.0	.11330822 06 .318 00 -.3242
100906	10	3	8869.0	.11330841 06 .318 00 -.1084
101006	10	3	8869.0	.11330864 06 .317 00 -.1377
101106	10	3	8869.0	.11330891 06 .317 00 -.4121
101206	10	3	8869.0	.11330923 06 .317 00 .3691
101306	10	3	8869.0	.11330959 06 .316 00 -.0928
101406	10	3	8869.0	.11331000 06 .316 00 .3008
101506	10	3	8869.0	.11331045 06 .316 00 .2510
102106	10	3	8869.0	.11331406 06 .314 00 -99.9999*

STATISTICS STATION 3

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
CC3	1/27-090606	1/27-102106	66	.282 00	.282 00	-.756-02	.793-01

STATION NUMBER 4 62/01/26

TIME	TC	Q	FRQ	DEC				HA			
213301	10	0	.0	.33823960	03	.330	00	-.0166	.84533466	02	.330 00	-.0779
213321	10	0	.0	.33816839	03	.330	00	-.0220	.84223456	02	.330 00	-.0818
213341	10	0	.0	.33809906	03	.330	00	-.0212	.83917523	02	.330 00	-.0938
213401	10	0	.0	.33803155	03	.330	00	-.0222	.83615620	02	.330 00	-.0857
213501	10	0	.0	.33783958	03	.330	00	-.0218	.82733652	02	.330 00	-.0737
213521	10	0	.0	.33776823	03	.330	00	-.0129	.82424907	02	.330 00	-.0529
213541	10	0	.0	.33770912	03	.330	00	-.0203	.82142084	02	.330 00	-.0460
213601	10	0	.0	.33765160	03	.330	00	-.0113	.81863032	02	.330 00	-.0449
213621	10	0	.0	.33759564	03	.330	00	-.0178	.81587710	02	.330 00	-.0496
213641	10	0	.0	.33754120	03	.330	00	-.0198	.81316072	02	.330 00	-.0498
213701	10	0	.0	.33748826	03	.330	00	-.0134	.81048074	02	.330 00	-.0498
213721	10	0	.0	.33743678	03	.330	00	-.0203	.80783674	02	.330 00	-.0514
213741	10	0	.0	.33738671	03	.330	00	-.0247	.80522822	02	.330 00	-.0485
213801	10	0	.0	.33733804	03	.330	00	-.0225	.80265483	02	.330 00	-.0471
213821	10	0	.0	.33729072	03	.330	00	-.0216	.80011605	02	.330 00	-.0492
213841	10	0	.0	.33724473	03	.330	00	-.0300	.79761156	02	.330 00	-.0507
213901	10	0	.0	.33720003	03	.330	00	-.0237	.79514086	02	.330 00	-.0536
213921	10	0	.0	.33715659	03	.330	00	-.0247	.79270355	02	.330 00	-.0518
213941	10	0	.0	.33711439	03	.330	00	-.0309	.79029922	02	.330 00	-.0513
214001	10	0	.0	.33707340	03	.330	00	-.0303	.78792745	02	.330 00	-.0500
214021	10	0	.0	.33703358	03	.330	00	-.0269	.78558782	02	.330 00	-.0581
214041	10	0	.0	.33699491	03	.330	00	-.0286	.78327996	02	.330 00	-.0532
214121	10	0	.0	.33692091	03	.330	00	-.0294	.77875791	02	.330 00	-.0530
214141	10	0	.0	.33688553	03	.330	00	-.0264	.77654290	02	.330 00	-.0574
214201	10	0	.0	.33685120	03	.330	00	-.0224	.77435809	02	.330 00	-.0529
214221	10	0	.0	.33681788	03	.330	00	-.0234	.77220308	02	.330 00	-.0554
214241	10	0	.0	.33678557	03	.330	00	-.0255	.77007744	02	.330 00	-.0548
214301	10	0	.0	.33675423	03	.330	00	-.0325	.76798087	02	.330 00	-.0551
214341	10	0	.0	.33669436	03	.330	00	-.0313	.76387341	02	.330 00	-.0563
214401	10	0	.0	.33666581	03	.330	00	-.0350	.76186177	02	.330 00	-.0510
214421	10	0	.0	.33663814	03	.330	00	-.0317	.75987769	02	.330 00	-.0547
214441	10	0	.0	.33661133	03	.330	00	-.0292	.75792065	02	.330 00	-.0490
214501	10	0	.0	.33658537	03	.330	00	-.0275	.75599092	02	.330 00	-.0540
214521	10	0	.0	.33656022	03	.330	00	-.0307	.75408750	02	.330 00	-.0555
214541	10	0	.0	.33653588	03	.330	00	-.0287	.75221033	02	.330 00	-.0518
214601	10	0	.0	.33651234	03	.330	00	-.0375	.75035897	02	.330 00	-.0507
214641	10	0	.0	.33646753	03	.330	00	-.0252	.74673259	02	.330 00	-.0499
214701	10	0	.0	.33644623	03	.330	00	-.0242	.74495690	02	.330 00	-.0503
214721	10	0	.0	.33642565	03	.330	00	-.0359	.74320577	02	.330 00	-.0472
214741	10	0	.0	.33640576	03	.330	00	-.0322	.74147890	02	.330 00	-.0345
214801	10	0	.0	.33638656	03	.330	00	-.0253	.73977598	02	.330 00	-.0461
214821	10	0	.0	.33636802	03	.330	00	-.0291	.73809669	02	.330 00	-.0482
214841	10	0	.0	.33635014	03	.330	00	-.0255	.73644076	02	.330 00	-.0466
214901	10	0	.0	.33633289	03	.330	00	-.0264	.73480769	02	.330 00	-.0513
214921	10	0	.0	.33631626	03	.330	00	-.0261	.73319773	02	.330 00	-.0522
214941	10	0	.0	.33630024	03	.330	00	-.0283	.73161003	02	.330 00	-.0475
215001	10	0	.0	.33628482	03	.330	00	-.0291	.73004452	02	.330 00	-.0549
215021	10	0	.0	.33626996	03	.330	00	-.0265	.72850093	02	.330 00	-.0526
215041	10	0	.0	.33625568	03	.330	00	-.0305	.72697893	02	.330 00	-.0503
215101	10	0	.0	.33624195	03	.330	00	-.0309	.72547826	02	.330 00	-.0522
215121	10	0	.0	.33622875	03	.330	00	-.0320	.72399872	02	.330 00	-.0522
215141	10	0	.0	.33621608	03	.330	00	-.0295	.72253995	02	.330 00	-.0564
215201	10	0	.0	.33620393	03	.330	00	-.0276	.72110174	02	.330 00	-.0565
215221	10	0	.0	.33619228	03	.330	00	-.0282	.71968380	02	.330 00	-.0548
215241	10	0	.0	.33618113	03	.330	00	-.0333	.71828592	02	.330 00	-.0570
215301	10	0	.0	.33617045	03	.330	00	-.0328	.71690782	02	.330 00	-.0552
215321	10	0	.0	.33616025	03	.330	00	-.0248	.71554925	02	.330 00	-.0532
215341	10	0	.0	.33615050	03	.330	00	-.0353	.71421001	02	.330 00	-.0632
215401	10	0	.0	.33614119	03	.330	00	-.0262	.71288978	02	.330 00	-.0574
215421	10	0	.0	.33613233	03	.330	00	-.0275	.71158836	02	.330 00	-.0552
215441	10	0	.0	.33612389	03	.330	00	-.0313	.71030553	02	.330 00	-.0569
215501	10	0	.0	.33611587	03	.330	00	-.0334	.70904107	02	.330 00	-.0564
215521	10	0	.0	.33610826	03	.330	00	-.0320	.70779473	02	.330 00	-.0577
215541	10	0	.0	.33610104	03	.330	00	-.0330	.70656628	02	.330 00	-.0590
215601	10	0	.0	.33609422	03	.330	00	-.0303	.70535551	02	.330 00	-.0598
215621	10	0	.0	.33608777	03	.330	00	-.0341	.70416223	02	.330 00	-.0544
215641	10	0	.0	.33608170	03	.330	00	-.0302	.70298616	02	.330 00	-.0588
215701	10	0	.0	.33607600	03	.330	00	-.0306	.70182716	02	.330 00	-.0590
215721	10	0	.0	.33607064	03	.330	00	-.0334	.70068498	02	.330 00	-.0608
215741	10	0	.0	.33606564	03	.330	00	-.0286	.69955942	02	.330 00	-.0623
215801	10	0	.0	.33606097	03	.330	00	-.0302	.69845028	02	.330 00	-.0593
215821	10	0	.0	.33605663	03	.330	00	-.0360	.69735736	02	.330 00	-.0580
215841	10	0	.0	.33605262	03	.330	00	-.0321	.69628050	02	.330 00	-.0563
215901	10	0	.0	.33604892	03	.330	00	-.0345	.69521943	02	.330 00	-.0542
215921	10	0	.0	.33604553	03	.330	00	-.0354	.69417404	02	.330 00	-.0557
220001	10	0	.0	.33603966	03	.330	00	-.0338	.69212942	02	.330 00	-.0511
220021	10	0	.0	.33603716	03	.330	00	-.0314	.69112980	02	.330 00	-.0492
220041	10	0	.0	.33603495	03	.330	00	-.0294	.69014512	02	.330 00	-.0527
220101	10	0	.0	.33603300	03	.330	00	-.0336	.68917519	02	.330 00	-.0498
220121	10	0	.0	.33603133	03	.330	00	-.0320	.68821977	02	.330 00	-.0482
220141	10	0	.0	.33602992	03	.330	00	-.0327	.68727873	02	.330 00	-.0502
220201	10	0	.0	.33602877	03	.330	00	-.0338	.68635195	02	.330 00	-.0574
220221	10	0	.0	.33602787	03	.330	00	-.0330	.68543917	02	.330 00	-.0602
220241	10	0	.0	.33602721	03	.330	00	-.0325	.68454029	02	.330 00	-.0463
220301	10	0	.0	.33602680	03	.330	00	-.0361	.68365508	02	.330 00	-.0337
220321	10	0	.0	.33602662	03	.330	00	-.0361	.68278349	02	.330 00	-.0526
220341	10	0	.0	.33602667	03	.330	00	-.0364	.68192527	02	.330 00	-.0548
220441	10	0	.0	.33602815	03	.330	00	-.0382	.67542949	02	.330 00	-.0472
220501	10	0	.0	.33602907	03	.330	00	-.0392	.67862332	02	.330 00	-.0486
220521	10	0	.0	.33603019	03	.330	00	-.0404	.67782979	02	.330 00	-.0472
220541	10	0	.0	.33603152	03	.330	00	-.0399	.67704879	02	.330 00	-.0511
220601	10	0	.0	.33603304	03	.330	00	-.0415	.67628011	02	.330 00	-.0482
220621	10	0	.0	.33603474	03	.330	00	-.0433	.67552366	02	.330 00	-.0447
220641	10	0	.0	.33603664	03	.330	00	-.0393	.67477926	02	.330 00	-.0442
220701	10	0	.0	.33603872	03	.330	00	-.0415	.67404683	02	.330 00	-.0490
220721	10	0	.0	.33604098	03	.330	00	-.0359	.67332619	02	.330 00	-.0469
220741	10	0	.0	.33604341	03	.330	00	-.0305	.67261718	02	.330 00	-.0420
220801	10	0	.0	.33604601	03	.330	00	-.0331	.67191976	02	.330 00	-.0403
220821	10	0	.0	.33604879	03	.330	00	-.0360	.67123371	02	.330 00	-.0416
220841	10	0	.0	.33605172	03	.330	00	-.0391	.67055894	02	.330 00	-.0302
220901	10	0	.0	.33605482	03	.330	00	-.0422	.66989536	02	.330 00	-.0419
220921	10	0	.0	.33605807	03	.330	00	-.0455	.66924277	02	.330 00	-.0226
220941	10	0	.0	.33606146	03	.330	00	-.0491	.66860109	02	.330 00	-.0304
221001	10	0	.0	.33606501	03	.330	00	-.0527	.66797020	02	.330 00	-.0333
221021	10	0	.0	.33606871	03	.330	00	-.0425	.66734997	02	.330 00	-.0474
221041	10	0	.0	.33607255	03	.330	00	-.0464	.66674030	02	.330 00	-.0504
221101	10	0	.0	.33607652	03	.330	00	-.0425	.66614105	02	.330 00	-.0604
221121	10	0	.0	.33608063	03	.330	00	-.0468	.66555214	02	.330 00	-.0515

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TIME	TC	Q	FRQ	DEC		HA	
221141	10	0	.0	.33608488 03 .330 00	-.0370	.66497342 02 .330 00	-.0458
221201	10	0	.0	.33608925 03 .330 00	-.0415	.66440478 02 .330 00	-.0388
221221	10	0	.0	.33609375 03 .330 00	-.0460	.66384614 02 .330 00	-.0350
221241	10	0	.0	.33609838 03 .330 00	-.0508	.66329737 02 .330 00	-.0441
221301	10	0	.0	.33610312 03 .330 00	-.0416	.66275839 02 .330 00	-.0582
221321	10	0	.0	.33610798 03 .330 00	-.0465	.66222905 02 .330 00	-.0593
221341	10	0	.0	.33611296 03 .330 00	-.0396	.66170929 02 .330 00	-.0253
221401	10	0	.0	.33611805 03 .330 00	-.0367	.66119897 02 .330 00	-.0464
221421	10	0	.0	.33612325 03 .330 00	-.0321	.66069802 02 .330 00	-.0563
221441	10	0	.0	.33612856 03 .330 00	-.0375	.66020632 02 .330 00	-.0671
221501	10	0	.0	.33613398 03 .330 00	-.0430	.65972381 02 .330 00	-.0529
221521	10	0	.0	.33613949 03 .330 00	-.0485	.65925033 02 .330 00	-.0375
221541	10	0	.0	.33614511 03 .330 00	-.0542	.65878582 02 .330 00	-.0551
221601	10	0	.0	.33615082 03 .330 00	-.0439	.65833017 02 .330 00	-.0674
221621	10	0	.0	.33615663 03 .330 00	-.0438	.65788334 02 .330 00	-.0508
221641	10	0	.0	.33616253 03 .330 00	-.0498	.65744518 02 .330 00	-.0350
221701	10	0	.0	.33616853 03 .330 00	-.0419	.65701561 02 .330 00	-.0541
221721	10	0	.0	.33617461 03 .330 00	-.0441	.65659457 02 .330 00	-.0620
221741	10	0	.0	.33618079 03 .330 00	-.0463	.65618192 02 .330 00	-.0347
221801	10	0	.0	.33618705 03 .330 00	-.0466	.65577761 02 .330 00	-.0522
221821	10	0	.0	.33619338 03 .330 00	-.0430	.65538153 02 .330 00	-.0747
221841	10	0	.0	.33619981 03 .330 00	-.0494	.65499366 02 .330 00	-.0380
221901	10	0	.0	.33620631 03 .330 00	-.0400	.65461385 02 .330 00	-.0659
221921	10	0	.0	.33621288 03 .330 00	-.0466	.65424201 02 .330 00	-.0428
221941	10	0	.0	.33621954 03 .330 00	-.0414	.65387812 02 .330 00	-.0564
222001	10	0	.0	.33622627 03 .330 00	-.0481	.65352206 02 .330 00	-.0588
222021	10	0	.0	.33623306 03 .330 00	-.0389	.65317372 02 .330 00	-.0441
222041	10	0	.0	.33623993 03 .330 00	-.0399	.65283307 02 .330 00	-.0640
222101	10	0	.0	.33624687 03 .330 00	-.0469	.65250003 02 .330 00	-.0487
222121	10	0	.0	.33625388 03 .330 00	-.0540	.65217451 02 .330 00	-.0500
222141	10	0	.0	.33626094 03 .330 00	-.0411	.65185644 02 .330 00	-.0684
222201	10	0	.0	.33626808 03 .330 00	-.0482	.65154575 02 .330 00	-.0372
222221	10	0	.0	.33627528 03 .330 00	-.0455	.65124235 02 .330 00	-.0630
222241	10	0	.0	.33628254 03 .330 00	-.0508	.65094616 02 .330 00	-.0513
222301	10	0	.0	.33628985 03 .330 00	-.0442	.65065715 02 .330 00	-.0664
222321	10	0	.0	.33629723 03 .330 00	-.0476	.65037522 02 .330 00	-.0563
222341	10	0	.0	.33630465 03 .330 00	-.0471	.65010031 02 .330 00	-.0728
222401	10	0	.0	.33631214 03 .330 00	-.0345	.64983234 02 .330 00	-.0460
222421	10	0	.0	.33631968 03 .330 00	-.0421	.64957125 02 .330 00	-.0499
222441	10	0	.0	.33632727 03 .330 00	-.0498	.64931697 02 .330 00	-.0625
222501	10	0	.0	.33633491 03 .330 00	-.0575	.64906942 02 .330 00	-.0637
222521	10	0	.0	.33634260 03 .330 00	-.0492	.64882855 02 .330 00	-.0497
222541	10	0	.0	.33435035 03 .330 00	-.0310	.64859433 02 .330 00	-.0522
222601	10	0	.0	.33635813 03 .330 00	-.0369	.64836663 02 .330 00	-.0615
222621	10	0	.0	.33636596 03 .330 00	-.0447	.64814544 02 .330 00	-.0574
222641	10	0	.0	.33637384 03 .330 00	-.0526	.64793068 02 .330 00	-.0459
222701	10	0	.0	.33638177 03 .330 00	-.0605	.64772227 02 .330 00	-.0551
222741	10	0	.0	.33639773 03 .330 00	-.0505	.64732428 02 .330 00	-.0693
222801	10	0	.0	.33640578 03 .330 00	-.0486	.64713462 02 .330 00	-.0504
222821	10	0	.0	.33641387 03 .330 00	-.0548	.64695104 02 .330 00	-.0580
222841	10	0	.0	.33642199 03 .330 00	-.0428	.64677355 02 .330 00	-.0483
222901	10	0	.0	.33643015 03 .330 00	-.0491	.64660210 02 .330 00	-.0691
222921	10	0	.0	.33643834 03 .330 00	-.0333	.64643660 02 .330 00	-.0507
222941	10	0	.0	.33644657 03 .330 00	-.0415	.64627697 02 .330 00	-.0366
223001	10	0	.0	.33445484 03 .330 00	-.0498	.64612319 02 .330 00	-.0493
223021	10	0	.0	.33646314 03 .330 00	-.0502	.64597524 02 .330 00	-.0664
223041	10	0	0	.33647147 03 .330 00	-.0505	.64583296 02 .330 00	-.0522
223101	10	0	.0	.33647984 03 .330 00	-.0449	.64569641 02 .330 00	-.0406
223121	10	0	.0	.33648822 03 .330 00	-.0533	.64556549 02 .330 00	-.0536
223141	10	0	.0	.33649665 03 .330 00	-.0378	.64544014 02 .330 00	-.0652
223201	10	0	.0	.33650510 03 .330 00	-.0363	.64532030 02 .330 00	-.0531
223221	10	0	.0	.33651358 03 .330 00	-.0447	.64520596 02 .330 00	-.0416
223241	10	0	.0	.33652208 03 .330 00	-.0532	.64509707 02 .330 00	-.0568
223301	10	0	.0	.33653062 03 .330 00	-.0558	.64499353 02 .330 00	-.0464
223321	10	0	.0	.33653918 03 .330 00	-.0344	.64489532 02 .330 00	-.0706
223341	10	0	.0	.33654776 03 .330 00	-.0430	.64480238 02 .330 00	-.0474
223401	10	0	.0	.33655637 03 .330 00	-.0516	.64471468 02 .330 00	-.0386
223421	10	0	.0	.33656500 03 .330 00	-.0603	.64463219 02 .330 00	-.0564
223441	10	0	.0	.33657366 03 .330 00	-.0630	.64455481 02 .330 00	-.0607
223501	10	0	.0	.33658233 03 .330 00	-.0316	.64448255 02 .330 00	-.0615
223521	10	0	.0	.33659102 03 .330 00	-.0423	.64441533 02 .330 00	-.0548
223541	10	0	.0	.33659974 03 .330 00	-.0491	.64435309 02 .330 00	-.0505
223601	10	0	.0	.33660848 03 .330 00	-.0577	.64429583 02 .330 00	-.0468
223621	10	0	.0	.33661724 03 .330 00	-.0486	.64424350 02 .330 00	-.0596
223641	10	0	.0	.33662601 03 .330 00	-.0314	.64419603 02 .330 00	-.0529
223701	10	0	.0	.33663481 03 .330 00	-.0402	.64415337 02 .330 00	-.0486
223721	10	0	.0	.33664361 03 .330 00	-.0490	.64411554 02 .330 00	-.0669
223741	10	0	.0	.33665244 03 .330 00	-.0579	.64408241 02 .330 00	-.0635
223821	10	0	.0	.33667014 03 .330 00	-.0475	.64403027 02 .330 00	-.0443
223841	10	0	.0	.33667902 03 .330 00	-.0424	.64401116 02 .330 00	-.0604
223901	10	0	.0	.33668790 03 .330 00	-.0513	.64399660 02 .330 00	-.0590
223921	10	0	.0	.33669680 03 .330 00	-.0442	.64398661 02 .330 00	-.0580
223941	10	0	.0	.33670572 03 .330 00	-.0391	.64398114 02 .330 00	-.0575
224001	10	0	.0	.33671465 03 .330 00	-.0481	.64398008 02 .330 00	-.0574
224021	10	0	.0	.33672359 03 .330 00	-.0450	.64398351 02 .330 00	-.0577
224041	10	0	.0	.33673254 03 .330 00	-.0339	.64399128 02 .330 00	-.0586
224101	10	0	.0	.33674150 03 .330 00	-.0426	.64400344 02 .330 00	-.0498
224121	10	0	.0	.33675047 03 .330 00	-.0519	.64401989 02 .330 00	-.0514
224141	10	0	.0	.33675946 03 .330 00	-.0509	.64404062 02 .330 00	-.0536
224201	10	0	.0	.33676846 03 .330 00	-.0499	.64406562 02 .330 00	-.0560
224221	10	0	.0	.33677746 03 .330 00	-.0509	.64409479 02 .330 00	-.0590
224241	10	0	.0	.33678648 03 .330 00	-.0599	.64412816 02 .330 00	-.0623
224301	10	0	.0	.33679549 03 .330 00	-.0369	.64416563 02 .330 00	-.0681
224321	10	0	.0	.33680452 03 .330 00	-.0399	.64420724 02 .330 00	-.0642
224341	10	0	.0	.33681356 03 .330 00	-.0490	.64425290 02 .330 00	-.0289
224401	10	0	.0	.33682260 03 .330 00	-.0380	.64430259 02 .330 00	-.0538
224421	10	0	.0	.33683166 03 .330 00	-.0470	.64435630 02 .330 00	-.0592
224441	10	0	.0	.33684072 03 .330 00	-.0481	.64441396 02 .330 00	-.0590
224501	10	0	.0	.33684978 03 .330 00	-.0511	.64447557 02 .330 00	-.0652
224521	10	0	.0	.33685885 03 .330 00	-.0463	.64454108 02 .330 00	-.0597
224541	10	0	.0	.33696792 03 .330 00	-.0293	.64461045 02 .330 00	-.0647
224601	10	0	.0	.33687700 03 .330 00	-.0383	.64468369 02 .330 00	-.0341
224621	10	0	.0	.33688608 03 .330 00	-.0475	.64476070 02 .330 00	-.0518
224641	10	0	.0	.33689518 03 .330 00	-.0565	.64484152 02 .330 00	-.0598
224701	10	0	.0	.33690427 03 .330 00	-.0516	.64492607 02 .330 00	-.0684
224721	10	0	.0	.33691336 03 .330 00	-.0347	.64501434 02 .330 00	-.0671
224741	10	0	.0	.33692246 03 .330 00	-.0437	.64510623 02 .330 00	-.0464
224801	10	0	.0	.33693156 03 .330 00	-.0529	.64520189 02 .330 00	-.0559

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TIME	TC	Q	FR	DEC				HA			
224821	10	0	.0	.33694067	03	.330	00	-.0540	.64530112	02	.330 00	-.0640
224841	10	0	.0	.33694977	03	.330	00	-.0491	.64540395	02	.330 00	-.0723
224901	10	0	.0	.33695889	03	.330	00	-.0441	.64551038	02	.330 00	-.0428
224921	10	0	.0	.33696799	03	.330	00	-.0532	.64562032	02	.330 00	-.0659
224941	10	0	.0	.33697711	03	.330	00	-.0424	.64573377	02	.330 00	-.0652
225001	10	0	.0	.33698621	03	.330	00	-.0475	.64585071	02	.330 00	-.0630
225021	10	0	.0	.33699533	03	.330	00	-.0505	.64597111	02	.330 00	-.0470
225041	10	0	.0	.33700445	03	.330	00	-.0497	.64609492	02	.330 00	-.0632
225101	10	0	.0	.33701356	03	.330	00	-.0487	.64622217	02	.330 00	-.0740
225121	10	0	.0	.33702268	03	.330	00	-.0378	.64635277	02	.330 00	-.0452
225141	10	0	.0	.33703179	03	.330	00	-.0470	.64648671	02	.330 00	-.0586
225201	10	0	.0	.33704090	03	.330	00	-.0560	.64662400	02	.330 00	-.0723
225221	10	0	.0	.33705002	03	.330	00	-.0511	.64676456	02	.330 00	-.0404
225241	10	0	.0	.33705913	03	.330	00	-.0402	.64690843	02	.330 00	-.0548
225301	10	0	.0	.33706824	03	.330	00	-.0493	.64705551	02	.330 00	-.0696
225321	10	0	.0	.33707735	03	.330	00	-.0485	.64720583	02	.330 00	-.0786
225341	10	0	.0	.33708645	03	.330	00	-.0415	.64735933	02	.330 00	-.0559
225401	10	0	.0	.33709556	03	.330	00	-.0505	.64751603	02	.330 00	-.0715
225421	10	0	.0	.33710467	03	.330	00	-.0516	.64767587	02	.330 00	-.0476
225441	10	0	.0	.33711376	03	.330	00	-.0387	.64783881	02	.330 00	-.0619
225501	10	0	.0	.33712287	03	.330	00	-.0459	.64800488	02	.330 00	-.0725
225521	10	0	.0	.33713196	03	.330	00	-.0549	.64817400	02	.330 00	-.0535
225541	10	0	.0	.33714105	03	.330	00	-.0420	.64834620	02	.330 00	-.0708
225601	10	0	.0	.33715014	03	.330	00	-.0510	.64852140	02	.330 00	-.0463
225621	10	0	.0	.33715923	03	.330	00	-.0581	.64869965	02	.330 00	-.0640
225641	10	0	.0	.33716831	03	.330	00	-.0352	.64888088	02	.330 00	-.0781
225711	10	0	.0	.33718193	03	.180	00	-.0487	.64915822	02	.180 00	-.0620
225811	10	0	.0	.33720913	03	.180	00	-.0479	.64973266	02	.180 00	-.0735
225911	10	0	.0	.33723629	03	.180	00	-.0409	.65033287	02	.180 00	-.0436
230011	10	0	.0	.33726341	03	.180	00	-.0439	.65095830	02	.180 00	-.0601
230111	10	0	.0	.33729048	03	.180	00	-.0449	.65160838	02	.180 00	-.0752
230211	10	0	.0	.33731749	03	.180	00	-.0538	.65228259	02	.180 00	-.0546
230311	10	0	.0	.33734445	03	.180	00	-.0427	.65298041	02	.180 00	-.0725
230411	10	0	.0	.33737134	03	.180	00	-.0455	.65370128	02	.180 00	-.0546
230511	10	0	.0	.33739817	03	.180	00	-.0383	.65444480	02	.180 00	-.0769
230611	10	0	.0	.33742494	03	.180	00	-.0509	.65521045	02	.180 00	-.0515
230711	10	0	.0	.33745163	03	.180	00	-.0436	.65599777	02	.180 00	-.0745
230811	10	0	.0	.33747825	03	.180	00	-.0460	.65680628	02	.180 00	-.0632
230911	10	0	.0	.33750479	03	.180	00	-.0444	.65763559	02	.180 00	-.0592
231011	10	0	.0	.33753126	03	.180	00	-.0488	.65848522	02	.180 00	-.0532
231111	10	0	.0	.33755765	03	.180	00	-.0410	.65935476	02	.180 00	-.0502
231211	10	0	.0	.33758395	03	.180	00	-.0432	.66024388	02	.180 00	-.0471
231311	10	0	.0	.33761017	03	.180	00	-.0493	.66115213	02	.180 00	-.0441
231411	10	0	.0	.33763631	03	.180	00	-.0414	.66207912	02	.180 00	-.0427
231511	10	0	.0	.33766236	03	.180	00	-.0432	.66302454	02	.180 00	-.0433
231611	10	0	.0	.33768832	03	.180	00	-.0450	.66398795	02	.180 00	-.0497
231711	10	0	.0	.33771419	03	.180	00	-.0388	.66496897	02	.180 00	-.0519
231811	10	0	.0	.33773997	03	.180	00	-.0444	.66596738	02	.180 00	-.0537
231911	10	0	.0	.33776566	03	.180	00	-.0460	.66698276	02	.180 00	-.0533
232011	10	0	.0	.33779125	03	.180	00	-.0475	.66801477	02	.180 00	-.0486
232111	10	0	.0	.33781675	03	.180	00	-.0308	.66906317	02	.180 00	-.0514
232211	10	0	.0	.33784215	03	.180	00	-.0420	.67012756	02	.180 00	-.0439
232311	10	0	.0	.33786745	03	.180	00	-.0452	.67120771	02	.180 00	-.0540
232411	10	0	.0	.33789266	03	.180	00	-.0342	.67230326	02	.180 00	-.0515
232511	10	0	.0	.33791777	03	.180	00	-.0413	.67341400	02	.180 00	-.0607
232611	10	0	.0	.33794278	03	.180	00	-.0341	.67453958	02	.180 00	-.0513
232711	10	0	.0	.33796769	03	.180	00	-.0288	.67567977	02	.180 00	-.0553
232811	10	0	.0	.33799250	03	.180	00	-.0435	.67683428	02	.180 00	-.0468
232911	10	0	.0	.33801722	03	.180	00	-.0400	.67800284	02	.180 00	-.0616
233011	10	0	.0	.33804183	03	.180	00	-.0444	.67918521	02	.180 00	-.0701
233111	10	0	.0	.33806634	03	.180	00	-.0367	.68038118	02	.180 00	-.0356
233211	10	0	.0	.33809075	03	.180	00	-.0270	.68159043	02	.180 00	-.0505
233311	10	0	.0	.33811506	03	.180	00	-.0352	.68281280	02	.180 00	-.0548
233411	10	0	.0	.33813927	03	.180	00	-.0431	.68404798	02	.180 00	-.0624
233511	10	0	.0	.33816336	03	.180	00	-.0370	.68529586	02	.180 00	-.0432
233611	10	0	.0	.33818737	03	.180	00	-.0369	.68655609	02	.180 00	-.0353
233711	10	0	.0	.33821127	03	.180	00	-.0406	.68782849	02	.180 00	-.0725
233811	10	0	.0	.33823507	03	.180	00	-.0403	.68911292	02	.180 00	-.0769
233911	10	0	.0	.33825876	03	.180	00	-.0358	.69040913	02	.180 00	-.0647
234011	10	0	.0	.33828235	03	.180	00	-.0311	.69171692	02	.180 00	-.0454
234111	10	0	.0	.33830585	03	.180	00	-.0404	.69303605	02	.180 00	-.0314
234211	10	0	.0	.33832924	03	.180	00	-.0176	.69436643	02	.180 00	-.0544
234311	10	0	.0	.33835252	03	.180	00	-.0286	.69570775	02	.180 00	-.0466
234411	10	0	.0	.33837570	03	.180	00	-.0356	.69705988	02	.180 00	-.0779
234511	10	0	.0	.33839879	03	.180	00	-.0326	.69842277	02	.180 00	-.0823
234611	10	0	.0	.33842177	03	.180	00	-.0333	.69979595	02	.180 00	-.0754
234711	10	0	.0	.33844465	03	.180	00	-.0280	.70117952	02	.180 00	-.0519
234811	10	0	.0	.33846743	03	.180	00	-.0286	.70257317	02	.180 00	-.0693
234911	10	0	.0	.33849010	03	.180	00	-.0230	.70397681	02	.180 00	-.0618
235011	10	0	.0	.33851268	03	.180	00	-.0414	.70539022	02	.180 00	-.0791
235111	10	0	.0	.33853516	03	.180	00	-.0337	.70681325	02	.180 00	-.0774
235211	10	0	.0	.33855753	03	.180	00	-.0338	.70824584	02	.180 00	-.0647
235311	10	0	.0	.33857981	03	.180	00	-.0378	.70968769	02	.180 00	-.0588
235411	10	0	.0	.33860198	03	.180	00	-.0338	.71113880	02	.180 00	-.0801
235511	10	0	.0	.33862406	03	.180	00	-.0336	.71259889	02	.180 00	-.0500
235611	10	0	.0	.33864604	03	.180	00	-.0333	.71406791	02	.180 00	-.0530
235711	10	0	.0	.33866791	03	.180	00	-.0130	.71554566	02	.180 00	-.0649
235811	10	0	.0	.33868970	03	.180	00	-.0286	.71703204	02	.180 00	-.0554
235911	10	0	.0	.33871138	03	.180	00	-.0260	.71852695	02	.180 00	-.0549

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000011	10	0	.0	.33873296	03	.180	00	-.0273	.72003056	02	.180 00	-.0554
000111	10	0	.0	.33875445	03	.180	00	-.0386	.72154204	02	.180 00	-.0525
000211	10	0	.0	.33877584	03	.180	00	-.0377	.72306164	02	.180 00	-.0465
000311	10	0	.0	.33879713	03	.180	00	-.0208	.72458921	02	.180 00	-.0613
000411	10	0	.0	.33881832	03	.180	00	-.0278	.72612467	02	.180 00	-.0627
000511	10	0	.0	.33883942	03	.180	00	-.0386	.72766783	02	.180 00	-.0471
000611	10	0	.0	.33886043	03	.180	00	-.0394	.72921864	02	.180 00	-.0703
000711	10	0	.0	.33888134	03	.180	00	-.0301	.73077700	02	.180 00	-.0701
000811	10	0	.0	.33890215	03	.180	00	-.0266	.73234273	02	.180 00	-.0408
000911	10	0	.0	.33892287	03	.180	00	-.0311	.73391578	02	.180 00	-.0601
001011	10	0	.0	.33894350	03	.180	00	-.0375	.73549600	02	.180 00	-.0740
001111	10	0	.0	.33896403	03	.180	00	-.0297	.73708330	02	.180 00	-.0568
001211	10	0	.0	.33898446	03	.180	00	-.0439	.73867762	02	.180 00	-.0543
001311	10	0	.0	.33900481	03	.180	00	-.0300	.74027877	02	.180 00	-.0424
001411	10	0	.0	.33902507	03	.180	00	-.0260	.74188676	02	.180 00	-.0552
001511	10	0	.0	.33904523	03	.180	00	-.0299	.74350140	02	.180 00	-.0686

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TIME	TC	Q	FRQ	DEC		HA	
001611	10	0	.0	.33906529 03 .180 00	-.0117	.74512264 02 .180 00	-.0688
001711	10	0	.0	.33908527 03 .180 00	-.0275	.74675034 02 .180 00	-.0796
001811	10	0	.0	.33910516 03 .180 00	-.0450	.74838448 02 .180 00	-.0850
001911	10	0	.0	.33912496 03 .180 00	-.0245	.75002494 02 .180 00	-.0612
002511	10	0	.0	.33924186 03 .180 00	-.0378	.75999524 02 .180 00	-.0762
002611	10	0	.0	.33926104 03 .180 00	-.0267	.76167751 02 .180 00	-.0604
002711	10	0	.0	.33928012 03 .180 00	-.0435	.76336536 02 .180 00	-.0452
002811	10	0	.0	.33929912 03 .180 00	-.0382	.76505882 02 .180 00	-.0505
002911	10	0	.0	.33931804 03 .180 00	-.0349	.76675771 02 .180 00	-.0645
003111	10	0	.0	.33935561 03 .180 00	-.0319	.77017178 02 .180 00	-.0479
003211	10	0	.0	.33937427 03 .180 00	-.0363	.77188671 02 .180 00	-.0735
003311	10	0	.0	.33939284 03 .180 00	-.0345	.77360690 02 .180 00	-.0574
003511	10	0	.0	.33942974 03 .180 00	-.0349	.77706257 02 .180 00	-.0791
003611	10	0	.0	.33944806 03 .180 00	-.0269	.77879790 02 .180 00	-.0486
003711	10	0	.0	.33946629 03 .180 00	-.0248	.78053819 02 .180 00	-.0845
003811	10	0	.0	.33948445 03 .180 00	-.0347	.78228331 02 .180 00	-.0610
003911	10	0	.0	.33950252 03 .180 00	-.0225	.78403325 02 .180 00	-.0581
004011	10	0	.0	.33952051 03 .180 00	-.0321	.78578794 02 .180 00	-.0776
004111	10	0	.0	.33953841 03 .180 00	-.0297	.78754728 02 .180 00	-.0554
004211	10	0	.0	.33955624 03 .180 00	-.0252	.78931126 02 .180 00	-.0399
004311	10	0	.0	.33957398 03 .180 00	-.0327	.79107977 02 .180 00	-.0607
004411	10	0	.0	.33959164 03 .180 00	-.0301	.79285280 02 .180 00	-.0781
004511	10	0	.0	.33960922 03 .180 00	-.0333	.79463022 02 .180 00	-.0417
004711	10	0	.0	.33964415 03 .180 00	-.0316	.79819816 02 .180 00	-.0645
004811	10	0	.0	.33966149 03 .180 00	-.0306	.79998853 02 .180 00	-.0576
004911	10	0	.0	.33967875 03 .180 00	-.0296	.80178316 02 .180 00	-.0610
005011	10	0	.0	.33969593 03 .180 00	-.0265	.80358191 02 .180 00	-.0688
005111	10	0	.0	.33971304 03 .180 00	-.0313	.80538476 02 .180 00	-.0411
005211	10	0	.0	.33973007 03 .180 00	-.0280	.80719168 02 .180 00	-.0640
005311	10	0	.0	.33974701 03 .180 00	-.0246	.80900255 02 .180 00	-.0509
005411	10	0	.0	.33976388 03 .180 00	-.0292	.81081742 02 .180 00	-.0784
005511	10	0	.0	.33978067 03 .180 00	-.0256	.81263615 02 .180 00	-.0703
005611	10	0	.0	.33979738 03 .180 00	-.0260	.81445873 02 .180 00	-.0505
005711	10	0	.0	.33982477 03 .180 00	-.0352	.81650361 02 .180 00	-.0891
005811	10	0	.0	.33984123 03 .180 00	-.0312	.81833124 02 .180 00	-.0818

STATISTICS STATION 4

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
HA	1/26-213301	1/27-005811	356	.114-01	.571-01	-.559-01	.326-02
DEC	1/26-213301	1/27-005811	356	.987-02	.392-01	-.379-01	.154-02

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TIME	TC	Q	FRQ	DEC		HA	
210001	10	0	.0	.58658844 01 .330 00	.0573	.23282975 02 .330 00	.0160
210101	10	0	.0	.35873768 03 .330 00	.0547	.11354185 02 .330 00	.0143
210121	10	0	.0	.35653800 03 .330 00	.0541	.76461908 01 .330 00	.0184
210221	10	0	.0	.35076334 03 .330 00	.0486	.35753729 03 .330 00	.0136
210241	10	0	.0	.34913472 03 .330 00	.0515	.35452185 03 .330 00	.0141
210301	10	0	.0	.34764096 03 .330 00	.0516	.35148154 03 .330 00	.0132
210321	10	0	.0	.34630469 03 .330 00	.0464	.34901096 03 .330 00	.0144
210341	10	0	.0	.34508669 03 .330 00	.0509	.34650296 03 .330 00	.0130
210401	10	0	.0	.34398680 03 .330 00	.0494	.34414929 03 .330 00	.0151
210421	10	0	.0	.34299461 03 .330 00	.0482	.34194103 03 .330 00	.0118
210441	10	0	.0	.34209992 03 .330 00	.0455	.33986904 03 .330 00	.0102
210501	10	0	.0	.34129304 03 .330 00	.0470	.33792422 03 .330 00	.0273
210521	10	0	.0	.34056497 03 .330 00	.0477	.33609767 03 .330 00	.0382
210641	10	0	.0	.33828746 03 .330 00	.0278	.32981145 03 .330 00	.0194
210701	10	0	.0	.33784493 03 .330 00	.0269	.32845850 03 .330 00	.0166
210721	10	0	.0	.33744273 03 .330 00	.0256	.32718023 03 .330 00	.0172
210741	10	0	.0	.33707668 03 .330 00	.0262	.32597111 03 .330 00	.0145
210801	10	0	.0	.33674307 03 .330 00	.0244	.32482610 03 .330 00	.0157
210841	10	0	.0	.33616036 03 .330 00	.0260	.32271017 03 .330 00	.0261
210901	10	0	.0	.33590578 03 .330 00	.0291	.32173110 03 .330 00	.0175
210921	10	0	.0	.33567255 03 .330 00	.0267	.32079976 03 .330 00	.0250
210941	10	0	.0	.33545865 03 .330 00	.0290	.31991288 03 .330 00	.0201
211001	10	0	.0	.33526226 03 .330 00	.0317	.31906747 03 .330 00	.0297
211141	10	0	.0	.33449223 03 .330 00	.0396	.31537386 03 .330 00	.0184
211201	10	0	.0	.33437245 03 .330 00	.0316	.31472684 03 .330 00	.0197
211221	10	0	.0	.33426190 03 .330 00	.0305	.31410617 03 .330 00	.0225
211241	10	0	.0	.33415981 03 .330 00	.0269	.31351031 03 .330 00	.0246
211301	10	0	.0	.33406551 03 .330 00	.0294	.31293784 03 .330 00	.0233
211321	10	0	.0	.33397839 03 .330 00	.0268	.31238746 03 .330 00	.0219
211341	10	0	.0	.33389788 03 .330 00	.0275	.31185794 03 .330 00	.0255
211401	10	0	.0	.33382347 03 .330 00	.0222	.31134816 03 .330 00	.0195
211421	10	0	.0	.33375472 03 .330 00	.0232	.31085707 03 .330 00	.0268
211501	10	0	.0	.33363251 03 .330 00	.0238	.30992715 03 .330 00	.0391
211521	10	0	.0	.33357833 03 .330 00	.0242	.30948656 03 .330 00	.0398
211541	10	0	.0	.33352831 03 .330 00	.0244	.30906117 03 .330 00	.0294
211601	10	0	.0	.33348219 03 .330 00	.0248	.30865022 03 .330 00	.0265
211621	10	0	.0	.33343968 03 .330 00	.0234	.30825303 03 .330 00	.0238
211641	10	0	.0	.33340053 03 .330 00	.0228	.30786897 03 .330 00	.0240
211701	10	0	.0	.33336453 03 .330 00	.0229	.30749742 03 .330 00	.0197
211721	10	0	.0	.33333146 03 .330 00	.0222	.30713782 03 .330 00	.0235
211741	10	0	.0	.33330113 03 .330 00	.0367	.30678965 03 .330 00	.0258
211901	10	0	.0	.33325385 03 .330 00	.0206	.30550169 03 .330 00	.0283
211921	10	0	.0	.33318481 03 .330 00	.0198	.30520373 03 .330 00	.0304
211941	10	0	.0	.33316762 03 .330 00	.0171	.30491462 03 .330 00	.0276
212001	10	0	.0	.33315217 03 .330 00	.0207	.30463399 03 .330 00	.0264
212021	10	0	.0	.33313836 03 .330 00	.0206	.30436153 03 .330 00	.0290
212041	10	0	.0	.33312608 03 .330 00	.0170	.30409692 03 .330 00	.0297
212101	10	0	.0	.33311526 03 .330 00	.0220	.30383986 03 .330 00	.0269
212121	10	0	.0	.33310580 03 .330 00	.0195	.30359007 03 .330 00	.0268
212141	10	0	.0	.33309762 03 .330 00	.0239	.30334729 03 .330 00	.0237
212201	10	0	.0	.33309066 03 .330 00	.0209	.30311127 03 .330 00	.0259
212221	10	0	.0	.33308483 03 .330 00	.0228	.30288176 03 .330 00	.0275
212241	10	0	.0	.33308009 03 .330 00	.0197	.30265854 03 .330 00	.0288
212301	10	0	.0	.33307636 03 .330 00	.0236	.30244138 03 .330 00	.0281

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TIME	TC	Q	FRQ	DEC		HA	
212321	10	0	.0	.33307358 03 .330 00	.0204	.30723010 03 .330 00	.0255
212341	10	0	.0	.33307172 03 .330 00	.0224	.30202448 03 .330 00	.0272
212401	10	0	.0	.33307072 03 .330 00	.0175	.30142433 03 .330 00	.0254
212421	10	0	.0	.33307052 03 .330 00	.0198	.30162949 03 .330 00	.0283
212441	10	0	.0	.33307109 03 .330 00	.0193	.30143979 03 .330 00	.0281
212501	10	0	.0	.33307239 03 .330 00	.0181	.30125505 03 .330 00	.0309
212521	10	0	.0	.33307437 03 .330 00	.0162	.30107512 03 .330 00	.0310
212541	10	0	.0	.33307700 03 .330 00	.0236	.30089986 03 .330 00	.0303
212601	10	0	.0	.33308024 03 .330 00	.0205	.30072913 03 .330 00	.0292
212621	10	0	.0	.33308407 03 .330 00	.0167	.30056277 03 .330 00	.0276
212641	10	0	.0	.33308845 03 .330 00	.0124	.30040047 03 .330 00	.0278
212701	10	0	.0	.33309335 03 .330 00	.0156	.30024270 03 .330 00	.0258
212721	10	0	.0	.33309875 03 .330 00	.0243	.30008874 03 .330 00	.0278
212741	10	0	.0	.33310461 03 .330 00	.0185	.29993869 03 .330 00	.0300
212801	10	0	.0	.33311092 03 .330 00	.0223	.29979241 03 .330 00	.0264
212821	10	0	.0	.33311765 03 .330 00	.0156	.29964982 03 .330 00	.0250
212841	10	0	.0	.33312478 03 .330 00	.0186	.29951080 03 .330 00	.0261
212901	10	0	.0	.33313229 03 .330 00	.0131	.29937527 03 .330 00	.0257
212921	10	0	.0	.33314015 03 .330 00	.0193	.29924312 03 .330 00	.0259
212941	10	0	.0	.33314836 03 .330 00	.0212	.29911427 03 .330 00	.0268
213001	10	0	.0	.33315688 03 .330 00	.0127	.29898863 03 .330 00	.0266
213021	10	0	.0	.33316572 03 .330 00	.0199	.29886612 03 .330 00	.0291
213041	10	0	.0	.33317484 03 .330 00	.0189	.29874665 03 .330 00	.0306
213101	10	0	.0	.33318425 03 .330 00	.0195	.29863015 03 .330 00	.0332
213121	10	0	.0	.33319391 03 .330 00	.0159	.29851654 03 .330 00	.0289
213141	10	0	.0	.33320381 03 .330 00	.0141	.29840576 03 .330 00	.0297
213201	10	0	.0	.33321395 03 .330 00	.0140	.29829773 03 .330 00	.0298
213221	10	0	.0	.33322432 03 .330 00	.0096	.29819237 03 .330 00	.0292
213241	10	0	.0	.33323490 03 .330 00	.0151	.29808964 03 .330 00	.0300
213301	10	0	.0	.33324566 03 .330 00	.0184	.29798947 03 .330 00	.0322
213321	10	0	.0	.33325663 03 .330 00	.0135	.29789179 03 .330 00	.0320
213341	10	0	.0	.33326777 03 .330 00	.0184	.29779655 03 .330 00	.0332
213401	10	0	.0	.33327908 03 .330 00	.0192	.29770369 03 .330 00	.0342
213421	10	0	.0	.33329055 03 .330 00	.0137	.29761317 03 .330 00	.0327
213441	10	0	.0	.33330217 03 .330 00	.0141	.29752491 03 .330 00	.0310
213501	10	0	.0	.33331393 03 .330 00	.0124	.29743888 03 .330 00	.0311
213521	10	0	.0	.33332583 03 .330 00	.0106	.29735503 03 .330 00	.0309
213541	10	0	.0	.33333786 03 .330 00	.0126	.29727329 03 .330 00	.0308
213601	10	0	.0	.33335000 03 .330 00	.0145	.29719364 03 .330 00	.0325
213621	10	0	.0	.33336226 03 .330 00	.0143	.29711603 03 .330 00	.0361
213641	10	0	.0	.33337462 03 .330 00	.0119	.29704040 03 .330 00	.0317
213701	10	0	.0	.33338709 03 .330 00	.0175	.29696672 03 .330 00	.0334
213721	10	0	.0	.33339965 03 .330 00	.0190	.29689495 03 .330 00	.0333
213741	10	0	.0	.33341230 03 .330 00	.0144	.29682504 03 .330 00	.0313
213801	10	0	.0	.33342503 03 .330 00	.0137	.29675698 03 .330 00	.0333
213821	10	0	.0	.33343785 03 .330 00	.0129	.29669069 03 .330 00	.0297
213841	10	0	.0	.33345073 03 .330 00	.0161	.29662617 03 .330 00	.0322
213901	10	0	.0	.33346369 03 .330 00	.0151	.29656336 03 .330 00	.0331
213921	10	0	.0	.33347671 03 .330 00	.0181	.29650224 03 .330 00	.0302
213941	10	0	.0	.33348979 03 .330 00	.0211	.29644277 03 .330 00	.0337
214041	10	0	.0	.33352934 03 .330 00	.0196	.29627397 03 .330 00	.0368
214101	10	0	.0	.33354262 03 .330 00	.0164	.29622080 03 .330 00	.0358
214121	10	0	.0	.33355594 03 .330 00	.0231	.29616913 03 .330 00	.0375
214141	10	0	.0	.33356929 03 .330 00	.0178	.29611893 03 .330 00	.0337
214201	10	0	.0	.33358268 03 .330 00	.0124	.29607017 03 .330 00	.0344
214221	10	0	.0	.33359611 03 .330 00	.0150	.29602283 03 .330 00	.0359
214241	10	0	.0	.33360955 03 .330 00	.0155	.29597689 03 .330 00	.0378
214301	10	0	.0	.33362303 03 .330 00	.0141	.29593231 03 .330 00	.0344
214321	10	0	.0	.33363653 03 .330 00	.0166	.29588907 03 .330 00	.0316
214341	10	0	.0	.33365005 03 .330 00	.0191	.29584716 03 .330 00	.0336
214401	10	0	.0	.33366359 03 .330 00	.0274	.29580652 03 .330 00	.0342
214421	10	0	.0	.33367715 03 .330 00	.0161	.29576717 03 .330 00	.0336
214441	10	0	.0	.33369072 03 .330 00	.0265	.29572906 03 .330 00	.0317
214501	10	0	.0	.33370429 03 .330 00	.0209	.29569219 03 .330 00	.0386
214521	10	0	.0	.33371786 03 .330 00	.0114	.29565651 03 .330 00	.0303
214541	10	0	.0	.33373148 03 .330 00	.0138	.29562203 03 .330 00	.0348
214601	10	0	.0	.33374508 03 .330 00	.0102	.29558871 03 .330 00	.0321
214621	10	0	.0	.33375869 03 .330 00	.0026	.29555653 03 .330 00	.0323
214641	10	0	.0	.33377229 03 .330 00	.0091	.29552549 03 .330 00	.0314
214701	10	0	.0	.33378590 03 .330 00	.0135	.29549555 03 .330 00	.0294
214721	10	0	.0	.33379950 03 .330 00	.0119	.29546670 03 .330 00	.0342
214821	10	0	.0	.33384030 03 .330 00	.0191	.29538652 03 .330 00	.0325
214841	10	0	.0	.33385369 03 .330 00	.0155	.29536186 03 .330 00	.0331
214901	10	0	.0	.33386747 03 .330 00	.0160	.29533821 03 .330 00	.0348
214921	10	0	.0	.33388104 03 .330 00	.0124	.29531553 03 .330 00	.0275
214941	10	0	.0	.33389460 03 .330 00	.0126	.29529385 03 .330 00	.0332
215021	10	0	.0	.33392168 03 .330 00	.0138	.29525332 03 .330 00	.0337
215041	10	0	.0	.33393520 03 .330 00	.0143	.29523445 03 .330 00	.0286
215101	10	0	.0	.33394871 03 .330 00	.0148	.29521651 03 .330 00	.0305
215121	10	0	.0	.33396220 03 .330 00	.0173	.29519947 03 .330 00	.0316
215141	10	0	.0	.33397568 03 .330 00	.0178	.29518331 03 .330 00	.0297
215201	10	0	.0	.33398913 03 .330 00	.0204	.29516803 03 .330 00	.0290
215221	10	0	.0	.33400257 03 .330 00	.0229	.29515361 03 .330 00	.0314
215241	10	0	.0	.33401599 03 .330 00	.0155	.29514003 03 .330 00	.0310
215301	10	0	.0	.33402939 03 .330 00	.0162	.29512730 03 .330 00	.0297
215321	10	0	.0	.33404277 03 .330 00	.0148	.29511539 03 .330 00	.0276
215341	10	0	.0	.33405613 03 .330 00	.0094	.29510429 03 .330 00	.0308
215401	10	0	.0	.33406946 03 .330 00	.0101	.29509399 03 .330 00	.0331
215421	10	0	.0	.33408278 03 .330 00	.0208	.29508449 03 .330 00	.0326
215521	10	0	.0	.33412258 03 .330 00	.0150	.29506058 03 .330 00	.0305
215541	10	0	.0	.33413580 03 .330 00	.0138	.29505413 03 .330 00	.0309
215601	10	0	.0	.33414899 03 .330 00	.0126	.29504840 03 .330 00	.0287
215621	10	0	.0	.33416216 03 .330 00	.0214	.29504341 03 .330 00	.0297
215641	10	0	.0	.33417530 03 .330 00	.0143	.29503912 03 .330 00	.0280
215701	10	0	.0	.33418842 03 .330 00	.0192	.29503555 03 .330 00	.0315
215721	10	0	.0	.33420151 03 .330 00	.0101	.29503267 03 .330 00	.0304
215821	10	0	.0	.33424062 03 .330 00	.0150	.29502811 03 .330 00	.0309
215841	10	0	.0	.33425359 03 .330 00	.0220	.29502792 03 .330 00	.0291
215901	10	0	.0	.33426654 03 .330 00	.0170	.29502839 03 .330 00	.0326
215921	10	0	.0	.33427944 03 .330 00	.0221	.29502949 03 .330 00	.0295
215941	10	0	.0	.33429235 03 .330 00	.0152	.29503123 03 .330 00	.0278
220041	10	0	.0	.33433085 03 .330 00	.0327	.29504019 03 .330 00	.0308
220101	10	0	.0	.33434362 03 .330 00	.0120	.29504438 03 .330 00	.0266
220121	10	0	.0	.33435637 03 .330 00	.0172	.29504918 03 .330 00	.0278
220141	10	0	.0	.33436907 03 .330 00	.0165	.29505457 03 .330 00	.0264
220201	10	0	.0	.33438176 03 .330 00	.0098	.29506053 03 .330 00	.0264
220221	10	0	.0	.33439441 03 .330 00	.0112	.29506706 03 .330 00	.0259
220241	10	0	.0	.33440703 03 .330 00	.0186	.29507417 03 .330 00	.0268

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TIME	TC	O	FRQ	DEC		MA	
220301	10	0	.0	.33441962 03 .330 00	.0060	.29508183 03 .330 00	.0251
220321	10	0	.0	.33443217 03 .330 00	.0114	.29509005 03 .330 00	.0269
220521	10	0	.0	.33450685 03 .330 00	.0107	.29515057 03 .330 00	.0283
220541	10	0	.0	.33451919 03 .330 00	.0123	.29516247 03 .330 00	.0304
220641	10	0	.0	.33455601 03 .330 00	.0115	.29520116 03 .330 00	.0257
220701	10	0	.0	.33456821 03 .330 00	.0173	.29521503 03 .330 00	.0278
220721	10	0	.0	.33458038 03 .330 00	.0171	.29522939 03 .330 00	.0315
220741	10	0	.0	.33459253 03 .330 00	.0170	.29524422 03 .330 00	.0266
220801	10	0	.0	.33460464 03 .330 00	.0148	.29525951 03 .330 00	.0313
220821	10	0	.0	.33461672 03 .330 00	.0147	.29527527 03 .330 00	.0295
220841	10	0	.0	.33462876 03 .330 00	.0067	.29529148 03 .330 00	.0273
220901	10	0	.0	.33464077 03 .330 00	.0127	.29530815 03 .330 00	.0246
220921	10	0	.0	.33465275 03 .330 00	.0127	.29532527 03 .330 00	.0315
220941	10	0	.0	.33466470 03 .330 00	.0167	.29534283 03 .330 00	.0299
221001	10	0	.0	.33467662 03 .330 00	.0128	.29536083 03 .330 00	.0299
221021	10	0	.0	.33468850 03 .330 00	.0109	.29537926 03 .330 00	.0255
221041	10	0	.0	.33470035 03 .330 00	.0090	.29539812 03 .330 00	.0266
221101	10	0	.0	.33471217 03 .330 00	.0152	.29541740 03 .330 00	.0293
221121	10	0	.0	.33472396 03 .330 00	.0114	.29543710 03 .330 00	.0295
221141	10	0	.0	.33473571 03 .330 00	.0116	.29545723 03 .330 00	.0354
221201	10	0	.0	.33474743 03 .330 00	.0119	.29547775 03 .330 00	.0289
221221	10	0	.0	.33475912 03 .330 00	.0142	.29549868 03 .330 00	.0239
221241	10	0	.0	.33477078 03 .330 00	.0105	.29552002 03 .330 00	.0306
221301	10	0	.0	.33478241 03 .330 00	.0129	.29554175 03 .330 00	.0289
221321	10	0	.0	.33479400 03 .330 00	.0133	.29556388 03 .330 00	.0267
221341	10	0	.0	.33480556 03 .330 00	.0177	.29558639 03 .330 00	.0262
221401	10	0	.0	.33481709 03 .330 00	.0121	.29560929 03 .330 00	.0372
221441	10	0	.0	.33484006 03 .330 00	.0092	.29565623 03 .330 00	.0303
221501	10	0	.0	.33485149 03 .330 00	.0117	.29568026 03 .330 00	.0283
221521	10	0	.0	.33486290 03 .330 00	.0163	.29570466 03 .330 00	.0298
221541	10	0	.0	.33487426 03 .330 00	.0109	.29572943 03 .330 00	.0270
221601	10	0	.0	.33488560 03 .330 00	.0176	.29575456 03 .330 00	.0319
221621	10	0	.0	.33489691 03 .330 00	.0082	.29578005 03 .330 00	.0244
221641	10	0	.0	.33490819 03 .330 00	.0189	.29580589 03 .330 00	.0265
221701	10	0	.0	.33491943 03 .330 00	.0157	.29583209 03 .330 00	.0283
221721	10	0	.0	.33493064 03 .330 00	.0225	.29585863 03 .330 00	.0278
221741	10	0	.0	.33494183 03 .330 00	.0192	.29588551 03 .330 00	.0328
221801	10	0	.0	.33495298 03 .330 00	.0121	.29591275 03 .330 00	.0296
221821	10	0	.0	.33496410 03 .330 00	.0010	.29594031 03 .330 00	.0260
221841	10	0	.0	.33497519 03 .330 00	.0178	.29596820 03 .330 00	.0301
221901	10	0	.0	.33498624 03 .330 00	.0088	.29599644 03 .330 00	.0298
221921	10	0	.0	.33499727 03 .330 00	.0197	.29602500 03 .330 00	.0313
221941	10	0	.0	.33500827 03 .330 00	.0207	.29605388 03 .330 00	.0323
222001	10	0	.0	.33501923 03 .330 00	.0097	.29608308 03 .330 00	.0272
222021	10	0	.0	.33503017 03 .330 00	-.0012	.29611261 03 .330 00	.0296
222041	10	0	.0	.33504108 03 .330 00	.0378	.29614245 03 .330 00	.0277
222101	10	0	.0	.33505195 03 .330 00	.0270	.29617260 03 .330 00	.0295
222121	10	0	.0	.33506279 03 .330 00	.0161	.29620306 03 .330 00	.0271
222141	10	0	.0	.33507361 03 .330 00	.0053	.29623343 03 .330 00	.0263
222201	10	0	.0	.33508439 03 .330 00	.0165	.29626489 03 .330 00	.0272
222221	10	0	.0	.33509514 03 .330 00	.0057	.29629627 03 .330 00	.0278
222241	10	0	.0	.33510587 03 .330 00	.0190	.29632794 03 .330 00	.0281
222301	10	0	.0	.33511656 03 .330 00	.0082	.29635991 03 .330 00	.0281
222321	10	0	.0	.33512723 03 .330 00	.0215	.29639217 03 .330 00	.0259
222341	10	0	.0	.33513786 03 .330 00	.0109	.29642472 03 .330 00	.0273
222401	10	0	.0	.33514846 03 .330 00	.0163	.29645755 03 .330 00	.0245
222421	10	0	.0	.33515904 03 .330 00	.0137	.29649067 03 .330 00	.0253
222441	10	0	.0	.33516959 03 .330 00	.0031	.29652408 03 .330 00	.0279
222501	10	0	.0	.33518011 03 .330 00	.0266	.29655776 03 .330 00	.0242
222521	10	0	.0	.33519059 03 .330 00	.0261	.29659172 03 .330 00	.0282
222541	10	0	.0	.33520105 03 .330 00	.0156	.29662595 03 .330 00	.0259
222601	10	0	.0	.33521149 03 .330 00	.0052	.29666046 03 .330 00	.0214
222621	10	0	.0	.33522189 03 .330 00	-.0053	.29669524 03 .330 00	.0246
222641	10	0	.0	.33523226 03 .330 00	.0023	.29673028 03 .330 00	.0256
222701	10	0	.0	.33524261 03 .330 00	.0439	.29676559 03 .330 00	.0262
222721	10	0	.0	.33525291 03 .330 00	.0197	.29680117 03 .330 00	.0266
222741	10	0	.0	.33526321 03 .330 00	.0033	.29683700 03 .330 00	.0228
222801	10	0	.0	.33527346 03 .330 00	.0070	.29687310 03 .330 00	.0226
222821	10	0	.0	.33528369 03 .330 00	.0148	.29690944 03 .330 00	.0263
222841	10	0	.0	.33529390 03 .330 00	.0066	.29694603 03 .330 00	.0257
222901	10	0	.0	.33530407 03 .330 00	.0184	.29698289 03 .330 00	.0248
222921	10	0	.0	.33531422 03 .330 00	.0082	.29702000 03 .330 00	.0256
222941	10	0	.0	.33532434 03 .330 00	.0001	.29705735 03 .330 00	.0263
223001	10	0	.0	.33533443 03 .330 00	-.0101	.29709493 03 .330 00	.0247
223021	10	0	.0	.33534450 03 .330 00	.0559	.29713277 03 .330 00	.0328
223041	10	0	.0	.33535453 03 .330 00	.0458	.29717085 03 .330 00	.0287
223101	10	0	.0	.33536454 03 .330 00	-.0002	.29720917 03 .330 00	.0264
223121	10	0	.0	.33537453 03 .330 00	.0138	.29724772 03 .330 00	.0258
223141	10	0	.0	.33538448 03 .330 00	.0158	.29728651 03 .330 00	.0290
223201	10	0	.0	.33539441 03 .330 00	.0058	.29732554 03 .330 00	.0259
223221	10	0	.0	.33540431 03 .330 00	-.0041	.29736479 03 .330 00	.0247
223241	10	0	.0	.33541418 03 .330 00	.0400	.29740427 03 .330 00	.0292
223301	10	0	.0	.33542403 03 .330 00	.0302	.29744398 03 .330 00	.0274
223321	10	0	.0	.33543386 03 .330 00	.0203	.29748392 03 .330 00	.0255
223341	10	0	.0	.33544365 03 .330 00	.0105	.29752408 03 .330 00	.0233
223401	10	0	.0	.33545342 03 .330 00	.0007	.29756446 03 .330 00	.0249
223421	10	0	.0	.33546316 03 .330 00	.0109	.29760507 03 .330 00	.0242
223441	10	0	.0	.33547287 03 .330 00	.0072	.29764588 03 .330 00	.0194
223501	10	0	.0	.33548256 03 .330 00	-.0025	.29768692 03 .330 00	.0223
223521	10	0	.0	.33549223 03 .330 00	-.0042	.29772817 03 .330 00	.0271
223541	10	0	.0	.33550187 03 .330 00	.0421	.29776964 03 .330 00	.0236
223601	10	0	.0	.33551148 03 .330 00	.0325	.29781131 03 .330 00	.0259
223621	10	0	.0	.33552107 03 .330 00	.0049	.29785319 03 .330 00	.0240
223641	10	0	.0	.33553063 03 .330 00	-.0047	.29789529 03 .330 00	.0239
223701	10	0	.0	.33554016 03 .330 00	.0177	.29793759 03 .330 00	.0215
223721	10	0	.0	.33554967 03 .330 00	.0222	.29798009 03 .330 00	.0190
223741	10	0	.0	.33555916 03 .330 00	.0127	.29802280 03 .330 00	.0223
223821	10	0	.0	.33557805 03 .330 00	.0157	.29810882 03 .330 00	.0202
223841	10	0	.0	.33558746 03 .330 00	.0063	.29815213 03 .330 00	.0209
223901	10	0	.0	.33559685 03 .330 00	-.0031	.29819563 03 .330 00	.0193
223921	10	0	.0	.33560621 03 .330 00	.0435	.29823933 03 .330 00	.0197
224001	10	0	.0	.33562487 03 .330 00	.0088	.29832732 03 .330 00	.0216
224021	10	0	.0	.33563415 03 .330 00	-.0005	.29837159 03 .330 00	.0193
224041	10	0	.0	.33564341 03 .330 00	.0002	.29841606 03 .330 00	.0248
224101	10	0	.0	.33565266 03 .330 00	.0349	.29846071 03 .330 00	.0261
224121	10	0	.0	.33566187 03 .330 00	.0217	.29850556 03 .330 00	.0253
224141	10	0	.0	.33567106 03 .330 00	.0105	.29855058 03 .330 00	.0242
224201	10	0	.0	.33568024 03 .330 00	.0013	.29859579 03 .330 00	.0210

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TIME	TC	Q	FRQ	DEC		HA	
224221	10	0	.0	.33568937 03 .330 00	-.0079	.29864119 03 .330 00	.0215
224241	10	0	.0	.33569850 03 .330 00	-.0131	.29868676 03 .330 00	.0220
224301	10	0	.0	.33570759 03 .330 00	.0558	.29873252 03 .330 00	.0262
224321	10	0	.0	.33571667 03 .330 00	.0147	.29877845 03 .330 00	.0242
224341	10	0	.0	.33572572 03 .330 00	.0056	.29882456 03 .330 00	.0201
224401	10	0	.0	.33573475 03 .330 00	.0166	.29887085 03 .330 00	.0278
224421	10	0	.0	.33574375 03 .330 00	.0096	.29891731 03 .330 00	.0233
224441	10	0	.0	.33575273 03 .330 00	.0006	.29896394 03 .330 00	.0206
224501	10	0	.0	.33576169 03 .330 00	.0236	.29901075 03 .330 00	.0198
224521	10	0	.0	.33577063 03 .330 00	.0146	.29905772 03 .330 00	.0208
224541	10	0	.0	.33577954 03 .330 00	.0057	.29910487 03 .330 00	.0197
224601	10	0	.0	.33578843 03 .330 00	-.0033	.29915218 03 .330 00	.0203
224621	10	0	.0	.33579729 03 .330 00	-.0001	.29919967 03 .330 00	.0168
224641	10	0	.0	.33580614 03 .330 00	.0410	.29924732 03 .330 00	.0211
224701	10	0	.0	.33581496 03 .330 00	.0121	.29929513 03 .330 00	.0193
224721	10	0	.0	.33582377 03 .330 00	.0033	.29934310 03 .330 00	.0193
224741	10	0	.0	.33583254 03 .330 00	.0145	.29939124 03 .330 00	.0191
224801	10	0	.0	.33584130 03 .330 00	.0217	.29943954 03 .330 00	.0188
224821	10	0	.0	.33585003 03 .330 00	.0129	.29948800 03 .330 00	.0183
224841	10	0	.0	.33585875 03 .330 00	.0042	.29953662 03 .330 00	.0197
224901	10	0	.0	.33586744 03 .330 00	-.0045	.29958540 03 .330 00	.0189
224914	10	0	.0	.33587308 03 .330 00	.0298	.29961719 03 .330 00	.0190
225011	10	0	.0	.33589769 03 .180 00	.0051	.29975735 03 .180 00	.0168
225111	10	0	.0	.33592341 03 .180 00	.0073	.29990622 03 .180 00	.0219
225211	10	0	.0	.33594894 03 .180 00	.0097	.30005645 03 .180 00	.0176
225311	10	0	.0	.33597428 03 .180 00	.0443	.30020800 03 .180 00	.0239
225411	10	0	.0	.33599944 03 .180 00	.0030	.30036083 03 .180 00	.0231
225511	10	0	.0	.33602442 03 .180 00	.0100	.30051495 03 .180 00	.0228
225611	10	0	.0	.33604921 03 .180 00	.0171	.30067031 03 .180 00	.0194
225711	10	0	.0	.33607384 03 .180 00	.0344	.30082688 03 .180 00	.0208
225811	10	0	.0	.33609828 03 .180 00	.0138	.30098465 03 .180 00	.0229
225911	10	0	.0	.33612256 03 .180 00	.0275	.30114360 03 .180 00	.0239
230111	10	0	.0	.33617059 03 .180 00	-.0047	.30146493 03 .180 00	.0184
230211	10	0	.0	.33619437 03 .180 00	.0294	.30162726 03 .180 00	.0220
230311	10	0	.0	.33621797 03 .180 00	.0057	.30179068 03 .180 00	.0165
230411	10	0	.0	.33624141 03 .180 00	.0242	.30195517 03 .180 00	.0179
230511	10	0	.0	.33626469 03 .180 00	.0038	.30212071 03 .180 00	.0143
230611	10	0	.0	.33628782 03 .180 00	.0615	.30228728 03 .180 00	.0237
230711	10	0	.0	.33631079 03 .180 00	.0145	.30245485 03 .180 00	.0161
230811	10	0	.0	.33633361 03 .180 00	-.0084	.30262342 03 .180 00	.0194
230911	10	0	.0	.33635627 03 .180 00	.0168	.30279296 03 .180 00	.0238
231011	10	0	.0	.33637879 03 .180 00	.0022	.30296346 03 .180 00	0212
231111	10	0	.0	.33640116 03 .180 00	.0037	.30313490 03 .180 00	.0217
231211	10	0	.0	.33642338 03 .180 00	.0034	.30330726 03 .180 00	.0212
231311	10	0	.0	.33644546 03 .180 00	.0413	.30348053 03 .180 00	.0219
231511	10	0	.0	.33648919 03 .180 00	-.0027	.30382974 03 .180 00	.0226
231611	10	0	.0	.33651086 03 .180 00	.0256	.30400564 03 .180 00	.0226
231711	10	0	.0	.33653237 03 .180 00	.0040	.30418240 03 .180 00	.0217
231811	10	0	.0	.33655376 03 .180 00	-.0175	.30435998 03 .180 00	.0201
231911	10	0	.0	.33657501 03 .180 00	.0011	.30453838 03 .180 00	.0236
232011	10	0	.0	.33659614 03 .180 00	.0119	.30471760 03 .180 00	.0203
232111	10	0	.0	.33661713 03 .180 00	-.0072	.30489760 03 .180 00	.0222
232211	10	0	.0	.33663800 03 .180 00	.0338	.30507839 03 .180 00	.0214
232311	10	0	.0	.33665873 03 .180 00	.0130	.30525995 03 .180 00	.0217
232411	10	0	.0	.33667935 03 .180 00	-.0077	.30544226 03 .180 00	.0193
234311	10	0	.0	.33704918 03 .180 00	.0106	.30903536 03 .180 00	.0249
234411	10	0	.0	.33706759 03 .180 00	.0000	.30923058 03 .180 00	.0256
234511	10	0	.0	.33708591 03 .180 00	.0096	.30942637 03 .180 00	.0258
234611	10	0	.0	.33710412 03 .180 00	-.0087	.30962269 03 .180 00	.0214
234711	10	0	.0	.33712225 03 .180 00	.0191	.30981955 03 .180 00	.0225
234811	10	0	.0	.33714028 03 .180 00	.0069	.31001694 03 .180 00	.0250
234911	10	0	.0	.33715822 03 .180 00	.0129	.31021485 03 .180 00	.0250
235011	10	0	.0	.33717607 03 .180 00	-.0051	.31041328 03 .180 00	.0265
235111	10	0	.0	.33719383 03 .180 00	-.0009	.31061222 03 .180 00	.0275
235211	10	0	.0	.33721150 03 .180 00	.0073	.31081165 03 .180 00	.0220
235311	10	0	.0	.33722908 03 .180 00	.0476	.31101158 03 .180 00	.0200
235411	10	0	.0	.33724658 03 .180 00	.0161	.31121199 03 .180 00	.0236
235511	10	0	.0	.33726399 03 .180 00	.0266	.31141289 03 .180 00	.0206
235711	10	0	.0	.33729855 03 .180 00	.0477	.31181609 03 .180 00	.0253

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000011	10	0	.0	.33734978 03 .180 00	.0203	.31242440 03 .180 00	.0208
000111	10	0	.0	.33736669 03 .180 00	.0092	.31262804 03 .180 00	.0211
000211	10	0	.0	.33738352 03 .180 00	.0103	.31283213 03 .180 00	.0229
000311	10	0	.0	.33740028 03 .180 00	.0175	.31303665 03 .180 00	.0183
000411	10	0	.0	.33741696 03 .180 00	.0087	.31324160 03 .180 00	.0213
000511	10	0	.0	.33743356 03 .180 00	.0520	.31344697 03 .180 00	.0259
000611	10	0	.0	.33745009 03 .180 00	.0393	.31365275 03 .180 00	.0260
000711	10	0	.0	.33746654 03 .180 00	.0228	.31385895 03 .180 00	.0157
000811	10	0	.0	.33748291 03 .180 00	.0063	.31406556 03 .180 00	.0231
000911	10	0	.0	.33749922 03 .180 00	-.0101	.31427256 03 .180 00	.0200
001011	10	0	.0	.33751545 03 .180 00	.0296	.31447996 03 .180 00	.0226
001111	10	0	.0	.33753162 03 .180 00	.0133	.31468775 03 .180 00	.0187
001211	10	0	.0	.33754771 03 .180 00	-.0028	.31489593 03 .180 00	.0184
001311	10	0	.0	.33756373 03 .180 00	.0110	.31510449 03 .180 00	.0139
001411	10	0	.0	.33757968 03 .180 00	.0190	.31531342 03 .180 00	.0168
002511	10	0	.0	.33775079 03 .180 00	.0009	.31763532 03 .180 00	.0163
002611	10	0	.0	.33776597 03 .180 00	-.0144	.31784845 03 .180 00	.0172
002711	10	0	.0	.33778108 03 .180 00	.0224	.31806189 03 .180 00	.0176
002811	10	0	.0	.33779614 03 .180 00	.0072	.31827565 03 .180 00	.0198
002911	10	0	.0	.33781114 03 .180 00	.0521	.31848973 03 .180 00	.0197
003011	10	0	.0	.33782608 03 .180 00	.0371	.31870411 03 .180 00	.0172
003111	10	0	.0	.33784097 03 .180 00	.0221	.31891881 03 .180 00	.0185
003211	10	0	.0	.33785579 03 .180 00	.0092	.31913381 03 .180 00	.0194
003311	10	0	.0	.33787057 03 .180 00	-.0057	.31934911 03 .180 00	.0141
003411	10	0	.0	.33788528 03 .180 00	.0316	.31956471 03 .180 00	.0184
003511	10	0	.0	.33789994 03 .180 00	.0228	.31978066 03 .180 00	.0105
003611	10	0	.0	.33791455 03 .180 00	.0041	.31999678 03 .180 00	.0202
003711	10	0	.0	.33792910 03 .180 00	-.0065	.32021325 03 .180 00	.0217
003811	10	0	.0	.33794360 03 .180 00	.0189	.32043001 03 .180 00	.0229
004011	10	0	.0	.33797244 03 .180 00	.0198	.32086435 03 .180 00	.0165
004111	10	0	.0	.33798678 03 .180 00	.0054	.32108195 03 .180 00	.0208
004211	10	0	.0	.33800107 03 .180 00	.0350	.32129981 03 .180 00	.0269
004311	10	0	.0	.33801531 03 .180 00	.0047	.32151793 03 .180 00	.0247
004411	10	0	.0	.33802950 03 .180 00	-.0016	.32173633 03 .180 00	.0243
004511	10	0	.0	.33804364 03 .180 00	-.0158	.32195499 03 .180 00	.0256
004611	10	0	.0	.33805773 03 .180 00	-.0300	.32217390 03 .180 00	.0186

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TIME	TC	Q	FRQ	DEC					HA				
004711	10	0	.0	.33807177	03	.180	00	-.0441	.32239308	03	.180	00	.0154
004811	10	0	.0	.33808577	03	.180	00	-.0581	.32261251	03	.180	00	.0139
004911	10	0	.0	.33809971	03	.180	00	-.0723	.32283219	03	.180	00	.0201
005011	10	0	.0	.33811362	03	.180	00	-.0862	.32305212	03	.180	00	.0122
005111	10	0	.0	.33812747	03	.180	00	-.1001	.32327230	03	.180	00	.0159
005211	10	0	.0	.33814128	03	.180	00	-.1140	.32349271	03	.180	00	.0175
005311	10	0	.0	.33815504	03	.180	00	-.1279	.32371337	03	.180	00	.0187
005911	10	0	.0	.33823667	03	.180	00	.0120	.32504226	03	.180	00	.0236
010011	10	0	.0	.33825012	03	.180	00	-.0015	.32526452	03	.180	00	.0173
010111	10	0	.0	.33826353	03	.180	00	.0370	.32548703	03	.180	00	.0147
010311	10	0	.0	.33829024	03	.180	00	.0122	.32593267	03	.180	00	.0130
010411	10	0	.0	.33830352	03	.180	00	-.0012	.32615582	03	.180	00	.0158
010511	10	0	.0	.33831677	03	.180	00	.0195	.32637918	03	.180	00	.0164
010611	10	0	.0	.33832998	03	.180	00	.0082	.32660274	03	.180	00	.0168
010711	10	0	.0	.33834315	03	.180	00	.0330	.32682652	03	.180	00	.0190
010811	10	0	.0	.33835627	03	.180	00	-.0103	.32705050	03	.180	00	.0169
010911	10	0	.0	.33836936	03	.180	00	.0246	.32727468	03	.180	00	.0147
011011	10	0	.0	.33838241	03	.180	00	.0135	.32749907	03	.180	00	.0123
011111	10	0	.0	.33839542	03	.180	00	.0004	.32772365	03	.180	00	.0176
011211	10	0	.0	.33840840	03	.180	00	.0314	.32794843	03	.180	00	.0228
011311	10	0	.0	.33842133	03	.180	00	.0183	.32817340	03	.180	00	.0198
011411	10	0	.0	.33843424	03	.180	00	.0054	.32839857	03	.180	00	.0146
011511	10	0	.0	.33844710	03	.180	00	-.0076	.32862393	03	.180	00	.0192
011711	10	0	.0	.33847271	03	.180	00	.0067	.32907522	03	.180	00	.0138
011811	10	0	.0	.33848547	03	.180	00	.0198	.32930113	03	.180	00	.0198
012011	10	0	.0	.33851087	03	.180	00	.0283	.32975352	03	.180	00	.0194
012211	10	0	.0	.33853614	03	.180	00	.0029	.33020663	03	.180	00	.0142
012511	10	0	.0	.33857378	03	.180	00	.0031	.33088759	03	.180	00	.0171
012711	10	0	.0	.33859871	03	.180	00	.0100	.33134743	03	.180	00	.0162
012811	10	0	.0	.33861113	03	.180	00	.0175	.33157010	03	.180	00	.0245
012911	10	0	.0	.33862351	03	.180	00	.0051	.33179794	03	.180	00	.0206
013011	10	0	.0	.33863586	03	.180	00	-.0073	.33202593	03	.180	00	.0146
013111	10	0	.0	.33864818	03	.180	00	.0303	.33225409	03	.180	00	.0164
013211	10	0	.0	.33866047	03	.180	00	.0179	.33248241	03	.180	00	.0180
013411	10	0	.0	.33868495	03	.180	00	-.0067	.33293952	03	.180	00	.0148
013511	10	0	.0	.33869715	03	.180	00	.0750	.33316832	03	.180	00	.0220
013611	10	0	.0	.33870932	03	.180	00	.0128	.33339726	03	.180	00	.0170
013811	10	0	.0	.33873356	03	.180	00	-.0115	.33385561	03	.180	00	.0125
013911	10	0	.0	.33874564	03	.180	00	.0884	.33408500	03	.180	00	.0231
014011	10	0	.0	.33875769	03	.180	00	.0202	.33431455	03	.180	00	.0175
014211	10	0	.0	.33878170	03	.180	00	.0381	.33477408	03	.180	00	.0199
014311	10	0	.0	.33879365	03	.180	00	-.0019	.33500406	03	.180	00	.0179
014411	10	0	.0	.33880559	03	.180	00	.0001	.33523418	03	.180	00	.0078
014511	10	0	.0	.33881750	03	.180	00	.0261	.33546444	03	.180	00	.0175
014711	10	0	.0	.33884123	03	.180	00	.0043	.33592539	03	.180	00	.0164
014811	10	0	.0	.33885305	03	.180	00	.0444	.33615607	03	.180	00	.0197
014911	10	0	.0	.33886485	03	.180	00	.0126	.33638687	03	.180	00	.0128
015111	10	0	.0	.33888837	03	.180	00	.0270	.33684890	03	.180	00	.0148
015211	10	0	.0	.33890008	03	.180	00	.0152	.33708010	03	.180	00	.0155
015411	10	0	.0	.33892344	03	.180	00	.0377	.33754291	03	.180	00	.0167
015511	10	0	.0	.33893509	03	.180	00	.0261	.33777450	03	.180	00	.0190
015611	10	0	.0	.33894670	03	.180	00	.0144	.33800622	03	.180	00	.0132
015711	10	0	.0	.33895829	03	.180	00	.0028	.33823806	03	.180	00	.0154
015811	10	0	.0	.33896986	03	.180	00	-.0089	.33847003	03	.180	00	.0174
015911	10	0	.0	.33898140	03	.180	00	.0475	.33870211	03	.180	00	.0153
020011	10	0	.0	.33899292	03	.180	00	.0180	.33893432	03	.180	00	.0130
020111	10	0	.0	.33900441	03	.180	00	.0065	.33916665	03	.180	00	.0107
020211	10	0	.0	.33901588	03	.180	00	.0269	.33939910	03	.180	00	.0102
020311	10	0	.0	.33902733	03	.180	00	.0175	.33963167	03	.180	00	.0195
020411	10	0	.0	.33903874	03	.180	00	.0060	.33986434	03	.180	00	.0148
020511	10	0	.0	.33905014	03	.180	00	.0165	.34009714	03	.180	00	.0180
020611	10	0	.0	.33906152	03	.180	00	.0051	.34033005	03	.180	00	.0171
020711	10	0	.0	.33907287	03	.180	00	.0237	.34056307	03	.180	00	.0100
020911	10	0	.0	.33909551	03	.180	00	.0170	.34102945	03	.180	00	.0135
021011	10	0	.0	.33910679	03	.180	00	.0077	.34126280	03	.180	00	.0222
021111	10	0	.0	.33911805	03	.180	00	-.0036	.34149626	03	.180	00	.0187
021311	10	0	.0	.33914050	03	.180	00	.0039	.34196350	03	.180	00	.0174
021411	10	0	.0	.33915170	03	.180	00	.0206	.34219728	03	.180	00	.0176
021711	10	0	.0	.33918516	03	.180	00	.0350	.34289923	03	.180	00	.0155
021811	10	0	.0	.33919627	03	.180	00	.0099	.34313341	03	.180	00	.0153
021911	10	0	.0	.33920736	03	.180	00	.0089	.34336770	03	.180	00	.0130
022011	10	0	.0	.33921843	03	.180	00	-.0023	.34360209	03	.180	00	.0145
022111	10	0	.0	.33922948	03	.180	00	.0366	.34383657	03	.180	00	.0161
022211	10	0	.0	.33924051	03	.180	00	.0256	.34407115	03	.180	00	.0174
022311	10	0	.0	.33925152	03	.180	00	.0146	.34430582	03	.180	00	.0167
022411	10	0	.0	.33926251	03	.180	00	.0236	.34454060	03	.180	00	.0139
022511	10	0	.0	.33927347	03	.180	00	.0125	.34477546	03	.180	00	.0130
022711	10	0	.0	.33929534	03	.180	00	.0146	.34524546	03	.180	00	.0229
022911	10	0	.0	.33931714	03	.180	00	.0108	.34571583	03	.180	00	.0185
023011	10	0	.0	.33932801	03	.180	00	.0419	.34595115	03	.180	00	.0151
023111	10	0	.0	.33933887	03	.180	00	-.0130	.34618655	03	.180	00	.0157
023211	10	0	.0	.33934969	03	.180	00	.0521	.34642205	03	.180	00	.0182
023711	10	0	.0	.33940358	03	.180	00	.0102	.34760079	03	.180	00	.0173
023911	10	0	.0	.33942501	03	.180	00	.0107	.34807286	03	.180	00	.0151
024111	10	0	.0	.33944635	03	.180	00	.0253	.34854525	03	.180	00	.0127
024211	10	0	.0	.33945701	03	.180	00	.0187	.34878157	03	.180	00	.0183
024311	10	0	.0	.33946764	03	.180	00	.0080	.34901796	03	.180	00	.0119
024511	10	0	.0	.33948886	03	.180	00	.0308	.34949098	03	.180	00	.0208
024611	10	0	.0	.33949944	03	.180	00	.0222	.34972759	03	.180	00	.0202
024711	10	0	.0	.33951000	03	.180	00	.0116	.34996429	03	.180	00	.0135
024811	10	0	.0	.33952055	03	.180	00	.0551	.35020106	03	.180	00	.0146
024911	10	0	.0	.33953108	03	.180	00	.0105	.35043790	03	.180	00	.0118
025011	10	0	.0	.33954160	03	.180	00	.0380	.35067482	03	.180	00	.0208
025111	10	0	.0	.33955209	03	.180	00	.0155	.35091180	03	.180	00	.0178
025211	10	0	.0	.33956257	03	.180	00	.0350	.35114885	03	.180	00	.0127
025311	10	0	.0	.33957303	03	.180	00	.0245	.35138598	03	.180	00	.0116
025411	10	0	.0	.33958348	03	.180	00	.0141	.35162317	03	.180	00	.0164
025611	10	0	.0	.33960433	03	.180	00	.0233	.35209776	03	.180	00	.0157
025711	10	0	.0	.33961473	03	.180	00	.0068	.35233516	03	.180	00	.0123
025811	10	0	.0	.33962512	03	.180	00	.0264	.35257262	03	.180	00	.0168
025911	10	0	.0	.33963549	03	.180	00	.0141	.35281015	03	.180	00	.0112
030011	10	0	.0	.33964584	03	.180	00	.0057	.35304774	03	.180	00	.0136
030111	10	0	.0	.33965618	03	.180	00	.0414	.35328540	03	.180	00	.0159
030311	10	0	.0	.33967681	03	.180	00	.0267	.35376090	03	.180	00	.0143
030411	10	0	.0	.33968711	03	.180	00	.0065	.35399874	03	.180	00	.0125
030511	10	0	.0	.33969738	03	.180	00	.0962	.35423665	03	.180	00	.0165
030611	10	0	.0	.33970764	03	.180	00	.0239	.35447461	03	.180	00	.0205
030711	10	0	.0	.33971789	03	.180	00	.0137	.35471263	03	.180	00	.0185

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TIME	TC	C	FRQ	DEC				HA			
030811	10	0	.0	.33972812	03	.180	00	.0275	.35495072	03	.180 00	.0164
030911	10	0	.0	.33973834	03	.180	00	.0173	.35518886	03	.180 00	.0162
031011	10	0	.0	.33974855	03	.180	00	.0071	.35542706	03	.180 00	.0100
031111	10	0	.0	.33975873	03	.180	00	.0588	.35566531	03	.180 00	.0117
031311	10	0	.0	.33977907	03	.180	00	.0046	.35614200	03	.180 00	.0189
031411	10	0	.0	.33978921	03	.180	00	.0264	.35638041	03	.180 00	.0165
031511	10	0	.0	.33979934	03	.180	00	.0163	.35661889	03	.180 00	.0140
031611	10	0	.0	.33980946	03	.180	00	.0382	.35685742	03	.180 00	.0114
031811	10	0	.0	.33982966	03	.180	00	.0181	.35733465	03	.180 00	.0201
034911	10	0	.0	.34013566	03	.180	00	.0087	.47552606	01	.180 00	.0105
035011	10	0	.0	.34014554	03	.180	00	-.0049	.49952768	01	.180 00	.0145
040211	10	0	.0	.34026076	03	.180	00	.0225	.78780202	01	.180 00	.0213
040411	10	0	.0	.34027980	03	.180	00	.0035	.83589034	01	.180 00	.0124
040511	10	0	.0	.34028930	03	.180	00	.0201	.85993896	01	.180 00	.0198
040611	10	0	.0	.34029879	03	.180	00	.0066	.88399007	01	.180 00	.0233
040711	10	0	.0	.34030828	03	.180	00	.0713	.90804403	01	.180 00	.0147
040811	10	0	.0	.34031774	03	.180	00	.0058	.93210064	01	.180 00	.0201
040911	10	0	.0	.34032720	03	.180	00	.0084	.95615973	01	.180 00	.0175
041111	10	0	.0	.34034609	03	.180	00	.0156	.10042859	02	.180 00	.0122
041211	10	0	.0	.34035551	03	.180	00	.0063	.10283526	02	.180 00	.0115
041811	10	0	.0	.34041183	03	.180	00	.0203	.11728044	02	.180 00	.0147
041911	10	0	.0	.34042118	03	.180	00	.0110	.11968876	02	.180 00	.0139
043311	10	0	.0	.34055094	03	.180	00	.0084	.15342667	02	.180 00	.0116
043411	10	0	.0	.34056013	03	.180	00	.0452	.15583791	02	.180 00	.0104
043511	10	0	.0	.34056931	03	.180	00	.0101	.15824930	02	.180 00	.0092
043611	10	0	.0	.34057848	03	.180	00	.0011	.16066086	02	.180 00	.0121
043711	10	0	.0	.34058764	03	.180	00	.0399	.16307255	02	.180 00	.0108
043811	10	0	.0	.34059679	03	.180	00	.0129	.16548441	02	.180 00	.0096
043911	10	0	.0	.34060592	03	.180	00	.0298	.16789642	02	.180 00	.0104
044011	10	0	.0	.34061505	03	.180	00	.0208	.17030858	02	.180 00	.0051
044111	10	0	.0	.34062416	03	.180	00	.0118	.17272088	02	.180 00	.0078
044211	10	0	.0	.34063328	03	.180	00	.0028	.17513333	02	.180 00	.0106
044311	10	0	.0	.34064237	03	.180	00	.0338	.17754590	02	.180 00	.0093
044411	10	0	.0	.34065146	03	.180	00	.0028	.17995859	02	.180 00	.0080
044511	10	0	.0	.34066053	03	.180	00	.0058	.18237145	02	.180 00	.0067
044611	10	0	.0	.34066960	03	.180	00	.0469	.18478443	02	.180 00	.0113
044711	10	0	.0	.34067865	03	.180	00	.0199	.18719751	02	.180 00	.0080
044811	10	0	.0	.34068770	03	.180	00	.0189	.18961073	02	.180 00	.0066
044911	10	0	.0	.34069673	03	.180	00	.0100	.19202407	02	.180 00	.0092
045011	10	0	.0	.34070576	03	.180	00	.0011	.19443752	02	.180 00	.0038
045111	10	0	.0	.34071477	03	.180	00	.0820	.19685107	02	.180 00	.0124
045311	10	0	.0	.34073277	03	.180	00	.0184	.20167852	02	.180 00	.0136
045511	10	0	.0	.34075073	03	.180	00	.0226	.20650637	02	.180 00	.0128
045611	10	0	.0	.34075969	03	.180	00	.0137	.20892047	02	.180 00	.0113
045711	10	0	.0	.34076865	03	.180	00	.0049	.21133462	02	.180 00	.0139
045811	10	0	.0	.34077759	03	.180	00	.0420	.21374889	02	.180 00	.0124
045911	10	0	.0	.34078653	03	.180	00	.0112	.21616322	02	.180 00	.0109
050011	10	0	.0	.34079545	03	.180	00	.0024	.21857766	02	.180 00	.0094
050111	10	0	.0	.34080436	03	.180	00	.0296	.22099218	02	.180 00	.0119
050211	10	0	.0	.34081327	03	.180	00	.0206	.22340680	02	.180 00	.0084
050311	10	0	.0	.34082216	03	.180	00	.0360	.22582147	02	.180 00	.0089
050411	10	0	.0	.34083104	03	.180	00	.0132	.22823618	02	.180 00	.0054
050511	10	0	.0	.34083992	03	.180	00	.0325	.23065102	02	.180 00	.0119
050811	10	0	.0	.34086648	03	.180	00	.0063	.23789586	02	.180 00	.0033
050911	10	0	.0	.34087532	03	.180	00	.0696	.24031095	02	.180 00	.0057
051011	10	0	.0	.34088414	03	.180	00	.0228	.24272608	02	.180 00	.0102
051111	10	0	.0	.34089295	03	.180	00	.0142	.24514123	02	.180 00	.0006
051211	10	0	.0	.34090175	03	.180	00	.0315	.24755649	02	.180 00	.0050
051311	10	0	.0	.34091055	03	.180	00	.0228	.24997179	02	.180 00	.0074
051411	10	0	.0	.34091933	03	.180	00	.0141	.25238711	02	.180 00	.0139
051611	10	0	.0	.34093687	03	.180	00	.0568	.25721792	02	.180 00	.0147
051711	10	0	.0	.34094562	03	.180	00	.0262	.25963335	02	.180 00	.0151
051811	10	0	.0	.34095437	03	.180	00	.0176	.26204886	02	.180 00	.0155
051911	10	0	.0	.34096311	03	.180	00	.0090	.26446439	02	.180 00	.0159
052011	10	0	.0	.34097183	03	.180	00	.0024	.26687999	02	.180 00	.0123
052111	10	0	.0	.34098054	03	.180	00	-.0022	.26929558	02	.180 00	.0107
052211	10	0	.0	.34098925	03	.180	00	.0791	.27171119	02	.180 00	.0151
052311	10	0	.0	.34099794	03	.180	00	.0366	.27412684	02	.180 00	.0075
052411	10	0	.0	.34100663	03	.180	00	.0241	.27654250	02	.180 00	.0179
052511	10	0	.0	.34101530	03	.180	00	.0195	.27895818	02	.180 00	.0123
052611	10	0	.0	.34102397	03	.180	00	.0110	.28137389	02	.180 00	.0147
052711	10	0	.0	.34103262	03	.180	00	.0325	.28378960	02	.180 00	.0110
052811	10	0	.0	.34104127	03	.180	00	.0280	.28620534	02	.180 00	.0154
052911	10	0	.0	.34104991	03	.180	00	.0315	.28862110	02	.180 00	.0098
053011	10	0	.0	.34105853	03	.180	00	.0110	.29103684	02	.180 00	.0102
053111	10	0	.0	.34106714	03	.180	00	.0025	.29345259	02	.180 00	.0106
053211	10	0	.0	.34107575	03	.180	00	.0400	.29586838	02	.180 00	.0169
053311	10	0	.0	.34108435	03	.180	00	.0236	.29828412	02	.180 00	.0073
053411	10	0	.0	.34109293	03	.180	00	.0132	.30069988	02	.180 00	.0097
053511	10	0	.0	.34110151	03	.180	00	.0167	.30311566	02	.180 00	.0081
053711	10	0	.0	.34111863	03	.180	00	.0378	.30794716	02	.180 00	.0108
054411	10	0	.0	.34117824	03	.180	00	.0213	.32485702	02	.180 00	.0095
054511	10	0	.0	.34118672	03	.180	00	.0310	.32727266	02	.180 00	.0159
054611	10	0	.0	.34119519	03	.180	00	.0227	.32968824	02	.180 00	.0162
054711	10	0	.0	.34120364	03	.180	00	.0144	.33210382	02	.180 00	.0107
055411	10	0	.0	.34126257	03	.180	00	-.0074	.34901181	02	.180 00	.0095
055511	10	0	.0	.34127095	03	.180	00	.0303	.35142710	02	.180 00	.0159
055611	10	0	.0	.34127931	03	.180	00	.0222	.35384233	02	.180 00	.0143
055711	10	0	.0	.34128767	03	.180	00	.0140	.35625747	02	.180 00	.0088
055811	10	0	.0	.34129601	03	.180	00	.0238	.35867263	02	.180 00	.0112
055911	10	0	.0	.34130435	03	.180	00	.0216	.36108771	02	.180 00	.0136
060011	10	0	.0	.34131268	03	.180	00	.0135	.36350274	02	.180 00	.0181
060111	10	0	.0	.34132100	03	.180	00	.0313	.36591771	02	.180 00	.0065
060311	10	0	.0	.34133761	03	.180	00	.0110	.37074751	02	.180 00	.0095
060411	10	0	.0	.34134589	03	.180	00	.0249	.37316231	02	.180 00	.0079
060611	10	0	.0	.34136244	03	.180	00	.0087	.37799175	02	.180 00	.0069
060711	10	0	.0	.34137069	03	.180	00	.0107	.38040634	02	.180 00	.0074
060811	10	0	.0	.34137894	03	.180	00	.0026	.38282092	02	.180 00	.0119
061011	10	0	.0	.34139541	03	.180	00	.0305	.38764979	02	.180 00	.0108
061111	10	0	.0	.34140362	03	.180	00	.0224	.39006413	02	.180 00	.0054
061211	10	0	.0	.34141183	03	.180	00	.0304	.39247841	02	.180 00	.0019
061311	10	0	.0	.34142003	03	.180	00	.0244	.39489260	02	.180 00	.0044
061411	10	0	.0	.34142821	03	.180	00	.0164	.39730674	02	.180 00	.0069
061511	10	0	.0	.34143639	03	.180	00	.0084	.39972079	02	.180 00	.0055
061611	10	0	.0	.34144456	03	.180	00	.0444	.40213475	02	.180 00	.0100
061711	10	0	.0	.34145271	03	.180	00	.0244	.40454862	02	.180 00	.0106
061811	10	0	.0	.34146086	03	.180	00	.0165	.40696245	02	.180 00	.0071
061911	10	0	.0	.34146899	03	.180	00	.0085	.40937617	02	.180 00	.0097

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TIME	TC	Q	FRQ	DEC		HA	
062011	10	0	.0	.34147712 03 .180 00	.0505	.41178981 02 .180 00	.0143
062111	10	0	.0	.34148524 03 .180 00	.0187	.41420336 02 .180 00	.0109
062211	10	0	.0	.34149334 03 .180 00	.0228	.41661682 02 .180 00	.0055
062311	10	0	.0	.34150144 03 .180 00	.0149	.41903020 02 .180 00	.0061
062411	10	0	.0	.34150952 03 .180 00	.0070	.42144345 02 .180 00	.0087
062611	10	0	.0	.34152566 03 .180 00	.0292	.42626974 02 .180 00	.0079
062711	10	0	.0	.34153372 03 .180 00	.0214	.42868273 02 .180 00	.0086
062811	10	0	.0	.34154176 03 .180 00	.0255	.43109566 02 .180 00	.0032
062911	10	0	.0	.34154979 03 .180 00	.0176	.43350847 02 .180 00	.0039
063011	10	0	.0	.34155782 03 .180 00	.0099	.43592115 02 .180 00	.0086
063111	10	0	.0	.34156583 03 .180 00	.0020	.43833375 02 .180 00	.0093
063211	10	0	.0	.34157383 03 .180 00	-.0038	.44074626 02 .180 00	.0100
063411	10	0	.0	.34158980 03 .180 00	.0287	.44557096 02 .180 00	.0173
063511	10	0	.0	.34159778 03 .180 00	.0209	.44798319 02 .180 00	.0081
063611	10	0	.0	.34160574 03 .180 00	.0192	.45039527 02 .180 00	.0128
063711	10	0	.0	.34161369 03 .180 00	.0114	.45280723 02 .180 00	.0096
063811	10	0	.0	.34162163 03 .180 00	.0397	.45521909 02 .180 00	.0163
063911	10	0	.0	.34162956 03 .180 00	.0139	.45763084 02 .180 00	.0091
064011	10	0	.0	.34163748 03 .180 00	.0063	.46004249 02 .180 00	.0099
064111	10	0	.0	.34164539 03 .180 00	.0225	.46245402 02 .180 00	.0106
064211	10	0	.0	.34165328 03 .180 00	.0149	.46486542 02 .180 00	.0114
064511	10	0	.0	.34167692 03 .180 00	.0179	.47209897 02 .180 00	.0079
064611	10	0	.0	.34168477 03 .180 00	.0103	.47450990 02 .180 00	.0187
064811	10	0	.0	.34170046 03 .180 00	-.0030	.47933144 02 .180 00	.0145
064911	10	0	.0	.34170828 03 .180 00	.0214	.48174198 02 .180 00	.0173
065011	10	0	.0	.34171610 03 .180 00	.0138	.48415241 02 .180 00	.0182
065111	10	0	.0	.34172390 03 .180 00	.0222	.48656275 02 .180 00	.0131
065211	10	0	.0	.34173168 03 .180 00	.0146	.48897294 02 .180 00	.0161
065311	10	0	.0	.34173948 03 .180 00	.0091	.49138303 02 .180 00	.0170
065411	10	0	.0	.34174725 03 .180 00	.0015	.49379294 02 .180 00	.0179
065511	10	0	.0	.34175501 03 .180 00	.0360	.49620279 02 .180 00	.0168
065611	10	0	.0	.34176276 03 .180 00	.0265	.49861244 02 .180 00	.0118
065711	10	0	.0	.34177050 03 .180 00	.0190	.50102196 02 .180 00	.0128
065911	10	0	.0	.34178594 03 .180 00	.0220	.50584066 02 .180 00	.0168
070011	10	0	.0	.34179365 03 .180 00	.0145	.50824982 02 .180 00	.0118
070211	10	0	.0	.34180903 03 .180 00	.0016	.51306769 02 .180 00	.0179
070311	10	0	.0	.34181670 03 .180 00	.0142	.51547640 02 .180 00	.0150
070411	10	0	.0	.34182438 03 .180 00	.0087	.51788495 02 .180 00	.0181
070511	10	0	.0	.34183203 03 .180 00	.0013	.52029346 02 .180 00	.0192
070611	10	0	.0	.34183967 03 .180 00	.0399	.52270172 02 .180 00	.0202
070711	10	0	.0	.34184730 03 .180 00	.0105	.52510991 02 .180 00	.0193
070911	10	0	.0	.34186253 03 .180 00	-.0042	.52992579 02 .180 00	.0217
071011	10	0	.0	.34187013 03 .180 00	.0325	.53233349 02 .180 00	.0128
071111	10	0	.0	.34187771 03 .180 00	.0231	.53474105 02 .180 00	.0179
071311	10	0	.0	.34189285 03 .180 00	.0304	.53955577 02 .180 00	.0043
071411	10	0	.0	.34190041 03 .180 00	.0151	.54196288 02 .180 00	.0156
071611	10	0	.0	.34191548 03 .180 00	.0245	.54677667 02 .180 00	.0100
071711	10	0	.0	.34192300 03 .180 00	.0173	.54918335 02 .180 00	.0093
071811	10	0	.0	.34193051 03 .180 00	.0100	.55158988 02 .180 00	.0126
072011	10	0	.0	.34194550 03 .180 00	-.0045	.55640245 02 .180 00	.0052
072211	10	0	.0	.34196044 03 .180 00	.0091	.56121437 02 .180 00	.0059
072311	10	0	.0	.34196789 03 .180 00	.0640	.56362010 02 .180 00	.0112
072411	10	0	.0	.34197534 03 .180 00	.0107	.56602564 02 .180 00	.0026
072511	10	0	.0	.34198277 03 .180 00	.0076	.56843106 02 .180 00	.0060
072711	10	0	.0	.34199759 03 .180 00	.0313	.57324141 02 .180 00	.0048
072811	10	0	.0	.34200499 03 .180 00	.0181	.57564630 02 .180 00	.0042
072911	10	0	.0	.34201237 03 .180 00	.0110	.57805109 02 .180 00	.0077
073011	10	0	.0	.34201975 03 .180 00	.0199	.58045565 02 .180 00	.0071
073111	10	0	.0	.34202711 03 .180 00	.0028	.58286007 02 .180 00	.0026
073211	10	0	.0	.34203446 03 .180 00	.0257	.58526433 02 .180 00	.0121
073411	10	0	.0	.34204913 03 .180 00	.0276	.59007232 02 .180 00	.0052
073811	10	0	.0	.34207832 03 .180 00	.0015	.59968624 02 .180 00	.0015
073911	10	0	.0	.34208559 03 .180 00	.0565	.60208931 02 .180 00	.0031
074011	10	0	.0	.34209285 03 .180 00	.0115	.60449219 02 .180 00	.0007
074111	10	0	.0	.34210009 03 .180 00	.0345	.60689489 02 .180 00	.0084
074211	10	0	.0	.34210732 03 .180 00	.0276	.60929742 02 .180 00	.0001
074311	10	0	.0	.34211455 03 .180 00	.0186	.61169972 02 .180 00	.0117
074411	10	0	.0	.34212175 03 .180 00	.0117	.61410192 02 .180 00	.0035
074511	10	0	.0	.34212895 03 .180 00	.0048	.61650389 02 .180 00	.0012
074611	10	0	.0	.34213614 03 .180 00	.0319	.61890569 02 .180 00	.0069
074811	10	0	.0	.34215047 03 .180 00	.0141	.62370878 02 .180 00	.0105
074911	10	0	.0	.34215762 03 .180 00	.0313	.62611002 02 .180 00	.0022
075011	10	0	.0	.34216475 03 .180 00	.0244	.62851108 02 .180 00	.0081
075111	10	0	.0	.34217188 03 .180 00	.0176	.63091198 02 .180 00	.0019
075211	10	0	.0	.34217900 03 .180 00	.0107	.63331267 02 .180 00	.0018
075311	10	0	.0	.34218609 03 .180 00	.0040	.63571320 02 .180 00	.0116
075411	10	0	.0	.34219318 03 .180 00	.0632	.63811350 02 .180 00	.0075
075511	10	0	.0	.34220026 03 .180 00	.0104	.64051366 02 .180 00	.0174
075611	10	0	.0	.34220732 03 .180 00	.0457	.64291359 02 .180 00	.0093
075711	10	0	.0	.34221437 03 .180 00	.0369	.64531331 02 .180 00	.0093
075811	10	0	.0	.34222141 03 .180 00	.0161	.64771289 02 .180 00	.0013
075911	10	0	.0	.34222843 03 .180 00	.0094	.65011221 02 .180 00	-.0007
080011	10	0	.0	.34223545 03 .180 00	.0587	.65251143 02 .180 00	.0072
080111	10	0	.0	.34224245 03 .180 00	-.0421	.65491038 02 .180 00	-.0007
080211	10	0	.0	.34224944 03 .180 00	.0173	.65730916 02 .180 00	.0033
080311	10	0	.0	.34225641 03 .180 00	.0106	.65970773 02 .180 00	.0014
080411	10	0	.0	.34226337 03 .180 00	.0039	.66210607 02 .180 00	.0015
080511	10	0	.0	.34227032 03 .180 00	.0173	.66450429 02 .180 00	.0015
080611	10	0	.0	.34227726 03 .180 00	.0107	.66690224 02 .180 00	-.0043
080711	10	0	.0	.34228418 03 .180 00	.0400	.66930002 02 .180 00	.0058
080811	10	0	.0	.34229109 03 .180 00	.0334	.67169757 02 .180 00	.0060
080911	10	0	.0	.34229799 03 .180 00	.0269	.67409495 02 .180 00	.0021
081011	10	0	.0	.34230487 03 .180 00	.0203	.67649209 02 .180 00	.0023
081111	10	0	.0	.34231174 03 .180 00	.0137	.67888901 02 .180 00	-.0014
081211	10	0	.0	.34231860 03 .180 00	.0072	.68128574 02 .180 00	.0008
081311	10	0	.0	.34232545 03 .180 00	.0006	.68368225 02 .180 00	-.0029
081411	10	0	.0	.34233227 03 .180 00	-.0059	.68607859 02 .180 00	-.0026
081611	10	0	.0	.34234589 03 .180 00	-.0189	.69087057 02 .180 00	.0000
081711	10	0	.0	.34235268 03 .180 00	-.0253	.69326621 02 .180 00	-.0036
081811	10	0	.0	.34235946 03 .180 00	-.0317	.69566165 02 .180 00	-.0032
081911	10	0	.0	.34236622 03 .180 00	-.0382	.69805688 02 .180 00	-.0148
082011	10	0	.0	.34237297 03 .180 00	-.0447	.70045189 02 .180 00	-.0064
082111	10	0	.0	.34237970 03 .180 00	-.0510	.70284668 02 .180 00	-.0060
082211	10	0	.0	.34238642 03 .180 00	-.0575	.70524122 02 .180 00	-.0055
082311	10	0	.0	.34239313 03 .180 00	-.0640	.70763553 02 .180 00	-.0090
082411	10	0	.0	.34239982 03 .180 00	-.0703	.71002964 02 .180 00	-.0045
082511	10	0	.0	.34240650 03 .180 00	-.0767	.71242352 02 .180 00	-.0060
082611	10	0	.0	.34241316 03 .180 00	-.0830	.71481717 02 .180 00	-.0034

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TIME	TC	Q	FRQ	DEC		HA	
082811	10	0	.0	.34242644 03 .180 00	.0784	.71960375 02 .180 00	-.0104
082911	10	0	.0	.34243307 03 .180 00	.0282	.72199666 02 .180 00	-.0018
083111	10	0	.0	.34244626 03 .180 00	.0156	.72678182 02 .180 00	-.0084
083211	10	0	.0	.34245283 03 .180 00	.0354	.72917398 02 .180 00	.0062
083311	10	0	.0	.34245939 03 .180 00	.0292	.73156597 02 .180 00	.0010
083411	10	0	.0	.34246593 03 .180 00	.0230	.73395766 02 .180 00	-.0003
084311	10	0	.0	.34252411 03 .180 00	.0219	.75547132 02 .180 00	-.0065
084711	10	0	.0	.34254954 03 .180 00	.0199	.76502585 02 .180 00	-.0043
085211	10	0	.0	.34258092 03 .180 00	.0203	.77696232 02 .180 00	.0016
085311	10	0	.0	.34258714 03 .180 00	.0144	.77934869 02 .180 00	.0009
085411	10	0	.0	.34259334 03 .180 00	.0345	.78173470 02 .180 00	-.0019
085511	10	0	.0	.34259952 03 .180 00	.0168	.78412045 02 .180 00	.0035
085711	10	0	.0	.34262063 03 .180 00	.0064	.78911561 02 .180 00	-.0202
085911	10	0	.0	.34263264 03 .180 00	.0231	.79387795 02 .180 00	-.0247
090011	10	0	.0	.34263860 03 .180 00	.0175	.79625855 02 .180 00	-.0248
090111	10	0	.0	.34264455 03 .180 00	.0480	.79863872 02 .180 00	-.0250
090211	10	0	.0	.34265047 03 .180 00	.0244	.80101853 02 .180 00	-.0210
090311	10	0	.0	.34265636 03 .180 00	.0168	.80339784 02 .180 00	-.0190
090411	10	0	.0	.34266223 03 .180 00	.0254	.80577675 02 .180 00	-.0210
090511	10	0	.0	.34266808 03 .180 00	.0059	.80815525 02 .180 00	-.0129
090611	10	0	.0	.34267390 03 .180 00	.0225	.81053326 02 .180 00	-.0128

STATISTICS STATION 5

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
HA	1/26-210001	1/27-090611	720	.104-01	.211-01	.183-01	.444-03
DEC	1/26-210001	1/27-090611	720	.204-01	.259-01	.160-01	.673-03

G MATRIX FOR MAPPING FORWARD

	X	Y	Z	DX	DY	DZ	KE	KM	RI01
X	-.62577376 02	-.50068325 01	-.20288073 02	-.16205811-02	-.37920013-03	-.58217319-03	.00000000 00	.00000000 00	.00000000 00
Y	-.11200071 03	.20768219 02	-.67604954 02	-.28899240-02	-.26393317-03	-.15250128-02	.00000000 00	.00000000 00	.00000000 00
Z	.32554687 01	-.11964681 02	-.17240018 02	-.30237481-04	-.21589054-03	-.31174554-03	.00000000 00	.00000000 00	.00000000 00
DX	.10477784 06	.43479288 04	.49922295 05	.27330869 01	.56592596 00	.12642978 01	.00000000 00	.00000000 00	.00000000 00
DY	-.88399055 05	.26237920 05	-.50639939 05	-.22424680 01	-.26001175-01	-.11486486 01	.00000000 00	.00000000 00	.00000000 00
DZ	.70547996 05	-.19344253 04	.44487088 05	.18853004 01	.31615287 00	.98255347 00	.00000000 00	.00000000 00	.00000000 00
KE	.40116796 01	-.50402568 00	.22148191 01	-.10734746-03	.12646288-04	.53191555-04	.10000000 01	.00000000 00	.00000000 00
KM	-.69428346-02	-.14876612-02	.11544973-02	-.43236261-06	-.82236794-07	.70490131-07	.00000000 00	.10000000 01	.00000000 00
RI01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01
LA01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

	LA01	LO01	RI03	LA03	LO03	RI04	LA04	LO04	RI05
X	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Y	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA01	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO01	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI03	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LA03	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO03	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RI04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00
LA04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00
LO04	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00
RI05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01
LA05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LO05	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

CONDITIONS AFTER FORWARD MAPPING 62/01/26 205009.000 TO 62/01/27 102806.000

X= -.12982313 06 Y= -.82373281 05 Z= -.49540038 05 DX= -.17072911 01 DY= -.15726162 01 DZ= -.54291970 00

COVARIANCE MATRIX AFTER MAPPING

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.35260567 02	.74585927 01	-.52955218 02	.73821442-03	.17900804-03	-.79485825-03	.80302938 01	.12171152 01	.13537834 00
Y	.74585927 01	.38409833 02	.94304335 01	.47514919-03	.67882089-03	.14919329-03	.15057567 02	.59472901 00	.13937692-02
Z	-.52955218 02	.94304335 01	.43179312 03	.30495370-03	.71843520-03	.76929320-02	.53859391 02	.69822898 00	.56235451-01
DX	.73821442-03	.47514919-03	.30495370-03	.23311522-07	.11489445-07	.78301945-08	.49648773-03	.30061027-04	.39086858-05
DY	.17900804-03	.67882089-03	.71843520-03	.11489445-07	.13241018-07	.13312108-07	.38084211-03	.15986280-04	.63216469-06
DZ	-.79485825-03	.14919329-03	.76929320-02	.78301945-08	.13312108-07	.14023977-06	.10167926-02	.21550993-04	.12520922-05
KE	.80302938 01	.15057567 02	.53859391 02	.49648773-03	.38084211-03	.10167926-02	.16714530 02	.83311544 00	.70988750-01
KM	.12171152 01	.59472901 00	.69822898 00	.30061027-04	.15986280-04	.21550993-04	.83311544 00	.24992497 02	-.20807322-03
RIO1	.13537834 00	.13937692-02	.56235451-01	.39086858-05	.63216469-06	.12520922-05	.70988750-01	-.20807322-03	.35725950-02
LAO1	.15486409-02	.70864998-03	.42502739-03	.45789753-07	.17487157-07	.13526558-07	.94290247-03	-.60232662-05	-.16249933-06
LOO1	.28885499-03	-.26661545-02	-.23453400-03	-.43083526-08	-.42123022-07	-.10767602-07	-.60407443-03	.10897908-04	.29051219-06
RIO3	-.59679302-01	-.33384926-01	-.44994333-01	-.18532077-05	-.90808503-06	-.11433194-05	-.40313875-01	.23819464-03	.10607269-04
LAO3	.12517839-02	.70155393-03	.94920814-03	.38899318-07	.19078733-07	.24080638-07	.84685364-03	-.49562638-05	-.22263110-06
LOO3	.11638848-02	.52653316-03	.35746283-03	.33467933-07	.14694635-07	.12812101-07	.66544879-03	-.84657788-05	-.19359915-06
RIO4	.63590290-04	-.54235432-03	-.12054433-02	-.72768623-08	-.10678356-07	-.19297234-07	-.32540644-03	-.72050978-05	-.51387839-06
LAO4	-.14730276-04	-.88624723-07	.67507976-04	-.52601386-10	.48609696-10	.10310887-08	.53246627-05	-.24381853-06	.87044977-08
LOO4	-.17495557-04	-.10181969-03	-.87654637-04	-.14647213-08	-.18972920-08	-.14772661-08	-.49769490-04	-.18283310-05	-.77801429-07
RIO5	.13535132 00	.13935672-02	.56224446-01	.39079060-05	.63204035-06	.12518482-05	.70974638-01	-.20802647-03	.35718803-02
LAO5	.15483267-02	.70852377-03	.42495536-03	.45780765-07	.17483900-07	.13523790-07	.94271853-03	-.60221466-05	-.16243141-06
LOO5	.28879073-03	-.26657220-02	-.23470174-03	-.43091206-08	-.42116677-07	-.10769252-07	-.60402024-03	.10893363-04	.29040035-06

	LAO1	LOO1	RIO3	LAO3	LOO3	RIO4	LAO4	LOO4	RIO5
X	.15486409-02	.28885499-03	-.59679302-01	.12517839-02	.11638848-02	.63590290-04	-.14730276-04	-.17495557-04	.13535132 00
Y	.70864998-03	-.26661545-02	-.33384926-01	.70155393-03	.52653316-03	-.54235432-03	-.88624723-07	-.10181969-03	.13935672-02
Z	.42502739-03	-.23453400-03	-.44994333-01	.94920814-03	.35746283-03	-.12054433-02	.67507976-04	-.87654637-04	.56224446-01
DX	.45789753-07	-.43083526-08	-.18532077-05	.38899318-07	.33467933-07	-.72768623-08	-.52601386-10	-.14647213-08	.39079060-05
DY	.17487157-07	-.42123022-07	-.90808503-06	.19078733-07	.14694635-07	-.10678356-07	.48609696-10	-.18972920-08	.63204035-06
DZ	.13526558-07	-.10767602-07	-.11433194-05	.24080638-07	.12812101-07	-.19297234-07	.10310887-08	-.14772661-08	.12518482-05
KE	.94290247-03	-.60407443-03	-.40313875-01	.84685364-03	.66544879-03	-.32540644-03	.53246627-05	-.49769490-04	.70974638-01
KM	-.60232662-05	.10897908-04	.23819464-03	-.49562638-05	-.84657788-05	-.72050978-05	-.24381853-06	-.18283310-05	-.20802647-03
RIO1	-.16249933-06	.29051219-06	.10607269-04	-.22263110-06	-.19359915-06	-.51387839-06	.87044977-08	-.77801429-07	.35718803-02
LAO1	.99188177-08	.94983203-08	.24139426-06	-.50518330-08	-.58133779-08	-.13666575-07	-.23225087-09	-.28667761-08	-.16245849-06
LOO1	.94983203-08	.97930630-06	-.32393527-06	.67283186-08	.12682119-07	.31267414-07	.70373510-09	.70248520-08	.29044862-06
RIO3	.24139426-06	-.32393527-06	.35872756-02	.26745730-06	.19559977-06	.42986450-06	.85054078-08	.97121497-07	.10604899-04
LAO3	-.50518330-08	.67283186-08	.26745730-06	.99437735-06	-.40311737-08	-.90462855-08	-.17772186-09	-.20413242-08	-.22258135-06
LOO3	-.58133779-08	.12682119-07	.19559977-06	-.40311737-08	.98931439-06	-.55299741-08	-.23092121-09	-.14932847-08	-.19355622-06
RIO4	-.13666575-07	.31267414-07	.42986450-06	-.90462855-08	-.55299741-08	.35998471-02	-.26761741-09	-.24093774-07	-.51377585-06
LAO4	-.23225087-09	.70373510-09	.85054078-08	-.17772186-09	-.23092121-09	-.26761741-09	.62749869 38	-.42678684-09	.87026730-08
LOO4	-.28667761-08	.70248520-08	.97121497-07	-.20413242-08	-.14932847-08	-.24093774-07	-.42678684-09	.99483761-06	-.77786067-07
RIO5	-.16245849-06	.29044862-06	.10604899-04	-.22258135-06	-.19355622-06	-.51377585-06	.87026730-08	-.77786067-07	.35726057-02
LAO5	.99168321-06	.94965330-08	.24134730-06	-.50508498-08	-.58122873-08	-.13664280-07	-.23218653-09	-.28662512-08	-.16239059-06
LOO5	.94933081-08	.97911245-06	-.32374443-06	.67243233-08	.12677682-07	.31263055-07	.70356472-09	.70237422-08	.29033682-06

	LAO5	LOO5
X	.15483267-02	.28879073-03
Y	.70852377-03	-.26657220-02
Z	.42495536-03	-.23470174-03
DX	.45780765-07	-.43091206-08
DY	.17483900-07	-.42116677-07
DZ	.13523790-07	-.10769252-07
KE	.94271853-03	-.60402024-03
KM	-.60221466-05	.10893363-04
RIO1	-.16243141-06	.29040035-06
LAO1	.99168321-06	.94933081-08
LOO1	.94965330-08	.97911245-06
RIO3	.24134730-06	-.32374443-06
LAO3	-.50508498-08	.67243233-08
LOO3	-.58122873-08	.12677682-07
RIO4	-.13664280-07	.31263055-07
LAO4	-.23218653-09	.70356472-09
LOO4	-.28662512-08	.70237422-08
RIO5	-.16239059-06	.29033682-06
LAO5	.80292224 37	.94915216-08
LOO5	.94915216-08	.97931859-06

```
CASE  1                                   SPACE TRAJECTORIES

    EPHEMERIDES WITH VENUS VELOCITIES

  GME  .39860041 06     J  .16234500-02    H -.57499999-05    D  .78749999-05    RE  .63781650 04   REM  .63783149 04
    G  .66709998-19     A  .88745998 29    B  .88763998 29    C  .88800998 29   CME  .41780741-02    AU  .14959900 09
  GMM  .49006276 04   GMS  .13271544 12  GMV  .32476952 06  GMA  .42977799 05  GMB  .00000000 00   GMJ  .12671062 09
  ARA  .27890000 01    GB  .00000000 00  MAS  .34020000 03  GB1  .00000000 00  GB2  .00000000 00    SC  .00000000 00

INJECTION CONDITIONS              MOON                JULIAN DATE 2437691.36815972              JAN. 26,1962   20 50 09.000

GEOCENTRIC        XO .33944723 04  YO .57112332 04  ZO .51362592 03 DXO-.77931342 01 DYO .56158514 01 DZO-.53071321 01
CARTESIAN       GMC .00000000 00 SGC .00000000 00  TO .75009000 05 GHA .78199559 02 GHO .12480641 03

  0 DAYS  0 HRS.  0 MIN.  0.000 SEC.                JULIAN DATE 2437691.36815972              JAN. 26,1962   20 50 09.000

GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X  .33944722 06     Y  .57112330 04    Z  .51362591 03    DX -.77931340 01   DY  .56158511 01   DZ -.53071320 01
    R  .66636654 04   DEC  .44206623 01   RA  .59274861 02    V  .10974351 02  PTH  .22679779 01   AZ  .11924067 03
    R  .66636652 04   LAT  .44206623 01  LON  .34107530 03   VE  .10554606 02  PTE  .23582227 01  AZE  .12052656 03
   XS  .87497054 08    YS -.10872425 09   ZS -.47144052 08  DXS  .24453922 02  DYS  .16321220 02  DZS  .70777928 01
   XM -.39166894 06    YM -.94116721 05   ZM -.76529536 04  DXM  .24768878 00  DYM -.88013244 00  DZM -.32787891 00
   XT -.39166894 05    YT -.94116721 05   ZT -.76529536 04  DXT  .24768878 00  DYT -.88013244 00  DZT -.32787891 00
   RS  .14730668 09    VS  .30240232 02   RM  .40289091 06   VM  .97133280 00   RT  .40289091 06   VT  .97133280 00
  GED  .44506675 01   ALT  .28558734 03  LOS  .23062620 03  RAS  .30882576 03  RAM  .19351180 03  LOM  .11531224 03
  DUT  .34000000 02    DT  .37500000 01   DR  .43429207 00  SHA  .62304382 04  DES -.18665352 02  DEM -.10884034 01

GEOCENTRIC                                                CONIC     ORBITAL B.T AND B.R          EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE                         JULIAN DATE 2437691.36760774              JAN. 26,1962   20 49 21.309
  SMA -.49676707 06   ECC  .10133932 01  INC  .29543722 02  LAN  .24711440 03  APF  .16650077 03  RCA  .66532986 04
   VH  .89576166 00    C3  .80238895 00   C1  .73072115 05  SLR  .13395706 05  APO  .00000000 00  TFP  .47691270 02
   TA  .45059673 01    EA  .36769811 00   MA  .49272113-02  DAO -.11027198 02  RAO  .22700436 03  MTA  .17067454 03
   WX -.45427334 00    WY  .19175792 00   WZ  .86997067 00   PX  .56524371 00   PY  .81683428 00   PZ  .11510255 00
   QX -.68857479 00    QY  .54403856 00   QZ -.47946509 00   RX -.74149571-01   RY  .32072185 00   RZ -.94426654 00
  SXO -.66935156 00   SYO -.71790136 00  SZO -.19127494 00   TX -.73923630 00   TY  .61786335 00   TZ  .26790776 00
   BX -.58788110 00    BY  .66921337 00   BZ -.45447692 00   MX -.73085374 00   MY  .47818253 00   MZ -.48702593 00
  B.T  .59248809 05   B.R  .56072447 05    B  .81575370 05  PER  .00000000 00  OMD  .45663550-02  NOD -.28535739-02

HELIOCENTRIC                                                                                 ECLIPTIC COORDINATES

    X -.87493659 08     Y  .11851082 09    Z -.20755000 04    DX -.32247056 02   DY -.14748788 02   DZ -.71038395 01
    R  .14730905 09   LAT -.80726466-03  LON  .12643755 03    V  .36164400 02  PTH  .11625534 02   AZ  .10156871 03
   XE -.87497054 08    YE  .11850538 09   ZE -.27450000 03  DXE -.24453922 02  DYE -.17789810 02  DZE -.62799453-03
   XT -.87888722 08    YT  .11841598 09   ZT  .30146000 05  DXT -.24206233 02  DYT -.18727736 02  DZT  .48693597-01
  LTE -.10676835-03   LCE  .12643987 03  LTT  .11712643-01  LCT  .12658292 03  RST  .14746787 09  VST  .30605100 02
  EPS  .69223563 02   ESP  .00000000 00  SEP  .11077401 03  EPM  .45150093 02  EMP  .67180292 00  MEP  .13417804 03
  MPS  .11286286 03   MSP  .14587384 00  SMP  .66991229 02  SEM  .11351174 03  EMS  .66344723 02  ESM  .14333671 00
  EPT  .45150093 02   ETP  .67180292 00  TEP  .13417804 03  TPS  .11286286 03  TSP  .14587384 00  STP  .66991229 02
  SET  .11351174 03   STE  .66344723 02  EST  .14333671 00  RPM  .40756277 06  RPT  .40756277 06  SPN -.39390859 01
  SAC  .00000000 00
  GCE  .24779532 03   CCT  .25967332 03  SIP  .11261853 03  CPT  .94167349 02  SIN  .93923017 02
  REP  .66636654 04   VEP  .10974351 02


HELIOCENTRIC                                                CONIC     ORBITAL B.T AND B.R          ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE                         JULIAN DATE 2437663.52384946              DEC. 30,1961   00 34 20.594
  SMA  .26865460 09   ECC  .48614515 00  INC  .11568715 02  LAN  .30643360 03  APF  .14388970 03  RCA  .13804947 09
   VH  .13063326 02    C3 -.49400026 03   C1  .52180558 10  SLR  .20516155 09  APO  .39925972 09  TFP  .24057484 07
   TA  .36114310 02    EA  .21704658 02   MA  .11403605 02  DAI  .67875567 01  RAI  .90881427 02  MTA  .18000000 03
   WX -.16134601 00    WY -.11910067 00   WZ  .97968490 00   PX -.15275426-01   PY  .99287368 00   PZ  .11818830 00
   QX -.98677965 00    QY  .41041150-02   QZ -.16201551 00   RX -.18000272-02   RY  .11817460 00   RZ -.99299117 00
  SXI -.15275426-01   SYI  .99287368 00  SZI  .11818830 00   TX  .99988171 00   TY  .15381106-01   TZ  .17967666-04
   BX  .98677967 00    BY -.41041151-02   BZ  .16201552 00   MX -.78815942 00   MY -.58188246 00   MZ -.20054302 00
  B.T  .23162606 09   B.R -.38300882 08    B  .23477135 09  PER  .87901606 03  DEF

SELENOCENTRIC                                                                                EQUATORIAL COORDINATES

    X  .32506341 06     Y  .99827953 05    Z  .81665795 04    DX -.80408227 01   DY  .64959836 01   DZ -.49792531 01
    R  .43756277 06   DEC  .11481462 01   RA  .14181124 02    V  .11473691 02  PTH -.33321257 02   AZ  .12041632 03
    R  .43756271 06   LAT -.58048104 01  LCN  .35603248 03   VR  .10985634 02  PTR -.35012026 02  AZR  .14965504 03
  LTS  .31334208 00   LNS  .28420240 03  LTE -.55904517 01  LNE  .35539257 03
  ALT  .43582477 06   SPA -.37513912 06  ALP  .19172039 01   DR -.63028759 01   DP  .13478190-02  ASD  .24433209 00
  HGE  .29077644 03   SVL -.10932827 02  HNG  .24668981 03  SIA  .44905761 02
  SAC  .00000000 00

  2 DAYS  2 HRS. 19 MIN. 30.000 SEC.                JULIAN DATE 2437693.46503472              JAN. 28,1962   23 09 39.000

GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X -.30677708 06     Y -.25433151 06    Z -.10166043 06    DX -.11790018 01   DY -.11328670 01   DZ -.27193628 00
    R  .41125605 06   DEC -.14311586 02   RA  .21966020 03    V  .16575229 01  PTH  .83631390 02   AZ  .40600203 02
    R  .41125604 06   LAT -.14311586 02  LCN  .10451891 03   VE  .28986099 02  PTE  .32579011 01  AZE  .27027638 03
   XS  .91867321 08    YS -.10569370 09   ZS -.45829891 08  DXS  .23784477 02  DYS  .17129804 02  DZS  .74278910 01
   XM -.30859722 06    YM -.23832971 06   ZM -.64157823 05  DXM  .65761686 00  DYM -.68255443 00  DZM -.28475504 00
   XT -.30859722 06    YT -.23832971 06   ZT -.64157823 05  DXT  .65761686 00  DYT -.68255443 00  DZT -.28475504 00
   RS  .14734701 09    VS  .30237478 02   RM  .39515758 06   VM  .98965949 00   RT  .39515758 06   VT  .98965949 00
  GED -.14405071 02   ALT  .40487915 06  LOS  .19585536 03  RAS  .31099666 03  RAM  .21767891 03  LOM  .10253762 03
  DUT  .34000000 02    DT  .99999999 03   DR  .16472941 01  SHA -.41062428 06  DES -.18121537 02  DEM -.93439121 01

GEOCENTRIC                                                CONIC     ORBITAL B.T AND B.R          EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE                         JULIAN DATE 2437691.37207207              JAN. 26,1962   20 55 47.027
  SMA -.49275117 06   ECC  .10144503 01  INC  .50907047 02  LAN  .23162273 03  APF  .17936869 03  RCA  .71203797 04
   VH  .89940446 00    C3  .80892839 00   C1  .75613393 05  SLR  .14343651 05  APO  .00000000 00  TFP  .18083197 06
   TA  .16205909 03    EA  .68672244 02   MA  .18911467 02  DAO -.79872863 01  RAO  .22507668 03  MTA  .17031773 03
   WX -.60843427 00    WY  .48184600 00   WZ  .63058034 00   PX  .62624562 00   PY  .77957892 00   PZ  .85513703-02
   QX -.48746680 00    QY  .40010105 00   QZ -.77607646 00   RX -.10715400 00   RY  .29502235 00   RZ -.94946291 00
  SXO -.69930932 00   SYO -.70118360 00  SZO -.13895334 00   TX -.70674217 00   TY  .64907887 00   TZ  .28144651 00
   BX -.37515864 00    BY  .52551485 00   BZ -.76358374 00   MX  .27085748 00   MY -.62078427 00   MZ  .73570545 00
  B.T  .32901922 05   B.R  .77364749 05    B  .84070454 05  PER  .00000000 00  OMD  .14307899-02  NOD -.18260807-02
```

CASE 1 SPACE TRAJECTORIES

HELIOCENTRIC ECLIPTIC COORDINATES

X	-.92174098 08	Y	.11492838 09	Z	.75645000 04	DX	-.24963479 02	DY	-.19818478 02	DZ	.20103621 00
R	.14732479 09	LAT	.29418938-02	LON	.12873008 03	V	.31874562 02	PTH	.28407183 00	AZ	.89638637 02
XE	-.91867321 08	YE	.11520216 09	ZE	-.34500000 03	DXE	-.23784477 02	DYE	-.18670933 02	DZE	-.15449524-03
XT	-.92175918 08	YT	.11495798 09	ZT	.35606000 05	DXT	-.23126860 02	DYT	-.19410433 02	DZT	.10130286-01
LTE	-.13415300-03	LOE	.12857042 03	LTT	.13845177-01	LOT	.12872343 03	RST	.14734903 09	VST	.30192990 02
EPS	.93016534 02	ESP	.15949038 00	SEP	.86823767 02	EPM	.64129888 02	EMP	.11053760 03	MEP	.53325081 01
MPS	.12642018 03	MSP	.27453512-18	SMP	.53567044 02	SEM	.90216196 02	EMS	.89630148 02	ESM	.15323340 00
EPT	.64129488 02	ETP	.11053760 03	TEP	.53325081 01	TPS	.12642018 03	TSP	.27453512-18	STP	.53567044 02
SET	.90216196 02	STE	.89630148 02	EST	.15323340 00	RPM	.40814409 05	RPT	.40814409 05	SPN	.92127923 02
SAC	.00000000 00										
GCE	.82965015 02	GCT	.14269257 03	SIP	.12397962 03	CPT	.11943700 03	SIN	.11699644 03		
REP	.41125605 06	VEP	.16575229 01								

HELIOCENTRIC CONIC ORBITAL B.T AND B.R ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE JULIAN DATE 2437691.12623521 JAN. 26,1962 15 01 46.723

SMA	.16891713 03	ECC	.12792252 00	INC	.36140073 00	LAN	.12826364 03	APF	.35796116 03	RCA	.14730882 09
VH	.24646870 02	C3	-.78568373 03	C1	.46958558 10	SLR	.16615294 09	APO	.19052543 09	TFP	.20207228 06
TA	.25052723 01	EA	.22029707 01	MA	.19212308 01	DAI	-.12856447-01	RAI	.12622486 03	MTA	.18000000 03
WX	.49521713-02	WY	.39058898-02	WZ	.99998011 00	PX	-.59095569 00	PY	.80670393 00	PZ	-.22438733-03
QX	-.80668876 00	QY	-.59094281 00	QZ	.63031438-02	RX	.13678428-03	RY	-.17795112-03	RZ	-.99999993 00
SXI	-.59095569 00	SYI	.80670393 00	SZI	-.22438733-03	TX	.80670398 00	TY	.59095573 00	TZ	.51831917-05
BX	.80668880 03	BY	.59094284 00	BZ	-.63031442-02	MX	-.78008633 00	MY	-.62564010 00	MZ	.63069279-02
B.T	.16752599 09	B.R	.10568298 07	B	.16752932 09	PER	.43824396 03	DEF			

SELENOCENTRIC EQUATORIAL COORDINATES

X	.18201406 04	Y	-.16001801 05	Z	-.37502606 05	DX	-.18366186 01	DY	-.45031255 00	DZ	.12818765-01
R	.40814409 05	DEC	-.66759551 02	RA	.27648927 03	V	.18910615 01	PTH	.25115262 01	AZ	.27685373 03
R	.40814408 05	LAT	-.42275761 02	LON	.22750522 03	VR	.19696623 01	PTR	.24112429 01	AZR	.28138816 03
LTS	.26804907 00	LNS	.26371142 03	LTE	-.67461231 01	LNE	.35330728 03				
ALT	.39076408 05	SHA	-.32837328 05	ALP	.13577014 03	DR	.82867066-01	DP	.26521458-02	ASD	.24405623 01
HGE	.26698346 03	SVL	-.44023740 02	HNG	.21434312 03	SIA	.61689325 02				
SAC	.00000000 00										

2 DAYS 2 HRS. 20 MIN. 30.000 SEC. JULIAN DATE 2437693.46572916 JAN. 28,1962 23 10 39.000

GEOCENTRIC EQUATORIAL COORDINATES

X	-.30884782 06	Y	-.25439948 06	Z	-.10167674 06	DX	-.11789016 01	DY	-.11327086 01	DZ	-.27173866 00
R	.41135488 06	DEC	-.14310419 02	RA	.21966123 03	V	.16573110 01	PTH	.83629527 02	AZ	.40556348 02
R	.41135487 06	LAT	-.14310419 02	LON	.10426925 03	VE	.28993298 02	PTE	.32566623 01	AZE	.27027654 03
XS	.91868748 08	YS	-.10569268 09	ZS	-.45829446 08	DXS	.23784250 02	DYS	.17130069 02	DZS	.74280053 01
XM	-.30855776 06	YM	-.23837066 06	ZM	-.64174908 05	DXM	.65773869 00	DYM	-.68246029 00	DZM	-.28472970 00
XT	-.30855776 06	YT	-.23837066 06	ZT	-.64174908 05	DXT	.65773869 00	DYT	-.68246029 00	DZT	-.28472970 00
RS	.14734703 09	VS	.10237477 02	RM	.39515425 06	VM	.98966824 00	RT	.39515425 06	VT	.98966824 00
GEO	-.14403897 02	ALT	.40497799 06	LOS	.19560539 03	RAS	.31099738 03	RAM	.21768722 03	LOM	.10229524 03
OUT	.34000000 02	CT	.59999999 02	DR	.16470775 01	SHA	-.41072301 06	DES	-.16121353 02	DEM	-.93465024 01

GEOCENTRIC CONIC ORBITAL B.T AND B.R EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE JULIAN DATE 2437691.37197457 JAN. 26,1962 20 55 38.604

SMA	-.49289533 06	ECC	.10144576 01	INC	.50948341 02	LAN	.23160485 03	APF	.17938543 03	RCA	.71260976 04
VH	.89927293 00	C3	.80869179 00	C1	.75643884 05	SLR	.14355222 05	APO	.00000000 00	TFP	.18090039 06
TA	.16205418 03	EA	.68670111 02	MA	.18910323 02	DAO	-.79802077 01	RAO	.22507437 03	MTA	.17031529 03
WX	-.60864072 00	WY	.48231868 00	WZ	.63002082 00	PX	.62633339 00	PY	.77951095 00	PZ	.83160791-02
QX	-.48709699 00	QY	.39966466 00	QZ	-.77653438 00	RX	-.10723686 00	RY	.29495452 00	RZ	-.94947461 00
SXO	-.69934962 00	SYO	-.70116762 00	SZO	-.13883099 00	TX	-.70668972 00	TY	.64912693 00	TZ	.28146736 00
BX	-.37478922 00	BY	.52510272 00	BZ	-.76406819 00	MX	.27041462 00	MY	-.62040134 00	MZ	.73619235 00
B.T	.32860859 05	B.R	.77432491 05	B	.84116746 05	PER	.00000000 00	OMD	.14227618-02	NOD	-.18207214-02

HELIOCENTRIC ECLIPTIC COORDINATES

X	-.92175595 08	Y	.11492719 09	Z	.75770000 04	DX	-.24963151 02	DY	-.19818542 02	DZ	.20115483 00
R	.14732481 09	LAT	.29467550-02	LON	.12873082 03	V	.31874346 02	PTH	.28435956 00	AZ	.89638422 02
XE	-.91868748 08	YE	.11520104 09	ZE	-.34500000 03	DXE	-.23784250 02	DYE	-.18671221 02	DZE	-.15425682-03
XT	-.92177305 08	YT	.11495681 09	ZT	.35606500 05	DXT	-.23126511 02	DYT	-.19410624 02	DZT	.10116339-01
LTE	-.13415298-03	LOE	.12857112 03	LTT	.13845375-01	LOT	.12872414 03	RST	.14734899 09	VST	.30192845 02
EPS	.93016384 02	ESP	.15979680 00	SEP	.86823881 02	EPM	.63979993 02	EMP	.11069358 03	MEP	.53264184 01
MPS	.12632759 03	MSP	.13988227-01	SMP	.53659622 02	SEM	.90208305 02	EMS	.89638040 02	ESM	.15371151 00
EPT	.63979993 02	ETP	.11069358 03	TEP	.53264184 01	TPS	.12632759 03	TSP	.13988227-01	STP	.53659622 02
SET	.90208305 02	STE	.89638040 02	EST	.15371151 00	RPM	.40819534 05	RPT	.40819534 05	SPN	.92127986 02
SAC	.00000000 00										
GCE	.82963427 02	GCT	.14253088 03	SIP	.12388733 03	CPT	.11941653 03	SIN	.11697627 03		
REP	.41135488 06	VEP	.16573110 01								

HELIOCENTRIC CONIC ORBITAL B.T AND B.R ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE JULIAN DATE 2437691.12430612 JAN. 26,1962 14 59 00.049

SMA	.16891419 09	ECC	.12790755 00	INC	.36167135 00	LAN	.12826389 03	APF	.35795886 03	RCA	.14730879 09
VH	.24647459 02	C3	-.78569739 03	C1	.46958241 10	SLR	.16615070 09	APO	.19051959 09	TFP	.20229895 06
TA	.25080658 01	EA	.22054612 01	MA	.19234361 01	DAI	-.12878628-01	RAI	.12622281 03	MTA	.18000000 03
WX	.49551096-02	WY	.39082425-02	WZ	.99998008 00	PX	-.59092658 00	PY	.80672474 00	PZ	-.22477446-03
QX	-.80670954 00	QY	-.59091368 00	QZ	.63068938-02	RX	.13700040-03	RY	-.17827291-03	RZ	-.99999951 00
SXI	-.59092658 00	SYI	.80672474 00	SZI	-.22477446-03	TX	.80672513 00	TY	.59092687 00	TZ	.51754154-05
BX	.80670993 00	BY	.59091397 00	BZ	-.63068968-02	MX	-.78007819 00	MY	-.62565020 00	MZ	.63106913-02
B.T	.16752332 09	B.R	.10574399 07	B	.16752666 09	PER	.43823253 03	DEF			

SELENOCENTRIC EQUATORIAL COORDINATES

X	.17099375 04	Y	-.16028820 05	Z	-.37501832 05	DX	-.18366403 01	DY	-.45024836 00	DZ	.12991037-01
R	.40819534 05	DEC	-.66740055 02	RA	.27608922 03	V	.18910685 01	PTH	.26650424 01	AZ	.27722146 03
R	.40819532 05	LAT	-.42242841 02	LON	.22728574 03	VR	.19696717 01	PTR	.25586119 01	AZR	.28152375 03
LTS	.26803199 00	LNS	.26370297 03	LTE	-.67462990 01	LNE	.35330678 03				
ALT	.39081534 05	SHA	-.32880578 05	ALP	.13601431 03	DR	.87929030-01	DP	.26515014-02	ASD	.24402558 01
HGE	.26698361 03	SVL	-.43999056 02	HNG	.21456112 03	SIA	.61539737 02				
SAC	.00000000 00										

CASE 1 SPACE TRAJECTORIES

SELENOCENTRIC CONIC ORBITAL B.T AND B.R EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE JULIAN DATE 2437693.45370954 JAN. 28,1962 22 53 20.504

SMA	-.14690007 04	ECC	.28756182 02	INC	.11306473 03	LAN	.19394188 03	APF	.27033515 03	RCA	.40773851 05
VH	.18264797 01	C3	.33360281 01	C1	.77109045 05	SLR	.12132742 07	APO	.00000000 00	TFP	.10384959 04
TA	.27576884 01	EA	.26643927 01	MA	.73981009 02	DAI	-.15251624 01	RAI	.19459148 03	MTA	.91992867 02
WX	-.22167788 00	WY	.89295833 00	WZ	-.39177082 00	PX	.88713461-01	PY	-.38163237 00	PZ	-.92004710 00
QX	-.97107613 00	QY	-.23870943 00	QZ	.53820269-02	RX	-.60884448-01	RY	.33331728 00	RZ	-.94084679 00
SXO	-.97357380 00	SYO	-.22529373 00	SZO	.37373530-01	DAO	.21418440 01	RAO	.19302941 03	TF	.50053195 02
SXI	-.96740376 00	SYI	-.25183636 00	SZI	-.26615986-01	TX	-.24581100 00	TY	.90855823 00	TZ	.33778531 00
BX	.12242910 00	BY	-.37310039 00	BZ	-.91967779 00	WX	-.39177082 00	WY	-.33991721-09	WZ	.22167787 00
B.T	-.28696429 05	B.R	.30964746 05	B	.42217300 05	PER	.27014573 04	DEF	.99758138 00		
OP1	.00000000 00	OY	.00000000 00	OPZ	.00000000 00						
BTE	-.16545368 05	BRE	.38840073 05	BTD	-.28696429 05	BRD	.30964746 05				
GP	-.18563216 01	IR	.28507701 04	THA	.13282266 03						
ZAE	.15212313 03	ZAP	.11463090 03	ZAC	.94112606 02	ETE	.38340047 02	ETS	.22620765 03	ETC	.12000633 03

L MATRIX FOR MAPPING FORWARD

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	-.32003095 03	-.10012508 03	-.10533019 03	-.19399971-02	-.86762449-03	-.51355974-03	.00000000 00	.00000000 00	.00000000 00
Y	-.56199467 03	-.10352733 03	-.26851369 03	-.32729419-02	-.13678745-02	-.12682702-02	.00000000 00	.00000000 00	.00000000 00
Z	-.10611928 02	-.42410152 02	-.55168863 02	-.72630987-04	-.24625501-03	-.35901493-03	.00000000 00	.00000000 00	.00000000 00
DX	.53975892 06	.15863790 06	.22477544 06	.32271492 01	.14773051 01	.11250472 01	.00000000 00	.00000000 00	.00000000 00
DY	-.43259392 06	-.47805530 05	-.20057520 06	-.24891998 01	-.91773847 00	-.90386219 00	.00000000 00	.00000000 00	.00000000 00
DZ	.36941056 06	.96355694 05	.17562672 06	.21898377 01	.99198271 00	.85742155 00	.00000000 00	.00000000 00	.00000000 00
KE	.20914232 02	.44538134 01	.93711682 01	.12417692-03	.52391998-04	.45258174-04	.10000000 01	.00000000 00	.00000000 00
KM	-.47596931 00	-.96807479-02	.24962425 00	-.11856580-04	.28767463-05	.13178243-04	.00000000 00	.10000000 01	.00000000 00
RIO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01
LAO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

	LAO1	LOO1	RIO3	LAO3	LOO3	RIO4	LAO4	LOO4	RIO5
X	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Y	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO1	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO1	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO3	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO3	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00
LAO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00
LOO4	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00
RIO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01
LAO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LOO5	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

COVARIANCE MATRIX AT IMPACT

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.94369573 03	.54969376 03	.38562757 03	.61485250-02	.36399217-02	.21955265-02	.10362232 03	-.36351972 01	.75518160 00
Y	.54969376 03	.58011016 03	.63447124 03	.35901742-02	.36764908-02	.39570743-02	.85866442 02	.39177324 01	.19555575 00
Z	.38562757 03	.63447124 03	.40593114 04	.28699780-03	.83288914-02	.23948276-01	.17809879 03	.97804239 01	.23826759 00
DX	.61485250-02	.35901742-02	.28699780-03	.43604842-07	.20053411-07	-.12261989-08	.60512840-03	-.24424814-03	.46927160-05
DY	.36399217-02	.36764908-02	.83288914-02	.20053411-07	.29515008-07	.50798211-07	.68295833-03	.10179164-03	.18715798-05
DZ	.21955265-02	.39570743-02	.23948276-01	-.12261989-08	.50798211-07	.14520186-06	.10631824-02	.35013695-03	.10268435-05
KE	.10362232 03	.85866442 02	.17809879 03	.60512840-03	.68295833-03	.10631824-02	.16714538 02	.83311486 00	.70988747-01
KM	-.36351972 01	.39177324 01	.97804239 01	-.24424814-03	.10179164-03	.35013695-03	.83311486 00	.24992497 02	-.20807281-03
RIO1	.75518160 00	.19555575 00	.23826759 00	.46927160-05	.18715798-05	.10268435-05	.70988747-01	-.20807281-03	.35725950-02
LAO1	.91450283-02	.42191679-02	.26020476-02	.58784685-07	.29112460-07	.14040834-07	.94290238-03	-.60232531-05	-.16249948-06
LOO1	-.18541110-02	-.80894076-02	-.20887084-02	-.18741120-07	-.35309449-07	-.22356298-07	-.60407443-03	.10897909-04	.29051179-06
RIO3	-.37650266 00	-.20697683 00	-.20381641 00	-.23711588-05	-.14846401-05	-.12028745-05	-.40313875-01	.23819413-03	.10607285-04
LAO3	.79032963-02	.43483385-02	.42923827-02	.49768970-07	.31197191-07	.25333999-07	.84685365-03	-.49562531-05	-.22263145-06
LOO3	.67605833-02	.33700191-02	.23226529-02	.43037541-07	.23541139-07	.13572537-07	.66544878-03	-.84657779-05	-.19359830-06
RIO4	-.15573118-02	-.22452462-02	-.35322437-02	-.10171275-07	-.14943496-07	-.20961552-07	-.32540672-03	-.72050949-05	-.51387841-06
LAO4	-.11171073-04	.14878106-04	.18151092-03	-.14261371-09	.28241212-09	.10070433-08	.53246766-05	-.24381836-06	.87044740-08
LOO4	-.31267042-03	-.38922634-03	-.28656409-03	-.21910899-08	-.22102095-08	-.18358451-08	-.49769515-04	-.18283300-05	-.77801494-07
RIO5	.75503103 00	.19551710 00	.23822097 00	.46917798-05	.18712092-05	.10266450-05	.70974635-01	-.20802606-03	.35718804-02
LAO5	.91432290-02	.42183723-02	.26015322-02	.58773211-07	.29106851-07	.14037987-07	.94271845-03	-.60221336-05	-.16243156-06
LOO5	-.18540925-02	-.80882294-02	-.20889718-02	-.18739590-07	-.35305369-07	-.22355977-07	-.60402025-03	.10893364-04	.29039996-06

	LAO1	LOO1	RIO3	LAO3	LOO3	RIO4	LAO4	LOO4	RIO5
X	.91450283-02	-.18541110-02	-.37650266 00	.79032963-02	.67605833-02	-.15573118-02	-.11171073-04	-.31267042-03	.75503103 00
Y	.42191679-02	-.80894076-02	-.20697683 00	.43483385-02	.33700191-02	-.22452462-02	.14878106-04	-.38922634-03	.19551710 00
Z	.26020476-02	-.20887084-02	-.20381641 00	.42923827-02	.23226529-02	-.35322437-02	.18151092-03	-.28656409-03	.23822097 00
DX	.58784685-07	-.18741120-07	-.23711588-05	.49768970-07	.43037541-07	-.10171275-07	-.14261371-09	-.21910899-08	.46917798-05
DY	.29112460-07	-.35309449-07	-.14846401-05	.31197191-07	.23541139-07	-.14943496-07	.28241212-09	-.22102095-08	.18712092-05
DZ	.14040834-07	-.22356298-07	-.12028745-05	.25333999-07	.13572537-07	-.20961552-07	.10070433-08	-.18358451-08	.10266450-05
KE	.94290238-03	-.60407443-03	-.40313875-01	.84685365-03	.66544878-03	-.32540672-03	.53246766-05	-.49769515-04	.70974635-01
KM	-.60232531-05	.10897909-04	.23819413-03	-.49562531-05	-.84657779-05	-.72050949-05	-.24381836-06	-.18283300-05	-.20802606-03
RIO1	-.16249948-06	.29051179-06	.10607285-04	-.22263145-06	-.19359830-06	-.51387841-06	.87044740-08	-.77801494-07	.35718804-02
LAO1	.99188179-06	.94983021-08	.24139406-06	-.50518291-08	-.58133570-08	-.13666584-07	-.23225030-09	-.28667766-08	-.16245864-06
LOO1	.94983021-08	.97930631-06	-.32393495-06	.67283124-08	.12682097-07	.31267427-07	.70373471-09	.70248534-08	.29044823-06
RIO3	.24139406-06	-.32393495-06	.35872756-02	.26745737-06	.19559927-06	.42986467-06	.85053940-08	.97121497-07	.10604915-04
LAO3	-.50518291-08	.67283124-08	.26745737-06	.99437735-06	-.40311635-08	-.90462893-08	-.17772157-09	-.20413242-08	-.22258171-06
LOO3	-.58133570-08	.12682097-07	.19559927-06	-.40311635-08	.98931442-06	-.55299833-08	-.23092092-09	-.14932857-08	-.19355538-06
RIO4	-.13666584-07	.31267427-07	.42986467-06	-.90462893-08	-.55299833-08	.35998471-02	.97137438 38	-.24093774-07	-.51377588-06
LAO4	-.23225030-09	.70373471-09	.85053940-08	-.17772157-09	-.23092092-09	.97137438 38	.36362735 37	-.42678685-09	.87026493-08
LOO4	-.28667766-08	.70248534-08	.97121497-07	-.20413242-08	-.14932857-08	-.24093774-07	-.42678685-09	.99483761-06	-.77786132-07
RIO5	-.16245864-06	.29044823-06	.10604915-04	-.22258171-06	-.19355538-06	-.51377588-06	.87026493-08	-.77786132-07	.35726057-02
LAO5	.99168323-06	.94965146-08	.24134710-06	-.50508459-08	-.58122665-08	-.13664290-07	-.23218597-09	-.28662517-08	.92882255 37
LOO5	.94932898-08	.97911246-06	-.32374411-06	.67243169-08	.12677660-07	.31263067-07	.70356433-09	.70237436-08	.29033642-06

	LAO5	LOO5
X	.91432290-02	-.18540925-02
Y	.42183723-02	-.80882294-02
Z	.26015322-02	-.20889718-02
DX	.58773211-07	-.18739590-07
DY	.29106851-07	-.35305369-07
DZ	.14037987-07	-.22355977-07
KE	.94271845-03	-.60402025-03
KM	-.60221336-05	.10893364-04
RIO1	-.16243156-06	.29039996-06
LAO1	.99168323-06	.94932898-08
LOO1	.94965146-08	.97911246-06
RIO3	.24134710-06	-.32374411-06
LAO3	-.50508459-08	.67243169-08
LOO3	-.58122665-08	.12677660-07
RIO4	-.13664290-07	.31263067-07
LAO4	-.23218597-09	.70356433-09
LOO4	-.28662517-08	.70237436-08
RIO5	.92882255 37	.29033642-06
LAO5	.23303447 36	.70554480 38
LOO5	.70554480 38	.97931862-06

IMPACT PARAMETERS 62/01/28 231039

N MATRIX

	B.R	B.T	TL	C3	S.TS	S.RS
B.R	.33045602 04	-.15337746 04	-.39870145-01	.24568195-01	-.74480856-02	-.81062960-02
B.T	-.15337746 04	.10641358 04	.70319035-01	-.22886968-01	.35480126-02	.38618485-02
TL	-.39870144-01	.70319033-01	.21386229-04	-.43680483-05	.12681430-06	.13769372-06
C3	.24568195-01	-.22886967-01	-.43680483-05	.10275567-05	-.57473032-07	-.62512001-07
S.TS	-.74480854-02	.35480126-02	.12681430-06	-.57473031-07	.17461116-07	.19001614-07
S.RS	-.81062959-02	.38618486-02	.13769372-06	-.62512001-07	.19001614-07	.20678039-07

NORMALIZED N MATRIX

	B.R	B.T	TL	C3	S.TS	S.RS
B.R	.10000000 01	-.81790875 00	-.14997627 00	.42161127 00	-.98050656 00	-.98064008 00
B.T	-.81790674 00	.10000000 01	.46613022 00	-.69212865 00	.82309623 00	.82326950 00
TL	-.14997627 00	.46613020 00	.10000000 01	-.93178871 00	.20752246 00	.20705816 00
C3	.42161127 00	-.69212864 00	-.93178871 00	.10000000 01	-.42906710 00	-.42885041 00
S.TS	-.98050655 00	.82309623 00	.20752247 00	-.42906709 00	.99999999 00	.99999958 00
S.RS	-.98064007 00	.82326952 00	.20705816 00	-.42885042 00	.99999957 00	.99999999 00

B.R	.30964755 05
B.T	-.28696710 05
DEL B	.66096263 02
DEL S	.30407755 02
DEL T	.16648289 02
SMAA	.63903550 02
SMIA	.16883492 02
THETA	.26928374 02
TL	.49302809 02
B	.42217499 05

APPENDIX C

Ranger III Postmidcourse Orbit Determination Program Printout

The material in this appendix is a data-processing printout of data derived from the postmidcourse orbit determination program (ODP) for the *Ranger III* mission.

```
PAGE HEADING                                                            (23
(RA-3  PCST M/C 8 MAY 63   )
EPCCH                                                                   (01
62010271C12806000
PRCBE PCSITION ANC VELCCITY AT EPOCH                                    (02
X=-129823.01 Y=-82372.405 Z=-49539.305
DX=-1.6962900 DY=-1.5446434 DZ=-.52199901
CTHER PARAMETER VALUES                                                  (03
SCLAR PRESSURE OFF
KE=35860C.49 KP=4900.6295 RI(1)=6375.6471 LA(1)=-25.7324
LC(1)=27.705732 RI(3)=6372.0880 LA(3)=35.119393 LO(3)=243.19258
ESTIMATE THESE PARAMETERS                                               (04
X Y Z DX DY DZ KE KP        RI(1) LA(1) LC(1) RI(3) LA(3) LO(3)
CCVARIANCE MATRIX OF ESTIMATED PARAMETERS                               (10
RC1*.35260473EC2 .74585368EC1 -.52954689E02 .73821340E-03
.17900841E-03 -.79484559E-03 .80303995E01 .12171235E01
.13537820E00 .15486453E-02 .28884C9E-03 -.5967936CE-01
.12517853E-02 .1163E884E-02
RC2*.74585368EC1 .38410008E02 .94297552E01 .47514650E-03
.67882183E-03 .14917877E-03 .15057467E02 .59472791E00
.13938756E-02 .70864248E-03 -.26661545E-02 -.33384783E-01
.70155058E-03 .52653177E-03
RC3*-.52954689E02 .94297552EC1 .43179251E03 .30495972E-03
.71841831E-03 .76929104E-02 .53858842E02 .69823132E00
.56234978E-01 .42502902E-03 -.23453814E-03 -.44994346E-01
.54920848E-03 .35746299E-03
RC4*.73821340E-03 .47514650E-03 .3C495972E-03 .1
.11489401E-07 .783C3553E-08 .49648774E-03 .3C061241E-04
.35086822E-05 .45785878E-07 -.43085181E-08 -.18532C94E-05
.38899358E-07 .33468C38E-07
RC5*.175C0841E-03 .67882183E-03 .71841831E-03 .11489401E-07
.1 .13311755E-C7 .38C83891E-03 .15986277E-C4
.63216434E-06 .17487C3CE-07 -.42123030E-07 -.9C8C8161E-06
.19078662E-07 .14694612E-07
RC6*-.75484559E-03 .14917877E-03 .76929104E-02 .78303553E-08
.13311755E-07 .1 .10167814E-02 .21551038E-04
.12520838E-05 .1352654CE-07 -.10767688E-07 -.11433180E-05
.24080612E-07 .12812104E-07
RC7*.8C3C3995EC1 .15C57467E02 .53858842E02 .49648774E-03
.38083851E-03 .10167814E-02 .16714399E02 .83311842E00
.70988737E-01 .94290324E-03 -.60407558E-03 -.4C313831E-01
.84685276E-03 .66544582E-03
RC8*.12171235EC1 .59472791E00 .65823132E00 .30061241E-04
.15986277E-04 .21551C38E-04 .83311842E00 1C000.
-.20807646E-03 -.60232700E-05 .10897594E-04 .23819525E-03
-.49562767E-05 -.84658466E-05
RC9*.12537820EC0 .13938756E-02 .56234978E-C1 .39086822E-05
.63216434E-06 .12520838E-05 .70988737E-01 -.20807646E-03
.35725952E-02 -.16250188E-C6 .29C51670E-06 .10607310E-04
-.22263198E-06 -.19360254E-06
R10*.15486453E-02 .7C864248E-03 .42502902E-03 .45789878E-07
.17487030E-07 .13526540E-07 .94290324E-03 -.60232TC0E-05
-.16250188E-06 .99188183E-06 .94503196E-08 .24139289E-06
-.50518043E-08 -.58133829E-08
R11*.28884809E-03 -.26661545E-02 -.23453814E-03 -.43085181E-08
-.42123030E-07 -.10767688E-07 -.604C7558E-03 .10897994E-04
.29051670E-06 .94983196E-08 .97930617E-06 -.32393609E-06
.67283361E-08 .12682206E-07
R12*-.59679360E-01 -.33384783E-01 -.44994346E-C1 -.18532094E-05
-.90808161E-06 -.11433180E-05 -.40312831E-C1 .23819525E-03
.1060731CE-04 .24139289E-06 -.323936C9E-06 .35872756E-02
.26745685E-06 .19560002E-06
R13*.12517853E-02 .7C155058E-03 .54520848E-03 .38859358E-07
.19078662E-07 .24080612E-07 .846E5276E-03 -.49562767E-05
-.22263198E-06 -.50518043E-08 .67283361E-08 .26745685E-06
.59437735E-06 -.40311787E-08
R14*.11638884E-02 .52653177E-03 .35746299E-03 .33468038E-07
.14694612E-07 .12812104E-07 .66544582E-03 -.84658466E-05
-.19360254E-06 -.58133829E-08 .12682206E-07 .19560002E-06
-.40311787E-09 .98931430E-06
STATISTICS,PLCT AND/CR PRINT RESICLALS FCR THESE PARAMETERS            (14
CC3(1)=2. CC3(3)=4.
WEIGHTS BY DATA TYPE AND STATION                                        (16
CC3(1)=1.0 CC3(3)*.6
REJECTICN SIGMAS                                                        (06
CC3(1)*4.  CC3(3)*4.
WEIGHT TABLES                                                           (25
SSC*.1E-2,.5E-2,.15E-1,.3E-1,.2E-2,.5E-2,.15E-1,.5E-1,
.1E-3,.2E-2,.1E-1,.2E-1,.1E-9,.1E-8,.1E-7,.1E-6,
.5E-1,.1E0,.2EC,.3EC,.5E-3,.5E-3,.1E-2,.1E-2,
.1E-4,.3E-4,.1E-3,.3E-3,.5E-11,.15E-10,.28E-10,.5E-10,
.7E-13,.14E-12,.28E-12,.5E-12,.5E-1,.1E0,.2E0,.3E0,
.25E-4,.25E-5,.5E-4,.5E-5;0,C,0,C,
.3E-2,.1E-1,.3E-1,.1E0,.5E-2,.1E-1,.2E-1,.5E-1,
.12E-2,.6E-2,.6E-1,.6E0,.5E-1,.1E0,.2E0,.3E0,
0,C,0,C,C,0,0,C,
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.12E-2,.6E-2,.6E-1,.6EC,.5E-1,.1E0,.2EC,.3E0,
C,C,0,0,C,0,0,C,
C,C,0,0,.45,.B3,.10,.25
.12E-2,.6E-2,.6E-1,.6E0,0;C,C,0,
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.1E-7,.1E-6,.3E-6,.1E-5,.3E-7,.1E-6,.3E-6,.1E-5,
.6E-0,.18E-1,.6E1,.18E2,.25E-4,.25E-5,.5E-4,.5E-5,
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.5E-12,.5E-11,.15E-10,.5E-10,.1E-1,.1E0,.31EC,.1E1,
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.4E-6,.4E-5,.8E-5,.12E-4,.26EC,.18E1,.6E1,.18E2,
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.25E-4,.25E-5,.5E-4,.5E-5;C,C,0,C,
.4E-6,.4E-6,.4E-6,.4E-6,.4E-6,.4E-6,.4E-6,.4E-6,
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.1E1,.1E1,.1E1,.1E1,.1E4,.1E4,.1E4,.1E4,
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.6E3,.6E3,.6E3,.6E3,.1E1,.1E1,.1E1,.1E1,
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.1E1,.1E1,.1E1,.1E1,.1E4,.1E4,.1E4,.1E4,
C,C,0,C,C,0,0,C,
CFFLINE CCNTROL                                                    127
KEY(6) KEY(14) KEY(16)
ENC CATA                                                           100
```

INPUT CBVARIANCE MATRIX OF ESTIMATED PARAMETERS

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.3526C472 02	.74585367 01	-.52554688 02	.73821340-03	.17900841-03	-.79484558-03	.80303994 01	.12171235 01	.13537820 00
Y	.74585367 01	.3841C008 02	.94297551 01	.47514649-03	.67882181-03	.14917877-03	.15057467 02	.59472790 00	.13938756-02
Z	-.52954688 02	.94297551 01	.43179251 C3	.30495971-03	.71841830-03	.76929103-02	.53858841 02	.69823132 00	.56234977-01
DX	.73821340-03	.47514649-03	.30495971-03	.99999999-01	.11489401-07	.78303552-08	.49648773-03	.30061240-04	.39086821-05
DY	.17900841-03	.67882181-03	.71841830-03	.11489401-07	.99999999-01	.13311755-07	.38083890-03	.15986277-04	.63216433-06
DZ	-.79484558-03	.14917877-03	.76929103-02	.78303552-08	.13311755-07	.99999999-01	.10167814-02	.21551038-04	.12520838-05
KE	.80303994 01	.15057467 02	.53858841 02	.49648773-03	.38083890-03	.10167814-02	.16714399 02	.83311842 00	.70988736-01
KM	.12171235 01	.59472790 00	.69823132 00	.30061240-04	.15986277-04	.21551038-04	.83311842 00	.10000000 05	-.20807646-03
RIO1	.13537820 00	.13938756-02	.56234977-01	.39086821-05	.63216433-06	.12520838-05	.70988736-01	-.20807646-03	.35725951-02
LAC1	.15486453-02	.70864247-03	.42502901-03	.45789877-07	.17487030-07	.13526540-07	.94290323-03	-.60232699-05	-.16250188-06
LCC1	.28884809-03	-.26661545-02	-.23453814-03	-.43085181-08	-.42123030-07	-.10767688-07	-.60407557-03	.10897994-04	.29051670-06
RIC3	-.59675359-01	-.33384782-01	-.44594345-01	-.18532094-05	-.90808161-06	-.11433180-05	-.40313830-01	.23819525-03	.10607310-04
LAC3	.12517853-02	.70155096-03	.94920848-03	.38899358-07	.19078662-07	.24080612-07	.84685275-03	-.49562766-05	-.22263198-06
LCC3	.11638884-02	.52653176-03	.35746298-03	.33468037-07	.14694612-07	.12812104-07	.66544980-03	-.84658466-05	-.19360254-06

	LAC1	LCO1	RIO3	LAO3	LCO3
X	.15486453-02	.28884809-03	-.59675359-01	.12517853-02	.11638884-02
Y	.70864247-03	-.26661545-02	-.33384782-01	.70155096-03	.52653176-03
Z	.42502901-03	-.23453814-03	-.44594345-01	.94920848-03	.35746298-03
DX	.45789877-07	-.43085181-08	-.18532094-05	.38899358-07	.33468037-07
DY	.17487030-07	-.42123030-07	-.90808161-06	.19078662-07	.14694612-07
DZ	.13526540-07	-.10767688-07	-.11433180-05	.24080612-07	.12812104-07
KE	.94290323-03	-.60407557-03	-.40313830-01	.84685275-03	.66544980-03
KM	-.60232699-05	.10897994-04	.23819525-03	-.49562766-05	-.84658466-05
RIO1	-.16250188-06	.29051670-06	.10607310-04	-.22263198-06	-.19360254-06
LAC1	.59188182-06	.94983196-08	.24135289-06	-.50518042-08	-.58133829-08
LCC1	.94983196-08	.97530616-06	-.32393608-06	.67283360-08	.12682206-07
RIC3	.24135289-06	-.32393608-06	.35872756-02	.26745684-06	.19560002-06
LAC3	-.50518042-08	.67283360-08	.26745684-06	.99437733-06	-.40311787-08
LCC3	-.58133829-08	.12682206-07	.19560002-06	-.40311787-08	.98931427-06

RA-3 POST M/C 8 MAY 63

EPOCH 62/01/27 102806.000 CLOCK 142550 SOS .46909 03 OSOS .46985 03

C	CC	STDEVCQ	OLC Q	NEW Q	NOMINAL Q	DQ (NOM)
X	.10770547-03	.56543867 01	-.12982526 06	-.12982526 06	-.12982301 06	-.22529297 01
Y	.48825371-02	.60498124 01	-.82372683 05	-.82372683 05	-.82372404 05	-.27832031 00
Z	-.15935229-02	.11687756 02	-.49526643 05	-.49526645 05	-.49539305 05	.12659668 02
DX	.79154456-07	.12448444-03	-.16954420 01	-.16954419 01	-.16962900 01	.84811448-03
DY	-.53594959-07	.14996659-03	-.15453653 01	-.15453654 01	-.15446434 01	-.72202086-03
DZ	-.10257217-06	.23138265-03	-.52116165 00	-.52116175 00	-.52199901 00	.83725899-03
KE	.88000236-03	.25301924 01	.39860163 06	.39860163 06	.39860049 06	.11406250 01
KM	.26748626-02	.43733264 01	.49005798 04	.49005824 04	.49006295 04	-.47058105-01
STA 1						
RI	.31011119-04	.57225586-01	.63756455 04	.63756455 04	.63756470 04	-.15258789-02
LA	-.13738194-06	.96939708-03	-.25732475 02	-.25732475 02	-.25732400 02	-.74863434-04
LC	.13140353-06	.94483679-03	.27705492 02	.27705492 02	.27705732 02	-.23937225-03
STA 3						
RI	.19803603-04	.57785259-01	.63721053 04	.63721053 04	.63720880 04	.17333984-01
LA	.62596561-06	.93525052-03	.35119003 02	.35119004 02	.35119393 02	-.38862228-03
LC	.15540603-05	.97722478-03	.24319265 03	.24319265 03	.24319258 03	.74386597-04

J MATRIX

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.21014325 02	.13083070 02	.80538094 01	.49231542 06	.34921392 06	.14780831 06	-.41307728 02	-.85744339 00	.33908542 02
Y	.13083070 02	.82470727 01	.50480376 01	.27781274 06	.19736949 06	.83578046 05	-.26328276 02	-.47225292 00	.23895496 02
Z	.80538094 01	.50480376 01	.31678700 01	.13371684 06	.94621927 05	.44644020 05	-.16693819 02	.11746772-01	.14529914 02
DX	.49231542 06	.27781274 06	.13371684 06	.83724081 11	.59431066 11	.24985231 11	.16262469 06	-.15596777 06	-.27006851 06
DY	.34921392 06	.19736949 06	.94621927 05	.59431066 11	.42246945 11	.17702370 11	.11533471 06	-.11333159 06	-.19528210 06
DZ	.14780831 06	.83578046 05	.44644020 05	.24985231 11	.17702370 11	.81065923 10	.49613418 05	-.12290396 05	-.75487574 05
KE	-.41307728 02	-.26328276 02	-.16693819 02	.16262469 06	.11533471 06	.49613418 05	.99449186 02	-.23467137 00	-.89842426 02
KM	-.85744339 00	-.47225292 00	.11746772-01	-.15596777 06	-.11333159 06	-.12290396 05	-.23467137 00	.22138758 01	.50296658 00
RIO1	.33908542 02	.23895496 02	.14529914 02	-.27006851 06	-.19528210 06	-.75487574 05	-.89842426 02	.50296658 00	.48498265 03
LAO1	.54087685 03	.40703397 03	.25547002 03	-.14009214 08	-.10132436 08	-.39148953 07	-.17093013 04	.26105424 02	.63960180 04
LCO1	.12981078 04	.97620513 03	.56674513 03	-.38923348 08	-.27675476 08	-.11030002 08	-.37181844 04	.67433377 02	.66904791 04
RIO3	.17560261 02	.10715465 02	.80587861 01	-.10410755 07	-.71449070 06	-.23046417 06	-.54742012 02	.32806201 01	-.57903863 00
LAO3	-.12839089 04	-.78434043 03	-.60245523 03	.86042995 08	.59145141 08	.19347081 08	.41497411 04	-.26723543 03	.43781002 02
LCO3	-.37292701 04	-.21458880 04	-.12005467 04	-.36070440 09	-.25381657 09	-.10794999 09	.28333385 04	.74932415 03	.35015863 02

	LAO1	LCO1	RIO3	LAO3	LCO3
X	.54087685 03	.12981078 04	.17560261 02	-.12839089 04	-.37292701 04
Y	.40703397 03	.97620513 03	.10715465 02	-.78434043 03	-.21458880 04
Z	.25547002 03	.56674513 03	.80587861 01	-.60245523 03	-.12005467 04
DX	-.14009214 08	-.38923348 08	-.10410755 07	.86042995 08	-.36070440 09
DY	-.10132436 08	-.27675476 08	-.71449070 06	.59145141 08	-.25381657 09
DZ	-.39148953 07	-.11030002 08	-.23046417 06	.19347081 08	-.10794999 09
KE	-.17093013 04	-.37181844 04	-.54742012 02	.41497411 04	.28333385 04
KM	.26105424 02	.67433377 02	.32806201 01	-.26723543 03	.74932415 03
RIO1	.63960180 04	.66904791 04	-.57903863 00	.43781002 02	.35015863 02
LAO1	.12448318 07	.13558040 06	-.11618334 04	.87769867 05	.77847776 05
LCO1	.13558040 06	.16958061 07	.20687774 04	-.15627988 06	-.13904868 06
RIO3	-.11618334 04	.20687774 04	.45200058 03	-.13620598 05	-.38159790 03
LAO3	.87769867 05	-.15627988 06	-.13620598 05	.20655705 07	.19479783 03
LCO3	.77847776 05	-.13904868 06	-.38159790 03	.19479783 03	.31078671 07

COVARIANCE MATRIX OF ESTIMATED PARAMETERS

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.31972089 02	.70346382 01	-.46080845 02	-.29744562-03	.73934303-05	.46399308-03	.76761791 01	-.34230098 01	.11915867 00
Y	.70346382 01	.36600230 02	-.96238941 01	-.16957929-03	-.20251687-03	.43314672-03	.11114032 02	-.81427477 01	-.16195426-01
Z	-.46080845 02	-.96238941 01	.13660365 03	.26806350-03	-.10838882-03	-.43325264-03	.94512839 00	-.92799396 01	-.14822322 00
DX	-.29744562-03	-.16957929-03	.26806350-03	.15496377-07	-.11941126-07	-.14650657-07	-.12450484-03	.22293999-03	-.75416388-06
DY	.73934303-05	-.20251687-03	-.10838882-03	-.11941126-07	.22489980-07	-.96528486-08	-.67729070-04	.22663168-03	.59262186-06
DZ	.46399308-03	.43314672-03	-.43325264-03	-.14650657-07	-.96528486-08	.53537932-07	.23065276-03	-.93531435-03	-.23109165-06
KE	.76761791 01	.11114032 02	.94512839 00	-.12450484-03	-.67729070-04	.23065276-03	.64018737 01	-.50388308 01	.24039779-01
KM	-.34230098 01	-.81427477 01	-.92799356 01	.22293999-03	.22663168-03	-.93531435-03	-.50388308 01	.19125984 02	.20529347-01
RIO1	.11915867 00	-.16195426-01	-.14822322 00	-.75416388-06	.59262186-06	-.23109165-06	.24039779-01	.20529347-01	.32747678-02
LAO1	.12815689-02	.48504370-03	-.18393289-02	-.81653884-08	.38381225-08	-.27422604-08	.37732016-03	.23380549-03	-.40492110-05
LCO1	-.18770524-03	-.27836085-02	-.88329165-04	.16944927-07	.13785669-07	-.41181553-07	-.81753717-03	.85833895-03	-.26660435-05
RIO3	-.37302471-01	-.23805624-01	-.14529440-01	.20144747-05	-.21722076-06	-.43987631-05	-.22944365-01	.80609125-01	.15887286-03
LAO3	.75512982-03	.49967496-03	.42010485-03	-.43560128-07	.47673475-08	.95341980-07	.48945912-03	-.17580282-02	-.33958655-05
LCO3	.14002797-02	.51047427-03	-.54154107-03	.49527983-08	-.49697121-07	.72282452-07	.60933745-03	-.13938610-02	.48530094-06

	LAO1	LCO1	RIO3	LAO3	LCO3
X	.12815689-02	-.18770524-03	-.37302471-01	.75512982-03	.14002797-02
Y	.48504370-03	-.27836085-02	-.23805624-01	.49967496-03	.51047427-03
Z	-.18393289-02	-.88329165-04	-.14529440-01	.42010485-03	-.54154107-03
DX	-.81653884-08	.16944927-07	.20144747-05	-.43560128-07	.49527983-08
DY	.38381225-08	.13785669-07	-.21722076-06	.47673475-08	-.49697121-07
DZ	-.27422604-08	-.41181553-07	-.43587631-05	.95341980-07	.72282452-07
KE	.37732016-03	-.81753717-03	-.22944365-01	.48945912-03	.60933745-03
KM	.23380549-03	.85833895-03	.80609125-01	-.17580282-02	-.13938610-02
RIO1	-.40492110-05	-.26660435-05	.15887286-03	-.33958655-05	.48530094-06
LAO1	.93973073-06	-.36671005-07	.24965332-05	-.53720807-07	.75306807-08
LCO1	-.36671005-07	.89272224-06	.31836596-05	-.70665539-07	.60404067-07
RIO3	.24965332-05	.31836596-05	.33391362-02	.57155024-05	-.15686585-05
LAO3	-.53720807-07	-.70665539-07	.57155024-05	.87469430-06	.35255173-07
LCO3	.75306807-08	.60404067-07	-.15686585-05	.35255173-07	.95496827-06

CORRELATION MATRIX OF ESTIMATED PARAMETERS

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.10000000 01	.20564320 00	-.69727448 00	-.42257810 00	.87189852-02	.35466611 00	.53654486 00	-.13842379 00	.36825605 00
Y	.20564320 00	.10000000 01	-.13610616 00	-.22517275 00	-.22321572 00	.30942993 00	.72606612 00	-.30776355 00	-.46779999-01
Z	-.69727448 00	-.13610616 00	.10000000 01	.18424346 00	-.61838478-01	-.16020618 00	.31959950-01	-.18155244 00	-.22161279 00
DX	-.42257810 00	-.22517275 00	.18424346 00	.99999997 00	-.63964008 00	-.50864084 00	-.39529162 00	.40950668 00	-.10586694 00
DY	.87189852-02	-.22321572 00	-.61838478-01	-.63964008 00	.10000000 01	-.27818273 00	-.17849540 00	.34555263 00	.69054639-01
DZ	.35466611 00	.30942993 00	-.16020618 00	-.50864084 00	-.27818273 00	.99999999 00	.39398012 00	-.92430416 00	-.17452723-01
KE	.53654486 00	.72606612 00	.31959950-01	-.39529162 00	-.17849540 00	.39398012 00	.10000000 01	-.45536991 00	.16603004 00
KM	-.13842379 00	-.30776355 00	-.18155244 00	.40950668 00	.34555263 00	-.92430416 00	-.45536991 00	.99999997 00	.82030047-01
RIO1	.36825605 00	-.46779999-01	-.22161279 00	-.10586694 00	.69054639-01	-.17452723-01	.16603004 00	.82030047-01	.99999999 00
LAO1	.23380551 00	.82706044-01	-.16234037 00	-.67664370-01	.26401134-01	-.12225769-01	.15383485 00	.55149439-01	-.72992531-01
LCO1	-.35134414-01	-.48697657 00	-.79986148-02	.14406764 00	.97291549-01	-.18837087 00	-.34197612 00	.20772499 00	-.49308159-01
RIO3	-.11416553 00	-.68107283-01	-.21512984-01	.28004618 00	-.25066270-01	-.32899000 00	-.15692980 00	.31897397 00	.48044356-01
LAO3	.14279334 00	.88311554-01	.38432478-01	-.37415014 00	.33990232-01	.44058045 00	.20684010 00	-.42981917 00	-.63450065-01
LCO3	.25341645 00	.86345057-01	-.47413910-01	.40713748-01	-.33911127 00	.31967421 00	.24643923 00	-.32614677 00	.86781349-02

	LAO1	LCO1	RIO3	LAO3	LCO3
X	.23380551 00	-.35134414-01	-.11416553 00	.14279334 00	.25341645 00
Y	.82706044-01	-.48697657 00	-.68107283-01	.88311554-01	.86345057-01
Z	-.16234037 00	-.79986148-02	-.21512984-01	.38432478-01	-.47413910-01
DX	-.67664370-01	.14406764 00	.28004618 00	-.37415014 00	.40713748-01
DY	.26401134-01	.97291549-01	-.25066270-01	.33990232-01	-.33911127 00
DZ	-.12225769-01	-.18837087 00	-.32899000 00	.44058045 00	.31967421 00
KE	.15383485 00	-.34197612 00	-.15692980 00	.20684010 00	.24643923 00
KM	.55149439-01	.20772499 00	.31897397 00	-.42981917 00	-.32614677 00
RIO1	-.72992531-01	-.49308159-01	.48044356-01	-.63450065-01	.86781349-02
LAO1	.10000000 01	-.40037127-01	.44567529-01	-.59253316-01	.79494675-02
LCO1	-.40037127-01	.10000000 01	.58311117-01	-.79968941-01	.65420449-01
RIO3	.44567529-01	.58311117-01	.10000000 01	.10575702 00	-.27779016-01
LAO3	-.59253316-01	-.79968941-01	.10575702 00	.99999999 00	.38574492-01
LCO3	.79494675-02	.65420449-01	-.27779016-01	.38574492-01	.10000000 01

STATION NUMBER 1 62/01/28

TIME	TC	Q	FRQ	CC3
044911	1	1	79C2.0	.11201289 06 .246 01 -.8945
045011	1	1	79C2.0	.11202244 06 .246 01 .5645
045021	1	1	79C2.0	.11202403 06 .246 01 .9746
045041	1	1	79C2.0	.11202720 06 .246 01 .7949
045051	1	1	79C2.0	.11202879 06 .246 01 .2051
045111	1	1	79C2.0	.11203197 06 .246 01 -1.5727
045121	1	1	79C2.0	.11203356 06 .246 01 -.5605
045131	1	1	79C2.0	.11203515 06 .246 01 .8516
045141	1	1	79C2.0	.11203674 06 .246 01 .2627
045151	1	1	79C2.0	.11203832 06 .246 01 .6758
045211	1	1	79C2.0	.11204150 06 .246 01 .4990
045221	1	1	79C2.0	.11204309 06 .246 01 -.0889
045231	1	1	79C2.0	.11204468 06 .246 01 1.3242
045251	1	1	79C2.0	.11204785 06 .247 01 .1514
045301	1	1	79C2.0	.11204944 06 .247 01 .5645
045311	1	1	79C2.0	.11205102 06 .247 01 .9785
045321	1	1	79C2.0	.11205261 06 .247 01 -.6074
045331	1	1	79C2.0	.11205419 06 .247 01 .8066
045341	1	1	79C2.0	.11205578 06 .247 01 -.7793
045351	1	1	79C2.0	.11205736 06 .247 01 .6348
045401	1	1	79C2.0	.11205895 06 .247 01 2.0469
045411	1	1	79C2.0	.11206053 06 .247 01 .4648
045421	1	1	79C2.0	.11206212 06 .247 01 -.1201
045431	1	1	79C2.0	.11206370 06 .247 01 -1.7031
045441	1	1	79C2.0	.11206529 06 .247 01 .7129
045451	1	1	79C2.0	.11206687 06 .247 01 .1270
045511	1	1	79C2.0	.11207004 06 .247 01 -.0400
045531	1	1	79C2.0	.11207321 06 .247 01 1.7930
045551	1	1	79C2.0	.11207637 06 .247 01 .6289
045601	1	1	79C2.0	.11207795 06 .247 01 .0459
045611	1	1	79C2.0	.11207954 06 .247 01 -.5371
045621	1	1	79C2.0	.11208112 06 .247 01 .8809
045631	1	1	79C2.0	.11208270 06 .247 01 .2988
045641	1	1	79C2.0	.11208428 06 .247 01 -1.2813
045651	1	1	79C2.0	.11208586 06 .247 01 1.1367
045701	1	1	79C2.0	.11208744 06 .247 01 .5566
045711	1	1	79C2.0	.11208902 06 .247 01 -.0254
045721	1	1	79C2.0	.11209060 06 .247 01 -.6055
045731	1	1	79C2.0	.11209219 06 .247 01 -1.1875
045741	1	1	79C2.0	.11209376 06 .247 01 -.7656
045751	1	1	79C2.0	.11209535 06 .247 01 -.3457
045801	1	1	79C2.0	.11209693 06 .247 01 -.9258
045811	1	1	79C2.0	.11209850 06 .247 01 -.5059
045821	1	1	79C2.0	.11210008 06 .247 01 .9160
045831	1	1	79C2.0	.11210166 06 .247 01 1.3359
045841	1	1	79C2.0	.11210324 06 .247 01 .7598
045851	1	1	79C2.0	.11210482 06 .247 01 1.1797
045901	1	1	79C2.0	.11210640 06 .247 01 .6035
045911	1	1	79C2.0	.11210797 06 .247 01 1.0234
045921	1	1	79C2.0	.11210955 06 .247 01 -1.5547
045931	1	1	79C2.0	.11211113 06 .247 01 -1.1328
045951	1	1	79C2.0	.11211428 06 .247 01 .7148
050001	1	1	79C2.0	.11211586 06 .247 01 -.8613
050011	1	1	79C2.0	.11211744 06 .247 01 .5625
050021	1	1	79C2.0	.11211901 06 .247 01 -.0127
050031	1	1	79C2.0	.11212059 06 .247 01 -.5898
050041	1	1	79C2.0	.11212216 06 .247 01 -.1641
050051	1	1	79C2.0	.11212374 06 .247 01 -.7402
050101	1	1	79C2.0	.11212531 06 .247 01 -1.3164
050111	1	1	79C2.0	.11212689 06 .247 01 1.1094
050131	1	1	79C2.0	.11213004 06 .247 01 .9629
050141	1	1	79C2.0	.11213161 06 .247 01 .3877
050151	1	1	79C2.0	.11213318 06 .247 01 -1.1875
050211	1	1	79C2.0	.11213633 06 .247 01 -2.3359
050221	1	1	79C2.0	.11213790 06 .247 01 .0957
050231	1	1	79C2.0	.11213948 06 .247 01 1.5234
050241	1	1	79C2.0	.11214105 06 .247 01 .9512
050251	1	1	79C2.0	.11214262 06 .247 01 -.6211
050301	1	1	79C2.0	.11214419 06 .247 01 .8066
050311	1	1	79C2.0	.11214576 06 .247 01 .2354
050321	1	1	79C2.0	.11214734 06 .247 01 1.6641
050331	1	1	79C2.0	.11214890 06 .247 01 -.9063
050341	1	1	79C2.0	.11215048 06 .247 01 -.4775
050351	1	1	79C2.0	.11215205 06 .247 01 -.0479
050401	1	1	79C2.0	.11215362 06 .247 01 -1.6172
050421	1	1	79C2.0	.11215676 06 .247 01 1.2422
050431	1	1	79C2.0	.11215833 06 .247 01 -1.3281
050441	1	1	79C2.0	.11215989 06 .247 01 -.8945
050451	1	1	79C2.0	.11216146 06 .247 01 -1.4648
050501	1	1	79C2.0	.11216303 06 .247 01 -1.0313
050511	1	1	79C2.0	.11216460 06 .247 01 -.5996
050521	1	1	79C2.0	.11216617 06 .247 01 .8340
050541	1	1	79C2.0	.11216930 06 .247 01 -.3018
050551	1	1	79C2.0	.11217087 06 .247 01 -.8691
050601	1	1	79C2.0	.11217244 06 .247 01 -.4355
050611	1	1	79C2.0	.11217400 06 .247 01 -.0020
050621	1	1	79C2.0	.11217557 06 .247 01 -.5684
050631	1	1	79C2.0	.11217713 06 .247 01 -.1328
050641	1	1	79C2.0	.11217870 06 .247 01 .3018
050651	1	1	79C2.0	.11218026 06 .247 01 -1.2656
050701	1	1	79C2.0	.11218183 06 .247 01 -1.8281
050711	1	1	79C2.0	.11218339 06 .247 01 -2.3906
050721	1	1	79C2.0	.11218496 06 .247 01 .0430
050731	1	1	79C2.0	.11218652 06 .247 01 -.5215
050741	1	1	79C2.0	.11218808 06 .247 01 -.0840
050751	1	1	79C2.0	.11218965 06 .247 01 1.3516
050801	1	1	79C2.0	.11219121 06 .247 01 -.2100
050811	1	1	79C2.0	.11219277 06 .247 01 .2266
050841	1	1	79C2.0	.11219746 06 .247 01 .5410
050851	1	1	79C2.0	.11219902 06 .247 01 -.0205
050901	1	1	79C2.0	.11220058 06 .247 01 -.5820
050911	1	1	79C2.0	.11220214 06 .247 01 .8574
050921	1	1	79C2.0	.11220370 06 .247 01 -.7031
050941	1	1	79C2.0	.11220682 06 .247 01 .1777
050951	1	1	79C2.0	.11220838 06 .247 01 .6191
051011	1	1	79C2.0	.11221150 06 .247 01 1.5000
051021	1	1	79C2.0	.11221306 06 .247 01 1.9414
051031	1	1	79C2.0	.11221462 06 .247 01 .3838

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TIME	TC	Q	FRQ	CC3
051041	1	1	79C2.0	.11221617 06 .247 01 -1.1758
051101	1	1	79C2.0	.11221929 06 .247 01 -1.2891
051111	1	1	79C2.0	.11222085 06 .247 01 -.8477
051121	1	1	79C2.0	.11222240 06 .247 01 .5977
051131	1	1	79C2.0	.11222396 06 .247 01 1.0430
051141	1	1	79C2.0	.11222551 06 .247 01 -.5156
051151	1	1	79C2.0	.11222707 06 .247 01 -1.0703
051201	1	1	79C2.0	.11222862 06 .247 01 .3740
051211	1	1	79C2.0	.11223018 06 .247 01 -.1807
051221	1	1	79C2.0	.11223173 06 .247 01 -.7363
051231	1	1	79C2.0	.11223329 06 .247 01 -.2900
051241	1	1	79C2.0	.11223484 06 .247 01 -.8438
051251	1	1	79C2.0	.11223640 06 .247 01 .6035
051301	1	1	79C2.0	.11223795 06 .247 01 1.0508
051311	1	1	79C2.0	.11223950 06 .247 01 -.5039
051321	1	1	79C2.0	.11224106 06 .247 01 -.0557
051331	1	1	79C2.0	.11224261 06 .247 01 1.3906
051341	1	1	79C2.0	.11224416 06 .247 01 .8398
051351	1	1	79C2.0	.11224571 06 .247 01 1.2891
051401	1	1	79C2.0	.11224726 06 .247 01 .7383
051411	1	1	79C2.0	.11224881 06 .247 01 1.1875
051421	1	1	79C2.0	.11225036 06 .247 01 -.3643
051431	1	1	79C2.0	.11225191 06 .247 01 -1.9141
051441	1	1	79C2.0	.11225346 06 .247 01 .5352
051511	1	1	79C2.0	.11225811 06 .247 01 -.1113
051521	1	1	79C2.0	.11225966 06 .247 01 .3398
051531	1	1	79C2.0	.11226121 06 .247 01 .7930
051541	1	1	79C2.0	.11226276 06 .247 01 .2441
051551	1	1	79C2.0	.11226430 06 .247 01 .6973
051611	1	1	79C2.0	.11226740 06 .247 01 .6035
051621	1	1	79C2.0	.11226894 06 .247 01 .0566
051631	1	1	79C2.0	.11227049 06 .247 01 -.4893
051641	1	1	79C2.0	.11227203 06 .247 01 -.0352
051651	1	1	79C2.0	.11227358 06 .247 01 .4199
051711	1	1	79C2.0	.11227667 06 .247 01 -.6699
051721	1	1	79C2.0	.11227821 06 .247 01 -.2139
051731	1	1	79C2.0	.11227976 06 .247 01 .2422
051741	1	1	79C2.0	.11228130 06 .247 01 -1.3008
051751	1	1	79C2.0	.11228284 06 .247 01 .1563
051801	1	1	79C2.0	.11228439 06 .247 01 -.3867
051811	1	1	79C2.0	.11228593 06 .247 01 .0713
051821	1	1	79C2.0	.11228747 06 .247 01 -.4707
051831	1	1	79C2.0	.11228901 06 .247 01 -.0127
051841	1	1	79C2.0	.11229055 06 .247 01 -.5547
051851	1	1	79C2.0	.11229209 06 .247 01 -1.0938
051901	1	1	79C2.0	.11229363 06 .247 01 .3652
051911	1	1	79C2.0	.11229517 06 .247 01 .8262
051921	1	1	79C2.0	.11229671 06 .247 01 .2852
051931	1	1	79C2.0	.11229825 06 .247 01 -1.2539
051941	1	1	79C2.0	.11229979 06 .247 01 .2070
051951	1	1	79C2.0	.11230133 06 .247 01 .6680
052001	1	1	79C2.0	.11230287 06 .247 01 1.1328
052011	1	1	79C2.0	.11230441 06 .247 01 -1.4063
052021	1	1	79C2.0	.11230594 06 .247 01 .0557
052031	1	1	79C2.0	.11230748 06 .247 01 -.4814
052041	1	1	79C2.0	.11230902 06 .247 01 -.0186
052051	1	1	79C2.0	.11231055 06 .247 01 -.5547
052101	1	1	79C2.0	.11231209 06 .247 01 -.0908
052121	1	1	79C2.0	.11231516 06 .247 01 -.1611
052131	1	1	79C2.0	.11231669 06 .247 01 1.3047
052141	1	1	79C2.0	.11231823 06 .247 01 -.2305
052151	1	1	79C2.0	.11231976 06 .247 01 1.2344
052201	1	1	79C2.0	.11232130 06 .247 01 -.2979
052211	1	1	79C2.0	.11232283 06 .247 01 .1689
052221	1	1	79C2.0	.11232436 06 .247 01 -.3643
052231	1	1	79C2.0	.11232590 06 .247 01 .1035
052241	1	1	79C2.0	.11232743 06 .247 01 .5723
052251	1	1	79C2.0	.11232896 06 .247 01 .0400
052301	1	1	79C2.0	.11233049 06 .247 01 -.4912
052311	1	1	79C2.0	.11233202 06 .247 01 -.0215
052331	1	1	79C2.0	.11233508 06 .247 01 .9180
052341	1	1	79C2.0	.11233661 06 .247 01 .3877
052351	1	1	79C2.0	.11233814 06 .247 01 .8594
052401	1	1	79C2.0	.11233967 06 .247 01 .3301
052411	1	1	79C2.0	.11234120 06 .247 01 -.1982
052421	1	1	79C2.0	.11234273 06 .247 01 -.7266
052431	1	1	79C2.0	.11234425 06 .247 01 .7461
052441	1	1	79C2.0	.11234578 06 .247 01 -.7813
052451	1	1	79C2.0	.11234731 06 .247 01 -.3076
052501	1	1	79C2.0	.11234883 06 .247 01 -1.8359
052511	1	1	79C2.0	.11235036 06 .247 01 -.3594
052521	1	1	79C2.0	.11235189 06 .247 01 1.1133
052531	1	1	79C2.0	.11235341 06 .247 01 -.4102
052541	1	1	79C2.0	.11235493 06 .247 01 -.9355
052551	1	1	79C2.0	.11235646 06 .247 01 -.4600
052601	1	1	79C2.0	.11235798 06 .247 01 .0166
052611	1	1	79C2.0	.11235951 06 .247 01 .4932
052621	1	1	79C2.0	.11236103 06 .247 01 -.0293
052631	1	1	79C2.0	.11236255 06 .247 01 -.5527
052701	1	1	79C2.0	.11236712 06 .247 01 -.1182
052711	1	1	79C2.0	.11236864 06 .247 01 -.6387
052721	1	1	79C2.0	.11237016 06 .247 01 .8418
052741	1	1	79C2.0	.11237320 06 .247 01 .8008
052751	1	1	79C2.0	.11237472 06 .247 01 -1.7188
052801	1	1	79C2.0	.11237624 06 .247 01 -.2373
052811	1	1	79C2.0	.11237776 06 .247 01 .2441
052821	1	1	79C2.0	.11237927 06 .247 01 -.2734
052831	1	1	79C2.0	.11238079 06 .247 01 .2090
052841	1	1	79C2.0	.11238231 06 .247 01 -.3086
052851	1	1	79C2.0	.11238382 06 .247 01 -.8262
052901	1	1	79C2.0	.11238534 06 .247 01 .6582
052911	1	1	79C2.0	.11238686 06 .247 01 1.1445
052921	1	1	79C2.0	.11238837 06 .247 01 1.6289
052931	1	1	79C2.0	.11238989 06 .247 01 .1133
052941	1	1	79C2.0	.11239140 06 .247 01 1.5977
052951	1	1	79C2.0	.11239292 06 .247 01 2.0859
053001	1	1	79C2.0	.11239443 06 .247 01 .5703
053011	1	1	79C2.0	.11239594 06 .247 01 .0576

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TIME	TC	Q	FRQ	CC3	
053021	1	1	79C2.0	.11235745 06 .247 01	-.4561
053041	1	1	79C2.0	.11240048 06 .247 01	.5215
053051	1	1	79C2.0	.11240199 06 .247 01	1.0078
053101	1	1	79C2.0	.11240350 06 .247 01	.4980
053111	1	1	79C2.0	.11240501 06 .247 01	-2.0156
053121	1	1	79C2.0	.11240652 06 .247 01	-.5234
053131	1	1	79C2.0	.11240803 06 .247 01	-.0322
053141	1	1	79C2.0	.11240954 06 .247 01	-.5430
053201	1	1	79C2.0	.11241256 06 .247 01	-.5586
053211	1	1	79C2.0	.11241406 06 .247 01	-.0664
053221	1	1	79C2.0	.11241557 06 .247 01	-.5742
053231	1	1	79C2.0	.11241708 06 .247 01	-.0811
053241	1	1	79C2.0	.11241859 06 .247 01	1.4141
053251	1	1	79C2.0	.11242009 06 .247 01	.9063
053301	1	1	79C2.0	.11242160 06 .247 01	.4014
053311	1	1	79C2.0	.11242310 06 .247 01	-1.1055
053321	1	1	79C2.0	.11242461 06 .247 01	.3906
053331	1	1	79C2.0	.11242611 06 .247 01	.8867
053341	1	1	79C2.0	.11242762 06 .247 01	-.6172
053351	1	1	79C2.0	.11242912 06 .247 01	-.1201
053401	1	1	79C2.0	.11243062 06 .247 01	.3770
053411	1	1	79C2.0	.11243212 06 .247 01	-.1250
053421	1	1	79C2.0	.11243363 06 .247 01	-.6270
053431	1	1	79C2.0	.11243513 06 .247 01	-.1289
053451	1	1	79C2.0	.11243813 06 .247 01	-.1299
053501	1	1	79C2.0	.11243963 06 .247 01	1.3711
053511	1	1	79C2.0	.11244113 06 .247 01	.8711
053531	1	1	79C2.0	.11244413 06 .247 01	-1.1289
053551	1	1	79C2.0	.11244712 06 .247 01	-.1240
053601	1	1	79C2.0	.11244862 06 .247 01	1.3789
053611	1	1	79C2.0	.11245012 06 .247 01	-.1172
053621	1	1	79C2.0	.11245161 06 .247 01	.3857
053631	1	1	79C2.0	.11245311 06 .247 01	.8906
053641	1	1	79C2.0	.11245460 06 .247 01	-.6055
053651	1	1	79C2.0	.11245610 06 .247 01	-.0996
053701	1	1	79C2.0	.11245759 06 .247 01	.4063
053711	1	1	79C2.0	.11245909 06 .247 01	-.0879
053721	1	1	79C2.0	.11246058 06 .247 01	1.4180
053741	1	1	79C2.0	.11246357 06 .247 01	1.4336
053751	1	1	79C2.0	.11246506 06 .247 01	-.0586
053801	1	1	79C2.0	.11246655 06 .247 01	-1.5508
053811	1	1	79C2.0	.11246804 06 .247 01	-.0410
053821	1	1	79C2.0	.11246953 06 .247 01	-.5332
053831	1	1	79C2.0	.11247102 06 .247 01	-1.0234
053841	1	1	79C2.0	.11247251 06 .247 01	.4883
053851	1	1	79C2.0	.11247400 06 .247 01	-1.0000
053901	1	1	79C2.0	.11247549 06 .247 01	-.4893
053911	1	1	79C2.0	.11247698 06 .247 01	-.9766
053921	1	1	79C2.0	.11247846 06 .247 01	.5352
053931	1	1	79C2.0	.11247995 06 .247 01	-.9531
053941	1	1	79C2.0	.11248144 06 .247 01	-.4385
053951	1	1	79C2.0	.11248292 06 .247 01	-.9238
054001	1	1	79C2.0	.11248441 06 .247 01	-1.4102
054011	1	1	79C2.0	.11248589 06 .247 01	-.8965
054021	1	1	79C2.0	.11248738 06 .247 01	1.6211
054031	1	1	79C2.0	.11248886 06 .247 01	1.1367
054041	1	1	79C2.0	.11249035 06 .247 01	-.3477
054101	1	1	79C2.0	.11249331 06 .247 01	-.3135
054111	1	1	79C2.0	.11249479 06 .247 01	.2051
054121	1	1	79C2.0	.11249628 06 .247 01	-.2764
054131	1	1	79C2.0	.11249776 06 .247 01	.2422
054141	1	1	79C2.0	.11249924 06 .247 01	-.2383
054151	1	1	79C2.0	.11250072 06 .247 01	-1.7188
054201	1	1	79C2.0	.11250220 06 .247 01	-.1982
054211	1	1	79C2.0	.11250368 06 .247 01	.3232
054231	1	1	79C2.0	.11250663 06 .247 01	.3662
054241	1	1	79C2.0	.11250811 06 .247 01	-1.1133
054251	1	1	79C2.0	.11250959 06 .247 01	-1.5898
054301	1	1	79C2.0	.11251106 06 .247 01	-.0645
054321	1	1	79C2.0	.11251402 06 .247 01	.6844
054331	1	1	79C2.0	.11251549 06 .247 01	1.5078
054341	1	1	79C2.0	.11251696 06 .247 01	1.0352
054351	1	1	79C2.0	.11251844 06 .247 01	-.4395
054401	1	1	79C2.0	.11251991 06 .247 01	-.9141
054411	1	1	79C2.0	.11252138 06 .247 01	.6152
054421	1	1	79C2.0	.11252284 06 .247 01	-.8594
054431	1	1	79C2.0	.11252433 06 .247 01	-.3301
054441	1	1	79C2.0	.11252580 06 .247 01	-.8027
054451	1	1	79C2.0	.11252727 06 .247 01	-.2725
054501	1	1	79C2.0	.11252874 06 .247 01	.2568
054511	1	1	79C2.0	.11253021 06 .247 01	-1.2148
054521	1	1	79C2.0	.11253168 06 .247 01	.3184
054531	1	1	79C2.0	.11253315 06 .247 01	-.1504
054541	1	1	79C2.0	.11253462 06 .247 01	.3818
054551	1	1	79C2.0	.11253609 06 .247 01	.9141
054601	1	1	79C2.0	.11253755 06 .247 01	-.5527
054611	1	1	79C2.0	.11253902 06 .247 01	-.0195
054621	1	1	79C2.0	.11254048 06 .247 01	-.4863
054631	1	1	79C2.0	.11254195 06 .247 01	1.0469
054651	1	1	79C2.0	.11254488 06 .247 01	-.8828
054701	1	1	79C2.0	.11254634 06 .247 01	-.3447
054711	1	1	79C2.0	.11254781 06 .247 01	-.8086
054721	1	1	79C2.0	.11254927 06 .247 01	.7305
054731	1	1	79C2.0	.11255073 06 .247 01	1.2656
054741	1	1	79C2.0	.11255219 06 .247 01	-.1953
054751	1	1	79C2.0	.11255366 06 .247 01	-1.6563
054801	1	1	79C2.0	.11255512 06 .247 01	-.1172
054811	1	1	79C2.0	.11255658 06 .247 01	-.5781
054821	1	1	79C2.0	.11255804 06 .247 01	-1.0391
054831	1	1	79C2.0	.11255950 06 .247 01	.5039
054841	1	1	79C2.0	.11256095 06 .247 01	.0459
054851	1	1	79C2.0	.11256241 06 .247 01	.5879
054901	1	1	79C2.0	.11256387 06 .247 01	-.8711
054911	1	1	79C2.0	.11256533 06 .247 01	.6738
054921	1	1	79C2.0	.11256678 06 .247 01	1.2188
054931	1	1	79C2.0	.11256824 06 .247 01	-.2393
054941	1	1	79C2.0	.11256969 06 .247 01	.3057
054951	1	1	79C2.0	.11257115 06 .247 01	-1.1484

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TIME	TC	Q	FRQ	CC3	
055001	1	1	79C2.0	.11257260 06 .247 01	.3965
055011	1	1	79C2.0	.11257406 06 .247 01	-.0566
055021	1	1	79C2.0	.11257551 06 .247 01	-.5098
055031	1	1	79C2.0	.11257696 06 .247 01	.0381
055041	1	1	79C2.0	.11257841 06 .247 01	-.4141
055051	1	1	79C2.0	.11257986 06 .247 01	.1348
055111	1	1	79C2.0	.11258277 06 .247 01	1.2344
055121	1	1	79C2.0	.11258422 06 .247 01	-.2158
055131	1	1	79C2.0	.11258566 06 .247 01	1.3359
055231	1	1	79C2.0	.11259435 06 .247 01	.6523
055241	1	1	79C2.0	.11259579 06 .247 01	-.7930
055251	1	1	79C2.0	.11259724 06 .247 01	.7637
055301	1	1	79C2.0	.11259868 06 .247 01	.3184
055311	1	1	79C2.0	.11260012 06 .247 01	-.1250
055321	1	1	79C2.0	.11260157 06 .247 01	1.4336
055331	1	1	79C2.0	.11260301 06 .247 01	-1.0117
055351	1	1	79C2.0	.11260589 06 .247 01	1.1094
055401	1	1	79C2.0	.11260733 06 .247 01	-.3340
055411	1	1	79C2.0	.11260877 06 .247 01	-1.7734
055421	1	1	79C2.0	.11261021 06 .247 01	.7871
055431	1	1	79C2.0	.11261165 06 .247 01	-.6523
055441	1	1	79C2.0	.11261309 06 .247 01	.9102
055451	1	1	79C2.0	.11261453 06 .247 01	-1.5273
055501	1	1	79C2.0	.11261596 06 .247 01	.0352
055511	1	1	79C2.0	.11261740 06 .247 01	-.4014
055521	1	1	79C2.0	.11261884 06 .247 01	-.8379
055531	1	1	79C2.0	.11262027 06 .247 01	-.2725
055541	1	1	79C2.0	.11262171 06 .247 01	.2930
055551	1	1	79C2.0	.11262314 06 .247 01	-.1426
055601	1	1	79C2.0	.11262457 06 .247 01	-.5762
055621	1	1	79C2.0	.11262744 06 .247 01	-.4404
055631	1	1	79C2.0	.11262887 06 .247 01	.1270
055641	1	1	79C2.0	.11263030 06 .247 01	-.3037
055651	1	1	79C2.0	.11263173 06 .247 01	.2656
055701	1	1	79C2.0	.11263316 06 .247 01	1.8359
055711	1	1	79C2.0	.11263459 06 .247 01	.4063
055721	1	1	79C2.0	.11263602 06 .247 01	-.0234
055731	1	1	79C2.0	.11263745 06 .247 01	-.4512
055741	1	1	79C2.0	.11263888 06 .247 01	-.8789
055751	1	1	79C2.0	.11264031 06 .247 01	-1.3086
055801	1	1	79C2.0	.11264173 06 .247 01	1.2656
055811	1	1	79C2.0	.11264316 06 .247 01	-.1592
055821	1	1	79C2.0	.11264458 06 .247 01	1.4180
055831	1	1	79C2.0	.11264601 06 .247 01	.9922
055841	1	1	79C2.0	.11264743 06 .247 01	-.4326
055851	1	1	79C2.0	.11264886 06 .247 01	1.1445
055901	1	1	79C2.0	.11265028 06 .247 01	.7207
055911	1	1	79C2.0	.11265170 06 .247 01	.2979
055921	1	1	79C2.0	.11265312 06 .247 01	-.1230
055931	1	1	79C2.0	.11265454 06 .247 01	.4551
055941	1	1	79C2.0	.11265596 06 .247 01	-1.9648
055951	1	1	79C2.0	.11265738 06 .247 01	-1.3867
060001	1	1	79C2.0	.11265880 06 .247 01	-.8047
060011	1	1	79C2.0	.11266022 06 .247 01	-1.2227
060021	1	1	79C2.0	.11266164 06 .247 01	.3584
060031	1	1	79C2.0	.11266306 06 .247 01	-.0586
060041	1	1	79C2.0	.11266447 06 .247 01	.5254
060051	1	1	79C2.0	.11266589 06 .247 01	-.8926
060101	1	1	79C2.0	.11266731 06 .247 01	-1.3086
060111	1	1	79C2.0	.11266872 06 .247 01	-.7227
060121	1	1	79C2.0	.11267014 06 .247 01	-1.1367
060131	1	1	79C2.0	.11267155 06 .247 01	-.5508
060141	1	1	79C2.0	.11267296 06 .247 01	-.9648
060151	1	1	79C2.0	.11267437 06 .247 01	-.3760
060201	1	1	79C2.0	.11267579 06 .247 01	1.2109
060211	1	1	79C2.0	.11267720 06 .247 01	1.8008
060221	1	1	79C2.0	.11267861 06 .247 01	-1.6094
060241	1	1	79C2.0	.11268143 06 .247 01	-.4297
060251	1	1	79C2.0	.11268284 06 .247 01	.1621
060301	1	1	79C2.0	.11268425 06 .247 01	-1.2461
060311	1	1	79C2.0	.11268565 06 .247 01	.3457
060321	1	1	79C2.0	.11268706 06 .247 01	1.9375
060331	1	1	79C2.0	.11268847 06 .247 01	1.5313
060341	1	1	79C2.0	.11268987 06 .247 01	-.8730
060351	1	1	79C2.0	.11269128 06 .247 01	.7227
060411	1	1	79C2.0	.11269429 06 .247 01	.9141
060421	1	1	79C2.0	.11269549 06 .247 01	.5098
060431	1	1	79C2.0	.11269689 06 .247 01	.1074
060441	1	1	79C2.0	.11269829 06 .247 01	-.2949
060451	1	1	79C2.0	.11269969 06 .247 01	.3047
060501	1	1	79C2.0	.11270110 06 .247 01	-.0967
060511	1	1	79C2.0	.11270249 06 .247 01	1.5039
060521	1	1	79C2.0	.11270389 06 .247 01	1.1055
060531	1	1	79C2.0	.11270529 06 .247 01	.7070
060541	1	1	79C2.0	.11270669 06 .247 01	-.6934
060551	1	1	79C2.0	.11270809 06 .247 01	-.0898
060601	1	1	79C2.0	.11270949 06 .247 01	-.4873
060611	1	1	79C2.0	.11271088 06 .247 01	-.8828
060631	1	1	79C2.0	.11271367 06 .247 01	-.6738
060641	1	1	79C2.0	.11271507 06 .247 01	.9336
060651	1	1	79C2.0	.11271646 06 .247 01	-1.4609
060701	1	1	79C2.0	.11271785 06 .247 01	.1455
060711	1	1	79C2.0	.11271925 06 .247 01	.7539
060721	1	1	79C2.0	.11272064 06 .247 01	-.6387
060731	1	1	79C2.0	.11272203 06 .247 01	-.0293
060741	1	1	79C2.0	.11272342 06 .247 01	.5801
060801	1	1	79C2.0	.11272620 06 .247 01	-.1982
060811	1	1	79C2.0	.11272759 06 .247 01	-1.5859
060821	1	1	79C2.0	.11272897 06 .247 01	-1.9766
060831	1	1	79C2.0	.11273036 06 .247 01	.6387
060841	1	1	79C2.0	.11273175 06 .247 01	-.7480
060851	1	1	79C2.0	.11273313 06 .247 01	-.1338
060901	1	1	79C2.0	.11273452 06 .247 01	-.5195
060911	1	1	79C2.0	.11273590 06 .247 01	1.0977
060921	1	1	79C2.0	.11273729 06 .247 01	-.2881
060931	1	1	79C2.0	.11273867 06 .247 01	1.3281
060941	1	1	79C2.0	.11274005 06 .247 01	.9473
060951	1	1	79C2.0	.11274143 06 .247 01	2.5625

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TIME	TC	Q	FRQ	CC3
061001	1	1	79C2.0	.11274282 06 .247 01 1.1836
061011	1	1	79C2.0	.11274420 06 .247 01 -1.1992
061021	1	1	79C2.0	.11274558 06 .247 01 -.5781
061031	1	1	79C2.0	.11274696 06 .247 01 .0439
061041	1	1	79C2.0	.11274833 06 .247 01 -1.3359
061101	1	1	79C2.0	.11275109 06 .247 01 .9102
061111	1	1	79C2.0	.11275246 06 .247 01 .5352
061121	1	1	79C2.0	.11275384 06 .247 01 .1582
061131	1	1	79C2.0	.11275522 06 .247 01 -.2168
061141	1	1	79C2.0	.11275659 06 .247 01 -1.5938
061151	1	1	79C2.0	.11275796 06 .247 01 1.0352
061201	1	1	79C2.0	.11275934 06 .247 01 -.3389
061211	1	1	79C2.0	.11276071 06 .247 01 -.7129
061221	1	1	79C2.0	.11276208 06 .247 01 .9180
061231	1	1	79C2.0	.11276345 06 .247 01 -.4541
061241	1	1	79C2.0	.11276482 06 .247 01 .1748
061251	1	1	79C2.0	.11276619 06 .247 01 -1.1953
061301	1	1	79C2.0	.11276756 06 .247 01 -.5645
061311	1	1	79C2.0	.11276893 06 .247 01 -1.9336
061341	1	1	79C2.0	.11277303 06 .247 01 .9668
061401	1	1	79C2.0	.11277576 06 .247 01 -.7656
061411	1	1	79C2.0	.11277713 06 .247 01 -.1289
061421	1	1	79C2.0	.11277849 06 .247 01 -.4922
061431	1	1	79C2.0	.11277985 06 .247 01 -1.8555
061441	1	1	79C2.0	.11278122 06 .247 01 -1.2188
061451	1	1	79C2.0	.11278258 06 .247 01 -.5801
061501	1	1	79C2.0	.11278394 06 .247 01 .0596
061511	1	1	79C2.0	.11278530 06 .247 01 .6992
061521	1	1	79C2.0	.11278666 06 .247 01 .3398
061531	1	1	79C2.0	.11278802 06 .247 01 .9805
061541	1	1	79C2.0	.11278938 06 .247 01 1.6211
061551	1	1	79C2.0	.11279074 06 .247 01 .2646
061601	1	1	79C2.0	.11279209 06 .247 01 -.0918
061621	1	1	79C2.0	.11279480 06 .247 01 1.1953
061631	1	1	79C2.0	.11279616 06 .247 01 .8418
061641	1	1	79C2.0	.11279751 06 .247 01 .4883
061651	1	1	79C2.0	.11279887 06 .247 01 -.8652
061701	1	1	79C2.0	.11280022 06 .247 01 .7832
061711	1	1	79C2.0	.11280157 06 .247 01 -.5703
061721	1	1	79C2.0	.11280292 06 .247 01 -.9219
061731	1	1	79C2.0	.11280427 06 .247 01 .7285
061741	1	1	79C2.0	.11280562 06 .247 01 -1.6211
061751	1	1	79C2.0	.11280697 06 .247 01 .0293
061801	1	1	79C2.0	.11280832 06 .247 01 -.3193
061811	1	1	79C2.0	.11280967 06 .247 01 -1.6680
061821	1	1	79C2.0	.11281101 06 .247 01 -1.0156
061831	1	1	79C2.0	.11281236 06 .247 01 -.3604
061851	1	1	79C2.0	.11281505 06 .247 01 .9492
061901	1	1	79C2.0	.11281639 06 .247 01 -.3945
061911	1	1	79C2.0	.11281774 06 .247 01 .2617
061921	1	1	79C2.0	.11281908 06 .247 01 -.0811
061931	1	1	79C2.0	.11282042 06 .247 01 .5781
061941	1	1	79C2.0	.11282176 06 .247 01 .2363
061951	1	1	79C2.0	.11282310 06 .247 01 -1.1055
062001	1	1	79C2.0	.11282444 06 .247 01 -.4443
062011	1	1	79C2.0	.11282578 06 .247 01 -.7852
062021	1	1	79C2.0	.11282712 06 .247 01 -2.1250
062031	1	1	79C2.0	.11282846 06 .247 01 -.4600
062041	1	1	79C2.0	.11282980 06 .247 01 1.2031
062111	1	1	79C2.0	.11283380 06 .247 01 -.8047
062121	1	1	79C2.0	.11283514 06 .247 01 -1.1406
062131	1	1	79C2.0	.11283647 06 .247 01 -1.4727
062141	1	1	79C2.0	.11283780 06 .247 01 .1953
062151	1	1	79C2.0	.11283914 06 .247 01 -1.1367
062201	1	1	79C2.0	.11284047 06 .247 01 -1.4688
062211	1	1	79C2.0	.11284180 06 .247 01 .2012
062221	1	1	79C2.0	.11284313 06 .247 01 -.1279
062231	1	1	79C2.0	.11284446 06 .247 01 .5430
062231	1	1	79C2.0	.11284446 06 .247 01 .5430
062241	1	1	79C2.0	.11284579 06 .247 01 .2139
062251	1	1	79C2.0	.11284711 06 .247 01 -.1133
062301	1	1	79C2.0	.11284844 06 .247 01 .5605
062311	1	1	79C2.0	.11284977 06 .247 01 .2334
062321	1	1	79C2.0	.11285109 06 .247 01 .9082
062331	1	1	79C2.0	.11285242 06 .247 01 .5840
062341	1	1	79C2.0	.11285374 06 .247 01 .2588
062351	1	1	79C2.0	.11285506 06 .247 01 1.9375
062401	1	1	79C2.0	.11285639 06 .247 01 -.3867
062411	1	1	79C2.0	.11285771 06 .247 01 .2910
062421	1	1	79C2.0	.11285903 06 .247 01 -.0303
062431	1	1	79C2.0	.11286035 06 .247 01 .6504
062441	1	1	79C2.0	.11286167 06 .247 01 -.6699
062451	1	1	79C2.0	.11286299 06 .247 01 .0117
062501	1	1	79C2.0	.11286431 06 .247 01 -1.3086
062511	1	1	79C2.0	.11286562 06 .247 01 .3760
062521	1	1	79C2.0	.11286654 06 .247 01 -1.9414
062531	1	1	79C2.0	.11286826 06 .247 01 -.2568
062541	1	1	79C2.0	.11286957 06 .247 01 .4277
062551	1	1	79C2.0	.11287089 06 .247 01 .1143
062601	1	1	79C2.0	.11287220 06 .247 01 -1.1992
062611	1	1	79C2.0	.11287351 06 .247 01 -1.5117
062621	1	1	79C2.0	.11287482 06 .247 01 .1748
062631	1	1	79C2.0	.11287614 06 .247 01 .8633
062641	1	1	79C2.0	.11287745 06 .247 01 -1.4492
062651	1	1	79C2.0	.11287876 06 .247 01 .2422
062701	1	1	79C2.0	.11288007 06 .247 01 -.0664
062711	1	1	79C2.0	.11288137 06 .247 01 .6250
062731	1	1	79C2.0	.11288359 06 .247 01 -1.9883
062741	1	1	79C2.0	.11288529 06 .247 01 -.2959
062751	1	1	79C2.0	.11288660 06 .247 01 .3994
062801	1	1	79C2.0	.11288790 06 .247 01 .0947
062811	1	1	79C2.0	.11288921 06 .247 01 -.2090
062821	1	1	79C2.0	.11289051 06 .247 01 -1.5117
062831	1	1	79C2.0	.11289181 06 .247 01 .1846
062841	1	1	79C2.0	.11289312 06 .247 01 -.1172
062851	1	1	79C2.0	.11289442 06 .247 01 .5820
062901	1	1	79C2.0	.11289572 06 .247 01 -.7188
062911	1	1	79C2.0	.11289702 06 .247 01 -1.0195

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TIME	TC	Q	FRQ	CC3
062921	1	1	79C2.0	.11289832 06 .247 01 -.3164
062931	1	1	79C2.0	.11289961 06 .247 01 .3857
062941	1	1	79C2.0	.11290091 06 .247 01 -.9121
062951	1	1	79C2.0	.11290221 06 .247 01 -1.2070
063001	1	1	79C2.0	.11290350 06 .247 01 .4971
063011	1	1	79C2.0	.11290480 06 .247 01 .2021
063021	1	1	79C2.0	.11290609 06 .247 01 .9082
063031	1	1	79C2.0	.11290738 06 .247 01 .6152
063041	1	1	79C2.0	.11290868 06 .247 01 .3223
063051	1	1	79C2.0	.11290997 06 .247 01 .0313
063101	1	1	79C2.0	.11291126 06 .247 01 -1.2617
063111	1	1	79C2.0	.11291255 06 .247 01 -.5508
063121	1	1	79C2.0	.11291384 06 .247 01 1.1602
063131	1	1	79C2.0	.11291513 06 .247 01 .8711
063141	1	1	79C2.0	.11291642 06 .247 01 .5840
063151	1	1	79C2.0	.11291770 06 .247 01 .2969
063201	1	1	79C2.0	.11291899 06 .247 01 .0098
063221	1	1	79C2.0	.11292156 06 .247 01 -1.5586
063231	1	1	79C2.0	.11292284 06 .247 01 1.1563
063241	1	1	79C2.0	.11292413 06 .247 01 .8730
063251	1	1	79C2.0	.11292541 06 .247 01 -1.4102
063311	1	1	79C2.0	.11292797 06 .247 01 -.9727
063321	1	1	79C2.0	.11292925 06 .247 01 -.2529
063331	1	1	79C2.0	.11293053 06 .247 01 -.5332
063341	1	1	79C2.0	.11293181 06 .247 01 -.8105
063351	1	1	79C2.0	.11293309 06 .247 01 -.0889
063401	1	1	79C2.0	.11293436 06 .247 01 -1.3672
063411	1	1	79C2.0	.11293564 06 .247 01 -1.6406
063421	1	1	79C2.0	.11293692 06 .247 01 -1.9180
063431	1	1	79C2.0	.11293819 06 .247 01 -.1914
063441	1	1	79C2.0	.11293947 06 .247 01 -1.4648
063451	1	1	79C2.0	.11294074 06 .247 01 -.7383
063501	1	1	79C2.0	.11294201 06 .247 01 -1.0117
063511	1	1	79C2.0	.11294328 06 .247 01 .7188
063521	1	1	79C2.0	.11294455 06 .247 01 .4473
063531	1	1	79C2.0	.11294582 06 .247 01 .1768
063541	1	1	79C2.0	.11294709 06 .247 01 1.9102
063551	1	1	79C2.0	.11294836 06 .247 01 .6406
063601	1	1	79C2.0	.11294963 06 .247 01 -.6289
063611	1	1	79C2.0	.11295089 06 .247 01 1.1055
063621	1	1	79C2.0	.11295216 06 .247 01 -.1611
063641	1	1	79C2.0	.11295469 06 .247 01 .3096
063651	1	1	79C2.0	.11295595 06 .247 01 -.9551
063701	1	1	79C2.0	.11295722 06 .247 01 .7832
063711	1	1	79C2.0	.11295848 06 .247 01 -.4785
063731	1	1	79C2.0	.11296100 06 .247 01 -2.0000
063741	1	1	79C2.0	.11296226 06 .247 01 -.2598
063751	1	1	79C2.0	.11296352 06 .247 01 .4814
063801	1	1	79C2.0	.11296477 06 .247 01 -.7754
063821	1	1	79C2.0	.11296729 06 .247 01 -.2900
063831	1	1	79C2.0	.11296854 06 .247 01 -.5469
063901	1	1	79C2.0	.11297231 06 .247 01 .6934
063911	1	1	79C2.0	.11297356 06 .247 01 -.5605
063921	1	1	79C2.0	.11297481 06 .247 01 -1.8125
063931	1	1	79C2.0	.11297606 06 .247 01 -1.0625
063941	1	1	79C2.0	.11297731 06 .247 01 -.3105
063951	1	1	79C2.0	.11297856 06 .247 01 .4395
064001	1	1	79C2.0	.11297981 06 .247 01 .1914
064011	1	1	79C2.0	.11298105 06 .247 01 .9453
064021	1	1	79C2.0	.11298230 06 .247 01 -.3027
064041	1	1	79C2.0	.11298479 06 .247 01 -.7949
064051	1	1	79C2.0	.11298604 06 .247 01 -.0381
064101	1	1	79C2.0	.11298728 06 .247 01 -.2813
064111	1	1	79C2.0	.11298852 06 .247 01 .4766
064121	1	1	79C2.0	.11298977 06 .247 01 1.2344
064131	1	1	79C2.0	.11299101 06 .247 01 -1.0078
064201	1	1	79C2.0	.11299472 06 .247 01 -.7246
064211	1	1	79C2.0	.11299596 06 .247 01 -1.9609
064221	1	1	79C2.0	.11299720 06 .247 01 .8027
064231	1	1	79C2.0	.11299843 06 .247 01 -.4346
064241	1	1	79C2.0	.11299967 06 .247 01 .3301
064251	1	1	79C2.0	.11300090 06 .248 01 -.9043
064301	1	1	79C2.0	.11300214 06 .248 01 -.1367
064311	1	1	79C2.0	.11300337 06 .248 01 .6309
064321	1	1	79C2.0	.11300460 06 .248 01 1.3984
064331	1	1	79C2.0	.11300583 06 .248 01 .1670
064341	1	1	79C2.0	.11300706 06 .248 01 -1.0625
064351	1	1	79C2.0	.11300829 06 .248 01 -1.2930
064401	1	1	79C2.0	.11300952 06 .248 01 -1.5234
064411	1	1	79C2.0	.11301075 06 .248 01 .2510
064421	1	1	79C2.0	.11301197 06 .248 01 2.0234
064431	1	1	79C2.0	.11301320 06 .248 01 -.2012
064441	1	1	79C2.0	.11301443 06 .248 01 .5742
064451	1	1	79C2.0	.11301565 06 .248 01 .3486
064501	1	1	79C2.0	.11301687 06 .248 01 -.8750
064511	1	1	79C2.0	.11301810 06 .248 01 .9043
064521	1	1	79C2.0	.11301932 06 .248 01 -1.3203
064531	1	1	79C2.0	.11302054 06 .248 01 -1.5391
064541	1	1	79C2.0	.11302176 06 .248 01 -.7598
064551	1	1	79C2.0	.11302298 06 .248 01 .0205
064601	1	1	79C2.0	.11302420 06 .248 01 .8027
064611	1	1	79C2.0	.11302541 06 .248 01 -.4160
064621	1	1	79C2.0	.11302663 06 .248 01 -.6328
064631	1	1	79C2.0	.11302785 06 .248 01 .1523
064651	1	1	79C2.0	.11303028 06 .248 01 1.7227
064721	1	1	79C2.0	.11303391 06 .248 01 .0850
064731	1	1	79C2.0	.11303512 06 .248 01 -.1260
064801	1	1	79C2.0	.11303875 06 .248 01 .2461
064811	1	1	79C2.0	.11303996 06 .248 01 .0391
064831	1	1	79C2.0	.11304237 06 .248 01 .6270
064841	1	1	79C2.0	.11304358 06 .248 01 -.5781
064851	1	1	79C2.0	.11304478 06 .248 01 .2178
064901	1	1	79C2.0	.11304598 06 .248 01 .0146
064911	1	1	79C2.0	.11304719 06 .248 01 .8125
064931	1	1	79C2.0	.11304959 06 .248 01 .4102
064941	1	1	79C2.0	.11305079 06 .248 01 1.2109
065011	1	1	79C2.0	.11305438 06 .248 01 -1.3828
065021	1	1	79C2.0	.11305558 06 .248 01 -.5801

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TIME	TC	Q	FRQ	CC3			
065031	1	1	79C2.0	.11305677	06	.248 01	-1.7773
065041	1	1	79C2.0	.11305797	06	.248 01	-.9707
065051	1	1	79C2.0	.11305916	06	.248 01	-.1641
065101	1	1	79C2.0	.11306036	06	.248 01	-.3564
065111	1	1	79C2.0	.11306155	06	.248 01	1.4531
065121	1	1	79C2.0	.11306274	06	.248 01	.2598
065131	1	1	79C2.0	.11306393	06	.248 01	.0693
065151	1	1	79C2.0	.11306631	06	.248 01	-.3086
065201	1	1	79C2.0	.11306750	06	.248 01	-.4961
065211	1	1	79C2.0	.11306868	06	.248 01	-.6836
065221	1	1	79C2.0	.11306987	06	.248 01	1.1328
065231	1	1	79C2.0	.11307105	06	.248 01	-1.0547
065241	1	1	79C2.0	.11307224	06	.248 01	-2.2422
065251	1	1	79C2.0	.11307342	06	.248 01	-.4219
065301	1	1	79C2.0	.11307460	06	.248 01	-1.6055
065311	1	1	79C2.0	.11307578	06	.248 01	1.2148
065321	1	1	79C2.0	.11307697	06	.248 01	.0342
065331	1	1	79C2.0	.11307815	06	.248 01	-.1465
065341	1	1	79C2.0	.11307932	06	.248 01	-.3252
065351	1	1	79C2.0	.11308050	06	.248 01	-1.5039
065401	1	1	79C2.0	.11308168	06	.248 01	.3193
065421	1	1	79C2.0	.11308403	06	.248 01	-.0322
065441	1	1	79C2.0	.11308638	06	.248 01	-1.3828
065451	1	1	79C2.0	.11308755	06	.248 01	-.5527
065501	1	1	79C2.0	.11308873	06	.248 01	-.7266
065511	1	1	79C2.0	.11308990	06	.248 01	-.8965
065521	1	1	79C2.0	.11309106	06	.248 01	.9336
065531	1	1	79C2.0	.11309223	06	.248 01	-.2354
065541	1	1	79C2.0	.11309340	06	.248 01	-.4043
065551	1	1	79C2.0	.11309457	06	.248 01	.4287
065601	1	1	79C2.0	.11309574	06	.248 01	-.7383
065611	1	1	79C2.0	.11309690	06	.248 01	.0967
065621	1	1	79C2.0	.11309807	06	.248 01	-1.0703
065631	1	1	79C2.0	.11309923	06	.248 01	-.2324
065641	1	1	79C2.0	.11310039	06	.248 01	.6055
065651	1	1	79C2.0	.11310156	06	.248 01	.4424
065701	1	1	79C2.0	.11310272	06	.248 01	1.2813
065711	1	1	79C2.0	.11310388	06	.248 01	1.1211
065721	1	1	79C2.0	.11310504	06	.248 01	-.0391
065731	1	1	79C2.0	.11310620	06	.248 01	.8027
065741	1	1	79C2.0	.11310735	06	.248 01	-.3555
065751	1	1	79C2.0	.11310851	06	.248 01	.4883
065801	1	1	79C2.0	.11310967	06	.248 01	.3320
065811	1	1	79C2.0	.11311082	06	.248 01	.1768
065821	1	1	79C2.0	.11311198	06	.248 01	1.0234
065841	1	1	79C2.0	.11311428	06	.248 01	.7188
065851	1	1	79C2.0	.11311543	06	.248 01	.5664
065901	1	1	79C2.0	.11311658	06	.248 01	-.5859
065911	1	1	79C2.0	.11311773	06	.248 01	-.7344
065921	1	1	79C2.0	.11311888	06	.248 01	-.8828
065941	1	1	79C2.0	.11312118	06	.248 01	-.1777
065951	1	1	79C2.0	.11312232	06	.248 01	-.3242
070001	1	1	79C2.0	.11312347	06	.248 01	-.4688
070021	1	1	79C2.0	.11312576	06	.248 01	-1.7578
070031	1	1	79C2.0	.11312690	06	.248 01	-.8984
070041	1	1	79C2.0	.11312804	06	.248 01	-1.0391
070111	1	1	79C2.0	.11313146	06	.248 01	-.4590
070121	1	1	79C2.0	.11313260	06	.248 01	-.5977
070131	1	1	79C2.0	.11313373	06	.248 01	1.2656
070141	1	1	79C2.0	.11313487	06	.248 01	-.8711
070151	1	1	79C2.0	.11313601	06	.248 01	-.0059
070201	1	1	79C2.0	.11313714	06	.248 01	.8613
070211	1	1	79C2.0	.11313827	06	.248 01	-.2725
070221	1	1	79C2.0	.11313940	06	.248 01	-1.4063
070231	1	1	79C2.0	.11314054	06	.248 01	-1.5352
070241	1	1	79C2.0	.11314167	06	.248 01	.3330
070301	1	1	79C2.0	.11314393	06	.248 01	.0742
070311	1	1	79C2.0	.11314505	06	.248 01	-1.0547
070321	1	1	79C2.0	.11314618	06	.248 01	.8203
070331	1	1	79C2.0	.11314730	06	.248 01	-.3057
070341	1	1	79C2.0	.11314843	06	.248 01	-.4307
070351	1	1	79C2.0	.11314956	06	.248 01	-.5566
070401	1	1	79C2.0	.11315068	06	.248 01	.3213
070421	1	1	79C2.0	.11315292	06	.248 01	.0781
070431	1	1	79C2.0	.11315404	06	.248 01	.9590
070441	1	1	79C2.0	.11315516	06	.248 01	-.1621
070451	1	1	79C2.0	.11315628	06	.248 01	-.2803
070501	1	1	79C2.0	.11315740	06	.248 01	-.3984
070531	1	1	79C2.0	.11316074	06	.248 01	1.2539
070541	1	1	79C2.0	.11316186	06	.248 01	-.8594
070551	1	1	79C2.0	.11316297	06	.248 01	-1.9727
070601	1	1	79C2.0	.11316408	06	.248 01	-.0840
070611	1	1	79C2.0	.11316520	06	.248 01	-.1963
070621	1	1	79C2.0	.11316631	06	.248 01	.6953
070631	1	1	79C2.0	.11316741	06	.248 01	.5859
070641	1	1	79C2.0	.11316852	06	.248 01	.4766
070651	1	1	79C2.0	.11316963	06	.248 01	1.3711
070711	1	1	79C2.0	.11317184	06	.248 01	.1572
070721	1	1	79C2.0	.11317295	06	.248 01	-.9473
070741	1	1	79C2.0	.11317515	06	.248 01	-.1543
070751	1	1	79C2.0	.11317625	06	.248 01	-.2559
070801	1	1	79C2.0	.11317736	06	.248 01	-.3564
070811	1	1	79C2.0	.11317846	06	.248 01	-.4570
070821	1	1	79C2.0	.11317956	06	.248 01	.4443
070851	1	1	79C2.0	.11318285	06	.248 01	.1533
070901	1	1	79C2.0	.11318394	06	.248 01	-.9414
070911	1	1	79C2.0	.11318503	06	.248 01	-.0361
070921	1	1	79C2.0	.11318613	06	.248 01	.8711
070931	1	1	79C2.0	.11318722	06	.248 01	-.2217
070941	1	1	79C2.0	.11318831	06	.248 01	.6875
070951	1	1	79C2.0	.11318940	06	.248 01	-.4043
071001	1	1	79C2.0	.11319049	06	.248 01	.5078
071011	1	1	79C2.0	.11319158	06	.248 01	.4180
071021	1	1	79C2.0	.11319267	06	.248 01	.3301
071031	1	1	79C2.0	.11319376	06	.248 01	1.2422
071041	1	1	79C2.0	.11319484	06	.248 01	1.1602
071101	1	1	79C2.0	.11319701	06	.248 01	1.9883
071111	1	1	79C2.0	.11319809	06	.248 01	.9063

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TIME	TC	Q	FRQ	CC3			
071131	1	1	79C2.0	.11320026	06	.248 01	-.2568
071141	1	1	79C2.0	.11320134	06	.248 01	.6641
071151	1	1	79C2.0	.11320242	06	.248 01	.5840
071201	1	1	79C2.0	.11320349	06	.248 01	-.4941
071211	1	1	79C2.0	.11320457	06	.248 01	.4297
071221	1	1	79C2.0	.11320565	06	.248 01	1.3516
071231	1	1	79C2.0	.11320672	06	.248 01	.2773
071241	1	1	79C2.0	.11320780	06	.248 01	.2031
071251	1	1	79C2.0	.11320887	06	.248 01	1.1289
071301	1	1	79C2.0	.11320994	06	.248 01	.0576
071321	1	1	79C2.0	.11321208	06	.248 01	-1.0859
071331	1	1	79C2.0	.11321315	06	.248 01	-.1533
071341	1	1	79C2.0	.11321422	06	.248 01	-.2217
071351	1	1	79C2.0	.11321529	06	.248 01	-.2900
071401	1	1	79C2.0	.11321636	06	.248 01	-.3564
071411	1	1	79C2.0	.11321742	06	.248 01	1.5781
071421	1	1	79C2.0	.11321849	06	.248 01	-.4863
071431	1	1	79C2.0	.11321955	06	.248 01	.4492
071441	1	1	79C2.0	.11322061	06	.248 01	-.6133
071451	1	1	79C2.0	.11322167	06	.248 01	-.6758
071501	1	1	79C2.0	.11322273	06	.248 01	.2646
071511	1	1	79C2.0	.11322380	06	.248 01	.2041
071521	1	1	79C2.0	.11322485	06	.248 01	.1455
071531	1	1	79C2.0	.11322591	06	.248 01	.0879
071541	1	1	79C2.0	.11322697	06	.248 01	.0313
071551	1	1	79C2.0	.11322802	06	.248 01	-.0254
071601	1	1	79C2.0	.11322908	06	.248 01	-.0801
071611	1	1	79C2.0	.11323013	06	.248 01	-.1338
071631	1	1	79C2.0	.11323224	06	.248 01	.7617
071641	1	1	79C2.0	.11323329	06	.248 01	1.7109
071701	1	1	79C2.0	.11323539	06	.248 01	-1.3906
071711	1	1	79C2.0	.11323644	06	.248 01	-.4375
071721	1	1	79C2.0	.11323748	06	.248 01	-.4844
071731	1	1	79C2.0	.11323853	06	.248 01	-.5313
071741	1	1	79C2.0	.11323958	06	.248 01	-.5762
071751	1	1	79C2.0	.11324062	06	.248 01	-.6211
071801	1	1	79C2.0	.11324166	06	.248 01	-.6641
071811	1	1	79C2.0	.11324271	06	.248 01	-.7070
071821	1	1	79C2.0	.11324375	06	.248 01	.2529
071831	1	1	79C2.0	.11324479	06	.248 01	1.2109
071851	1	1	79C2.0	.11324686	06	.248 01	.1348
071911	1	1	79C2.0	.11324894	06	.248 01	.0605
071921	1	1	79C2.0	.11324997	06	.248 01	-.9746
071931	1	1	79C2.0	.11325101	06	.248 01	-1.0078
071951	1	1	79C2.0	.11325307	06	.248 01	-.0742
072001	1	1	79C2.0	.11325411	06	.248 01	-.1064
072011	1	1	79C2.0	.11325514	06	.248 01	-2.1406
072031	1	1	79C2.0	.11325720	06	.248 01	-.1953
072041	1	1	79C2.0	.11325822	06	.248 01	-2.2188
072051	1	1	79C2.0	.11325925	06	.248 01	-1.2500
072101	1	1	79C2.0	.11326027	06	.248 01	-.2744
072111	1	1	79C2.0	.11326130	06	.248 01	-.2988
072121	1	1	79C2.0	.11326232	06	.248 01	-.3223
072141	1	1	79C2.0	.11326437	06	.248 01	.6348
072151	1	1	79C2.0	.11326539	06	.248 01	.6133
072201	1	1	79C2.0	.11326641	06	.248 01	.5938
072211	1	1	79C2.0	.11326742	06	.248 01	.5762
072221	1	1	79C2.0	.11326844	06	.248 01	.5586
072231	1	1	79C2.0	.11326946	06	.248 01	-.4590
072241	1	1	79C2.0	.11327047	06	.248 01	.5254
072251	1	1	79C2.0	.11327149	06	.248 01	-.4893
072301	1	1	79C2.0	.11327250	06	.248 01	1.4961
072311	1	1	79C2.0	.11327351	06	.248 01	-.5156
072331	1	1	79C2.0	.11327554	06	.248 01	-.5371
072341	1	1	79C2.0	.11327655	06	.248 01	-.5469
072351	1	1	79C2.0	.11327755	06	.248 01	-1.5547
072401	1	1	79C2.0	.11327856	06	.248 01	.4375
072411	1	1	79C2.0	.11327957	06	.248 01	.4307
072421	1	1	79C2.0	.11328057	06	.248 01	-.5762
072431	1	1	79C2.0	.11328158	06	.248 01	.4199
072441	1	1	79C2.0	.11328258	06	.248 01	-.5840
072451	1	1	79C2.0	.11328359	06	.248 01	-.5859
072501	1	1	79C2.0	.11328459	06	.248 01	-.5879
072511	1	1	79C2.0	.11328559	06	.248 01	1.4141
072531	1	1	79C2.0	.11328758	06	.248 01	.4141
072541	1	1	79C2.0	.11328858	06	.248 01	.4170
072551	1	1	79C2.0	.11328958	06	.248 01	-.5801
072601	1	1	79C2.0	.11329058	06	.248 01	-.5762
072611	1	1	79C2.0	.11329157	06	.248 01	1.4297
072631	1	1	79C2.0	.11329355	06	.248 01	-.5547
072641	1	1	79C2.0	.11329455	06	.248 01	1.4531
072701	1	1	79C2.0	.11329653	06	.248 01	1.4727
072711	1	1	79C2.0	.11329751	06	.248 01	-.5156
072721	1	1	79C2.0	.11329850	06	.248 01	-.5020
072731	1	1	79C2.0	.11329949	06	.248 01	.5117
072741	1	1	79C2.0	.11330047	06	.248 01	.5273
072751	1	1	79C2.0	.11330146	06	.248 01	-1.4570
072801	1	1	79C2.0	.11330244	06	.248 01	.5586
072811	1	1	79C2.0	.11330342	06	.248 01	.5762
072821	1	1	79C2.0	.11330440	06	.248 01	-.4043
072831	1	1	79C2.0	.11330538	06	.248 01	-.3848
072841	1	1	79C2.0	.11330636	06	.248 01	.6367
072851	1	1	79C2.0	.11330734	06	.248 01	.6582
072901	1	1	79C2.0	.11330832	06	.248 01	-.3193
072911	1	1	79C2.0	.11330930	06	.248 01	-1.2969
072921	1	1	79C2.0	.11331027	06	.248 01	-2.2734
072931	1	1	79C2.0	.11331124	06	.248 01	-2.2422
072941	1	1	79C2.0	.11331222	06	.248 01	.7832
072951	1	1	79C2.0	.11331319	06	.248 01	-1.1914
073011	1	1	79C2.0	.11331513	06	.248 01	-.1309
073021	1	1	79C2.0	.11331610	06	.248 01	2.8984
073031	1	1	79C2.0	.11331707	06	.248 01	1.9336
073041	1	1	79C2.0	.11331803	06	.248 01	.9668
073051	1	1	79C2.0	.11331900	06	.248 01	1.0000
073121	1	1	79C2.0	.11332189	06	.248 01	.1084
073131	1	1	79C2.0	.11332285	06	.248 01	-.8535
073141	1	1	79C2.0	.11332381	06	.248 01	-.8145
073151	1	1	79C2.0	.11332477	06	.248 01	.2266

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TIME	TC	Q	FRQ	CC3
073201	1	1	79C2.0	.11332573 06 .248 01 1.2695
073211	1	1	79C2.0	.11332669 06 .248 01 1.3086
073221	1	1	79C2.0	.11332765 06 .248 01 -.6465
073231	1	1	79C2.0	.11332860 06 .248 01 -.6035
073241	1	1	79C2.0	.11332956 06 .248 01 -.5566
073251	1	1	79C2.0	.11333051 06 .248 01 -.5098
073301	1	1	79C2.0	.11333146 06 .248 01 1.5391
073311	1	1	79C2.0	.11333241 06 .248 01 .5879
073321	1	1	79C2.0	.11333336 06 .248 01 .6367
073331	1	1	79C2.0	.11333431 06 .248 01 .6875
073421	1	1	79C2.0	.11333904 06 .248 01 -.0439
073431	1	1	79C2.0	.11333999 06 .248 01 -.9883
073441	1	1	79C2.0	.11334093 06 .248 01 1.0703
073451	1	1	79C2.0	.11334187 06 .248 01 -.8711
073501	1	1	79C2.0	.11334281 06 .248 01 -.8105
073511	1	1	79C2.0	.11334375 06 .248 01 -.7500
073521	1	1	79C2.0	.11334469 06 .248 01 1.3125
073531	1	1	79C2.0	.11334562 06 .248 01 -.6230
073541	1	1	79C2.0	.11334656 06 .248 01 -.5586
073551	1	1	79C2.0	.11334749 06 .248 01 .5059
073601	1	1	79C2.0	.11334843 06 .248 01 -1.4297
073611	1	1	79C2.0	.11334936 06 .248 01 -.3604
073621	1	1	79C2.0	.11335029 06 .248 01 -.2910
073631	1	1	79C2.0	.11335122 06 .248 01 -.2217
073641	1	1	79C2.0	.11335215 06 .248 01 -.1514
073651	1	1	79C2.0	.11335308 06 .248 01 -.0801
073701	1	1	79C2.0	.11335401 06 .248 01 -2.0078
073711	1	1	79C2.0	.11335493 06 .248 01 -1.9336
073721	1	1	79C2.0	.11335586 06 .248 01 .1416
073731	1	1	79C2.0	.11335678 06 .248 01 .2178
073741	1	1	79C2.0	.11335770 06 .248 01 1.2930
073751	1	1	79C2.0	.11335863 06 .248 01 .3721
073801	1	1	79C2.0	.11335955 06 .248 01 -.5488
073841	1	1	79C2.0	.11336322 06 .248 01 .7793
073851	1	1	79C2.0	.11336414 06 .248 01 .8613
073901	1	1	79C2.0	.11336505 06 .248 01 -1.0547
073911	1	1	79C2.0	.11336596 06 .248 01 1.0352
073921	1	1	79C2.0	.11336688 06 .248 01 .1211
073931	1	1	79C2.0	.11336779 06 .248 01 2.2109
073941	1	1	79C2.0	.11336870 06 .248 01 1.3008
073951	1	1	79C2.0	.11336961 06 .248 01 .3896
074001	1	1	79C2.0	.11337052 06 .248 01 .4814
074011	1	1	79C2.0	.11337142 06 .248 01 -1.4258
074021	1	1	79C2.0	.11337233 06 .248 01 .6680
074031	1	1	79C2.0	.11337323 06 .248 01 .7637
074041	1	1	79C2.0	.11337414 06 .248 01 -.1406
074051	1	1	79C2.0	.11337504 06 .248 01 .9570
074101	1	1	79C2.0	.11337594 06 .248 01 -.9453
074111	1	1	79C2.0	.11337685 06 .248 01 .1533
074121	1	1	79C2.0	.11337775 06 .248 01 .2539
074131	1	1	79C2.0	.11337864 06 .248 01 -.6445
074141	1	1	79C2.0	.11337954 06 .248 01 .4570
074151	1	1	79C2.0	.11338044 06 .248 01 -.4385
074201	1	1	79C2.0	.11338133 06 .248 01 -.3350
074211	1	1	79C2.0	.11338223 06 .248 01 -.2285
074221	1	1	79C2.0	.11338312 06 .248 01 -.1221
074231	1	1	79C2.0	.11338401 06 .248 01 -.0146
074241	1	1	79C2.0	.11338491 06 .248 01 .0938
074251	1	1	79C2.0	.11338580 06 .248 01 1.2031
074301	1	1	79C2.0	.11338668 06 .248 01 -.6855
074321	1	1	79C2.0	.11338846 06 .248 01 1.5391
074331	1	1	79C2.0	.11338934 06 .248 01 -1.3477
074341	1	1	79C2.0	.11339023 06 .248 01 -.2305
074401	1	1	79C2.0	.11339200 06 .248 01 .0039
074411	1	1	79C2.0	.11339288 06 .248 01 -.8789
074421	1	1	79C2.0	.11339376 06 .248 01 .2412
074451	1	1	79C2.0	.11339639 06 .248 01 .6074
074501	1	1	79C2.0	.11339727 06 .248 01 -1.2695
074511	1	1	79C2.0	.11339814 06 .248 01 -1.1445
074521	1	1	79C2.0	.11339902 06 .248 01 -2.0156
074531	1	1	79C2.0	.11339989 06 .248 01 -.8926
074541	1	1	79C2.0	.11340076 06 .248 01 .2373
074551	1	1	79C2.0	.11340163 06 .248 01 .3672
074601	1	1	79C2.0	.11340250 06 .248 01 -.5039
074611	1	1	79C2.0	.11340337 06 .248 01 .6289
074621	1	1	79C2.0	.11340424 06 .248 01 .7617
074631	1	1	79C2.0	.11340510 06 .248 01 -2.1094
074641	1	1	79C2.0	.11340597 06 .248 01 -.9707
074651	1	1	79C2.0	.11340683 06 .248 01 1.1641
074711	1	1	79C2.0	.11340856 06 .248 01 1.4414
074721	1	1	79C2.0	.11340942 06 .248 01 .5801
074731	1	1	79C2.0	.11341028 06 .248 01 1.7188
074741	1	1	79C2.0	.11341114 06 .248 01 -.1396
074751	1	1	79C2.0	.11341200 06 .248 01 2.0000
074801	1	1	79C2.0	.11341285 06 .248 01 .1455
074811	1	1	79C2.0	.11341371 06 .248 01 -.7109
074821	1	1	79C2.0	.11341456 06 .248 01 .4365
074831	1	1	79C2.0	.11341542 06 .248 01 -.4170
074841	1	1	79C2.0	.11341627 06 .248 01 .7305
074851	1	1	79C2.0	.11341712 06 .248 01 -.1201
074911	1	1	79C2.0	.11341882 06 .248 01 1.1797
074931	1	1	79C2.0	.11342051 06 .248 01 .4863
074941	1	1	79C2.0	.11342136 06 .248 01 -.3594
074951	1	1	79C2.0	.11342220 06 .248 01 .7969
075001	1	1	79C2.0	.11342305 06 .248 01 .9531
075021	1	1	79C2.0	.11342473 06 .248 01 -.7324
075031	1	1	79C2.0	.11342557 06 .248 01 -.5723
075041	1	1	79C2.0	.11342641 06 .248 01 -.4111
075101	1	1	79C2.0	.11342808 06 .248 01 -.0859
075111	1	1	79C2.0	.11342892 06 .248 01 1.0781
075121	1	1	79C2.0	.11342975 06 .248 01 1.2461
075131	1	1	79C2.0	.11343059 06 .248 01 .4102
075151	1	1	79C2.0	.11343225 06 .248 01 -1.2539
075221	1	1	79C2.0	.11343474 06 .248 01 .2588
075231	1	1	79C2.0	.11343557 06 .248 01 1.4336
075241	1	1	79C2.0	.11343639 06 .248 01 -1.3945
075251	1	1	79C2.0	.11343722 06 .248 01 -.2188
075301	1	1	79C2.0	.11343804 06 .249 01 .9590

STATICN NUMBER 1 62/01/28

TIME	TC	Q	FRQ	CC3
075311	1	1	79C2.0	.11343886 06 .249 01 .1357
075321	1	1	79C2.0	.11343969 06 .249 01 -.6875
075331	1	1	79C2.0	.11344050 06 .249 01 .4941
075341	1	1	79C2.0	.11344132 06 .249 01 .6758
075351	1	1	79C2.0	.11344214 06 .249 01 .8574
075411	1	1	79C2.0	.11344378 06 .249 01 -.7773
075421	1	1	79C2.0	.11344459 06 .249 01 -.5918
075431	1	1	79C2.0	.11344540 06 .249 01 .5957
075441	1	1	79C2.0	.11344622 06 .249 01 -.2168
075451	1	1	79C2.0	.11344703 06 .249 01 -.0283
075511	1	1	79C2.0	.11344865 06 .249 01 .3516
075521	1	1	79C2.0	.11344946 06 .249 01 -.4561
075531	1	1	79C2.0	.11345026 06 .249 01 -.2637
075541	1	1	79C2.0	.11345107 06 .249 01 -2.0703
075601	1	1	79C2.0	.11345268 06 .249 01 1.3242
075611	1	1	79C2.0	.11345348 06 .249 01 .5215
075621	1	1	79C2.0	.11345428 06 .249 01 -1.2813
075631	1	1	79C2.0	.11345508 06 .249 01 .9199
075641	1	1	79C2.0	.11345588 06 .249 01 .1191
075651	1	1	79C2.0	.11345668 06 .249 01 .3213
075701	1	1	79C2.0	.11345747 06 .249 01 .5254
075711	1	1	79C2.0	.11345827 06 .249 01 -.2715
075721	1	1	79C2.0	.11345906 06 .249 01 -1.0664
075731	1	1	79C2.0	.11345986 06 .249 01 .1406
075741	1	1	79C2.0	.11346065 06 .249 01 1.3477
075751	1	1	79C2.0	.11346144 06 .249 01 -.4434
075801	1	1	79C2.0	.11346223 06 .249 01 -.2334
075811	1	1	79C2.0	.11346302 06 .249 01 -.0225
075821	1	1	79C2.0	.11346381 06 .249 01 -.8105
075841	1	1	79C2.0	.11346538 06 .249 01 -.3828
075851	1	1	79C2.0	.11346617 06 .249 01 -2.1641
075901	1	1	79C2.0	.11346655 06 .249 01 .0488
075911	1	1	79C2.0	.11346773 06 .249 01 .2676
075921	1	1	79C2.0	.11346851 06 .249 01 -.5137
075931	1	1	79C2.0	.11346929 06 .249 01 .7070
075941	1	1	79C2.0	.11347007 06 .249 01 -2.0703
075951	1	1	79C2.0	.11347085 06 .249 01 -.8516
080011	1	1	79C2.0	.11347240 06 .249 01 .5977
080021	1	1	79C2.0	.11347318 06 .249 01 .8223
080031	1	1	79C2.0	.11347355 06 .249 01 1.0508
080041	1	1	79C2.0	.11347472 06 .249 01 1.2773
080051	1	1	79C2.0	.11347549 06 .249 01 1.5078
080101	1	1	79C2.0	.11347626 06 .249 01 -1.2656
080111	1	1	79C2.0	.11347703 06 .249 01 -.0332
080121	1	1	79C2.0	.11347780 06 .249 01 .2002
080131	1	1	79C2.0	.11347857 06 .249 01 -1.5664
080141	1	1	79C2.0	.11347933 06 .249 01 .6680
080151	1	1	79C2.0	.11348010 06 .249 01 -.0967
080201	1	1	79C2.0	.11348086 06 .249 01 .1406
080211	1	1	79C2.0	.11348162 06 .249 01 .3789
080221	1	1	79C2.0	.11348238 06 .249 01 -.3818
080231	1	1	79C2.0	.11348314 06 .249 01 -1.1406
080241	1	1	79C2.0	.11348390 06 .249 01 .0996
080251	1	1	79C2.0	.11348466 06 .249 01 -.6582
080301	1	1	79C2.0	.11348541 06 .249 01 .5859
080311	1	1	79C2.0	.11348617 06 .249 01 -1.1680
080321	1	1	79C2.0	.11348692 06 .249 01 .0771
080331	1	1	79C2.0	.11348767 06 .249 01 1.3242
080341	1	1	79C2.0	.11348843 06 .249 01 -.4277
080351	1	1	79C2.0	.11348918 06 .249 01 -.1777
080411	1	1	79C2.0	.11349068 06 .249 01 .3242
080421	1	1	79C2.0	.11349142 06 .249 01 -.4229
080431	1	1	79C2.0	.11349217 06 .249 01 -.1689
080501	1	1	79C2.0	.11349440 06 .249 01 2.6016
080521	1	1	79C2.0	.11349588 06 .249 01 1.1172
080531	1	1	79C2.0	.11349662 06 .249 01 .3789
080541	1	1	79C2.0	.11349736 06 .249 01 .6406
080551	1	1	79C2.0	.11349809 06 .249 01 -1.0977
080601	1	1	79C2.0	.11349883 06 .249 01 .1689
080611	1	1	79C2.0	.11349957 06 .249 01 .4336
080621	1	1	79C2.0	.11350030 06 .249 01 -.2988
080631	1	1	79C2.0	.11350103 06 .249 01 -.0322
080641	1	1	79C2.0	.11350176 06 .249 01 -.7637
080701	1	1	79C2.0	.11350322 06 .249 01 -.2217
080711	1	1	79C2.0	.11350395 06 .249 01 -1.9492
080721	1	1	79C2.0	.11350468 06 .249 01 -.6758
080731	1	1	79C2.0	.11350540 06 .249 01 .5996
080741	1	1	79C2.0	.11350612 06 .249 01 -1.1250
080751	1	1	79C2.0	.11350685 06 .249 01 1.1523
080801	1	1	79C2.0	.11350757 06 .249 01 -.5703
080811	1	1	79C2.0	.11350829 06 .249 01 .7090
080821	1	1	79C2.0	.11350901 06 .249 01 -.0117
080831	1	1	79C2.0	.11350973 06 .249 01 -.7305
080841	1	1	79C2.0	.11351045 06 .249 01 -.4463
080851	1	1	79C2.0	.11351116 06 .249 01 -.1621
080901	1	1	79C2.0	.11351188 06 .249 01 .1221
080911	1	1	79C2.0	.11351259 06 .249 01 -.5918
080931	1	1	79C2.0	.11351402 06 .249 01 .9844
080941	1	1	79C2.0	.11351472 06 .249 01 -.7266
080951	1	1	79C2.0	.11351544 06 .249 01 .5645
081011	1	1	79C2.0	.11351685 06 .249 01 .1494
081021	1	1	79C2.0	.11351756 06 .249 01 .4443
081031	1	1	79C2.0	.11351826 06 .249 01 -1.2617
081041	1	1	79C2.0	.11351896 06 .250 01 .0361
081301	1	1	79C2.0	.11352869 06 .250 01 -.6895
081311	1	1	79C2.0	.11352937 06 .250 01 -.3750
081321	1	1	79C2.0	.11353006 06 .250 01 .9395
081341	1	1	79C2.0	.11353143 06 .250 01 .5742
081401	1	1	7851.0	.11353276 06 .250 01 .2354
081411	1	1	7851.0	.11353344 06 .250 01 1.5586
081421	1	1	7851.0	.11353412 06 .250 01 -.1211
081431	1	1	7851.0	.11353480 06 .250 01 .2021
081441	1	1	7851.0	.11353547 06 .250 01 -.4736
081451	1	1	7851.0	.11353615 06 .250 01 .8535
081501	1	1	7851.0	.11353682 06 .250 01 1.1797
081511	1	1	7851.0	.11353749 06 .250 01 .5078
081521	1	1	7851.0	.11353816 06 .250 01 -.1631
081531	1	1	7851.0	.11353883 06 .250 01 1.1680

STATION NUMBER 1 62/01/28

TIME	TC	Q	FRQ	CC3
081551	1	1	7851.0	.11354017 06 .250 01 -.1689
081611	1	1	7851.0	.11355150 06 .250 01 .5000
081621	1	1	7851.0	.11354216 06 .250 01 -.1631
081631	1	1	7851.0	.11354282 06 .250 01 .1748
081651	1	1	7851.0	.11354415 06 .250 01 -.1475
081701	1	1	7851.0	.11354481 06 .250 01 .1934
081711	1	1	7851.0	.11354546 06 .250 01 -.4639
081721	1	1	7851.0	.11354612 06 .250 01 -1.1211
081731	1	1	7851.0	.11354678 06 .250 01 .2236
081741	1	1	7851.0	.11354743 06 .250 01 .5703
081751	1	1	7851.0	.11354808 06 .250 01 .9160
081801	1	1	7851.0	.11354873 06 .250 01 -.7363
081811	1	1	7851.0	.11354939 06 .250 01 -.3867
081831	1	1	7851.0	.11355068 06 .250 01 -.6855
081841	1	1	7851.0	.11355133 06 .250 01 -.3320
081901	1	1	7851.0	.11355262 06 .250 01 .3779
081911	1	1	7851.0	.11355327 06 .250 01 -.2666
081931	1	1	7851.0	.11355455 06 .250 01 -.5508
081941	1	1	7851.0	.11355519 06 .250 01 .8105
081951	1	1	7851.0	.11355583 06 .250 01 1.1719
082001	1	1	7851.0	.11355647 06 .250 01 -.4668
082011	1	1	7851.0	.11355710 06 .250 01 -.1035
082021	1	1	7851.0	.11365774 06 .250 01 -1.7383
082031	1	1	7851.0	.11355837 06 .250 01 -.3730
082041	1	1	7851.0	.11355900 06 .250 01 .9941
082051	1	1	7851.0	.11355964 06 .250 01 -1.6367
082111	1	1	7851.0	.11356090 06 .250 01 1.1016
082121	1	1	7851.0	.11356152 06 .250 01 .4746
082131	1	1	7851.0	.11356215 06 .250 01 -1.1523
082141	1	1	7851.0	.11356278 06 .250 01 -.7793
082201	1	1	7851.0	.11356403 06 .250 01 -.0264
082211	1	1	7851.0	.11356465 06 .250 01 1.3516
082221	1	1	7851.0	.11356527 06 .250 01 -.2705
082231	1	1	7851.0	.11356589 06 .250 01 1.1094
082241	1	1	7851.0	.11356651 06 .250 01 .4912
082251	1	1	7851.0	.11356713 06 .250 01 -1.1289
082311	1	1	7851.0	.11356836 06 .250 01 -.3584
082321	1	1	7851.0	.11356897 06 .250 01 -.9727
082341	1	1	7851.0	.11357020 06 .250 01 .8047
082401	1	1	7851.0	.11357142 06 .251 01 1.5859
082411	1	1	7851.0	.11357202 06 .251 01 -1.0234
082421	1	1	7851.0	.11357263 06 .251 01 -1.6328
082431	1	1	7851.0	.11357324 06 .251 01 -2.2344
082441	1	1	7851.0	.11357384 06 .251 01 1.1602
082451	1	1	7851.0	.11357444 06 .251 01 .5566
082501	1	1	7851.0	.11357505 06 .251 01 .9551
082511	1	1	7851.0	.11367565 06 .251 01 -.6465
082521	1	1	7851.0	.11357625 06 .251 01 -2.2500
082531	1	1	7851.0	.11367684 06 .251 01 -1.8438
082541	1	1	7851.0	.11357744 06 .251 01 -.4414
082601	1	1	7851.0	.11357863 06 .251 01 -.6328
082621	1	1	7851.0	.11357982 06 .251 01 -.8184
082631	1	1	7851.0	.11358041 06 .251 01 -.4092
082641	1	1	7851.0	.11358100 06 .251 01 .0000

STATION NUMBER 1 62/01/28

TIME	TC	Q	FRQ	CC3
082701	1	1	7851.0	.11358217 06 .251 01 -.1758
082721	1	1	7851.0	.11358335 06 .251 01 -.3477
082731	1	1	7851.0	.11358393 06 .251 01 -.9316
082741	1	1	7851.0	.11358451 06 .251 01 .4854
082801	1	1	7851.0	.11358568 06 .251 01 .3232
082831	1	1	7851.0	.11358741 06 .251 01 .5898
082841	1	1	7851.0	.11358799 06 .251 01 .0137
082851	1	1	7851.0	.11358856 06 .251 01 .4395
082911	1	1	7851.0	.11358971 06 .251 01 .2939
082921	1	1	7851.0	.11359028 06 .251 01 .7246
082931	1	1	7851.0	.11359085 06 .251 01 .1543
082941	1	1	7851.0	.11359141 06 .251 01 1.5859
083001	1	1	7851.0	.11359255 06 .251 01 -.5469
083011	1	1	7851.0	.11359311 06 .251 01 .8887
083021	1	1	7851.0	.11359368 06 .251 01 1.3242
083031	1	1	7851.0	.11359424 06 .251 01 -.2373
083041	1	1	7851.0	.11359480 06 .251 01 .2012
083051	1	1	7851.0	.11359536 06 .251 01 -.3584
083101	1	1	7851.0	.11359592 06 .251 01 -.9180
083141	1	1	7851.0	.11359814 06 .251 01 -.1396
083151	1	1	7851.0	.11359869 06 .251 01 -.6934
083201	1	1	7851.0	.11359924 06 .251 01 .7578
083221	1	1	7851.0	.11360034 06 .251 01 -1.3438
083231	1	1	7851.0	.11360089 06 .251 01 .1104
083251	1	1	7851.0	.11360198 06 .251 01 1.0195
083301	1	1	7851.0	.11360252 06 .251 01 -1.5273
083311	1	1	7851.0	.11360307 06 .251 01 -1.0703
083321	1	1	7851.0	.11360361 06 .251 01 -1.6133
083331	1	1	7851.0	.11360415 06 .251 01 .8496
083341	1	1	7851.0	.11360469 06 .251 01 .3096
083351	1	1	7851.0	.11360523 06 .251 01 -1.2305
083401	1	1	7851.0	.11360576 06 .252 01 -.7656
083411	1	1	7851.0	.11360630 06 .252 01 -.3008
083421	1	1	7851.0	.11360683 06 .252 01 .1650
083431	1	1	7851.0	.11360737 06 .252 01 -.3682
083441	1	1	7851.0	.11360790 06 .252 01 -1.8984
083451	1	1	7851.0	.11360843 06 .252 01 -.4307
083501	1	1	7851.0	.11360896 06 .252 01 -.9609
083511	1	1	7851.0	.11360949 06 .252 01 .5117
083521	1	1	7851.0	.11361001 06 .252 01 -.0156
083531	1	1	7851.0	.11361054 06 .252 01 .4590
083541	1	1	7851.0	.11361106 06 .252 01 -2.0625
083621	1	1	7851.0	.11361315 06 .252 01 .8477
083631	1	1	7851.0	.11361367 06 .252 01 .3301
083641	1	1	7851.0	.11361419 06 .252 01 -.1875
083651	1	1	7851.0	.11361470 06 .252 01 .2969
083701	1	1	7851.0	.11361522 06 .252 01 -.2178
083711	1	1	7851.0	.11361573 06 .252 01 .2686
083721	1	1	7851.0	.11361624 06 .252 01 -.2441

STATISTICS STATION 1

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
CC3	1/28-044911	1/28-083721	1183	.876 00	.877 00	-.505-01	.769 00

STATION NUMBER 3 62/01/27

TIME	TC	Q	FRQ	CC3			
173406	10	3	8069.0	.11501237	06	.658 00	.2275
173506	10	3	8069.0	.11501449	06	.658 00	-.0898
173606	10	3	8069.0	.11501657	06	.660 00	-.2744
173706	10	3	8069.0	.11501862	06	.662 00	-.2246
173806	10	3	8069.0	.11502064	06	.664 00	-.2422
173906	10	3	8069.0	.11502262	06	.666 00	-.4258
174706	10	3	8751.0	.11503761	06	.682 00	.0879
174806	10	3	8751.0	.11503929	06	.684 00	.6133
174906	10	3	8751.0	.11504093	06	.686 00	.0713
175006	10	3	8751.0	.11504253	06	.688 00	.2646
175106	10	3	8751.0	.11504411	06	.691 00	-.2070
175206	10	3	8751.0	.11504564	06	.693 00	.3574
175306	10	3	8751.0	.11504714	06	.697 00	.0547
175406	10	3	8751.0	.11504861	06	.699 00	-.0117
175506	10	3	8751.0	.11505004	06	.703 00	-.5430
175606	10	3	8751.0	.11505144	06	.707 00	-.0400
175706	10	3	8751.0	.11505280	06	.711 00	.5000
175806	10	3	8751.0	.11505412	06	.715 00	.5742
175906	10	3	8751.0	.11505542	06	.719 00	.1836
180006	10	3	8751.0	.11505667	06	.723 00	.1289
180406	10	3	8172.0	.11506104	06	.742 00	.8594
180506	10	3	8172.0	.11506211	06	.748 00	.0840
180606	10	3	8172.0	.11506315	06	.756 00	.5449
180706	10	3	8172.0	.11506416	06	.762 00	.1406
181206	10	3	8172.0	.11506864	06	.803 00	.0605
181306	10	3	8712.0	.11506970	06	.813 00	-.1006
181406	10	3	8712.0	.11507045	06	.824 00	.4492
181506	10	3	8712.0	.11507116	06	.836 00	-.1641
181606	10	3	8712.0	.11507184	06	.848 00	.1582
181706	10	3	8712.0	.11507248	06	.861 00	-.1826
181806	10	3	8712.0	.11507309	06	.877 00	-.3877
181906	10	3	8712.0	.11507365	06	.895 00	.5449
182006	10	3	8712.0	.11507418	06	.912 00	-.0859
182106	10	3	8712.0	.11507468	06	.932 00	.2207
182206	10	3	8712.0	.11507514	06	.953 00	.2637
182306	10	3	8712.0	.11507556	06	.977 00	-.3574
182406	10	3	8712.0	.11507594	06	.101 01	.0596
182506	10	3	8712.0	.11507629	06	.104 01	-.6875
182606	10	3	8712.0	.11507660	06	.107 01	-.0977
182706	10	3	8712.0	.11507687	06	.111 01	.1299
182806	10	3	8712.0	.11507711	06	.115 01	-.3066
182906	10	3	8712.0	.11507731	06	.120 01	-.4072
183006	10	3	8712.0	.11507747	06	.125 01	.6309
183106	10	3	8712.0	.11507759	06	.131 01	.2051
183206	10	3	8712.0	.11507768	06	.138 01	-.0850
183306	10	3	8712.0	.11507774	06	.146 01	-.1377
183406	10	3	8712.0	.11507775	06	.156 01	-.1533
183506	10	3	8712.0	.11507773	06	.167 01	.2666
183606	10	3	8712.0	.11507768	06	.180 01	.0225

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TIME	TC	Q	FRQ	CC3			
085106	10	3	7362.0	.10895991	06	.176 01	.2910
085126	10	3	7733.0	.10896040	06	.297 01	-.1997
085146	10	3	7733.0	.10896078	06	.289 01	.1182
085206	10	3	7733.0	.10896117	06	.282 01	-.4697
085226	10	3	7733.0	.10896156	06	.275 01	.3379
085246	10	3	7733.0	.10896196	06	.269 01	-.1592
085306	10	3	7733.0	.10896236	06	.263 01	.1396
085406	10	3	7733.0	.10896359	06	.247 01	1.1055
085426	10	3	7733.0	.10896402	06	.242 01	-.0156
085446	10	3	7733.0	.10896444	06	.237 01	.1582
085546	10	3	7733.0	.10896575	06	.225 01	.4521
085606	10	3	7733.0	.10896619	06	.221 01	.1084
085646	10	3	7733.0	.10896710	06	.214 01	.1035
085706	10	3	7733.0	.10896755	06	.211 01	-.1553
085746	10	3	7733.0	.10896849	06	.205 01	-.1865
085806	10	3	7733.0	.10896896	06	.202 01	-.2607
085826	10	3	7733.0	.10896944	06	.198 01	-.0391
085946	10	3	7733.0	.10897140	06	.189 01	.2998
090006	10	3	7733.0	.10897190	06	.186 01	-.2021
090026	10	3	7733.0	.10897241	06	.184 01	-.1084
090046	10	3	7733.0	.10897292	06	.182 01	.1797
090106	10	3	7733.0	.10897344	06	.180 01	-.2373
090126	10	3	7733.0	.10897396	06	.179 01	-.3584
090146	10	3	7733.0	.10897448	06	.177 01	.6152
090206	10	3	7733.0	.10897502	06	.175 01	-.7168
090226	10	3	7733.0	.10897555	06	.173 01	-.2510
090306	10	3	7733.0	.10897664	06	.170 01	-.5391
090326	10	3	7733.0	.10897719	06	.168 01	.0117
090346	10	3	7733.0	.10897774	06	.167 01	-.0439
090406	10	3	7733.0	.10897830	06	.166 01	.1973
090426	10	3	7733.0	.10897887	06	.164 01	.5332
090506	10	3	7733.0	.10898001	06	.162 01	-.5117
090546	10	3	7733.0	.10898117	06	.159 01	-.1738
090626	10	3	7733.0	.10898236	06	.157 01	.3428
090646	10	3	7733.0	.10898295	06	.156 01	-.3555
090706	10	3	7733.0	.10898356	06	.155 01	.3418
090726	10	3	7733.0	.10898416	06	.154 01	-.2666
090746	10	3	7733.0	.10898478	06	.153 01	-.0791
090806	10	3	7733.0	.10898540	06	.152 01	.0029
090826	10	3	7733.0	.10898602	06	.151 01	.3809
090946	10	3	7733.0	.10898855	06	.147 01	-.2559
091006	10	3	7733.0	.10898920	06	.146 01	-.0029
091026	10	3	7733.0	.10898985	06	.146 01	.3457
091046	10	3	7733.0	.10899051	06	.145 01	-.7109
091126	10	3	7733.0	.10899183	06	.143 01	.2637
091146	10	3	7733.0	.10899251	06	.143 01	-.5078
091226	10	3	7733.0	.10899386	06	.141 01	.0381
091246	10	3	7733.0	.10899455	06	.141 01	-.6465
091306	10	3	7733.0	.10899523	06	.140 01	.8652
091346	10	3	7733.0	.10899663	06	.139 01	.1709
091426	10	3	7733.0	.10899804	06	.138 01	.5586
091446	10	3	7733.0	.10899875	06	.137 01	-.6563
091506	10	3	7733.0	.10899947	06	.137 01	.0273
091546	10	3	7733.0	.10900092	06	.136 01	-.2246
091606	10	3	7733.0	.10900166	06	.135 01	.8438
091646	10	3	7733.0	.10900314	06	.134 01	-.1357

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TIME	TC	Q	FRQ	CC3			
091706	10	3	7733.0	.10900388	06	.134 01	.1182
091746	10	3	7733.0	.10900539	06	.133 01	.2100
091806	10	3	7733.0	.10900615	06	.132 01	-.0518
091826	10	3	7733.0	.10900692	06	.132 01	-.2178
091846	10	3	7733.0	.10900769	06	.132 01	.0117
091906	10	3	7733.0	.10900846	06	.131 01	-.1631
091926	10	3	7733.0	.10900924	06	.131 01	-.4434
091946	10	3	7733.0	.10901003	06	.130 01	.3721
092106	10	3	7733.0	.10901321	06	.129 01	-.1152
092146	10	3	7733.0	.10901484	06	.128 01	.1631
092206	10	3	7733.0	.10901565	06	.128 01	.2451
092226	10	3	7733.0	.10901648	06	.128 01	-.2783
092246	10	3	7733.0	.10901730	06	.127 01	-.3047
092306	10	3	7733.0	.10901814	06	.127 01	.1621
092326	10	3	7733.0	.10901897	06	.127 01	-.5742
092346	10	3	7733.0	.10901981	06	.127 01	-.0156
092406	10	3	7733.0	.10902066	06	.126 01	.0371
092446	10	3	7733.0	.10902237	06	.125 01	-.2695
092506	10	3	7733.0	.10902323	06	.125 01	-.1299
092526	10	3	7733.0	.10902409	06	.125 01	.8047
092546	10	3	7733.0	.10902496	06	.125 01	-.1650
092626	10	3	7733.0	.10902672	06	.124 01	-.1201
092646	10	3	7733.0	.10902760	06	.124 01	-.3037
092706	10	3	7733.0	.10902849	06	.124 01	.3076
092746	10	3	7733.0	.10903028	06	.123 01	-.1846
092806	10	3	7733.0	.10903119	06	.123 01	.1123
092826	10	3	7733.0	.10903209	06	.123 01	-.0947
092846	10	3	7733.0	.10903301	06	.123 01	-.2070
092906	10	3	7733.0	.10903392	06	.122 01	-.1240
092926	10	3	7733.0	.10903485	06	.122 01	.2539
092946	10	3	7733.0	.10903577	06	.122 01	-.1719
093046	10	3	7733.0	.10903858	06	.121 01	.0205
093106	10	3	7733.0	.10903952	06	.121 01	-.4248
093126	10	3	7733.0	.10904047	06	.121 01	-.1738
093146	10	3	7733.0	.10904143	06	.121 01	.1719
093206	10	3	7733.0	.10904239	06	.121 01	.0117
093226	10	3	7733.0	.10904335	06	.120 01	-.3516
093246	10	3	7733.0	.10904432	06	.120 01	.5801
093306	10	3	7733.0	.10904529	06	.120 01	-.3926
093326	10	3	7733.0	.10904627	06	.120 01	.0293
093346	10	3	7733.0	.10904725	06	.120 01	.2471
093546	10	3	7733.0	.10905324	06	.119 01	.3555
093626	10	3	7733.0	.10905528	06	.118 01	-.2783
093706	10	3	7733.0	.10905733	06	.118 01	-.5332
093906	10	3	7733.0	.10906360	06	.117 01	-.4023
093946	10	3	7733.0	.10906573	06	.117 01	.1719
094026	10	3	7733.0	.10906787	06	.117 01	-.2736
094046	10	3	7733.0	.10906855	06	.117 01	-.2529
094106	10	3	7733.0	.10907004	06	.116 01	.3633
094126	10	3	7733.0	.10907112	06	.116 01	.4746
094146	10	3	7733.0	.10907222	06	.116 01	-.0195
094226	10	3	7733.0	.10907442	06	.116 01	-.0186
094306	10	3	7733.0	.10907664	06	.116 01	-.4375
094326	10	3	7733.0	.10907775	06	.116 01	.0469
094406	10	3	7733.0	.10908000	06	.116 01	-.4990
094426	10	3	7733.0	.10908113	06	.116 01	-.1289
094446	10	3	7733.0	.10908226	06	.115 01	-.1631
094506	10	3	7733.0	.10908340	06	.115 01	-.0029
094526	10	3	7733.0	.10908454	06	.115 01	-.2451
094546	10	3	7733.0	.10908569	06	.115 01	.7070
094606	10	3	7733.0	.10908684	06	.115 01	.5547
094626	10	3	7733.0	.10908800	06	.115 01	.0967
094646	10	3	7733.0	.10908916	06	.115 01	.1348
094706	10	3	7733.0	.10909033	06	.115 01	-.6328
094726	10	3	7733.0	.10909150	06	.114 01	-.2021
094746	10	3	7733.0	.10909268	06	.114 01	.6230
094806	10	3	7733.0	.10909386	06	.114 01	-.3564
094826	10	3	7733.0	.10909504	06	.114 01	-.5410
094906	10	3	7733.0	.10909742	06	.114 01	-.4238
094926	10	3	7733.0	.10909862	06	.114 01	-.3213
094946	10	3	7733.0	.10909982	06	.114 01	-.2236
095006	10	3	7733.0	.10910103	06	.114 01	-.2305
095046	10	3	7733.0	.10910346	06	.114 01	-.3584
095106	10	3	7733.0	.10910468	06	.114 01	-.1787
095126	10	3	7733.0	.10910590	06	.114 01	-.6035
095146	10	3	7733.0	.10910713	06	.114 01	-.1328
095206	10	3	7733.0	.10910837	06	.113 01	-.3662
095226	10	3	7733.0	.10910960	06	.113 01	.5961
095246	10	3	7733.0	.10911085	06	.113 01	-.6484
095306	10	3	7733.0	.10911209	06	.113 01	.1045
095346	10	3	7733.0	.10911460	06	.113 01	-.7031
095406	10	3	7733.0	.10911586	06	.113 01	.2354
095426	10	3	7733.0	.10911713	06	.113 01	.7715
095446	10	3	7733.0	.10911840	06	.113 01	-.0986
095506	10	3	7733.0	.10911967	06	.113 01	.4268
095546	10	3	7733.0	.10912223	06	.112 01	.1650
095606	10	3	7733.0	.10912352	06	.112 01	-.7227
095426	10	3	7733.0	.10912481	06	.112 01	.0850
095646	10	3	7733.0	.10912611	06	.112 01	-.4111
095706	10	3	7733.0	.10912741	06	.112 01	-.2119
095726	10	3	7733.0	.10912872	06	.112 01	.3828
095746	10	3	7733.0	.10913002	06	.112 01	.6738
095806	10	3	7733.0	.10913134	06	.112 01	.1602
095826	10	3	7733.0	.10913266	06	.112 01	.4404
095906	10	3	7733.0	.10913531	06	.112 01	-.4102
095946	10	3	7733.0	.10913798	06	.112 01	.0225
100006	10	3	7733.0	.10913932	06	.112 01	.2822
100046	10	3	7733.0	.10914201	06	.112 01	.3867
100106	10	3	7733.0	.10914337	06	.112 01	.9336
100126	10	3	7733.0	.10914472	06	.112 01	-.3252
100146	10	3	7733.0	.10914609	06	.112 01	-.0869
100226	10	3	7733.0	.10914882	06	.111 01	-.0254
100246	10	3	7733.0	.10915020	06	.111 01	.0986
100306	10	3	7733.0	.10915158	06	.111 01	-.6816
100346	10	3	7733.0	.10915435	06	.111 01	.3438
100406	10	3	7733.0	.10915575	06	.111 01	.0518
100426	10	3	7733.0	.10915715	06	.111 01	.3535
100446	10	3	7733.0	.10915855	06	.111 01	-.4482

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TIME	TC	Q	FRQ	CC3
100526	10	3	7733.0	.10916136 06 .111 01 .2354
100606	10	3	7733.0	.10916420 06 .111 01 .2002
100626	10	3	7733.0	.10916562 06 .111 01 .4766
100646	10	3	7733.0	.10916705 06 .111 01 .1484
100706	10	3	7733.0	.10916848 06 .111 01 .4160
100726	10	3	7733.0	.10916992 06 .111 01 .9805
100746	10	3	7733.0	.10917136 06 .111 01 -.5625
100826	10	3	7733.0	.10917425 06 .111 01 -.0566
100846	10	3	7733.0	.10917571 06 .111 01 -.1113
100906	10	3	7733.0	.10917717 06 .111 01 -.4697
100926	10	3	7733.0	.10917863 06 .111 01 -.0313
100946	10	3	7733.0	.10918010 06 .111 01 .2012
101006	10	3	7733.0	.10918157 06 .111 01 -.4697
101026	10	3	7733.0	.10918304 06 .111 01 .5547
101046	10	3	7733.0	.10918452 06 .111 01 .2754
101106	10	3	7733.0	.10918601 06 .110 01 .3906
101126	10	3	7733.0	.10918750 06 .110 01 -.6973
101206	10	3	7733.0	.10919049 06 .110 01 .5137
101226	10	3	7733.0	.10919199 06 .110 01 .1113
101246	10	3	7733.0	.10919349 06 .110 01 .6074
101306	10	3	7733.0	.10919500 06 .110 01 -.6035
101326	10	3	7733.0	.10919652 06 .110 01 .0820
101346	10	3	7733.0	.10919803 06 .110 01 .0645
101426	10	3	7733.0	.10920108 06 .110 01 .1143
101446	10	3	7733.0	.10920261 06 .110 01 .0840
101506	10	3	7733.0	.10920415 06 .110 01 .2480
101526	10	3	7733.0	.10920569 06 .110 01 -.0908
101546	10	3	7733.0	.10920723 06 .110 01 -.1348
101606	10	3	7733.0	.10920878 06 .110 01 .3174
101646	10	3	7733.0	.10921189 06 .110 01 .2090
101706	10	3	7733.0	.10921345 06 .110 01 .1484
101726	10	3	7733.0	.10921502 06 .110 01 -.0166
101746	10	3	7733.0	.10921658 06 .110 01 .1143
101826	10	3	7733.0	.10921973 06 .109 01 .0645
101846	10	3	7733.0	.10922132 06 .109 01 .1826
101906	10	3	7733.0	.10922290 06 .109 01 -.0039
101926	10	3	7733.0	.10922449 06 .109 01 .3066
101946	10	3	7733.0	.10922609 06 .109 01 -.5879
102006	10	3	7733.0	.10922768 06 .109 01 .3145
102026	10	3	7733.0	.10922929 06 .109 01 .3115
102046	10	3	7733.0	.10923090 06 .109 01 -.4961
102106	10	3	7733.0	.10923250 06 .109 01 -.5059
102126	10	3	7733.0	.10923412 06 .109 01 .0781
102146	10	3	7733.0	.10923574 06 .109 01 -.0410
102206	10	3	7733.0	.10923736 06 .109 01 .3359
102226	10	3	7733.0	.10923899 06 .109 01 .3086
102246	10	3	7733.0	.10924062 06 .109 01 -.1221
102306	10	3	7733.0	.10924226 06 .109 01 -.5605
102326	10	3	7733.0	.10924390 06 .109 01 .1016
102346	10	3	7733.0	.10924554 06 .109 01 .5566
102406	10	3	7733.0	.10924719 06 .109 01 -.0908
102426	10	3	7733.0	.10924884 06 .109 01 .1572
102446	10	3	7733.0	.10925050 06 .109 01 -.1992
102506	10	3	7733.0	.10925216 06 .109 01 .4395
102526	10	3	7733.0	.10925382 06 .109 01 .4756
102546	10	3	7733.0	.10925549 06 .109 01 .1064
102606	10	3	7733.0	.10925716 06 .109 01 -.2666
102626	10	3	7733.0	.10925884 06 .109 01 .1563
102646	10	3	7733.0	.10926052 06 .109 01 .0752
102706	10	3	7733.0	.10926221 06 .109 01 -.0107
102726	10	3	7733.0	.10926390 06 .109 01 .4014
102746	10	3	7733.0	.10926559 06 .109 01 -.3926
102826	10	3	7733.0	.10926899 06 .109 01 .1084
102846	10	3	7733.0	.10927069 06 .109 01 .3037
102906	10	3	7733.0	.10927241 06 .109 01 -.0068
102926	10	3	7733.0	.10927412 06 .109 01 .2793
102946	10	3	7733.0	.10927584 06 .109 01 .2617
103006	10	3	7733.0	.10927756 06 .109 01 .4404
103046	10	3	7733.0	.10928102 06 .109 01 .2842
103106	10	3	7733.0	.10928275 06 .109 01 -.4492
103126	10	3	7733.0	.10928449 06 .109 01 -.1875
103146	10	3	7733.0	.10928623 06 .109 01 .5703
103206	10	3	7733.0	.10928797 06 .109 01 -.0752
103246	10	3	7733.0	.10929148 06 .109 01 -.7813
103326	10	3	7733.0	.10929500 06 .109 01 -.4990
103346	10	3	7733.0	.10929676 06 .108 01 .1338
103406	10	3	7733.0	.10929853 06 .108 01 -.0352
103426	10	3	7733.0	.10930031 06 .108 01 -.1104
103446	10	3	7733.0	.10930209 06 .108 01 .2119
103506	10	3	7733.0	.10930387 06 .108 01 .1299
103526	10	3	7733.0	.10930566 06 .108 01 -.1563
103546	10	3	7733.0	.10930745 06 .108 01 .4531
103606	10	3	7733.0	.10930924 06 .108 01 -.1406
103626	10	3	7733.0	.10931104 06 .108 01 .4619
103646	10	3	7733.0	.10931284 06 .108 01 -.8398
103706	10	3	7733.0	.10931464 06 .108 01 -.1455
103726	10	3	7733.0	.10931645 06 .108 01 -.0557
103746	10	3	7733.0	.10931827 06 .108 01 .1299
103806	10	3	7733.0	.10932009 06 .108 01 .0127
103826	10	3	7733.0	.10932191 06 .108 01 .0918
103846	10	3	7733.0	.10932373 06 .108 01 .0654
103906	10	3	7733.0	.10932556 06 .108 01 -.5645
103926	10	3	7733.0	.10932740 06 .108 01 .2021
103946	10	3	7733.0	.10932923 06 .108 01 .5664
104006	10	3	7733.0	.10933107 06 .108 01 -.0752
104026	10	3	7733.0	.10933292 06 .108 01 .4785
104046	10	3	7733.0	.10933477 06 .108 01 .0293
104106	10	3	7733.0	.10933662 06 .108 01 -.3232
104126	10	3	7733.0	.10933848 06 .108 01 .0205
104146	10	3	7733.0	.10934034 06 .108 01 -.5410
104206	10	3	7733.0	.10934220 06 .108 01 .8945
104226	10	3	7733.0	.10934407 06 .108 01 .2266
104246	10	3	7733.0	.10934595 06 .108 01 -.7480
104306	10	3	7733.0	.10934782 06 .108 01 .3770
104326	10	3	7733.0	.10934970 06 .108 01 -.6035
104346	10	3	7733.0	.10935159 06 .108 01 .4131
104406	10	3	7733.0	.10935347 06 .108 01 .1250
104426	10	3	7733.0	.10935536 06 .108 01 -.4668

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TIME	TC	Q	FRQ	CC3
104446	10	3	7733.0	.10935726 06 .108 01 .2383
104506	10	3	7733.0	.10935916 06 .108 01 .3389
104526	10	3	7733.0	.10936106 06 .108 01 .6352
104546	10	3	7733.0	.10936297 06 .108 01 .0283
104606	10	3	7733.0	.10936488 06 .108 01 .1172
104626	10	3	7733.0	.10936680 06 .108 01 -.2979
104646	10	3	7733.0	.10936871 06 .108 01 .5840
104706	10	3	7733.0	.10937064 06 .108 01 .1621
104726	10	3	7733.0	.10937256 06 .108 01 -.2646
104746	10	3	7733.0	.10937449 06 .108 01 .1045
104806	10	3	7733.0	.10937643 06 .108 01 .7715
104826	10	3	7733.0	.10937837 06 .108 01 -.9668
104846	10	3	7733.0	.10938031 06 .107 01 .5922
104906	10	3	7733.0	.10938225 06 .107 01 -.4531
104926	10	3	7733.0	.10938420 06 .107 01 -.4014
104946	10	3	7733.0	.10938615 06 .107 01 .3457
105006	10	3	7733.0	.10938811 06 .107 01 -.6117
105026	10	3	7733.0	.10939007 06 .107 01 -.8730
105046	10	3	7733.0	.10939203 06 .107 01 .5645
105106	10	3	7733.0	.10939400 06 .107 01 .6980
105126	10	3	7733.0	.10939597 06 .107 01 -.1748
105146	10	3	7733.0	.10939795 06 .107 01 -.1504
105206	10	3	7733.0	.10939993 06 .107 01 -.2295
105226	10	3	7733.0	.10940191 06 .107 01 -.8125
105246	10	3	7733.0	.10940390 06 .107 01 -.4990
105306	10	3	7733.0	.10940589 06 .107 01 -.7891
105326	10	3	7733.0	.10940788 06 .107 01 .6191
105346	10	3	7733.0	.10940988 06 .107 01 .1201
105406	10	3	7733.0	.10941188 06 .107 01 .2178
105426	10	3	7733.0	.10941389 06 .107 01 .1133
105446	10	3	7733.0	.10941589 06 .107 01 .3037
105506	10	3	7733.0	.10941791 06 .107 01 .0918
105526	10	3	7733.0	.10941992 06 .107 01 -.9258
105546	10	3	7733.0	.10942194 06 .107 01 .5566
105606	10	3	7733.0	.10942397 06 .107 01 .4316
105626	10	3	7733.0	.10942599 06 .107 01 .0049
105646	10	3	7733.0	.10942803 06 .107 01 -.5273
105706	10	3	7733.0	.10943006 06 .107 01 -.0605
105726	10	3	7733.0	.10943210 06 .107 01 -.0986
105746	10	3	7733.0	.10943414 06 .107 01 -1.0430
105806	10	3	7733.0	.10943619 06 .107 01 .8145
105826	10	3	7733.0	.10943823 06 .107 01 .2646
105846	10	3	7733.0	.10944029 06 .107 01 -.4883
105926	10	3	7733.0	.10944441 06 .107 01 -.3057
105946	10	3	7733.0	.10944647 06 .107 01 -.7695
110006	10	3	7733.0	.10944854 06 .107 01 .4639
110026	10	3	7733.0	.10945061 06 .107 01 .1924
110046	10	3	7733.0	.10945268 06 .107 01 -.2822
110106	10	3	7733.0	.10945476 06 .107 01 .2402
110126	10	3	7733.0	.10945684 06 .107 01 -1.0430
110146	10	3	7733.0	.10945893 06 .107 01 .5723
110206	10	3	7733.0	.10946102 06 .107 01 -.0156
110226	10	3	7733.0	.10946311 06 .107 01 .0908
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110306	10	3	7733.0	.10946730 06 .107 01 .1953
110326	10	3	7733.0	.10946941 06 .107 01 -.2080
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110406	10	3	7733.0	.10947362 06 .107 01 .0742
110426	10	3	7733.0	.10947574 06 .107 01 -.6406
110446	10	3	7733.0	.10947786 06 .107 01 -.1572
110506	10	3	7733.0	.10947998 06 .107 01 .3223
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110546	10	3	7733.0	.10948423 06 .107 01 .4688
110606	10	3	7733.0	.10948636 06 .107 01 -.2617
110626	10	3	7733.0	.10948850 06 .107 01 -.3975
110646	10	3	7733.0	.10949063 06 .107 01 .2637
110706	10	3	7733.0	.10949278 06 .107 01 -.4775
110726	10	3	7733.0	.10949492 06 .107 01 -.3232
110746	10	3	7733.0	.10949707 06 .107 01 .4277
110806	10	3	7733.0	.10949922 06 .107 01 .1748
110826	10	3	7733.0	.10950138 06 .107 01 .6186
110846	10	3	7733.0	.10950354 06 .107 01 .1582
110906	10	3	7733.0	.10950570 06 .107 01 .0957
110926	10	3	7733.0	.10950787 06 .107 01 -.2705
110946	10	3	7733.0	.10951004 06 .107 01 -.5410
111006	10	3	7733.0	.10951221 06 .107 01 -.6152
111026	10	3	7733.0	.10951439 06 .107 01 .3086
111046	10	3	7733.0	.10951657 06 .107 01 .1279
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111146	10	3	7733.0	.10952313 06 .107 01 -.3330
111206	10	3	7733.0	.10952533 06 .107 01 -.0273
111226	10	3	7733.0	.10952752 06 .107 01 .0752
111246	10	3	7733.0	.10952972 06 .107 01 .1738
111306	10	3	7733.0	.10953193 06 .107 01 .2695
111326	10	3	7733.0	.10953414 06 .107 01 .2617
111346	10	3	7733.0	.10953635 06 .107 01 .1504
111406	10	3	7733.0	.10953856 06 .107 01 .2363
111426	10	3	7733.0	.10954078 06 .107 01 .2188
111446	10	3	7733.0	.10954300 06 .107 01 -.3037
111506	10	3	7733.0	.10954523 06 .107 01 .0723
111526	10	3	7733.0	.10954746 06 .107 01 -.5566
111546	10	3	7733.0	.10954969 06 .107 01 -.2881
111606	10	3	7733.0	.10955192 06 .107 01 .8789
111626	10	3	7733.0	.10955416 06 .107 01 -.2607
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111706	10	3	7733.0	.10955865 06 .107 01 .5527
111726	10	3	7733.0	.10956089 06 .107 01 .3047
111746	10	3	7733.0	.10956315 06 .107 01 -.7480
111806	10	3	7733.0	.10956540 06 .107 01 -.3018
111826	10	3	7733.0	.10956766 06 .107 01 .6406
111846	10	3	7733.0	.10956992 06 .107 01 -.3213
111906	10	3	7733.0	.10957218 06 .107 01 .1143
111926	10	3	7733.0	.10957445 06 .107 01 -.6543
111946	10	3	7733.0	.10957672 06 .107 01 -.2256
112006	10	3	7733.0	.10957900 06 .107 01 .0000
112026	10	3	7733.0	.10958128 06 .107 01 .0215
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112106	10	3	7733.0	.10958584 06 .107 01 -.3447

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TIME	TC	Q	FRQ	CC3			
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112246	10	3	7733.0	.10959732 06	.107 01		.0830
112306	10	3	7733.0	.10959962 06	.107 01		.0791
112326	10	3	7733.0	.10960193 06	.107 01		.2715
112346	10	3	7733.0	.10960424 06	.107 01		.1621
112406	10	3	7733.0	.10960655 06	.107 01		-.0518
112426	10	3	7733.0	.10960887 06	.107 01		.0303
112446	10	3	7733.0	.10961119 06	.107 01		-.3887
112506	10	3	7733.0	.10961351 06	.107 01		-.4131
112526	10	3	7733.0	.10961584 06	.107 01		-.4404
112546	10	3	7733.0	.10961817 06	.107 01		-.1689
112606	10	3	7733.0	.10962050 06	.107 01		-.4023
112626	10	3	7733.0	.10962284 06	.107 01		-.7383
112646	10	3	7733.0	.10962518 06	.107 01		.1221
112706	10	3	7733.0	.10962752 06	.107 01		.1787
112726	10	3	7733.0	.10962986 06	.107 01		-.0664
112746	10	3	7733.0	.10963221 06	.107 01		.1846
112806	10	3	7733.0	.10963457 06	.107 01		-.0664
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113006	10	3	7733.0	.10964874 06	.106 01		-.2451
113026	10	3	7733.0	.10965112 06	.106 01		.1807
113046	10	3	7733.0	.10965350 06	.106 01		-.2969
113106	10	3	7733.0	.10965587 06	.106 01		-.3760
113126	10	3	7733.0	.10965826 06	.106 01		-.2588
113146	10	3	7733.0	.10966064 06	.106 01		-.5469
113206	10	3	7733.0	.10966303 06	.106 01		.2637
113226	10	3	7733.0	.10966543 06	.106 01		-.2285
113246	10	3	7733.0	.10966782 06	.106 01		-.4238
113306	10	3	7733.0	.10967022 06	.106 01		.4775
113326	10	3	7733.0	.10967262 06	.106 01		-.4248
113346	10	3	7733.0	.10967503 06	.106 01		-.1289
113406	10	3	7733.0	.10967744 06	.106 01		-.2373
113426	10	3	7733.0	.10967985 06	.106 01		.3516
113446	10	3	7733.0	.10968226 06	.106 01		-.6621
113506	10	3	7733.0	.10968468 06	.106 01		.1211
113526	10	3	7733.0	.10968710 06	.106 01		-.4980
113546	10	3	7733.0	.10968952 06	.106 01		-.3223
113606	10	3	7733.0	.10969195 06	.106 01		-.3477
113626	10	3	7733.0	.10969438 06	.106 01		-.1768
113646	10	3	7733.0	.10969681 06	.106 01		.3906
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114026	10	3	7733.0	.10972376 06	.106 01		.2441
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114206	10	3	7733.0	.10973612 06	.106 01		.4766
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114306	10	3	7733.0	.10974358 06	.106 01		-.1787
114326	10	3	7733.0	.10974607 06	.106 01		.1309
114346	10	3	7733.0	.10974856 06	.106 01		-.5625
114406	10	3	7733.0	.10975106 06	.106 01		-.4590
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114446	10	3	7733.0	.10975606 06	.106 01		.1387
114506	10	3	7733.0	.10975856 06	.106 01		-.3662
114526	10	3	7733.0	.10976107 06	.106 01		-.0732
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114606	10	3	7733.0	.10976610 06	.106 01		-.4971
114626	10	3	7733.0	.10976861 06	.106 01		.5859
114706	10	3	7733.0	.10977366 06	.106 01		.3447
114726	10	3	7733.0	.10977618 06	.106 01		.3203
114746	10	3	7733.0	.10977871 06	.106 01		.2930
114806	10	3	7733.0	.10978124 06	.106 01		.4619
114826	10	3	7733.0	.10978377 06	.106 01		-.0713
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114906	10	3	7733.0	.10978885 06	.106 01		.5547
114926	10	3	7733.0	.10979139 06	.106 01		-.2871
114946	10	3	7733.0	.10979393 06	.106 01		-.1309
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115026	10	3	7733.0	.10979903 06	.106 01		.1719
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115126	10	3	7733.0	.10980669 06	.106 01		.3066
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115206	10	3	7733.0	.10981182 06	.106 01		-.6191
115226	10	3	7733.0	.10981438 06	.106 01		.2158
115246	10	3	7733.0	.10981695 06	.106 01		-.1523
115306	10	3	7733.0	.10981952 06	.106 01		-.4238
115326	10	3	7733.0	.10982210 06	.106 01		.6016
115346	10	3	7733.0	.10982467 06	.106 01		-.5762
115406	10	3	7733.0	.10982725 06	.106 01		.2461
115426	10	3	7733.0	.10982984 06	.106 01		.4639
115446	10	3	7733.0	.10983242 06	.106 01		.0791
115506	10	3	7733.0	.10983501 06	.106 01		-.2090
115526	10	3	7733.0	.10983760 06	.106 01		-.1992
115546	10	3	7733.0	.10984019 06	.106 01		.1084
115606	10	3	7733.0	.10984279 06	.106 01		.2129
115626	10	3	7733.0	.10984538 06	.106 01		-.0850
115646	10	3	7733.0	.10984799 06	.106 01		-.3867
115706	10	3	7733.0	.10985059 06	.106 01		.8105
115726	10	3	7733.0	.10985319 06	.106 01		.3047
115746	10	3	7733.0	.10985580 06	.106 01		-.8047

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TIME	TC	Q	FRQ	CC3			
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115906	10	3	7733.0	.10986626 06	.106 01		.8359
115926	10	3	7733.0	.10986888 06	.106 01		-.3848
115946	10	3	7733.0	.10987151 06	.106 01		.5898
120006	10	3	7733.0	.10987414 06	.106 01		-.1357
120026	10	3	7733.0	.10987676 06	.106 01		.4346
120046	10	3	7733.0	.10987940 06	.106 01		-.3965
120106	10	3	7733.0	.10988203 06	.106 01		-.1318
120126	10	3	7733.0	.10988467 06	.106 01		-.0684
120146	10	3	7733.0	.10988731 06	.106 01		-.4082
120206	10	3	7733.0	.10988995 06	.106 01		-.1494
120226	10	3	7733.0	.10989259 06	.106 01		.1064
120246	10	3	7733.0	.10989524 06	.106 01		.3594
120306	10	3	7733.0	.10989789 06	.106 01		-.3896
120326	10	3	7733.0	.10990054 06	.106 01		-.2412
120346	10	3	7733.0	.10990319 06	.106 01		-.8965
120406	10	3	7733.0	.10990585 06	.106 01		.0469
120426	10	3	7733.0	.10990851 06	.106 01		.1875
120446	10	3	7733.0	.10991117 06	.106 01		.0254
120506	10	3	7733.0	.10991384 06	.106 01		-.6387
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120606	10	3	7733.0	.10992184 06	.106 01		.1553
120626	10	3	7733.0	.10992452 06	.106 01		-.2197
120646	10	3	7733.0	.10992720 06	.106 01		.5039
120706	10	3	7733.0	.10992987 06	.106 01		.3242
120726	10	3	7733.0	.10993256 06	.106 01		-.5566
120746	10	3	7733.0	.10993524 06	.106 01		-.7402
120806	10	3	7733.0	.10993793 06	.106 01		.3740
120826	10	3	7733.0	.10994061 06	.106 01		-.1143
120846	10	3	7733.0	.10994330 06	.106 01		-.0049
120906	10	3	7733.0	.10994600 06	.106 01		-.3994
120926	10	3	7733.0	.10994869 06	.106 01		.3057
120946	10	3	7733.0	.10995139 06	.106 01		-.5938
121006	10	3	7733.0	.10995409 06	.106 01		.2070
121026	10	3	7733.0	.10995679 06	.106 01		.0039
121046	10	3	7733.0	.10995950 06	.106 01		.1992
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121226	10	3	7733.0	.10997306 06	.106 01		.0351
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121346	10	3	7733.0	.10998395 06	.106 01		-.0518
121406	10	3	7733.0	.10998668 06	.106 01		-.2793
121426	10	3	7733.0	.10998941 06	.106 01		.0898
121446	10	3	7733.0	.10999214 06	.106 01		.1572
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121526	10	3	7733.0	.10999761 06	.106 01		-.0146
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121606	10	3	7733.0	.11000309 06	.106 01		-.1963
121626	10	3	7733.0	.11000584 06	.106 01		-.4404
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121706	10	3	7733.0	.11001133 06	.106 01		.6660
121726	10	3	7733.0	.11001408 06	.106 01		.6152
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121806	10	3	7733.0	.11001959 06	.106 01		-.2939
121826	10	3	7733.0	.11002235 06	.106 01		.2490
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121906	10	3	7733.0	.11002787 06	.106 01		.2275
121926	10	3	7733.0	.11003063 06	.106 01		.2637
121946	10	3	7733.0	.11003340 06	.106 01		.2979
122006	10	3	7733.0	.11003617 06	.106 01		-.0703
122026	10	3	7733.0	.11003894 06	.106 01		-.1406
122046	10	3	7733.0	.11004171 06	.106 01		-.6133
122106	10	3	7733.0	.11004449 06	.106 01		-.3877
122126	10	3	7733.0	.11004726 06	.106 01		-.1641
122146	10	3	7733.0	.11005004 06	.106 01		.1563
122206	10	3	7733.0	.11005282 06	.106 01		-.2246
122226	10	3	7733.0	.11005561 06	.106 01		-.4082
122246	10	3	7733.0	.11005839 06	.106 01		.2070
122306	10	3	7733.0	.11006118 06	.106 01		-.1797
122326	10	3	7733.0	.11006397 06	.106 01		.0313
122346	10	3	7733.0	.11006676 06	.106 01		.0391
122406	10	3	7733.0	.11006955 06	.106 01		.2461
122426	10	3	7733.0	.11007235 06	.106 01		1.0508
122446	10	3	7733.0	.11007515 06	.106 01		.0518
122526	10	3	7733.0	.11008075 06	.106 01		-.0498
122546	10	3	7733.0	.11008355 06	.106 01		-.0527
122606	10	3	7733.0	.11008636 06	.106 01		.0410
122626	10	3	7733.0	.11008917 06	.106 01		.3330
122646	10	3	7733.0	.11009198 06	.106 01		-.4766
122706	10	3	7733.0	.11009479 06	.106 01		.2119
122726	10	3	7733.0	.11009760 06	.106 01		-.5039
122746	10	3	7733.0	.11010042 06	.106 01		-.2197
122806	10	3	7733.0	.11010324 06	.106 01		-.1367
122826	10	3	7733.0	.11010606 06	.106 01		.3428
122846	10	3	7733.0	.11010888 06	.106 01		-.2793
122906	10	3	7733.0	.11011170 06	.106 01		-.1025
122926	10	3	7733.0	.11011453 06	.106 01		.5723
122946	10	3	7733.0	.11011735 06	.106 01		.2432
123006	10	3	7733.0	.11012019 06	.106 01		-.1865
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123046	10	3	7733.0	.11012585 06	.106 01		-.2520
123106	10	3	7733.0	.11012869 06	.106 01		.1123
123126	10	3	7733.0	.11013152 06	.106 01		.5762
123146	10	3	7733.0	.11013436 06	.106 01		-.0645
123206	10	3	7733.0	.11013720 06	.106 01		-.6055
123226	10	3	7733.0	.11014005 06	.106 01		.1504
123246	10	3	7733.0	.11014289 06	.106 01		.2051
123306	10	3	7733.0	.11014574 06	.106 01		.2588
123326	10	3	7733.0	.11014859 06	.106 01		.2100
123346	10	3	7733.0	.11015144 06	.106 01		.2578
123406	10	3	7733.0	.11015429 06	.106 01		.0059
123426	10	3	7733.0	.11015715 06	.106 01		.1514
123446	10	3	7733.0	.11016000 06	.106 01		.4951

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TIME	TC	Q	FRQ	CC3
123508	10	3	7733.0	.11016286 06 .106 01 .5371
123526	10	3	7733.0	.11016572 06 .106 01 -.0244
123546	10	3	7733.0	.11016858 06 .106 01 -.2852
123606	10	3	7733.0	.11017145 06 .106 01 .8516
123626	10	3	7733.0	.11017431 06 .106 01 -.1162
123646	10	3	7733.0	.11017718 06 .106 01 .1172
123706	10	3	7733.0	.11018005 06 .106 01 -.0518
123726	10	3	7733.0	.11018292 06 .105 01 -.5234
123746	10	3	7733.0	.11018579 06 .105 01 .2051
123808	10	3	7733.0	.11018867 06 .105 01 -.4707
123846	10	3	7733.0	.11019442 06 .105 01 .4756
123906	10	3	7733.0	.11019730 06 .105 01 .1953
123926	10	3	7733.0	.11020019 06 .105 01 .0127
123946	10	3	7733.0	.11020307 06 .105 01 -.0693
124006	10	3	7733.0	.11020595 06 .105 01 .6445
124026	10	3	7733.0	.11020884 06 .105 01 .3574
124046	10	3	7733.0	.11021173 06 .105 01 -.3301
124106	10	3	7733.0	.11021462 06 .105 01 -.0215
124126	10	3	7733.0	.11021751 06 .105 01 -.1133
124146	10	3	7733.0	.11022041 06 .105 01 .0938
124206	10	3	7733.0	.11022330 06 .105 01 -.3018
124226	10	3	7733.0	.11022620 06 .105 01 -.3994
124246	10	3	7733.0	.11022910 06 .105 01 .3008
124306	10	3	7733.0	.11023200 06 .105 01 -.2988
124326	10	3	7733.0	.11023490 06 .105 01 -.6016
124346	10	3	7733.0	.11023780 06 .105 01 .5957
124406	10	3	7733.0	.11024071 06 .105 01 -.4111
124426	10	3	7733.0	.11024362 06 .105 01 -.0186
124446	10	3	7733.0	.11024653 06 .105 01 .3730
124506	10	3	7733.0	.11024944 06 .105 01 .0635
124526	10	3	7733.0	.11025235 06 .105 01 .1514
124546	10	3	7733.0	.11025526 06 .105 01 .1367
124606	10	3	7733.0	.11025818 06 .105 01 -.1777
124626	10	3	7733.0	.11026109 06 .105 01 .2041
124646	10	3	7733.0	.11026401 06 .105 01 -.0137
124706	10	3	7733.0	.11026693 06 .105 01 .4658
124726	10	3	7733.0	.11026985 06 .105 01 -.4561
124746	10	3	7733.0	.11027278 06 .105 01 .0205
124806	10	3	7733.0	.11027570 06 .105 01 .4961
124826	10	3	7733.0	.11027863 06 .105 01 -.2305
124846	10	3	7733.0	.11028156 06 .105 01 .0410
124906	10	3	7733.0	.11028449 06 .105 01 .0127
124926	10	3	7733.0	.11028742 06 .105 01 .0811
124946	10	3	7733.0	.11029035 06 .105 01 .4482
125008	10	3	7733.0	.11029329 06 .105 01 -.0869
125026	10	3	7733.0	.11029622 06 .105 01 -.1221
125046	10	3	7733.0	.11029916 06 .105 01 -.1592
125106	10	3	7733.0	.11030210 06 .105 01 -.2979
125126	10	3	7733.0	.11030504 06 .105 01 .3623
125146	10	3	7733.0	.11030798 06 .105 01 .1201
125206	10	3	7733.0	.11031092 06 .105 01 -.1230
125226	10	3	7733.0	.11031387 06 .105 01 -.3672
125246	10	3	7733.0	.11031681 06 .105 01 -.0137
125306	10	3	7733.0	.11031976 06 .105 01 .3389
125326	10	3	7733.0	.11032271 06 .105 01 .4893
125346	10	3	7733.0	.11032566 06 .105 01 -.6602
125406	10	3	7733.0	.11032861 06 .105 01 -.4131
125426	10	3	7733.0	.11033157 06 .105 01 -.0654
125446	10	3	7733.0	.11033452 06 .105 01 .3789
125506	10	3	7733.0	.11033748 06 .105 01 .5234
125526	10	3	7733.0	.11034043 06 .105 01 .6660
125546	10	3	7733.0	.11034339 06 .105 01 -.6953
125606	10	3	7733.0	.11034635 06 .105 01 .8457
125626	10	3	7733.0	.11034932 06 .105 01 .0840
125646	10	3	7733.0	.11035228 06 .105 01 .6211
125726	10	3	7733.0	.11035821 06 .105 01 -.2100
125746	10	3	7733.0	.11036118 06 .105 01 -.1768
125806	10	3	7733.0	.11036415 06 .105 01 .8535
125826	10	3	7733.0	.11036711 06 .105 01 .2832
125846	10	3	7733.0	.11037009 06 .105 01 -.0879
125906	10	3	7733.0	.11037306 06 .105 01 .2402
125946	10	3	7733.0	.11037901 06 .105 01 .2900
130006	10	3	7733.0	.11038199 06 .105 01 .1133
130046	10	3	7733.0	.11038794 06 .105 01 -.4434
130106	10	3	7733.0	.11039092 06 .105 01 -.1240
130126	10	3	7733.0	.11039391 06 .105 01 -.1064
130146	10	3	7733.0	.11039689 06 .105 01 -.0889
130206	10	3	7733.0	.11039987 06 .105 01 .1260
130226	10	3	7733.0	.11040286 06 .105 01 -.2598
130246	10	3	7733.0	.11040584 06 .105 01 .2539
130306	10	3	7733.0	.11040883 06 .105 01 .4658
130326	10	3	7733.0	.11041182 06 .105 01 .2764
130346	10	3	7733.0	.11041481 06 .105 01 .4854
130406	10	3	7733.0	.11041781 06 .105 01 .1934
130426	10	3	7733.0	.11042080 06 .105 01 .7012
130446	10	3	7733.0	.11042379 06 .105 01 .2061
130506	10	3	7733.0	.11042679 06 .105 01 .5117
130526	10	3	7733.0	.11042978 06 .105 01 -.1855
130546	10	3	7733.0	.11043278 06 .105 01 .2168
130606	10	3	7733.0	.11043578 06 .105 01 -.2822
130626	10	3	7733.0	.11043878 06 .105 01 -.0840
130646	10	3	7733.0	.11044178 06 .105 01 .1152
130706	10	3	7733.0	.11044479 06 .105 01 -.3877
130726	10	3	7733.0	.11044779 06 .105 01 .1094
130806	10	3	7733.0	.11045380 06 .105 01 .1992
130826	10	3	7733.0	.11045681 06 .105 01 .1914
130846	10	3	7733.0	.11045981 06 .105 01 -.5176
130906	10	3	7733.0	.11046282 06 .105 01 .4736
130926	10	3	7733.0	.11046584 06 .105 01 .1641
130946	10	3	7733.0	.11046885 06 .105 01 .5527
131006	10	3	7733.0	.11047186 06 .105 01 -.4609
131026	10	3	7733.0	.11047487 06 .105 01 .1260
131046	10	3	7733.0	.11047789 06 .105 01 -.2891
131106	10	3	7733.0	.11048090 06 .105 01 .2939
131126	10	3	7733.0	.11048392 06 .105 01 -.6230
131146	10	3	7733.0	.11048694 06 .105 01 -.1356
131206	10	3	7733.0	.11048996 06 .105 01 .6406
131226	10	3	7733.0	.11049298 06 .105 01 .4209

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TIME	TC	Q	FRQ	CC3
131246	10	3	7733.0	.11049600 06 .105 01 -.2002
131306	10	3	7733.0	.11049902 06 .105 01 -.0225
131326	10	3	7733.0	.11050204 06 .105 01 .0547
131346	10	3	7733.0	.11050507 06 .105 01 -.3701
131406	10	3	7733.0	.11050809 06 .105 01 -.0947
131426	10	3	7733.0	.11051112 06 .105 01 .0791
131446	10	3	7733.0	.11051415 06 .105 01 -.0479
131506	10	3	7733.0	.11051718 06 .105 01 -.1758
131526	10	3	7733.0	.11052020 06 .105 01 -.2051
131546	10	3	7733.0	.11052323 06 .105 01 -.3350
131606	10	3	7733.0	.11052627 06 .105 01 .1338
131626	10	3	7733.0	.11052930 06 .105 01 -.2979
131646	10	3	7733.0	.11053233 06 .105 01 -.7305
131706	10	3	7733.0	.11053536 06 .105 01 -.1650
131726	10	3	7733.0	.11053840 06 .105 01 -.7012
131746	10	3	7733.0	.11054143 06 .105 01 -.1348
131806	10	3	7733.0	.11054447 06 .105 01 -.1719
131826	10	3	7733.0	.11054751 06 .105 01 -.4092
131846	10	3	7733.0	.11055055 06 .105 01 .6523
131906	10	3	7733.0	.11055359 06 .105 01 .3125
131926	10	3	7733.0	.11055663 06 .105 01 -.6270
131946	10	3	7733.0	.11055967 06 .105 01 -.0684
132006	10	3	7733.0	.11056271 06 .105 01 .0898
132026	10	3	7733.0	.11056575 06 .105 01 -.5547
132046	10	3	7733.0	.11056880 06 .105 01 .6035
132106	10	3	7733.0	.11057184 06 .105 01 -.2412
132126	10	3	7733.0	.11057489 06 .105 01 -.0869
132146	10	3	7733.0	.11057793 06 .105 01 -.1328
132206	10	3	7733.0	.11058098 06 .105 01 .2197
132226	10	3	7733.0	.11058403 06 .105 01 .4727
132246	10	3	7733.0	.11058708 06 .105 01 -.0762
132306	10	3	7733.0	.11059012 06 .105 01 .3750
132326	10	3	7733.0	.11059317 06 .105 01 .2236
132346	10	3	7733.0	.11059623 06 .105 01 .1729
132406	10	3	7733.0	.11059928 06 .105 01 -.1787
132426	10	3	7733.0	.11060233 06 .105 01 -.0313
132446	10	3	7733.0	.11060538 06 .105 01 -.3838
132506	10	3	7733.0	.11060844 06 .105 01 -.2383
132526	10	3	7733.0	.11061149 06 .105 01 -.0938
132546	10	3	7733.0	.11061455 06 .105 01 .1504
132606	10	3	7733.0	.11061760 06 .105 01 .2939
132626	10	3	7733.0	.11062066 06 .105 01 -.2627
132646	10	3	7733.0	.11062372 06 .105 01 -.1201
132706	10	3	7733.0	.11062678 06 .105 01 -.2783
132726	10	3	7733.0	.11062984 06 .105 01 -.0371
132746	10	3	7733.0	.11063290 06 .105 01 -.0967
132806	10	3	7733.0	.11063596 06 .105 01 .2422
132826	10	3	7733.0	.11063902 06 .105 01 -.1191
132846	10	3	7733.0	.11064208 06 .105 01 -.2803
132906	10	3	7733.0	.11064514 06 .105 01 .0566
132926	10	3	7733.0	.11064821 06 .105 01 -.2061
132946	10	3	7733.0	.11065127 06 .105 01 .2295
133006	10	3	7733.0	.11065433 06 .105 01 .2646
133026	10	3	7733.0	.11065740 06 .105 01 .0996
133046	10	3	7733.0	.11066047 06 .105 01 .2334
133106	10	3	7733.0	.11066353 06 .105 01 .1670
133126	10	3	7733.0	.11066660 06 .105 01 -.0996
133146	10	3	7733.0	.11066967 06 .105 01 -.2676
133206	10	3	7733.0	.11067273 06 .105 01 .3643
133226	10	3	7733.0	.11067580 06 .105 01 -.6055
133246	10	3	7733.0	.11067887 06 .105 01 -.2734
133306	10	3	7733.0	.11068194 06 .105 01 .1563
133326	10	3	7733.0	.11068501 06 .105 01 .2861
133346	10	3	7733.0	.11068808 06 .105 01 -.3857
133406	10	3	7733.0	.11069116 06 .105 01 .4424
133426	10	3	7733.0	.11069423 06 .105 01 .0703
133446	10	3	7733.0	.11069730 06 .105 01 .0977
133506	10	3	7733.0	.11070037 06 .105 01 -.5762
133526	10	3	7733.0	.11070345 06 .105 01 .6504
133546	10	3	7733.0	.11070652 06 .105 01 -.1240
133606	10	3	7733.0	.11070960 06 .105 01 -.5996
133626	10	3	7733.0	.11071267 06 .105 01 .2266
133646	10	3	7733.0	.11071575 06 .105 01 -.3506
133706	10	3	7733.0	.11071883 06 .105 01 -.0264
133726	10	3	7733.0	.11072190 06 .105 01 -.1025
133746	10	3	7733.0	.11072498 06 .105 01 -.2803
133806	10	3	7733.0	.11072806 06 .105 01 .4424
133826	10	3	7733.0	.11073114 06 .105 01 -.8359
133846	10	3	7733.0	.11073421 06 .105 01 -.3154
133906	10	3	7733.0	.11073729 06 .105 01 -.4941
133926	10	3	7733.0	.11074037 06 .105 01 -.3730
133946	10	3	7733.0	.11074345 06 .105 01 .3467
134006	10	3	7733.0	.11074653 06 .105 01 -.0332
134026	10	3	7733.0	.11074961 06 .105 01 -.3145
134046	10	3	7733.0	.11075269 06 .105 01 -.3955
134106	10	3	7733.0	.11075578 06 .105 01 .1230
134126	10	3	7733.0	.11075886 06 .105 01 .1406
134146	10	3	7733.0	.11076194 06 .105 01 .3584
134206	10	3	7733.0	.11076502 06 .105 01 -.2246
134226	10	3	7733.0	.11076811 06 .105 01 .0918
134246	10	3	7733.0	.11077119 06 .105 01 -.0908
134306	10	3	7733.0	.11077427 06 .105 01 -.0752
134326	10	3	7733.0	.11077736 06 .105 01 -.2598
134346	10	3	7733.0	.11078044 06 .105 01 .0566
134406	10	3	7733.0	.11078353 06 .105 01 -.1289
134426	10	3	7733.0	.11078661 06 .105 01 -.8145
134446	10	3	7733.0	.11078970 06 .105 01 .6016
134506	10	3	7733.0	.11079278 06 .105 01 -.4854
134526	10	3	7733.0	.11079587 06 .105 01 .0283
134546	10	3	7733.0	.11079896 06 .105 01 -.7578
134606	10	3	7733.0	.11080204 06 .105 01 -.4443
134626	10	3	7733.0	.11080513 06 .105 01 -.1309
134646	10	3	7733.0	.11080822 06 .105 01 -.2178
134706	10	3	7733.0	.11081131 06 .105 01 -.1064
134726	10	3	7733.0	.11081439 06 .105 01 -.6953
134746	10	3	7733.0	.11081748 06 .105 01 .3184
134806	10	3	7733.0	.11082057 06 .105 01 -.1699
134826	10	3	7733.0	.11082366 06 .105 01 -.2578

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TIME	TC	Q	FRQ	CC3			
134846	10	3	7733.0	.11082675	06	.105	01	-.0469
134906	10	3	7733.0	.11082983	06	.105	01	-.2354
134926	10	3	7733.0	.11083292	06	.105	01	-.1250
134946	10	3	7733.0	.11083601	06	.105	01	.0859
135006	10	3	7733.0	.11083910	06	.105	01	-.1035
135026	10	3	7733.0	.11084219	06	.105	01	-.1934
135046	10	3	7733.0	.11084528	06	.105	01	-.2832
135106	10	3	7733.0	.11084837	06	.105	01	.2266
135126	10	3	7733.0	.11085146	06	.105	01	-.4629
135146	10	3	7733.0	.11085455	06	.105	01	.4463
135206	10	3	7733.0	.11085764	06	.105	01	-.6445
135226	10	3	7733.0	.11086073	06	.105	01	.2656
135246	10	3	7733.0	.11086382	06	.105	01	-.6270
135306	10	3	7733.0	.11086651	06	.105	01	-.4160
135326	10	3	7733.0	.11087001	06	.105	01	-.3076
135346	10	3	7733.0	.11087310	06	.105	01	-.3994
135406	10	3	7733.0	.11087619	06	.105	01	.3105
135426	10	3	7733.0	.11087928	06	.105	01	.2188
135446	10	3	7733.0	.11088237	06	.105	01	.4277
135506	10	3	7733.0	.11088546	06	.105	01	.0361
135526	10	3	7733.0	.11088856	06	.105	01	-.3564
135546	10	3	7733.0	.11089165	06	.105	01	-.4482
135606	10	3	7733.0	.11089474	06	.105	01	-.0391
135626	10	3	7733.0	.11089783	06	.105	01	-.6309
135646	10	3	7733.0	.11090092	06	.105	01	.5781
135706	10	3	7733.0	.11090401	06	.105	01	.2861
135726	10	3	7733.0	.11090710	06	.105	01	.7949
135746	10	3	7733.0	.11091020	06	.105	01	-.2979
135806	10	3	7733.0	.11091329	06	.105	01	-.1904
135826	10	3	7733.0	.11091638	06	.105	01	-.3818
135846	10	3	7733.0	.11091947	06	.105	01	-.1738
135906	10	3	7733.0	.11092256	06	.105	01	-.0654
135926	10	3	7733.0	.11092566	06	.105	01	-.0576
135946	10	3	7733.0	.11092875	06	.105	01	-.0498
140006	10	3	7733.0	.11093184	06	.105	01	-.8418
140026	10	3	7733.0	.11093493	06	.105	01	.0674
140046	10	3	7733.0	.11093802	06	.105	01	.5762
140106	10	3	7733.0	.11094112	06	.105	01	-.2168
140126	10	3	7733.0	.11094421	06	.105	01	.2930
140146	10	3	7733.0	.11094730	06	.105	01	-.2988
140206	10	3	7733.0	.11095039	06	.105	01	.0088
140226	10	3	7733.0	.11095348	06	.105	01	-.0820
140246	10	3	7733.0	.11095657	06	.105	01	-.2734
140306	10	3	7733.0	.11095966	06	.105	01	.9355
140326	10	3	7733.0	.11096275	06	.105	01	.2451
140346	10	3	7733.0	.11096584	06	.105	01	.1543
140406	10	3	7733.0	.11096894	06	.105	01	-.6387
140426	10	3	7733.0	.11097203	06	.105	01	.2715
140446	10	3	7733.0	.11097512	06	.105	01	.5820
140506	10	3	7733.0	.11097821	06	.105	01	.0908
140526	10	3	7733.0	.11098130	06	.105	01	-.5996
140546	10	3	7733.0	.11098439	06	.105	01	.0107
140606	10	3	7733.0	.11098748	06	.105	01	-.0801
140626	10	3	7733.0	.11099057	06	.105	01	-.1620
140646	10	3	7733.0	.11099366	06	.105	01	.8418
140706	10	3	7733.0	.11099675	06	.105	01	-.3486
140726	10	3	7733.0	.11099984	06	.105	01	-.4375
140746	10	3	7733.0	.11100293	06	.105	01	-.2266
140806	10	3	7733.0	.11100601	06	.105	01	-.3154
140826	10	3	7733.0	.11100910	06	.105	01	.3965
140846	10	3	7733.0	.11101219	06	.105	01	-.0918
140906	10	3	7733.0	.11101528	06	.105	01	.1201
140926	10	3	7733.0	.11101837	06	.105	01	.1318
140946	10	3	7733.0	.11102145	06	.105	01	.0449
141006	10	3	7733.0	.11102454	06	.105	01	.6563
141026	10	3	7733.0	.11102763	06	.105	01	.4697
141046	10	3	7733.0	.11103072	06	.105	01	-.1172
141106	10	3	7733.0	.11103380	06	.105	01	-.0029
141126	10	3	7733.0	.11103689	06	.105	01	.0098
141146	10	3	7733.0	.11103998	06	.105	01	.0244
141206	10	3	7733.0	.11104306	06	.105	01	.3379
141226	10	3	7733.0	.11104615	06	.105	01	-.0469
141246	10	3	7733.0	.11104923	06	.105	01	.1680
141306	10	3	7733.0	.11105231	06	.105	01	-.3154
141326	10	3	7733.0	.11105540	06	.105	01	.4990
141346	10	3	7733.0	.11105848	06	.105	01	-.3848
141406	10	3	7733.0	.11106157	06	.105	01	-.1689
141426	10	3	7733.0	.11106465	06	.105	01	-.4521
141446	10	3	7733.0	.11106773	06	.105	01	-.2344
141506	10	3	7733.0	.11107082	06	.105	01	.2822
141526	10	3	7733.0	.11107390	06	.105	01	-.7012
141546	10	3	7733.0	.11107698	06	.105	01	-.5820
141606	10	3	7733.0	.11108006	06	.105	01	-.2627
141626	10	3	7733.0	.11108314	06	.105	01	.4561
141646	10	3	7733.0	.11108622	06	.105	01	.0762
141706	10	3	7733.0	.11108930	06	.105	01	-1.3047
141726	10	3	7733.0	.11109238	06	.105	01	-.4844
141746	10	3	7733.0	.11109546	06	.105	01	-.2637
141806	10	3	7733.0	.11109854	06	.105	01	-.3428
141826	10	3	7733.0	.11110162	06	.105	01	-.5215
141846	10	3	7733.0	.11110470	06	.105	01	-.2998
141906	10	3	7733.0	.11110778	06	.105	01	.5234
141926	10	3	7733.0	.11111085	06	.105	01	.1465
141946	10	3	7733.0	.11111393	06	.105	01	.5703
142006	10	3	7733.0	.11111701	06	.105	01	-.5059
142026	10	3	7733.0	.11112008	06	.105	01	.4180
142046	10	3	7733.0	.11112316	06	.105	01	-.0576
142106	10	3	7733.0	.11112623	06	.105	01	-.1318
142126	10	3	7733.0	.11112930	06	.105	01	.0938
142146	10	3	7733.0	.11113238	06	.105	01	.4199
142206	10	3	7733.0	.11113545	06	.105	01	-.1523
142226	10	3	7733.0	.11113852	06	.105	01	-.4248
142246	10	3	7733.0	.11114160	06	.105	01	-.0967
142306	10	3	7733.0	.11114467	06	.105	01	.2314
142326	10	3	7733.0	.11114774	06	.105	01	.2607
142346	10	3	7733.0	.11115081	06	.105	01	-.7109
142406	10	3	7733.0	.11115388	06	.105	01	.5215
142426	10	3	7733.0	.11115695	06	.105	01	.4512

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TIME	TC	Q	FRQ	CC3			
142446	10	3	7733.0	.11116002	06	.105	01	-.5176
142506	10	3	7733.0	.11116308	06	.105	01	-.2852
142526	10	3	7733.0	.11116615	06	.105	01	-.2529
142546	10	3	7733.0	.11116922	06	.105	01	.0811
142606	10	3	7733.0	.11117228	06	.105	01	.5156
142626	10	3	7733.0	.11117535	06	.105	01	-.2510
142646	10	3	7733.0	.11117842	06	.105	01	-.5176
142706	10	3	7733.0	.11118148	06	.105	01	-.2813
142726	10	3	7733.0	.11118454	06	.105	01	.0557
142746	10	3	7733.0	.11118761	06	.105	01	.0928
142806	10	3	7733.0	.11119067	06	.105	01	.2305
142826	10	3	7733.0	.11119373	06	.105	01	.0693
142846	10	3	7733.0	.11119679	06	.105	01	.3086
142906	10	3	7733.0	.11119985	06	.105	01	.7480
142926	10	3	7733.0	.11120291	06	.105	01	.0889
142946	10	3	7733.0	.11120597	06	.105	01	-.4697
143006	10	3	7733.0	.11120903	06	.105	01	.3711
143026	10	3	7733.0	.11121209	06	.105	01	.2139
143046	10	3	7733.0	.11121514	06	.105	01	-.5430
143106	10	3	7733.0	.11121820	06	.105	01	-.1982
143126	10	3	7733.0	.11122125	06	.105	01	-.3545
143146	10	3	7733.0	.11122431	06	.105	01	-.0088
143206	10	3	7733.0	.11122736	06	.105	01	-.0625
143226	10	3	7733.0	.11123041	06	.105	01	-.3154
143246	10	3	7733.0	.11123347	06	.105	01	-.1680
143306	10	3	7733.0	.11123652	06	.105	01	.4814
143326	10	3	7733.0	.11123957	06	.105	01	-.1699
143346	10	3	7733.0	.11124262	06	.105	01	.8809
143406	10	3	7733.0	.11124567	06	.105	01	.0303
143426	10	3	7733.0	.11124872	06	.105	01	-.1172
143446	10	3	7733.0	.11125176	06	.105	01	.3350
143506	10	3	7733.0	.11125481	06	.105	01	-.5117
143526	10	3	7733.0	.11125786	06	.105	01	-.2568
143546	10	3	7733.0	.11126090	06	.105	01	.0977
143606	10	3	7733.0	.11126395	06	.105	01	.2529
143626	10	3	7733.0	.11126699	06	.105	01	.1094
143646	10	3	7733.0	.11127003	06	.105	01	-.6328
143706	10	3	7733.0	.11127307	06	.105	01	.1260
143726	10	3	7733.0	.11127611	06	.105	01	-.2148
143746	10	3	7733.0	.11127915	06	.105	01	-.0547
143806	10	3	7733.0	.11128219	06	.105	01	.1064
143826	10	3	7733.0	.11128523	06	.105	01	.3682
143846	10	3	7733.0	.11128827	06	.105	01	.4307
143906	10	3	7733.0	.11129130	06	.105	01	-.2051
143926	10	3	7733.0	.11129434	06	.105	01	-.3408
143946	10	3	7733.0	.11129737	06	.105	01	-.5762
144006	10	3	7733.0	.11130041	06	.105	01	.2910
144026	10	3	7733.0	.11130344	06	.105	01	.2578
144046	10	3	7733.0	.11130647	06	.105	01	-.2734
144106	10	3	7733.0	.11130950	06	.105	01	-.0029
144126	10	3	7733.0	.11131253	06	.105	01	-.1338
144146	10	3	7733.0	.11131556	06	.105	01	.4375
144206	10	3	7733.0	.11131859	06	.105	01	.1094
144226	10	3	7733.0	.11132162	06	.105	01	-.5176
144246	10	3	7733.0	.11132464	06	.105	01	-.3428
144306	10	3	7733.0	.11132767	06	.105	01	.0322
144326	10	3	7733.0	.11133069	06	.105	01	-.3906
144346	10	3	7733.0	.11133371	06	.105	01	.0859
144406	10	3	7733.0	.11133673	06	.105	01	.1631
144426	10	3	7733.0	.11133976	06	.105	01	.9434
144446	10	3	7733.0	.11134278	06	.105	01	.0234
144506	10	3	7733.0	.11134579	06	.105	01	.2051
144526	10	3	7733.0	.11134881	06	.105	01	-.6133
144546	10	3	7733.0	.11135183	06	.105	01	.6699
144606	10	3	7733.0	.11135484	06	.105	01	.2549
144626	10	3	7733.0	.11135786	06	.105	01	.1406
144646	10	3	7733.0	.11136087	06	.105	01	.2266
144706	10	3	7733.0	.11136388	06	.105	01	-.1855
144726	10	3	7733.0	.11136650	06	.105	01	.2031
144746	10	3	7733.0	.11136990	06	.105	01	.1934
144846	10	3	7733.0	.11137893	06	.105	01	.0693
144926	10	3	7733.0	.11138494	06	.105	01	-.2412
144946	10	3	7733.0	.11138794	06	.105	01	-.1445
145006	10	3	7733.0	.11139095	06	.105	01	-.2471
145026	10	3	7733.0	.11139355	06	.105	01	.2520
145046	10	3	7733.0	.11139695	06	.105	01	.1514
145106	10	3	7733.0	.11139995	06	.105	01	.3535
145126	10	3	7733.0	.11140294	06	.105	01	.0566
145146	10	3	7733.0	.11140594	06	.105	01	.0596
145206	10	3	7733.0	.11140894	06	.105	01	-.4355
145226	10	3	7733.0	.11141193	06	.105	01	.2695
145246	10	3	7733.0	.11141492	06	.105	01	-.1221
145306	10	3	7733.0	.11141791	06	.105	01	-.1143
145326	10	3	7733.0	.11142090	06	.105	01	-.1045
145346	10	3	7733.0	.11142389	06	.105	01	-.3936
145406	10	3	7733.0	.11142688	06	.105	01	.4180
145426	10	3	7733.0	.11142987	06	.105	01	.2314
145446	10	3	7733.0	.11143285	06	.105	01	.4463
145506	10	3	7733.0	.11143584	06	.105	01	.2617
145526	10	3	7733.0	.11143882	06	.105	01	.4785
145546	10	3	7733.0	.11144180	06	.105	01	.0967
145606	10	3	7733.0	.11144478	06	.105	01	-.8848
145626	10	3	7733.0	.11144776	06	.105	01	-.1621
145646	10	3	7733.0	.11145074	06	.105	01	.1602
145706	10	3	7733.0	.11145372	06	.105	01	-.3174
145726	10	3	7733.0	.11145669	06	.105	01	-.4922
145746	10	3	7733.0	.11145967	06	.105	01	.1348
145806	10	3	7733.0	.11146264	06	.105	01	.1621
145826	10	3	7733.0	.11146561	06	.105	01	.1904
145846	10	3	7733.0	.11146858	06	.105	01	.4209
145906	10	3	7733.0	.11147155	06	.105	01	.2529
145926	10	3	7733.0	.11147451	06	.105	01	-.3154
145946	10	3	7733.0	.11147748	06	.105	01	-.0811
150006	10	3	7733.0	.11148044	06	.105	01	-.0459
150026	10	3	7733.0	.11148341	06	.105	01	-.3086
150046	10	3	7733.0	.11148637	06	.105	01	-.7715
150106	10	3	7733.0	.11148933	06	.105	01	.1699
150126	10	3	7733.0	.11149229	06	.105	01	.6113

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TIME	TC	Q	FRQ	CC3
150146	10	3	7733.0	.11149525 06 .105 01 .2539
150206	10	3	7733.0	.11149820 06 .105 01 .5977
150226	10	3	7733.0	.11150116 06 .105 01 -.1572
150246	10	3	7733.0	.11150411 06 .105 01 .2891
150306	10	3	7733.0	.11150706 06 .105 01 .2373
150326	10	3	7733.0	.11151001 06 .105 01 .9883
150346	10	3	7733.0	.11151296 06 .105 01 -.0625
150406	10	3	7733.0	.11151591 06 .105 01 .3906
150426	10	3	7733.0	.11151886 06 .105 01 .2441
150446	10	3	7733.0	.11152180 06 .105 01 -.2002
150506	10	3	7733.0	.11152474 06 .105 01 .2568
150526	10	3	7733.0	.11152768 06 .105 01 -.3857
150546	10	3	7733.0	.11153062 06 .105 01 -.1250
150606	10	3	7733.0	.11153356 06 .105 01 .2354
150646	10	3	7733.0	.11153944 06 .105 01 .0635
150706	10	3	7733.0	.11154237 06 .105 01 -.3711
150726	10	3	7733.0	.11154530 06 .105 01 .0957
150746	10	3	7733.0	.11154823 06 .105 01 .1650
150806	10	3	7733.0	.11155116 06 .105 01 -.2646
150826	10	3	7733.0	.11155409 06 .105 01 -.4922
150846	10	3	7733.0	.11155702 06 .105 01 .4814
150906	10	3	7733.0	.11155994 06 .105 01 -.2441
150926	10	3	7733.0	.11156287 06 .105 01 -.2676
150946	10	3	7733.0	.11156579 06 .105 01 .1104
151006	10	3	7733.0	.11156871 06 .106 01 .2910
151026	10	3	7733.0	.11157163 06 .106 01 .2725
151046	10	3	7733.0	.11157454 06 .106 01 -.2441
151106	10	3	7733.0	.11157746 06 .106 01 .2393
151126	10	3	7733.0	.11158037 06 .106 01 .0254
151146	10	3	7733.0	.11158329 06 .106 01 -.1865
151206	10	3	7733.0	.11158620 06 .106 01 .0029
151246	10	3	7733.0	.11159201 06 .106 01 .0869
151306	10	3	7733.0	.11159492 06 .106 01 -.4180
151326	10	3	7733.0	.11159782 06 .106 01 -.0225
151346	10	3	7733.0	.11160072 06 .106 01 -.2246
151406	10	3	7733.0	.11160362 06 .106 01 -.3252
151426	10	3	7733.0	.11160652 06 .106 01 -.0244
151446	10	3	7733.0	.11160942 06 .106 01 -.3223
151506	10	3	7733.0	.11161232 06 .106 01 -.2178
151526	10	3	7733.0	.11161521 06 .106 01 -.0117
151546	10	3	7733.0	.11161810 06 .106 01 -.1035
151606	10	3	7733.0	.11162099 06 .106 01 .2051
151626	10	3	7733.0	.11162388 06 .106 01 .5156
151646	10	3	7733.0	.11162677 06 .106 01 -.3711
151706	10	3	7733.0	.11162965 06 .106 01 -.3555
151726	10	3	7733.0	.11163254 06 .106 01 .4609
151746	10	3	7733.0	.11163542 06 .106 01 -.0215
151806	10	3	7733.0	.11163830 06 .106 01 -.0010
151826	10	3	7733.0	.11164118 06 .106 01 .3203
151846	10	3	7733.0	.11164406 06 .106 01 -.0566
151906	10	3	7733.0	.11164693 06 .106 01 -.5332
151926	10	3	7733.0	.11164980 06 .106 01 .6973
151946	10	3	7733.0	.11165268 06 .106 01 -.5762
152006	10	3	7733.0	.11165554 06 .106 01 -.1455
152026	10	3	7733.0	.11165841 06 .106 01 -.1133
152046	10	3	7733.0	.11166128 06 .106 01 .0205
152106	10	3	7733.0	.11166414 06 .106 01 -.3438
152126	10	3	7733.0	.11166701 06 .106 01 -.1064
152146	10	3	7733.0	.11166987 06 .106 01 .2334
152206	10	3	7733.0	.11167272 06 .106 01 -.1250
152226	10	3	7733.0	.11167558 06 .106 01 -.0811
152246	10	3	7733.0	.11167844 06 .106 01 -.4365
152306	10	3	7733.0	.11168129 06 .106 01 -.0898
152326	10	3	7733.0	.11168414 06 .106 01 .3594
152346	10	3	7733.0	.11168699 06 .106 01 .2090
152406	10	3	7733.0	.11168984 06 .106 01 .6621
152426	10	3	7733.0	.11169268 06 .106 01 .2158
152446	10	3	7733.0	.11169553 06 .106 01 -.1279
152506	10	3	7733.0	.11169837 06 .106 01 -.5703
152526	10	3	7733.0	.11170121 06 .106 01 -.2090
152546	10	3	7733.0	.11170405 06 .106 01 -.6484
152606	10	3	7733.0	.11170688 06 .106 01 -.3828
152626	10	3	7733.0	.11170972 06 .106 01 .3828
152646	10	3	7733.0	.11171255 06 .106 01 .1494
152706	10	3	7733.0	.11171538 06 .106 01 -.2803
152726	10	3	7733.0	.11171821 06 .106 01 -.6094
152746	10	3	7733.0	.11172103 06 .106 01 .4648
152806	10	3	7733.0	.11172386 06 .106 01 -.2598
152826	10	3	7733.0	.11172668 06 .106 01 .0176
152846	10	3	7733.0	.11172950 06 .106 01 .2969
152906	10	3	7733.0	.11173232 06 .106 01 -.3213
152926	10	3	7733.0	.11173514 06 .106 01 -.6387
152946	10	3	7733.0	.11173795 06 .106 01 .1475
153006	10	3	7733.0	.11174076 06 .106 01 .2344
153026	10	3	7733.0	.11174358 06 .106 01 .6230
153046	10	3	7733.0	.11174638 06 .106 01 .0146
153106	10	3	7733.0	.11174919 06 .106 01 -.0918
153126	10	3	7733.0	.11175200 06 .106 01 -.2969
153146	10	3	7733.0	.11175480 06 .106 01 -.0996
153206	10	3	7733.0	.11175760 06 .106 01 -.1992
153226	10	3	7733.0	.11176040 06 .106 01 .0020
153246	10	3	7733.0	.11176319 06 .106 01 -.1943
153306	10	3	7733.0	.11176599 06 .106 01 -.6895
153326	10	3	7733.0	.11176878 06 .106 01 -.2813
153346	10	3	7733.0	.11177157 06 .106 01 .1279
153406	10	3	7733.0	.11177436 06 .106 01 -.6602
153426	10	3	7733.0	.11177714 06 .106 01 .6543
153446	10	3	7733.0	.11177993 06 .106 01 .3701
153506	10	3	7733.0	.11178271 06 .106 01 -.5117
153526	10	3	7733.0	.11178549 06 .106 01 -.3916
153546	10	3	7733.0	.11178827 06 .106 01 -.7695
153606	10	3	7733.0	.11179104 06 .106 01 .3555
153626	10	3	7733.0	.11179382 06 .106 01 -.2178
153646	10	3	7733.0	.11179659 06 .106 01 -.0889
153706	10	3	7733.0	.11179936 06 .106 01 -.4590
153726	10	3	7733.0	.11180212 06 .106 01 -.4268
153746	10	3	7733.0	.11180489 06 .106 01 -.2910
153806	10	3	7733.0	.11180765 06 .106 01 -.5547

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TIME	TC	Q	FRQ	CC3
153826	10	3	7733.0	.11181041 06 .106 01 -.1133
153846	10	3	7733.0	.11181317 06 .106 01 .6273
153906	10	3	7733.0	.11181593 06 .106 01 .5723
153926	10	3	7733.0	.11181868 06 .106 01 .2178
153946	10	3	7733.0	.11182143 06 .106 01 -.1338
154006	10	3	7733.0	.11182418 06 .106 01 .5156
154026	10	3	7733.0	.11182693 06 .106 01 -.0313
154046	10	3	7733.0	.11182968 06 .106 01 .1240
154106	10	3	7733.0	.11183242 06 .106 01 -.6191
154126	10	3	7733.0	.11183516 06 .106 01 -.6602
154146	10	3	7733.0	.11183790 06 .106 01 .4014
154206	10	3	7733.0	.11184063 06 .106 01 -.2354
154226	10	3	7733.0	.11184337 06 .106 01 .1309
154246	10	3	7733.0	.11184610 06 .106 01 .4990
154306	10	3	7733.0	.11184883 06 .106 01 .1699
154326	10	3	7733.0	.11185156 06 .106 01 .8418
154346	10	3	7733.0	.11185428 06 .106 01 .0176
154406	10	3	7733.0	.11185700 06 .106 01 -.2051
154426	10	3	7733.0	.11185973 06 .106 01 -.5273
154446	10	3	7733.0	.11186244 06 .106 01 -.4443
154506	10	3	7733.0	.11186516 06 .106 01 -.2607
154526	10	3	7733.0	.11186787 06 .106 01 .0264
154546	10	3	7733.0	.11187058 06 .106 01 -.0850
154606	10	3	7733.0	.11187329 06 .106 01 -.5938
154626	10	3	7733.0	.11187600 06 .106 01 -.3008
154646	10	3	7733.0	.11187870 06 .106 01 .4951
154706	10	3	7733.0	.11188141 06 .106 01 .2930
154726	10	3	7733.0	.11188411 06 .106 01 -.6074
154746	10	3	7733.0	.11188680 06 .106 01 -.1045
154806	10	3	7733.0	.11188950 06 .106 01 .5020
154826	10	3	7733.0	.11189219 06 .106 01 .2090
154846	10	3	7733.0	.11189488 06 .106 01 -.0811
154906	10	3	7733.0	.11189757 06 .106 01 -.1689
154926	10	3	7733.0	.11190025 06 .106 01 -.0557
154946	10	3	7733.0	.11190294 06 .106 01 .4619
155006	10	3	7733.0	.11190830 06 .106 01 .0039
155046	10	3	7733.0	.11191097 06 .106 01 -.1719
155106	10	3	7733.0	.11191365 06 .106 01 .3545
155126	10	3	7733.0	.11191632 06 .106 01 -.5176
155146	10	3	7733.0	.11191898 06 .106 01 .6152
155206	10	3	7733.0	.11192165 06 .106 01 .1484
155226	10	3	7733.0	.11192431 06 .106 01 -.2148
155246	10	3	7733.0	.11192697 06 .106 01 -.0762
155306	10	3	7733.0	.11192963 06 .106 01 -.3350
155326	10	3	7733.0	.11193229 06 .106 01 -.1914
155346	10	3	7733.0	.11193494 06 .106 01 -.2451
155406	10	3	7733.0	.11193759 06 .106 01 .1035
155426	10	3	7733.0	.11194024 06 .106 01 -.1455
155446	10	3	7733.0	.11194289 06 .106 01 .3076
155506	10	3	7733.0	.11194553 06 .106 01 .0645
155526	10	3	7733.0	.11194818 06 .106 01 -.0771
155546	10	3	7733.0	.11195081 06 .106 01 .1846
155606	10	3	7733.0	.11195345 06 .106 01 .2471
155626	10	3	7733.0	.11195609 06 .106 01 -.1865
155646	10	3	7733.0	.11195872 06 .106 01 .0830
155706	10	3	7733.0	.11196135 06 .106 01 .1543
155726	10	3	7733.0	.11196397 06 .106 01 .1270
155746	10	3	7733.0	.11196660 06 .106 01 .0039
155806	10	3	7733.0	.11196922 06 .106 01 -.2168
155826	10	3	7733.0	.11197184 06 .106 01 .0635
155846	10	3	7733.0	.11197445 06 .106 01 -.4521
155906	10	3	7733.0	.11197706 06 .106 01 .0342
155926	10	3	7733.0	.11197968 06 .106 01 .3242
155946	10	3	7733.0	.11198228 06 .106 01 -.0859
160006	10	3	7733.0	.11198489 06 .106 01 .1094
160026	10	3	7733.0	.11198749 06 .106 01 -.7949
160046	10	3	7733.0	.11199009 06 .106 01 .2051
160106	10	3	7733.0	.11199269 06 .106 01 .4072
160126	10	3	7733.0	.11199529 06 .106 01 .5137
160146	10	3	7733.0	.11199788 06 .106 01 -.5801
160206	10	3	7733.0	.11200047 06 .106 01 .4287
160226	10	3	7733.0	.11200306 06 .106 01 -.2578
160246	10	3	7733.0	.11200564 06 .106 01 .5566
160306	10	3	7733.0	.11200822 06 .106 01 .0752
160326	10	3	7733.0	.11201080 06 .106 01 -.4053
160346	10	3	7733.0	.11201338 06 .106 01 -.4824
160406	10	3	7733.0	.11201596 06 .106 01 .4434
160426	10	3	7733.0	.11201853 06 .106 01 -.4277
160446	10	3	7733.0	.11202109 06 .106 01 .5039
160506	10	3	7733.0	.11202366 06 .106 01 .6387
160526	10	3	7733.0	.11202623 06 .106 01 -.6270
160546	10	3	7733.0	.11202879 06 .106 01 -.4863
160606	10	3	7733.0	.11203134 06 .106 01 .4551
160626	10	3	7733.0	.11203390 06 .106 01 .4004
160646	10	3	7733.0	.11203645 06 .106 01 -.0537
160706	10	3	7733.0	.11203900 06 .106 01 -.6035
160726	10	3	7733.0	.11204155 06 .106 01 -.4502
160746	10	3	7733.0	.11204409 06 .106 01 .2051
160806	10	3	7733.0	.11204664 06 .106 01 -.4375
160826	10	3	7733.0	.11204917 06 .106 01 -.1748
160846	10	3	7733.0	.11205171 06 .106 01 .0879
160906	10	3	7733.0	.11205424 06 .106 01 -.1455
160926	10	3	7733.0	.11205678 06 .106 01 -.0771
160946	10	3	7733.0	.11205930 06 .106 01 -.0039
161006	10	3	7733.0	.11206183 06 .106 01 .0703
161026	10	3	7733.0	.11206435 06 .106 01 -.1523
161046	10	3	7733.0	.11206687 06 .106 01 .9277
161106	10	3	7733.0	.11206939 06 .106 01 -.1895
161126	10	3	7733.0	.11207190 06 .106 01 .0977
161146	10	3	7733.0	.11207441 06 .106 01 -.2148
161206	10	3	7733.0	.11207692 06 .106 01 .2773
161226	10	3	7733.0	.11207943 06 .106 01 -.1279
161246	10	3	7733.0	.11208193 06 .106 01 -.3311
161306	10	3	7733.0	.11208443 06 .106 01 -.1309
161326	10	3	7733.0	.11208693 06 .106 01 .6719
161346	10	3	7733.0	.11208942 06 .106 01 -.1221
161406	10	3	7733.0	.11209191 06 .106 01 .3867
161426	10	3	7733.0	.11209440 06 .106 01 -.2031

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TIME	TC	Q	FRQ	CC3			
161446	10	3	7733.0	.11209689 06	.106	01	.0117
161506	10	3	7733.0	.11209937 06	.106	01	-.3711
161526	10	3	7733.0	.11210185 06	.106	01	.0488
161546	10	3	7733.0	.11210433 06	.106	01	-.3281
161606	10	3	7733.0	.11210680 06	.106	01	.8584
161626	10	3	7733.0	.11210927 06	.106	01	.0264
161646	10	3	7733.0	.11211174 06	.106	01	-.2422
161706	10	3	7733.0	.11211421 06	.106	01	-.4082
161726	10	3	7733.0	.11211667 06	.106	01	-.3701
161746	10	3	7733.0	.11211913 06	.106	01	.3701
161806	10	3	7733.0	.11212159 06	.106	01	-.4873
161826	10	3	7733.0	.11212404 06	.106	01	.0586
161846	10	3	7733.0	.11212649 06	.106	01	-.3916
161906	10	3	7733.0	.11212894 06	.106	01	.3604
161926	10	3	7733.0	.11213138 06	.107	01	.6152
161946	10	3	7733.0	.11213383 06	.107	01	-.0273
162006	10	3	7733.0	.11213626 06	.107	01	.3340
162026	10	3	7733.0	.11213870 06	.107	01	-.5039
162046	10	3	7733.0	.11214114 06	.107	01	-.1357
162106	10	3	7733.0	.11214356 06	.107	01	.5352
162126	10	3	7733.0	.11214599 06	.107	01	.3066
162146	10	3	7733.0	.11214842 06	.107	01	-.2178
162206	10	3	7733.0	.11215084 06	.107	01	-.1366
162226	10	3	7733.0	.11215326 06	.107	01	.9434
162246	10	3	7733.0	.11215567 06	.107	01	.3271
162306	10	3	7733.0	.11215808 06	.107	01	-.5859
162326	10	3	7733.0	.11216049 06	.107	01	.1055
162346	10	3	7733.0	.11216290 06	.107	01	-.2012
162406	10	3	7733.0	.11216530 06	.107	01	-.5039
162426	10	3	7733.0	.11216770 06	.107	01	-.2041
162446	10	3	7733.0	.11217010 06	.107	01	-.3008
162506	10	3	7733.0	.11217249 06	.107	01	-.1953
162526	10	3	7733.0	.11217489 06	.107	01	-.5879
162546	10	3	7733.0	.11217727 06	.107	01	-.2744
162606	10	3	7733.0	.11217966 06	.107	01	-.3594
162646	10	3	7733.0	.11218442 06	.107	01	.2793
162706	10	3	7733.0	.11218680 06	.107	01	-1.0977
162726	10	3	7733.0	.11218917 06	.107	01	-.1689
162746	10	3	7733.0	.11219154 06	.107	01	-.1387
162806	10	3	7733.0	.11219390 06	.107	01	-.2051
162826	10	3	7733.0	.11219627 06	.107	01	-.0684
162846	10	3	7733.0	.11219863 06	.107	01	-.1289
162906	10	3	7733.0	.11220098 06	.107	01	.5156
162926	10	3	7733.0	.11220334 06	.107	01	-.1406
162946	10	3	7733.0	.11220569 06	.107	01	-.2910
163006	10	3	7733.0	.11220804 06	.107	01	-.2383
163026	10	3	7733.0	.11221038 06	.107	01	.2168
163046	10	3	7733.0	.11221272 06	.107	01	.0752
163106	10	3	7733.0	.11221506 06	.107	01	.6375
163126	10	3	7733.0	.11221740 06	.107	01	.2012
163146	10	3	7733.0	.11221973 06	.107	01	-.1309
163206	10	3	7733.0	.11222206 06	.107	01	.4404
163226	10	3	7733.0	.11222438 06	.107	01	-.0850
163246	10	3	7733.0	.11222671 06	.107	01	-.4082
163306	10	3	7733.0	.11222903 06	.107	01	-.3281
163326	10	3	7733.0	.11223134 06	.107	01	-.1436
163346	10	3	7733.0	.11223366 06	.107	01	-.0566
163406	10	3	7733.0	.11223596 06	.107	01	-.4658
163426	10	3	7733.0	.11223827 06	.107	01	.6270
163506	10	3	7733.0	.11224287 06	.107	01	-.1768
163526	10	3	7733.0	.11224517 06	.107	01	-.1729
163546	10	3	7733.0	.11224747 06	.107	01	-.3672
163606	10	3	7733.0	.11224976 06	.107	01	-.0576
163626	10	3	7733.0	.11225204 06	.107	01	-.7441
163646	10	3	7733.0	.11225433 06	.107	01	-.2285
163706	10	3	7733.0	.11225661 06	.107	01	-.5098
163726	10	3	7733.0	.11225889 06	.107	01	.0127
163746	10	3	7733.0	.11226116 06	.107	01	-.3613
163806	10	3	7733.0	.11226343 06	.107	01	-.0322
163826	10	3	7733.0	.11226570 06	.107	01	-.2998
163846	10	3	7733.0	.11226796 06	.107	01	.1357
163906	10	3	7733.0	.11227023 06	.107	01	.4736
163926	10	3	7733.0	.11227248 06	.107	01	.5176
163946	10	3	7733.0	.11227474 06	.107	01	-.0391
164006	10	3	7733.0	.11227699 06	.107	01	.0107
164026	10	3	7733.0	.11227924 06	.107	01	.0625
164046	10	3	7733.0	.11228148 06	.107	01	-.0820
164106	10	3	7733.0	.11228372 06	.107	01	.2764
164126	10	3	7733.0	.11228596 06	.107	01	.1387
164146	10	3	7733.0	.11228819 06	.107	01	-.3965
164206	10	3	7733.0	.11229043 06	.107	01	-.0283
164226	10	3	7733.0	.11229265 06	.107	01	-.4561
164246	10	3	7733.0	.11229488 06	.107	01	.3193
164306	10	3	7733.0	.11229710 06	.107	01	.0977
164326	10	3	7733.0	.11229932 06	.107	01	.2803
164346	10	3	7733.0	.11230153 06	.107	01	-.3350
164406	10	3	7733.0	.11230374 06	.107	01	.6543
164426	10	3	7733.0	.11230595 06	.107	01	-.0537
164446	10	3	7733.0	.11230816 06	.107	01	.0420
164506	10	3	7733.0	.11231036 06	.107	01	-.3584
164526	10	3	7733.0	.11231256 06	.107	01	-.2568
164546	10	3	7733.0	.11231475 06	.107	01	-.3516
164606	10	3	7733.0	.11231694 06	.107	01	.4580
164626	10	3	7733.0	.11231913 06	.107	01	.4707
164646	10	3	7733.0	.11232131 06	.107	01	-.3125
164706	10	3	7733.0	.11232349 06	.107	01	-.0957
164726	10	3	7733.0	.11232567 06	.107	01	-.1719
164746	10	3	7733.0	.11232785 06	.107	01	-.2461
164806	10	3	7733.0	.11233001 06	.107	01	-.2158
164826	10	3	7733.0	.11233218 06	.107	01	-.0840
164846	10	3	7733.0	.11233435 06	.107	01	.4531
164906	10	3	7733.0	.11233651 06	.107	01	-.3076
164926	10	3	7733.0	.11233866 06	.107	01	.3359
164946	10	3	7733.0	.11234082 06	.107	01	-.1182
165006	10	3	7733.0	.11234297 06	.107	01	-.4668
165026	10	3	7733.0	.11234511 06	.107	01	-.2139
165046	10	3	7733.0	.11234726 06	.107	01	.1436
165106	10	3	7733.0	.11234940 06	.107	01	-.0957

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TIME	TC	Q	FRQ	CC3			
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165146	10	3	7733.0	.11235366 06	.107	01	-.5645
165206	10	3	7733.0	.11235579 06	.107	01	.4063
165226	10	3	7733.0	.11235792 06	.107	01	-.1182
165246	10	3	7733.0	.11236004 06	.107	01	-.4404
165306	10	3	7733.0	.11236216 06	.107	01	.2412
165326	10	3	7733.0	.11236427 06	.107	01	.2266
165346	10	3	7733.0	.11236638 06	.107	01	.5156
165406	10	3	7733.0	.11236849 06	.107	01	.4063
165426	10	3	7733.0	.11237060 06	.107	01	.5039
165446	10	3	7733.0	.11237270 06	.107	01	-.1982
165506	10	3	7733.0	.11237479 06	.107	01	.5059
165526	10	3	7733.0	.11237689 06	.107	01	.0107
165546	10	3	7733.0	.11237898 06	.107	01	-.5801
165606	10	3	7733.0	.11238106 06	.107	01	-.6660
165626	10	3	7733.0	.11238315 06	.107	01	-.5488
165646	10	3	7733.0	.11238523 06	.107	01	.0713
165726	10	3	7733.0	.11238938 06	.107	01	-.3770
165746	10	3	7733.0	.11239145 06	.107	01	1.0547
165806	10	3	7733.0	.11239351 06	.107	01	.6895
165826	10	3	7733.0	.11239557 06	.107	01	-.6738
165846	10	3	7733.0	.11239763 06	.107	01	-1.1289
165906	10	3	7733.0	.11239968 06	.108	01	.3154
165926	10	3	7733.0	.11240173 06	.108	01	.1641
170006	10	3	7733.0	.11240583 06	.108	01	-.5273
170026	10	3	7733.0	.11240787 06	.108	01	-.3662
170046	10	3	7733.0	.11240990 06	.108	01	.8984
170106	10	3	7733.0	.11241193 06	.108	01	.3643
170126	10	3	7733.0	.11241396 06	.108	01	-.2656
170146	10	3	7733.0	.11241599 06	.108	01	.4102
170206	10	3	7733.0	.11241801 06	.108	01	.2881
170226	10	3	7733.0	.11242003 06	.108	01	.3701
170246	10	3	7733.0	.11242204 06	.108	01	.5566
170306	10	3	7733.0	.11242405 06	.108	01	-.3555
170326	10	3	7733.0	.11242606 06	.108	01	.3369
170346	10	3	7733.0	.11242806 06	.108	01	-.3662
170406	10	3	7733.0	.11243006 06	.108	01	.2344
170426	10	3	7733.0	.11243206 06	.108	01	-.3623
170446	10	3	7733.0	.11243405 06	.108	01	-.4541
170506	10	3	7733.0	.11243604 06	.108	01	.0566
170526	10	3	7733.0	.11243803 06	.108	01	-.6289
170546	10	3	7733.0	.11244001 06	.108	01	.2900
170606	10	3	7733.0	.11244199 06	.108	01	-.2881
170626	10	3	7733.0	.11244396 06	.108	01	-.2617
170646	10	3	7733.0	.11244593 06	.108	01	-.2314
170706	10	3	7733.0	.11244790 06	.108	01	.1025
170726	10	3	7733.0	.11244986 06	.108	01	-.1611
170746	10	3	7733.0	.11245182 06	.108	01	-.6211
170806	10	3	7733.0	.11245377 06	.108	01	-.0752
170826	10	3	7733.0	.11245573 06	.108	01	-.1270
170846	10	3	7733.0	.11245767 06	.108	01	.0254
170906	10	3	7733.0	.11245962 06	.108	01	-.4189
170926	10	3	7733.0	.11246156 06	.108	01	.2412
170946	10	3	7733.0	.11246349 06	.108	01	-.4951
171006	10	3	7733.0	.11246543 06	.108	01	-.1279
171026	10	3	7733.0	.11246736 06	.108	01	-.6586
171046	10	3	7733.0	.11246928 06	.108	01	-.1826
171106	10	3	7733.0	.11247120 06	.108	01	.0957
171126	10	3	7733.0	.11247312 06	.108	01	.4775
171146	10	3	7733.0	.11247503 06	.108	01	-.0352
171206	10	3	7733.0	.11247694 06	.108	01	-.2471
171226	10	3	7733.0	.11247885 06	.108	01	.4473
171246	10	3	7733.0	.11248075 06	.108	01	-.7559
171306	10	3	7733.0	.11248265 06	.108	01	-.5547
171326	10	3	7733.0	.11248455 06	.108	01	.1504
171346	10	3	7733.0	.11248644 06	.108	01	.2588
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171426	10	3	7733.0	.11249021 06	.109	01	.0898
171446	10	3	7733.0	.11249209 06	.109	01	-.1904
171506	10	3	7733.0	.11249397 06	.109	01	-.3662
171526	10	3	7733.0	.11249584 06	.109	01	-.2383
171546	10	3	7733.0	.11249771 06	.109	01	-.2061
171606	10	3	7733.0	.11249957 06	.109	01	-.0703
171626	10	3	7733.0	.11250143 06	.109	01	-.3311
171646	10	3	7733.0	.11250329 06	.109	01	-.4873
171706	10	3	7733.0	.11250514 06	.109	01	.0596
171726	10	3	7733.0	.11250699 06	.109	01	-.1895
171746	10	3	7733.0	.11250883 06	.109	01	-.1348
171806	10	3	7733.0	.11251067 06	.109	01	-.6758
171826	10	3	7733.0	.11251251 06	.109	01	.1865
171846	10	3	7733.0	.11251435 06	.109	01	-.3457
172006	10	3	7733.0	.11252164 06	.109	01	.0586
172026	10	3	7733.0	.11252345 06	.109	01	.1455
172046	10	3	7733.0	.11252526 06	.109	01	-.7656
172106	10	3	7733.0	.11252707 06	.109	01	-.2705
172126	10	3	7733.0	.11252887 06	.109	01	-.4727
172146	10	3	7733.0	.11253067 06	.109	01	.2285
172206	10	3	7733.0	.11253246 06	.109	01	.5352
172226	10	3	7733.0	.11253425 06	.109	01	-.0557
172246	10	3	7733.0	.11253604 06	.109	01	.0576
172306	10	3	7733.0	.11253782 06	.109	01	-.0244
172326	10	3	7733.0	.11253960 06	.109	01	-.6035
172346	10	3	7733.0	.11254138 06	.109	01	-.7773
172406	10	3	7733.0	.11254315 06	.109	01	.6523
172426	10	3	7733.0	.11254491 06	.109	01	-.6152
172446	10	3	7733.0	.11254668 06	.109	01	-.4775
172506	10	3	7733.0	.11254843 06	.109	01	-.4355
172526	10	3	7733.0	.11255019 06	.109	01	-.2910
172546	10	3	7733.0	.11255194 06	.109	01	.4580
172606	10	3	7733.0	.11255369 06	.109	01	-.1875
172626	10	3	7733.0	.11255543 06	.109	01	.2686
172646	10	3	7733.0	.11255717 06	.109	01	.4307
172706	10	3	7733.0	.11255890 06	.109	01	-.9043
172726	10	3	7733.0	.11256063 06	.109	01	.0645
172746	10	3	7733.0	.11256236 06	.109	01	.2383
172806	10	3	7733.0	.11256408 06	.109	01	.3145
172826	10	3	7733.0	.11256580 06	.109	01	-.0039
172846	10	3	7733.0	.11256752 06	.109	01	-.4189

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TIME	TC	Q	FRQ	CC3			
172906	10	3	7733.0	.11256923	06	.109	01	.0713
172926	10	3	7733.0	.11257094	06	.110	01	-.5371
172946	10	3	7733.0	.11257264	06	.110	01	.2617
173006	10	3	7733.0	.11257434	06	.110	01	-.0371
173026	10	3	7733.0	.11257603	06	.110	01	.4688
173046	10	3	7733.0	.11257772	06	.110	01	.1777
173806	10	3	8071.0	.11261403	06	.639	00	-.8281
173826	10	3	8071.0	.11261562	06	.639	00	.4775
173846	10	3	8071.0	.11261721	06	.639	00	.4844
173906	10	3	8071.0	.11261880	06	.639	00	-.0029
173926	10	3	8071.0	.11262039	06	.639	00	.3125
173946	10	3	8071.0	.11262197	06	.639	00	-.2676
174006	10	3	8071.0	.11262354	06	.639	00	.2578
174026	10	3	8071.0	.11262511	06	.639	00	-.3135
174046	10	3	8071.0	.11262668	06	.641	00	.5195
174106	10	3	8071.0	.11262824	06	.641	00	-.1445
174126	10	3	8071.0	.11262980	06	.641	00	.0967
174146	10	3	8071.0	.11263136	06	.641	00	.3418
174206	10	3	8071.0	.11263291	06	.641	00	.1914
174226	10	3	8071.0	.11263445	06	.641	00	.0449
174246	10	3	8071.0	.11263600	06	.641	00	.1025
174306	10	3	8071.0	.11263753	06	.641	00	.4648
174326	10	3	8071.0	.11263907	06	.643	00	-.1689
174346	10	3	8071.0	.11264060	06	.643	00	.1006
174406	10	3	8071.0	.11264212	06	.643	00	.3760
174426	10	3	8071.0	.11264364	06	.643	00	.6543
174446	10	3	8071.0	.11264516	06	.643	00	-.0625
174506	10	3	8071.0	.11264667	06	.643	00	.3252
174526	10	3	8071.0	.11264818	06	.645	00	.6172
174546	10	3	8071.0	.11264969	06	.645	00	.0117
174606	10	3	8071.0	.11265119	06	.645	00	-.1875
174626	10	3	8071.0	.11265268	06	.645	00	-.0840
174646	10	3	8071.0	.11265417	06	.645	00	.1250
174706	10	3	8071.0	.11265566	06	.645	00	.0361
174726	10	3	8071.0	.11265714	06	.645	00	1.0547
174746	10	3	8071.0	.11265862	06	.646	00	-.4248
174806	10	3	8071.0	.11266010	06	.646	00	.4014
174826	10	3	8071.0	.11266157	06	.646	00	-.2695
174846	10	3	8071.0	.11266304	06	.646	00	-.1367
174906	10	3	8071.0	.11266450	06	.646	00	-.3975
174926	10	3	8071.0	.11266595	06	.648	00	.6445
174946	10	3	8071.0	.11266741	06	.648	00	.4912
175006	10	3	8071.0	.11266886	06	.648	00	-.0576
175026	10	3	8071.0	.11267030	06	.648	00	-.0020
175046	10	3	8071.0	.11267174	06	.648	00	-.1426
175106	10	3	8071.0	.11267318	06	.648	00	.1211
175126	10	3	8071.0	.11267461	06	.650	00	-.8105
175146	10	3	8071.0	.11267604	06	.650	00	.3613
175206	10	3	8071.0	.11267746	06	.650	00	-.2617
175226	10	3	8071.0	.11267888	06	.650	00	-.1816
175246	10	3	8071.0	.11268029	06	.650	00	.3047
175306	10	3	8071.0	.11268170	06	.652	00	-.5059
175326	10	3	8071.0	.11268311	06	.652	00	.4883
175346	10	3	8071.0	.11268451	06	.652	00	.0869
175406	10	3	8071.0	.11268591	06	.652	00	-.3115
175426	10	3	8071.0	.11268730	06	.652	00	-.0039
175446	10	3	8071.0	.11268869	06	.654	00	-.1924
175506	10	3	8071.0	.11269008	06	.654	00	.5234
175526	10	3	8071.0	.11269146	06	.654	00	-.4570
175546	10	3	8071.0	.11269283	06	.654	00	-.3330
175606	10	3	8071.0	.11269420	06	.656	00	.1953
175626	10	3	8071.0	.11269557	06	.656	00	.2285
175646	10	3	8071.0	.11269693	06	.656	00	.1660
175706	10	3	8071.0	.11269829	06	.656	00	.4063
175726	10	3	8071.0	.11269965	06	.656	00	.3535
175746	10	3	8071.0	.11270100	06	.658	00	-.4961
175806	10	3	8071.0	.11270234	06	.658	00	.4580
175826	10	3	8071.0	.11270368	06	.658	00	.3174
175846	10	3	8071.0	.11270502	06	.658	00	-.5195
175906	10	3	8071.0	.11270635	06	.660	00	-.3506
175926	10	3	8071.0	.11270768	06	.660	00	.3213
175946	10	3	8071.0	.11270900	06	.660	00	.3975
180006	10	3	8071.0	.11271032	06	.660	00	-.0215
180026	10	3	8071.0	.11271164	06	.662	00	-.0361
180046	10	3	8071.0	.11271295	06	.662	00	-.3467
180106	10	3	8071.0	.11271425	06	.662	00	-.4521
180126	10	3	8071.0	.11271555	06	.664	00	.2471
180146	10	3	8071.0	.11271685	06	.664	00	1.0508
180206	10	3	8071.0	.11271814	06	.664	00	-.0430
180226	10	3	8071.0	.11271943	06	.664	00	-.2324
180246	10	3	8071.0	.11272071	06	.666	00	-1.2148
180306	10	3	8071.0	.11272199	06	.666	00	.3057
180326	10	3	8071.0	.11272327	06	.666	00	.4307
180346	10	3	8071.0	.11272454	06	.668	00	-.1406
180406	10	3	8071.0	.11272580	06	.668	00	-.3057
180426	10	3	8071.0	.11272707	06	.668	00	-.0684
180446	10	3	8071.0	.11272832	06	.670	00	.4746
180506	10	3	8071.0	.11272958	06	.670	00	.2217
180526	10	3	8071.0	.11273082	06	.670	00	.5742
180546	10	3	8071.0	.11273207	06	.672	00	-.3711
180606	10	3	8071.0	.11273331	06	.672	00	-.5098
180626	10	3	8071.0	.11273454	06	.672	00	.2549
180646	10	3	8071.0	.11273578	06	.674	00	.6250
180706	10	3	8071.0	.11273700	06	.674	00	-.2021
180726	10	3	8071.0	.11273822	06	.674	00	.3760
180746	10	3	8071.0	.11273944	06	.676	00	-.6406
180806	10	3	8071.0	.11274065	06	.676	00	.6465
180826	10	3	8071.0	.11274186	06	.676	00	.4385
180846	10	3	8071.0	.11274306	06	.678	00	.2344
180906	10	3	8071.0	.11274426	06	.678	00	-.2646
180926	10	3	8071.0	.11274546	06	.680	00	.3398
180946	10	3	8071.0	.11274665	06	.680	00	-.3506
181006	10	3	8071.0	.11274783	06	.680	00	.2637
181026	10	3	8071.0	.11274902	06	.682	00	-.2178
181046	10	3	8071.0	.11275019	06	.682	00	.7051
181106	10	3	8071.0	.11275137	06	.684	00	.4336
181126	10	3	8071.0	.11275253	06	.684	00	-.5352
181146	10	3	8071.0	.11275370	06	.686	00	-.4990

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TIME	TC	Q	FRQ	CC3			
181206	10	3	8071.0	.11275486	06	.686	00	1.0430
181226	10	3	8071.0	.11275601	06	.688	00	-.2119
181246	10	3	8071.0	.11275716	06	.688	00	.4385
181306	10	3	8071.0	.11275831	06	.689	00	.0928
181326	10	3	8071.0	.11275945	06	.689	00	-.0479
181346	10	3	8071.0	.11276058	06	.689	00	.0156
181406	10	3	8071.0	.11276172	06	.691	00	-.0166
181426	10	3	8071.0	.11276284	06	.691	00	-.5430
181446	10	3	8071.0	.11276397	06	.693	00	-.4658
181506	10	3	8071.0	.11276508	06	.695	00	.3154
181526	10	3	8071.0	.11276620	06	.695	00	.2012
181546	10	3	8071.0	.11276731	06	.697	00	.6934
181606	10	3	8071.0	.11276841	06	.697	00	.3877
181626	10	3	8071.0	.11276951	06	.699	00	-.4131
181646	10	3	8071.0	.11277061	06	.699	00	.5918
181706	10	3	8071.0	.11277170	06	.701	00	-.2988
181726	10	3	8071.0	.11277279	06	.703	00	.0146
181746	10	3	8071.0	.11277387	06	.703	00	.4326
181806	10	3	8071.0	.11277494	06	.705	00	.0557
181826	10	3	8071.0	.11277602	06	.705	00	.2822
181846	10	3	8071.0	.11277708	06	.707	00	.4150
181906	10	3	8071.0	.11277815	06	.709	00	.8516
181926	10	3	8071.0	.11277921	06	.709	00	.0918
181946	10	3	8071.0	.11278026	06	.711	00	-.4629
182006	10	3	8071.0	.11278131	06	.713	00	-.0127
182026	10	3	8071.0	.11278236	06	.713	00	.0420
182046	10	3	8071.0	.11278340	06	.715	00	.0000
182106	10	3	8071.0	.11278443	06	.717	00	.1650
182126	10	3	8071.0	.11278547	06	.719	00	-.2676
182146	10	3	8071.0	.11278649	06	.719	00	.8066
182206	10	3	8071.0	.11278751	06	.721	00	.1836
182226	10	3	8071.0	.11278853	06	.723	00	-.8359
182246	10	3	8071.0	.11278955	06	.725	00	.2529
182306	10	3	8071.0	.11279055	06	.727	00	.0439
182326	10	3	8071.0	.11279156	06	.727	00	-.3613
182346	10	3	8071.0	.11279256	06	.729	00	.7402
182406	10	3	8071.0	.11279355	06	.730	00	-.1553
182426	10	3	8071.0	.11279454	06	.732	00	-.2441
182446	10	3	8071.0	.11279553	06	.734	00	.5703
182506	10	3	8071.0	.11279651	06	.736	00	.0889
182526	10	3	8071.0	.11279749	06	.738	00	-.0879
182546	10	3	8071.0	.11279846	06	.740	00	-.0596
182606	10	3	8071.0	.11279943	06	.742	00	-.0273
182626	10	3	8071.0	.11280039	06	.744	00	.0107
182646	10	3	8071.0	.11280135	06	.746	00	-.0469
182706	10	3	8071.0	.11280230	06	.748	00	.5996
182726	10	3	8071.0	.11280325	06	.750	00	.4502
182746	10	3	8071.0	.11280419	06	.752	00	-.2930
182806	10	3	8071.0	.11280513	06	.754	00	.0664
182826	10	3	8071.0	.11280607	06	.756	00	.5332
182846	10	3	8071.0	.11280700	06	.760	00	.1025
182906	10	3	8071.0	.11280792	06	.762	00	.1768
182926	10	3	8071.0	.11280884	06	.764	00	.1563
182946	10	3	8071.0	.11280976	06	.766	00	-.1602
183006	10	3	8071.0	.11281067	06	.770	00	.6297
183026	10	3	8071.0	.11281158	06	.771	00	-.0781
183046	10	3	8071.0	.11281248	06	.773	00	-.3809
183106	10	3	8071.0	.11281338	06	.777	00	-.0781
183126	10	3	8071.0	.11281427	06	.779	00	.6289
183146	10	3	8071.0	.11281516	06	.783	00	.5410
183206	10	3	8071.0	.11281604	06	.785	00	.3574
183226	10	3	8071.0	.11281692	06	.789	00	.1787
183246	10	3	8071.0	.11281779	06	.791	00	-.5957
183306	10	3	8071.0	.11281866	06	.795	00	-.3643
183326	10	3	8071.0	.11281953	06	.799	00	.2705
183346	10	3	8071.0	.11282039	06	.801	00	-.2900
183406	10	3	8071.0	.11282124	06	.805	00	-.1455
183426	10	3	8071.0	.11282209	06	.809	00	-1.5977
183446	10	3	8071.0	.11282294	06	.813	00	.2578
183506	10	3	8071.0	.11282378	06	.816	00	-.1846
183526	10	3	8071.0	.11282462	06	.818	00	-.1201
183546	10	3	8071.0	.11282545	06	.822	00	-.3525
183606	10	3	8071.0	.11282628	06	.828	00	.9199
183626	10	3	8071.0	.11282710	06	.832	00	.4971
183646	10	3	8071.0	.11282792	06	.836	00	.0801
183706	10	3	8071.0	.11282873	06	.840	00	.2666
183726	10	3	8071.0	.11282954	06	.844	00	.1563
183746	10	3	8071.0	.11283035	06	.850	00	-.1475
183806	10	3	8071.0	.11283114	06	.854	00	.1543
183826	10	3	8071.0	.11283194	06	.859	00	.6602
183846	10	3	8071.0	.11283273	06	.863	00	.5703
183906	10	3	8071.0	.11283351	06	.869	00	-.5156
183926	10	3	8071.0	.11283430	06	.875	00	-.1963
183946	10	3	8071.0	.11283507	06	.879	00	-.4717
184006	10	3	8071.0	.11283584	06	.885	00	.1582
184026	10	3	8071.0	.11283661	06	.891	00	.5918
184046	10	3	8071.0	.11283737	06	.896	00	.1299
184126	10	3	8071.0	.11283888	06	.910	00	.6205
184146	10	3	8071.0	.11283963	06	.916	00	-1.2266
184206	10	3	8071.0	.11284037	06	.924	00	.1309
184226	10	3	8071.0	.11284111	06	.930	00	.0918
184246	10	3	8071.0	.11284184	06	.938	00	-1.1406
184306	10	3	8071.0	.11284257	06	.945	00	-.2695
184326	10	3	8071.0	.11284329	06	.953	00	-.6934
184346	10	3	8071.0	.11284401	06	.961	00	.1875
184406	10	3	8071.0	.11284473	06	.969	00	-.3271
184426	10	3	8071.0	.11284543	06	.979	00	.3643
184446	10	3	8071.0	.11284614	06	.986	00	.6602
184506	10	3	8071.0	.11284684	06	.956	00	.1582
184526	10	3	8071.0	.11284754	06	.101	01	.1621
184546	10	3	8071.0	.11284823	06	.102	01	-.7285
184606	10	3	8071.0	.11284891	06	.103	01	-.0146
184626	10	3	8071.0	.11284959	06	.104	01	-.5957
184646	10	3	8071.0	.11285027	06	.105	01	.0283
184706	10	3	8071.0	.11285094	06	.106	01	-.7441
184726	10	3	8071.0	.11285161	06	.107	01	-.3105
184746	10	3	8071.0	.11285227	06	.109	01	.4258
184806	10	3	8071.0	.11285293	06	.110	01	.0693

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TIME	TC	Q	FRQ	CC3
184826	10	3	8071.0	.11285358 06 .111 01 .1152
184846	10	3	8071.0	.11285423 06 .113 01 -.3330
184906	10	3	8071.0	.11285488 06 .114 01 -.5762
184926	10	3	8071.0	.11285551 06 .116 01 -.6146
184946	10	3	8071.0	.11285615 06 .118 01 -.4492
185006	10	3	8071.0	.11285678 06 .119 01 -.0791
185026	10	3	8071.0	.11285740 06 .121 01 .2969
185046	10	3	8071.0	.11285802 06 .123 01 .7773
185106	10	3	8071.0	.11285864 06 .125 01 -.3379
185126	10	3	8071.0	.11285925 06 .127 01 .0508
185146	10	3	8071.0	.11285985 06 .129 01 .5449
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134706	10	3	6951.0	.10915313 06 .607 00 .6660
134906	10	3	6951.0	.10917235 06 .607 00 .0479
135106	10	3	6951.0	.10919158 06 .607 00 -.3770
135306	10	3	6951.0	.10920004 06 .607 00 -.0400
135706	10	3	6991.0	.10924927 06 .607 00 .2246
135906	10	3	6951.0	.10926851 06 .607 00 .7891
140306	10	3	6951.0	.10930698 06 .607 00 .3213
140506	10	3	6951.0	.10932621 06 .607 00 .4922
140906	10	3	6951.0	.10936464 06 .607 00 1.0547
141906	10	3	6951.0	.10946054 06 .607 00 .1582
142306	10	3	6951.0	.10949879 06 .607 00 .3105
142506	10	3	6951.0	.10951788 06 .607 00 -.5840
142706	10	3	6951.0	.10953695 06 .607 00 -.8555
142906	10	3	6951.0	.10955600 06 .607 00 -.0010
143306	10	3	6951.0	.10959402 06 .607 00 .6836
151706	10	3	7388.4	.11000187 06 .609 00 -.1670
151906	10	3	7388.4	.11001979 06 .609 00 .1074
152106	10	3	7388.4	.11003765 06 .609 00 -.3525
152306	10	3	7388.4	.11005545 06 .609 00 .7520
152506	10	3	7388.4	.11007317 06 .609 00 -.3730
152706	10	3	7388.4	.11009083 06 .609 00 -.0293
152906	10	3	7388.4	.11010841 06 .609 00 1.0859
154106	10	3	7108.3	.11021225 06 .609 00 -.7500
154306	10	3	7108.3	.11022929 06 .609 00 -.7949
154506	10	3	7108.3	.11024625 06 .611 00 -.5566
154906	10	3	7108.3	.11027992 06 .611 00 .3750
155106	10	3	7108.3	.11029663 06 .611 00 .1709
155306	10	3	7108.3	.11031324 06 .611 00 .1553
155906	10	3	7071.3	.11036253 06 .611 00 -.3330
160706	10	3	7071.3	.11042694 06 .611 00 -.1416
160906	10	3	7071.3	.11044280 06 .611 00 -.4980
161106	10	3	7071.3	.11045855 06 .611 00 .2471
161506	10	3	7039.3	.11048974 06 .613 00 -.0439
161706	10	3	7039.3	.11050519 06 .613 00 -.0869
161906	10	3	7039.3	.11052052 06 .613 00 .2754
162106	10	3	7039.3	.11053575 06 .613 00 .2451
162306	10	3	7039.3	.11055087 06 .613 00 .1250
162506	10	3	7039.3	.11056588 06 .613 00 .0137
162706	10	3	7039.3	.11058078 06 .613 00 -.0859
163306	10	3	7039.3	.11062480 06 .615 00 .5980
163506	10	3	7039.3	.11063924 06 .615 00 -.7422
163906	10	3	7039.3	.11066777 06 .615 00 -22.0625*
164306	10	3	7014.0	.11069581 06 .615 00 .5938
164506	10	3	7014.0	.11070965 06 .615 00 -1.0469
164906	10	3	7014.0	.11073695 06 .617 00 .0449
165106	10	3	7014.0	.11075042 06 .617 00 -.2217
165306	10	3	7014.0	.11076376 06 .617 00 .2412
165506	10	3	7014.0	.11077697 06 .617 00 .1299
165906	10	3	7014.0	.11080300 06 .619 00 -.5020
170306	10	3	7014.0	.11082851 06 .619 00 .2939

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TIME	TC	Q	FRQ	CC3
170706	10	3	7014.0	.11085348 06 .621 00 -.1768
170906	10	3	7014.0	.11086576 06 .621 00 .5430
172306	10	3	7014.0	.11094784 06 .625 00 -.1416
172506	10	3	7014.0	.11095900 06 .625 00 .1992
172906	10	3	7014.0	.11098088 06 .627 00 .2188
173106	10	3	7014.0	.11099160 06 .629 00 -.5039
173306	10	3	7014.0	.11100218 06 .629 00 -.5762
173506	10	3	7014.0	.11101260 06 .631 00 -.2021
173706	10	3	7014.0	.11102288 06 .631 00 -.3770
173906	10	3	7014.0	.11103300 06 .633 00 .5977
174106	10	3	7014.0	.11104298 06 .633 00 .2217
174306	10	3	7014.0	.11105280 06 .635 00 .2998
174506	10	3	7014.0	.11106247 06 .637 00 .5313
174706	10	3	7014.0	.11107198 06 .637 00 .5156
174906	10	3	7014.0	.11108135 06 .639 00 .1523
175106	10	3	7014.0	.11109055 06 .641 00 .0459
180706	10	3	6981.0	.11115851 06 .658 00 .0869
180906	10	3	6981.0	.11116629 06 .660 00 .3105
181106	10	3	6981.0	.11117350 06 .664 00 -.4023
181306	10	3	6981.0	.11118135 06 .668 00 -.1523
181506	10	3	6981.0	.11118864 06 .672 00 -.1377
181706	10	3	6981.0	.11119576 06 .676 00 -.0605
181906	10	3	6981.0	.11120272 06 .682 00 .4824
182106	10	3	6981.0	.11120951 06 .688 00 .1914
182306	10	3	6981.0	.11121613 06 .693 00 .0664
182506	10	3	6981.0	.11122259 06 .699 00 -.3926
182706	10	3	6981.0	.11122888 06 .707 00 .5176
182906	10	3	6981.0	.11123500 06 .715 00 -.5059
183106	10	3	6981.0	.11124096 06 .725 00 -.2617
183306	10	3	6981.0	.11124675 06 .734 00 -.2461
183506	10	3	6981.0	.11125236 06 .746 00 .1367
183706	10	3	6981.0	.11125781 06 .760 00 -.7109
183906	10	3	6981.0	.11126309 06 .775 00 .8125
184106	10	3	6981.0	.11126819 06 .793 00 -.0947
184306	10	3	6981.0	.11127313 06 .814 00 .0684
184506	10	3	6981.0	.11127789 06 .838 00 -.2949
184706	10	3	6981.0	.11128249 06 .867 00 -1.0898
184906	10	3	6981.0	.11128691 06 .902 00 .0898
185106	10	3	6981.0	.11129116 06 .945 00 -.3594
185306	10	3	6981.0	.11129524 06 .998 00 -1.0391
185506	10	3	6981.0	.11129914 06 .107 01 .3564
				62/01/30
092306	10	3	7342.3	.10631054 06 .689 00 -.1387
092706	10	3	7342.3	.10632437 06 .678 00 -.1689
092906	10	3	7342.3	.10633154 06 .674 00 .4629
093106	10	3	7342.3	.10633887 06 .670 00 -.7754
093306	10	3	7342.3	.10634638 06 .666 00 .7188
093506	10	3	7342.3	.10635405 06 .662 00 -.1563
093706	10	3	7342.3	.10636190 06 .658 00 -.3965
093906	10	3	7342.3	.10636990 06 .656 00 .9961
094106	10	3	7342.3	.10637808 06 .652 00 -.5762
094306	10	3	7342.3	.10638641 06 .650 00 -1.2148
094506	10	3	7342.3	.10639492 06 .648 00 .2822
094706	10	3	7342.3	.10640358 06 .646 00 -.0840
094906	10	3	7342.3	.10641241 06 .645 00 .4863
095106	10	3	7342.3	.10642141 06 .643 00 -.4053
095306	10	3	7342.3	.10643056 06 .641 00 -.0596

STATISTICS STATION 3 ITERATION 3

DATA TYPE	BEGINNING TIME	END TIME	NUMBER OF POINTS	STD DEV	RMS	FIRST MOMENT	SECOND MOMENT
CC3	1/27-173406	1/30-095306	1841	.389 00	.389 00	-.723-02	.151 00

```
CASE  1                                        SPACE TRAJECTORIES

    EPHEMERICES WITH VENUS VELOCITIES

  GME  .39860163 06     J  .16234500-02     H -.57499999-05     D  .78749999-05    RE  .63781650 04   REM  .63783149 04
    G  .66709998-19     A  .88745998 29     B  .88763998 29     C  .88800998 29   OME  .41780741-02    AU  .14959900 09
  GMM  .49005824 04   GMS  .13271544 12   GMV  .32476952 06   GMA  .42977799 05   GMB  .00000000 00   GMJ  .12671062 09
  ARA  .27890000 01    GB  .00000000 00   MAS  .34020000 03   GB1  .00000000 00   GB2  .00000000 00    SC  .00000000 00

INJECTION CONDITIONS            MOON            JULIAN DATE 2437691.93618055              JAN. 27,1962   10 28 06.000

GEOCENTRIC        XO-.12982526 06  YO-.82372683 05  ZO-.49526645 05 DXO-.16954419 01 DYO-.15453654 01 DZO-.52116175 00
CARTESIAN        GMC .00000000 00 SGC .00000000 00  TO .37686000 05 GHA .28324693 03 GHO .12579204 03

   0 DAYS  0 HRS.  0 MIN.  0.000 SEC.            JULIAN DATE 2437691.93618055              JAN. 27,1962   10 28 06.000

GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X -.12982526 06     Y -.82372677 05     Z -.49526644 05    DX -.16954418 01    DY -.15453653 01    DZ -.52116174 00
    R  .16153249 06   DEC -.17854741 02    RA  .21239467 03     V  .23525064 01   PTH  .79154370 02    AZ  .63614647 02
    R  .16153248 06   LAT -.17854741 02   LON  .28914774 03    VE  .11061065 02   PTE  .12056990 02   AZE  .27104204 03
   XS  .88692842 08    YS -.10751781 09    ZS -.46794340 08   DXS  .24275854 02   DYS  .16542348 02   DZS  .71735502 01
   XM -.37661564 06    YM -.13648082 06    ZM -.23639547 05   DXM  .36509294 00   DYM -.84409497 00   DZM -.32279713 00
   XT -.37661564 06    YT -.13648082 06    ZT -.23639547 05   DXT  .36509294 00   DYT -.84409497 00   DZT -.32279713 00
   RS  .14731729 09    VS  .30239481 02    RM  .40128319 06    VM  .97467284 00    RT  .40128319 06    VT  .97467284 00
  GED -.17968618 02   ALT  .15515631 06   LCS  .26168331 02   RAS  .30941526 03   RAM  .19991969 03   LOM  .27667275 03
  CUT  .34000000 02    DT  .12000000 03    DR  .23104854 01   SHA  .16151899 06   DES -.18520457 02   DEM -.33772425 01

GEOCENTRIC                                          CONIC        ORBITAL B.T AND B.R          EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE                     JULIAN DATE 2437691.36404820              JAN. 26,1962   20 44 13.765
  SMA -.66540498 06   ECC  .10095522 01   INC  .31495683 02   LAN  .24411272 03   APF  .16830233 03   RCA  .63827049 04
   VH  .77397425 00    C3  .59903613 00    C1  .71503267 05   SLR  .12826634 05   APO  .00000000 00   TFP  .49432235 05
   TA  .15578191 03    EA  .38227135 02    MA  .32943773 01   DAO -.10094311 02   RAO  .22722129 03   MTA  .17209561 03
   WX -.47001029 00    WY  .22805567 00    WZ  .85267953 00    PX  .58306516 00    PY  .80549084 00    PZ  .10592214 00
   QX -.66266527 00    QY  .54495212 00    QZ -.51158365 00    RX -.85384947-01    RY  .30877146 00    RZ -.94729593 00
  SXO -.66865540 00   SYO -.72262075 00   SZO -.17526895 00    TX -.73865375 00    TY  .61844922 00    TZ  .26816265 00
   BX -.57618599 00    BY  .65252701 00    BZ -.49215668 00    WX  .36488439 00    WY -.82941440 00    WZ  .42300212 00
  B.T  .64408498 05   B.R  .66230194 05     B  .92384487 05   PER  .00000000 00   DMO  .30408057-02   NOD -.19677616-02

HELIOCENTRIC                                                                                 ECLIPTIC COORDINATES

    X -.88822667 08     Y  .11753109 09     Z -.12971000 05    DX -.25971296 02    DY -.19655926 02    DZ  .13612705 00
    R  .14731546 09   LAT -.50447071-02   LON  .12707971 03     V  .32571186 02   PTH -.39937823-01    AZ  .89760542 02
   XE -.88692842 08    YE  .11762637 09    ZE -.30200000 03   DXE -.24275854 02   DYE -.18030782 02   DZE -.51075219-03
   XT -.89069461 08    YT  .11749175 09    ZT  .32305000 05   DXT -.23910761 02   DYT -.18933623 02   DZT  .39136588-01
  LTE -.11745617-03   LOE  .12701709 03   LTT  .12554105-01   LOT  .12716545 03   RST  .14743704 09   VST  .30499313 02
  EPS  .89196718 02   ESP  .62165044-01   SEP  .90740460 02   EPM  .14913329 03   EMP  .11918499 02   MEP  .18948210 02
  MPS  .11753357 03   MSP  .87356456-01   SMP  .62378906 02   SEM  .10728875 03   EMS  .72562308 02   ESM  .14886133 00
  EPT  .14913329 03   ETP  .11918499 02   TEP  .18948210 02   TPS  .11753357 03   TSP  .87356456-01   STP  .62378906 02
  SET  .10728875 03   STE  .72562308 02   EST  .14886133 00   RPM  .25397893 06   RPT  .25397893 06   SPN  .86933847 02
  SAC  .00000000 00
  GCE  .88945635 02   GCT  .25284672 03   SIP  .11714149 03   CPT  .58642650 02   SIN  .98250565 02
  REP  .16153249 06   VEP  .23525064 01

HELIOCENTRIC                                          CONIC        ORBITAL B.T AND B.R          ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE                     JULIAN DATE 2437692.17810316              JAN. 27,1962   16 16 28.114
  SMA  .17913832 09   ECC  .17762308 00   INC  .23923566 00   LAN  .12828659 03   APF  .35905787 03   RCA  .14731922 09
   VH  .22745672 02    C3 -.74085455 03    C1  .47583684 10   SLR  .17348651 09   APO  .21095742 09   TFP -.20902114 05
   TA -.26477911 00    EA -.22126739 00    MA -.18196624 00   DAI -.39380856-02   RAI  .12734448 03   MTA  .18000000 03
   WX  .32811579-02    WY  .25900557-02    WZ  .99999128 00    PX -.60660566 00    PY  .79500257 00    PZ -.68732560-04
   QX -.79495581 00    QY -.60660014 00    QZ  .41796713-02    RX  .55100396-04    RY -.44412851-04    RZ -.99999976 00
  SXI -.60660566 00   SYI  .79500257 00   SZI -.68732560-04    TX  .79500277 00    TY  .60660581 00    TZ  .16863878-04
   BX  .79495599 00    BY  .60660028 00    BZ -.41796723-02    WX -.79779074 00    WY -.60291999 00    WZ  .41793101-02
  B.T  .17628817 09   B.R  .73580601 06     B  .17628972 09   PER  .47861703 03   DEF

SELENOCENTRIC                                                                                EQUATORIAL COORDINATES

    X  .24675438 08     Y  .54108138 05     Z -.25887097 05    DX -.20605347 01    DY -.70127036 00    DZ -.19836460 00
    R  .25357893 08   DEC -.58500587 01    RA  .12366085 02     V  .21856193 01   PTH -.77214488 02    AZ  .21025766 03
    R  .25357892 08   LAT -.11462491 02   LON  .34399612 03    VR  .23951358 01   PTR -.62860479 02   AZR  .25511726 03
  LTS  .30534787 00   LNS  .28229579 03   LTE -.60191852 01   LNE  .35472828 03
  ALT  .25224093 08   SHA -.22503370 06   ALP  .54252073 01    DR -.21314277 01    DP  .10911499-03   ASD  .39208359 00
  HGE  .27080328 03   SVL -.14234424 02   HNG  .11848381 03   SIA  .14874120 03
  SAC  .00000000 00

   1 DAYS 10 HRS. 35 MIN. 48.425 SEC.            JULIAN DATE 2437693.37771325              JAN. 28,1962   21 03 54.425

GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X -.29597162 06     Y -.24217889 06     Z -.96796393 05    DX -.11730565 01    DY -.11242155 01    DZ -.27420868 00
    R  .39448619 06   DEC -.14203897 02    RA  .21929176 03     V  .16477598 01   PTH  .83621829 02    AZ  .44020677 02
    R  .39448619 06   LAT -.14203897 02   LON  .13567225 03    VE  .27808324 02   PTE  .33759533 01   AZE  .27027168 03
   XS  .91687764 08    YS -.10582282 09    ZS -.45885880 08   DXS  .23813017 02   DYS  .17096560 02   DZS  .74134996 01
   XM -.31350064 06    YM -.23313583 06    ZM -.61997588 05   DXM  .64220018 00   DYM -.69424424 00   DZM -.28788360 00
   XT -.31350064 06    YT -.23313583 06    ZT -.61997588 05   DXT  .64220018 00   DYT -.69424424 00   DZT -.28788360 00
   RS  .14734527 09    VS  .30237594 02    RM  .39557384 06    VM  .98857124 00    RT  .39557384 06    VT  .98857124 00
  GED -.14296738 02   ALT  .38810928 06   LCS  .22728704 03   RAS  .31090654 03   RAM  .21663646 03   LOM  .13301696 03
  CUT  .34000000 02    DT  .48000000 03    DR  .16375607 01   SHA -.39398377 06   DES -.18144669 02   DEM -.90170422 01

GEOCENTRIC                                          CONIC        ORBITAL B.T AND B.R          EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE                     JULIAN DATE 2437691.37903373              JAN. 26,1962   21 05 48.515
  SMA -.57414903 06   ECC  .10113281 01   INC  .47648847 02   LAN  .23263165 03   APF  .17766636 03   RCA  .65040126 04
   VH  .83321525 00    C3  .69424766 00    C1  .72210720 05   SLR  .13081703 05   APO  .00000000 00   TFP  .17268591 06
   TA  .16294211 03    EA  .63010935 02    MA  .14358600 02   DAO -.80459234 01   RAO  .22522809 03   MTA  .17141626 03
   WX -.58734293 00    WY  .44854347 00    WZ  .67367257 00    PX  .62823394 00    PY  .77744220 00    PZ  .30091956-01
   QX -.51024441 00    QY  .44089789 00    QZ -.73841555 00    RX -.10668392 00    RY  .29491193 00    RZ -.94955008 00
  SXO -.69735325 00   SYO -.70292790 00   SZO -.13996676 00    TX -.70874320 00    TY  .64723971 00    TZ  .28064893 00
   BX -.41076278 00    BY  .55199672 00    BZ -.72565389 00    WX  .30351350 00    WY -.64955540 00    WZ  .69710474 00
  B.T  .38543873 05   B.R  .77622107 05     B  .86665002 05   PER  .00000000 00   DMO  .17565747-02   NOD -.18647664-02
```

```
CASE  1                                   SPACE TRAJECTORIES

HELIOCENTRIC                                                                                                   ECLIPTIC COORDINATES

    X -.91983735 08     Y  .11508219 C9     Z  .71935000 04    DX -.24986074 02    DY -.19775219 02    DZ  .19548792 00
    R  .14732589 09   LAT  .27915882-C2   LON  .12863490 03     V  .31865363 02   PTH  .27507221 00    AZ  .89648508 02
   XE -.91827764 08    YE  .11534289 C9    ZE -.34400000 C3   DXE -.23813017 02   DYE -.18634708 02   DZE -.17619133-03
   XT -.92001264 08    YT  .11510433 C9    ZT  .35522500 05   DXT -.23170817 02   DYT -.19386177 02   DZT  .11888802-01
  LTE -.13376573-03   LCE  .12848170 C3   LTT  .13812230-01   LOT  .12863485 03   RST  .14735414 09   VST  .30211103 02
  EPS  .92738797 02   ESP  .15323340 00   SEP  .87107575 C2   EPM  .88655136 02   EMP  .85542861 02   MEP  .58019949 01
  MPS  .13491146 03   MSP  .98911702-C2   SMP  .45077519 02   SEM  .91207489 02   EMS  .88638732 02   ESM  .15355230 00
  EPT  .88655136 02   ETP  .85542861 C2   TEP  .58019949 01   TPS  .13491146 03   TSP  .98911702-02   STP  .45077519 02
  SET  .91207489 02   STE  .88638732 02   EST  .15355230 00   RPM  .40000002 05   RPT  .40000002 05   SPN  .91812406 02
  SAC  .00000000 00
  GCE  .82994180 02   GCT  .17382565 C3   SIP  .13242117 03   CPT  .12191758 03   SIN  .11942729 03
  REP  .39448619 06   VEP  .16477598 01

HELIOCENTRIC                                          CONIC        ORBITAL B.T AND B.R          ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE                          JULIAN DATE 2437691.10212349                JAN. 26,1962   14 27 03.470
  SMA  .16879403 09   ECC  .12727456 C0   INC  .35151995 00   LAN  .12817888 03   APF  .35801918 03   RCA  .14731085 09
   VH  .24672101 02    C3 -.78825671 C3    CI  .46945390 10   SLR  .16605977 09   APO  .19027722 09   TFP  .19661095 06
   TA  .24368240 01    EA  .21441884 C1    MA  .18713518 01   DAI -.12149470-01   RAI  .12619812 03   MTA  .18000000 03
   WX  .48225036-02    WY  .37920594-C2    WZ  .99998118 00    PX -.59057910 00    PY  .80697945 00    PZ -.21204826-03
   CX -.80696506 00    CY -.59056696 C0    CZ  .61311722-02    RX  .12999060-03    RY -.16763558-03    RZ -.99999975 00
  SXI -.59057510 00   SYI  .80697945 C0   SZI -.21204826-03    TX  .80697965 00    TY  .59057925 00    TZ  .58976707-05
   BX  .80696525 00    BY  .59056709 C0    BZ -.61311735-02    MX -.78112542 00    MY -.62434400 00    MZ  .61346451-02
  B.T  .16741812 09   B.R  .10274761 C7     B  .16742128 C9   PER  .43776499 03   DEF

SELENOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X  .17529016 05     Y -.90430605 C4     Z -.34758805 C5    DX -.18152566 01    DY -.42997130 00    DZ  .13674922-01
    R  .40000002 05   DEC -.60455162 C2    RA  .33271120 03     V  .18655345 01   PTH -.22376148 02    AZ  .22474515 03
    R  .39999999 05   LAT -.44779363 02   LON  .26298511 03    VR  .19338386 01   PTR -.21545459 02   AZR  .25749159 03
  LTS  .27017523 00   LNS  .26477350 C3   LTE -.67229201 01   LNE  .35337093 03
  ALT  .38262002 05   SHA -.28322514 C5   ALP  .90375026 02    DR -.71018187 00    DP  .24709781-02   ASD  .24902844 01
  HGE  .26726119 03   SVL -.45082483 C2   HNG  .17916605 C3   SIA  .86164851 02
  SAC  .00000000 00

  1 DAYS 12 HRS. 59 MIN. 48.425 SEC.                 JULIAN DATE 2437693.47771325                JAN. 28,1962   23 27 54.425

GEOCENTRIC                                                                                      EQUATORIAL COORDINATES

    X -.30607425 06     Y -.25180029 C6     Z -.99030143 05    DX -.11639964 01    DY -.11022838 01    DZ -.24186202 00
    R  .40852393 06   DEC -.14028803 C2    RA  .21944335 03     V  .16212386 01   PTH  .83288708 02    AZ  .36138850 02
    R  .40852392 06   LAT -.14028804 C2   LON  .99725289 02    VE  .28835173 02   PTE  .32010074 01   AZE  .27030451 03
   XS  .91893374 08    YS -.10567494 C9    ZS -.45821754 08   DXS  .23780328 02   DYS  .17134628 02   DZS  .74299790 01
   XM -.30787563 06    YM -.23907645 C6    ZM -.64469497 05   DXM  .65983930 00   DYM -.68083311 00   DZM -.28429125 00
   XT -.30787563 06    YT -.23907645 C6    ZT -.64469497 C5   DXT  .65983930 00   DYT -.68083311 00   DZT -.28429125 00
   RS  .14734727 09    VS  .30237461 C2    RM  .39509653 06    VM  .98981974 00    RT  .39509653 06    VT  .98981974 00
  GED -.14120595 02   ALT  .40214699 C6   LCS  .19129168 03   RAS  .31100974 03   RAM  .21783062 03   LOM  .98112553 02
  OUT  .34000000 02    DT  .24000000 C3    DR  .16101293 01   SHA -.40800928 06   DES -.18118176 02   DEM -.93911779 01

GEOCENTRIC                                            CONIC        ORBITAL B.T AND B.R          EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE                          JULIAN DATE 2437691.36810677                JAN. 26,1962   20 50 04.425
  SMA -.58878437 06   ECC  .10126834 C1   INC  .55059420 02   LAN  .22948184 03   APF  .18079203 03   RCA  .74678097 04
   VH  .82279453 00    C3  .67459084 C0    CI  .77402304 C5   SLR  .15030337 05   APO  .00000000 00   TFP  .18227000 06
   TA  .16201629 03    EA  .63201318 C2    MA  .14593553 02   DAO -.67876139 01   RAO  .22471888 03   MTA  .17092235 03
   WX -.62347493 00    WY  .53283540 C0    WZ  .57215416 00    PX  .64361426 00    PY  .76526603 00    PZ -.11337012-01
   CX -.44385115 00    CY  .36117807 C0    CZ -.82006726 C0    RX -.12136909 00    RY  .28347907 00    RZ -.95126713 00
  SXO -.70558723 00   SYO -.69869733 C0   SZO -.11818929 C0    TX -.69815200 00    TY  .65685742 00    TZ  .28481947 00
   BX -.33678691 00    BY  .47739284 C0    BZ -.81158528 C0    MX  .22349100 00    MY -.57980561 00    MZ  .78350266 00
  B.T  .29872877 05   B.R  .89203227 C5     B  .94072337 05   PER  .00000000 00   OMD  .64290037-03   NOD -.11552669-02

HELIOCENTRIC                                                                                                   ECLIPTIC COORDINATES

    X -.92195448 08     Y  .11491129 C9     Z  .89700000 04    DX -.24944325 02    DY -.19783711 02    DZ  .21646470 00
    R  .14732733 09   LAT  .34884439-C2   LON  .12874193 C3     V  .31838049 02   PTH  .32349312 00    AZ  .89610460 02
   XE -.91893374 08    YE  .11518170 C9    ZE -.34600000 C3   DXE -.23780328 02   DYE -.18676189 02   DZE -.15133619-03
   XT -.92201249 08    YT  .11493671 C9    ZT  .35616500 05   DXT -.23120489 02   DYT -.19413925 02   DZT  .98742842-02
  LTE -.13454161-03   LCE  .12858329 C3   LTT  .13849330-C1   LOT  .12873629 03   RST  .14734829 09   VST  .30190356 02
  EPS  .92717576 02   ESP  .15841325 C0   SEP  .87123746 02   EPM  .66215231 02   EMP  .10888580 03   MEP  .48989501 01
  MPS  .12463806 03   MSP  .27453512-18   SMP  .55350138 02   SEM  .90072078 02   EMS  .89774287 02   ESM  .15323340 00
  EPT  .66215231 02   ETP  .10888580 C3   TEP  .48989501 01   TPS  .12463806 03   TSP  .27453512-18   STP  .55350138 02
  SET  .90072078 02   STE  .89774287 C2   EST  .15323340 00   RPM  .36872474 05   RPT  .36872474 05   SPN  .91823021 02
  SAC  .00000000 00
  GCE  .82757740 02   GCT  .14550329 C3   SIP  .12193640 03   CPT  .12229089 03   SIN  .11958923 03
  REP  .40852393 06   VEP  .16212386 01

HELIOCENTRIC                                          CONIC        ORBITAL B.T AND B.R          ECLIPTIC COORDINATES

EPOCH OF PERICENTER PASSAGE                          JULIAN DATE 2437690.76340426                JAN. 26,1962   06 19 18.128
  SMA  .16842507 09   ECC  .12539007 C0   INC  .38947931 00   LAN  .12822885 03   APF  .35760882 03   RCA  .14730624 09
   VH  .24746456 02    C3 -.78757511 C3    CI  .46905400 10   SLR  .16577698 09   APO  .18954390 09   TFP  .23451630 06
   TA  .29042540 01    EA  .25404193 C1    MA  .22394752 01   DAI -.16253288-01   RAI  .12583774 03   MTA  .18000000 03
   WX  .53408982-02    WY  .42072286-C2    WZ  .99997690 C0    PX -.58549170 00    PY  .81067814 00    PZ -.28366330-03
   CX -.81066058 00    CY -.58547664 C0    CZ  .67930467-02    RX  .17021202-03    RY -.22697727-03    RZ -.99999978 00
  SXI -.58549170 00   SYI  .81067814 C0   SZI -.28366330-03    TX  .81067831 00    TY  .58549183 00    TZ  .50938534-05
   BX  .81066073 00    BY  .58547675 C0    BZ -.67930481-02    MX -.77995437 00    MY -.62579946 00    MZ  .67986953-02
  B.T  .16709189 09   B.R  .11359404 C7     B  .16709575 C9   PER  .43633044 03   DEF

SELENOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X  .18013867 04     Y -.12723840 C5     Z -.34560646 C5    DX -.18238357 01    DY -.42145071 00    DZ  .42429228-01
    R  .36872474 05   DEC -.69603299 C2    RA  .27805814 03     V  .18723775 01   PTH  .50679149 00    AZ  .27509522 03
    R  .36872473 05   LAT -.45162600 C2   LON  .22775733 03    VR  .19402360 01   PTR  .48906374 00   AZR  .28087838 03
  LTS  .26774000 00   LNS  .26355720 C3   LTE -.67492966 01   LNE  .35329824 03
  ALT  .35134474 05   SHA -.30332641 C5   ALP  .13376651 C3    DR  .16561304-01    DP  .29093554-02   ASD  .27016616 01
  HGE  .26728242 03   SVL -.47005361 C2   HNG  .21353974 03   SIA  .63513570 02
  SAC  .00000000 00
```

CASE 1 SPACE TRAJECTORIES

SELENOCENTRIC CONIC ORBITAL B.T AND B.R EQUATORIAL COORDINATES

EPOCH OF PERICENTER PASSAGE JULIAN DATE 2437693.47561779 JAN. 28,1962 23 24 53.377

SMA	-.15125323 04	ECC	.25376982 02	INC	.11031254 03	LAN	.19349220 03	APF	.27136461 03	RCA	.36870974 05
VH	.17995959 01	C3	.32359851 01	C1	.69036490 05	SLR	.97254504 06	APO	.00000000 00	TFP	.18104811 03
TA	.52676039 00	EA	.50840430 00	MA	.12344783 02	DAI	-.83816836 00	RAI	.19380249 03	MTA	.92258367 02
WX	-.21880416 00	WY	.91193090 00	WZ	-.34714089 00	PX	.57812022-01	PY	-.34302093 00	PZ	-.93754701 00
QX	-.97405467 00	QY	-.22520810 00	QZ	.22333838-01	RX	-.67320579-01	RY	.33173059 00	RZ	-.94096903 00
SXO	-.97557624 00	SYO	-.21151617 00	SZO	.59261271-01	DAO	.33974112 01	RAO	.19223304 03	TF	.36946493 02
SXI	-.97101998 00	SYI	-.23855019 00	SZI	-.14628288-01	TX	-.22932100 00	TY	.91271497 00	TZ	.33817637 00
BX	.96150512-01	BY	-.33388001 00	BZ	-.93769889 00	MX	-.34714089 00	MY	-.30944122-09	MZ	.21880416 00
B.T	-.24695721 05	B.R	.29344966 05	B	.38353692 05	PER	.27173902 04	DEF	.99689434 00		
CPI	.00000000 00	CY	.00000000 00	CPZ	.00000000 00						
BTE	-.13315559 05	BRE	.35968062 05	BTO	-.24695721 05	BRO	.29344966 05				
GP	-.11928515 01	IR	.28771872 04	THA	.13008282 03						
ZAE	.15141254 03	ZAP	.11562239 03	ZAC	.94187140 02	ETE	.41012146 02	ETS	.22912152 03	ETC	.12267292 03

L MATRIX FOR MAPPING FORWARD

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.13193590 01	.40338913 00	.17095464 00	.28385107-05	.37055771-05	.27031486-06	.00000000 00	.00000000 00	.00000000 00
Y	.40808592 00	.95706650 00	.14220180 00	.38031843-05	-.14990017-05	.19314761-05	.00000000 00	.00000000 00	.00000000 00
Z	.18551157 00	.15011670 00	.77693922 00	.51609199-06	.20297084-05	-.12097680-05	.00000000 00	.00000000 00	.00000000 00
DX	.14210177 06	.10289237 05	.11116144 04	.10784546 01	.11475925 00	-.16013609 00	.00000000 00	.00000000 00	.00000000 00
DY	.10438015 05	.13025954 06	.41320604 04	.11940618 00	.81679364 00	.15446709 00	.00000000 00	.00000000 00	.00000000 00
DZ	.14264607 04	.42802646 04	.12793056 06	-.14988510 00	.15679377 00	.11055248 01	.00000000 00	.00000000 00	.00000000 00
KE	.25322213 00	.17271042 00	.86775314-01	.33901659-05	.24711787-05	.11737235-05	.10000000 01	.00000000 00	.00000000 00
KM	-.13488149 01	-.24200467 00	.26152372 00	-.13340929-04	.13958218-04	.43488947-04	.00000000 00	.10000000 01	.00000000 00
RIO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01
LAO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LCO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LCO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00

	LAO1	LCO1	RIO3	LAO3	LCO3
X	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Y	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
Z	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DX	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DY	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
DZ	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KE	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
KM	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
RIO1	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LAO1	.10000000 01	.00000000 00	.00000000 00	.00000000 00	.00000000 00
LCO1	.00000000 00	.10000000 01	.00000000 00	.00000000 00	.00000000 00
RIO3	.00000000 00	.00000000 00	.10000000 01	.00000000 00	.00000000 00
LAO3	.00000000 00	.00000000 00	.00000000 00	.10000000 01	.00000000 00
LCO3	.00000000 00	.00000000 00	.00000000 00	.00000000 00	.10000000 01

COVARIANCE MATRIX AT IMPACT

	X	Y	Z	DX	DY	DZ	KE	KM	RIO1
X	.18140540 03	-.21913943 03	-.75544882 01	.13208480-02	-.14391758-02	-.74359909-03	.51856954 01	-.39224484 01	.19206294-03
Y	-.21913943 03	.31973651 03	-.45648570 02	-.16084015-02	.19507442-02	.82565916-03	.70841622 01	.11745563 02	.77945902-01
Z	-.75544882 01	-.45648570 02	.82170203 03	-.91147519-03	-.17158146-02	.18900657-02	.31954072 02	-.12285942 03	-.11759093 00
DX	.13208480-02	-.16084015-02	-.91147519-03	.11935044-07	-.93258826-08	-.10510387-07	-.23459997-04	.89966766-04	-.70017114-06
DY	-.14391758-02	.19507442-02	-.17158146-02	-.93258826-08	.16397815-07	.18383507-08	-.74253713-04	.29924328-03	.87220716-06
DZ	-.74359909-03	.82565916-03	.18900657-02	-.10510387-07	.18383507-08	.18582615-07	.75246821-04	-.21427837-03	.10580926-05
KE	.51856954 01	.70841622 01	.31954072 02	-.23459997-04	-.74253713-04	.75246821-04	.64018737 01	-.50388308 01	.24039779-01
KM	-.39224484 01	.11745563 02	-.12285942 03	.89966766-04	.29924328-03	-.21427837-03	-.50388308 01	.19125984 02	.20529347-01
RIO1	.19206294-03	.77945902-01	-.11759093 00	-.70017114-06	.87220716-06	.10580926-05	.24039779-01	.20529347-01	.32747678-02
LAO1	.20359210-03	.11178600-02	-.13911296-02	-.52434909-08	.62524342-08	.12988063-07	.37732016-03	.23380549-03	-.40492110-05
LCO1	-.27169165-03	-.13081983-02	-.55355986-02	.70533814-09	.20006020-07	-.15062951-07	-.81753717-03	.85833895-03	-.26660435-05
RIO3	.10155449 00	-.89881971-01	-.56335568 00	.14487708-05	.30048953-06	-.17789035-05	-.22944365-01	.80609125-01	.15887286-03
LAO3	-.22308797-02	.19367648-02	.12277683-01	-.31325021-07	-.65834916-08	.37895571-07	.48945912-03	-.17580282-02	-.33958655-05
LCO3	.42778551-02	-.46984949-02	.86268692-02	.14870969-07	-.43316037-07	.13557626-07	.60933745-03	-.13938610-02	.48530094-06

	LAO1	LCO1	RIO3	LAO3	LCO3
X	.20359210-03	-.27169165-03	.10155449 00	-.22308797-02	.42778551-02
Y	.11178600-02	-.13081983-02	-.89881971-01	.19367648-02	-.46984949-02
Z	-.13911296-02	-.55355986-02	-.56335568 00	.12277683-01	.86268692-02
DX	-.52434909-08	.70533814-09	.14487708-05	-.31325021-07	.14870969-07
DY	.62524342-08	.20006020-07	.30048953-06	-.65834916-08	-.43316037-07
DZ	.12988063-07	-.15062951-07	-.17789035-05	.37895571-07	.13557626-07
KE	.37732016-03	-.81753717-03	-.22944365-01	.48945912-03	.60933745-03
KM	.23380549-03	.85833895-03	.80609125-01	-.17580282-02	-.13938610-02
RIO1	-.40492110-05	-.26660435-05	.15887286-03	-.33958655-05	.48530094-06
LAO1	.93973073-06	-.36671005-07	.24965332-05	-.53720807-07	.75306807-08
LCO1	-.36671005-07	.89272224-06	.31836596-05	-.70665539-07	.60404067-07
RIO3	.24965332-05	.31836596-05	.33391362-02	.57155024-05	-.15686585-05
LAO3	-.53720807-07	-.70665539-07	.57155024-05	.87469430-06	.35255173-07
LCO3	.75306807-08	.60404067-07	-.15686585-05	.35255173-07	.95496827-06

IMPACT PARAMETERS 62/01/28 232754

A MATRIX

	B.R	B.T	TL	C3	S.TS	S.RS
B.R	.82121196 03	-.79025637 02	.12986618-02	.20522421-02	-.96942881-03	-.93060444-03
B.T	-.79025634 02	.44247417 03	-.21174827-01	.39915469-02	-.55753576-04	-.12448519-03
TL	.12986619-02	-.21174827-01	.15668442-05	-.19985803-06	.25104737-07	.29999386-07
C3	.20522420-02	.39915469-02	-.19985803-06	.67300896-07	.16878353-08	.15622730-08
S.TS	-.96942879-03	-.55753592-04	.25104735-07	.16878348-08	.38569537-08	.40362227-08
S.RS	-.93060445-03	-.12448521-03	.29999384-07	.15622726-08	.40362227-08	.42426046-08

NORMALIZED A MATRIX

	B.R	B.T	TL	C3	S.TS	S.RS
B.R	.99999999 00	-.13109810 00	.36203915-01	.27605176 00	-.54471090 00	-.49856433 00
B.T	-.13109810 00	.10000000 01	-.80419802 00	.73145372 00	-.42678245-01	-.90856803-01
TL	.36203915-01	-.80419803 00	.10000000 01	-.61545777 00	.32293904 00	.36794523 00
C3	.27605175 00	.73145372 00	-.61545777 00	.99999999 00	.10476046 00	.92454957-01
S.TS	-.54471090 00	-.42678257-01	.32293901 00	.10476044 00	.10000000 01	.99778420 00
S.RS	-.49856433 00	-.90856817-01	.36794521 00	.92454936-01	.99778421 00	.99999999 00

B.R	.29344966 05
B.T	-.24695939 05
DEL B	.35548363 02
DEL S	.81112326 01
DEL T	.45062514 01
SMAA	.28931637 02
SMIA	.20655423 02
THETA	.11325646 02
TL	.36191677 02
B	.38353832 05

APPENDIX D

Orbit Determination Program Format Description

This appendix defines the functions within each block of the orbit determination program printout.

Printout Block	*Function*
1	Control card input
2	*A priori* covariance matrix
3	See Table D-1
4	Normal equations including *a priori* (J)
5	Covariance matrix on estimated parameters including *a priori* (J^{-1})
6	Correlation matrix of covariance matrix of block 5
7	Residuals for a particular station (see Table D-2)

At the end of each station's residuals, a summary is given which includes the beginning and end time for the data, the number of points, standard deviation, root mean square, first moment, and second moment.

7A,7B,7C These blocks include, respectively, the matrix which maps the covariance matrix at injection to the midcourse epoch, the integrated conditions at midcourse epoch, and the covariance matrix at midcourse epoch. These blocks are only on the premidcourse phase.

Table D-1. Explanation of printout block 3

Iteration number		Epoch year/month/day		XX XXX XX	Clock XXXXXX	SOS[a] XXXXX QSOS[b] XXXXX
GMT				hr min sec	(PC time now) hr min sec	Floating pointing numbers
Q	DQ	STDEVDQ	OLD Q	NEW Q	NOMINAL Q	DQ (NOM)
X, Y, Z = Position space fixed cartesian component in km DX, DY, DZ = Velocity S.F.C. in km/sec RI = Radius in km $KE = GM_{\oplus}$ in km³/sec² LA = Latitude in deg LO = Longitude in deg $KM = GM_{☾}$ in km³/sec²	Difference in estimated parameters from previous iteration and this iteration	Standard deviations on estimated parameters	Value of estimated parameters from previous iteration (Initial estimate on 1st iteration)	Value of estimated parameters on this iteration	Initial estimate of parameters	Total difference in new Q and nominal Q

[a]Weighted sum of the squares of the residuals.
[b]Weighted sum of the squares of the residuals plus the product $\delta x^T \Gamma^{-1} \delta x$ where δx is the difference in the *a priori* Q and the value of Q on the particular iteration and Γ is an *a priori* covariance on Q.

Table D-2. Residuals for a particular station

GMT	TC	Q	FRQ	CC3(HA or DEC)		
XX XX XX	X	X	XXXX.X	.XXXXXXXX XX	.XXX XX	.XXXX*
hr sec min	Doppler count time in seconds	Trans-mitting station	Last digits in transmitter frequency 2966 XXXX.X in cps	Calculated 2-way doppler (CC3) in cps, or hour angle in deg or declination in deg (floating point)	Associated weight in floating point	Residual (observed minus calculated) in cps. Asterisk means data deleted from fit

8 A trajectory printout; see Appendix E for explanation

9 The matrix which maps the covariance matrix at the estimated parameter *solution time* to encounter epoch

10 The covariance matrix at encounter epoch

11 The N matrix. This is just a rotation of the covariance matrix at encounter (block 10) into the B-plane system explained in Appendix A. The quantities $S{\cdot}TS$ and $S{\cdot}RS$, are the S-vector dotted on a standard R and T vector fixed in the program. $C3$ is twice the energy (*vis viva* energy integral). T_L is linearized time of flight. The units are $B{\cdot}R$ in km, $B{\cdot}T$ in km, T_L in hours, $C3$ in km^2/sec^2, $S{\cdot}TS$ in km, $S{\cdot}RS$ in km.

12 Correlation matrix of N (block 11)

13 $B{\cdot}R$ = The B vector dotted on the R axis in km (T axis in the Moon's orbital plane; Appendix A)

$B{\cdot}T$ = The B vector dotted on the T axis in km

$DEL\ B$ = $(N_{11} + N_{22})^{1/2}$ where N_{11} and N_{22} are elements from the N matrix (block 11); units are km

$DEL\ S$ = Hyperbolic excess velocity times $DEL\ T$ (like position uncertainty in the direction of the incoming asymptote), units are km

$DEL\ T$ = Uncertainty in linearized time of flight in sec

SMAA = The square root of larger eigenvalue of the upper 2×2 of the N matrix (block 11; commonly called the semimajor axis of the 40% dispersion ellipse in the B plane).

SMIA = The semiminor axis of the 40% dispersion ellipse or the square root of smaller eigen value of the upper 2×2 of the N matrix.

$THETA$ = The orientation angle of the semimajor axis ($SMAA$) in deg, $0° \leq THETA \leq 45°$, measured from the R axis if $N_{11} > N_{22}$ or T axis if $N_{22} > N_{11}$, and in a direction of positive or

negative correlation of T and R depending on the sign of N_{12} (i.e., N_{12} positive means positive correlation).

T_L = Linearized time of flight in hours from epoch of estimated parameters.

B = The vector measured from the center of the Moon perpendicular to the incoming asymptote in km.

APPENDIX E

Trajectory Format Explanation

The tables in this appendix provide a key to the *Ranger III* trajectory (Table E-1), and define the key terms (Table E-2) and conversion factors for the *Ranger III* trajectory constants (Table E-3).

Table E-1. *Ranger III* trajectory key

COLUMN		1	2	3	4	5	6
GROUP	ROW						
A	1	GME	J	H	D	RE	REM
	2	G	A	B	C	OME	AU
	3	GMM	GMS	GMV	GMA	GMB	GMJ
B		INJECTION CONDITIONS	TARGET		JULIAN DATE	MONTH DAY, YEAR	hr min sec
	4	GEOCENTRIC	XO	YO	ZO	DXO	DYO	DZO
	5	CARTESIAN			TO	GHA	GHO	
C		TIME PAST INJECTION			JULIAN DATE	MONTH DAY, YEAR	hr min sec
		GEOCENTRIC				EQUATORIAL COORDINATES	
	6	X	Y	Z	DX	DY	DZ
	7	R	DEC	RA	V	PTH	AZ
	8	R	LAT	LON	VE	PTE	AZE
	9	XS	YS	ZS	DXS	DYS	DZS
	10	XM	YM	ZM	DXM	DYM	DZM
	11	XT	YT	ZT	DXT	DYT	DZT
	12	RS	VS	RM	VM	RT	VT
	13	GED	ALT	LOS	RAS	RAM	LOM
	14	DUT	DT	DR	SHA	DES	DEM
D		GEOCENTRIC		CONIC	ORBITAL B·T AND B·R	EQUATORIAL COORDINATES	
		EPOCH OF PERICENTER PASSAGE			JULIAN DATE	MONTH DAY YEAR	hr min sec
	15	SMA	ECC	INC	LAN	APF	RCA
	16	VH	C3	C1	SLR	APO	TFP
	17	TA	EA	MA	DAO	RAO	MTA
	18	WX	WY	WZ	PX	PY	PZ
	19	QX	QY	QZ	RX	RY	RZ
	20	SXO	SYO	SZO	TX	TY	TZ
	21	BX	BY	BZ	MX	MY	MZ
	22	B·T	B·R	B	PER	OMD	NOD
	23	C3J					
E		HELIOCENTRIC				EQUATORIAL COORDINATES	
	24	X	Y	Z	DX	DY	DZ
	25	R	LAT	LON	V	PTH	AZ
	26	XE	YE	ZE	DXE	DYE	DZE
	27	XT	YT	ZT	DXT	DYT	DZT
	28	LTE	LOE	LTT	LOT	RST	VST
	29	EPS	ESP	SEP	EPM	EMP	MEP
	30	MPS	MSP	SMP	SEM	EMS	ESM
	31	EPT	ETP	TEP	TPS	TSP	STP
	32	SET	STE	EST	RPM	RPT	SPN
	33	GCE	GCT	SIP	CPT	SIN	D1
	34	REP	VEP	CPE	CPS	D2	D3
F		SELENOCENTRIC				EQUATORIAL COORDINATES	
	35	X	Y	Z	DX	DY	DZ
	36	R	DEC	RA	V	PTH	AZ
	37	R	LAT	LON	VR	PTR	AZR
	38	LTS	LNS	LTE	LNE		
	39	ALT	SHA	ALP	DR	DP	ASD
	40	HGE	SVL	HNG	SIA		
G		SELENOCENTRIC		CONIC	ORBITAL B·T AND B·R	EQUATORIAL COORDINATES	
		EPOCH OF PERICENTER PASSAGE			JULIAN DATE	MONTH DAY YEAR	hr min sec
	41	SMA	ECC	INC	LAN	APF	RCA
	42	VH	C3	C1	SLR	APO	TFP
	43	TA	EA	MA	DAI	RAI	MTA
	44	WX	WY	WZ	PX	PY	PZ
	45	QX	QY	QZ	RX	RY	RZ
	46	SXO	SYO	SZO	DAO	RAO	TF
	47	SXI	SYI	SZI	TX	TY	TZ
	48	BX	BY	BZ	MX	MY	MZ
	49	B·T	B·R	B	PER	DEF	C3J
H	50	XOCTAL	YOCTAL ZOCTAL	XOCTAL YOCTAL	ZOCTAL		
	51		YY MM DDD HH	TT SS SSS	SOCTAL		

Table E-2. *Ranger III* trajectory key definitions

Group		Trajectory constant
Group A		
Row 1	*GME*	Universal gravitational constant times the mass of Earth, km^3/sec^2
	J	Coefficient of the second harmonic in the Earth's potential function
	H	Coefficient of the third harmonic in the Earth's potential function
	D	Coefficient of the fourth harmonic in the Earth's potential function
	RE	Earth radius used in the potential function, km
	REM	Conversion factor for converting lunar ephemerides into km
Row 2	G	Universal constant of gravitation, $km^3/kg\ sec^2$
	A, B, C	Moments of inertia about principal axis for the Moon, kg km^2
	OME	Sidereal rotation rate of the Earth, deg/sec
	AU	Astronomical unit, km
Row 3	*GMM*	Universal gravitational constant times the mass of Moon, km^3/sec^2
	GMS	Universal gravitational constant times the mass of Sun, km^2/sec^3
	GMV	Universal gravitational constant times the mass of Venus, km^3/sec^2
	GMA	Universal gravitational constant times the mass of Mars, km^3/sec^2
	GMB	Universal gravitational constant times the mass of Earth–Moon, km^3/sec^2
	GMJ	Universal gravitational constant times the mass of Jupiter, km^3/sec^2
Group B		Injection conditions are vernal equinox cartesian coordinates in a geocentric equatorial system. The principal direction X is the vernal equinox direction of date and the principal plane XY is the equatorial plane of date. Z is along the direction of the Earth's spin axis of date.
Row 4	*XO*, *YO*, *ZO*	Cartesian components of the probe radius vector, km
	DXO, *DYO*, *DZO*	Cartesian components of the probe space-fixed velocity vector, km/sec
Row 5	*TO*	Time of injection in seconds past midnight of day before launch, sec
	GHA	*HA* of Greenwich at injection epoch, deg
	GHO	*HA* of Greenwich at n idnight of day before launch, deg
Group C		Inertial position and velocity of the probe, Sun, Moon and target body in a geocentric equatorial system. The principal direction *X* is the vernal equinox direction of date and the principal plane *XY* is the equatorial plane of date. Z is along the direction of the Earth's spin axis of date. Miscellaneous parameters are also included.
Row 6	*X*, *Y*, *Z*	Cartesian components of the probe radius vector, km
	DX, *DY*, *DZ*	Cartesian components of the probe space-fixed velocity vector, km/sec
Row 7	*R*	Probe radius distance, km
	DEC	Probe declination angle, deg
	RA	Probe right Ascension angle, deg
	V	Probe space-fixed velocity, km/sec
	PTH	Pitch angle of the probe space-fixed velocity vector with respect to the local horizontal, deg
	AZ	Azimuth angle of the probe space-fixed velocity vector measured East of true North, deg
Row 8[a]	*R*	Probe radius distance, km
	LAT	Probe geocentric latitude, deg
	LON	Probe East longitude, deg
	VE	Probe Earth-fixed velocity, km/sec
	PTE	Pitch angle of the probe Earth-fixed velocity vector with respect to the local horizontal, deg
	AZE	Azimuth angle of the probe Earth-fixed velocity vector measured East of true North, deg
Row 9	*XS*, *YS*, *ZS*	Cartesian components of the Sun radius vector, km
	DXS, *DYS*, *DZS*	Cartesian components of the Sun space-fixed velocity vector, km/sec
Row 10	*XM*, *YM*, *ZM*	Cartesian components of the Moon radius vector, km
	DXM, *DYM*, *DZM*	Cartesian components of the Moon space-fixed velocity vector, km/sec
Row 11	*XT*, *YT*, *ZT*	Cartesian components of the target radius vector, km
	DXT, *DYT*, *DZT*	Cartesian components of the target space-fixed velocity vector, km/sec

[a]These are Earth-fixed spherical coordinates in a geocentric equatorial system. The principal direction *X* is directed towards Greenwich and is the intersection of the meridian plane of Greenwich with the equatorial plane. The principal plane is the Earth's geometrical equatorial plane *X, Y, Z* is along the direction of the Earth's geometrical north direction.

Table E-2. (Cont'd)

Group		Trajectory constant
Row 12	*RS*	Sun radius distance, km
	VS	Sun space-fixed velocity, km/sec
	RM	Moon radius distance, km
	VM	Moon space-fixed velocity, km/sec
	RT	Target radius distance, km
	VT	Target space-fixed velocity, km/sec
Row 13	*GED*	Geodetic latitude of the probe, deg
	ALT	Altitude of the probe above the Earth's surface, km
	LOS	East longitude of the Sun in coordinate system defined in Row 8, deg
	RAS	Right ascension of the Sun, deg
	RAM	Right ascension of the Moon, deg
	LOM	East longitude of the Moon in coordinate system defined in Row 8, deg
Row 14	*DUT*	Ephemeris time minus Universal Time, sec
	DT	Adams-Moulton step size, sec
	DR	Radial velocity of probe, km/sec
	SHA	Sun shadow parameter, km
	DES	Declination of the Sun, deg
	DEM	Declination of the Moon, deg
Group D		Characteristics of the Earth conic in the geocentric equatorial system described under Group B
Row 15	*SMA*	Semimajor axis, km
	ECC	Eccentricity
	INC	Inclination of the orbit plane to the equatorial plane, deg
	LAN	Longitude of the ascending node, deg
	APF	Argument of pericenter, deg
	RCA	Magnitude of the closest approach vector, km
Row 16	*VH*	Hyperbolic excess speed, km/sec
	C3	Twice the energy (*vis viva* energy integral, km^2/sec^2)
	C1	Angular momentun, km^2/sec
	SLR	Semi-latus rectum, km
	APO	Apogee distance, km
	TFP	Time from pericenter passage, sec
Row 17	*TA*	True anomaly, deg
	EA	Eccentric anomaly, deg
	MA	Mean anomaly, deg
	DAO	Declination of the outgoing asymptote,[b] deg
	RAO	Right ascension of the outgoing asymptote,[b] deg
	MTA	Maximum true anomaly, deg
Row 18	*WX*, *WY*, *WZ*	Components of a unit vector normal to the conic $W = \frac{R \times V}{R \times V}$
	PX, *PY*, *PZ*	Components of a unit vector in the direction of perigee
Row 19	*QX*, *QY*, *QZ*	Components of a unit vector perpendicular to the perigee direction, vector *P*, and being in the orbit plane $Q = W \times P$
	RX, *RY*, *RZ*	Components of the unit vector R^b
Row 20	*SXO*, *SYO*, *SZO*	Components of the unit vector S^b, along the direction of the outgoing asymptote
	TX, *TY*, *TZ*	Components of the unit vector T^b
Row 21	*BX*, *BY*, *BZ*	Components of the impact parameter B^b, km
	MX, *MY*, *MZ*	Components of a unit vector which lies in the orbit plane and is normal to the radius vector *R*. $M = W \times \frac{R}{\lvert R \rvert}$
Row 22	$B \cdot T$	Projection of the impact parameter B^b upon the vector *T*, km
	$B \cdot R$	Projection of the impact parameter B^b upon the vector *R*, km
	B	The magnitude of the impact parameter,[b] km
	PER	Period, min
	OMD	Rate of change of argument of perigee, deg/day
	NOD	Rate of change of RA of the ascending node, deg/day
Row 23	C3J	Earth–Moon Jacobi constant, km^2/sec^2
Group E		Inertial position and velocity of the probe, Sun, Moon, and target body in a helocentric equatorial system. The principal direction *X* is the vernal equinox direction of date and the principal plane *XY* is the equatorial plane of date. *Z* is along the direction of the Earth's spin axis of date. Miscellaneous parameters are also included.
Row 24	*X*, *Y*, *Z*	Cartesian components of the probe radius vector, km
	DX, *DY*, *DZ*	Cartesian components of the probe space-fixed velocity vector, km/sec

[b]See appendix A.

Table E-2. (Cont'd)

Group		Trajectory constant
Row 25	*R*	Sun probe radius distance, km
	LAT	Probe celestial declination, deg
	LON	Probe celestial right ascension, deg
	V	Probe space-fixed velocity, km/sec
	PTH	Pitch angle of the probe space-fixed velocity vector with respect to the local horizontal, deg
	AZ	Azimuth angle of the probe space-fixed velocity vector measured East of true North, deg
Row 26	*XE*, *YE*, *ZE*	Cartesian components of the Earth radius vector, km
	DXE, *DYE*, *DZE*	Cartesian components of the Earth-space-fixed velocity vector, km/sec
Row 27	*XT*, *YT*, *ZT*	Cartesian components of the target radius vector, km
	DXT, *DYT*, *DZT*	Cartesian components of the target space-fixed velocity vector, km/sec
Row 28	*LTE*	Celestial latitude of the Earth, deg
	LOE	Celestial longitude of the Earth, deg
	LTT	Celestial latitude of the target, deg
	LOT	Celestial longitude of the target, deg
	RST	Sun–target range, km
	VST	Sun–target velocity, km/sec
Row 29	*EPS*	Earth–probe–Sun angle, deg
	ESP	Earth–Sun–probe angle, deg
	SEP	Sun–Earth–probe angle, deg
	EPM	Earth–probe–Moon angle, deg
	EMP	Earth–Moon–probe angle, deg
	MEP	Moon–Earth–probe angle, deg
Row 30	*MPS*	Moon–probe–Sun angle, deg
	MSP	Moon–Sun–probe angle, deg
	SMP	Sun–Moon–probe angle, deg
	SEM	Sun–Earth–Moon angle, deg
	EMS	Earth–Moon–Sun angle, deg
	ESM	Earth–Sun–Moon anlge, deg
Row 31	*EPT*	Earth–probe–target angle, deg
	ETP	Earth–target–probe angle, deg
	TEP	Target–Earth–probe angle, deg
	TPS	Target–probe–Sun angle, deg
	TSP	Target–Sun–probe angle, deg
	STP	Sun–target–probe angle, deg
Row 32	*SET*	Sun–Earth–target angle, deg
	STE	Sun–target–Earth angle, deg
	EST	Earth–Sun–target angle, deg
	RPM	Moon probe radius distance, km
	RPT	Target probe radius distance, km
	SPN	Sun–probe–near limb of Earth angle, deg

Group		Trajectory constant
Row 33	*GCE*	Clock angle of Earth, deg
	GCT	Clock angle of target, deg
	SIP	Sun–probe–near limb of target angle, deg
	CPT	Canopus–probe–near limb of target angle, deg
	SIN	Canopus–probe–near limb of target angle, deg
	D1	Radius of a circle (target) used in construction of visible planet, cm
Row 34	*REP*	Earth probe distance, km
	VEP	Velocity of the probe with respect to Earth, km/sec
	CPE	Canopus–probe–Earth angle, deg
	CPS	Canopus–probe–Sun angle, deg
	D2	Semi-minor axis of ellipse used in construction of visible planet, cm
	D3	Distance from intersecton of ellipse with circle to the diameter (of the circle) that is perpendicular to D1, in construction of visible planet, cm
Group F Row 35, 36		Inertial position of probe in a selenocentric equatorial system. The principal direction *X* is the vernal equinox direction of date and the principal plane *XY* is the geocentric equatorial plane of date. *Z* is along the direction of the Earth's spin axis of date.
Row 37, 38, 39		Selenocentric-fixed spherical coordinates of the probe, Sun and Earth in a selenocentric equatorial system. The principal direction X is in the direction of the mean Moon–Earth line. The principal plane *XY* is the mean selenocentric equatorial plane. *Z* is along the direction of the Moon's mean spin axis. Miscellaneous parameters are also included.
Row 35	*X*, *Y*, *Z*	Cartesian components of the probe radius vector, km
	DX, *DY*, *DZ*	Cartesian components of the probe velocity vector, km/sec
Row 36	*R*	Probe radius distance, km
	DEC	Probe declination angle, deg
	RA	Probe right ascension angle, deg
	V	Probe space-fixed velocity, km/sec
	PTH	Pitch angle of the probe space-fixed velocity vector with respect to the local horizontal, deg
	AZ	Azimuth angle of the probe space-fixed velocity vector measured East of true North, deg

Table E-2. (Cont'd)

Group		Trajectory constant
Row 37	*R*	Probe radius distance, km
	LAT	Probe selenocentric latitude, deg
	LON	Probe selenocentric East longitude, deg
	VR	Probe selenocentric-fixed velocity, km/sec
	RTR	Pitch angle of the probe selenocentric-fixed velocity vector with respect to the local horizontal, deg
	AZR	Azimuth angle of the probe selenocentric-fixed velocity vector measured East of the Moon's mean spin axis, deg
Row 38	*LTS*	Selenocentric latitude of the Sun, deg
	LNS	Selenocentric longitude of the Sun, deg
	LTE	Selenocentric latitude of the Earth, deg
	LNE	Selenocentric longitude of the Earth, deg
Row 39	*ALT*	Altitude of the probe above the Moon's surface, km
	SHA	Sun shadow parameter, km
	ALP	Illuminated crescent orientation viewing angle, deg
	DR	First time derivative of the probe radius distance, km/sec
	DP	First time derivative of the probe radius direction, deg/sec
	ASD	Angular semidiameter of Moon as seen from the probe, deg
Row 40	*HGE*	Right ascension of Earth in probe coordinate system,[c] deg
	SVL	Declination of the Moon in probe coordinate system,[c] deg
	HNG	Right ascension of the Moon in probe coordinate system,[c] deg
	SIA	Earth–probe–Moon angle minus *ASD*, deg
Group G		Characteristics of the selenocentric conic in the geocentric equatorial system described under Group B except centered at the Moon.
Row 41	*SMA*	Semimajor axis, km
	ECC	Eccentricity
	INC	Inclination of the orbit plane to the equatorial plane, deg
	LAN	Longitude of the ascending node, deg
	APF	Argument of pericenter, deg
	RCA	Magnitude of the closest approach vector, km
Row 42	*VH*	Hyperbolic excess speed, km/sec
	C3	Twice the energy (*vis viva* energy integral, km^2/sec^2)
	C1	Angular momentum, km^2/sec
	SLR	Semi-latus rectum, km
	APO	Apogee distance, km
	TFP	Time from pericenter passage, sec

Group		Trajectory constant
Row 43	*TA*	True anomaly, deg
	EA	Eccentric anomaly, deg
	MA	Mean anomaly, deg
	DAI	Declination of the outgoing asymptote,[d] deg
	RAI	Right ascension of the incoming asymptote,[d] deg
	MTA	Maximum true anomaly, deg
Row 44	*WX*, *WY*, *WZ*	Components of a unit vector normal to the conic $W = \frac{R \times V}{\lvert R \times V \rvert}$
	PX, *PY*, *PZ*	Components of a unit vector in the direction of perigee
Row 45	*QX*, *QY*, *QZ*	Components of a unit vector perpendicular to the perigee direction, vector *P*, and being in the orbit plane $Q = W \times P$
	RX, *RY*, *RZ*	Components of the unit vector R^d
Row 46	*SXO*, *SYO*, *SZO*	Components of the unit vector S,[d] along the direction of the outgoing asymptote
	DAO	Declination of the outgoing asymptote,[d] deg
	RAO	Right ascension of the outgoing asymptote,[d] deg
	TF	Time from injection to epoch of pericenter passage, hr
Row 47	*SXI*, *SYI*, *SZI*	Components of the unit vector S_I^d along the direction of the incoming asymptote
	TX, *TY*, *TZ*	Components of the unit vector T^d
Row 48	*BX*, *BY*, *BZ*	Components of the impact parameter B,[d] km
	MX, *MY*, *MZ*	Components of a unit vector which lies in the orbit plane and is normal to the radius vector *R*. $M = W \times \frac{R}{\lvert R \rvert}$
Row 49	$B \cdot T$	Projection of the impact parameter B^d upon the vector *T*, km
	$B \cdot R$	Projection of the impact parameter B^d upon the vector *R*, km
	B	The magnitude of the impact parameter,[d] km
	PER	Period, min
	DFF	Angle between the incoming and outgoing asymptotes, deg
	C3J	Earth–Moon Jacobi constant, km^2/sec^2

[c]Same coordinate system as defined under B except centered at the probe.

[d]See appendix A.

Table E-2. (Cont'd)

Group	Trajectory constant
Group H	Cartesian coordinates and epoch of injection conditions in the geocentric equatorial system described under Group B.
Row 50 *XOCTAL*, *YOCTAL*, *ZOCTAL*	Cartesian components of the probe radius vector of injection in octal representation, km
XOCTAL, *YOCTAL*, *ZOCTAL*	Cartesian components of the probe space-fixed velocity vector at injection in octal representation, km/sec

Group	Trajectory constant
Row 51	Epoch of injection
YY	Years past 1900
MM	Month
DDD	Day of month
HH	Hours
TT	Min
SSSSS	Msec
SOCTAL	Sec in octal representation
	The time past midnight Greenwich Meridian Time on (*DD*), month (*MM*) and year (*YY* + 1900) at which the injection epoch occurs is the time determined by the sum of *HH*, *TT*, *SSSSS*, and *SOCTAL*

Table E-3. *Ranger III* trajectory constants and conversion factors

Constants	Conversion factors
GM_{Sun}	$1.32715445 \times 10^{11}$ km^3/sec^2
GM_{Venus}	3.247695×10^5 km^3/sec^2
$GM_{\oplus}$	3.986032×10^5 km^3/sec^2
$GM_{\oplus-☾}$	4.03503×10^5 km^3/sec^2
$GM_{☾}$	4.900759×10^3 km^3/sec^2
GM_{Mars}	4.297780×10^4 km^3/sec^2
$GM_{Jupiter}$	1.267106×10^8 km^3/sec^2
M_{Sun}/M_{Venus}	408645
M_{Sun}/M_{Earth}	332951.3
M_{Earth}/M_{Moon}	81.335
$M_{Sun}/M_{Earth\text{-}Moon}$	328908
M_{Sun}/M_{Mars}	3,088,000
$M_{Sun}/M_{Jupiter}$	1047.39
Equatorial radius of Earth	6378.3149 km
1*AU*	1.495990×10^8 km
Ellipticity of Earth	1/298.3
Conversion from feet to meters	0.3048
Atmospheric model	1959 *ARDC*
Sidereal rotation rate of Earth	4.1780742×10^{-3} deg/sec
Universal constant of gravitation	6.671×10^{-20} km^3/kg sec^2
Speed of light	2.997925×10^5 km/sec
Mean Moon radius	1738.09 km

Constants	Conversion factors
Moon moments of inertia about principal axis	$A = 0.88746 \times 10^{29}$ kg km^2 $B = 0.88764 \times 10^{29}$ kg km^2 $C = 0.88801 \times 10^{29}$ kg km^2
Lunar and solar ephemerides	The Moon and Sun positions are obtained from the joint JPL–STL ephemerides. For purposes of converting into kilometers, the conversion factors are: 1 *AU* = 1.495990×10^8 km 1 *e.r.* = 6378.3149
Geometrical Earth model, used in locating tracking and launching facilities upon the Earth	Clarke spheroid of 1866 $a = 6378.2064$ km $b = 6356.5838$ km $e^2 = 0.006768657997291$

Earth potential function:

$$\Phi(R, \phi) = \frac{GM_{\oplus}}{R}\left[1 + \frac{JR_E^2}{3R^2}(1 - 3\sin^2\phi) + \frac{H}{5}\frac{R_E^3}{R^3}(3 - 5\sin^2\phi)(\sin\phi) + \frac{D}{35}\frac{R_E^4}{R^4}(3 - 30\sin^2\phi + 35\sin^4\phi)\right]$$

where
R = geocentric distance
ϕ = geocentric latitude
$J = 1.62345 \times 10^{-3}$
$H = -0.575 \times 10^{-5}$
$D = 0.7875 \times 10^{-5}$

APPENDIX F

Premidcourse Trajectory Computer Printout

The material in this appendix is a data-processing printout of premidcourse data derived from the trajectory computer.

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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

DOUBLE PRECISION EPHEMERIS TAPE - EPHEM1

  GME  .39860041 06     J  .16234500-02     H -.57499999-05     D  .78749999-05    RE  .63781650 04    REM  .63783149 04
    G  .66709998-19     A  .88781796 29     B  .88800194 29     C  .88836976 29   GME  .41780741-02     AU  .14959850 09
  GMM  .49006276 04   GMS  .13271411 12   GMV  .32476627 06   GMA  .42977367 05   GMC  .37918700 08    GMJ  .12670935 09
  EGM  .39860320 06   MGM  .49027779 04    JA  .29200000-02    HA  .00000000 00    DA  .00000000 00     RA  .34170000 04

INJECTION CONDITIONS              MOON        235553217100202200000000 J.D.= 2437691.36815972  JAN. 26,1962 20 50 09.000

GEOCENTRIC        XO .33944723 04  YO .57112334 04  ZO .51362574 03 DXO-.77931342 01 DYO .56158511 01 DZO-.53071322 01
CARTESIAN         TO .75009000 05 GHA .78199561 02 GHO .12480642 03
DATE OF RUN 072365G  18093                EARTH    IS THE CENTRAL BODY FOR INTEGRATION   COWELL EQUATIONS OF MOTION

  0 DAYS  0 HRS.  0 MIN.  0.000 SEC.        235553217100202200000000 J.D.= 2437691.36815972  JAN. 26,1962 20 50 09.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X  .33944722 04     Y  .57112331 04     Z  .51362573 03    DX -.77931339 01    DY  .56158508 01    DZ -.53071320 01
    R  .66636654 04   DEC  .44206614 01    RA  .59274862 02     V  .10974350 02   PTH  .22679788 01    AZ  .11924067 03
    R  .66636652 04   LAT  .44206614 01   LON  .34107530 03    VE  .10554606 02   PTE  .23582235 01   AZE  .12052656 03
   XS  .87496671 08    YS -.10872397 09    ZS -.47143935 08   DXS  .24453849 02   DYS  .16321150 02   DZS  .70777578 01
   XM -.39166885 06    YM -.94116841 05    ZM -.76530051 04   DXM  .24768942 00   DYM -.88013231 00   DZM -.32787867 00
   XT -.39166885 06    YT -.94116841 05    ZT -.76530051 04   DXT  .24768942 00   DYT -.88013231 00   DZT -.32787867 00
   RS  .14730621 09    VS  .30240127 02    RM  .40289085 06    VM  .97133277 00    RT  .40289085 06    VT  .97133277 00
  GED  .44506666 01   ALT  .28558734 03   LOS  .23062615 03   RAS  .30882571 03   RAM  .19351182 03   LOM  .11531225 03
  DUT  .34000000 02    DT  .75000000 01    DR  .43429211 00   SHA  .62304363 04   DES -.18665366 02   DEM -.10884111 01
  CCL  .11220472 03   MCL  .19187801 03   TCL  .19187801 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 235553217064202247410260 J.D.= 2437691.36760774  JAN. 26,1962 20 49 21.309
  SMA -.49677068 06   ECC  .10133931 01     B  .81575646 05   SLR  .13395705 05   APO  .00000000 00   RCA  .66532986 04
   VH  .89575841 00    C3  .80238312 00    C1  .73072113 05   TFP  .47691279 02    TF -.13247577-01   LTF -.20627596 01
   TA  .45059687 01   MTA  .17067458 03    EA  .36769640 00    MA  .43271585-02   C3J  .52649879 00   TFI  .00000000 00
                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
    X  .33944722 04     Y  .57112331 04     Z  .51362573 03    DX -.77931339 01    DY  .56158508 01    DZ -.53071320 01
  INC  .29543721 02   LAN  .24711440 03   APF  .16650077 03    MX -.73385374 00    MY  .47818250 00    MZ -.48702594 00
   WX -.45427335 00    WY  .19175794 00    WZ  .86997967 00    PX  .56524370 00    PY  .81685428 00    PZ  .11510253 00
   QX -.68857478 00    QY  .54403853 00    QZ -.47946509 00    RX  .13043825 00    RY  .13989943 00    RZ -.98153651 00
   BX -.58788151 00    BY  .66921292 00    BZ -.45447706 00    TX -.73140606 00    TY  .68194221 00    TZ  .00000000 00
  SXI  .44619560 00   SYI  .89421555 00   SZI  .35888010-01   DAI  .20566724 01   RAI  .63481724 02
  SXO -.66935118 00   SYO -.71790176 00   SZO -.19127464 00   DAO -.11027180 02   RAO  .22700439 03

  BTQ  .71014899 05   BRQ -.40143117 05     B  .81575646 05   THA  .33052151 03    T VECTOR IN  EARTH EQUATOR PLANE


      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

    X -.87493276 08     Y  .10872968 09     Z  .47144449 08    DX -.32246983 02    DY -.10705299 02    DZ -.12384890 02
    R  .14730857 09   LAT  .18665267 02   LON  .12882315 03     V  .36164303 02   PTH  .11625548 02    AZ  .11601095 03
   XE -.87496671 08    YE  .10872397 09    ZE  .47143935 08   DXE -.24453849 02   DYE -.16321150 02   DZE -.70777578 01
   XT -.87888339 08    YT  .10862985 09    ZT  .47136282 08   DXT -.24206160 02   DYT -.17201282 02   DZT -.74056365 01
  LTE  .18665366 02   LDE  .12882571 03   LTT  .18541073 02   LDT  .12897502 03   RST  .14746740 09   VST  .30604995 02
  EPS  .69223517 02   ESP  .98911702-02   SEP  .11077406 03   EPM  .45150075 02   EMP  .67187575 00   MEP  .13417806 03
  MPS  .11286279 03   MSP  .14620880 00   SMP  .66991299 02   SEM  .11351167 03   EMS  .66344790 02   ESM  .14384772 00
  RPM  .40756271 06   SPM -.39391317 01
  GCE  .24779527 03   GCT  .25967328 03   SIP  .11261844 03   CPT  .94167386 02   SIN  .93923040 02
  REP  .66636654 04   VEP  .10974350 02   CPE  .11512786 03   CPS  .10312050 03

  0 DAYS  0 HRS.  9 MIN. 51.000 SEC.        235553217324202000000000 J.D.= 2437691.37500000  JAN. 26,1962 21 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

    X -.16075193 04     Y  .76833474 04     Z -.25327157 04    DX -.85493810 01    DY  .13166945 01    DZ -.47531674 01
    R  .82481872 04   DEC -.17882340 02    RA  .10181704 03     V  .98700657 01   PTH  .26164928 02    AZ  .11390833 03
    R  .82481872 04   LAT -.17882340 02   LON  .21148236 02    VE  .94060870 01   PTE  .27561976 02   AZE  .11550252 03
   XS  .87511121 08    YS -.10871432 09    ZS -.47139753 08   DXS  .24451719 02   DYS  .16323822 02   DZS  .70789149 01
   XM -.39152205 06    YM -.94636896 05    ZM -.78457723 04   DXM  .24912000 00   DYM -.87977711 00   DZM -.32784644 00
   XT -.39152205 06    YT -.94636896 05    ZT -.78457723 04   DXT  .24912000 00   DYT -.87977711 00   DZT -.32784644 00
   RS  .14730633 09    VS  .30240119 02    RM  .40287371 06    VM  .97136595 00    RT  .40287371 06    VT  .97136595 00
  GED -.17996369 02   ALT  .18720166 04   LOS  .22816401 03   RAS  .30883282 03   RAM  .19358862 03   LOM  .11291982 03
  DUT  .34000000 02    DT  .30000000 02    DR  .43522699 01   SHA  .58497296 04   DES -.18663632 02   DEM -.11160205 01
  CCL  .16229570 03   MCL  .24136734 03   TCL  .24136734 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 235553217064202325521000 J.D.= 2437691.36761200  JAN. 26,1962 20 49 21.677
  SMA -.51998688 06   ECC  .10127974 01     B  .83455306 05   SLR  .13394171 05   APO  .00000000 00   RCA  .66545051 04
   VH  .87553331 00    C3  .76655858 00    C1  .73067927 05   TFP  .63832298 03    TF -.13145272-01   LTF -.21109990 01
   TA  .51974699 02   MTA  .17088206 03    EA  .44562698 01    MA  .61580525-01   C3J  .49186993 00   TFI  .16416667 00
                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
    X -.16075193 04     Y  .76833474 04     Z -.25327157 04    DX -.85493810 01    DY  .13166945 01    DZ -.47531674 01
  INC  .29537932 02   LAN  .24710838 03   APF  .16654962 03    MX -.86933543 00    MY -.30902285 00    MZ -.38569526 00
   WX -.45417223 00    WY  .19177146 00    WZ  .87002949 00    PX  .56675297 00    PY  .81725401 00    PZ  .11467326 00
   QX -.68904401 00    QY  .54343315 00    QZ -.47947757 00    RX  .12848455 00    RY  .13889027 00    RZ -.98193747 00
   BX -.59084271 00    BY  .66607432 00    BZ -.45524710 00    TX -.73407033 00    TY  .67907345 00    TZ  .00000000 00
  SXI  .44842612 00   SYI  .89306366 00   SZI  .37242882-01   DAI  .21343521 01   RAI  .63337291 02
  SXO -.66680767 00   SYO -.72081116 00   SZO -.18920568 00   DAO -.10906432 02   RAO  .22722871 03

  BTQ  .72658985 05   BRQ -.41054355 05     B  .83455306 05   THA  .33053234 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.87512728 08     Y  .10872200 09     Z  .47137219 08     DX -.33001100 02     DY -.15007128 02     DZ -.11832082 02
   R  .14731215 09   LAT  .18661828 02   LON  .12883135 03     V  .38135085 02    PTH  .71443650 01     AZ  .11186256 03
  XE -.87511121 08    YE  .10871432 09    ZE  .47139753 08    DXE -.24451719 02    DYE -.16323822 02    DZE -.70789149 01
  XT -.87902643 08    YT  .10861968 09    ZT  .47131906 08    DXT -.24202599 02    DYT -.17203599 02    DZT -.74067613 01
 LTE  .18663632 02   LOE  .12883281 03   LTT  .18639326 02    LOT  .12898220 03    RST  .14746704 09    VST  .30603753 02
 EPS  .45168719 02   ESP  .00000000 00   SEP  .13482900 03    EPM  .87485138 02    EMP  .11720093 01    MEP  .91342869 02
 MPS  .11252121 03   MSP  .14469538 00   SMP  .67334095 02    SEM  .11343701 03    EMS  .66419376 02    ESM  .14367758 00
 RPM  .40315135 06   SPN -.54788971 01
 GCE  .19770429 03   GCT  .25907163 03   SIP  .11227419 03    CPT  .94795572 02    SIN  .94548553 02
 REP  .82481872 04   VEP  .98700657 01   CPE  .14488575 03    CPS  .10312110 03

  0 DAYS  1 HRS.  9 MIN. 51.000 SEC.        2355532211302020000000000 J.D.= 2437691.41666666  JAN. 26,1962 22 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.23684213 05     Y  .17660536 04     Z -.12746631 05     DX -.46121747 01     DY -.23402070 01     DZ -.18898875 01
   R  .26954359 05   DEC -.28222502 02   RA  .17573553 03     V  .55063961 01    PTH  .60510270 02     AZ  .80925007 02
   R  .26954359 05   LAT -.28222502 02   LON  .80025664 02    VE  .49039171 01    PTE  .77791303 02    AZE  .55652800 02
  XS  .87599125 08    YS -.10865552 09   ZS -.47114256 08   DXS  .24438738 02    DYS  .16340093 02    DZS  .70859614 01
  XM -.39060953 06    YM -.97800149 05   ZM -.90266488 04   DXM  .25782682 00    DYM -.87757193 00    DZM -.32763490 00
  XT -.39060953 06    YT -.97800149 05   ZT -.90266488 04   DXT  .25782682 00    DYT -.87757193 00    DZT -.32763490 00
  RS  .14730710 09    VS  .30240063 02   RM  .40276812 06    VM  .97157180 00    RT  .40276812 06    VT  .97157180 00
 GED -.28384949 02   ALT  .20580982 05   LOS  .21316623 03   RAS  .30887609 03   RAM  .19405664 03   LOM  .98346769 02
 DUT  .34000000 02    DT  .12000000 03    DR  .47930093 01   SHA  .24466689 05   DES -.18653064 02   DEM -.12841934 01
 CCL  .24497452 03   MCL  .32251488 03   TCL  .32251488 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642022741600 00 J.D.= 2437691.36760960  JAN. 26,1962 20 49 21.470
 SMA -.53543107 06   ECC  .10124289 01    B  .84679881 05   SLR  .13392373 05   APO  .00000000 00   RCA  .66548305 04
  VH  .86281380 00    C3  .74444765 00   C1  .73063224 05   TFP  .42385295 04    TF -.13202652-01   LTF -.21424733 01
  TA  .11979970 03   MTA  .17101295 03   EA  .15631493 02    MA  .39133739 00   C3J  .46745610 00   TFI  .11641667 01

                                                     ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.23684213 05     Y  .17660536 04     Z -.12746631 05     DX -.46121747 01     DY -.23402070 01     DZ -.18898875 01
 INC  .29531056 02   LAN  .24707253 03   APF  .16657743 03    MX -.14781158 00    MY -.97920243 00    MZ  .13897610 00
  WX -.45395599 00    WY  .19201492 00    WZ  .87008865 00    PX  .56494251 00    PY  .81715902 00    PZ  .11441628 00
  QX -.68903115 00    QY  .54349002 00    QZ -.47943161 00    RX  .12734522 00    RY  .13817092 00    RZ -.98218734 00
  BX -.59232204 00    BY  .66446735 00    BZ -.45567285 00    TX -.73532620 00    TY  .67771334 00    TZ  .00000000 00
 SXI  .45037272 00   SYI  .89202654 00   SZI  .38119092-01   DAI  .21845907 01   RAI  .63211376 02
 SXO -.66564147 00   SYO -.72222809 00   SZO -.18790426 00   DAO -.10830505 02   RAO  .22733478 03

 BTQ  .73732591 05   BRQ -.41643574 05    B  .84679881 05   THA  .33054259 03    T VECTOR IN  EARTH EQUATOR PLANE


                                          IBSYS-JPTRAJ-SPACE 050865

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.87622809 08     Y  .10865729 09     Z  .47101508 08     DX -.29050913 02     DY -.18680300 02     DZ -.89758489 01
   R  .14731841 09   LAT  .18646347 02   LON  .12888321 03     V  .35685782 02    PTH  .10135753 01     AZ  .10575175 03
  XE -.87599125 08    YE  .10865552 09    ZE  .47114256 08    DXE -.24438738 02    DYE -.16340093 02    DZE -.70859614 01
  XT -.87989734 08    YT  .10855772 09    ZT  .47105229 08    DXT -.24180911 02    DYT -.17217665 02    DZT -.74135963 01
 LTE  .18653064 02   LOE  .12887609 03   LTT  .18628676 02    LOT  .12902595 03    RST  .14746483 09    VST  .30596174 02
 EPS  .65180999 02   ESP  .98911702-02   SEP  .11480748 03    EPM  .14570903 03    EMP  .21607772 01    MEP  .32130172 02
 MPS  .11258049 03   MSP  .13634040 00   SMP  .67283106 02    SEM  .11298209 03    EMS  .66873837 02    ESM  .14418738 00
 RPM  .38021238 06   SPN  .51493734 02
 GCE  .11502547 03   GCT  .25754035 03   SIP  .11231857 03    CPT  .96134374 02    SIN  .95872403 02
 REP  .26954359 05   VEP  .55063961 01   CPE  .11798253 03    CPS  .10311897 03

  0 DAYS  2 HRS.  9 MIN. 51.000 SEC.        2355532227342020000000000 J.D.= 2437691.45833333  JAN. 26,1962 23 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.38027104 05     Y -.66240290 04     Z -.18378078 05     DX -.35206375 01     DY -.22850053 01     DZ -.13324931 01
   R  .42751516 05   DEC -.25460028 02   RA  .18988134 03     V  .44035979 01    PTH  .67163771 02     AZ  .74508165 02
   R  .42751515 05   LAT -.25460028 02   LON  .79130403 02    VE  .42477081 01    PTE  .72831559 02    AZE  .29135015 03
  XS  .87687083 08    YS -.10859667 09   ZS -.47088734 08   DXS  .24425744 02    DYS  .16356356 02    DZS  .70930043 01
  XM -.38966571 06    YM -.10095534 06   ZM -.10205717 05   DXM  .26652051 00    DYM -.87529530 00    DZM -.32739725 00
  XT -.38966571 06    YT -.10095534 06   ZT -.10205717 05   DXT  .26652051 00    DYT -.87529530 00    DZT -.32739725 00
  RS  .14730787 09    VS  .30240007 02   RM  .40266053 06    VM  .97178392 00    RT  .40266053 06    VT  .97178392 00
 GED -.25611387 02   ALT  .36377300 05   LOS  .19816843 03   RAS  .33891936 03   RAM  .19452493 03   LOM  .83773995 02
 DUT  .34000000 02    DT  .24000000 03    DR  .40584350 01   SHA  .41068270 05   DES -.18642485 02   DEM -.14523560 01
 CCL  .25516259 03   MCL  .33200949 03   TCL  .33200949 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642022720200 00 J.D.= 2437691.36760940  JAN. 26,1962 20 49 21.453
 SMA -.53549115 06   ECC  .10124277 01    B  .84685293 05   SLR  .13392580 05   APO  .00000000 00   RCA  .66549374 04
  VH  .86276539 00    C3  .74436413 00   C1  .73063590 05   TFP  .78385466 04    TF -.13207376-01   LTF -.21426335 01
  TA  .13271129 03   MTA  .17101337 03   EA  .20793697 02    MA  .72360005 00   C3J  .46633267 00   TFI  .21641666 01

                                                     ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.38027104 05     Y -.66240290 04     Z -.18378078 05     DX -.35206375 01     DY -.22850053 01     DZ -.13324931 01
 INC  .29531806 02   LAN  .24706895 03   APF  .16658094 03    MX  .57255520-01    MY -.96907705 00    MZ  .24116164 00
  WX -.45395432 00    WY  .19204774 00    WZ  .87008219 00    PX  .55495009 00    PY  .81715750 00    PZ  .11438952 00
  QX -.68902600 00    QY  .54348060 00    QZ -.47944959 00    RX  .12732668 00    RY  .13815127 00    RZ -.98219249 00
  BX -.59232077 00    BY  .66445246 00    BZ -.45559522 00    TX -.73532736 00    TY  .67771210 00    TZ  .00000000 00
 SXI  .45038673 00   SYI  .89202051 00   SZI  .38093510-01   DAI  .21831248 01   RAI  .63210504 02
 SXO -.66564374 00   SYO -.72223300 00   SZO -.18787724 00   DAO -.10828928 02   RAO  .22733488 03

 BTQ  .73736689 05   BRQ -.41647321 05    B  .84685293 05   THA  .33054174 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                        IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.87725110 08     Y  .10859004 09     Z  .47070355 08     DX -.27346381 02     DY -.18641361 02     DZ -.84254973 01
   R  .14731976 09   LAT  .18633383 02   LON  .12893322 03      V  .34633548 02    PTH  .34522252 00     AZ  .10499700 03
  XE -.87687083 08    YE  .10859667 09     ZE  .47088734 08    DXE -.24425744 02    DYE -.16356356 02    DZE -.70930043 01
  XT -.88376748 08    YT  .10849571 09     ZT  .47078528 08    DXT -.24159223 02    DYT -.17231651 02    DZT -.74204015 01
 LTE  .18642485 02   LOE  .12891936 03    LTT  .18618020 02    LOT  .12906367 03    RST  .14746261 09    VST  .30588563 02
 EPS  .73852666 02   ESP  .15639313-01    SEP  .10613136 03    EPM  .15279639 03    EMP  .27820583 01    MEP  .24421539 02
 MPS  .11303093 03   MSP  .12990992 00    SMP  .66838855 02    SEM  .11252694 03    EMS  .67328539 02    ESM  .14452625 00
 RPM  .36416327 06   SPM  .65272810 02
 GCE  .10483740 03   GCT  .25684689 03    SIP  .11275746 03    CPT  .96614110 02    SIN  .96340644 02
 REP  .42751516 05   VEP  .44035979 01    CPE  .10761764 03    CPS  .10311503 03

  0 DAYS  3 HRS.  9 MIN. 51.000 SEC.        2355532245402020000000000 J.D.= 2437691.50000000  JAN. 27,1962 00 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.49671294 05     Y -.14627748 05     Z -.22686606 05     DX -.29979684 01     DY -.21627117 01     DZ -.10867528 01
   R  .56532208 05   DEC -.23659729 02    RA  .19540922 03      V  .38530725 01    PTH  .70401414 02     AZ  .71790846 02
   R  .56532206 05   LAT -.23659729 02   LON  .70617180 02     VE  .44533259 01    PTE  .54595951 02    AZE  .27900604 03
  XS  .87774994 08    YS -.10853775 09    ZS -.47063186 08    DXS  .24412736 02    DYS  .16372611 02    DZS  .71000435 01
  XM -.38869060 06    YM -.10410220 06    ZM -.11383882 05    DXM  .27520049 00    DYM -.87294731 00    DZM -.32713345 00
  XT -.38869060 06    YT -.10410220 06    ZT -.11383882 05    DXT  .27520049 00    DYT -.87294731 00    DZT -.32713345 00
  RS  .14730864 09    VS  .30239952 02    RM  .40255092 06    VM  .97200236 00     RT  .40255092 06     VT  .97200236 00
 GED -.23831393 02   ALT  .50157478 05   LOS  .18317359 03   RAS  .33896263 03    RAM  .19499351 03    LOM  .69201467 02
 DUT  .34000000 02    DT  .24000000 03    DR  .36298477 01   SHA  .55335332 05    DES -.18631898 02    DEM -.16205033 01
 CCL  .25971827 03   MCL  .33606142 03   TCL  .33606142 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642022735700 00 J.D.= 2437691.36760955  JAN. 26,1962 20 49 21.467
 SMA -.53542386 06   ECC  .10124294 01     B  .84680329 05   SLR  .13392591 05    APO  .00000000 00    RCA  .66549868 04
  VH  .86281961 00    C3  .74445768 00    C1  .73063830 05   TFP  .11438533 05     TF -.13203680-01    LTF -.21425097 01
  TA  .13891433 03   MTA  .17101278 03    EA  .24393960 02    MA  .10561248 01    C3J  .46571970 00    TFI  .31641667 01

                                                                    ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.49671294 05     Y -.14627748 05     Z -.22686606 05     DX -.29979684 01     DY -.21627117 01     DZ -.10867528 01
 INC  .29532488 02   LAN  .24706677 03   APF  .16658311 03    MX  .14805477 00    MY -.94665597 00     MZ  .28622095 00
 WX -.45395667 00    WY  .19206901 00    WZ  .87007633 00    PX  .55495365 00    PY  .81715725 00     PZ  .11437376 00
 QX -.68902154 00    QY  .54347353 00    QZ -.47946408 00    RX  .12732235 00    RY  .13814357 00     RZ -.98213411 00
 BX -.59230889 00    BY  .66445290 00    BZ -.45571103 00    TX -.73531999 00    TY  .67772007 00     TZ  .00000000 00
 SXI  .45038299 00   SYI  .89202338 00   SZI  .38070595-01   DAI  .21818100 01   RAI  .63210769 02
 SXO -.66565268 00   SYO -.72222698 00   SZO -.18786864 00   DAO -.10828428 02   RAO  .22733426 03

 BTQ  .73731802 05   BRQ -.41645880 05    B  .84680329 05   THA  .33054097 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.87824665 08     Y  .10852313 09     Z  .47040499 08     DX -.27410705 02     DY -.18535323 02     DZ -.81867963 01
   R  .14732023 09   LAT  .18621068 02   LON  .12898226 03      V  .34087373 02    PTH  .12224075 00     AZ  .10472380 03
  XE -.87774994 08    YE  .10853775 09     ZE  .47063186 08    DXE -.24412736 02    DYE -.16372611 02    DZE -.71000435 01
  XT -.88163684 08    YT  .10843365 09     ZT  .47051802 08    DXT -.24137536 02    DYT -.17245558 02    DZT -.74271763 01
 LTE  .18631838 02   LOE  .12896263 03    LTT  .18607353 02    LOT  .12911338 03    RST  .14746038 09    VST  .30580923 02
 EPS  .78167566 02   ESP  .20982341-01    SEP  .10181391 03    EPM  .15444501 03    EMP  .14731285 01    MEP  .22081858 02
 MPS  .11348548 03   MSP  .12530987 00    SMP  .66389497 02    SEM  .11207156 03    EMS  .67783490 02    ESM  .14503307 00
 RPM  .35083980 06   SPM  .71689625 02
 GCE  .10028173 03   GCT  .25634314 03    SIP  .11320161 03    CPT  .96921279 02    SIN  .96637404 02
 REP  .56532208 05   VEP  .38530725 01    CPE  .10251261 03    CPS  .10311078 03

  0 DAYS  4 HRS.  9 MIN. 51.000 SEC.        2355532263442020000000000 J.D.= 2437691.54166666  JAN. 27,1962 01 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.59848318 05     Y -.22216072 05     Z -.26321220 05     DX -.26779718 01     DY -.20562765 01     DZ -.94325662 00
   R  .69052021 05   DEC -.22406767 02    RA  .20036524 03      V  .35056438 01    PTH  .72437574 02     AZ  .70240846 02
   R  .69052019 05   LAT -.22406768 02   LON  .59532136 02     VE  .49688352 01    PTE  .42270087 02    AZE  .27558798 03
  XS  .87862857 08    YS -.10847878 09    ZS -.47037613 08    DXS  .24399716 02    DYS  .16388858 02    DZS  .71070791 01
  XM -.38768428 06    YM -.10724048 06    ZM -.12561051 05    DXM  .28386616 00    DYM -.87052798 00    DZM -.32684343 00
  XT -.38768428 06    YT -.10724048 06    ZT -.12561051 05    DXT  .28386616 00    DYT -.87052798 00    DZT -.32684343 00
  RS  .14730942 09    VS  .30239896 02    RM  .40243931 06    VM  .97222715 00     RT  .40243931 06     VT  .97222715 00
 GED -.22544230 02   ALT  .62676952 05   LOS  .16817278 03   RAS  .30900589 03    RAM  .19546240 03    LOM  .54629293 02
 DUT  .34000000 02    DT  .24000000 03    DR  .33421491 01   SHA  .68181179 05    DES -.18621300 02    DEM -.17886225 01
 CCL  .26247503 03   MCL  .33839853 03   TCL  .33839853 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642023013100 00 J.D.= 2437691.36761007  JAN. 26,1962 20 49 21.511
 SMA -.53531593 06   ECC  .10124319 01     B  .84671936 05   SLR  .13392733 05    APO  .00000000 00    RCA  .66549996 04
  VH  .86290658 00    C3  .74460778 00    C1  .73054006 05   TFP  .15038489 05     TF -.13191461-01    LTF -.21422850 01
  TA  .14276410 03   MTA  .17101187 03    EA  .27236426 02    MA  .13889302 01    C3J  .46526670 00    TFI  .41641666 01

                                                                    ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.59848318 05     Y -.22216072 05     Z -.26321220 05     DX -.26779718 01     DY -.20562765 01     DZ -.94325662 00
 INC  .29533419 02   LAN  .24706431 03   APF  .16658549 03    MX  .20670431 00    MY -.92714083 00     MZ  .31254331 00
 WX -.45396153 00    WY  .19209404 00    WZ  .87006831 00    PX  .55495842 00    PY  .81715631 00     PZ  .11435714 00
 QX -.68901447 00    QY  .54346615 00    QZ -.47948267 00    RX  .12732340 00    RY  .13813680 00     RZ -.98219536 00
 BX -.59279062 00    BY  .66445684 00    BZ -.45572900 00    TX -.73530862 00    TY  .67773243 00     TZ  .00000000 00
 SXI  .45037665 00   SYI  .89202777 00   SZI  .38043510-01   DAI  .21802570 01   RAI  .63211208 02
 SXO -.66566565 00   SYO -.72221671 00   SZO -.18786234 00   DAO -.10828059 02   RAO  .22733329 03

 BTQ  .73723737 05   BRQ -.41643095 05    B  .84671936 05   THA  .33053992 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.87922705 08     Y  .10845657 09     Z  .47011292 08    DX -.27077687 02    DY -.18445134 02    DZ -.80503357 01
   R  .14732036 09   LAT  .18609064 02   LON  .12903072 03     V  .33737694 02   PTH  .20646808-01    AZ  .10458999 03
  XE -.87862857 08    YE  .10847878 09    ZE  .47037613 08   DXE -.24399716 02   DYE -.16388858 02   DZE -.71070791 01
  XT -.88250541 08    YT  .10837154 09    ZT  .47025352 08   DXT -.24115850 02   DYT -.17259386 02   DZT -.74339226 01
 LTE  .18621300 02   LOE  .12900589 03   LTT  .18596680 02   LOT  .12915707 03   RST  .14745814 09   VST  .30573253 02
 EPS  .80864362 02   ESP  .26169577-01   SEP  .99109118 02   EPM  .15462117 03   EMP  .42173874 01   MEP  .21161428 02
 MPS  .11392325 03   MSP  .12033130 00   SMP  .65956352 02   SEM  .11161593 03   EMS  .68238695 02   ESM  .14553811 00
 RPM  .33896151 06   SPM  .75564675 02
 GCE  .97524965 02   GCT  .25592350 03   SIP  .11362946 03   CPT  .97156318 02   SIN  .96862521 02
 REP  .69052021 05   VEP  .35056438 01   CPE  .99319058 02   CPS  .10310639 03

  0 DAYS  5 HRS.  9 MIN. 51.000 SEC.        2355532301502020000000000 J.D.= 2437691.58333334  JAN. 27,1962 02 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.69068868 05     Y -.29454811 05     Z -.29533837 05    DX -.24565022 01    DY -.19679716 01    DZ -.84716029 00
   R  .80686689 05   DEC -.21471050 02   RA  .20309610 03     V  .32596005 01   PTH  .73870882 02    AZ  .69218308 02
   R  .80686687 05   LAT -.21471052 02   LON  .47221922 02    VE  .55977108 01   PTE  .34013535 02   AZE  .27397054 03
  XS  .87950675 08    YS -.10841975 09   ZS -.47012015 08   DXS  .24386682 02   DYS  .16405096 02   DZS  .71141111 01
  XM -.38664678 06    YM -.11036992 06   ZM -.13737128 05   DXM  .29251693 00   DYM -.86803735 00   DZM -.32652732 00
  XT -.38664678 06    YT -.11036992 06   ZT -.13737128 05   DXT  .29251693 00   DYT -.86803735 00   DZT -.32652732 00
  RS  .14731019 09    VS  .30239841 02   RM  .40232569 06    VM  .97245826 00    RT  .40232569 06    VT  .97245826 00
 GED -.21603932 02   ALT  .74311375 05   LOS  .15317497 03   RAS  .30904915 03   RAM  .19593161 03   LOM  .40057434 02
 DUT  .34000000 02    DT  .24000000 03    DR  .31312366 01   SHA  .83047859 05   DES -.18610693 02   DEM -.19567040 01
 CCL  .26438661 03   MCL  .33993663 03   TCL  .33993663 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642023162400 00 J.D.= 2437691.36761124  JAN. 26,1962 20 49 21.612
 SMA -.53518230 06   ECC  .10124350 01    B  .84661266 05   SLR  .13392699 05   APO  .00000000 00   RCA  .66549721 04
  VH  .86301431 00    C3  .74479370 00   C1  .73063111 05   TFP  .18638388 05    TF -.13163388-01   LTF -.21419795 01
  TA  .14546423 03   MTA  .17101078 03   EA  .29620108 02    MA  .17220559 01   C3J  .46488476 00   TFI  .51641666 01

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.69068868 05     Y -.29454811 05     Z -.29533837 05    DX -.24565022 01    DY -.19679716 01    DZ -.84716029 00
 INC  .29534744 02   LAN  .24706118 03   APF  .16658842 03    MX  .24729137 00    MY -.91094720 00    MZ  .33018546 00
  WX -.45396975 00    WY  .19212677 00    WZ  .87005692 00    PX  .56496543 00    PY  .81715421 00    PZ  .11433736 00
  QX -.68900334 00    QY  .54345784 00    QZ -.47950825 00    RX  .12731875 00    RY  .13812901 00    RZ -.98219664 00
  BX -.59226578 00    BY  .66446202 00    BZ -.45575374 00    TX -.73529396 00    TY  .67774833 00    TZ  .00000000 00
 SXI  .45037065 00   SYI  .89203220 00   SZI  .38010602-01   DAI  .21783710 01   RAI  .63211628 02
 SXO -.66568213 00   SYO -.72220325 00   SZO -.18785549 00   DAO -.13827660 02   RAO  .22733206 03

 BTQ  .73713381 05   BRQ -.41639735 05    B  .84661266 05   THA  .33053846 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88019743 08     Y  .10839030 09     Z  .46982481 08    DX -.26843184 02    DY -.18373068 02    DZ -.79612714 01
   R  .14732035 09   LAT  .18597243 02   LON  .12907877 03     V  .33488923 02   PTH -.32198365-01    AZ  .10451518 03
  XE -.87950675 08    YE  .10841975 09    ZE  .47012015 08   DXE -.24386682 02   DYE -.16405096 02   DZE -.71141111 01
  XT -.88337321 08    YT  .10830938 09    ZT  .46998277 08   DXT -.24094165 02   DYT -.17273133 02   DZT -.74406384 01
 LTE  .18610693 02   LOE  .12904915 03   LTT  .18585396 02   LOT  .12920374 03   RST  .14745590 09   VST  .30565552 02
 EPS  .82754202 02   ESP  .30486634-01   SEP  .97214662 02   EPM  .15428374 03   EMP  .49922944 01   MEP  .20723955 02
 MPS  .11434388 03   MSP  .11619496 00   SMP  .65539962 02   SEM  .11116005 03   EMS  .68694157 02   ESM  .14553811 00
 RPM  .32810444 06   SPM  .78220443 02
 GCE  .95613376 02   GCT  .25555001 03   SIP  .11404036 03   CPT  .97353324 02   SIN  .97049806 02
 REP  .80686689 05   VEP  .32596005 01   CPE  .97070988 02   CPS  .10310195 03

  0 DAYS  6 HRS.  9 MIN. 51.000 SEC.        2355532317542020000000000 J.D.= 2437691.62500000  JAN. 27,1962 03 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.77602166 05     Y -.36402760 05     Z -.32451925 05    DX -.22915280 01    DY -.18940997 01    DZ -.77734842 00
   R  .91653610 05   DEC -.20736546 02   RA  .20513102 03     V  .33729439 01   PTH  .74964592 02    AZ  .68482836 02
   R  .91653609 05   LAT -.20736546 02   LON  .34215783 02    VE  .62642661 01   PTE  .28278489 02   AZE  .27303813 03
  XS  .88038445 08    YS -.10836066 09   ZS -.46986391 08   DXS  .24373536 02   DYS  .16421327 02   DZS  .71211395 01
  XM -.38557817 06    YM -.11349027 06   ZM -.14912020 05   DXM  .30115220 00   DYM -.86547546 00   DZM -.32618495 00
  XT -.38557817 06    YT -.11349027 06   ZT -.14912020 05   DXT  .30115220 00   DYT -.86547546 00   DZT -.32618495 00
  RS  .14731097 09    VS  .30239787 02   RM  .40221006 06    VM  .97269575 00    RT  .40221006 06    VT  .97269575 00
 GED -.20865729 02   ALT  .85278110 05   LOS  .13817715 03   RAS  .33909240 03   RAM  .19649115 03   LOM  .25485908 02
 DUT  .34000000 02    DT  .48000000 03    DR  .29677437 01   SHA  .91185698 05   DES -.18600076 02   DEM -.21247386 01
 CCL  .26581973 03   MCL  .34102406 03   TCL  .34102406 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642023445600 00 J.D.= 2437691.36761326  JAN. 26,1962 20 49 21.787
 SMA -.53502733 06   ECC  .10124384 01    B  .84648585 05   SLR  .13392573 05   APO  .00000000 00   RCA  .66548982 04
  VH  .86313929 00    C3  .74500944 00   C1  .73063568 05   TFP  .22238213 05    TF -.13114750-01   LTF -.21415964 01
  TA  .14749962 03   MTA  .17100954 03   EA  .31691965 02   MA  .23555471 01   C3J  .46453929 00   TFI  .61641666 01

                                                                ALL VECTORS REFFERENCED TO EARTH EQUATOR PLANE

   X -.77602166 05     Y -.36402760 05     Z -.32451925 05    DX -.22915280 01    DY -.18940997 01    DZ -.77734842 00
 INC  .29536606 02   LAN  .24705719 03   APF  .16659203 03    MX  .27751707 00    MY -.89739674 00    MZ  .34301928 00
  WX -.45398211 00    WY  .19216930 00    WZ  .87004389 00    PX  .56497547 00    PY  .81715058 00    PZ  .11431359 00
  QX -.68898692 00    QY  .54344805 00    QZ -.47954271 00    RX  .12731680 00    RY  .13811958 00    RZ -.98219823 00
  BX -.59223370 00    BY  .66446747 00    BZ -.45578749 00    TX -.73527607 00    TY  .67776774 00    TZ  .00000000 00
 SXI  .45036654 00   SYI  .89203593 00   SZI  .37971123-01   DAI  .21761368 01   RAI  .63211936 02
 SXO -.66570228 00   SYO -.72218686 00   SZO -.18784724 00   DAO -.13827179 02   RAO  .22733054 03

 BTQ  .73700883 05   BRQ -.41536074 05    B  .84648585 05   THA  .33053645 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88116047 08     Y  .10832426 09     Z  .46953939 08    DX -.26665163 02    DY -.18315426 02    DZ -.78984879 01
   R  .14732025 09   LAT  .18585545 02   LON  .12912653 03     V  .33299728 02   PTH -.61215569-01    AZ  .10447071 03
  XE -.88038445 08    YE  .10836066 09    ZE  .46986391 08   DXE -.24373536 02   DYE -.16421327 02   DZE -.71211395 01
  XT -.88424023 08    YT  .10824717 09    ZT  .46971479 08   DXT -.24372483 02   DYT -.17286802 02   DZT -.74473244 01
 LTE  .18600076 02   LOE  .12909240 03   LTT  .18575305 02   LOT  .12924440 03   RST  .14745365 09   VST  .30557824 02
 EPS  .84172519 02   ESP  .34970568-01   SEP  .95792016 02   EPM  .15374853 03   EMP  .57847658 01   MEP  .20466704 02
 MPS  .11474978 03   MSP  .11190583 00   SMP  .65138020 02   SEM  .11070392 03   EMS  .69149887 02   ESM  .14620880 00
 RPM  .31796124 06   SPN  .80182189 02
 GCE  .94180266 02   GCT  .25520433 03   SIP  .11443657 03   CPT  .97528041 02   SIN  .97214840 02
 REP  .91653610 05   VEP  .30729439 01   CPE  .95373040 02   CPS  .10309746 03

  0 DAYS  7 HRS.  9 MIN. 51.000 SEC.        2355532335602020000000000 J.D.= 2437691.66666666  JAN. 27,1962 04 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.85610621 05     Y -.43105605 05     Z -.35150114 05    DX -.21624538 01    DY -.18313203 01    DZ -.72381741 00
   R  .10209212 06   DEC -.20138948 02    RA  .20672560 03     V  .29247043 01   PTH  .75836267 02    AZ  .67922509 02
   R  .10209212 06   LAT -.20138948 02   LON  .20769302 02    VE  .63380487 01   PTE  .24125135 02   AZE  .27243467 03
  XS  .88126168 08    YS -.10830152 09    ZS -.46960742 08   DXS  .24360576 02   DYS  .16437549 02   DZS  .71281642 01
  XM -.38447851 06    YM -.11660127 06    ZM -.15085633 05   DXM  .30977137 00   DYM -.86284238 00   DZM -.32581634 00
  XT -.38447851 06    YT -.11660127 06    ZT -.16085633 05   DXT  .30977137 00   DYT -.86284238 00   DZT -.32581634 00
  RS  .14731175 09    VS  .30239731 02    RM  .40209243 06    VM  .97293964 00    RT  .40209243 06    VT  .97293964 00
 GED -.20265061 02   ALT  .95716478 05   LOS  .12317933 03   RAS  .30913564 03   RAM  .19687103 03   LOM  .10914730 02
 DUT  .34000000 02    DT  .48000000 03    DR  .28357346 01   SHA  .10175264 06   DES -.18589448 02   DEM -.22927178 01
 CCL  .26694998 03   MCL  .34182592 03   TCL  .34182592 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642024053200000 J.D.= 2437691.36761622  JAN. 26,1962 20 49 22.042
 SMA -.53485193 06   ECC  .10124422 01     B  .84633950 05   SLR  .13392326 05   APO  .00000000 00   RCA  .66547630 04
  VH  .86328081 00    C3  .74525374 00    C1  .73062896 05   TFP  .25837957 05    TF -.13043821-01   LTF -.21411303 01
  TA  .14910881 03   MTA  .17100817 03    EA  .33536139 02    MA  .23894575 01   C3J  .46421397 00   TFI  .71641666 01

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.85610621 05     Y -.43105605 05     Z -.35150114 05    DX -.21624538 01    DY -.18313203 01    DZ -.72381741 00
 INC  .29539069 02   LAN  .24705221 03   APF  .16659644 03    MX  .30115989 00    MY -.88587701 00    MZ  .35288018 00
  WX -.45399968 00    WY  .19222331 00    WZ  .87001970 00    PX  .56498903 00    PY  .81714519 00    PZ  .11428531 00
  QX -.68896414 00    QY  .54343702 00    QZ -.47958773 00    RX  .12731436 00    RY  .13810823 00    RZ -.98220016 00
  BX -.59219321 00    BY  .66447308 00    BZ -.45583192 00    TX -.73525477 00    TY  .67779084 00    TZ  .00000000 00
 SXI  .45036509 00   SYI  .89203867 00   SZI  .37924390-01   DAI  .21734276 01   RAI  .63212080 02
 SXO -.66572627 00   SYO -.72216736 00   SZO -.18783725 00   DAO -.10826596 02   RAO  .22732874 03

 BTQ  .73686220 05   BRQ -.41632275 05     B  .84633950 05   THA  .33053381 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88211778 08     Y  .10825841 09     Z  .46925592 08    DX -.26523039 02    DY -.18268869 02    DZ -.78519817 01
   R  .14732010 09   LAT  .18573933 02   LON  .12917405 03     V  .33149311 02   PTH -.77119665-01    AZ  .10444382 03
  XE -.88126168 08    YE  .10830152 09    ZE  .46960742 08   DXE -.24360576 02   DYE -.16437549 02   DZE -.71281642 01
  XT -.88510648 08    YT  .10818491 09    ZT  .46944656 08   DXT -.24050804 02   DYT -.17300391 02   DZT -.74539806 01
 LTE  .18589448 02   LOE  .12913564 03   LTT  .18564606 02   LOT  .12928805 03   RST  .14745138 09   VST  .30550066 02
 EPS  .85286591 02   ESP  .39564682-01   SEP  .94673833 02   EPM  .15313725 03   EMP  .65878759 01   MEP  .20274878 02
 MPS  .11514355 03   MSP  .10812639 00   SMP  .64747981 02   SEM  .11024752 03   EMS  .69605887 02   ESM  .14670980 00
 RPM  .30836193 06   SPN  .81704821 02
 GCE  .93050013 02   GCT  .25487594 03   SIP  .11482060 03   CPT  .97689078 02   SIN  .97366126 02
 REP  .10209212 06   VEP  .29247043 01   CPE  .94029131 02   CPS  .10309294 03

  0 DAYS  8 HRS.  9 MIN. 51.000 SEC.        2355532353642020000000000 J.D.= 2437691.70833333  JAN. 27,1962 05 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.93201129 05     Y -.49598566 05     Z -.37676378 05    DX -.20578964 01    DY -.17771452 01    DZ -.68116119 00
   R  .11209807 06   DEC -.19639558 02    RA  .20802043 03     V  .28330632 01   PTH  .76554541 02    AZ  .67477614 02
   R  .11209807 06   LAT -.19639558 02   LON  .70230838 01    VE  .76064598 01   PTE  .21002618 02   AZE  .27201478 03
  XS  .88213845 08    YS -.10824231 09    ZS -.46935068 08   DXS  .24347503 02   DYS  .16453762 02   DZS  .71351853 01
  XM -.38334784 06    YM -.11970266 06    ZM -.17257871 05   DXM  .31837384 00   DYM -.86013814 00   DZM -.32542149 00
  XT -.38334784 06    YT -.11970266 06    ZT -.17257871 05   DXT  .31837384 00   DYT -.86013814 00   DZT -.32542149 00
  RS  .14731253 09    VS  .30239677 02    RM  .40197279 06    VM  .97318994 00    RT  .40197279 06    VT  .97318994 00
 GED -.19763062 02   ALT  .10572230 06   LOS  .10818150 03   RAS  .30917888 03   RAM  .19734129 03   LOM  .35634391 03
 DUT  .34000000 02    DT  .48000000 03    DR  .27262361 01   SHA  .11185601 06   DES -.18578810 02   DEM -.24606311 01
 CCL  .26787368 03   MCL  .34243179 03   TCL  .34243179 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642024644600 00 J.D.= 2437691.36762048  JAN. 26,1962 20 49 22.411
 SMA -.53465648 06   ECC  .10124464 01     B  .84617247 05   SLR  .13391928 05   APO  .00000000 00   RCA  .66545513 04
  VH  .86343858 00    C3  .74552618 00    C1  .73061809 05   TFP  .29437589 05    TF -.12941479-01   LTF -.21405651 01
  TA  .15042484 03   MTA  .17100669 03    EA  .35205732 02    MA  .27238393 01   C3J  .46389997 00   TFI  .81641665 01

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.93201129 05     Y -.49598566 05     Z -.37676378 05    DX -.20578964 01    DY -.17771452 01    DZ -.68116119 00
 INC  .29542229 02   LAN  .24704609 03   APF  .16660175 03    MX  .32030499 00    MY -.87593161 00    MZ  .36076093 00
  WX -.45402348 00    WY  .19229050 00    WZ  .86999252 00    PX  .56500657 00    PY  .81713773 00    PZ  .11425204 00
  QX -.68893409 00    QY  .54342459 00    QZ -.47964508 00    RX  .12731124 00    RY  .13809470 00    RZ -.98220246 00
  BX -.59214347 00    BY  .66447834 00    BZ -.45588887 00    TX -.73522996 00    TY  .67781775 00    TZ  .00000000 00
 SXI  .45036716 00   SYI  .89203997 00   SZI  .37869805-01   DAI  .21702985 01   RAI  .63212008 02
 SXO -.66575427 00   SYO -.72214469 00   SZO -.18782518 00   DAO -.10825891 02   RAO  .22732665 03

 BTQ  .73669218 05   BRQ -.41628413 05     B  .84617247 05   THA  .33053042 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                          EQUATORIAL COORDINATES

   X -.88307046 08     Y  .10819271 09     Z  .46897391 08    DX -.26405399 02    DY -.18230908 02    DZ -.78163465 01
   R  .14731993 09   LAT  .18562385 02   LON  .12922137 03     V  .33025843 02   PTH -.85199779-01    AZ  .10442796 03
  XE -.88213845 08    YE  .10824231 09    ZE  .46935068 08   DXE -.24347503 02   DYE -.16453762 02   DZE -.71351853 01
  XT -.88597192 08    YT  .10812261 09    ZT  .46917810 08   DXT -.24029129 02   DYT -.17313900 02   DZT -.74606068 01
 LTE  .18578810 02   LOE  .12917888 03   LTT  .18553898 02   LOT  .12933168 03   RST  .14744911 09   VST  .30542279 02
 EPS  .86190529 02   ESP  .41377734-01   SEP  .93765965 02   EPM  .15250119 03   EMP  .73980850 01   MEP  .20100713 02
 MPS  .11552755 03   MSP  .10444440 00   SMP  .64367537 02   SEM  .10979086 03   EMS  .70062163 02   ESM  .14704286 00
 RPM  .29919326 06   SPN  .82928833 02
 GCE  .92126314 02   GCT  .25455811 03   SIP  .11519470 03   CPT  .97841717 02   SIN  .97508867 02
 REP  .11209807 06   VEP  .28030632 01   CPE  .92929333 02   CPS  .10308841 03

  0 DAYS  9 HRS.  9 MIN. 51.000 SEC.        2355532371702020000000000 J.D.= 2437691.75000000  JAN. 27,1962 06 00 00.000

      GEOCENTRIC                                                                                           EQUATORIAL COORDINATES

   X -.10044849 06     Y -.55909186 05     Z -.40063639 05    DX -.19709244 01    DY -.17297636 01    DZ -.64617807 00
   R  .12174084 06   DEC -.19213523 02    RA  .20910011 03     V  .27007723 01   PTH  .77161324 02    AZ  .67113108 02
   R  .12174084 06   LAT -.19213524 02   LON  .35306168 03    VE  .82643283 01   PTE  .18580011 02   AZE  .27170735 03
  XS  .88301472 08    YS -.10818305 09    ZS -.46909368 08   DXS  .24334416 02   DYS  .16469968 02   DZS  .71422029 01
  XM -.38218623 06    YM -.12279419 06    ZM -.18428641 05   DXM  .32695902 00   DYM -.85736281 00   DZM -.32500034 00
  XT -.38218623 06    YT -.12279419 06    ZT -.18428641 05   DXT  .32695902 00   DYT -.85736281 00   DZT -.32500034 00
  RS  .14731330 09    VS  .30239621 02    RM  .40185114 06    VM  .97344666 00    RT  .40185114 06    VT  .97344666 00
 GED -.19334773 02   ALT  .11536497 06   LDS  .93183672 02   RAS  .30922211 03   RAM  .19781190 03   LDM  .34177346 03
 DUT  .34000000 02    DT  .48000000 03    DR  .26332519 01   SHA  .12157280 06   DES -.18568164 02   DEM -.26284693 01
 CCL  .26864875 03   MCL  .34289489 03   TCL  .34289489 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642025663000000 J.D.= 2437691.36762644  JAN. 26,1962 20 49 22.925
  SMA -.53444031 06   ECC  .10124509 01     B  .84598289 05   SLR  .13391368 05   APO  .00000000 00   RCA  .66542583 04
   VH  .86361319 00    C3  .74582773 00    C1  .73060282 05   TFP  .33037075 05    TF -.12798667-01   LTF -.21398916 01
   TA  .15152869 03   MTA  .17100509 03    EA  .36736645 02    MA  .30587520 01   C3J  .46359199 00   TFI  .91641665 01

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.10044849 06     Y -.55909186 05     Z -.40063639 05    DX -.19709244 01    DY -.17297636 01    DZ -.64617807 00
 INC  .29546242 02   LAN  .24703872 03   APF  .16660805 03    MX  .33621831 00    MY -.86722775 00    MZ  .36725007 00
  WX -.45405430 00    WY  .19237248 00    WZ  .86995798 00    PX  .56502857 00    PY  .81712791 00    PZ  .11421325 00
  QX -.68889559 00    QY  .54340999 00    QZ -.47971643 00    RX  .12730725 00    RY  .13807873 00    RZ -.98220524 00
  BX -.59208360 00    BY  .66448268 00    BZ -.45596328 00    TX -.73520149 00    TY  .67784864 00    TZ  .00000000 00
 SXI  .45037348 00   SYI  .89203940 00   SZI  .37806637-01   DAI  .21666760 01   RAI  .63211670 02
 SXO -.66578649 00   SYO -.72211875 00   SZO -.18781073 00   DAO -.10825049 02   RAO  .22732424 03

 BTQ  .73649634 05   BRQ -.41624532 05     B  .84598289 05   THA  .33052618 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                          EQUATORIAL COORDINATES

   X -.88401920 08     Y  .10812714 09     Z  .46869304 08    DX -.26305340 02    DY -.18199731 02    DZ -.77883809 01
   R  .14731975 09   LAT  .18550886 02   LON  .12926853 03     V  .32922029 02   PTH -.88345080-01    AZ  .10441946 03
  XE -.88301472 08    YE  .10818305 09    ZE  .46909368 08   DXE -.24334416 02   DYE -.16469968 02   DZE -.71422029 01
  XT -.88683658 08    YT  .10806025 09    ZT  .46890939 08   DXT -.24007457 02   DYT -.17327330 02   DZT -.74672031 01
 LTE  .18568164 02   LOE  .12922211 03   LTT  .18543181 02   LOT  .12937528 03   RST  .14744684 09   VST  .30534464 02
 EPS  .86941941 02   ESP  .47949227-01   SEP  .93010774 02   EPM  .15186280 03   EMP  .82137531 01   MEP  .19923442 02
 MPS  .11590383 03   MSP  .10111274 00   SMP  .63994665 02   SEM  .10933393 03   EMS  .70518721 02   ESM  .14704286 00
 RPM  .29037531 06   SPN  .83938842 02
 GCE  .91351236 02   GCT  .25424612 03   SIP  .11556087 03   CPT  .97989481 02   SIN  .97646523 02
 REP  .12174084 06   VEP  .27007723 01   CPE  .92006514 02   CPS  .10308386 03

  0 DAYS 10 HRS.  9 MIN. 51.000 SEC.        2355532407742020000000000 J.D.= 2437691.79166666  JAN. 27,1962 07 00 00.000

      GEOCENTRIC                                                                                           EQUATORIAL COORDINATES

   X -.10740750 06     Y -.62059408 05     Z -.42335609 05    DX -.18970972 01    DY -.16878447 01    DZ -.61683933 00
   R  .13107267 06   DEC -.18844049 02    RA  .21001906 03     V  .26130993 01   PTH  .77683899 02    AZ  .66806935 02
   R  .13107267 06   LAT -.18844050 02   LON  .33893955 03    VE  .89037464 01   PTE  .16650666 02   AZE  .27147358 03
  XS  .88389055 08    YS -.10812373 09    ZS -.46883643 08   DXS  .24321317 02   DYS  .16486165 02   DZS  .71492167 01
  XM -.38099375 06    YM -.12587560 06    ZM -.19597846 05   DXM  .33552630 00   DYM -.85451645 00   DZM -.32455291 00
  XT -.38099375 06    YT -.12587560 06    ZT -.19597846 05   DXT  .33552630 00   DYT -.85451645 00   DZT -.32455291 00
  RS  .14731409 09    VS  .30239566 02    RM  .40172749 06    VM  .97370984 00    RT  .40172749 06    VT  .97370984 00
 GED -.18963321 02   ALT  .12469672 06   LDS  .78185829 02   RAS  .30926533 03   RAM  .19828291 03   LDM  .32720340 03
 DUT  .34000000 02    DT  .95999999 03    DR  .25529606 01   SHA  .13096049 06   DES -.18557508 02   DEM -.27962222 01
 CCL  .26931249 03   MCL  .34324893 03   TCL  .34324893 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170642027132000000 J.D.= 2437691.36763412  JAN. 26,1962 20 49 23.588
  SMA -.53420261 06   ECC  .10124557 01     B  .84577056 05   SLR  .13390597 05   APO  .00000000 00   RCA  .66538595 04
   VH  .86380530 00    C3  .74615959 00    C1  .73058179 05   TFP  .36636412 05    TF -.12614488-01   LTF -.21391051 01
   TA  .15247295 03   MTA  .17100337 03    EA  .38154396 02    MA  .33942625 01   C3J  .46328658 00   TFI  .10164167 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.10740750 06     Y -.62059408 05     Z -.42335609 05    DX -.18970972 01    DY -.16878447 01    DZ -.61683933 00
 INC  .29551159 02   LAN  .24702994 03   APF  .16661547 03    MX  .34971491 00    MY -.85952161 00    MZ  .37272165 00
  WX -.45409356 00    WY  .19247115 00    WZ  .86991566 00    PX  .56505559 00    PY  .81711548 00    PZ  .11416848 00
  QX -.68884755 00    QY  .54339376 00    QZ -.47980381 00    RX  .12730243 00    RY  .13806018 00    RZ -.98220847 00
  BX -.59201199 00    BY  .66448632 00    BZ -.45604797 00    TX -.73516890 00    TY  .67788398 00    TZ  .00000000 00
 SXI  .45038467 00   SYI  .89203683 00   SZI  .37734037-01   DAI  .21625130 01   RAI  .63211031 02
 SXO -.66582339 00   SYO -.72208912 00   SZO -.18779383 00   DAO -.10824064 02   RAO  .22732149 03

 BTQ  .73627366 05   BRQ -.41620780 05     B  .84577056 05   THA  .33052098 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88496462 08     Y  .10806167 09     Z  .46841307 08    DX -.26218414 02    DY -.18174009 02    DZ -.77660560 01
   R  .14731957 09   LAT  .18539425 02   LON  .12931556 03     V  .32833085 02   PTH -.88238358-01    AZ  .10441609 03
  XE -.88389055 08    YE  .10812373 09    ZE  .46883643 08   DXE -.24321317 02   DYE -.16486165 02   DZE -.71492167 01
  XT -.88770048 08    YT  .10799785 09    ZT  .46864045 08   DXT -.23985791 02   DYT -.17340681 02   DZT -.74737696 01
 LTE  .18557508 02   LOE  .12926533 03   LTT  .18532457 02   LOT  .12941888 03   RST  .14744455 09   VST  .30526621 02
 EPS  .87578365 02   ESP  .50435271-01   SEP  .92370699 02   EPM  .15123169 03   EMP  .90342534 01   MEP  .19734059 02
 MPS  .11627421 03   MSP  .98415912-01   SMP  .63627582 02   SEM  .10887672 03   EMS  .70975568 02   ESM  .14754103 00
 RPM  .28184915 06   SPN  .84789250 02
 GCE  .90687502 02   GCT  .25393643 03   SIP  .11592088 03   CPT  .98134886 02   SIN  .97781555 02
 REP  .13107267 06   VEP  .26130993 01   CPE  .91216996 02   CPS  .10307930 03

  0 DAYS 11 HRS.  9 MIN. 51.000 SEC.        2355532426002020000000000 J.D.= 2437691.83333333  JAN. 27,1962 08 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.11411971 06     Y -.68067019 05     Z -.44510015 05    DX -.18333993 01    DY -.16503927 01    DZ -.59179080 00
   R  .14013411 06   DEC -.18519319 02   RA  .21081407 03     V  .25368022 01   PTH  .78140941 02    AZ  .66544422 02
   R  .14013411 06   LAT -.18519319 02   LON  .32469351 03    VE  .95422890 01   PTE  .15080395 02   AZE  .27129050 03
  XS  .88476590 08    YS -.10806434 09    ZS -.46857893 08   DXS  .24308205 02   DYS  .16502354 02   DZS  .71562269 01
  XM -.37977046 06    YM -.12894663 06    ZM -.20765395 05   DXM  .34407508 00   DYM -.85159910 00   DZM -.32407916 00
  XT -.37977046 06    YT -.12894663 06    ZT -.20765395 05   DXT  .34407508 00   DYT -.85159910 00   DZT -.32407916 00
  RS  .14731487 09    VS  .30239512 02    RM  .40160183 06    VM  .97397945 00    RT  .40160183 06    VT  .97397945 00
 GED -.18636835 02   ALT  .13375808 06   LOS  .63187984 02   RAS  .30930855 03   RAM  .19875432 03   LOM  .31263375 03
 DUT  .34000000 02    DT  .95999999 03    DR  .24826569 01   SHA  .14006341 06   DES -.18546841 02   DEM -.29638803 01
 CCL  .26989013 03   MCL  .34351637 03   TCL  .34351637 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532170652020730540000 J.D.= 2437691.36764428  JAN. 26,1962 20 49 24.466
  SMA -.53394229 06   ECC  .10124608 01    B  .84553277 05   SLR  .13389582 05   APO  .00000000 00   RCA  .66533384 04
  VH  .86401585 00    C3  .74652338 00   C1  .73055411 05   TFP  .43235534 05    TF -.12370467-01   LTF -.21381702 01
  TA  .15329347 03   MTA  .17100155 03   EA  .39477861 02    MA  .37304375 01   C3J  .46298146 00   TFI  .11164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.11411971 06     Y -.68067019 05     Z -.44510015 05    DX -.18333993 01    DY -.16503927 01    DZ -.59179080 00
 INC  .29557096 02   LAN  .24701961 03   APF  .16662411 03    MX  .36134647 00    MY -.85263024 00    MZ  .37742614 00
  WX -.45414251 00    WY  .19258855 00    WZ  .86986455 00    PX  .56508824 00    PY  .81710012 00    PZ  .11411715 00
  QX -.68878870 00    QY  .54337570 00    QZ -.47990941 00    RX  .12729661 00    RY  .13803879 00    RZ -.98221224 00
  BX -.59192737 00    BY  .66448882 00    BZ -.45615416 00    TX -.73513198 00    TY  .67792401 00    TZ  .00000000 00
 SXI  .45040167 00   SYI  .89203184 00   SZI  .37651176-01   DAI  .21577626 01   RAI  .63210031 02
 SXO -.66586527 00   SYO -.72205564 00   SZO -.18777416 00   DAO -.10822915 02   RAO  .22731836 03

 BTQ  .73602083 05   BRQ -.41617188 05    B  .84553277 05   THA  .33051467 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88590709 08     Y  .10799628 09     Z  .46813383 08    DX -.26141504 02    DY -.18152747 02    DZ -.77480177 01
   R  .14731939 09   LAT  .18527993 02   LON  .12936246 03     V  .32755724 02   PTH -.85925486-01    AZ  .10441642 03
  XE -.88476590 08    YE  .10806434 09    ZE  .46857893 08   DXE -.24308205 02   DYE -.16502354 02   DZE -.71562269 01
  XT -.88856360 08    YT  .10793540 09    ZT  .46837128 08   DXT -.23964130 02   DYT -.17353953 02   DZT -.74803060 01
 LTE  .18546841 02   LOE  .12930856 03   LTT  .18521723 02   LOT  .12946246 03   RST  .14744226 09   VST  .30518751 02
 EPS  .88125475 02   ESP  .54722807-01   SEP  .91820050 02   EPM  .15061141 03   EMP  .98595946 01   MEP  .19528989 02
 MPS  .11664028 03   MSP  .94096185-01   SMP  .63264690 02   SEM  .13841922 03   EMS  .71432707 02   ESM  .14787221 00
 RPM  .27356983 06   SPN  .85516840 02
 GCE  .90109857 02   GCT  .25362622 03   SIP  .11627626 03   CPT  .98279841 02   SIN  .97915817 02
 REP  .14013411 06   VEP  .25368022 01   CPE  .90530941 02   CPS  .10307473 03

  0 DAYS 12 HRS.  9 MIN. 51.000 SEC.        2355532444042020000000000 J.D.= 2437691.87500000  JAN. 27,1962 09 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.12061756 06     Y -.73946679 05     Z -.46600512 05    DX -.17777054 01    DY -.16166484 01    DZ -.57009047 00
   R  .14895742 06   DEC -.18230737 02   RA  .21151109 03     V  .24695731 01   PTH  .78545731 02    AZ  .66315370 02
   R  .14895742 06   LAT -.18230737 02   LON  .31034947 03    VE  .10162213 02   PTE  .13778869 02   AZE  .27114371 03
  XS  .88564077 08    YS -.10800491 09    ZS -.46832118 08   DXS  .24295079 02   DYS  .16518535 02   DZS  .71632335 01
  XM -.37851642 06    YM -.13200703 06    ZM -.21931189 05   DXM  .35260475 00   DYM -.84861086 00   DZM -.32357908 00
  XT -.37851642 06    YT -.13200703 06    ZT -.21931189 05   DXT  .35260475 00   DYT -.84861086 00   DZT -.32357908 00
  RS  .14731565 09    VS  .30239457 02    RM  .40147418 06    VM  .97425557 00    RT  .40147418 06    VT  .97425557 00
 GED -.18346681 02   ALT  .14258133 06   LOS  .48190136 02   RAS  .30935177 03   RAM  .19922614 03   LOM  .29806450 03
 DUT  .34000000 02    DT  .95999999 03    DR  .24203880 01   SHA  .14891665 06   DES -.18536165 02   DEM -.31314334 01
 CCL  .27039953 03   MCL  .34371262 03   TCL  .34371262 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532170652023077000000 J.D.= 2437691.36765696  JAN. 26,1962 20 49 25.562
  SMA -.53365801 06   ECC  .10124662 01    B  .84526753 05   SLR  .13388306 05   APO  .00000000 00   RCA  .66526860 04
  VH  .86424595 00    C3  .74692106 00   C1  .73051928 05   TFP  .43834438 05    TF -.12066245-01   LTF -.21370872 01
  TA  .15401566 03   MTA  .17099961 03   EA  .40721437 02    MA  .40673579 01   C3J  .46267521 00   TFI  .12164167 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.12061756 06     Y -.73946679 05     Z -.46600512 05    DX -.17777054 01    DY -.16166484 01    DZ -.57009047 00
 INC  .29564278 02   LAN  .24700754 03   APF  .16663410 03    MX  .37150116 00    MY -.84661318 00    MZ  .38153836 00
  WX -.45420215 00    WY  .19272676 00    WZ  .86980270 00    PX  .56512710 00    PY  .81708138 00    PZ  .11405864 00
  QX -.68871740 00    QY  .54335476 00    QZ -.48003522 00    RX  .12728970 00    RY  .13801430 00    RZ -.98221655 00
  BX -.59182841 00    BY  .66448969 00    BZ -.45628126 00    TX -.73509037 00    TY  .67796915 00    TZ  .00000000 00
 SXI  .45042521 00   SYI  .89202388 00   SZI  .37557067-01   DAI  .21523667 01   RAI  .63208621 02
 SXO -.66591252 00   SYO -.72201792 00   SZO -.18775147 00   DAO -.10821592 02   RAO  .22731485 03

 BTQ  .73573507 05   BRQ -.41613830 05    B  .84526753 05   THA  .33050711 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88684694 08     Y  .10793096 09     Z  .46785517 08    DX -.26072785 02    DY -.18135183 02    DZ -.77333239 01
   R  .14731921 09   LAT  .18516586 02   LON  .12940926 03     V  .32687601 02   PTH -.82079236-01    AZ  .10441949 03
  XE -.88564077 08    YE  .10800491 09    ZE  .46832118 08   DXE -.24295079 02   DYE -.16518535 02   DZE -.71632335 01
  XT -.88942593 08    YT  .10787290 09    ZT  .46810187 08   DXT -.23942474 02   DYT -.17367146 02   DZT -.74868126 01
 LTE  .18536165 02   LOE  .12935177 03   LTT  .18510982 02   LOT  .12950602 03   RST  .14743996 09   VST  .30510854 02
 EPS  .88601518 02   ESP  .57249289-01   SEP  .91340564 02   EPM  .15000253 03   EMP  .10690215 02   MEP  .19307246 02
 MPS  .11700353 03   MSP  .91459911-01   SMP  .62904537 02   SEM  .10796144 03   EMS  .71890149 02   ESM  .14803752 00
 RPM  .26550217 06   SPN  .86147499 02
 GCE  .89600468 02   GCT  .25331309 03   SIP  .11662845 03   CPT  .98425870 02   SIN  .98050785 02
 REP  .14895742 06   VEP  .24695731 01   CPE  .89927163 02   CPS  .10307315 03

  0 DAYS 13 HRS.  9 MIN. 51.000 SEC.        2355532462102020000000000 J.D.= 2437691.91666666  JAN. 27,1962 10 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.12692692 06     Y -.79710627 05     Z -.48617866 05    DX -.17284683 01    DY -.15860225 01    DZ -.55106054 00
   R  .15756879 06   DEC -.17971873 02   RA  .21212898 03     V  .24097173 01   PTH  .78908028 02    AZ  .66112424 02
   R  .15756879 06   LAT -.17971873 02   LON  .29592629 03    VE  .10770075 02   PTE  .12683327 02   AZE  .27102373 03
  XS  .88651517 08    YS -.10794541 09   ZS -.46806317 08   DXS  .24281941 02   DYS  .16534708 02   DZS  .71702366 01
  XM -.37723172 06    YM -.13505655 06   ZM -.23095137 05   DXM  .36111472 00   DYM -.84555175 00   DZM -.32305265 00
  XT -.37723172 06    YT -.13505655 06   ZT -.23095137 05   DXT  .36111472 00   DYT -.84555175 00   DZT -.32305265 00
  RS  .14731644 09    VS  .30239403 02   RM  .40134453 06    VM  .97453815 00    RT  .40134453 06    VT  .97453815 00
 GED -.18086396 02   ALT  .15119264 06   LOS  .33192280 02   RAS  .30939498 03   RAM  .19969839 03   LOM  .28349568 03
 DUT  .34000000 02    DT  .95999999 03    DR  .23647330 01   SHA  .15754853 06   DES -.18525479 02   DEM -.32988738 01
 CCL  .27085366 03   MCL  .34384857 03   TCL  .34384857 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170652025703400 00 J.D.= 2437691.36767292  JAN. 26,1962 20 49 26.941
 SMA -.53334817 06   ECC  .10124719 01    B  .84497228 05   SLR  .13386723 05   APD  .00000000 00   RCA  .66518807 04
  VH  .86449695 00    C3  .74735497 00   CI  .73047610 05   TFP  .47433059 05    TF -.11683106-01   LTF -.21358228 01
  TA  .15465816 03   MTA  .17099757 03   EA  .41896404 02    MA  .44051065 01   C3J  .46236646 00   TFI  .13164167 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.12692692 06     Y -.79710627 05     Z -.48617866 05    DX -.17284683 01    DY -.15860225 01    DZ -.55106054 00
 INC  .29572793 02   LAN  .24699355 03   APF  .16664559 03    MX  .38046150 00    MY -.84076238 00    MZ  .38518534 00
  WX -.45427621 00    WY  .19288822 00    WZ  .86972337 00    PX  .56517281 00    PY  .81705903 00    PZ  .11399219 00
  QX -.68863246 00    QY  .54333112 00    QZ -.48018402 00    RX  .12728154 00    RY  .13798641 00    RZ -.98222153 00
  BX -.59171350 00    BY  .66448859 00    BZ -.45643188 00    TX -.73504376 00    TY  .67801968 00    TZ  .00000000 00
 SXI  .45045617 00   SYI  .89201272 00   SZI  .37450572-01   DAI  .21462606 01   RAI  .63206748 02
 SXO -.66596553 00   SYO -.72197580 00   SZO -.18772544 00   DAO -.10820074 02   RAO  .22731091 03

 BTQ  .73541307 05   BRQ -.41610786 05    B  .84497228 05   THA  .33049816 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88778443 08     Y  .10786570 09     Z  .46757699 08    DX -.26010409 02    DY -.18120730 02    DZ -.77212971 01
   R  .14731905 09   LAT  .18505199 02   LON  .12945595 03     V  .32626992 02   PTH -.77144424-01    AZ  .10442465 03
  XE -.88651517 08    YE  .10794541 09    ZE  .46806317 08   DXE -.24281941 02   DYE -.16534708 02   DZE -.71702366 01
  XT -.89028748 08    YT  .10781035 09    ZT  .46783222 08   DXT -.23920826 02   DYT -.17380259 02   DZT -.74932892 01
 LTE  .18525479 02   LOE  .12939498 03   LTT  .18500233 02   LOT  .12954956 03   RST  .14743765 09   VST  .30502929 02
 EPS  .89019868 02   ESP  .60165642-01   SEP  .90918856 02   EPM  .14940411 03   EMP  .11526816 02   MEP  .19069064 02
 MPS  .11736532 03   MSP  .88745359-01   SMP  .62545768 02   SEM  .10750336 03   EMS  .72347894 02   ESM  .14836759 00
 RPM  .25761808 06   SPN  .86700042 02
 GCE  .89146336 02   GCT  .25299490 03   SIP  .11697875 03   CPT  .98574258 02   SIN  .98187693 02
 REP  .15756879 06   VEP  .24097173 01   CPE  .89390139 02   CPS  .10306557 03

  0 DAYS 13 HRS. 37 MIN. 57.000 SEC.        2355532470552024000000000 J.D.= 2437691.93618055  JAN. 27,1962 10 28 06.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.12982311 06     Y -.82373282 05     Z -.49540028 05    DX -.17072907 01    DY -.15726161 01    DZ -.54291946 00
   R  .16153517 06   DEC -.17859421 02   RA  .21239529 03     V  .23838466 01   PTH  .79065246 02    AZ  .66024747 02
   R  .16153517 06   LAT -.17859421 02   LON  .28914836 03    VE  .11050800 02   PTE  .12227887 02   AZE  .27097484 03
  XS  .88692452 08    YS -.10791752 09   ZS -.46794226 08   DXS  .24275783 02   DYS  .16542279 02   DZS  .71735150 01
  XM -.37661953 06    YM -.13648093 06   ZM -.23639590 05   DXM  .36509327 00   DYM -.84409473 00   DZM -.32279705 00
  XT -.37661953 06    YT -.13648093 06   ZT -.23639590 05   DXT  .36509327 00   DYT -.84409473 00   DZT -.32279705 00
  RS  .14731681 09    VS  .30239377 02   RM  .40128312 06    VM  .97467273 00    RT  .40128312 06    VT  .97467273 00
 GED -.17973324 02   ALT  .15515899 06   LOS  .26168277 02   RAS  .30941521 03   RAM  .19991971 03   LOM  .27667277 03
 DUT  .34000000 02    DT  .95999999 03    DR  .23405651 01   SHA  .16152176 06   DES -.18520472 02   DEM -.33772485 01
 CCL  .27105020 03   MCL  .34389379 03   TCL  .34389379 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170652027302000 00 J.D.= 2437691.36768159  JAN. 26,1962 20 49 27.689
 SMA -.53319381 06   ECC  .10124747 01    B  .84482303 05   SLR  .13385870 05   APD  .00000000 00   RCA  .66514476 04
  VH  .86462208 00    C3  .74757133 00   CI  .73045284 05   TFP  .49118310 05    TF -.11475205-01   LTF -.21351689 01
  TA  .15493575 03   MTA  .17099656 03   EA  .42425708 02    MA  .45635968 01   C3J  .46222079 00   TFI  .13632500 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.12982311 06     Y -.82373282 05     Z -.49540028 05    DX -.17072907 01    DY -.15726161 01    DZ -.54291946 00
 INC  .29577323 02   LAN  .24698627 03   APF  .16665153 03    MX  .38430875 00    MY -.83828530 00    MZ  .38676106 00
  WX -.45431254 00    WY  .19297257 00    WZ  .86969034 00    PX  .56519682 00    PY  .81704716 00    PZ  .11395817 00
  QX -.68858726 00    QY  .54331876 00    QZ -.48026225 00    RX  .12727729 00    RY  .13797212 00    RZ -.98222410 00
  BX -.59165364 00    BY  .66448732 00    BZ -.45651131 00    TX -.73502004 00    TY  .67804538 00    TZ  .00000000 00
 SXI  .45047353 00   SYI  .89200620 00   SZI  .37396128-01   DAI  .21431391 01   RAI  .63205691 02
 SXO -.66599251 00   SYO -.72195440 00   SZO -.18771205 00   DAO -.10819293 02   RAO  .22730890 03

 BTQ  .73524889 05   BRQ -.41609498 05    B  .84482303 05   THA  .33049344 03    T VECTOR IN  EARTH EQUATOR PLANE
```

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CASE  1                                   EBSYS-JPTRAJ-SPACE 050865

BX

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88822275 08     Y  .10783515 09     Z  .46744685 08    DX -.25983074 02    DY -.18114895 02    DZ -.77164344 01
   R  .14731898 09   LAT  .18499871 02   LON  .12947780 03     V  .32600811 02   PTH -.74550660-01    AZ  .10442765 03
  XE -.88692452 08    YE  .10791752 09    ZE  .46794226 08   DXE -.24275783 02   DYE -.16542279 02   DZE -.71735150 01
  XT -.89069071 08    YT  .10778104 09    ZT  .46770586 08   DXT -.23910690 02   DYT -.17386373 02   DZT -.74963120 01
 LTE  .18520472 02   LOE  .12941521 03   LTT  .18495195 02   LOT  .12956995 03   RST  .14743656 09   VST  .30499208 02
 EPS  .89198903 02   ESP  .62165044-01   SEP  .90738274 02   EPM  .14912698 03   EMP  .11920928 02   MEP  .18952083 02
 MPS  .11753462 03   MSP  .87356456-01   SMP  .62377852 02   SEM  .10728872 03   EMS  .72562379 02   ESM  .14869693 00
 RPM  .25398216 06   SPN  .86936069 02
 GCE  .88949800 02   GCT  .25284358 03   SIP  .11714252 03   CPT  .98644888 02   SIN  .98252789 02
 REP  .16153517 06   VEP  .23838466 01   CPE  .89158171 02   CPS  .10306342 03

  0 DAYS 14 HRS.  9 MIN. 51.000 SEC.        2355532500142020000000000 J.D.= 2437691.95833333  JAN. 27,1962 11 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.13306887 06     Y -.85369223 05     Z -.50570747 05    DX -.16845319 01    DY -.15580497 01    DZ -.53419957 00
   R  .16598985 06   DEC -.17737810 02    RA  .21268186 03     V  .23559575 01   PTH  .79235181 02    AZ  .65930092 02
   R  .16598984 06   LAT -.17737810 02   LON  .28143810 03    VE  .11366552 02   PTE  .11748935 02   AZE  .27092406 03
  XS  .88738910 08    YS -.10788585 09    ZS -.46780492 08   DXS  .24268789 02   DYS  .16550872 02   DZS  .71772358 01
  XM -.37591642 06    YM -.13809493 06    ZM -.24257142 05   DXM  .36960436 00   DYM -.84242188 00   DZM -.32249986 00
  XT -.37591642 06    YT -.13809493 06    ZT -.24257142 05   DXT  .36960436 00   DYT -.84242188 00   DZT -.32249986 00
  RS  .14731723 09    VS  .30239348 02    RM  .40121288 06    VM  .97482724 00    RT  .40121288 06    VT  .97482724 00
 GED -.17851041 02   ALT  .15961364 06   LOS  .18194416 02   RAS  .30943818 03   RAM  .20017108 03   LOM  .26892731 03
 DUT  .34000000 02    DT  .95999999 03    DR  .23144977 01   SHA  .16598234 06   DES -.18514785 02   DEM -.34661886 01
 CCL  .27126228 03   MCL  .34393198 03   TCL  .34393198 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170662020124340000 J.D.= 2437691.36769281  JAN. 26,1962 20 49 28.660
 SMA -.53301132 06   ECC  .10124779 01     B  .84464382 05   SLR  .13384781 05   APO  .00000000 00   RCA  .66508958 04
  VH  .86477008 00    C3  .74782728 00    C1  .73042312 05   TFP  .51031340 05    TF -.11205673-01   LTF -.21343514 01
  TA  .15523498 03   MTA  .17099542 03    EA  .43011774 02    MA  .47437721 01   C3J  .46205425 00   TFI  .14164167 02

                                                                ALL VECTORS REFFRENCED TO EARTH EQUATOR PLANE
   X -.13306887 06     Y -.85369223 05     Z -.50570747 05    DX -.16845319 01    DY -.15580497 01    DZ -.53419957 00
 INC  .29582807 02   LAN  .24697742 03   APF  .16665876 03    MX  .38843803 00    MY -.83559189 00    MZ  .38846211 00
  WX -.45436039 00    WY  .19307575 00    WZ  .86964309 00    PX  .56522624 00    PY  .81703258 00    PZ  .11391711 00
  QX -.68853194 00    QY  .54330461 00    QZ -.48035870 00    RX  .12727199 00    RY  .13795482 00    RZ -.98222721 00
  BX -.59158070 00    BY  .66448517 00    BZ -.45660899 00    TX -.73499174 00    TY  .67807606 00    TZ  .00000000 00
 SXI  .45049583 00   SYI  .89199778 00   SZI  .37330608-01   DAI  .21393826 01   RAI  .63204332 02
 SXO -.66602476 00   SYO -.72192889 00   SZO -.18769575 00   DAO -.10818342 02   RAO  .22730651 03

 BTQ  .73505074 05   BRQ -.41608126 05     B  .84464382 05   THA  .33048763 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.88871978 08     Y  .10780049 09     Z  .46729920 08    DX -.25953321 02    DY -.18108921 02    DZ -.77114353 01
   R  .14731890 09   LAT  .18493826 02   LON  .12950257 03     V  .32572598 02   PTH -.71430970-01    AZ  .10443143 03
  XE -.88738910 08    YE  .10788565 09    ZE  .46780492 08   DXE -.24268789 02   DYE -.16550872 02   DZE -.71772358 01
  XT -.89114826 08    YT  .10774776 09    ZT  .46756234 08   DXT -.23899185 02   DYT -.17393294 02   DZT -.74997357 01
 LTE  .18514785 02   LOE  .12943818 03   LTT  .18489474 02   LOT  .12959309 03   RST  .14743533 09   VST  .30494978 02
 EPS  .89390597 02   ESP  .63334395-01   SEP  .90544846 02   EPM  .14881444 03   EMP  .12370299 02   MEP  .18815258 02
 MPS  .11772695 03   MSP  .85660053-01   SMP  .62187391 02   SEM  .10704498 03   EMS  .72805952 02   ESM  .14869693 00
 RPM  .24989465 06   SPN  .87188520 02
 GCE  .88737717 02   GCT  .25266969 03   SIP  .11732843 03   CPT  .98726134 02   SIN  .98327621 02
 REP  .16598985 06   VEP  .23559575 01   CPE  .88908190 02   CPS  .10306097 03

  0 DAYS 15 HRS.  9 MIN. 51.000 SEC.        2355532516202020000000000 J.D.= 2437692.00000000  JAN. 27,1962 12 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.13906084 06     Y -.90931323 05     Z -.52466248 05    DX -.16450121 01    DY -.15323577 01    DZ -.51912764 00
   R  .17423871 06   DEC -.17524707 02    RA  .21318051 03     V  .23073097 01   PTH  .79532863 02    AZ  .65764163 02
   R  .17423871 06   LAT -.17524707 02   LON  .26689567 03    VE  .11952344 02   PTE  .10942869 02   AZE  .27084014 03
  XS  .88826255 08    YS -.10782624 09    ZS -.46754541 08   DXS  .24255625 02   DYS  .16567028 02   DZS  .71842315 01
  XM -.37457060 06    YM -.14112191 06    ZM -.25417109 05   DXM  .37807309 00   DYM -.83922129 00   DZM -.32192070 00
  XT -.37457060 06    YT -.14112191 06    ZT -.25417109 05   DXT  .37807309 00   DYT -.83922129 00   DZT -.32192070 00
  RS  .14731801 09    VS  .30239294 02    RM  .40107923 06    VM  .97512284 00    RT  .40107923 06    VT  .97512284 00
 GED -.17636754 02   ALT  .16786246 06   LOS  .31965446 01   RAS  .30948138 03   RAM  .20064422 03   LOM  .25435939 03
 DUT  .34000000 02    DT  .95999999 03    DR  .22689145 01   SHA  .17423753 06   DES -.18504079 02   DEM -.36333703 01
 CCL  .27163286 03   MCL  .34396842 03   TCL  .34396842 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170662025345400000 J.D.= 2437691.36771671  JAN. 26,1962 20 49 30.724
 SMA -.53264531 06   ECC  .10124843 01     B  .84428106 05   SLR  .13382469 05   APO  .00000000 00   RCA  .66497257 04
  VH  .86506715 00    C3  .74834116 00    C1  .73036002 05   TFP  .54629275 05    TF -.10632276-01   LTF -.21326707 01
  TA  .15575686 03   MTA  .17099313 03    EA  .44074906 02    MA  .50834642 01   C3J  .46173823 00   TFI  .15164167 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.13906084 06     Y -.90931323 05     Z -.52466248 05    DX -.16450121 01    DY -.15323577 01    DZ -.51912764 00
 INC  .29594618 02   LAN  .24695893 03   APF  .16667376 03    MX  .39559077 00    MY -.83083180 00    MZ  .39144119 00
  WX -.45446210 00    WY  .19329215 00    WZ  .86954131 00    PX  .56528806 00    PY  .81700156 00    PZ  .11383242 00
  QX -.68841374 00    QY  .54327372 00    QZ -.48056203 00    RX  .12726100 00    RY  .13791922 00    RZ -.98223362 00
  BX -.59142802 00    BY  .66447891 00    BZ -.45681581 00    TX -.73493370 00    TY  .67813896 00    TZ  .00000000 00
 SXI  .45054477 00   SYI  .89197859 00   SZI  .37195515-01   DAI  .21316363 01   RAI  .63201332 02
 SXO -.66609089 00   SYO -.72187660 00   SZO -.18766213 00   DAO -.10816380 02   RAO  .22730161 03

 BTQ  .73464571 05   BRQ -.41606030 05     B  .84428106 05   THA  .33047532 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                  EQUATORIAL COORDINATES

   X -.88965315 08     Y  .10773531 09     Z  .46702174 08    DX -.25900637 02    DY -.18099385 02    DZ -.77033591 01
   R  .14731876 09   LAT  .18482466 02   LON  .12954910 03     V  .32523414 02   PTH -.65152320-01    AZ  .10443947 03
  XE -.88826255 08    YE  .10782624 09    ZE  .46754641 08   DXE -.24255625 02   DYE -.16567028 02   DZE -.71842315 01
  XT -.89200825 08    YT  .10768512 09    ZT  .46729223 08   DXT -.23877551 02   DYT -.17406249 02   DZT -.75061522 01
 LTE  .18904079 02   LOE  .12948138 03   LTT  .18478708 02   LOT  .12963661 03   RST  .14743301 09   VST  .30487002 02
 EPS  .89721450 02   ESP  .67085183-01   SEP  .90210783 02   EPM  .14823139 03   EMP  .13221740 02   MEP  .18546865 02
 MPS  .11808967 03   MSP  .82755473-01   SMP  .61827248 02   SEM  .10658629 03   EMS  .73264325 02   ESM  .14918958 00
 RPM  .24231301 06   SPN  .87623673 02
 GCE  .88367140 02   GCT  .25233556 03   SIP  .11767869 03   CPT  .98882530 02   SIN  .98471548 02
 REP  .17423871 06   VEP  .23073097 01   CPE  .88472334 02   CPS  .10305637 03

  0 DAYS 16 HRS.  9 MIN. 51.000 SEC.        2355532534242020000000000 J.D.= 2437692.04166666  JAN. 27,1962 13 00 00.000

     GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.14491742 06     Y -.96404574 05     Z -.54310259 05    DX -.16092201 01    DY -.15086441 01    DZ -.50555105 00
   R  .18233076 06   DEC -.17329515 02    RA  .21363335 03     V  .22630020 01   PTH  .79805546 02    AZ  .65611327 02
   R  .18233076 06   LAT -.17329515 02   LON  .25230745 03    VE  .12528137 02   PTF  .10240586 02   AZE  .27076864 03
  XS  .88913555 08    YS -.10776657 09    ZS -.46728764 08   DXS  .24242447 02   DYS  .16583176 02   DZS  .71912235 01
  XM -.37319431 06    YM -.14413725 06    ZM -.26574944 05   DXM  .38652027 00   DYM -.83595008 00   DZM -.32131514 00
  XT -.37319431 06    YT -.14413725 06    ZT -.26574944 05   DXT  .38652027 00   DYT -.83595008 00   DZT -.32131514 00
  RS  .14731880 09    VS  .30239239 02    RM  .40094360 06    VM  .97542496 00    RT  .40094360 06    VT  .97542496 00
 GED -.17440473 02   ALT  .17595447 06   LOS  .34819867 03   RAS  .30952457 03   RAM  .20111784 03   LOM  .23979194 03
 DUT  .34000000 02    DT  .95999999 03    DR  .22272754 01   SHA -.18233053 06   DES -.18493363 02   DEM -.38004069 01
 CCL  .27197123 03   MCL  .34396182 03   TCL  .34396182 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170672022410000000 J.D.= 2437691.36774603  JAN. 26,1962 20 49 33.258
 SMA -.53224801 06   ECC  .10124910 01     B  .84387833 05   SLR  .13379700 05   APO  .00000000 00   RCA  .66483276 04
  VH  .86538995 00    C3  .74889977 00    CI  .73028445 05   TFP  .58226742 05    TF -.99284648-02   LTF -.21307196 01
  TA  .15623227 03   MTA  .17099075 03    EA  .45091901 02    MA  .54242903 01   C3J  .46141773 00   TFI  .16164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.14491742 06     Y -.96404574 05     Z -.54310259 05    DX -.16092201 01    DY -.15086441 01    DZ -.50555105 00
 INC  .29608293 02   LAN  .24693781 03   APF  .16669082 03    MX  .40204476 00    MY -.82642704 00    MZ  .39418066 00
  WX -.45458202 00    WY  .19354107 00    WZ  .86942341 00    PX  .56535926 00    PY  .81696559 00    PZ  .11373718 00
  QX -.68827619 00    QY  .54323950 00    QZ -.48079809 00    RX  .12724823 00    RY  .13787915 00    RZ -.98224092 00
  BX -.59125320 00    BY  .66446934 00    BZ -.45705597 00    TX -.73486941 00    TY  .67820863 00    TZ  .00000000 00
 SXI  .45060468 00   SYI  .89195471 00   SZI  .37044004-01   DAI  .21229491 01   RAI  .63197648 02
 SXO -.66616427 00   SYO -.72181881 00   SZO -.18752402 00   DAO -.10814157 02   RAO  .22729618 03

 BTQ  .73419149 05   BRQ -.41604505 05     B  .84387833 05   THA  .33046103 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                  EQUATORIAL COORDINATES

   X -.89058472 08     Y  .10767016 09     Z  .46674454 08    DX -.25851667 02    DY -.18091819 02    DZ -.76967746 01
   R  .14731863 09   LAT  .18471115 02   LON  .12959557 03     V  .32478653 02   PTH -.58462149-01    AZ  .10444853 03
  XE -.88913555 08    YE  .10776657 09    ZE  .46728764 08   DXE -.24242447 02   DYE -.16583176 02   DZE -.71912235 01
  XT -.89286749 08    YT  .10762243 09    ZT  .46702189 08   DXT -.23855926 02   DYT -.17419126 02   DZT -.75125387 01
 LTE  .18493363 02   LOE  .12952457 03   LTT  .18467933 02   LOT  .12968310 03   RST  .14743068 09   VST  .30478999 02
 EPS  .90018502 02   ESP  .63941139-01   SEP  .89910583 02   EPM  .14765261 03   EMP  .14082379 02   MEP  .18265002 02
 MPS  .11845475 03   MSP  .80356253-01   SMP  .61465000 02   SEM  .10612729 03   EMS  .73723024 02   ESM  .14951711 00
 RPM  .23485739 06   SPN  .88013866 02
 GCE  .88028762 02   GCT  .25199058 03   SIP  .11803072 03   CPT  .99044432 02   SIN  .98620404 02
 REP  .18233076 06   VEP  .22630020 01   CPE  .88075530 02   CPS  .10305176 03

  0 DAYS 17 HRS.  9 MIN. 51.000 SEC.        2355532552302020000000000 J.D.= 2437692.08333333  JAN. 27,1962 14 00 00.000

     GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.15065103 06     Y -.10179564 06     Z -.56107733 05    DX -.15766102 01    DY -.14866606 01    DZ -.49323871 00
   R  .19027917 06   DEC -.17149777 02    RA  .21404708 03     V  .22224185 01   PTH  .80056784 02    AZ  .65468888 02
   R  .19027917 06   LAT -.17149777 02   LON  .23758012 03    VE  .13094578 02   PTF  .96233881 01   AZE  .27070711 03
  XS  .89000804 08    YS -.10770684 09    ZS -.46702863 08   DXS  .24229256 02   DYS  .16599315 02   DZS  .71982118 01
  XM -.37178767 06    YM -.14714068 06    ZM -.27730551 05   DXM  .39494530 00   DYM -.83260830 00   DZM -.32068318 00
  XT -.37178767 06    YT -.14714068 06    ZT -.27730551 05   DXT  .39494530 00   DYT -.83260830 00   DZT -.32068318 00
  RS  .14731960 09    VS  .30239185 02    RM  .40080598 06    VM  .97573360 00    RT  .40080598 06    VT  .97573360 00
 GED -.17253727 02   ALT  .18390284 06   LOS  .33320079 03   RAS  .30956776 03   RAM  .20159194 03   LOM  .22522498 03
 DUT  .34000000 02    DT  .95999999 03    DR  .21890363 01   SHA -.19027540 06   DES -.18482639 02   DEM -.39672906 01
 CCL  .27228206 03   MCL  .34391488 03   TCL  .34391488 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170702020416000000 J.D.= 2437691.36778083  JAN. 26,1962 20 49 36.264
 SMA -.53181743 06   ECC  .10124981 01     B  .84343455 05   SLR  .13376437 05   APO  .00000000 00   RCA  .66466831 04
  VH  .86574021 00    C3  .74950610 00    CI  .73019540 05   TFP  .61823736 05    TF -.90935230-02   LTF -.21284991 01
  TA  .15666794 03   MTA  .17098824 03    EA  .46067861 02    MA  .57663751 01   C3J  .46109211 00   TFI  .17164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.15065103 06     Y -.10179564 06     Z -.56107733 05    DX -.15766102 01    DY -.14866606 01    DZ -.49323871 00
 INC  .29624155 02   LAN  .24691376 03   APF  .16671016 03    MX  .40789766 00    MY -.82233043 00    MZ  .39672688 00
  WX -.45472219 00    WY  .19382627 00    WZ  .86928660 00    PX  .56544090 00    PY  .81692393 00    PZ  .11363019 00
  QX -.68811654 00    QY  .54320035 00    QZ -.48107075 00    RX  .12723363 00    RY  .13783422 00    RZ -.98224909 00
  BX -.59105355 00    BY  .66445579 00    BZ -.45733380 00    TX -.73479801 00    TY  .67828599 00    TZ  .00000000 00
 SXI  .45067665 00   SYI  .89192533 00   SZI  .36874046-01   DAI  .21132042 01   RAI  .63193206 02
 SXO -.66624580 00   SYO -.72175468 00   SZO -.18758110 00   DAO -.10811653 02   RAO  .22729014 03

 BTQ  .73368529 05   BRQ -.41603814 05     B  .84343455 05   THA  .33044448 03    T VECTOR IN  EARTH EQUATOR PLANE
```

CASE 1 IBSYS-JPTRAJ-SPACE 050865

BK

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89151455 08	Y	.10760504 09	Z	.46646755 08	DX	-.25805866 02	DY	-.18085975 02	DZ	-.76914506 01
R	.14731852 09	LAT	.18459772 02	LON	.12964196 03	V	.32437688 02	PTH	-.51472305-01	AZ	.10445840 03
XE	-.89000804 08	YE	.10770684 09	ZE	.46702863 08	DXE	-.24229256 02	DYE	-.16599315 02	DZE	-.71982118 01
XT	-.89372591 08	YT	.10755970 09	ZT	.46675132 08	DXT	-.23834310 02	DYT	-.17431923 02	DZT	-.75188950 01
LTE	.18482639 02	LOE	.12956776 03	LTT	.18457152 02	LOT	.12972358 03	RST	.14742834 09	VST	.30470971 02
EPS	.90286583 02	ESP	.72684965-01	SEP	.89639412 02	EPM	.14707564 03	EMP	.14953604 02	MEP	.17970754 02
MPS	.11882344 03	MSP	.76616680-01	SMP	.61099092 02	SEM	.10566797 03	EMS	.74182051 02	ESM	.14968061 00
RPM	.22751451 06	SPN	.88365716 02								
GCE	.87717940 02	GCT	.25163281 03	SIP	.11838573 03	CPT	.93212809 02	SIN	.98775095 02		
REP	.19027917 06	VEP	.22224185 01	CPE	.87712167 02	CPS	.10304715 03				

0 DAYS 18 HRS. 9 MIN. 51.000 SEC. 23555325703420200000000 J.D.= 2437692.12500000 JAN. 27,1962 15 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.15627230 06	Y	-.10711036 06	Z	-.57862874 05	DX	-.15467441 01	DY	-.14662011 01	DZ	-.48200596 00
R	.19809537 06	DEC	-.16983484 02	RA	.21442707 03	V	.21850613 01	PTH	.80289461 02	AZ	.65334605 02
R	.19809536 06	LAT	-.16983484 02	LON	.22301903 03	VE	.13652271 02	PTE	.90767869 01	AZE	.27065368 03
XS	.89088008 08	YS	-.10764705 09	ZS	-.46676936 08	DXS	.24216051 02	DYS	.16615446 02	DZS	.72051965 01
XM	-.37035074 06	YM	-.15013195 06	ZM	-.28883835 05	DXM	.40334757 00	DYM	-.82919607 00	DZM	-.32002481 00
XT	-.37035074 06	YT	-.15013195 06	ZT	-.28883835 05	DXT	.40334757 00	DYT	-.82919607 00	DZT	-.32002481 00
RS	.14732039 09	VS	.30239131 02	RM	.40066638 06	VM	.97604880 00	RT	.40066638 06	VT	.97604880 00
GED	-.17092498 02	ALT	.19171900 06	LOS	.31820290 03	RAS	.30961094 03	RAM	.20206654 03	LOM	.21065850 03
DUT	.34000000 02	DT	.95999999 03	DR	.21537548 01	SHA	-.19808426 06	DES	-.18471904 02	DEM	-.41340095 01
CCL	.27256908 03	MCL	.34382928 03	TCL	.34382928 03						

GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE 23555321707020275664000 J.D.= 2437691.36782251 JAN. 26,1962 20 49 39.866

SMA	-.53135080 06	ECC	.10125054 01	B	.84294385 05	SLR	.13372609 05	APO	.00000000 00	RCA	.66447569 04
VH	.86612026 00	C3	.75016431 00	CI	.73009092 05	TFP	.65420134 05	TF	-.80928802-02	LTF	-.21259451 01
TA	.15706931 03	MTA	.17098562 03	EA	.47007159 02	MA	.61098552 01	C3J	.46076107 00	TFI	.18164166 02

ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

X	-.15627230 06	Y	-.10711036 06	Z	-.57862874 05	DX	-.15467441 01	DY	-.14662011 01	DZ	-.48200596 00
INC	.29642438 02	LAN	.26688644 03	APF	.16673205 03	MX	.41322771 00	MY	-.81850347 00	MZ	.39911872 00
WX	-.45488551 00	WY	.19415224 00	WZ	.86912882 00	PX	.56553417 00	PY	.81687611 00	PZ	.11351019 00
QX	-.68793216 00	QY	.54315630 00	QZ	-.48138478 00	RX	.12721683 00	RY	.13778385 00	RZ	-.98225835 00
BX	-.59082615 00	BY	.66443755 00	BZ	-.45765401 00	TX	-.73471909 00	TY	.67837147 00	TZ	.00000000 00
SXI	.45076253 00	SYI	.89188989 00	SZI	.36683786-01	DAI	.21022964 01	RAI	.63187895 02		
SXO	-.66633605 00	SYO	-.72168397 00	SZO	-.18753269 00	DAO	-.10808830 02	RAO	.22728348 03		

BTQ	.73311993 05	BRQ	-.41604028 05	B	.84294385 05	THA	.33042540 03	T VECTOR IN EARTH EQUATOR PLANE

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89244280 08	Y	.10753994 09	Z	.46619074 08	DX	-.25762796 02	DY	-.18081647 02	DZ	-.76872025 01
R	.14731842 09	LAT	.18448435 02	LON	.12968830 03	V	.32400010 02	PTH	-.44263040-01	AZ	.10446894 03
XE	-.89088008 08	YE	.10764705 09	ZE	.46676936 08	DXE	-.24216051 02	DYE	-.16615446 02	DZE	-.72051965 01
XT	-.89458358 08	YT	.10749692 09	ZT	.46648053 08	DXT	-.23812704 02	DYT	-.17444642 02	DZT	-.75252213 01
LTE	.18471904 02	LOE	.12961094 03	LTT	.18446361 02	LOT	.12976705 03	RST	.14742600 09	VST	.30462917 02
EPS	.90529604 02	ESP	.77252514-01	SEP	.89393352 02	EPM	.14649788 03	EMP	.15836969 02	MEP	.17665149 02
MPS	.11919702 03	MSP	.75003516-01	SMP	.60728242 02	SEM	.10520832 03	EMS	.74641415 02	ESM	.15049542 00
RPM	.22027305 06	SPN	.88684557 02								
GCE	.87430923 02	GCT	.25126021 03	SIP	.11874492 03	CPT	.99388642 02	SIN	.98936538 02		
REP	.19809537 06	VEP	.21850613 01	CPE	.87377714 02	CPS	.10304253 03				

0 DAYS 19 HRS. 9 MIN. 51.000 SEC. 23555326064020200000000 J.D.= 2437692.16666666 JAN. 27,1962 16 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.16179045 06	Y	-.11235391 06	Z	-.59579293 05	DX	-.15192648 01	DY	-.14470930 01	DZ	-.47170321 00
R	.20578932 06	DEC	-.16828979 02	RA	.21477769 03	V	.21505226 01	PTH	.80505973 02	AZ	.65206575 02
R	.20578931 06	LAT	-.16828979 02	LON	.20832859 03	VE	.14201770 02	PTE	.85893922 01	AZE	.27060693 03
XS	.89175164 08	YS	-.10758720 09	ZS	-.46650985 08	DXS	.24202834 02	DYS	.16631568 02	DZS	.72121776 01
XM	-.36888359 06	YM	-.15311082 06	ZM	-.30034702 05	DXM	.41172647 00	DYM	-.82571346 00	DZM	-.31934002 00
XT	-.36888359 06	YT	-.15311082 06	ZT	-.30034702 05	DXT	.41172647 00	DYT	-.82571346 00	DZT	-.31934002 00
RS	.14732118 09	VS	.30239077 02	RM	.40052479 06	VM	.97637054 00	RT	.40052479 06	VT	.97637054 00
GED	-.16937119 02	ALT	.19941292 06	LOS	.30320501 03	RAS	.30965411 03	RAM	.20254164 03	LOM	.19609254 03
DUT	.34000000 02	DT	.95999999 03	DR	.21210665 01	SHA	-.20576768 06	DES	-.18461160 02	DEM	-.43005542 01
CCL	.27283535 03	MCL	.34370589 03	TCL	.34370589 03						

GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE 23555321707220201630000 J.D.= 2437691.36787166 JAN. 26,1962 20 49 44.112

SMA	-.53084532 06	ECC	.10125131 01	B	.84240320 05	SLR	.13368180 05	APO	.00000000 00	RCA	.66425307 04
VH	.86653253 00	C3	.75087862 00	CI	.72997002 05	TFP	.69015887 05	TF	-.69134235-02	LTF	-.21230412 01
TA	.15744082 03	MTA	.17098287 03	EA	.47913554 02	MA	.64548860 01	C3J	.46042395 00	TFI	.19164166 02

ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

X	-.16179045 06	Y	-.11235391 06	Z	-.59579293 05	DX	-.15192648 01	DY	-.14470930 01	DZ	-.47170321 00
INC	.29663567 02	LAN	.24685548 03	APF	.16675678 03	MX	.41809719 00	MY	-.81491227 00	MZ	.40138857 00
WX	-.45507452 00	WY	.19452372 00	WZ	.86894637 00	PX	.56564026 00	PY	.81682129 00	PZ	.11337564 00
QX	-.68771967 00	QY	.54310546 00	QZ	-.48174500 00	RX	.12719761 00	RY	.13772749 00	RZ	-.98226873 00
BX	-.59056784 00	BY	.66441364 00	BZ	-.45802201 00	TX	-.73463183 00	TY	.67846598 00	TZ	.00000000 00
SXI	.45086370 00	SYI	.89184739 00	SZI	.36470741-01	DAI	.20900814 01	RAI	.63181619 02		
SXO	-.66643591 00	SYO	-.72160587 00	SZO	-.18747825 00	DAO	-.10805655 02	RAO	.22727611 03		

BTQ	.73249049 05	BRQ	-.41605388 05	B	.84240320 05	THA	.33040347 03	T VECTOR IN EARTH EQUATOR PLANE

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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

      HELIOCENTRIC                                                                                                EQUATORIAL COORDINATES

    X -.83336354 08     Y  .10747485 09     Z  .46591406 08     DX -.25722099 02     DY -.18078661 02     DZ -.76838808 01
    R  .14731834 09   LAT  .18437102 02   LON  .12973457 03     V  .12365203 02    PTH -.36895878-01     AZ  .10448003 03
   XE -.89175164 08     YE  .10758720 09     ZE  .46650985 08   DXE -.24202834 02    DYE -.16631568 02    DZE -.72121776 01
   XT -.89544047 08     YT  .10743409 09     ZT  .46620950 08   DXT -.23791108 02    DYT -.17457282 02    DZT -.75315176 01
  LTE  .18441160 02    LOE  .12965411 03    LTT  .18435561 02   LOT  .12981049 03    RST  .14742365 09    VST  .30454839 02
  EPS  .90750764 02    ESP  .80356253-01    SEP  .89159204 02   EPM  .14591666 03    EMP  .16734198 02    MEP  .17349146 02
  MPS  .11957685 03    MSP  .71668340-01    SMP  .60351115 02   SEM  .10474834 03    EMS  .75101118 02    ESM  .15082012 00
  RPM  .21312338 06    SPN  .88974720 02
  GCE  .87164646 02    GCT  .25087054 03    SIP  .11910957 03   CPT  .93572345 02    SIN  .99105673 02
  REP  .20574932 06    VEP  .21505226 01    CPE  .87068461 02   CPS  .10303790 03

  0 DAYS 20 HRS.  9 MIN. 51.000 SEC.        2355532624442020000000000 J.D.= 2437692.20833333  JAN. 27,1962 17 00 00.000

      GEOCENTRIC                                                                                                  EQUATORIAL COORDINATES

    X -.16721352 06     Y -.11753088 06     Z -.61260108 05     DX -.14938788 01     DY -.14291901 01     DZ -.46220773 00
    R  .21336979 06   DEC -.16684875 02    RA  .21510258 03     V  .21184650 01    PTH  .80708288 02     AZ  .65083100 02
    R  .21336979 06   LAT -.16684875 02   LON  .19361241 03    VE  .14743586 02    PTE  .81521303 01    AZE  .27056574 03
   XS  .89262271 08     YS -.10752730 09     ZS -.46625008 08   DXS  .24189604 02    DYS  .16647683 02    DZS  .72191548 01
   XM -.36738633 06     YM -.15607701 06     ZM -.31183056 05   DXM  .42008137 00    DYM -.82216052 00    DZM -.31862879 00
   XT -.36738633 06     YT -.15607701 06     ZT -.31183056 05   DXT  .42008137 00    DYT -.82216052 00    DZT -.31862879 00
   RS  .14732198 09     VS  .30239022 02    RM  .40038123 06    VM  .97669881 00     RT  .40038123 06     VT  .97669881 00
  GED -.16792199 02    ALT  .20699337 06   LOS  .28820711 03   RAS  .33369728 03   RAM  .20301728 03   LOM  .18152711 03
  DUT  .34000000 02     DT  .95999999 03    DR  .20906689 01   SHA -.21333493 06   DES -.18450407 02   DEM -.44669146 01
  CCL  .27308342 03    MCL  .34354485 03   TCL  .34354485 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532170732022213000 00 J.D.= 2437691.36792981  JAN. 26,1962 20 49 49.136
  SMA -.53029783 06    ECC  .10125212 01     B  .84180679 05   SLR  .13363042 05   APO  .00000000 00   RCA  .66399512 04
   VH  .86697973 00     C3  .75165385 00    C1  .72982971 05   TFP  .72610864 05    TF -.55179595-02   LTF -.21197248 01
   TA  .15778620 03    MTA  .17098000 03    EA  .48790330 02    MA  .68016350 01   C3J  .46008074 00   TFI  .20164166 02

                                                     ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
    X -.16721352 06     Y -.11753088 06     Z -.61260108 05     DX -.14938788 01     DY -.14291901 01     DZ -.46220773 00
  INC  .29687780 02    LAN  .24682043 03   APF  .16678471 03    MX  .42255738 00     MY -.81152963 00     MZ  .40356581 00
   WX -.45529330 00     WY  .19494676 00    WZ  .86873715 00    PX  .56576084 00     PY  .81675875 00     PZ  .11322486 00
   QX -.68747569 00     QY  .54304805 00    QZ -.48215799 00    RX  .12717563 00     RY  .13766445 00     RZ -.98228044 00
   BX -.59027451 00     BY  .66438320 00    BZ -.45844408 00    TX -.73453546 00     TY  .67857030 00     TZ  .00000000 00
  SXI  .45098258 00    SYI  .89179708 00   SZI  .36232347-01   DAI  .20764142 01   RAI  .63174234 02
  SXO -.66654634 00    SYO -.72151982 00   SZO -.18741702 00   DAO -.10802083 02   RAO  .22726797 03

  BTQ  .73178915 05    BRQ -.41608091 05     B  .84180679 05   THA  .33037829 03    T VECTOR IN  EARTH EQUATOR PLANE
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      HELIOCENTRIC                                                                                                EQUATORIAL COORDINATES

    X -.89429484 08     Y  .10740977 09     Z  .46563748 08     DX -.25683482 02     DY -.18076872 02     DZ -.76813626 01
    R  .14731627 09   LAT  .18425773 02   LON  .12978080 03     V  .32332923 02    PTH -.29413355-01     AZ  .10449156 03
   XE -.89262271 08     YE  .10752730 09     ZE  .46625008 08   DXE -.24189604 02    DYE -.16647683 02    DZE -.72191548 01
   XT -.89629657 08     YT  .10737122 09     ZT  .46593825 08   DXT -.23769523 02    DYT -.17469843 02    DZT -.75377837 01
  LTE  .18450407 02    LOE  .12969728 03    LTT  .18424753 02   LOT  .12985392 03    RST  .14742130 09    VST  .30446737 02
  EPS  .90952709 02    ESP  .83344489-01    SEP  .88954318 02   EPM  .14532915 03    EMP  .17647230 02    MEP  .17023616 02
  MPS  .11996431 03    MSP  .68884033-01    SMP  .59966308 02   SEM  .10428803 03    EMS  .75561170 02    ESM  .15082012 00
  RPM  .20605724 06    SPN  .89239782 02
  GCE  .86916573 02    GCT  .25046142 03    SIP  .11948101 03   CPT  .99766786 02    SIN  .99283491 02
  REP  .21336979 06    VEP  .21184650 01    CPE  .85781337 02   CPS  .10303327 03

  0 DAYS 21 HRS.  9 MIN. 51.000 SEC.        2355532642502020000000000 J.D.= 2437692.25000000  JAN. 27,1962 18 00 00.000

      GEOCENTRIC                                                                                                  EQUATORIAL COORDINATES

    X -.17254859 06     Y -.12264538 06     Z -.62908036 05     DX -.14703421 01     DY -.14123681 01     DZ -.45341775 00
    R  .22084458 06   DEC -.16550005 02    RA  .21540473 03     V  .23886066 01    PTH  .80898061 02     AZ  .64962661 02
    R  .22084457 06   LAT -.16550006 02   LON  .17887350 03    VE  .15278187 02    PTE  .77576844 01    AZE  .27052923 03
   XS  .89349332 08     YS -.10746734 09     ZS -.46599007 08   DXS  .24176360 02    DYS  .16663789 02    DZS  .72261286 01
   XM -.36585903 06     YM -.15903030 06     ZM -.32328802 05   DXM  .42841166 00    DYM -.81853740 00    DZM -.31789112 00
   XT -.36585903 06     YT -.15903030 06     ZT -.32328802 05   DXT  .42841166 00    DYT -.81853740 00    DZT -.31789112 00
   RS  .14732277 09     VS  .30238968 02    RM  .40023570 06    VM  .97703366 00     RT  .40023570 06     VT  .97703366 00
  GED -.16656562 02    ALT  .21446812 06   LOS  .27320921 03   RAS  .30974245 03   RAM  .20349345 03   LOM  .16696222 03
  DUT  .34000000 02     DT  .95999999 03    DR  .20623079 01   SHA -.22079422 06   DES -.18439644 02   DEM -.46330803 01
  CCL  .27331541 03    MCL  .34334560 03   TCL  .34334560 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532170742026033000 00 J.D.= 2437691.36799799  JAN. 26,1962 20 49 55.026
  SMA -.52970499 06    ECC  .10125296 01     B  .84114991 05   SLR  .13357139 05   APO  .00000000 00   RCA  .66369899 04
   VH  .86746475 00     C3  .75249510 00    C1  .72966848 05   TFP  .76204973 05    TF -.38816928-02   LTF -.21159545 01
   TA  .15810853 03    MTA  .17097700 03    EA  .49640375 02    MA  .71502910 01   C3J  .45973083 00   TFI  .21164166 02

                                                     ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
    X -.17254859 06     Y -.12264538 06     Z -.62908036 05     DX -.14703421 01     DY -.14123681 01     DZ -.45341775 00
  INC  .29715595 02    LAN  .24678079 03   APF  .16681620 03    MX  .42664302 00     MY -.80833016 00     MZ  .40567586 00
   WX -.45554542 00     WY  .19542770 00    WZ  .85849660 00    PX  .56589743 00     PY  .81668752 00     PZ  .11305585 00
   QX -.68719603 00     QY  .54298212 00    QZ -.48263026 00    RX  .12715047 00     RY  .13759396 00     RZ -.98229357 00
   BX -.58994212 00     BY  .66434482 00    BZ -.45892730 00    TX -.73442914 00     TY  .67868539 00     TZ  .00000000 00
  SXI  .45112114 00    SYI  .89173777 00   SZI  .35965501-01   DAI  .20611146 01   RAI  .63165611 02
  SXO -.66666829 00    SYO -.72142501 00   SZO -.18734818 00   DAO -.10798068 02   RAO  .22725899 03

  BTQ  .73100880 05    BRQ -.41612415 05     B  .84114991 05   THA  .33034946 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.89521880 08     Y  .10734469 09     Z  .46536098 08    DX -.25646702 02    DY -.18076157 02    DZ -.76795463 01
   R  .14731822 09   LAT  .18414444 02   LON  .12982697 03     V  .32302882 02   PTH -.21848921-01    AZ  .10450346 03
  XE -.89349332 08    YE  .10746734 09    ZE  .46599007 08   DXE -.24176360 02   DYE -.16663789 02   DZE -.72261286 01
  XT -.89715191 08    YT  .10730831 09    ZT  .46566677 08   DXT -.23747949 02   DYT -.17482326 02   DZT -.75440196 01
 LTE  .18439644 02   LDE  .12974044 03   LTT  .18413939 02   LDT  .12989733 03   RST  .14741894 09   VST  .30438611 02
 EPS  .91137645 02   ESP  .85660053-01   SEP  .88776480 02   EPM  .14473241 03   EMP  .18578227 02   MEP  .16689362 02
 MPS  .12036091 03   MSP  .66351990-01   SMP  .59572329 02   SEM  .10382738 03   EMS  .76021574 02   ESM  .15114412 00
 RPM  .19906752 06   SPN  .89482713 02
 GCE  .86684587 02   GCT  .25003019 03   SIP  .11986064 03   CPT  .99971318 02   SIN  .99471052 02
 REP  .22084458 06   VEP  .20886066 01   CPE  .86513772 02   CPS  .10302863 03

  0 DAYS 22 HRS.  9 MIN. 51.000 SEC.        2355532660542020000000000 J.D.= 2437692.29166666  JAN. 27,1962 19 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.17780195 06     Y -.12770110 06     Z -.64525461 05    DX -.14484506 01    DY -.13965202 01    DZ -.44524792 00
   R  .22822059 06   DEC -.16423376 02   RA  .21568670 03     V  .20607095 01   PTH  .81076736 02    AZ  .64843820 02
   R  .22822059 06   LAT -.16423377 02   LON  .16411440 03    VE  .15806003 02   PTE  .74000924 01   AZE  .27049667 03
  XS  .89436344 08    YS -.10740732 09   ZS -.46572980 08   DXS  .24163104 02   DYS  .16679886 02   DZS  .72330985 01
  XM -.36430179 06    YM -.16197041 06   ZM -.33471845 05   DXM  .43671672 00   DYM -.81484415 00   DZM -.31712700 00
  XT -.36430179 06    YT -.16197041 06   ZT -.33471845 05   DXT  .43671672 00   DYT -.81484415 00   DZT -.31712700 00
  RS  .14732357 09    VS  .30238914 02   RM  .40008820 06    VM  .97737505 00    RT  .40008820 06    VT  .97737505 00
 GED -.16529211 02   ALT  .22184411 06   LOS  .25821130 03   RAS  .30978360 03   RAM  .20397017 03   LOM  .15239787 03
 DUT  .34000000 02    DT  .95999999 03    DR  .20357687 01   SHA -.22815284 06   DES -.18428870 02   DEM -.47990411 01
 CCL  .27353309 03   MCL  .34310698 03   TCL  .34310698 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532170762023653000000 J.D.= 2437691.36807774  JAN. 26,1962 20 50 01.917
 SMA -.52906276 06   ECC  .10125384 01    B  .84042674 05   SLR  .13350357 05   APO  .00000000 00   RCA  .66335911 04
  VH  .86799110 00    C3  .75340854 00   C1  .72948321 05   TFP  .73798083 05    TF -.19676685-02   LTF -.21116714 01
  TA  .15841045 03   MTA  .17097367 03   EA  .50466277 02    MA  .75310590 01   C3J  .45937401 00   TFI  .22164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.17780195 06     Y -.12770110 06     Z -.64525461 05    DX -.14484506 01    DY -.13965202 01    DZ -.44524792 00
 INC  .29747421 02   LAN  .24673600 03   APF  .16685173 03    MX  .43040578 00    MY -.80529292 00    MZ  .40774304 00
  WX -.45583587 00    WY  .19597432 00    WZ  .86822114 00    PX  .56605212 00    PY  .81660654 00    PZ  .11286633 00
  QX -.68687604 00    QY  .54290698 00    QZ -.48317021 00    RX  .12712175 00    RY  .13751515 00    RZ -.98233833 00
  BX -.58956530 00    BY  .66429728 00    BZ -.45948000 00    TX -.73431170 00    TY  .67881244 00    TZ  .00000000 00
 SXI  .45128215 00   SYI  .89166832 00   SZI  .35666587-01   DAI  .20439776 01   RAI  .63155577 02
 SXD -.66680311 00   SYD -.72132050 00   SZD -.18727081 00   DAD -.10793555 02   RAD  .22724908 03

 BTQ  .73014073 05   BRQ -.41618702 05    B  .84042674 05   THA  .33031646 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.89614145 08     Y  .10727962 09     Z  .46508455 08    DX -.25611555 02    DY -.18076406 02    DZ -.76783464 01
   R  .14731818 09   LAT  .18403118 02   LON  .12987310 03     V  .32274838 02   PTH -.14226430-01    AZ  .10451568 03
  XE -.89436344 08    YE  .10740732 09    ZE  .46572980 08   DXE -.24163104 02   DYE -.16679886 02   DZE -.72330985 01
  XT -.89800645 08    YT  .10724535 09    ZT  .46539508 08   DXT -.23726387 02   DYT -.17494730 02   DZT -.75502256 01
 LTE  .18428870 02   LDE  .12978360 03   LTT  .18403115 02   LDT  .12994073 03   RST  .14741657 09   VST  .30430461 02
 EPS  .91307436 02   ESP  .89020541-01   SEP  .88603828 02   EPM  .14412326 03   EMP  .19529625 02   MEP  .16347108 02
 MPS  .12076826 03   MSP  .63719410-01   SMP  .59167570 02   SEM  .10336637 03   EMS  .76482338 02   ESM  .15130585 00
 RPM  .19214812 06   SPN  .89706004 02
 GCE  .86466903 02   GCT  .24957388 03   SIP  .12024998 03   CPT  .10018779 03   SIN  .99669506 02
 REP  .22822059 06   VEP  .20607095 01   CPE  .86263601 02   CPS  .10302399 03

  0 DAYS 23 HRS.  9 MIN. 51.000 SEC.        2355532676602020000000000 J.D.= 2437692.33333333  JAN. 27,1962 20 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.18297920 06     Y -.13270139 06     Z -.66114480 05    DX -.14280319 01    DY -.13815542 01    DZ -.43762598 00
   R  .23550408 06   DEC -.16304138 02   RA  .21595062 03     V  .20345721 01   PTH  .81245486 02    AZ  .64725200 02
   R  .23550407 06   LAT -.16304138 02   LON  .14933726 03    VE  .16327427 02   PTE  .70744503 01   AZE  .27046752 03
  XS  .89523310 08    YS -.10734724 09   ZS -.46546927 08   DXS  .24149835 02   DYS  .16695976 02   DZS  .72400650 01
  XM -.36271469 06    YM -.16489710 06   ZM -.34612089 05   DXM  .44499592 00   DYM -.81108088 00   DZM -.31633642 00
  XT -.36271469 06    YT -.16489710 06   ZT -.34612089 05   DXT  .44499592 00   DYT -.81108088 00   DZT -.31633642 00
  RS  .14732437 09    VS  .30238859 02   RM  .39993874 06    VM  .97772300 00    RT  .39993874 06    VT  .97772300 00
 GED -.16409289 02   ALT  .22912757 06   LOS  .24321339 03   RAS  .30982675 03   RAM  .20444746 03   LOM  .13783410 03
 DUT  .34000000 02    DT  .95999999 03    DR  .20108684 01   SHA -.23541732 06   DES -.18418088 02   DEM -.49647868 01
 CCL  .27373800 03   MCL  .34282715 03   TCL  .34282715 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532171002023664000000 J.D.= 2437691.36817028  JAN. 26,1962 20 50 09.912
 SMA -.52836689 06   ECC  .10125475 01    B  .83962996 05   SLR  .13342603 05   APO  .00000000 00   RCA  .66297084 04
  VH  .86856249 00    C3  .75440080 00   C1  .72927136 05   TFP  .83390088 05    TF  .25320053-03   LTF -.21068181 01
  TA  .15869420 03   MTA  .17097060 03   EA  .51270365 02    MA  .78542103 01   C3J  .45901003 00   TFI  .23164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.18297920 06     Y -.13270139 06     Z -.66114480 05    DX -.14280319 01    DY -.13815542 01    DZ -.43762598 00
 INC  .29783846 02   LAN  .24668541 03   APF  .16689180 03    MX  .43385433 00    MY -.80239838 00    MZ  .40979011 00
  WX -.45616989 00    WY  .19659538 00    WZ  .86790552 00    PX  .56622706 00    PY  .81651464 00    PZ  .11265365 00
  QX -.68651013 00    QY  .54282092 00    QZ -.48378693 00    RX  .12738886 00    RY  .13742694 00    RZ -.98232492 00
  BX -.58913838 00    BY  .66423882 00    BZ -.46011170 00    TX -.73418214 00    TY  .67895256 00    TZ  .00000000 00
 SXI  .45146866 00   SYI  .89158729 00   SZI  .35331566-01   DAI  .20247703 01   RAI  .63143939 02
 SXD -.66695203 00   SYD -.72120542 00   SZD -.18718372 00   DAD -.10788475 02   RAD  .22723815 03

 BTQ  .72917447 05   BRQ -.41627284 05    B  .83962996 05   THA  .33027872 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 05  65

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.89706289 08     Y  .10721454 09     Z  .46480813 08    DX -.25577866 02    DY -.18077530 02    DZ -.76776909 01
   R  .14731816 09   LAT  .18391792 02   LON  .12991919 03     V  .32748585 02   PTH -.65593342-02    AZ  .10452815 03
  XE -.89523310 08    YE  .10734724 09    ZE  .46546927 08   DXE -.24149835 02   DYE -.16695976 02   DZE -.72400650 01
  XT -.89886024 08    YT  .10718234 09    ZT  .46512315 08   DXT -.23704838 02   DYT -.17507056 02   DZT -.75564013 01
 LTE  .18418088 02   LDE  .12982675 03   LTT  .18392284 02   LOT  .12998411 03   RST  .14741420 09   VST  .30422287 02
 EPS  .91463661 02   ESP  .91192092-01   SEP  .88444776 02   EPM  .14349831 03   EMP  .20504166 02   MEP  .15997514 02
 MPS  .12118810 03   MSP  .61373100-01   SMP  .58750287 02   SEM  .10290501 03   EMS  .76943466 02   ESM  .15162881 00
 RPM  .18529386 06   SPN  .89911769 02
 GCE  .86261999 02   GCT  .24908914 03   SIP  .12065065 03   CPT  .10041757 03   SIN  .99880118 02
 REP  .23550408 06   VEP  .20345721 01   CPE  .86028982 02   CPS  .10301934 03

  1 DAYS  0 HRS.  9 MIN. 51.000 SEC.        2355532714642020000000000 J.D.= 2437692.37500000  JAN. 27,1962 21 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.18808537 06     Y -.13764926 06     Z -.67676952 05    DX -.14089397 01    DY -.13673898 01    DZ -.43049017 00
   R  .24270062 06   DEC -.16191551 02   RA  .21619833 03     V  .20100218 01   PTH  .81405379 02    AZ  .64605407 02
   R  .24270062 06   LAT -.16191551 02   LON  .13454390 03    VE  .16842821 02   PTE  .67766830 01   AZE  .27044130 03
  XS  .89610228 08    YS -.10728711 09    ZS -.46520850 08   DXS  .24136552 02   DYS  .16712056 02   DZS  .72470275 01
  XM -.36109785 06    YM -.16781012 06    ZM -.35749440 05   DXM  .45324865 00   DYM -.80724771 00   DZM -.31551938 00
  XT -.36109785 06    YT -.16781012 06    ZT -.35749440 05   DXT  .45324865 00   DYT -.80724771 00   DZT -.31551938 00
  RS  .14732517 09    VS  .30238805 02    RM  .39978733 06    VM  .97807753 00    RT  .39978733 06    VT  .97807753 00
 GED -.16296056 02   ALT  .23632409 06   LOS  .22821547 03   RAS  .39986990 03   RAM  .20492533 03   LOM  .12327090 03
 DUT  .34000000 02    DT  .95999999 03    DR  .19874501 01   SHA -.24259355 06   DES -.18407295 02   DEM -.51303078 01
 CCL  .27393142 03   MCL  .34250358 03   TCL  .34250358 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171022026350000 0 J.D.= 2437691.36827814  JAN. 26,1962 20 50 19.231
 SMA -.52761274 06   ECC  .10125571 01    B  .83875255 05   SLR  .13333771 05   APO  .00000000 00   RCA  .66252884 04
  VH  .86918302 00    C3  .75547912 00   C1  .72902795 05   TFP  .84980768 05    TF  .28419494-02   LTF -.21013089 01
  TA  .15896171 03   MTA  .17096720 03   EA  .52054760 02    MA  .82099748 01   C3J  .45863828 00   TFI  .24164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.18808537 06     Y -.13764926 06     Z -.67676952 05    DX -.14089397 01    DY -.13673898 01    DZ -.43049017 00
 INC  .29825583 02   LAN  .24662824 03   APF  .16693702 03    MX  .43701564 00    MY -.79962868 00    MZ  .41183957 00
  WX -.45655360 00    WY  .19730115 00    WZ  .86754344 00    PX  .56642482 00    PY  .81641036 00    PZ  .11241465 00
  QX -.68609179 00    QY  .54272151 00    QZ -.48449132 00    RX  .12705117 00    RY  .13732813 00    RZ -.98234361 00
  BX -.58865464 00    BY  .66416711 00    BZ -.46083380 00    TX -.73403910 00    TY  .67910721 00    TZ  .00000000 00
 SXI  .45168415 00   SYI  .89149291 00   SZI  .34955543-01   DAI  .20032125 01   RAI  .63130472 02
 SXO -.66711663 00   SYO -.72107862 00   SZO -.18708558 00   DAO -.10782751 02   RAO  .22722608 03

 BTQ  .72809902 05   BRQ -.41638641 05    B  .83875255 05   THA  .33023556 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.89798313 08     Y  .10714946 09     Z  .46453173 08    DX -.25545491 02    DY -.18079446 02    DZ -.76775177 01
   R  .14731816 09   LAT  .18380465 02   LON  .12996523 03     V  .32223947 02   PTH -.11360528-02    AZ  .10454083 03
  XE -.89610228 08    YE  .10728711 09    ZE  .46520850 08   DXE -.24136552 02   DYE -.16712056 02   DZE -.72470275 01
  XT -.89971325 08    YT  .10711930 09    ZT  .46485101 08   DXT -.23683303 02   DYT -.17519304 02   DZT -.75625469 01
 LTE  .18407295 02   LDE  .12986990 03   LTT  .18381443 02   LOT  .11002747 03   RST  .14741183 09   VST  .30414091 02
 EPS  .91607673 02   ESP  .93835890-01   SEP  .88297974 02   EPM  .14285384 03   EMP  .21504973 02   MEP  .15641182 02
 MPS  .12162234 03   MSP  .58097472-01   SMP  .58318578 02   SEM  .10244329 03   EMS  .77404964 02   ESM  .15162881 00
 RPM  .17850031 06   SPN  .90101808 02
 GCE  .86068576 02   GCT  .24857215 03   SIP  .12106443 03   CPT  .10066219 03   SIN  .10010428 03
 REP  .24270362 06   VEP  .20100218 01   CPE  .85808335 02   CPS  .10331468 03

  1 DAYS  1 HRS.  9 MIN. 51.000 SEC.        2355532732702020000000000 J.D.= 2437692.41666666  JAN. 27,1962 22 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.19312500 06     Y -.14254748 06     Z -.69214531 05    DX -.13910490 01    DY -.13539571 01    DZ -.42378716 00
   R  .24981533 06   DEC -.16084979 02   RA  .21643140 03     V  .19869103 01   PTH  .81557325 02    AZ  .64481012 02
   R  .24981532 06   LAT -.16084979 02   LON  .11973590 03    VE  .17352521 02   PTE  .65033825 01   AZE  .27041762 03
  XS  .89697096 08    YS -.10722691 09    ZS -.46434748 08   DXS  .24123256 02   DYS  .16728129 02   DZS  .72537866 01
  XM -.35945133 06    YM -.17070921 06    ZM -.36883802 05   DXM  .46147428 00   DYM -.80334472 00   DZM -.31467588 00
  XT -.35945133 06    YT -.17070921 06    ZT -.36883802 05   DXT  .46147428 00   DYT -.80334472 00   DZT -.31467588 00
  RS  .14732597 09    VS  .30238751 02    RM  .39963397 06    VM  .97843862 00    RT  .39963397 06    VT  .97843862 00
 GED -.16188871 02   ALT  .24343878 06   LOS  .21321755 03   RAS  .39991304 03   RAM  .20540379 03   LOM  .10870829 03
 DUT  .34000000 02    DT  .95999999 03    DR  .19653787 01   SHA -.24756683 06   DES -.18396494 02   DEM -.52955916 01
 CCL  .27411449 03   MCL  .34213300 03   TCL  .34213300 03

                                                    GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171052024007000000 J.D.= 2437691.36840285  JAN. 26,1962 20 50 30.007
 SMA -.52673478 06   ECC  .10125671 01    B  .83778650 05   SLR  .13323732 05   APO  .00000000 00   RCA  .66202672 04
  VH  .86985754 00    C3  .75665215 00   C1  .72875544 05   TFP  .93559993 05    TF  .58350562-02   LTF -.20950828 01
  TA  .15921465 03   MTA  .17096365 03   EA  .52821427 02    MA  .85686740 01   C3J  .45825863 00   TFI  .25164166 02

                                                                ALL VECTORS REFFRENCED TO EARTH EQUATOR PLANE
   X -.19312500 06     Y -.14254748 06     Z -.69214531 05    DX -.13910490 01    DY -.13539571 01    DZ -.42378716 00
 INC  .29873409 02   LAN  .24656361 03   APF  .16698808 03    MX  .43990596 00    MY -.79696766 00    MZ  .41391441 00
  WX -.45699437 00    WY  .19810367 00    WZ  .86712798 00    PX  .56664845 00    PY  .81629211 00    PZ  .11214570 00
  QX -.68561336 00    QY  .54260658 00    QZ -.48529607 00    RX  .12700794 00    RY  .13721732 00    RZ -.98236467 00
  BX -.58810589 00    BY  .66407990 00    BZ -.46165936 00    TX -.73388099 00    TY  .67927807 00    TZ  .00000000 00
 SXI  .45193266 00   SYI  .89138333 00   SZI  .34532804-01   DAI  .19789764 01   RAI  .63114924 02
 SXO -.66729878 00   SYO -.72093876 00   SZO -.18697489 00   DAO -.10776296 02   RAO  .22721274 03

 BTQ  .72690172 05   BRQ -.41653341 05    B  .83778650 05   THA  .33018618 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                  EQUATORIAL COORDINATES

   X -.89890221 08     Y  .10708437 09     Z  .46425533 08    DX -.25514305 02    DY -.18082086 02    DZ -.76777737 01
   R  .14731817 09   LAT  .18369135 02   LON  .13001123 03     V  .32200773 02   PTH  .88542685-02    AZ  .10455370 03
  XE -.89697096 08    YE  .10722691 09    ZE  .46494748 08   DXE -.24123256 02   DYE -.16728129 02   DZE -.72539866 01
  XT -.90056547 08    YT  .10705620 09    ZT  .46457864 08   DXT -.23661781 02   DYT -.17531473 02   DZT -.75686625 01
 LTE  .18396494 02   LOE  .12991304 03   LTT  .18370596 02   LOT  .13007082 03   RST  .14740945 09   VST  .30405873 02
 EPS  .91740637 02   ESP  .96407213-01   SEP  .88162252 02   EPM  .14218574 03   EMP  .22535601 02   MEP  .15278655 02
 MPS  .12207308 03   MSP  .55952909-01   SMP  .57870344 02   SEM  .10198121 03   EMS  .77866843 02   ESM  .15195109 00
 RPM  .17176381 06   SPN  .90277669 02
 GCE  .85885507 02   GCT  .24801851 03   SIP  .12149329 03   CPT  .10092336 03   SIN  .10034357 03
 REP  .24981533 06   VEP  .19869103 01   CPE  .85600299 02   CPS  .10301002 03

  1 DAYS  2 HRS.  9 MIN. 51.000 SEC.        2355532750742020000000000 J.D.= 2437692.45833333  JAN. 27,1962 23 00 00.000

     GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.19810223 06     Y -.14739856 06     Z -.70728686 05    DX -.13742531 01    DY -.13411943 01    DZ -.41747048 00
   R  .25685282 06   DEC -.15983861 02   RA  .21665120 03     V  .19651095 01   PTH  .81702121 02    AZ  .66356510 02
   R  .25685282 06   LAT -.15983861 02   LON  .10491464 03    VE  .17856834 02   PTE  .62516780 01   AZE  .27039617 03
  XS  .89783918 08    YS -.10716666 09    ZS -.46468620 08   DXS  .24109947 02   DYS  .16744193 02   DZS  .72609419 01
  XM -.35777526 06    YM -.17359413 06    ZM -.38015079 05   DXM  .46967218 00   DYM -.79937202 00   DZM -.31380591 00
  XT -.35777526 06    YT -.17359413 06    ZT -.38015079 05   DXT  .46967218 00   DYT -.79937202 00   DZT -.31380591 00
  RS  .14732677 09    VS  .30238697 02    RM  .39947866 06    VM  .97880627 00    RT  .39947866 06    VT  .97880627 00
 GED -.16087170 02   ALT  .25047625 06   LOS  .19821962 03   RAS  .30995618 03   RAM  .20588286 03   LOM  .94146301 02
 OUT  .34000000 02    DT  .95999999 03    DR  .19445371 01   SHA -.25670203 06   DES -.18385681 02   DEM -.54606286 01
 CCL  .27428818 03   MCL  .34171130 03   TCL  .34171130 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171102024764000000 J.D.= 2437691.36854731  JAN. 26,1962 20 50 42.488
 SMA -.52590714 06   ECC  .10125774 01    B  .83672240 05   SLR  .13312335 05   APO  .00000000 00   RCA  .66145705 04
  VH  .87059133 00    C3  .75792926 00   CI  .72844370 05   TFP  .94157511 05    TF  .93021392-02   LTF -.20880270 01
  TA  .15945451 03   MTA  .17095996 03   EA  .53572200 02    MA  .89306459 01   C3J  .45787066 00   TFI  .26164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.19810223 06     Y -.14739856 06     Z -.70728686 05    DX -.13742531 01    DY -.13411943 01    DZ -.41747048 00
 INC  .29928219 02   LAN  .24649049 03   APF  .16704581 03    MX  .44253706 00    MY -.79440027 00    MZ  .41603873 00
  WX -.45750090 00    WY  .19901725 00    WZ  .86665112 00    PX  .56690142 00    PY  .81615803 00    PZ  .11184246 00
  QX -.68506594 00    QY  .54247359 00    QZ -.48621627 00    RX  .12695826 00    RY  .13709283 00    RZ -.98238846 00
  BX -.58748268 00    BY  .66397422 00    BZ -.46260387 00    TX -.73370608 00    TY  .67946699 00    TZ  .00000000 00
 SXI  .45221909 00   SYI  .89125631 00   SZI  .34056697-01   DAI  .19516813 01   RAI  .63096985 02
 SXO -.66750053 00   SYO -.72078440 00   SZO -.18684979 00   DAO -.10768999 02   RAO  .22719799 03

 BTQ  .72556762 05   BRQ -.41672046 05    B  .83672240 05   THA  .33012965 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                  EQUATORIAL COORDINATES

   X -.89982020 08     Y  .10701926 09     Z  .46397892 08    DX -.25484200 02    DY -.18085387 02    DZ -.76784123 01
   R  .14731819 09   LAT  .18357805 02   LON  .13005719 03     V  .32178932 02   PTH  .16594798-01    AZ  .10456670 03
  XE -.89783918 08    YE  .10716666 09    ZE  .46468620 08   DXE -.24109947 02   DYE -.16744193 02   DZE -.72609419 01
  XT -.90141693 08    YT  .10699307 09    ZT  .46430605 08   DXT -.23640275 02   DYT -.17543565 02   DZT -.75747477 01
 LTE  .18385681 02   LOE  .12995618 03   LTT  .18359740 02   LOT  .13011415 03   RST  .14740706 09   VST  .30397632 02
 EPS  .91863555 02   ESP  .99650790-01   SEP  .88036604 02   EPM  .14148942 03   EMP  .23600133 02   MEP  .14910443 02
 MPS  .12254264 03   MSP  .53722807-01   SMP  .57403268 02   SEM  .10151875 03   EMS  .78329101 02   ESM  .15211196 00
 RPM  .16508138 06   SPN  .90440679 02
 GCE  .85711818 02   GCT  .24742311 03   SIP  .12193938 03   CPT  .10120299 03   SIN  .10059973 03
 REP  .25685282 06   VEP  .19651095 01   CPE  .85403688 02   CPS  .10300535 03

  1 DAYS  3 HRS.  9 MIN. 51.000 SEC.        2355532767002020000000000 J.D.= 2437692.50000000  JAN. 28,1962 00 00 00.000

     GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.20302082 06     Y -.15220482 06     Z -.72220735 05    DX -.13584600 01    DY -.13290472 01    DZ -.41149919 00
   R  .26381735 06   DEC -.15887701 02   RA  .21685891 03     V  .19445080 01   PTH  .81840503 02    AZ  .64224231 02
   R  .26381734 06   LAT -.15887701 02   LON  .90081243 02    VE  .18356348 02   PTE  .60191263 01   AZE  .27037667 03
  XS  .89870692 08    YS -.10710635 09    ZS -.46442468 08   DXS  .24096625 02   DYS  .16760249 02   DZS  .72678933 01
  XM -.35606972 06    YM -.17646461 06    ZM -.39143177 05   DXM  .47784172 00   DYM -.79532973 00   DZM -.31290947 00
  XT -.35606972 06    YT -.17646461 06    ZT -.39143177 05   DXT  .47784172 00   DYT -.79532973 00   DZT -.31290947 00
  RS  .14732758 09    VS  .30238643 02    RM  .39932141 06    VM  .97918348 00    RT  .39932141 06    VT  .97918048 00
 GED -.15990454 02   ALT  .25744076 06   LOS  .18322163 03   RAS  .30999931 03   RAM  .20636255 03   LOM  .79584880 02
 OUT  .34000000 02    DT  .95999999 03    DR  .19248235 01   SHA -.26364354 06   DES -.18374861 02   DEM -.56254086 01
 CCL  .27445334 03   MCL  .34123337 03   TCL  .34123337 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171142021646000000 J.D.= 2437691.36871426  JAN. 26,1962 20 50 56.912
 SMA -.52494331 06   ECC  .10125882 01    B  .83554874 05   SLR  .13299383 05   APO  .00000000 00   RCA  .66080993 04
  VH  .87139019 00    C3  .75932086 00   CI  .72808924 05   TFP  .97743087 05    TF  .13308763-01   LTF -.20800352 01
  TA  .15968261 03   MTA  .17095613 03   EA  .54308805 02    MA  .92962745 01   C3J  .45747387 00   TFI  .27164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.20302082 06     Y -.15220482 06     Z -.72220735 05    DX -.13584600 01    DY -.13290472 01    DZ -.41149919 00
 INC  .29991018 02   LAN  .24640765 03   APF  .16711116 03    MX  .44491675 00    MY -.79191252 00    MZ  .41823911 00
  WX -.45808402 00    WY  .20005898 00    WZ  .86610377 00    PX  .56718795 00    PY  .81600587 00    PZ  .11149984 00
  QX -.68443930 00    QY  .54231994 00    QZ -.48727032 00    RX  .12690094 00    RY  .13695263 00    RZ -.98241544 00
  BX -.58677385 00    BY  .66384625 00    BZ -.46368590 00    TX -.73351245 00    TY  .67967602 00    TZ  .00000000 00
 SXI  .45254944 00   SYI  .89110909 00   SZI  .33519418-01   DAI  .19208805 01   RAI  .63076277 02
 SXO -.66772421 00   SYO -.72061396 00   SZO -.18670799 00   DAO -.10760729 02   RAO  .22718166 03

 BTQ  .72407869 05   BRQ -.41695530 05    B  .83554874 05   THA  .33006483 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                    EQUATORIAL COORDINATES

   X -.90073712 08     Y  .10695415 09     Z  .46370247 08    DX -.25455084 02    DY -.18089296 02    DZ -.76793925 01
   R  .14731824 09   LAT  .18346472 02   LON  .13010312 03     V  .32158311 02   PTH  .24352185-01    AZ  .10457983 03
  XE -.89870692 08    YE  .10710635 09    ZE  .46442468 08   DXE -.24096625 02   DYE -.16760249 02   DZE -.72678933 01
  XT -.90226761 08    YT  .10692989 09    ZT  .46403325 08   DXT -.23618783 02   DYT -.17555578 02   DZT -.75808027 01
 LTE  .18374861 02   LOE  .12999930 03   LTT  .18348876 02   LOT  .13015746 03   RST  .14740467 09   VST  .30389370 02
 EPS  .91977308 02   ESP  .10255385 00   SEP  .87920152 02   EPM  .14075972 03   EMP  .24703266 02   MEP  .14537002 02
 MPS  .12303360 03   MSP  .51869734-01   SMP  .56914769 02   SEM  .10105591 03   EMS  .78791752 02   ESM  .15243321 00
 RPM  .15845071 06   SPN  .90592001 02
 GCE  .85546654 02   GCT  .24678002 03   SIP  .12240509 03   CPT  .10150326 03   SIN  .10087476 03
 REP  .26381735 06   VEP  .19445080 01   CPE  .85217469 02   CPS  .10300068 03

  1 DAYS  4 HRS.  9 MIN. 51.000 SEC.        2355533005042020000000000 J.D.= 2437692.54166666  JAN. 28,1962 01 00 00.000

     GEOCENTRIC                                                                                      EQUATORIAL COORDINATES

   X -.20788424 06     Y -.15696838 06     Z -.73691853 05    DX -.13435908 01    DY -.13174675 01    DZ -.40583680 00
   R  .27071280 06   DEC -.15796062 02    RA  .21705557 03     V  .19250092 01   PTH  .81973091 02    AZ  .54084344 02
   R  .27071280 06   LAT -.15796063 02   LON  .75236837 02    VE  .18850431 02   PTE  .58036492 01   AZE  .27035892 03
  XS  .89957417 08    YS -.10704599 09    ZS -.46416291 08   DXS  .24083290 02   DYS  .16776296 02   DZS  .72748413 01
  XM -.35433483 06    YM -.17932043 06    ZM -.40268000 05   DXM  .48598228 00   DYM -.79121797 00   DZM -.31198655 00
  XT -.35433483 06    YT -.17932043 06    ZT -.40268000 05   DXT  .48598228 00   DYT -.79121797 00   DZT -.31198655 00
  RS  .14732838 09    VS  .30238589 02    RM  .39916224 06    VM  .97956125 00    RT  .39916224 06    VT  .97956125 00
 GED -.15898286 02   ALT  .26433619 06   LOS  .16822369 03   RAS  .31004243 03   RAM  .20684288 03   LOM  .65024145 02
 DUT  .34000000 02    DT  .95999999 03    DR  .19061491 01   SHA -.27051545 06   DES -.18364030 02   DEM -.57899214 01
 CCL  .27461073 03   MCL  .34069296 03   TCL  .34069296 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532171202023036000000 J.D.= 2437691.36890659  JAN. 26,1962 20 51 13.529
  SMA -.52389576 06   ECC  .10125994 01     B  .83425499 05   SLR  .13284750 05   APO  .00000000 00   RCA  .66007918 04
   VH  .87226094 00    C3  .76083914 00    C1  .72768858 05   TFP  .10132647 06    TF  .17924785-01   LTF -.20710074 01
   TA  .15990007 03   MTA  .17095214 03    EA  .55032904 02    MA  .96660063 01   C3J  .45706776 00   TFI  .28164166 02

                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.20788424 06     Y -.15696838 06     Z -.73691853 05    DX -.13435908 01    DY -.13174675 01    DZ -.40583680 00
 INC  .30063291 02   LAN  .24631369 03   APF  .16718527 03    MX  .44704738 00    MY -.78968836 00    MZ  .42054315 00
  WX -.45875495 00    WY  .20124850 00    WZ  .86547254 00    PX  .56751268 00    PY  .81583298 00    PZ  .11111165 00
  QX -.68372010 00    QY  .54213953 00    QZ -.48847856 00    RX  .12683469 00    RY  .13679442 00    RZ -.98244602 00
  BX -.58596627 00    BY  .66369128 00    BZ -.46492733 00    TX -.73329767 00    TY  .67990774 00    TZ  .00000000 00
 SXI  .45292998 00   SYI  .89093833 00   SZI  .32911339-01   DAI  .18860201 01   RAI  .63052393 02
 SXO -.66797265 00   SYO -.72042538 00   SZO -.18654692 00   DAO -.10751335 02   RAO  .22716356 03

 BTQ  .72241621 05   BRQ -.41724836 05     B  .83425499 05   THA  .32999041 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                    EQUATORIAL COORDINATES

   X -.90165301 08     Y  .10688902 09     Z  .46342599 08    DX -.25426880 02    DY -.18093763 02    DZ -.76806781 01
   R  .14731829 09   LAT  .18335135 02   LON  .13014901 03     V  .32138813 02   PTH  .32132624-01    AZ  .10459304 03
  XE -.89957417 08    YE  .10704599 09    ZE  .46416291 08   DXE -.24083290 02   DYE -.16776296 02   DZE -.72748413 01
  XT -.90311751 08    YT  .10686667 09    ZT  .46376023 08   DXT -.23597307 02   DYT -.17567514 02   DZT -.75868278 01
 LTE  .18364030 02   LOE  .13004243 03   LTT  .18338004 02   LOT  .13020075 03   RST  .14740228 09   VST  .30381086 02
 EPS  .92082655 02   ESP  .10491172 00   SEP  .87812132 02   EPM  .13999075 03   EMP  .25850467 02   MEP  .14158777 02
 MPS  .12354883 03   MSP  .47949227-01   SMP  .56401968 02   SEM  .10059269 03   EMS  .79254796 02   ESM  .15243321 00
 RPM  .15187015 06   SPN  .90732641 02
 GCE  .85389265 02   GCT  .24608222 03   SIP  .12289309 03   CPT  .10182667 03   SIN  .10117093 03
 REP  .27071280 06   VEP  .19250092 01   CPE  .85040735 02   CPS  .10299600 03

  1 DAYS  5 HRS.  9 MIN. 51.000 SEC.        2355533023102020000000000 J.D.= 2437692.58333334  JAN. 28,1962 02 00 00.000

     GEOCENTRIC                                                                                      EQUATORIAL COORDINATES

   X -.21269569 06     Y -.16169122 06     Z -.75143094 05    DX -.13295779 01    DY -.13064122 01    DZ -.40045035 00
   R  .27754277 06   DEC -.15708554 02    RA  .21724209 03     V  .19065284 01   PTH  .82100478 02    AZ  .63934720 02
   R  .27754277 06   LAT -.15708554 02   LON  .60382283 02    VE  .19340233 02   PTE  .56034555 01   AZE  .27034272 03
  XS  .90044095 08    YS -.10698556 09    ZS -.46390089 08   DXS  .24069941 02   DYS  .16792335 02   DZS  .72817855 01
  XM -.35257068 06    YM -.18216131 06    ZM -.41389453 05   DXM  .49409321 00   DYM -.78703685 00   DZM -.31103717 00
  XT -.35257068 06    YT -.18216131 06    ZT -.41389453 05   DXT  .49409321 00   DYT -.78703685 00   DZT -.31103717 00
  RS  .14732919 09    VS  .30238535 02    RM  .39900115 06    VM  .97994857 00    RT  .39900115 06    VT  .97994857 00
 GED -.15810269 02   ALT  .27116615 06   LOS  .15322574 03   RAS  .31008555 03   RAM  .20732386 03   LOM  .50464053 02
 DUT  .34000000 02    DT  .95999999 03    DR  .18884366 01   SHA -.27732148 06   DES -.18353190 02   DEM -.59541550 01
 CCL  .27476101 03   MCL  .34008240 03   TCL  .34008240 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532171252021272000000 J.D.= 2437691.36912826  JAN. 26,1962 20 51 32.682
  SMA -.52275632 06   ECC  .10126111 01     B  .83282776 05   SLR  .13268164 05   APO  .00000000 00   RCA  .65925129 04
   VH  .87321105 00    C3  .76249753 00    C1  .72723419 05   TFP  .10490732 06    TF  .23244857-01   LTF -.20607853 01
   TA  .16010797 03   MTA  .17094801 03    EA  .55746110 02    MA  .10040338 02   C3J  .45665178 00   TFI  .29164166 02

                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.21269569 06     Y -.16169122 06     Z -.75143094 05    DX -.13295779 01    DY -.13064122 01    DZ -.40045035 00
 INC  .30146452 02   LAN  .24620689 03   APF  .16726949 03    MX  .44892832 00    MY -.78711434 00    MZ  .42298438 00
  WX -.45952941 00    WY  .20261054 00    WZ  .86474452 00    PX  .56788154 00    PY  .81563636 00    PZ  .11067054 00
  QX -.68289384 00    QY  .54192912 00    QZ -.48986760 00    RX  .12675785 00    RY  .13661535 00    RZ -.98248089 00
  BX -.58504355 00    BY  .66350392 00    BZ -.46635458 00    TX -.73305899 00    TY  .68016507 00    TZ  .00000000 00
 SXI  .45336911 00   SYI  .89074042 00   SZI  .32221133-01   DAI  .18464537 01   RAI  .63024813 02
 SXO -.66824918 00   SYO -.72021645 00   SZO -.18636337 00   DAO -.10740631 02   RAO  .22714345 03

 BTQ  .72055688 05   BRQ -.41761212 05     B  .83282776 05   THA  .32990476 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90256790 08     Y  .10682387 09     Z  .46314945 08    DX -.25399519 02    DY -.18098747 02    DZ -.76822358 01
   R  .14731836 09   LAT  .18323796 02   LON  .13019487 03     V  .32120351 02   PTH  .39942092-01    AZ  .10460632 03
  XE -.90044095 08    YE  .10698556 09    ZE  .46390089 08   DXE -.24069941 02   DYE -.16792335 02   DZE -.72817855 01
  XT -.90396665 08    YT  .10680340 09    ZT  .46348699 08   DXT -.23575848 02   DYT -.17579371 02   DZT -.75928226 01
 LTE  .18353190 02   LOE  .13008555 03   LTT  .18327123 02   LOT  .13024404 03   RST  .14739988 09   VST  .30372781 02
 EPS  .92180269 02   ESP  .10744563 00   SEP  .87711871 02   EPM  .13917574 03   EMP  .27048093 02   MEP  .13776156 02
 MPS  .12409157 03   MSP  .45327037-01   SMP  .55861636 02   SEM  .10012908 03   EMS  .79718241 02   ESM  .15243321 00
 RPM  .14533872 06   SPN  .90863482 02
 GCE  .85238986 02   GCT  .24532138 03   SIP  .12340636 03   CPT  .10217605 03   SIN  .10149084 03
 REP  .27754277 06   VEP  .19065284 01   CPE  .84872681 02   CPS  .10299131 03

  1 DAYS  6 HRS.  9 MIN. 51.000 SEC.        2355533041142020000000000 J.D.= 2437692.62500000  JAN. 28,1962 03 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.21745816 06     Y -.16637514 06     Z -.76575393 05    DX -.13163631 01    DY -.12958428 01    DZ -.39530959 00
   R  .28431062 06   DEC -.15624822 02   RA  .21741925 03     V  .18889918 01   PTH  .82223175 02    AZ  .63772923 02
   R  .28431061 06   LAT -.15624822 02   LON  .45518383 02    VE  .19825687 02   PTE  .54170007 01   AZE  .27032792 03
  XS  .90130724 08    YS -.10692508 09    ZS -.46363861 08   DXS  .24056580 02   DYS  .16808365 02   DZS  .72887260 01
  XM -.35077738 06    YM -.18498702 06    ZM -.42507441 05   DXM  .50217389 00   DYM -.78278648 00   DZM -.31006132 00
  XT -.35077738 06    YT -.18498702 06    ZT -.42507441 05   DXT  .50217389 00   DYT -.78278648 00   DZT -.31006132 00
  RS  .14732999 09    VS  .30238480 02    RM  .39883813 06    VM  .98036243 00    RT  .39883813 06    VT  .98034243 00
 GED -.15726051 02   ALT  .27793397 06   LOS  .13822779 03   RAS  .31012866 03   RAM  .20780550 03   LOM  .35904633 02
 DUT  .34000000 02    DT  .95999999 03    DR  .18716181 01   SHA -.28406511 06   DES -.18342339 02   DEM -.61181009 01
 CCL  .27490478 03   MCL  .33939233 03   TCL  .33939233 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532171322025341000 00 J.D.= 2437691.36938333  JAN. 26,1962 20 51 54.720
  SMA -.52151559 06   ECC  .10126232 01    B  .83125217 05   SLR  .13249467 05   APO  .00000000 00   RCA  .65831833 04
   VH  .87424915 00    C3  .76431158 00   C1  .72672161 05   TFP  .10848528 06    TF  .29366493-01   LTF -.20492300 01
   TA  .16030721 03   MTA  .17094371 03   EA  .56450013 02    MA  .10419847 02   C3J  .45622531 00   TFI  .30164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.21745816 06     Y -.16637514 06     Z -.76575393 05    DX -.13163631 01    DY -.12958428 01    DZ -.39530959 00
 INC  .30242658 02   LAN  .24608524 03   APF  .16736539 03    MX  .45055238 00    MY -.78477277 00    MZ  .42559874 00
  WX -.46042366 00    WY  .20417348 00    WZ  .86390004 00    PX  .56830118 00    PY  .81541212 00    PZ  .11016757 00
  QX -.68194120 00    QY  .54167926 00    QZ -.49146703 00    RX  .12666837 00    RY  .13641199 00    RZ -.98252069 00
  BX -.58398695 00    BY  .66327644 00    BZ -.46799958 00    TX -.73279322 00    TY  .68045139 00    TZ  .00000000 00
 SXI  .45387611 00   SYI  .89051019 00   SZI  .31435036-01   DAI  .18013906 01   RAI  .62992926 02
 SXO -.66855758 00   SYO -.71998450 00   SZO -.18615345 00   DAO -.10728389 02   RAO  .22712107 03

 BTQ  .71847385 05   BRQ -.41806162 05    B  .83125217 05   THA  .32980596 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90348182 08     Y  .10675870 09     Z  .46287286 08    DX -.25372943 02    DY -.18104208 02    DZ -.76840355 01
   R  .14731845 09   LAT  .18312453 02   LON  .13024070 03     V  .32102850 02   PTH  .47788271-01    AZ  .10461965 03
  XE -.90130724 08    YE  .10692508 09    ZE  .46363861 08   DXE -.24056580 02   DYE -.16808365 02   DZE -.72887260 01
  XT -.90481501 08    YT  .10674009 09    ZT  .46321354 08   DXT -.23554406 02   DYT -.17591151 02   DZT -.75987872 01
 LTE  .18342339 02   LOE  .13012866 03   LTT  .18316236 02   LOT  .13028730 03   RST  .14739748 09   VST  .30364456 02
 EPS  .92270733 02   ESP  .11036527 00   SEP  .87618785 02   EPM  .13830685 03   EMP  .28303622 02   MEP  .13389521 02
 MPS  .12466545 03   MSP  .42543532-01   SMP  .55290160 02   SEM  .99665068 02   EMS  .80182095 02   ESM  .15243321 00
 RPM  .13885620 06   SPN  .90985298 02
 GCE  .85095222 02   GCT  .24448755 03   SIP  .12394824 03   CPT  .10255468 03   SIN  .10183748 03
 REP  .28431062 06   VEP  .18889918 01   CPE  .84712599 02   CPS  .10298662 03

  1 DAYS  7 HRS.  9 MIN. 51.000 SEC.        2355533057202020000000000 J.D.= 2437692.66666666  JAN. 28,1962 04 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.22217440 06     Y -.17102183 06     Z -.77989586 05    DX -.13038974 01    DY -.12857246 01    DZ -.39038622 00
   R  .29101943 06   DEC -.15544549 02   RA  .21758777 03     V  .18723347 01   PTH  .82341687 02    AZ  .63596036 02
   R  .29101942 06   LAT -.15544549 02   LON  .30645838 02    VE  .20307017 02   PTE  .52429444 01   AZE  .27031438 03
  XS  .90217306 08    YS -.10686454 09    ZS -.46337609 08   DXS  .24043206 02   DYS  .16824387 02   DZS  .72956627 01
  XM -.34895506 06    YM -.18779730 06    ZM -.43621868 05   DXM  .51022368 00   DYM -.77846699 00   DZM -.30905899 00
  XT -.34895506 06    YT -.18779730 06    ZT -.43621868 05   DXT  .51022368 00   DYT -.77846699 00   DZT -.30905899 00
  RS  .14733080 09    VS  .30238426 02    RM  .39867321 06    VM  .98074283 00    RT  .39867321 06    VT  .98074283 00
 GED -.15645310 02   ALT  .28464277 06   LOS  .12322983 03   RAS  .31017177 03   RAM  .20828782 03   LOM  .21345882 02
 DUT  .34000000 02    DT  .95999999 03    DR  .18556343 01   SHA -.29074956 06   DES -.18331479 02   DEM -.62817454 01
 CCL  .27504255 03   MCL  .33861125 03   TCL  .33861125 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532171412020147000 00 J.D.= 2437691.36967709  JAN. 26,1962 20 52 20.101
  SMA -.52016331 06   ECC  .10126357 01    B  .82951116 05   SLR  .13228340 05   APO  .00000000 00   RCA  .65726449 04
   VH  .87538482 00    C3  .76629858 00   C1  .72614198 05   TFP  .11205990 06    TF  .36416769-01   LTF -.20361479 01
   TA  .16049870 03   MTA  .17093926 03   EA  .57146195 02    MA  .10805184 02   C3J  .45578778 00   TFI  .31164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.22217440 06     Y -.17102183 06     Z -.77989586 05    DX -.13038974 01    DY -.12857246 01    DZ -.39038622 00
 INC  .30354067 02   LAN  .24594633 03   APF  .16747493 03    MX  .45190872 00    MY -.78244815 00    MZ  .42843113 00
  WX -.46146021 00    WY  .20597338 00    WZ  .86291905 00    PX  .56877983 00    PY  .81515587 00    PZ  .10959180 00
  QX -.68084061 00    QY  .54138321 00    QZ -.49331551 00    RX  .12656366 00    RY  .13618016 00    RZ -.98256631 00
  BX -.58277284 00    BY  .66299973 00    BZ -.46990125 00    TX -.73249664 00    TY  .68077065 00    TZ  .00000000 00
 SXI  .45446282 00   SYI  .89024211 00   SZI  .30536285-01   DAI  .17498714 01   RAI  .62955983 02
 SXO -.66890231 00   SYO -.71972653 00   SZO -.18591233 00   DAO -.10714329 02   RAO  .22709610 03

 BTQ  .71613500 05   BRQ -.41861604 05    B  .82951116 05   THA  .32969162 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90439480 08     Y  .10669352 09     Z  .46259619 08    DX -.25347103 02    DY -.18110111 02    DZ -.76860488 01
   R  .14731856 09   LAT  .18301106 02   LON  .13028650 03     V  .32086244 02   PTH  .55682262-01    AZ  .10463300 03
  XE -.90217306 08    YE  .10686454 09    ZE  .46337609 08   DXE -.24043206 02   DYE -.16824387 02   DZE -.72956627 01
  XT -.90566261 08    YT  .10667674 09    ZT  .46293987 08   DXT -.23532982 02   DYT -.17602854 02   DZT -.76047216 01
 LTE  .18331479 02   LOE  .13017176 03   LTT  .18305339 02   LOT  .13033054 03   RST  .14739507 09   VST  .30356111 02
 EPS  .92354566 02   ESP  .11255962 00   SEP  .87532350 02   EPM  .13737489 03   EMP  .29625872 02   MEP  .12999230 02
 MPS  .12527449 03   MSP  .41377734-01   SMP  .54683486 02   SEM  .99200658 02   EMS  .80646361 02   ESM  .15291383 00
 RPM  .13242315 06   SPN  .91098768 02
 GCE  .84957448 02   GCT  .24356870 03   SIP  .12452244 03   CPT  .10296635 03   SIN  .10221430 03
 REP  .29101943 06   VEP  .18723347 01   CPE  .84559852 02   CPS  .10298192 03

  1 DAYS  8 HRS.  9 MIN. 51.000 SEC.        2355533075242020000000000 J.D.= 2437692.70833333  JAN. 28,1962 05 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.22684706 06     Y -.17563287 06     Z -.79386406 05    DX -.12921394 01    DY -.12760261 01    DZ -.38565319 00
   R  .29767212 06   DEC -.15467442 02   RA  .21774828 03     V  .18565008 01   PTH  .82456470 02    AZ  .63400579 02
   R  .29767212 06   LAT -.15467442 02   LON  .15765276 02    VE  .20784434 02   PTE  .50801179 01   AZE  .27030201 03
  XS  .90303840 08    YS -.10680394 09   ZS -.46311331 08   DXS  .24029818 02   DYS  .16840400 02   DZS  .73025957 01
  XM -.34710381 06    YM -.19059191 06   ZM -.44732638 05   DXM  .51824194 00   DYM -.77407853 00   DZM -.30803021 00
  XT -.34710381 06    YT -.19059191 06   ZT -.44732638 05   DXT  .51824194 00   DYT -.77407853 00   DZT -.30803021 00
  RS  .14733161 09    VS  .30238372 02   RM  .39850638 06    VM  .98114978 00    RT  .39850638 06    VT  .98114978 00
 GED -.15567753 02   ALT  .29129545 06   LOS  .10823186 03   RAS  .31021487 03   RAM  .20877083 03   LOM  .67878265 01
 DUT  .34000000 02    DT  .95999999 03    DR  .18404336 01   SHA -.29737784 06   DES -.18320610 02   DEM -.64450783 01
 CCL  .27517481 03   MCL  .33772504 03   TCL  .33772504 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171502022426000 00 J.D.= 2437691.37001471  JAN. 26,1962 20 52 49.271
  SMA -.51868806 06   ECC  .10126487 01    B  .82758710 05   SLR  .13204489 05   APO  .00000000 00   RCA  .65607521 04
   VH  .87662882 00    C3  .76847808 00   C1  .72548708 05   TFP  .11563073 06    TF  .44519901-01   LTF -.20213453 01
   TA  .16068322 03   MTA  .17093464 03   EA  .57836252 02    MA  .11197095 02   C3J  .45533833 00   TFI  .32164166 02

                                                                   ALL VECTORS REFFRENCED TO EARTH EQUATOR PLANE
   X -.22684706 06     Y -.17563287 06     Z -.79386406 05    DX -.12921394 01    DY -.12760261 01    DZ -.38565319 00
 INC  .30483590 02   LAN  .24578726 03   APF  .16760041 03    MX  .45297926 00    MY -.78012116 00    MZ  .43153359 00
  WX -.46266508 00    WY  .20805351 00    WZ  .86177447 00    PX  .56932749 00    PY  .81486224 00    PZ  .10892990 00
  QX -.67956419 00    QY  .54103000 00    QZ -.49545886 00    RX  .12644062 00    RY  .13591483 00    RZ -.98261889 00
  BX -.58137204 00    BY  .66266246 00    BZ -.47210702 00    TX -.73216465 00    TY  .68112769 00    TZ  .00000000 00
 SXI  .45514340 00   SYI  .88992921 00   SZI  .29504322-01   DAI  .16907177 01   RAI  .62913083 02
 SXO -.66928894 00   SYO -.71943882 00   SZO -.18563425 00   DAO -.10698113 02   RAO  .22706817 03

 BTQ  .71350389 05   BRQ -.41930014 05    B  .82758710 05   THA  .32955880 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90530687 08     Y  .10662831 09     Z  .46231944 08    DX -.25321957 02    DY -.18116426 02    DZ -.76882489 01
   R  .14731868 09   LAT  .18289755 02   LON  .13033227 03     V  .32070478 02   PTH  .63641140-01    AZ  .10456435 03
  XE -.90303840 08    YE  .10680394 09    ZE  .46311331 08   DXE -.24029818 02   DYE -.16840400 02   DZE -.73025957 01
  XT -.90650943 08    YT  .10661335 09    ZT  .46266598 08   DXT -.23511576 02   DYT -.17614478 02   DZT -.76106259 01
 LTE  .18320610 02   LOE  .13021487 03   LTT  .18294436 02   LOT  .13037377 03   RST  .14739266 09   VST  .30347746 02
 EPS  .92432225 02   ESP  .11556174 00   SEP  .87452116 02   EPM  .13636904 03   EMP  .31025324 02   MEP  .12605622 02
 MPS  .12592324 03   MSP  .37664454-01   SMP  .54037078 02   SEM  .98735837 02   EMS  .81111047 02   ESM  .15291383 00
 RPM  .12604104 06   SPN  .91204497 02
 GCE  .84825186 02   GCT  .24255023 03   SIP  .12513312 03   CPT  .10341544 03   SIN  .10262531 03
 REP  .29767212 06   VEP  .18565008 01   CPE  .84413870 02   CPS  .10297721 03

  1 DAYS  9 HRS.  9 MIN. 51.000 SEC.        2355533113302020000000000 J.D.= 2437692.75000000  JAN. 28,1962 06 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.23147861 06     Y -.18020970 06     Z -.80766489 05    DX -.12810554 01    DY -.12667187 01    DZ -.38108389 00
   R  .30427143 06   DEC -.15393231 02   RA  .21790131 03     V  .18414408 01   PTH  .82567930 02    AZ  .63182314 02
   R  .30427143 06   LAT -.15393231 02   LON  .87724302 00    VE  .21258139 02   PTE  .49275016 01   AZE  .27029071 03
  XS  .90390324 08    YS -.10674329 09   ZS -.46285028 08   DXS  .24016418 02   DYS  .16856405 02   DZS  .73095250 01
  XM -.34522375 06    YM -.19337060 06   ZM -.45839658 05   DXM  .52622805 00   DYM -.76962122 00   DZM -.30697497 00
  XT -.34522375 06    YT -.19337060 06   ZT -.45839658 05   DXT  .52622805 00   DYT -.76962122 00   DZT -.30697497 00
  RS  .14733242 09    VS  .30238318 02   RM  .39833767 06    VM  .98156324 00    RT  .39833767 06    VT  .98156324 00
 GED -.15493109 02   ALT  .29789475 06   LOS  .93233890 02   RAS  .31025796 03   RAM  .20925454 03   LOM  .35223047 03
 DUT  .34000000 02    DT  .95999999 03    DR  .18259707 01   SHA -.30395280 06   DES -.18309730 02   DEM -.66080901 01
 CCL  .27530199 03   MCL  .33671615 03   TCL  .33671615 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532171602025453000 00 J.D.= 2437691.37040268  JAN. 26,1962 20 53 22.792
  SMA -.51707707 06   ECC  .10126622 01    B  .82545980 05   SLR  .13177628 05   APO  .00000000 00   RCA  .65473619 04
   VH  .87799335 00    C3  .77087233 00   C1  .72474878 05   TFP  .11919721 06    TF  .53831100-01   LTF -.20046011 01
   TA  .16086149 03   MTA  .17092985 03   EA  .58521814 02    MA  .11596439 02   C3J  .45487610 00   TFI  .33164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.23147861 06     Y -.18020970 06     Z -.80766489 05    DX -.12810554 01    DY -.12667187 01    DZ -.38108389 00
 INC  .30634942 02   LAN  .24560452 03   APF  .16774461 03    MX  .45373761 00    MY -.77776857 00    MZ  .43496861 00
  WX -.46406984 00    WY  .21046712 00    WZ  .86043142 00    PX  .56995605 00    PY  .81452457 00    PZ  .10816523 00
  QX -.67807752 00    QY  .54060414 00    QZ -.49795339 00    RX  .12629525 00    RY  .13560973 00    RZ -.98267972 00
  BX -.57974917 00    BY  .66224918 00    BZ -.47667560 00    TX -.73179191 00    TY  .68152814 00    TZ  .00000000 00
 SXI  .45593483 00   SYI  .88956255 00   SZI  .28313622-01   DAI  .16224670 01   RAI  .62863124 02
 SXO -.66972388 00   SYO -.71911708 00   SZO -.18531187 00   DAO -.10679316 02   RAO  .22703682 03

 BTQ  .71053660 05   BRQ -.42014471 05    B  .82545980 05   THA  .32940391 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90621802 08     Y  .10656307 09     Z  .46204262 08    DX -.25297473 02    DY -.18123124 02    DZ -.76906089 01
   R  .14731881 09   LAT  .18278398 02   LON  .13037802 03     V  .32055502 02   PTH  .71680272-01    AZ  .10465968 03
  XE -.90390324 08    YE  .10674329 09    ZE  .46285028 08   DXE -.24016418 02   DYE -.16856405 02   DZE -.73095250 01
  XT -.90735547 08    YT  .10654991 09    ZT  .46239189 08   DXT -.23490189 02   DYT -.17626026 02   DZT -.76165000 01
 LTE  .18309730 02   LOE  .13025796 03   LTT  .18283525 02   LOT  .13041698 03   RST  .14739025 09   VST  .30339361 02
 EPS  .92504106 02   ESP  .11786692 00   SEP  .87377676 02   EPM  .13527644 03   EMP  .32514523 02   MEP  .12209032 02
 MPS  .12661675 03   MSP  .34970568-01   SMP  .53345893 02   SEM  .98270600 02   EMS  .81576161 02   ESM  .15323340 00
 RPM  .11971236 06   SPN  .91303010 02
 GCE  .84698004 02   GCT  .24141416 03   SIP  .12578485 03   CPT  .10390705 03   SIN  .10307516 03
 REP  .30427143 06   VEP  .18414408 01   CPE  .84274139 02   CPS  .10297250 03

 1 DAYS 10 HRS.  9 MIN. 51.000 SEC.        23555331313420200000000 J.D.= 2437692.79166666  JAN. 28,1962 07 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.23607143 06     Y -.18475369 06     Z -.82130376 05    DX -.12706186 01    DY -.12577756 01    DZ -.37665137 00
   R  .31081995 06   DEC -.15321665 02   RA  .21804736 03     V  .18271118 01   PTH  .82676464 02    AZ  .62936015 02
   R  .31081995 06   LAT -.15321665 02   LON  .34598223 03    VE  .21728327 02   PTE  .47841948 01   AZE  .27028041 03
  XS  .90476761 08    YS -.10668257 09   ZS -.46258701 08   DXS  .24003004 02   DYS  .16872402 02   DZS  .73164507 01
  XM -.34331500 06    YM -.19613311 06   ZM -.46942831 05   DXM  .53418134 00   DYM -.76509518 00   DZM -.30589328 00
  XT -.34331500 06    YT -.19613311 06   ZT -.46942831 05   DXT  .53418134 00   DYT -.76509518 00   DZT -.30589328 00
  RS  .14733323 09    VS  .30238263 02   RM  .39816707 06    VM  .98198321 00    RT  .39816707 06    VT  .98198321 00
 GED -.15421125 02   ALT  .30444325 06   LOS  .78235916 02   RAS  .31030105 03   RAM  .20973898 03   LOM  .33767384 03
 DUT  .34000000 02    DT  .95999999 03   DR  .18122066 01   SHA -.31047712 06   DES -.18298843 02   DEM -.67707673 01
 CCL  .27542449 03   MCL  .33556273 03   TCL  .33556273 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  23555321717220224770000 J.D.= 2437691.37084851  JAN. 26,1962 20 54 01.312
  SMA -.51531649 06   ECC  .10126762 01    B  .82310661 05   SLR  .13147365 05   APO  .00000000 00   RCA  .65322803 04
   VH  .87949190 00    C3  .77350601 00   C1  .72391610 05   TFP  .12275869 06    TF  .64530849-01   LTF -.19856430 01
   TA  .16103423 03   MTA  .17092489 03   EA  .59204558 02    MA  .12004185 02   C3J  .45440027 00   TFI  .34164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.23607143 06     Y -.18475369 06     Z -.82130376 05    DX -.12706186 01    DY -.12577756 01    DZ -.37665137 00
 INC  .30812475 02   LAN  .24539388 03   APF  .16791094 03    MX  .45414892 00    MY -.77536499 00    MZ  .43881394 00
  WX -.46571500 00    WY  .21328106 00    WZ  .85884838 00    PX  .57068033 00    PY  .81413485 00    PZ  .10727719 00
  QX -.67633820 00    QY  .54008847 00    QZ -.50087009 00    RX  .12612246 00    RY  .13525707 00    RZ -.98275052 00
  BX -.57785934 00    BY  .66174062 00    BZ -.47767975 00    TX -.73137204 00    TY  .68197870 00    TZ  .00000000 00
 SXI  .45685867 00   SYI  .88913146 00   SZI  .26932615-01   DAI  .15433102 01   RAI  .62804732 02
 SXO -.67021493 00   SYO -.71875626 00   SZO -.18493607 00   DAO -.10657405 02   RAO  .22700154 03

 BTQ  .70718038 05   BRQ -.42118926 05    B  .82310661 05   THA  .32922241 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90712832 08     Y  .10649782 09     Z  .46176571 08    DX -.25273622 02    DY -.18130177 02    DZ -.76931021 01
   R  .14731897 09   LAT  .18267038 02   LON  .13042373 03     V  .32041272 02   PTH  .79827834-01    AZ  .10467297 03
  XE -.90476761 08    YE  .10668257 09    ZE  .46258701 08   DXE -.24003004 02   DYE -.16872402 02   DZE -.73164507 01
  XT -.90820076 08    YT  .10648644 09    ZT  .46211759 08   DXT -.23468823 02   DYT -.17637497 02   DZT -.76223439 01
 LTE  .18298843 02   LOE  .13030105 03   LTT  .18272604 02   LOT  .13046017 03   RST  .14738783 09   VST  .30330959 02
 EPS  .92570562 02   ESP  .12033130 00   SEP  .87308685 02   EPM  .13408166 03   EMP  .34108553 02   MEP  .11809782 02
 MPS  .12736057 03   MSP  .34970568-01   SMP  .52604380 02   SEM  .97804943 02   EMS  .82041704 02   ESM  .15323340 00
 RPM  .11344090 06   SPN  .91394775 02
 GCE  .84575507 02   GCT  .24013824 03   SIP  .12648267 03   CPT  .10444714 03   SIN  .10356925 03
 REP  .31081995 06   VEP  .18271118 01   CPE  .84140194 02   CPS  .10296778 03

 1 DAYS 11 HRS.  9 MIN. 51.000 SEC.        23555331474020200000000 J.D.= 2437692.83333333  JAN. 28,1962 08 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.24062781 06     Y -.18926610 06     Z -.83478513 05    DX -.12608092 01    DY -.12491723 01    DZ -.37232727 00
   R  .31732012 06   DEC -.15252510 02   RA  .21818686 03     V  .18134769 01   PTH  .82782467 02    AZ  .62655171 02
   R  .31732012 06   LAT -.15252510 02   LON  .33108066 03    VE  .22195186 02   PTE  .46494079 01   AZE  .27027106 03
  XS  .90563150 08    YS -.10662180 09   ZS -.46232349 08   DXS  .23989577 02   DYS  .16888390 02   DZS  .73233725 01
  XM -.34137768 06    YM -.19887921 06   ZM -.48042063 05   DXM  .54210117 00   DYM -.76050057 00   DZM -.30478515 00
  XT -.34137768 06    YT -.19887921 06   ZT -.48042063 05   DXT  .54210117 00   DYT -.76050057 00   DZT -.30478515 00
  RS  .14733405 09    VS  .30238209 02   RM  .39799459 06    VM  .98240967 00    RT  .39799459 06    VT  .98240967 00
 GED -.15351564 02   ALT  .31094341 06   LOS  .63237932 02   RAS  .31034413 03   RAM  .21022414 03   LOM  .32311794 03
 DUT  .34000000 02    DT  .95999999 03   DR  .17991076 01   SHA -.31695331 06   DES -.18287945 02   DEM -.69331013 01
 CCL  .27554267 03   MCL  .33423727 03   TCL  .33423727 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  23555321720520230470000 J.D.= 2437691.37136039  JAN. 26,1962 20 54 45.538
  SMA -.51339132 06   ECC  .10126908 01    B  .82050467 05   SLR  .13113372 05   APO  .00000000 00   RCA  .65153439 04
   VH  .88113938 00    C3  .77640660 00   C1  .72297964 05   TFP  .12631446 06    TF  .76816081-01   LTF -.19642069 01
   TA  .16120204 03   MTA  .17091974 03   EA  .59886210 02    MA  .12421436 02   C3J  .45390958 00   TFI  .35164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.24062781 06     Y -.18926610 06     Z -.83478513 05    DX -.12608092 01    DY -.12491723 01    DZ -.37232727 00
 INC  .31021985 02   LAN  .24515014 03   APF  .16810352 03    MX  .45416485 00    MY -.77287695 00    MZ  .44316447 00
  WX -.46764961 00    WY  .21657841 00    WZ  .85696959 00    PX  .57151826 00    PY  .81368299 00    PZ  .10623962 00
  QX -.67429249 00    QY  .53945660 00    QZ -.50429704 00    RX  .12591571 00    RY  .13484710 00    RZ -.98283339 00
  BX -.57564692 00    BY  .66111013 00    BZ -.48121100 00    TX -.73089732 00    TY  .68248744 00    TZ  .00000000 00
 SXI  .45794081 00   SYI  .88862193 00   SZI  .25321228-01   DAI  .14509533 01   RAI  .62736220 02
 SXO -.67077145 00   SYO -.71835029 00   SZO -.18449527 00   DAO -.10631707 02   RAO  .22696167 03

 BTQ  .70337336 05   BRQ -.42248528 05    B  .82050467 05   THA  .32900862 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90803777 08     Y  .10643253 09     Z  .46148870 08    DX -.25250386 02    DY -.18137562 02    DZ -.76956998 01
   R  .14731913 09   LAT  .18255670 02   LON  .13046942 03     V  .32027752 02   PTH  .88112000-01    AZ  .10468618 03
  XE -.90563150 08    YE  .10662180 09    ZE  .46232349 08   DXE -.23989577 02   DYE -.16888390 02   DZE -.73233725 01
  XT -.90904527 08    YT  .10642292 09    ZT  .46184307 08   DXT -.23447475 02   DYT -.17648890 02   DZT -.76281577 01
 LTE  .18287945 02   LOE  .13034413 03   LTT  .18261678 02   LOT  .13050335 03   RST  .14738541 09   VST  .30322536 02
 EPS  .92631894 02   ESP  .12294532 00   SEP  .87244833 02   EPM  .13276610 03   EMP  .35825699 02   MEP  .11408195 02
 MPS  .12816068 03   MSP  .31278626-01   SMP  .51806539 02   SEM  .97338861 02   EMS  .82507684 02   ESM  .15291383 00
 RPM  .10723194 06   SPN  .91480196 02
 GCE  .84457332 02   GCT  .23869460 03   SIP  .12723195 03   CPT  .10504261 03   STN  .10411388 03
 REP  .31732012 06   VEP  .18134769 01   CPE  .84011614 02   CPS  .10296305 03

  1 DAYS 12 HRS.  9 MIN. 51.000 SEC.        2355533165442020000000000 J.D.= 2437692.87500000  JAN. 28,1962 09 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.24514998 06     Y -.19374811 06     Z -.84811230 05    DX -.12516139 01    DY -.12408847 01    DZ -.36808068 00
   R  .32377429 06   DEC -.15185534 02    RA  .21832019 03     V  .18005043 01   PTH  .82886269 02    AZ  .62331612 02
   R  .32377428 06   LAT -.15185534 02   LON  .31617293 03    VE  .22658904 02   PTF  .45224415 01   AZE  .27026263 03
  XS  .90649490 08    YS -.10656097 09    ZS -.46205972 08   DXS  .23976137 02   DYS  .16904369 02   DZS  .73302907 01
  XM -.33941190 06    YM -.20160864 06    ZM -.49137257 05   DXM  .54998692 00   DYM -.75583754 00   DZM -.30365057 00
  XT -.33941190 06    YT -.20160864 06    ZT -.49137257 05   DXT  .54998692 00   DYT -.75583754 00   DZT -.30365057 00
  RS  .14733486 09    VS  .30238155 02    RM  .39782025 06    VM  .98284264 00    RT  .39782025 06    VT  .98284264 00
 GED -.15284195 02   ALT  .31739756 06   LOS  .48239948 02   RAS  .31038721 03   RAM  .21071005 03   LOM  .30856279 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17866445 01   SHA -.32338383 06   DES -.18277036 02   DEM -.70950791 01
 CCL  .27565685 03   MCL  .33270484 03   TCL  .33270484 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532172222020376000000 J.D.= 2437691.37194731  JAN. 26,1962 20 55 36.248
 SMA -.51128581 06   ECC  .10127059 01     B  .81763032 05   SLR  .13075280 05   APO  .00000000 00   RCA  .64963686 04
  VH  .88295181 00    C3  .77960389 00    C1  .72192878 05   TFP  .12986375 06    TF  .90902327-01   LTF -.19399819 01
  TA  .16136550 03   MTA  .17091438 03    EA  .60568543 02    MA  .12849429 02   C3J  .45340279 00   TFI  .36164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.24514998 06     Y -.19374811 06     Z -.84811230 05    DX -.12516139 01    DY -.12408847 01    DZ -.36808068 00
 INC  .31270644 02   LAN  .24486700 03   APF  .16832742 03    MX  .45372195 00    MY -.77026384 00    MZ  .44813921 00
  WX -.46993588 00    WY  .22046409 00    WZ  .85472488 00    PX  .57249220 00    PY  .81315653 00    PZ  .10501953 00
  QX -.67187224 00    QY  .53867561 00    QZ -.50834543 00    RX  .12566660 00    RY  .13436755 00    RZ -.98293094 00
  BX -.57304058 00    BY  .66032321 00    BZ -.48538412 00    TX -.73035840 00    TY  .68306413 00    TZ  .00000000 00
 SXI  .45921393 00   SYI  .88801660 00   SZI  .23428978-01   DAI  .13425035 01   RAI  .62655468 02
 SXD -.67140487 00   SYD -.71789187 00   SZD -.18397482 00   DAD -.13601369 02   RAD  .22691644 03

 BTQ  .69904129 05   BRQ -.42409972 05     B  .81763032 05   THA  .32875533 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90894639 08     Y  .10636722 09     Z  .46121161 08    DX -.25227751 02    DY -.18145254 02    DZ -.76983714 01
   R  .14731932 09   LAT  .18244299 02   LON  .13051509 03     V  .32014912 02   PTH  .96569481-01    AZ  .10469932 03
  XE -.90649490 08    YE  .10656097 09    ZE  .46205972 08   DXE -.23976137 02   DYE -.16904369 02   DZE -.73302907 01
  XT -.90988901 08    YT  .10635936 09    ZT  .46156834 08   DXT -.23426150 02   DYT -.17660207 02   DZT -.76339413 01
 LTE  .18277036 02   LOE  .13038721 03   LTT  .18250741 02   LOT  .13054651 03   RST  .14738299 09   VST  .30314096 02
 EPS  .92688367 02   ESP  .12589407 00   SEP  .87185860 02   EPM  .13130714 03   EMP  .37688264 02   MEP  .11004590 02
 MPS  .12902335 03   MSP  .28837468-01   SMP  .50946116 02   SEM  .96872344 02   EMS  .82974111 02   ESM  .15323340 00
 RPM  .10109268 06   SPN  .91559630 02
 GCE  .84343145 02   GCT  .23704798 03   SIP  .12803821 03   CPT  .10570150 03   STN  .10471636 03
 REP  .32377429 06   VEP  .18005043 01   CPE  .83888003 02   CPS  .10295832 03

  1 DAYS 13 HRS.  9 MIN. 51.000 SEC.        2355533203502020000000000 J.D.= 2437692.91666666  JAN. 28,1962 10 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.24964015 06     Y -.19820083 06     Z -.86128747 05    DX -.12430266 01    DY -.12328896 01    DZ -.36387656 00
   R  .33018469 06   DEC -.15120515 02    RA  .21844768 03     V  .17881661 01   PTH  .82988188 02    AZ  .61954931 02
   R  .33018469 06   LAT -.15120515 02   LON  .30125935 03    VE  .23119662 02   PTF  .44026707 01   AZE  .27025510 03
  XS  .90735782 08    YS -.10650009 09    ZS -.46179570 08   DXS  .23962684 02   DYS  .16920340 02   DZS  .73372052 01
  XM -.33741781 06    YM -.20432117 06    ZM -.50228320 05   DXM  .55783792 00   DYM -.75110622 00   DZM -.30248958 00
  XT -.33741781 06    YT -.20432117 06    ZT -.50228320 05   DXT  .55783792 00   DYT -.75110622 00   DZT -.30248958 00
  RS  .14733568 09    VS  .30238100 02    RM  .39764406 06    VM  .98328207 00    RT  .39764406 06    VT  .98328207 00
 GED -.15218795 02   ALT  .32380795 06   LOS  .33241951 02   RAS  .31043328 03   RAM  .21119672 03   LOM  .29400839 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17747925 01   SHA -.32977099 06   DES -.18266120 02   DEM -.72566900 01
 CCL  .27576737 03   MCL  .33092077 03   TCL  .33092077 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532172402024530200000 J.D.= 2437691.37261938  JAN. 26,1962 20 56 34.314
 SMA -.50898413 06   ECC  .10127218 01     B  .81446061 05   SLR  .13032778 05   APO  .00000000 00   RCA  .64752010 04
  VH  .88494595 00    C3  .78312933 00    C1  .72075453 05   TFP  .13340569 06    TF  .10703182 00   LTF -.19126609 01
  TA  .16152511 03   MTA  .17090877 03    EA  .61253351 02    MA  .13289525 02   C3J  .45287865 00   TFI  .37164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.24964015 06     Y -.19820083 06     Z -.86128747 05    DX -.12430266 01    DY -.12328896 01    DZ -.36387656 00
 INC  .31567753 02   LAN  .24453674 03   APF  .16858882 03    MX  .45273533 00    MY -.76747270 00    MZ  .45388801 00
  WX -.47265196 00    WY  .22507144 00    WZ  .85202169 00    PX  .57362995 00    PY  .81253976 00    PZ  .10357462 00
  QX -.66899012 00    QY  .53769956 00    QZ -.51315631 00    RX  .12536409 00    RY  .13380277 00    RZ -.98304660 00
  BX -.56994937 00    BY  .65933257 00    BZ -.49034506 00    TX -.72974402 00    TY  .68372045 00    TZ  .00000000 00
 SXI  .46071895 00   SYI  .88729288 00   SZI  .21191278-01   DAI  .12142608 01   RAI  .62559804 02
 SXD -.67212907 00   SYD -.71737239 00   SZD -.18335576 00   DAD -.10565286 02   RAD  .22686493 03

 BTQ  .69409467 05   BRQ -.42612042 05     B  .81446061 05   THA  .32845329 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.90985422 08     Y  .10630189 09     Z  .46093440 08     DX -.25205711 02     DY -.18153230 02     DZ -.77010817 01
   R  .14731953 09   LAT  .18232921 02   LON  .13056073 03      V  .32002722 02    PTH  .10524809 00     AZ  .10471223 03
  XE -.90735782 08    YE  .10650009 09    ZE  .46179570 08    DXE -.23962684 02    DYE -.16920340 02    DZE -.73372052 01
  XT -.91073199 08    YT  .10629576 09    ZT  .46129341 08    DXT -.23404846 02    DYT -.17671446 02    DZT -.76396948 01
 LTE  .18266120 02   LOE  .13043028 03   LTT  .18239798 02    LOT  .13058965 03    RST  .14738057 09    VST  .30305639 02
 EPS  .92740203 02   ESP  .12820425 00   SEP  .87131539 02    EPM  .12967709 03    EMP  .39723603 02    MEP  .10599302 02
 MPS  .12995470 03   MSP  .27088086-01  SMP  .50016974 02    SEM  .96405388 02    EMS  .83440986 02    ESM  .15323340 00
 RPM  .95032713 05   SPN  .91633382 02
 GCE  .84232622 02   GCT  .23515339 03   SIP  .12890674 03    CPT  .13643307 03    SIN  .10538511 03
 REP  .33018469 06   VEP  .17881661 01   CPE  .83769003 02    CPS  .10295358 03

  1 DAYS 14 HRS.  9 MIN. 51.000 SEC.        2355533221542020000000000 J.D.= 2437692.95833333  JAN. 28,1962 11 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.25410050 06     Y -.20262525 06     Z -.87431146 05     DX -.12350483 01     DY -.12251630 01     DZ -.35967366 00
   R  .33655350 06   DEC -.15057233 02   RA  .21856962 03      V  .17764385 01    PTH  .83088485 02     AZ  .61511810 02
   R  .33655350 06   LAT -.15057233 02   LON  .28634021 03     VE  .23577647 02    PTE  .42895398 01    AZE  .27024848 03
  XS  .90822027 08    YS -.10643914 09    ZS -.46153143 08    DXS  .23949218 02    DYS  .16936303 02    DZS  .73441159 01
  XM -.33539551 06    YM -.20701654 06    ZM -.51315155 05    DXM  .56565353 00    DYM -.74630678 00    DZM -.30130217 00
  XT -.33539551 06    YT -.20701654 06    ZT -.51315155 05    DXT  .56565353 00    DYT -.74630678 00    DZT -.30130217 00
  RS  .14733650 09    VS  .30238045 02    RM  .39746602 06    VM  .98372796 00     RT  .39746602 06     VT  .98372796 00
 GED -.15155140 02   ALT  .33017675 06   LDS  .18243950 02   RAS  .31047335 03    RAM  .21168417 03    LDM  .27945477 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17635295 01   SHA -.33611703 06    DES -.18255193 02    DEM -.74179217 01
 CCL  .27587453 03   MCL  .32882730 03   TCL  .32882730 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532172612021160000000 J.D.= 2437691.37338668  JAN. 26,1962 20 57 40.609
  SMA -.50647157 06   ECC  .10127386 01     B  .81097818 05   SLR  .12985653 05   APO  .00000000 00   RCA  .64517333 04
   VH  .88713831 00    C3  .78701438 00    C1  .71945024 05   TFP  .13693939 06    TF  .12544727 00   LTF -.18819356 01
   TA  .16168126 03   MTA  .17090284 03    EA  .61942383 02    MA  .13743181 02   C3J  .45233577 00   TFI  .38164166 02

                                                                   ALL VECTORS REFFRENCFD TO EARTH EQUATOR PLANE

   X -.25410050 06     Y -.20262525 06     Z -.87431146 05     DX -.12350483 01     DY -.12251630 01     DZ -.35967366 00
 INC  .31925182 02   LAN  .24414993 03   APF  .16889529 03    MX  .45109302 00     MY -.76443517 00     MZ  .46060137 00
  WX -.47589733 00    WY  .23057093 00    WZ  .84873933 00    PX  .57496618 00     PY  .81181301 00     PZ  .10185032 00
  QX -.66553392 00    QY  .53666670 00    QZ -.51891014 00    RX  .12499365 00     RY  .13313273 00     RZ -.98318474 00
  BX -.56625532 00    BY  .65807396 00    BZ -.49627974 00    TX -.72904050 00     TY  .68447057 00     TZ  .00000000 00
 SXI  .46250710 00   SYI  .88642201 00   SZI  .18524809-01   DAI  .10614532 01    RAI  .62445864 02
 SXO -.67296102 00   SYO -.71678149 00   SZO -.18261362 00   DAO -.10522034 02    RAO  .22680601 03

 BTQ  .68842732 05   BRQ -.42866469 05     B  .81097818 05   THA  .32809362 03     T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91076127 08     Y  .10623652 09     Z  .46065711 08     DX -.25184266 02     DY -.18161466 02     DZ -.77037895 01
   R  .14731975 09   LAT  .18221539 02   LON  .13060635 03      V  .31991162 02    PTH  .11420503 00     AZ  .10472498 03
  XE -.90822027 08    YE  .10643914 09    ZE  .46153143 08    DXE -.23949218 02    DYE -.16936303 02    DZE -.73441159 01
  XT -.91157422 08    YT  .10623213 09    ZT  .46101827 08    DXT -.23383564 02    DYT -.17682610 02    DZT -.76454180 01
 LTE  .18255193 02   LOE  .13047335 03   LTT  .18228846 02    LOT  .13063278 03    RST  .14737815 09    VST  .30297164 02
 EPS  .92787584 02   ESP  .13028593 00   SEP  .87081692 02    EPM  .12784188 03    EMP  .41965461 02    MEP  .10192653 02
 MPS  .13095998 03   MSP  .24228320-01  SMP  .49013871 02    SEM  .95937989 02    EMS  .83908315 02    ESM  .15323340 00
 RPM  .89064733 05   SPN  .91701711 02
 GCE  .84125465 02   GCT  .23295276 03   SIP  .12984178 03    CPT  .10724789 03    SIN  .10612970 03
 REP  .33655350 06   VEP  .17764385 01   CPE  .83654273 02    CPS  .10294883 03

  1 DAYS 15 HRS.  9 MIN. 51.000 SEC.        2355533237602020000000000 J.D.= 2437693.00000000  JAN. 28,1962 12 00 00.000

      GEOCENTRIC                                                                                                    EQUATORIAL COORDINATES

   X -.25853323 06     Y -.20702230 06     Z -.88718342 05     DX -.12276868 01     DY -.12176793 01     DZ -.35542181 00
   R  .34288279 06   DEC -.14995457 02   RA  .21868624 03      V  .17652995 01    PTH  .83187303 02     AZ  .60985084 02
   R  .34288277 06   LAT -.14995457 02   LON  .27141578 03     VE  .24033045 02    PTE  .41825465 01    AZE  .27024279 03
  XS  .90908220 08    YS -.10637814 09    ZS -.46126691 08    DXS  .23935739 02    DYS  .16952257 02    DZS  .73510229 01
  XM -.33334514 06    YM -.20969451 06    ZM -.52397668 05    DXM  .57343309 00    DYM -.74143936 00    DZM -.30008836 00
  XT -.33334514 06    YT -.20969451 06    ZT -.52397668 05    DXT  .57343309 00    DYT -.74143936 00    DZT -.30008836 00
  RS  .14733731 09    VS  .30237991 02    RM  .39728615 06    VM  .98418029 00     RT  .39728615 06     VT  .98418029 00
 GED -.15093000 02   ALT  .33650602 06   LDS  .32459450 01   RAS  .31051641 03    RAM  .21217240 03    LDM  .76490193 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17528352 01   SHA -.34242414 06    DES -.18244257 02    DEM -.75787650 01
 CCL  .27597862 03   MCL  .32634929 03   TCL  .32634929 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 2355532173032027706000000 J.D.= 2437691.37425860  JAN. 26,1962 20 58 55.943
  SMA -.50373671 06   ECC  .10127567 01     B  .80717642 05   SLR  .12934037 05   APO  .00000000 00   RCA  .64260307 04
   VH  .88954325 00    C3  .79128718 00    C1  .71801896 05   TFP  .14046406 06    TF  .14637327 00   LTF -.18475861 01
   TA  .16183407 03   MTA  .17089643 03    EA  .62637216 02    MA  .14211872 02   C3J  .45177278 00   TFI  .39164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.25853323 06     Y -.20702230 06     Z -.88718342 05     DX -.12276868 01     DY -.12176793 01     DZ -.35542181 00
 INC  .32358755 02   LAN  .24369516 03   APF  .16925601 03    MX  .44864391 00     MY -.76105649 00     MZ  .46851983 00
  WX -.47979581 00    WY  .23718019 00    WZ  .84471341 00    PX  .57654415 00     PY  .81095105 00     PZ  .99775788-01
  QX -.66135644 00    QY  .53488650 00    QZ -.52583577 00    RX  .12453603 00     RY  .13233159 00     RZ -.98335094 00
  BX -.56180570 00    BY  .65645758 00    BZ -.50342607 00    TX -.72823118 00     TY  .68533155 00     TZ  .00000000 00
 SXI  .46664252 00   SYI  .88536575 00   SZI  .15321555-01   DAI  .87789445 00    RAI  .62309380 02
 SXO -.67392144 00   SYO -.71610683 00   SZO -.18171646 00   DAO -.10469755 02    RAO  .22673831 03

 BTQ  .68191306 05   BRQ -.43188927 05     B  .80717642 05   THA  .32765190 03     T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91166753 08     Y  .10617112 09     Z  .46037972 08    DX -.25163425 02    DY -.18169936 02    DZ -.77064446 01
   R  .14731998 09   LAT  .18210151 02   LON  .13065194 03     V  .31980210 02   PTH  .12351458 00    AZ  .10473746 03
  XE -.90908220 08    YE  .10637814 09    ZE  .46126691 08   DXE -.23935739 02   DYE -.16952257 02   DZE -.73510229 01
  XT -.91241565 08    YT  .10616845 09    ZT  .46074292 08   DXT -.23362306 02   DYT -.17693696 02   DZT -.76511112 01
 LTE  .18244257 02   LOE  .13051641 03   LTT  .18217888 02   LOT  .13067589 03   RST  .14737572 09   VST  .30288677 02
 EPS  .92830653 02   ESP  .13251956 00   SEP  .87036169 02   EPM  .12575934 03   EMP  .44455642 02   MEP  .97850165 01
 MPS  .13204207 03   MSP  .22117329-01   SMP  .47933301 02   SEM  .95470138 02   EMS  .84376108 02   ESM  .15355230 00
 RPM  .83205492 05   SPM  .91764827 02
 GCE  .84021376 02   GCT  .23037066 03   SIP  .13084512 03   CPT  .10815772 03   SIN  .10696077 03
 REP  .34288279 06   VEP  .17652995 01   CPE  .83543497 02   CPS  .10294408 03

 1 DAYS 16 HRS.  9 MIN. 51.000 SEC.        2355533255642020000000000 J.D.= 2437693.04166666  JAN. 28,1962 13 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.26294059 06     Y -.21139280 06     Z -.89990054 05    DX -.12209565 01    DY -.12104097 01    DZ -.35105826 00
   R  .34917456 06   DEC -.14934950 02   RA  .21879777 03     V  .17547270 01   PTH  .83284685 02    AZ  .60352530 02
   R  .34917456 06   LAT -.14934951 02   LON  .25648623 03    VE  .24486347 02   PTE  .40812292 01   AZE  .27023811 03
  XS  .90994368 08    YS -.10631708 09    ZS -.46100213 08   DXS  .23922246 02   DYS  .16968202 02   DZS  .73579261 01
  XM -.33126682 06    YM -.21235483 06    ZM -.53475764 05   DXM  .58117595 00   DYM -.73650413 00   DZM -.29884816 00
  XT -.33126682 06    YT -.21235483 06    ZT -.53475764 05   DXT  .58117595 00   DYT -.73650413 00   DZT -.29884816 00
  RS  .14733814 09    VS  .30237937 02    RM  .39710444 06    VM  .98463903 00    RT  .39710444 06    VT  .98463903 00
 GED -.15032138 02   ALT  .34279779 06   LOS  .34824793 03   RAS  .31055947 03   RAM  .21766144 03   LOM  .25034990 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17426986 01   SHA -.34869439 06   DES -.18233311 02   DEM -.77392062 01
 CCL  .27607993 03   MCL  .32338843 03   TCL  .32338843 03

                                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532173312021642000000 J.D.= 2437691.37524199  JAN. 26,1962 21 00 20.908
 SMA -.50077569 06   ECC  .10127769 01    B  .80306345 05   SLR  .12878454 05   APO  .00000000 00   RCA  .63983515 04
  VH  .89716925 00    C3  .79596597 00   C1  .71647450 05   TFP  .14397309 06    TF  .16997433 00   LTF -.18095347 01
  TA  .16198341 03   MTA  .17088932 03   EA  .63339005 02    MA  .14696911 02   C3J  .45118859 00   TFI  .40164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.26294059 06     Y -.21139280 06     Z -.89990054 05    DX -.12209565 01    DY -.12104092 01    DZ -.35105826 00
 INC  .32888727 02   LAN  .24315874 03   APF  .16968204 03    MX  .44518842 00    MY -.75721129 00    MZ  .47795187 00
  WX -.48450572 00    WY  .24517941 00    WZ  .83972670 00    PX  .57841791 00    PY  .80992189 00    PZ  .97258565-01
  QX -.65626730 00    QY  .53283526 00    QZ -.53427794 00    RX  .12376538 00    RY  .13136591 00    RZ -.98355252 00
  BX -.55640028 00    BY  .65435796 00    BZ -.51208827 00    TX -.72729617 00    TY  .68637376 00    TZ  .00000000 00
 SXI  .46720609 00   SYI  .88407438 00   SZI  .11440854-01   DAI  .65552654 00   RAI  .62144927 02
 SXO -.67503546 00   SYO -.71533397 00   SZO -.18062231 00   DAO -.10406311 02   RAO  .22666019 03

 BTQ  .67440312 05   BRQ -.43600568 05    B  .80306945 05   THA  .32711709 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91257308 08     Y  .10610569 09     Z  .46010223 08    DX -.25143202 02    DY -.18178611 02    DZ -.77089843 01
   R  .14732024 09   LAT  .18198757 02   LON  .13069752 03     V  .31969845 02   PTH  .13326724 00    AZ  .10474960 03
  XE -.90994368 08    YE  .10631708 09    ZE  .46100213 08   DXE -.23922246 02   DYE -.16968202 02   DZE -.73579261 01
  XT -.91325634 08    YT  .10610473 09    ZT  .46046738 08   DXT -.23341370 02   DYT -.17704706 02   DZT -.76567742 01
 LTE  .18233311 02   LOE  .13055946 03   LTT  .18204921 02   LOT  .13071898 03   RST  .14737329 09   VST  .30280164 02
 EPS  .92869515 02   ESP  .13580115 00   SEP  .86994868 02   EPM  .12337722 03   EMP  .47246027 02   MEP  .93767513 01
 MPS  .13319892 03   MSP  .20982341-01   SMP  .46779115 02   SEM  .95001829 02   EMS  .84844369 02   ESM  .15371151 00
 RPM  .77477052 05   SPM  .91822897 02
 GCE  .83920064 02   GCT  .22730849 03   SIP  .13191346 03   CPT  .10917504 03   SIN  .10788958 03
 REP  .34917456 06   VEP  .17547270 01   CPE  .83436358 02   CPS  .10293932 03

 1 DAYS 17 HRS.  9 MIN. 51.000 SEC.        2355533273702020000000000 J.D.= 2437693.08333333  JAN. 28,1962 14 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.26732488 06     Y -.21573747 06     Z -.91245738 05    DX -.12148769 01    DY -.12033174 01    DZ -.34650284 00
   R  .35543077 06   DEC -.14875451 02   RA  .21890435 03     V  .17446957 01   PTH  .83380352 02    AZ  .59585488 02
   R  .35543076 06   LAT -.14875452 02   LON  .24155174 03    VE  .24936850 02   PTE  .39851618 01   AZE  .27023451 03
  XS  .91080466 08    YS -.10625597 09    ZS -.46073712 08   DXS  .23908741 02   DYS  .16984139 02   DZS  .73648255 01
  XM -.32916071 06    YM -.21499727 06    ZM -.54549348 05   DXM  .58888146 00   DYM -.73150126 00   DZM -.29758158 00
  XT -.32916071 06    YT -.21499727 06    ZT -.54549348 05   DXT  .58888146 00   DYT -.73150126 00   DZT -.29758158 00
  RS  .14733896 09    VS  .30237882 02    RM  .39692093 06    VM  .98510418 00    RT  .39692093 06    VT  .98510418 00
 GED -.14972287 02   ALT  .34905398 06   LOS  .33324992 03   RAS  .31060252 03   RAM  .21315128 03   LOM  .23579868 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17330644 01   SHA -.35492984 06   DES -.18222355 02   DEM -.78992341 01
 CCL  .27617877 03   MCL  .31981628 03   TCL  .31981628 03

                                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532173602027026000000 J.D.= 2437691.37633705  JAN. 26,1962 21 01 55.521
 SMA -.49759836 06   ECC  .10128003 01    B  .79871138 05   SLR  .12820374 05   APO  .00000000 00   RCA  .63694218 04
  VH  .89501311 00    C3  .80104847 00   C1  .71485708 05   TFP  .14748448 06    TF  .19625616 00   LTF -.17680199 01
  TA  .16212853 03   MTA  .17088105 03   EA  .64048058 02    MA  .15199153 02   C3J  .45058268 00   TFI  .41164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.26732488 06     Y -.21573747 06     Z -.91245738 05    DX -.12148769 01    DY -.12033174 01    DZ -.34650284 00
 INC  .33541667 02   LAN  .24252471 03   APF  .17018635 03    MX  .44045969 00    MY -.75272556 00    MZ  .48928611 00
  WX -.49022303 00    WY  .25492526 00    WZ  .83348420 00    PX  .58065420 00    PY  .80868493 00    PZ  .94177962-01
  QX -.65001749 00    QY  .53013456 00    QZ -.54445928 00    RX  .12324712 00    RY  .13019237 00    RZ -.98379880 00
  BX -.54977713 00    BY  .65159803 00    BZ -.52265200 00    TX -.72621171 00    TY  .68747114 00    TZ  .00000000 00
 SXI  .47029785 00   SYI  .88248245 00   SZI  .66993208-02   DAI  .38384638 00   RAI  .61945685 02
 SXO -.67633328 00   SYO -.71444620 00   SZO -.17927606 00   DAO -.10327596 02   RAO  .22656973 03

 BTQ  .66572780 05   BRQ -.44130082 05    B  .79871138 05   THA  .32646021 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  L                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
EQUATORIAL COORDINATES

  X -.91347790 08    Y  .10604023 09    Z  .45982466 08    DX -.25123617 02    DY -.18187457 02    DZ -.77113283 01
  R  .14732052 09  LAT  .18187358 02  LON  .13074308 03    V  .31960042 02   PTH  .14358253 00    AZ  .10476128 03
 XE -.91080466 08   YE  .10625597 09   ZE  .46073712 08  DXE -.23908741 02   DYE -.16984139 02   DZE -.73648255 01
 XT -.91409626 08   YT  .10604097 09   ZT  .46019162 08  DXT -.23319859 02   DYT -.17715640 02   DZT -.76624071 01
LTE  .18222355 02  LOE  .13060251 03  LTT  .18195946 02  LOT  .13076205 03   RST  .14737086 09   VST  .30271640 02
EPS  .92904223 02  ESP  .13794551 00  SEP  .86957734 02  EPM  .12063082 03   EMP  .50400906 02   MEP  .89682653 01
MPS  .13441884 03  MSP  .18504685-01  SMP  .45561188 02  SEM  .94533058 02   EMS  .85313104 02   ESM  .15371151 00
RPM  .71908567 05  SPN  .91876028 02
GCE  .83821227 02  GCT  .22363751 03  SIP  .13303381 03  CPT  .11031200 03   SIN  .10892698 03
REP  .35543077 06  VEP  .17446957 01  CPE  .83332554 02  CPS  .10293455 03

 I DAYS 18 HRS.  9 MIN. 51.000 SEC.        2355533311742020000000000 J.D.= 2437693.12500000  JAN. 28,1962 15 00 00.000

     GEOCENTRIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
EQUATORIAL COORDINATES

  X -.27168850 06    Y -.22005686 06    Z -.92484524 05    DX -.12094690 01    DY -.11963592 01    DZ -.34165198 00
  R  .36165321 06  DEC -.14816672 02   RA  .21900609 03    V  .17351704 01   PTH  .83473624 02    AZ  .58647288 02
  R  .36165321 06  LAT -.14816672 02  LON  .22661243 03   VE  .25385655 02   PTE  .38939207 01   AZE  .27023214 03
 XS  .91166515 08   YS -.10619479 09   ZS -.46047185 08  DXS  .23895222 02   DYS  .17000067 02   DZS  .73717213 01
 XM -.32702691 06   YM -.21762157 06   ZM -.55618325 05  DXM  .59654897 00   DYM -.72643091 00   DZM -.29628866 00
 XT -.32702691 06   YT -.21762157 06   ZT -.55618325 05  DXT  .59654897 00   DYT -.72643091 00   DZT -.29628866 00
 RS  .14733978 09   VS  .30237827 02   RM  .39673562 06   VM  .98557571 00    RT  .39673562 06    VT  .98557571 00
GED -.14913160 02  ALT  .35527642 06  LOS  .31825189 03  RAS  .31064555 03   RAM  .21364196 03   LOM  .22124829 03
DUT  .34000000 02   DT  .95999999 03   DR  .17239260 01  SHA -.36113241 06   DES -.18211390 02   DEM -.80588359 01
CCL  .27627544 03  MCL  .31546702 03  TCL  .31546702 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532174122025420000000 J.D.= 2437691.3775320I  JAN. 26,1962 21 03 38.766
 SMA -.49423940 06  ECC  .10128294 01    B  .79422429 05  SLR  .12762932 05   APO  .00000000 00   RCA  .63407916 04
  VH  .89804931 00   C3  .80649257 00   C1  .71325380 05  TFP  .15098123 06    TF  .22493505 00   LTF -.17238682 01
  TA  .16226763 03  MTA  .17087081 03   EA  .64763085 02   MA  .15718403 02   C3J  .44995573 00   TFI  .42164166 02

                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
  X -.27168850 06    Y -.22005686 06    Z -.92484524 05    DX -.12094690 01    DY -.11963592 01    DZ -.34165198 00
 INC  .34352263 02  LAN  .24177518 03  APF  .17078357 03   HX  .43410237 00   HY -.74735541 00   HZ  .50300375 00
 WX -.49718412 00   WY  .26686499 00   WZ  .82558390 00   PX  .58333364 00   PY  .80718876 00   PZ  .90377017-01
 QX -.64228407 00   QY  .52652450 00   QZ -.55699289 00   RX  .12233459 00   RY  .12875504 00   RZ -.98410180 00
 BX -.54159670 00   BY  .64792509 00   BZ -.53559881 00   TX -.72495077 00   TY  .68880069 00   TZ  .00000000 00
SXI  .47403926 00  SYI  .88050305 00  SZI  .85923167-03  DAI  .49231149-01  RAI  .61703168 02
SXO -.67785000 00  SYO -.71342535 00  SZO -.17760522 00  DAO -.10230302 02  RAO  .22646474 03

BTQ  .65569978 05  BRQ -.44816284 05    B  .79422429 05  THA  .32564786 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                                                                                                                                                                                                                                                                                                                
EQUATORIAL COORDINATES

  X -.91438203 08    Y  .10597474 09    Z  .45954700 08    DX -.25104691 02    DY -.18196427 02    DZ -.77133732 01
  R  .14732082 09  LAT  .18175955 02  LON  .13078861 03    V  .31950768 02   PTH  .15459706 00    AZ  .10477237 03
 XE -.91166515 08   YE  .10619479 09   ZE  .46047185 08  DXE -.23895222 02   DYE -.17000067 02   DZE -.73717213 01
 XT -.91493541 08   YT  .10597717 09   ZT  .45991566 08  DXT -.23298673 02   DYT -.17726498 02   DZT -.76680098 01
LTE  .18211390 02  LOE  .13064556 03  LTT  .18184963 02  LOT  .13080511 03   RST  .14736842 09   VST  .30263101 02
EPS  .92934794 02  ESP  .14057998 00  SEP  .86924753 02  EPM  .11744064 03   EMP  .53999333 02   MEP  .85600239 01
MPS  .13567242 03  MSP  .15639313-01  SMP  .44309494 02  SEM  .94063818 02   EMS  .85782321 02   ESM  .15371151 00
RPM  .66538618 05  SPN  .91924291 02
GCE  .83724555 02  GCT  .21919158 03  SIP  .13417560 03  CPT  .11157801 03   SIN  .11008119 03
REP  .36165321 06  VEP  .17351704 01  CPE  .83231773 02  CPS  .10292977 03

 I DAYS 19 HRS.  9 MIN. 51.000 SEC.        2355533330002020000000000 J.D.= 2437693.16666666  JAN. 28,1962 16 00 00.000

     GEOCENTRIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
EQUATORIAL COORDINATES

  X -.27603388 06    Y -.22435135 06    Z -.93705121 05    DX -.12047470 01    DY -.11894750 01    DZ -.33637191 00
  R  .36784355 06  DEC -.14758284 02   RA  .21910308 03    V  .17260974 01   PTH  .83563052 02    AZ  .57492194 02
  R  .36784355 06  LAT -.14758284 02  LON  .21166835 03   VE  .25832663 02   PTE  .38070782 01   AZE  .27023117 03
 XS  .91252515 08   YS -.10613356 09   ZS -.46020634 08  DXS  .23881690 02   DYS  .17015987 02   DZS  .73786132 01
 XM -.32486559 06   YM -.22022750 06   ZM -.56682600 05  DXM  .60417779 00   DYM -.72129327 00   DZM -.29496940 00
 XT -.32486559 06   YT -.22022750 06   ZT -.56682600 05  DXT  .60417779 00   DYT -.72129327 00   DZT -.29496940 00
 RS  .14734060 09   VS  .30237772 02   RM  .39654851 06   VM  .98605360 00    RT  .39654851 06    VT  .98605360 00
GED -.14854426 02  ALT  .36146674 06  LOS  .30325386 03  RAS  .31068859 03   RAM  .21413348 03   LOM  .20669874 03
DUT  .34000000 02   DT  .95999999 03   DR  .17152159 01  SHA -.36730387 06   DES -.18200416 02   DEM -.82180024 01
CCL  .27637029 03  MCL  .31013371 03  TCL  .31013371 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532174452027152000000 J.D.= 2437691.37879170  JAN. 26,1962 21 05 27.604
 SMA -.49077576 06  ECC  .10128673 01    B  .78984783 05  SLR  .12711716 05   APO  .00000000 00   RCA  .63152264 04
  VH  .90121273 00   C3  .81218438 00   C1  .71182127 05  TFP  .15447240 06    TF  .25516748 00   LTF -.16789323 01
  TA  .16239745 03  MTA  .17085729 03   EA  .65479968 02   MA  .16252408 02   C3J  .44931090 00   TFI  .43164166 02

                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
  X -.27603388 06    Y -.22435135 06    Z -.93705121 05    DX -.12047470 01    DY -.11894750 01    DZ -.33637191 00
 INC  .35363501 02  LAN  .24089186 03  APF  .17148912 03   HX  .42565820 00   HY -.74077205 00   HZ  .51968481 00
 WX -.50566639 00   WY  .28154432 00   WZ  .81549662 00   PX  .58655062 00   PY  .80537054 00   PZ  .85655098-01
 QX -.63266098 00   QY  .52164306 00   QZ -.57238870 00   RX  .12116598 00   RY  .12698301 00   RZ -.98447658 00
 BX -.53142398 00   BY  .64298439 00   BZ -.55150671 00   TX -.72348380 00   TY  .69034136 00   TZ  .00000000 00
SXI  .47857283 00  SYI  .87802478 00  SZI -.63822306-02  DAI -.36567808 00  RAI  .61407134 02
SXO -.67962491 00  SYO -.71225286 00  SZO -.17551604 00  DAO -.10108691 02  RAO  .22634286 03

BTQ  .64413121 05  BRQ -.45711555 05    B  .78984783 05  THA  .32463812 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91528548 08     Y  .10590921 09     Z  .45926929 08    DX -.25086437 02    DY -.18205462 02    DZ -.77149851 01
   R  .14732114 09   LAT  .18164545 02   LON  .13083414 03     V  .31941965 02   PTH  .16648586 00    AZ  .10478269 03
  XE -.91252515 08    YE  .10613356 09    ZE  .46020634 08   DXE -.23881690 02   DYE -.17015987 02   DZE -.73786132 01
  XT -.91577380 08    YT  .10591334 09    ZT  .45963952 08   DXT -.23277512 02   DYT -.17737280 02   DZT -.76735826 01
 LTE  .18200416 02   LOE  .13068859 03   LTT  .18173974 02   LOT  .13084815 03   RST  .14736599 09   VST  .30254546 02
 EPS  .92961183 02   ESP  .14316597 00   SEP  .86895964 02   EPM  .11371074 03   EMP  .58136763 02   MEP  .81524870 01
 MPS  .13689920 03   MSP  .13988227-01   SMP  .43084478 02   SEM  .93594102 02   EMS  .86252022 02   ESM  .15355230 00
 RPM  .61418316 05   SPN  .91967689 02
 GCE  .83629708 02   GCT  .21376342 03   SIP  .13527756 03   CPT  .11297515 03   SIN  .11135351 03
 REP  .36784355 06   VEP  .17260974 01   CPE  .83133691 02   CPS  .10292498 03

  1 DAYS 20 HRS.  9 MIN. 51.000 SEC.        2355533346042020000000000 J.D.= 2437693.20833333  JAN. 28,1962 17 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.28036348 06     Y -.22862108 06     Z -.94905688 05    DX -.12007044 01    DY -.11825850 01    DZ -.33049306 00
   R  .37400316 06   DEC -.14699906 02    RA  .21919536 03     V  .17173887 01   PTH  .83646007 02    AZ  .56066059 02
   R  .37400316 06   LAT -.14699906 02   LON  .19671956 03    VE  .26278066 02   PTE  .37241538 01   AZE  .27023182 03
  XS  .91338466 08    YS -.10607228 09    ZS -.45994058 08   DXS  .23868145 02   DYS  .17031898 02   DZS  .73855015 01
  XM -.32267688 06    YM -.22281481 06    ZM -.57742078 05   DXM  .61176730 00   DYM -.71608850 00   DZM -.29362382 00
  XT -.32267688 06    YT -.22281481 06    ZT -.57742078 05   DXT  .61176730 00   DYT -.71608850 00   DZT -.29362382 00
  RS  .14734142 09    VS  .30237717 02    RM  .39635963 06    VM  .98653784 00    RT  .39635963 06    VT  .98653784 00
 GED -.14795703 02   ALT  .36762635 06   LOS  .28825582 03   RAS  .31073163 03   RAM  .21462585 03   LOM  .19215005 03
 DUT  .34000000 02    DT  .95999999 03    DR  .17068389 01   SHA -.37344575 06   DES -.18189433 02   DEM -.83767198 01
 CCL  .27646369 03   MCL  .30357809 03   TCL  .30357809 03

                                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532175002026700000000 J.D.= 2437691.38003978  JAN. 26,1962 21 07 15.438
  SMA -.48735275 06   ECC  .10129225 01     B  .78601228 05   SLR  .12676994 05   APO  .00000000 00   RCA  .62978053 04
   VH  .90437210 00    C3  .81788889 00    C1  .71084842 05   TFP  .15796456 06    TF  .28512144 00   LTF -.16368493 01
   TA  .16251189 03   MTA  .17083811 03    EA  .66189818 02    MA  .16795233 02   C3J  .44865561 00   TFI  .44164166 02

                                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.28036348 06     Y -.22862108 06     Z -.94905688 05    DX -.12007044 01    DY -.11825850 01    DZ -.33049306 00
 INC  .36626171 02   LAN  .23985915 03   APF  .17231690 03    MX  .41454796 00    MY -.73252120 00    MZ  .53996425 00
  WX -.51595189 00    WY  .29957848 00    WZ  .80252422 00    PX  .59040549 00    PY  .80315562 00    PZ  .79764188-01
  QX -.62065643 00    QY  .51496896 00    QZ -.59126250 00    RX  .11966061 00    RY  .12478909 00    RZ -.98494112 00
  BX -.51873165 00    BY  .63628167 00    BZ -.57101937 00    TX -.72178283 00    TY  .69211961 00    TZ  .00000000 00
 SXI  .48404961 00   SYI  .87490495 00   SZI -.15396898-01   DAI -.88721113 00   RAI  .61046015 02
 SXO -.68169706 00   SYO -.71091358 00   SZO -.17289008 00   DAO -.99558979 01   RAO  .22620187 03

 BTQ  .63086907 05   BRQ -.46884909 05     B  .78601228 05   THA  .32338101 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91618829 08     Y  .10584365 09     Z  .45899152 08    DX -.25068850 02    DY -.18214483 02    DZ -.77159945 01
   R  .14732149 09   LAT  .18153132 02   LON  .13087963 03     V  .31933543 02   PTH  .17944102 00    AZ  .10479202 03
  XE -.91338466 08    YE  .10607228 09    ZE  .45994058 08   DXE -.23868145 02   DYE -.17031898 02   DZE -.73855015 01
  XT -.91661142 08    YT  .10584946 09    ZT  .45936316 08   DXT -.23256378 02   DYT -.17747986 02   DZT -.76791253 01
 LTE  .18189433 02   LOE  .13073163 03   LTT  .18162975 02   LOT  .13089117 03   RST  .14736356 09   VST  .30245976 02
 EPS  .92983299 02   ESP  .14536996 00   SEP  .86871458 02   EPM  .10932945 03   EMP  .62924299 02   MEP  .77462430 01
 MPS  .13798715 03   MSP  .13988227-01   SMP  .41998111 02   SEM  .93123904 02   EMS  .86722215 02   ESM  .15402942 00
 RPM  .56615104 05   SPN  .92006168 02
 GCE  .83536306 02   GCT  .20711439 03   SIP  .13622789 03   CPT  .11448965 03   SIN  .11273039 03
 REP  .37403316 06   VEP  .17173887 01   CPE  .83037961 02   CPS  .10292018 03

  1 DAYS 21 HRS.  9 MIN. 51.000 SEC.        2355533364102020000000000 J.D.= 2437693.25000000  JAN. 28,1962 18 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.28467969 06     Y -.23286584 06     Z -.96083712 05    DX -.11972869 01    DY -.11755819 01    DZ -.32381070 00
   R  .38013301 06   DEC -.14641095 02    RA  .21928290 03     V  .17089009 01   PTH  .83718073 02    AZ  .54311430 02
   R  .38013300 06   LAT -.14641095 02   LON  .18176604 03    VE  .26722017 02   PTE  .36445804 01   AZE  .27023437 03
  XS  .91424370 08    YS -.10601093 09    ZS -.45967457 08   DXS  .23854588 02   DYS  .17047801 02   DZS  .73923859 01
  XM -.32046090 06    YM -.22538327 06    ZM -.58796664 05   DXM  .61931680 00   DYM -.71081679 00   DZM -.29225195 00
  XT -.32046090 06    YT -.22538327 06    ZT -.58796664 05   DXT  .61931680 00   DYT -.71081679 00   DZT -.29225195 00
  RS  .14734225 09    VS  .30237662 02    RM  .39616897 06    VM  .98702837 00    RT  .39616897 06    VT  .98702837 00
 GED -.14736542 02   ALT  .37375618 06   LOS  .27325779 03   RAS  .31077465 03   RAM  .21511909 03   LOM  .17760223 03
 DUT  .34000000 02    DT  .95999999 03    DR  .16986398 01   SHA -.37955917 06   DES -.18178439 02   DEM -.85349753 01
 CCL  .27655607 03   MCL  .29557431 03   TCL  .29557431 03

                                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                  2355532175302024060000000 J.D.= 2437691.38113480  JAN. 26,1962 21 08 50.047
  SMA -.48422056 06   ECC  .10130040 01     B  .78343698 05   SLR  .12675514 05   APO  .00000000 00   RCA  .62968151 04
   VH  .90729236 00    C3  .82317943 00    C1  .71080694 05   TFP  .16146995 06    TF  .31140184 00   LTF -.16040058 01
   TA  .16260108 03   MTA  .17080956 03    EA  .66876259 02    MA  .17334782 02   C3J  .44800442 00   TFI  .45164166 02

                                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.28467969 06     Y -.23286584 06     Z -.96083712 05    DX -.11972869 01    DY -.11755819 01    DZ -.32381070 00
 INC  .38202830 02   LAN  .23867016 03   APF  .17327530 03    MX  .40010847 00    MY -.72202878 00    MZ  .56443577 00
  WX -.52827039 00    WY  .32157033 00    WZ  .78582633 00    PX  .59498855 00    PY  .80046491 00    PZ  .72419401-01
  QX -.60573844 00    QY  .50581470 00    QZ -.61419256 00    RX  .11771867 00    RY  .12207319 00    RZ -.98551531 00
  BX -.50293305 00    BY  .62716892 00    BZ -.59474154 00    TX -.71982884 00    TY  .69415160 00    TZ  .00000000 00
 SXI  .49060424 00   SYI  .87097622 00   SZI -.26606913-01   DAI -.15246425 01   RAI  .60608271 02
 SXO -.68409703 00   SYO -.70940235 00   SZO -.16958641 00   DAO -.97637740 01   RAO  .22604035 03

 BTQ  .61586340 05   BRQ -.48423730 05     B  .78343698 05   THA  .32182295 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91709049 08     Y  .10577807 09     Z  .45871373 08    DX -.25051874 02    DY -.18223383 02    DZ -.77161966 01
   R  .14732186 09   LAT  .18141715 02   LON  .13092512 03     V  .31925347 02   PTH  .19365806 00    AZ  .10480009 03
  XE -.91424370 08    YE  .10601093 09    ZE  .45967457 08   DXE -.23854588 02   DYE -.17047801 02   DZE -.73923859 01
  XT -.91744830 08    YT  .10578555 09    ZT  .45908660 08   DXT -.23235271 02   DYT -.17758617 02   DZT -.76846378 01
 LTE  .18178439 02   LOE  .13077465 03   LTT  .18151969 02   LOT  .13093418 03   RST  .14736112 09   VST  .30237393 02
 EPS  .93000995 02   ESP  .14754103 00   SEP  .86851387 02   EPM  .10417580 03   EMP  .68482233 02   MEP  .73419607 01
 MPS  .13874645 03   MSP  .98911702-02   SMP  .41240156 02   SEM  .97653221 02   EMS  .87192907 02   ESM  .15371151 00
 RPM  .52216930 05   SPN  .92039622 02
 GCE  .83443930 02   GCT  .19901825 03   SIP  .13683895 03   CPT  .11607787 03   SIN  .11417037 03
 REP  .38013301 06   VEP  .17089009 01   CPE  .82944199 02   CPS  .10291537 03

  1 DAYS 22 HRS.  9 MIN. 51.000 SEC.        2355533402142020000000000 J.D.= 2437693.29166666  JAN. 28,1962 19 00 00.000

      GEOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.28898453 06     Y -.23708498 06     Z -.97235898 05    DX -.11943536 01    DY -.11683298 01    DZ -.31610226 00
   R  .38623331 06   DEC -.14581346 02   RA  .21936570 03     V  .17004105 01   PTH  .83772490 02    AZ  .52181660 02
   R  .38623330 06   LAT -.14581347 02   LON  .16680777 03    VE  .27164597 02   PTE  .35676596 01   AZE  .27023901 03
  XS  .91510226 08    YS -.10594953 09   ZS -.45940831 08   DXS  .23841017 02   DYS  .17063695 02   DZS  .73992665 01
  XM -.31821784 06    YM -.22793263 06   ZM -.59846266 05   DXM  .62682564 00   DYM -.70547834 00   DZM -.29085381 00
  XT -.31821784 06    YT -.22793263 06   ZT -.59846266 05   DXT  .62682564 00   DYT -.70547834 00   DZT -.29085381 00
  RS  .14734308 09    VS  .30237607 02   RM  .39597658 06    VM  .98752519 00    RT  .39597658 06    VT  .98752519 00
 GED -.14676439 02   ALT  .37985647 06   LOS  .25825974 03   RAS  .31081767 03   RAM  .21561321 03   LOM  .16305528 03
 DUT  .34000000 02    DT  .95999999 03    DR  .16903763 01   SHA -.38564452 06   DES -.18167436 02   DEM -.86927595 01
 CCL  .27664790 03   MCL  .28601599 03   TCL  .28601599 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532175472025422000000 J.D.= 2437691.38183758  JAN. 26,1962 21 09 50.768
 SMA -.48177605 06   ECC  .10131288 01    B  .78323564 05   SLR  .12733296 05   APD  .00000000 00   RCA  .63251273 04
  VH  .90959123 00    C3  .82735620 00   C1  .71242521 05   TFP  .16500923 06    TF  .32826900 00   LTF -.15907707 01
  TA  .16264995 03   MTA  .17076605 03   EA  .67512199 02    MA  .17849741 02   C3J  .44738254 00   TFI  .46164166 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.28898453 06     Y -.23708498 06     Z -.97235898 05    DX -.11943536 01    DY -.11683298 01    DZ -.31610226 00
 INC  .40136185 02   LAN  .23733592 03   APF  .17436095 03    MX  .38170291 00    MY -.70863625 00    MZ  .59341025 00
  WX -.54266046 00    WY  .34790152 00    WZ  .76451445 00    PX  .60034209 00    PY  .79723106 00    PZ  .63339573-01
  QX -.58745905 00    QY  .49334183 00    QZ -.64148580 00    RX  .11522784 00    RY  .11873516 00    RZ -.98621725 00
  BX -.48351235 00    BY  .61487778 00    BZ -.62300973 00    TX -.71762633 00    TY  .69642836 00    TZ  .00000000 00
 SXI  .49829530 00   SYI  .86606460 00   SZI -.40417854-01   DAI -.23164031 01   RAI  .60085779 02
 SXO -.68682966 00   SYO -.70773546 00   SZO -.16545541 00   DAO -.95236930 01   RAO  .22585884 03

 BTQ  .59928521 05   BRQ -.50429676 05    B  .78323564 05   THA  .31991948 03    T VECTOR IN  EARTH EQUATOR PLANE
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     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91799210 08     Y  .10571244 09     Z  .45843595 08    DX -.25035370 02    DY -.18232024 02    DZ -.77153687 01
   R  .14732227 09   LAT  .18130295 02   LON  .13097059 03     V  .31917133 02   PTH  .20928297 00    AZ  .10480662 03
  XE -.91510226 08    YE  .10594953 09    ZE  .45940831 08   DXE -.23841017 02   DYE -.17063695 02   DZE -.73992665 01
  XT -.91828443 08    YT  .10572159 09    ZT  .45880985 08   DXT -.23214191 02   DYT -.17769173 02   DZT -.76901203 01
 LTE  .18167436 02   LOE  .13081767 03   LTT  .18140956 02   LOT  .13097717 03   RST  .14735869 09   VST  .30228796 02
 EPS  .93014082 02   ESP  .14984393 00   SEP  .86835933 02   EPM  .98137230 02   EMP  .74922301 02   MEP  .69404677 01
 MPS  .13888927 03   MSP  .13988227-01   SMP  .41098370 02   SEM  .92182045 02   EMS  .87664104 02   ESM  .15371151 00
 RPM  .48335666 05   SPN  .92067896 02
 GCE  .83352102 02   GCT  .18936809 03   SIP  .13682854 03   CPT  .11764590 03   SIN  .11558517 03
 REP  .38623331 06   VEP  .17004105 01   CPE  .82851981 02   CPS  .10291055 03

  1 DAYS 23 HRS.  9 MIN. 51.000 SEC.        2355533420202020000000000 J.D.= 2437693.33333333  JAN. 28,1962 20 00 00.000

      GEOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.29327928 06     Y -.24127734 06     Z -.98358188 05    DX -.11916292 01    DY -.11606738 01    DZ -.30717804 00
   R  .39230323 06   DEC -.14520109 02   RA  .21944372 03     V  .16915976 01   PTH  .83800209 02    AZ  .49668655 02
   R  .39230322 06   LAT -.14520109 02   LON  .15184472 03    VE  .27605741 02   PTE  .34925421 01   AZE  .27024585 03
  XS  .91596030 08    YS -.10588807 09   ZS -.45914181 08   DXS  .23827432 02   DYS  .17079580 02   DZS  .74061434 01
  XM -.31594780 06    YM -.23046264 06   ZM -.60890785 05   DXM  .63429317 00   DYM -.70007332 00   DZM -.28942941 00
  XT -.31594780 06    YT -.23046264 06   ZT -.60890785 05   DXT  .63429317 00   DYT -.70007332 00   DZT -.28942941 00
  RS  .14734391 09    VS  .30237551 02   RM  .39578243 06    VM  .98802826 00    RT  .39578243 06    VT  .98802826 00
 GED -.14614838 02   ALT  .38592638 06   LDS  .24326169 03   RAS  .31086069 03   RAM  .21610823 03   LOM  .14850923 03
 DUT  .34000000 02    DT  .95999999 03    DR  .16817040 01   SHA -.39170116 06   DES -.18156423 02   DEM -.88500570 01
 CCL  .27673969 03   MCL  .27508740 03   TCL  .27508740 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532175462025526000000 J.D.= 2437691.38179205  JAN. 26,1962 21 09 46.834
 SMA -.48058967 06   ECC  .10133176 01    B  .78694225 05   SLR  .12885811 05   APD  .00000000 00   RCA  .64002876 04
  VH  .91071325 00    C3  .82939862 00   C1  .71667913 05   TFP  .16861317 06    TF  .32717609 00   LTF -.16120937 01
  TA  .16263879 03   MTA  .17070061 03   EA  .68057866 02    MA  .18307175 02   C3J  .44682804 00   TFI  .47164166 02

                                                                   ALL VECTORS REFFERENCED TO EARTH EQUATOR PLANE
   X -.29327928 06     Y -.24127734 06     Z -.98358188 05    DX -.11916292 01    DY -.11606738 01    DZ -.30717804 00
 INC  .42441608 02   LAN  .23589616 03   APF  .17555144 03    MX  .35900240 00    MY -.69178800 00    MZ  .62653458 00
  WX -.55878107 00    WY  .37837768 00    WZ  .73796546 00    PX  .60640075 00    PY  .79343438 00    PZ  .52343088-01
  QX -.56572209 00    QY  .47675087 00    QZ -.67280474 00    RX  .11238577 00    RY  .11470477 00    RZ -.98705596 00
  BX -.46029709 00    BY  .59869905 00    BZ -.65550444 00    TX -.71522483 00    TY  .69889444 00    TZ  .00000000 00
 SXI  .50701427 00   SYI  .86004633 00   SZI -.57065488-01   DAI -.32713882 01   RAI  .59479813 02
 SXO -.68984793 00   SYO -.70596694 00   SZO -.16037582 00   DAO -.92287124 01   RAO  .22566162 03

 BTQ  .58168440 05   BRQ -.53002004 05    B  .78694225 05   THA  .31766079 03    T VECTOR IN  EARTH EQUATOR PLANE
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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91889309 08     Y  .10564679 09     Z  .45815822 08    DX -.25019062 02    DY -.18240253 02    DZ -.77133214 01
   R  .14732270 09   LAT  .18118875 02   LON  .13101604 03     V  .31908550 02   PTH  .22631405 00    AZ  .10481143 03
  XE -.91596030 08    YE  .10588807 09    ZE  .45914181 08   DXE -.23827432 02   DYE -.17079580 02   DZE -.74061434 01
  XT -.91911977 08    YT  .10565761 09    ZT  .45853290 08   DXT -.23193139 02   DYT -.17779653 02   DZT -.76955727 01
 LTE  .18156423 02   LOE  .13086069 03   LTT  .18129935 02   LOT  .13102014 03   RST  .14735625 09   VST  .30220185 02
 EPS  .93022376 02   ESP  .15227267 00   SEP  .86825284 02   EPM  .91145108 02   EMP  .82312051 02   MEP  .65428337 01
 MPS  .13804824 03   MSP  .98911702-02   SMP  .41940027 02   SEM  .91710367 02   EMS  .88135809 02   ESM  .15355230 00
 RPM  .45106826 05   SPN  .92090830 02
 GCE  .83260302 02   GCT  .17834770 03   SIP  .13583993 03   CPT  .11902828 03   SIN  .11681997 03
 REP  .39230323 06   VEP  .16915976 01   CPE  .82760836 02   CPS  .10290571 03

  2 DAYS  0 HRS.  9 MIN. 51.000 SEC.        2355533436242020000000000 J.D.= 2437693.37500000  JAN. 28,1962 21 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.29756398 06     Y -.24544119 06     Z -.99446042 05    DX -.11886777 01    DY -.11524763 01    DZ -.29697815 00
   R  .39834058 06   DEC -.14456848 02    RA  .21951701 03     V  .16820678 01   PTH  .83791526 02    AZ  .46841905 02
   R  .39834057 06   LAT -.14456848 02   LON  .13687694 03    VE  .28045168 02   PTE  .34183073 01   AZE  .27025466 03
  XS  .91681787 08    YS -.10582655 09    ZS -.45887505 08   DXS  .23813835 02   DYS  .17095456 02   DZS  .74130166 01
  XM -.31365097 06    YM -.23297309 06    ZM -.61930130 05   DXM  .64171870 00   DYM -.69460195 00   DZM -.28797880 00
  XT -.31365097 06    YT -.23297309 06    ZT -.61930130 05   DXT  .64171870 00   DYT -.69460195 00   DZT -.28797880 00
  RS  .14734474 09    VS  .30237496 02    RM  .39558656 06    VM  .98853757 00    RT  .39558656 06    VT  .98853757 00
 GED -.14551200 02   ALT  .39196371 06   LOS  .22826363 03   RAS  .31090369 03   RAM  .21660416 03   LOM  .13396409 03
 DUT  .34000000 02    DT  .95999999 03    DR  .16722025 01   SHA -.39772704 06   DES -.18145401 02   DEM -.90068576 01
 CCL  .27683200 03   MCL  .26339354 03   TCL  .26339354 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532175132026672000000 J.D.= 2437691.38054898  JAN. 26,1962 21 07 59.432
  SMA -.48137380 06   ECC  .10135902 01     B  .79630859 05   SLR  .13172901 05   APO  .00000000 00   RCA  .65419968 04
   VH  .90997119 00    C3  .82804757 00    C1  .72461879 05   TFP  .17232057 06    TF  .29734230 00   LTF -.16862141 01
   TA  .16254749 03   MTA  .17060695 03    EA  .68463629 02    MA  .18664009 02   C3J  .44639093 00   TFI  .48164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.29756398 06     Y -.24544119 06     Z -.99446042 05    DX -.11886777 01    DY -.11524763 01    DZ -.29697815 00
 INC  .45059603 02   LAN  .23442564 03   APF  .17680036 03    MX  .33243242 00    MY -.67139696 00    MZ  .66235476 00
  WX -.57573073 00    WY  .41179292 00    WZ  .70637082 00    PX  .61291961 00    PY  .78915689 00    PZ  .39508182-01
  QX -.54116841 00    QY  .45569442 00    QZ -.70673789 00    RX  .10824585 00    RY  .10999210 00    RZ -.98802052 00
  BX -.43388032 00    BY  .57838005 00    BZ -.69081429 00    TX -.71274196 00    TY  .70142633 00    TZ  .00000000 00
 SXI  .51637951 00   SYI  .85294801 00   SZI -.76365564-01   DAI -.43796888 01   RAI  .58809052 02
 SXO -.69302361 00   SYO -.70420369 00   SZO -.15432248 00   DAO -.88775049 01   RAO  .22545844 03

 BTQ  .56413677 05   BRQ -.56201158 05     B  .79630859 05   THA  .31510812 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.91979350 08     Y  .10558111 09     Z  .45788059 08    DX -.25002513 02    DY -.18247932 02    DZ -.77099947 01
   R  .14732317 09   LAT  .18107454 02   LON  .13106148 03     V  .31899164 02   PTH  .24447723 00    AZ  .10481449 03
  XE -.91681787 08    YE  .10582655 09    ZE  .45887505 08   DXE -.23813835 02   DYE -.17095456 02   DZE -.74130166 01
  XT -.91995437 08    YT  .10559358 09    ZT  .45825575 08   DXT -.23172116 02   DYT -.17790058 02   DZT -.77009954 01
 LTE  .18145401 02   LOE  .13090369 03   LTT  .18118906 02   LOT  .13106309 03   RST  .14735381 09   VST  .30211562 02
 EPS  .93025737 02   ESP  .15450506 00   SEP  .86819579 02   EPM  .83230459 02   EMP  .90618984 02   MEP  .61505438 01
 MPS  .13587795 03   MSP  .98911702-02   SMP  .44110496 02   SEM  .91238186 02   EMS  .88608031 02   ESM  .15323340 00
 RPM  .42681242 05   SPN  .92108312 02
 GCE  .83168001 02   GCT  .16656155 03   SIP  .13354407 03   CPT  .11998431 03   SIN  .11765043 03
 REP  .39834058 06   VEP  .16820678 01   CPE  .82670284 02   CPS  .10290086 03

  2 DAYS  1 HRS.  9 MIN. 51.000 SEC.        2355533454302020000000000 J.D.= 2437693.41666666  JAN. 28,1962 22 00 00.000

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.30183682 06     Y -.24957446 06     Z -.10049512 06    DX -.11849495 01    DY -.11436828 01    DZ -.28569640 00
   R  .40434162 06   DEC -.14391141 02    RA  .21958572 03     V  .16714479 01   PTH  .83740253 02    AZ  .43876360 02
   R  .40434161 06   LAT -.14391142 02   LON  .12190459 03    VE  .28482348 02   PTE  .33441758 01   AZE  .27026472 03
  XS  .91767495 08    YS -.10576498 09    ZS -.45860805 08   DXS  .23800225 02   DYS  .17111325 02   DZS  .74198859 01
  XM -.31132747 06    YM -.23546371 06    ZM -.62964205 05   DXM  .64910156 00   DYM -.68906443 00   DZM -.28650199 00
  XT -.31132747 06    YT -.23546371 06    ZT -.62964205 05   DXT  .64910156 00   DYT -.68906443 00   DZT -.28650199 00
  RS  .14734557 09    VS  .30237441 02    RM  .39538898 06    VM  .98905309 00    RT  .39538898 06    VT  .98905309 00
 GED -.14485102 02   ALT  .39796474 06   LOS  .21326557 03   RAS  .31094670 03   RAM  .21710100 03   LOM  .11941987 03
 DUT  .34000000 02    DT  .95999999 03    DR  .16614824 01   SHA -.40371853 06   DES -.18134370 02   DEM -.91631478 01
 CCL  .27692525 03   MCL  .25184682 03   TCL  .25184682 03

                                                GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                   2355532174152027312000000 J.D.= 2437691.37768168  JAN. 26,1962 21 03 51.697
  SMA -.48483525 06   ECC  .10139521 01     B  .81271556 05   SLR  .13623307 05   APO  .00000000 00   RCA  .67644641 04
   VH  .90671704 00    C3  .82213578 00    C1  .73690267 05   TFP  .17616830 06    TF  .22852707 00   LTF -.18294767 01
   TA  .16236597 03   MTA  .17048414 03    EA  .68682229 02    MA  .18876783 02   C3J  .44612151 00   TFI  .49164166 02

                                                                ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

   X -.30183682 06     Y -.24957446 06     Z -.10049512 06    DX -.11849495 01    DY -.11436828 01    DZ -.28569640 00
 INC  .47828164 02   LAN  .23302607 03   APF  .17804016 03    MX  .30359722 00    MY -.64832117 00    MZ  .69821886 00
  WX -.59210009 00    WY  .44575703 00    WZ  .67135635 00    PX  .61944223 00    PY  .78463298 00    PZ  .25345921-01
  QX -.51547005 00    QY  .43087403 00    QZ -.74070196 00    RX  .10377995 00    RY  .10474414 00    RZ -.98906941 00
  BX -.40597037 00    BY  .55466074 00    BZ -.72631917 00    TX -.71036877 00    TY  .70382968 00    TZ  .00000000 00
 SXI  .52570087 00   SYI  .84506866 00   SZI -.97456065-01   DAI -.55926988 01   RAI  .58115055 02
 SXO -.69613641 00   SYO -.70260403 00   SZO -.14745338 00   DAO -.84792025 01   RAO  .22526492 03

 BTQ  .54823112 05   BRQ -.59995773 05     B  .81271556 05   THA  .31242054 03    T VECTOR IN  EARTH EQUATOR PLANE
```

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CASE  1                                   IBSYS-JPTRAJ-SPACE 050865

BK

     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.92069331 08     Y  .10551540 09     Z  .45760310 08    DX -.24985175 02    DY -.18255007 02    DZ -.77055823 01
   R  .14732368 09   LAT  .18096035 02   LON  .13110690 03     V  .31888559 02   PTH  .26311767 00    AZ  .10481616 03
  XE -.91767495 08    YE  .10576498 09    ZE  .45860805 08   DXE -.23800225 02   DYE -.17111325 02   DZE -.74198859 01
  XT -.92078822 08    YT  .10552951 09    ZT  .45797841 08   DXT -.23151124 02   DYT -.17800389 02   DZT -.77063879 01
 LTE  .18134370 02   LOE  .13094670 03   LTT  .18107869 02   LOT  .13110603 03   RST  .14735138 09   VST  .30202926 02
 EPS  .93024191 02   ESP  .15686166 00   SEP  .86818796 02   EPM  .74584115 02   EMP  .99650135 02   MEP  .57657433 01
 MPS  .13223288 03   MSP  .98911702-02   SMP  .47755252 02   SEM  .90765494 02   EMS  .89080776 02   ESM  .15355230 00
 RPM  .41203827 05   SPN  .92120382 02
 GCE  .83074751 02   GCT  .15492157 03   SIP  .12981527 03   CPT  .12024459 03   SIN  .11782698 03
 REP  .40434162 06   VEP  .16714479 01   CPE  .82579875 02   CPS  .10289600 03

  2 DAYS  2 HRS.  3 MIN.  9.571 SEC.        2355533470672025110667 40 J.D.= 2437693.45368715  JAN. 28,1962 22 53 18.571
  CHANGE OF PHASE OCCURS AT THIS POINT    MOON     IS THE CENTRAL BODY FOR INTEGRATION   COWELL EQUATIONS OF MOTION

  2 DAYS  2 HRS.  3 MIN.  9.571 SEC.        2355533470672025110667 40 J.D.= 2437693.45368715  JAN. 28,1962 22 53 18.571

     GEOCENTRIC                                                                                                     EQUATORIAL COORDINATES

   X -.30562027 06     Y -.25321952 06     Z -.10139217 06    DX -.11805774 01    DY -.11354453 01    DZ -.27517373 00
   R  .40963916 06   DEC -.14330559 02    RA  .21964321 03     V  .16609393 01   PTH  .83660832 02    AZ  .41332286 02
   R  .40963916 06   LAT -.14330559 02   LON  .10859821 03    VE  .28868328 02   PTE  .32781442 01   AZE  .27027376 03
  XS  .91843604 08    YS -.10571022 09    ZS -.45837061 08   DXS  .23788121 02   DYS  .17125416 02   DZS  .74259861 01
  XM -.30924083 06    YM -.23765979 06    ZM -.63878476 05   DXM  .65562484 00   DYM -.68408903 00   DZM -.28516790 00
  XT -.30924083 06    YT -.23765979 06    ZT -.63878476 05   DXT  .65562484 00   DYT -.68408903 00   DZT -.28516790 00
  RS  .14734630 09    VS  .30237391 02    RM  .39521200 06    VM  .98951627 00    RT  .39521200 06    VT  .98951627 00
 GED -.14424157 02   ALT  .40326228 06   LOS  .19993991 03   RAS  .31098490 03   RAM  .21754323 03   LOM  .10649824 03
 DUT  .34000000 02    DT  .12000000 03    DR  .16507839 01   SHA -.40900920 06   DES -.18124561 02   DEM -.93015735 01
 CCL  .27700912 03   MCL  .24240315 03   TCL  .24240315 03

                                                   GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355532172652026176667 40 J.D.= 2437691.37360096  JAN. 26,1962 20 57 59.124
 SMA -.49051600 06   ECC  .10143296 01     B  .83336477 05   SLR  .14158530 05   APO  .00000000 00   RCA  .70289041 04
  VH  .90145133 00    C3  .81261449 00    CI  .75123869 05   TFP  .17971945 06    TF  .13058996 00   LTF -.20199533 01
  TA  .16213793 03   MTA  .17035776 03    EA  .68699418 02    MA  .18923733 02   C3J  .44604766 00   TFI  .50052658 02

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X -.30562027 06     Y -.25321952 06     Z -.10139217 06    DX -.11805774 01    DY -.11354453 01    DZ -.27517373 00
 INC  .50217522 02   LAN  .23192459 03   APF  .17907296 03    MX  .27823775 00    MY -.62712630 00    MZ  .72752683 00
  WX -.60494628 00    WY  .47391907 00    WZ  .63987470 00    PX  .62476660 00    PY  .78071247 00    PZ  .12433210-01
  QX -.49366615 00    QY  .40729349 00    QZ -.76837802 00    RX  .99469821-01    RY  .99873631-01    RZ -.99001563 00
  BX -.38204669 00    BY  .53230567 00    BZ -.75544093 00    TX -.70853771 00    TY  .70567296 00    TZ  .00000000 00
 SXI  .53325358 00   SYI  .83790304 00   SZI -.11644227 00   DAI -.66868208 01   RAI  .57526737 02
 SXO -.69862726 00   SYO -.70146341 00   SZO -.14095740 00   DAO -.81032518 01   RAO  .22511606 03

 BTQ  .53690162 05   BRQ -.63736439 05     B  .83336477 05   THA  .31011004 03    T VECTOR IN  EARTH EQUATOR PLANE


     HELIOCENTRIC                                                                                                   EQUATORIAL COORDINATES

   X -.92149224 08     Y  .10545700 09     Z  .45735670 08    DX -.24968699 02    DY -.18260861 02    DZ -.77011598 01
   R  .14732417 09   LAT  .18085893 02   LON  .13114724 03     V  .31877936 02   PTH  .27929411 00    AZ  .10481709 03
  XE -.91843604 08    YE  .10571022 09    ZE  .45837061 08   DXE -.23788121 02   DYE -.17125416 02   DZE -.74259861 01
  XT -.92152845 08    YT  .10547256 09    ZT  .45773184 08   DXT -.23132497 02   DYT -.17809505 02   DZT -.77111540 01
 LTE  .18124561 02   LOE  .13098490 03   LTT  .18098058 02   LOT  .13114416 03   RST  .14734922 09   VST  .30195244 02
 EPS  .93018895 02   ESP  .15872175 00   SEP  .86822033 02   EPM  .66585974 02   EMP  .10798147 03   MEP  .54325394 01
 MPS  .12790302 03   MSP  .27453512-18   SMP  .52084463 02   SEM  .90345377 02   EMS  .89501248 02   ESM  .15291383 00
 RPM  .40773656 05   SPN  .92126776 02
 GCE  .82990876 02   GCT  .14539403 03   SIP  .12545989 03   CPT  .11973695 03   SIN  .11729382 03
 REP  .40963916 06   VEP  .16609393 01   CPE  .82499403 02   CPS  .10289166 03

     SELENOCENTRIC                                                                                                  EQUATORIAL COORDINATES

   X  .36205512 04     Y -.15559732 05     Z -.37513697 05    DX -.18362022 01    DY -.45135627 00    DZ  .99941716-02
   R  .40773656 05   DEC -.66933012 02    RA  .28309891 03     V  .18908889 01   PTH -.52912468-07    AZ  .27077293 03
   R  .40773655 05   LAT -.42759129 02   LON  .23112571 03    VP  .19694588 01   PTP  .27094169-06   AZP  .27913743 03
 LTS  .26832312 00   LNS  .26384939 03   LTE -.67432391 01   LNE  .35331543 03
 ALT  .39035566 05   SHA -.32167049 05   ALP  .13168268 03    DR -.29938525-08    DP  .26571066-02   ASD  .24431305 01
 HGE  .26698109 03   SVL -.44369305 02   HNG  .21075275 03   SIA  .64142843 02

                                                   SELENOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                          2355533470672025110710 71 J.D.= 2437693.45368715  JAN. 28,1962 22 53 18.571
 SMA -.14694189 04   ECC  .28748151 02     B  .42217509 05   SLR  .12129409 07   APO  .00000000 00   RCA  .40773657 05
  VH  .18262198 01    C3  .33350787 01    CI  .77098454 05   TFP -.33170496-04    TF  .50057658 02   LTF  .49301995 02
  TA -.68301891-05   MTA  .91993424 02    EA -.00000000 00    MA -.23620117-05   C3J  .44604766 00   TFI  .50052658 02
 ZAE  .15588374 03   ZAP  .11461108 03   ZAC  .94107617 02   DEF  .39868600 01    IR  .28511263 04    GP -.51590979-01

                                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE
   X  .36205512 04     Y -.15559732 05     Z -.37513697 05    DX -.18362022 01    DY -.45135627 00    DZ  .99941716-02
 INC  .11306477 03   LAN  .19393900 03   APF  .27032913 03    MX -.97107884 00    MY -.23870057 00    MZ  .52854344-02
  WX -.22163283 00    WY  .89296924 00    WZ -.39177143 00    PX  .88796331-01    PY -.38161237 00    PZ -.92004739 00
  QX -.97107883 00    QY -.23870057 00    QZ  .52854356-02    RX  .25859648-01    RY  .67316834-02    RZ -.99964292 00
  BX  .12252142 00    BY -.37307827 00    BZ -.91967446 00    TX -.25192040 00    TY  .96774796 00    TZ  .00000000 00
 SXI -.96740239 00   SYI -.25183044 00   SZI -.26721470-01   DAI -.15312089 01   RAI  .19459117 03
 SXO -.97357993 00   SYO -.22528179 00   SZO  .37285944-01   DAO  .21368212 01   RAO  .19302866 03
 ETE  .16036594 03   ETS  .33926470 03   ETC  .23307988 03

 BTQ -.16545522 05   BRQ  .38840233 05     B  .42217509 05   THA  .11307348 03    T VECTOR IN  EARTH EQUATOR PLANE

                                                                   ALL VECTORS REFERENCED TO ORBIT PLANE OF TARGET
   X -.22128441 05     Y  .16717386 05     Z -.29888995 05    DX  .10990403 01    DY  .15379870 01    DZ  .46541355-01
 INC  .13282276 03   LAN  .55757982 02   APF  .27192309 03    MX  .58122954 00    MY  .81336731 00    MZ  .24613479-01
  WX  .60632790 00    WY -.41271033 00    WZ -.67973278 00    PX -.54271419 00    PY  .41000462 00    PZ -.73304673 00
  QX  .58122953 00    QY  .81336731 00    QZ  .24613482-01    RX -.50599064-03    RY -.74470450-03    RZ  .99999958 00
  BX -.56260374 00    BY  .38146363 00    BZ -.73345929 00    TX  .82713738 00    TY -.56199979 00    TZ  .00000000 00
 SXI  .56199955 00   SYI  .82713703 00   SZI -.90033956-03   DAI -.51586710-01   RAI  .55805790 02
 SXO  .59975602 00   SYO  .79861313 00   SZO  .50097513-01   DAO  .28715771 01   RAO  .53093560 02
 ETE  .18011525 03   ETS  .35901400 03   ETC  .25282919 03
```

```
CASE  1                                    IBSYS-JPTRAJ-SPACE 050865

BK

  BTO -.28696636 05   BRO  .30964835 05     B  .42217508 05   THA  .13282279 03    T VECTOR IN  ORBIT PLANE OF TARGET

                                                                  ALL VECTORS REFERENCED TO TRUE TARGET EQU. PLANE
    X -.22128441 05     Y  .20162644 05     Z -.27681958 05    DX  .10990403 01    DY  .15214599 01    DZ  .22962989 00
  INC  .13639414 03   LAN  .61537192 02   APF  .28014142 03    MX  .58122954 00    MY  .80462693 00    MZ  .12144019 00
   WX  .60632790 00    WY -.32869974 00    WZ -.72410148 00    PX -.54271419 00    PY  .49450175 00    PZ -.67891776 00
   QX  .58122955 00    QY  .80462694 00    QZ  .12144020 00    RX  .55200177-01    RY  .80672978-01    RZ -.99521095 00
   BX -.56260374 00    BY  .46621366 00    BZ -.68273117 00    TX  .82529355 00    TY -.56470396 00    TZ  .00000000 00
  SXI  .56199957 00   SYI  .82134117 00   SZI  .97750647-01   DAI  .56096582 01   RAI  .55618262 02
  SXO  .59975603 00   SYO  .78693882 00   SZO  .14498276 00   DAO  .83362824 01   RAO  .52687592 02
  ETE  .18397685 03   ETS  .28756176 01   ETC  .25669080 03

  BTT -.30716865 05   BRT  .28961909 05     B  .42217508 05   THA  .13668439 03    T VECTOR IN  TRUE TARGET EQU. PLANE

  214652214362   215544306147   211775713527   603762144661   203550576715   603523043464                      EARTH
                   620102620                      5009000                   000000000000                    INITIAL

  214672000400   616746377120   620445071322   601726275064   577711146430   172614311440                      MOON
                                                               235553347067   202511066740                      END
```

APPENDIX G

Postmidcourse Trajectory Computer Printout

The material in this appendix is a data-processing printout of postmidcourse data derived from the trajectory computer.

```
CASE  2                                                    SPACE TRAJECTORIES

RA-3 POST-MC
 EPHEMERIS TAPE IV WITH MARS VELOCITIES.   B-B IS R-2373

  GME  .39860163 06      J  .16274500-02     H -.57499999-05     D  .78749999-05    RE  .63781650 04   REM  .63783149 04
    G  .66709998-19      A  .88702497 29     B  .88800499 29     C  .88837498 29   OME  .41780741-02    AU  .14959900 09
  GMM  .49005799 04    GMS  .13271544 12   GMV  .32476950 06   GMA  .42977799 05   GMC  .37918700 08   GMJ  .12671060 09
  EGM  .39860320 06    MGM  .49077779 04    JA  .29200000-02    HA  .00000000 00    DA  .00000000 00    RA  .34170000 04

INJECTION CONDITIONS                MOON        235553247055202400000000 J.D.= 2437691.93618055  JAN. 27,1962 10 28 06.000

GEOCENTRIC        XO-.12982526 04  YO-.82372683 05  ZO-.49526644 05 DXO-.16954419 01 DYO-.15453654 01 DZO-.52116175 00
CARTESIAN        GMC .00000000 00 SGC .00000000 00  TO .37686000 05 GHA .28324693 03 GHO .12579204 03
DATE OF RUN 032465A  12512                   EARTH    IS THE CENTRAL BODY FOR INTEGRATION      ENCKE  EQUATIONS OF MOTION

   0 DAYS  0 HRS.  0 MIN.  0.000 SEC.        235553247055202400000000 J.D.= 2437691.93618055  JAN. 27,1962 10 28 06.000

       GEOCENTRIC                                                                                          EQUATORIAL COORDINATES

    X -.12982526 06      Y -.82372677 05     Z -.49526643 05    DX -.16954418 01    DY -.15453653 01    DZ -.52116174 00
    R  .16153248 06    DEC -.17854741 02    RA  .21239467 03     V  .23525064 01   PTH  .79154370 02    AZ  .63614643 02
    R  .16153248 06    LAT -.17854741 02   LON  .28914774 03    VE  .11061065 02   PTE  .12056991 02   AZE  .27104204 03
   XS  .88692864 08     YS -.10791779 09    ZS -.46794334 08   DXS  .24275853 02   DYS  .16542349 02   DZS  .71735504 01
   XM -.37661915 06     YM -.13648177 06    ZM -.23639916 05   DXM  .36509557 00   DYM -.84409382 00   DZM -.32279690 00
   XT -.37661915 06     YT -.13648177 06    ZT -.23639916 05   DXT  .36509557 00   DYT -.84409382 00   DZT -.32279690 00
   RS  .14731728 09     VS  .30279480 02    RM  .40128307 06    VM  .97467276 00    RT  .40128307 06    VT  .97467276 00
  GED -.17968618 02    ALT  .15515630 06   LOS  .26168342 02   RAS  .30941527 03   RAM  .19991984 03   LOM  .27667291 03
  DUT  .35000000 02     DT  .48000000 03    DR  .23104853 01   SHA  .16151899 06   DES -.18520454 02   DEM -.33772963 01
  DAC  .00000000 00    CCL  .27105436 03   MCL  .34390109 03   TCL  .34390109 03

                                                        GEOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE                 235553216747202342440000 J.D.= 2437691.36404826  JAN. 26,1962 20 44 13.770
  SMA -.66540533 06    ECC  .10005922 01     B  .92384467 05   SLR  .12826629 05   APO  .00000000 00   RCA  .63827024 04
   VH  .77397404 00     C3  .59973581 00    C1  .71503253 05   TFP  .49432230 05    TF -.13731175 02   LTF -.16010990 02
   TA  .15576191 03    HTA  .17279561 03    EA  .38227126 02    MA  .32943743 01   C3J  .32905269 00   TFI  .00000000 00
  ZAE  .40933175 02    ZAP  .11081521 03   ZAC  .61998520 02   DEF  .16419122 03    IR  .48124521 05    GP -.13198707 02

                                                   ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

    X -.12982526 06      Y -.82372677 05     Z -.49526643 05    DX -.16954418 01    DY -.15453653 01    DZ -.52116174 00
  INC  .31495678 02    LAN  .24411271 03   APF  .16830232 03    MX  .36488440 00    MY -.82941444 00    MZ  .42300218 00
   WX -.47001032 00     WY  .22809571 00    WZ  .85267956 00    PX  .58306521 00    PY  .80549081 00    PZ  .10592216 00
   QX -.66266517 00     QY  .54695223 00    QZ -.51158368 00    RX  .11903713 00    RY  .12864430 00    RZ -.98452057 00
   BX -.57618595 00     BY  .65252703 00    BZ -.49215672 00    TX -.73398238 00    TY  .67916851 00    TZ  .00000000 00
  SXI  .48639557 00    SYI  .87375482 00   SZI  .34562660-01   DAI  .19806874 01   RAI  .60876983 02
  SXO -.66865537 00    SYO -.72252076 00   SZO -.17526892 00   DAO -.10094309 02   RAO  .22727129 03
  ETE  .17712873 03    ETS  .19995228 03   ETC  .29313453 03
  BTQ  .78821447 05    BRQ -.48197851 05    B  .92384467 05   THA  .32856028 03

       HELIOCENTRIC                                                                                        EQUATORIAL COORDINATES

    X -.88822689 08      Y  .10793542 09     Z  .46744807 08    DX -.25971295 02    DY -.18087714 02    DZ -.76947122 01
    R  .14731946 09    LAT  .18499857 02   LON  .12947786 03     V  .32571185 02   PTH -.39929285-01    AZ  .10441142 03
   XE -.88692864 08     YE  .10791779 09    ZE  .46794334 08   DXE -.24275853 02   DYE -.16542349 02   DZE -.71735504 01
   XT -.89069483 08     YT  .10778131 09    ZT  .46770694 08   DXT -.23910757 02   DYT -.17386443 02   DZT -.74963474 01
  LTE  .18520454 02    LOE  .12941527 03   LTT  .18495178 02   LOT  .12957001 03   RST  .14743704 09   VST  .30499310 02
  EPS  .89196708 02    ESP  .62145044-01   SEP  .90740470 02   EPM  .14913349 03   EMP  .11918425 02   MEP  .18948072 02
  MPS  .11753334 03    MSP  .87914651-01   SMP  .62379142 02   SEM  .10728864 03   EMS  .72562458 02   ESM  .14869693 00
  RPM  .25397862 06    SPN  .86973836 02
  GCE  .88945632 02    GCT  .25294672 03   SIP  .11714125 03   CPT  .98642732 02   SIN  .98250648 02    D1  .20529767 00
  REP  .16153248 06    VEP  .23595064 01   CPE  .89154607 02   CPS  .10306337 03    D2  .95758200-01    D3  .73511767-03


   0 DAYS  0 HRS. 31 MIN. 54.000 SEC.        235553250014202000000000 J.D.= 2437691.95833333  JAN. 27,1962 11 00 00.000

       GEOCENTRIC                                                                                          EQUATORIAL COORDINATES

    X -.13304834 06      Y -.85316460 05     Z -.50515719 05    DX -.16726714 01    DY -.15307951 01    DZ -.51244278 00
    R  .16592949 06    DEC -.17774527 02    RA  .21266978 03     V  .23245990 01   PTH  .79317309 02    AZ  .63523299 02
    R  .16592949 06    LAT -.17774529 02   LON  .28142602 03    VE  .11373115 02   PTE  .11586776 02   AZE  .27098802 03
   XS  .88739321 08     YS -.10798612 09    ZS -.46780600 08   DXS  .24268859 02   DYS  .16550942 02   DZS  .71772715 01
   XM -.37591604 06     YM -.13809578 06    ZM -.24257468 05   DXM  .36960666 00   DYM -.84242096 00   DZM -.32249971 00
   XT -.37591604 06     YT -.13809578 06    ZT -.24257468 05   DXT  .36960666 00   DYT -.84242096 00   DZT -.32249971 00
   RS  .14731770 09     VS  .30279451 02    RM  .40121283 06    VM  .97482727 00    RT  .40121283 06    VT  .97482727 00
  GED -.17837686 02    ALT  .15985328 06   LOS  .18194477 02   RAS  .30943824 03   RAM  .20017121 03   LOM  .26892744 03
  DUT  .35000000 02     DT  .47400000 03    DR  .22843111 01   SHA  .16592156 06   DES -.18514766 02   DEM -.34662364 01
  DAC  .00000000 00    CCL  .27197087 03   MCL  .34395120 03   TCL  .34395120 03

       HELIOCENTRIC                                                                                        EQUATORIAL COORDINATES

    X -.88872369 08      Y  .10790080 09     Z  .46730084 08    DX -.25941530 02    DY -.18081737 02    DZ -.76897142 01
    R  .14731942 09    LAT  .18493825 02   LON  .12950261 03     V  .32542954 02   PTH -.36828379-01    AZ  .10441518 03
   XE -.88739321 08     YE  .10798612 09    ZE  .46780600 08   DXE -.24268859 02   DYE -.16550942 02   DZE -.71772715 01
   XT -.89115237 08     YT  .10774802 09    ZT  .46756342 08   DXT -.23899252 02   DYT -.17393363 02   DZT -.74997711 01
  LTE  .18514766 02    LOE  .12943824 03   LTT  .18489457 02   LOT  .12959315 03   RST  .14743581 09   VST  .30495079 02
  EPS  .89375256 02    ESP  .66102112-01   SEP  .90560210 02   EPM  .14884934 03   EMP  .12353085 02   MEP  .18797570 02
  MPS  .11771240 03    MSP  .85640053-01   SMP  .62201612 02   SEM  .10704490 03   EMS  .72806032 02   ESM  .14918958 00
  RPM  .24991973 06    SPN  .87172379 02
  GCE  .88729124 02    GCT  .25248033 03   SIP  .11731395 03   CPT  .98722232 02   SIN  .98323780 02    D1  .20863203 00
  REP  .16592949 06    VEP  .23245990 01   CPE  .88903292 02   CPS  .10306092 03    D2  .97897885-01    D3  .76492631-03

   0 DAYS  1 HRS. 31 MIN. 54.000 SEC.        235553251620202000000000 J.D.= 2437692.00000000  JAN. 27,1962 12 00 00.000

       GEOCENTRIC                                                                                          EQUATORIAL COORDINATES

    X -.13899749 06      Y -.90790408 05     Z -.52332893 05    DX -.16330839 01    DY -.15050809 01    DZ -.49736811 00
    R  .17406929 06    DEC -.17496288 02    RA  .21314888 03     V  .22758749 01   PTH  .79602825 02    AZ  .63362982 02
    R  .17406928 06    LAT -.17496289 02   LON  .26686405 03    VE  .11951901 02   PTE  .10794842 02   AZE  .27089870 03
   XS  .88826668 08     YS -.10792650 09    ZS -.46754748 08   DXS  .24255694 02   DYS  .16567098 02   DZS  .71842672 01
   XM -.37457021 06     YM -.14112276 06    ZM -.25417438 05   DXM  .37807539 00   DYM -.83922034 00   DZM -.32192053 00
   XT -.37457021 06     YT -.14112276 06    ZT -.25417438 05   DXT  .37807539 00   DYT -.83922034 00   DZT -.32192053 00
   RS  .14731849 09     VS  .30279397 02    RM  .40107919 06    VM  .97512285 00    RT  .40107919 06    VT  .97512285 00
  GED -.17608178 02    ALT  .16749303 06   LOS  .31966095 01   RAS  .30948144 03   RAM  .20064436 03   LOM  .25435952 03
  DUT  .35000000 02     DT  .48000000 03    DR  .22385059 01   SHA  .17406764 06   DES -.18504060 02   DEM -.36334181 01
  DAC  .00000000 00    CCL  .27154951 03   MCL  .34401079 03   TCL  .34401079 03

       HELIOCENTRIC                                                                                        EQUATORIAL COORDINATES

    X -.88965665 08      Y  .10773572 09     Z  .46702414 08    DX -.25888778 02    DY -.18072179 02    DZ -.76816353 01
    R  .14731935 09    LAT  .18482487 02   LON  .12954910 03     V  .32493691 02   PTH -.30617176-01    AZ  .10442320 03
   XE -.88826668 08     YE  .10792650 09    ZE  .46754748 08   DXE -.24255694 02   DYE -.16567098 02   DZE -.71842672 01
   XT -.89201238 08     YT  .10748538 09    ZT  .46729330 08   DXT -.23877618 02   DYT -.17406319 02   DZT -.75061877 01
  LTE  .18504060 02    LOE  .12948144 03   LTT  .18478690 02   LOT  .12963667 03   RST  .14743348 09   VST  .30487103 02
  EPS  .89683533 02    ESP  .67095183-01   SEP  .90248766 02   EPM  .14831927 03   EMP  .13175328 02   MEP  .18505395 02
  MPS  .11804896 03    MSP  .82142237-01   SMP  .61867899 02   SEM  .10658621 03   EMS  .73264407 02   ESM  .14918958 00
  RPM  .24239080 06    SPN  .87593713 02
  GCE  .88350484 02    GCT  .25276127 03   SIP  .11763813 03   CPT  .98875183 02   SIN  .98464354 02    D1  .21511271 00
  REP  .17406929 06    VEP  .22758749 01   CPE  .88464684 02   CPS  .10305631 03    D2  .10206974 00    D3  .82470210-03
```

CASE 2 SPACE TRAJECTORIES

RA-3 POST-MC

0 DAYS 2 HRS. 31 MIN. 54.00^ SEC. 2355532534242020000000000 J.D.= 2437692.04166666 JAN. 27,1962 13 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.14481094 06	Y	-.96155389 05	Z	-.54098556-05	DX	-.15971778 01	DY	-.14813287 01	DZ	-.48378452 00
R	.18205142 06	DEC	-.17297156 02	RA	.21358441 03	V	.22314477 01	PTH	.79864469 02	AZ	.63215069 02
R	.18205142 06	LAT	-.17297157 02	LON	.25225851 03	VE	.12520629 02	PTE	.10104289 02	AZE	.27082257 03
XS	.88913966 08	YS	-.10776683 09	ZS	-.46728872 08	DXS	.24242516 02	DYS	.16583245 02	DZS	.71912591 01
XM	-.37319392 06	YM	-.14413808 06	ZM	-.26575269 05	DXM	.38652255 00	DYM	-.83594912 00	DZM	-.32131497 00
XT	-.37319392 06	YT	-.14413808 06	ZT	-.26575269 05	DXT	.38652255 00	DYT	-.83594912 00	DZT	-.32131497 00
RS	.14731928 09	VS	.30279342 02	RM	.40094355 06	VM	.97542498 00	RT	.40094355 06	VT	.97542498 00
GED	-.17397877 02	ALT	.17547512 06	LOS	.34819874 03	RAS	.30952463 03	RAM	.20111797 03	LOM	.23979208 03
DUT	.35000000 02	DT	.95999999 03	DR	.21966243 01	SHA	-.18205140 06	DES	-.18493346 02	DEM	-.38004538 01
DAC	.00000000 00	CCL	.27199562 03	MCL	.34402838 03	TCL	.34402838 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89058776 08	Y	.10757068 09	Z	.46674773 08	DX	-.25839694 02	DY	-.18064574 02	DZ	-.76750436 01
R	.14731929 09	LAT	.18471159 02	LON	.12959553 03	V	.32448804 02	PTH	-.24025190-01	AZ	.10443223 03
XE	-.88913966 08	YE	.10776683 09	ZE	.46728872 08	DXE	-.24242516 02	DYE	-.16583245 02	DZE	-.71912591 01
XT	-.89287159 08	YT	.10742269 09	ZT	.46702297 08	DXT	-.23855993 02	DYT	-.17419194 02	DZT	-.75125740 01
LTE	.18493346 02	LOE	.12952463 03	LTT	.18467916 02	LOT	.12968016 03	RST	.14743115 09	VST	.30479099 02
EPS	.89960409 02	ESP	.69941139-01	SEP	.89968782 02	EPM	.14779334 03	EMP	.14004675 02	MEP	.18201981 02
MPS	.11838616 03	MSP	.79745169-01	SMP	.61533500 02	SEM	.10612721 03	EMS	.73723105 02	ESM	.14918958 00
RPM	.23498650 06	SPN	.87952696 02								
GCE	.88004378 02	GCT	.25273276 03	SIP	.11796238 03	CPT	.99033409 02	SIN	.98609634 02	D1	.22189115 00
REP	.18205142 06	VEP	.22314477 01	CPE	.88064902 02	CPS	.10305170 03	D2	.10645253 00	D3	.88985111-03

0 DAYS 3 HRS. 31 MIN. 54.00^ SEC. 2355532552302020000000000 J.D.= 2437692.08333333 JAN. 27,1962 14 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.15050094 06	Y	-.10154804 06	Z	-.55817655 05	DX	-.15644190 01	DY	-.14592931 01	DZ	-.47146235 00
R	.18988904 06	DEC	-.17094513 02	RA	.21398269 03	V	.21907122 01	PTH	.80105634 02	AZ	.63076977 02
R	.18988904 06	LAT	-.17094513 02	LON	.23761573 03	VE	.13079945 02	PTE	.94969553 01	AZE	.27075702 03
XS	.89001218 08	YS	-.10770710 09	ZS	-.46702971 08	DXS	.24229324 02	DYS	.16599385 02	DZS	.71982476 01
XM	-.37178727 06	YM	-.14714152 06	ZM	-.27730878 05	DXM	.39494759 00	DYM	-.83260731 00	DZM	-.32068301 00
XT	-.37178727 06	YT	-.14714152 06	ZT	-.27730878 05	DXT	.39494759 00	DYT	-.83260731 00	DZT	-.32068301 00
RS	.14732007 09	VS	.30279287 02	RM	.40080593 06	VM	.97573363 00	RT	.40080593 06	VT	.97573363 00
GED	-.17204152 02	ALT	.18351270 06	LOS	.33320085 03	RAS	.30956782 03	RAM	.20159207 03	LOM	.22522511 03
DUT	.35000000 02	DT	.19200000 04	DR	.21581281 01	SHA	-.18988670 06	DES	-.18482621 02	DEM	-.39673375 01
DAC	.00000000 00	CCL	.27291384 03	MCL	.34400683 03	TCL	.34400683 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89151718 08	Y	.10740565 09	Z	.46647153 08	DX	-.25793744 02	DY	-.18058678 02	DZ	-.76697099 01
R	.14731925 09	LAT	.18459841 02	LON	.12964188 03	V	.32407676 02	PTH	-.17155727-01	AZ	.10444208 03
XE	-.89001218 08	YE	.10770710 09	ZE	.46702971 08	DXE	-.24229324 02	DYE	-.16599385 02	DZE	-.71982476 01
XT	-.89373005 08	YT	.10755996 09	ZT	.46675240 08	DXT	-.23834377 02	DYT	-.17431992 02	DZT	-.75189306 01
LTE	.18482621 02	LOE	.12956782 03	LTT	.18457134 02	LOT	.12972364 03	RST	.14742882 09	VST	.30471071 02
EPS	.90210345 02	ESP	.72694965-01	SEP	.89715802 02	EPM	.14726952 03	EMP	.14842364 02	MEP	.17888105 02
MPS	.11872511 03	MSP	.77252514-01	SMP	.61197285 02	SEM	.10566789 03	EMS	.74182131 02	ESM	.14951711 00
RPM	.22769365 06	SPN	.88255532 02								
GCE	.87686152 02	GCT	.25149298 03	SIP	.11828777 03	CPT	.99197859 02	SIN	.98760513 02	D1	.22899857 00
REP	.18988904 06	VEP	.21907122 01	CPE	.87698412 02	CPS	.10304707 03	D2	.11107011 00	D3	.96108526-03

0 DAYS 4 HRS. 31 MIN. 54.00^ SEC. 2355532570342020000000000 J.D.= 2437692.12500000 JAN. 27,1962 15 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.15607801 06	Y	-.10646412 06	Z	-.57494381 05	DX	-.15343784 01	DY	-.14387708 01	DZ	-.46021795 00
R	.19759348 06	DEC	-.16916220 02	RA	.21434880 03	V	.21531788 01	PTH	.80329064 02	AZ	.62946555 02
R	.19759347 06	LAT	-.16916220 02	LON	.22294077 03	VE	.13630448 02	PTE	.89587534 01	AZE	.27070009 03
XS	.89088424 08	YS	-.10754731 09	ZS	-.46677043 08	DXS	.24216120 02	DYS	.16615517 02	DZS	.72052325 01
XM	-.37035032 06	YM	-.15013279 06	ZM	-.28884163 05	DXM	.40334987 00	DYM	-.82919506 00	DZM	-.32002462 00
XT	-.37035032 06	YT	-.15013279 06	ZT	-.28884163 05	DXT	.40334987 00	DYT	-.82919506 00	DZT	-.32002462 00
RS	.14732087 09	VS	.30279233 02	RM	.40066633 06	VM	.97604883 00	RT	.40066633 06	VT	.97604883 00
GED	-.17024854 02	ALT	.19171710 06	LOS	.31820297 03	RAS	.30961100 03	RAM	.20206667 03	LOM	.21065864 03
DUT	.35000000 02	DT	.19200000 04	DR	.21225796 01	SHA	-.19758553 06	DES	-.18471887 02	DEM	-.41340564 01
DAC	.00000000 00	CCL	.27240795 03	MCL	.34394800 03	TCL	.34394800 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89244502 08	Y	.10754065 09	Z	.46619549 08	DX	-.25750498 02	DY	-.18054287 02	DZ	-.76654503 01
R	.14731922 09	LAT	.18448526 02	LON	.12968818 03	V	.32369810 02	PTH	-.10082975-01	AZ	.10445261 03
XE	-.89088424 08	YE	.10754731 09	ZE	.46677043 08	DXE	-.24216120 02	DYE	-.16615517 02	DZE	-.72052325 01
XT	-.89458774 08	YT	.10749718 09	ZT	.46648159 08	DXT	-.23812770 02	DYT	-.17444712 02	DZT	-.75252571 01
LTE	.18471887 02	LOE	.12951100 03	LTT	.18446341 02	LOT	.12976711 03	RST	.14742648 09	VST	.30463018 02
EPS	.90436940 02	ESP	.76616680-01	SEP	.89486212 02	EPM	.14674567 03	EMP	.15689777 02	MEP	.17564551 02
MPS	.11906697 03	MSP	.75073516-01	SMP	.60858124 02	SEM	.10520824 03	EMS	.74641494 02	ESM	.15049542 00
RPM	.22050100 06	SPN	.88597204 02								
GCE	.87392045 02	GCT	.25174004 03	SIP	.11861536 03	CPT	.99369495 02	SIN	.98917883 02	D1	.23646886 00
REP	.19759348 06	VEP	.21531788 01	CPE	.87360738 02	CPS	.10304244 03	D2	.11594880 00	D3	.10392281-02

0 DAYS 5 HRS. 31 MIN. 54.00^ SEC. 2355532606402020000000000 J.D.= 2437692.16666666 JAN. 27,1962 16 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.16155130 06	Y	-.11190880 06	Z	-.59132340 05	DX	-.15067056 01	DY	-.14195909 01	DZ	-.44990239 00
R	.20517471 06	DEC	-.16750510 02	RA	.21468690 03	V	.21184457 01	PTH	.80537023 02	AZ	.62821957 02
R	.20517471 06	LAT	-.16750510 02	LON	.20823780 03	VE	.14172694 02	PTE	.84785844 01	AZE	.27065025 03
XS	.89175577 08	YS	-.10758747 09	ZS	-.46651093 08	DXS	.24202903 02	DYS	.16631639 02	DZS	.72122133 01
XM	-.36888318 06	YM	-.15311164 06	ZM	-.30035027 05	DXM	.41172874 00	DYM	-.82571243 00	DZM	-.31933983 00
XT	-.36888318 06	YT	-.15311164 06	ZT	-.30035027 05	DXT	.41172874 00	DYT	-.82571243 00	DZT	-.31933983 00
RS	.14732166 09	VS	.30279179 02	RM	.40052475 06	VM	.97637057 00	RT	.40052475 06	VT	.97637057 00
GED	-.16858206 02	ALT	.19879830 06	LOS	.30320507 03	RAS	.30965417 03	RAM	.20254178 03	LOM	.19609268 03
DUT	.35000000 02	DT	.19200000 04	DR	.20896180 01	SHA	-.20515838 06	DES	-.18461143 02	DEM	-.43006012 01
DAC	.00000000 00	CCL	.27298102 03	MCL	.34385296 03	TCL	.34385296 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89337128 08	Y	.10747566 09	Z	.46591960 08	DX	-.25709609 02	DY	-.18051230 02	DZ	-.76621157 01
R	.14731921 09	LAT	.18437217 02	LON	.12973442 03	V	.32334793 02	PTH	-.28650117-02	AZ	.10446369 03
XE	-.89175577 08	YE	.10758747 09	ZE	.46651093 08	DXE	-.24202903 02	DYE	-.16631639 02	DZE	-.72122133 01
XT	-.89544460 08	YT	.10743436 09	ZT	.46621057 08	DXT	-.23791175 02	DYT	-.17457351 02	DZT	-.75315531 01
LTE	.18461143 02	LOE	.12955417 03	LTT	.18435543 02	LOT	.12981055 03	RST	.14742413 09	VST	.30454940 02
EPS	.90643153 02	ESP	.79745169-01	SEP	.89277054 02	EPM	.14621951 03	EMP	.16548425 02	MEP	.17232059 02
MPS	.11941291 03	MSP	.71658340-01	SMP	.60514839 02	SEM	.10474826 03	EMS	.75101199 02	ESM	.15049542 00
RPM	.21339888 06	SPN	.88851787 02								
GCE	.87118971 02	GCT	.25097193 03	SIP	.11894627 03	CPT	.99549305 02	SIN	.99082661 02	D1	.24433927 00
REP	.20517471 06	VEP	.21194457 01	CPE	.87048207 02	CPS	.10303781 03	D2	.12111801 00	D3	.11252392-02

```
CASE  2                                          SPACE TRAJECTORIES

RA-3 PUST-MC

  0 DAYS  6 HRS. 31 MIN. 54.000 SEC.        2355532624442020000000000 J.D.= 2437692.20833333  JAN. 27,1962 17 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.16692879 06     Y -.11698662 06     Z -.60734648 05     DX -.14811118 01     DY -.14016091 01     DZ -.44039352 00
   R  .21264148 06   DEC -.16595908 02    RA  .21500042 03      V  .20861799 01    PTH  .80731387 02     AZ  .62701564 02
   R  .21264148 06   LAT -.16595908 02   LON  .19351025 03     VE  .14707189 02    PTE  .80475977 01    AZE  .27060632 03
  XS  .89262685 08    YS -.10752756 09    ZS -.46625115 08    DXS  .24189673 02    DYS  .16647753 02    DZS  .72191907 01
  XM -.36738590 06    YM -.15677784 06    ZM -.31183381 05    DXM  .42008364 00    DYM -.82215948 00    DZM -.31862859 00
  XT -.36738590 06    YT -.15677784 06    ZT -.31183381 05    DXT  .42008364 00    DYT -.82215948 00    DZT -.31862859 00
  RS  .14732245 09    VS  .30239125 02    RM  .40038118 06     VM  .97669885 00     RT  .40038118 06     VT  .97669885 00
 GED -.16702726 02   ALT  .20676503 06   LOS  .28820718 03    RAS  .30969734 03    RAM  .20301741 03    LOM  .18152724 03
 DUT  .35000000 02    DT  .19200000 04    DR  .20589430 01    SHA -.21261442 06    DES -.18450390 02    DEM -.44669616 01
 DAC  .00000000 00   CCL  .27313561 03   MCL  .34372209 03    TCL  .34372209 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.89429613 08     Y  .10741068 09     Z  .46564380 08     DX -.25670785 02     DY -.18049362 02     DZ -.76595842 01
   R  .14731921 09   LAT  .18475910 02   LON  .12978060 03      V  .32302289 02    PTH  .44584970-02     AZ  .10447522 03
  XE -.89262685 08    YE  .10752756 09    ZE  .46625115 08    DXE -.24189673 02    DYE -.16647753 02    DZE -.72191907 01
  XT -.89630070 08    YT  .10777149 09    ZT  .46593932 08    DXT -.23769589 02    DYT -.17469913 02    DZT -.75378192 01
 LTE  .18450390 02   LOE  .12959735 03   LTT  .18424736 02    LOT  .12985398 03    RST  .14742177 09    VST  .30446838 02
 EPS  .90831431 02   ESP  .82755473-01   SEP  .89085876 02    EPM  .14568866 03    EMP  .17420017 02    MEP  .16891324 02
 MPS  .11976415 03   MSP  .68874033-01   SMP  .60166715 02    SEM  .10428795 03    EMS  .75561250 02    ESM  .15082012 00
 RPM  .20637898 06   SPN  .89112635 02
 GCE  .86864381 02   GCT  .25058647 03   SIP  .11928164 03    CPT  .99738342 02    SIN  .99255825 02     D1  .25265097 00
 REP  .21264148 06   VEP  .20841799 01   CPE  .86757779 02    CPS  .10303317 03     D2  .12661069 00     D3  .12202409-02

  0 DAYS  7 HRS. 31 MIN. 54.000 SEC.        2355532642502020000000000 J.D.= 2437692.25000000  JAN. 27,1962 18 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.17221751 06     Y -.12190167 06     Z -.62304020 05     DX -.14573572 01     DY -.13847024 01     DZ -.43158994 00
   R  .22000154 06   DEC -.16451169 02    RA  .21529221 03      V  .20561033 01    PTH  .80913759 02     AZ  .62583888 02
   R  .22000154 06   LAT -.16451169 02   LON  .17876098 03     VE  .15234401 02    PTE  .76586500 01    AZE  .27056736 03
  XS  .89349744 08    YS -.10746761 09    ZS -.46599115 08    DXS  .24176430 02    DYS  .16663859 02    DZS  .72261641 01
  XM -.36585859 06    YM -.15903111 06    ZM -.32329124 05    DXM  .42841391 00    DYM -.81853635 00    DZM -.31789092 00
  XT -.36585859 06    YT -.15903111 06    ZT -.32329124 05    DXT  .42841391 00    DYT -.81853635 00    DZT -.31789092 00
  RS  .14732325 09    VS  .30279071 02    RM  .40023565 06     VM  .97703370 00     RT  .40023565 06     VT  .97703370 00
 GED -.16557162 02   ALT  .21362507 06   LOS  .27320928 03    RAS  .30974051 03    RAM  .20349358 03    LOM  .16696235 03
 DUT  .35000000 02    DT  .19200000 04    DR  .20303028 01    SHA -.21996178 06    DES -.18439625 02    DEM -.46331273 01
 DAC  .00000000 00   CCL  .27397386 03   MCL  .34355514 03    TCL  .34355514 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.89521961 08     Y  .10734570 09     Z  .46536810 08     DX -.25633787 02     DY -.18048561 02     DZ -.76577540 01
   R  .14731923 09   LAT  .18414606 02   LON  .12982673 03      V  .32272012 02    PTH  .11858168-01     AZ  .10448713 03
  XE -.89349744 08    YE  .10746761 09    ZE  .46599115 08    DXE -.24176430 02    DYE -.16663859 02    DZE -.72261641 01
  XT -.89715602 08    YT  .10770857 09    ZT  .46566785 08    DXT -.23748016 02    DYT -.17482395 02    DZT -.75440550 01
 LTE  .18439625 02   LOE  .12974051 03   LTT  .18413921 02    LOT  .12989739 03    RST  .14741942 09    VST  .30438711 02
 EPS  .91003820 02   ESP  .86279230-01   SEP  .88910630 02    EPM  .14515057 03    EMP  .18306435 02    MEP  .16542990 02
 MPS  .12012199 03   MSP  .66351990-01   SMP  .59810963 02    SEM  .10382729 03    EMS  .76021656 02    ESM  .15114412 00
 RPM  .19943409 06   SPN  .89342542 02
 GCE  .86626139 02   GCT  .25078127 03   SIP  .11962267 03    CPT  .99937723 02    SIN  .99438403 02     D1  .26144968 00
 REP  .22000154 06   VEP  .20541033 01   CPE  .86486907 02    CPS  .10302852 03     D2  .13246398 00     D3  .13255532-02

  0 DAYS  8 HRS. 31 MIN. 54.000 SEC.        2355532660542020000000000 J.D.= 2437692.29166666  JAN. 27,1962 19 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.17742372 06     Y -.12695764 06     Z -.63842840 05     DX -.14352402 01     DY -.13687651 01     DZ -.42340659 00
   R  .22726184 06   DEC -.16315236 02    RA  .21556470 03      V  .20279806 01    PTH  .81085473 02     AZ  .62467548 02
   R  .22726184 06   LAT -.16315236 02   LON  .16399240 03     VE  .15754758 02    PTE  .73059109 01    AZE  .27053262 03
  XS  .89436757 08    YS -.10740758 09    ZS -.46573087 08    DXS  .24163173 02    DYS  .16679957 02    DZS  .72331342 01
  XM -.36430135 06    YM -.16197122 06    ZM -.33472167 05    DXM  .43671897 00    DYM -.81484308 00    DZM -.31712679 00
  XT -.36430135 06    YT -.16197122 06    ZT -.33472167 05    DXT  .43671897 00    DYT -.81484308 00    DZT -.31712679 00
  RS  .14732405 09    VS  .30279016 02    RM  .40008815 06     VM  .97737510 00     RT  .40008815 06     VT  .97737510 00
 GED -.16420450 02   ALT  .22078534 06   LOS  .25821136 03    RAS  .30978366 03    RAM  .20397030 03    LOM  .15239801 03
 DUT  .35000000 02    DT  .19200000 04    DR  .20034838 01    SHA -.22720772 06    DES -.18428853 02    DEM -.47990881 01
 DAC  .00000000 00   CCL  .27379755 03   MCL  .34335124 03    TCL  .34335124 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.89614180 08     Y  .10778073 09     Z  .46509244 08     DX -.25598413 02     DY -.18048722 02     DZ -.76565408 01
   R  .14731926 09   LAT  .18403303 02   LON  .12987282 03      V  .32243723 02    PTH  .19311506-01     AZ  .10449935 03
  XE -.89436757 08    YE  .10740758 09    ZE  .46573087 08    DXE -.24163173 02    DYE -.16679957 02    DZE -.72331342 01
  XT -.89801058 08    YT  .10774561 09    ZT  .46539614 08    DXT -.23726454 02    DYT -.17494800 02    DZT -.75502610 01
 LTE  .18428853 02   LOE  .12978366 03   LTT  .18403096 02    LOT  .12994079 03    RST  .14741705 09    VST  .30430561 02
 EPS  .91162046 02   ESP  .87914651-01   SEP  .88749586 02    EPM  .14460253 03    EMP  .19209808 02    MEP  .16187661 02
 MPS  .12048780 03   MSP  .63719410-01   SMP  .59447705 02    SEM  .10336629 03    EMS  .76482419 02    ESM  .15114412 00
 RPM  .19255801 06   SPN  .89553855 02
 GCE  .86402442 02   GCT  .24975368 03   SIP  .11997065 03    CPT  .10014867 03    SIN  .99631516 02     D1  .27078657 00
 REP  .22726184 06   VEP  .20279806 01   CPE  .86233439 02    CPS  .10302387 03     D2  .13872010 00     D3  .14427379-02

  0 DAYS  9 HRS. 31 MIN. 54.000 SEC.        2355532676602020000000000 J.D.= 2437692.33333333  JAN. 27,1962 20 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.18255299 06     Y -.13175784 06     Z -.65353209 05     DX -.14145908 01     DY -.13537060 01     DZ -.41577151 00
   R  .23442859 06   DEC -.16187201 02    RA  .21581991 03      V  .20016126 01    PTH  .81247688 02     AZ  .62351203 02
   R  .23442859 06   LAT -.16187201 02   LON  .14920655 03     VE  .16268652 02    PTE  .69845821 01    AZE  .27050149 03
  XS  .89523725 08    YS -.10774750 09    ZS -.46547034 08    DXS  .24149903 02    DYS  .16696046 02    DZS  .72401007 01
  XM -.36271424 06    YM -.16499791 06    ZM -.34612412 05    DXM  .44499818 00    DYM -.81107980 00    DZM -.31633620 00
  XT -.36271424 06    YT -.16499791 06    ZT -.34612412 05    DXT  .44499818 00    DYT -.81107980 00    DZT -.31633620 00
  RS  .14732484 09    VS  .30298962 02    RM  .39993870 06     VM  .97772307 00     RT  .39993870 06     VT  .97772307 00
 GED -.16291681 02   ALT  .22805206 06   LOS  .24321346 03    RAS  .30982682 03    RAM  .20444759 03    LOM  .13783423 03
 DUT  .35000000 02    DT  .19200000 04    DR  .19783046 01    SHA -.23435873 06    DES -.18418070 02    DEM -.49648346 01
 DAC  .00000000 00   CCL  .27390824 03   MCL  .34310893 03    TCL  .34310893 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.89706277 08     Y  .10771575 09     Z  .46481680 08     DX -.25564494 02     DY -.18049752 02     DZ -.76558722 01
   R  .14731931 09   LAT  .18391999 02   LON  .12991886 03      V  .32217219 02    PTH  .26802516-01     AZ  .10451184 03
  XE -.89523725 08    YE  .10774750 09    ZE  .46547034 08    DXE -.24149903 02    DYE -.16696046 02    DZE -.72401007 01
  XT -.89886439 08    YT  .10718261 09    ZT  .46512422 08    DXT -.23704905 02    DYT -.17507126 02    DZT -.75564369 01
 LTE  .18418070 02   LOE  .12982682 03   LTT  .18392265 02    LOT  .12998417 03    RST  .14741468 09    VST  .30422388 02
 EPS  .91307576 02   ESP  .91172092-01   SEP  .88601274 02    EPM  .14404160 03    EMP  .20132511 02    MEP  .15825880 02
 MPS  .12086306 03   MSP  .61770341-01   SMP  .59074962 02    SEM  .10290493 03    EMS  .76943547 02    ESM  .15162881 00
 RPM  .18574536 06   SPN  .89748561 02
 GCE  .86191760 02   GCT  .24990069 03   SIP  .12032694 03    CPT  .10037252 03    SIN  .99836402 02     D1  .28071917 00
 REP  .23442859 06   VEP  .20016126 01   CPE  .85995548 02    CPS  .10301921 03     D2  .14542711 00     D3  .15736519-02
```

CASE 2 SPACE TRAJECTORIES

RA-3 POST-MC

0 DAYS 10 HRS. 31 MIN. 54.000 SEC. 2355532714642020000000000 J.D.= 2437692.37500000 JAN. 27,1962 21 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.18761036 06	Y	-.13680529 06	Z	-.66836981 05	DX	-.13952642 01	DY	-.13394456 01	DZ	-.40862310 00
R	.24150742 06	DEC	-.16086281 02	RA	.21605959 03	V	.19768282 01	PTH	.81401397 02	AZ	.62233519 02
R	.24150741 06	LAT	-.16086281 02	LON	.13440517 03	VE	.16776448 02	PTE	.66906747 01	AZE	.27047348 03
XS	.89610639 08	YS	-.10778737 09	ZS	-.46520957 08	DXS	.24136621 02	DYS	.16712127 02	DZS	.72470632 01
XM	-.36109738 06	YM	-.16771092 06	ZM	-.35749760 05	DXM	.45325088 00	DYM	-.80724662 00	DZM	-.31551917 00
XT	-.36109738 06	YT	-.16771092 06	ZT	-.35749760 05	DXT	.45325088 00	DYT	-.80724662 00	DZT	-.31551917 00
RS	.14732564 09	VS	.30278908 02	RM	.39978728 06	VM	.97807760 00	RT	.39978728 06	VT	.97807760 00
GED	-.16170065 02	ALT	.23513087 06	LOS	.22821553 03	RAS	.30986996 03	RAM	.20492546 03	LOM	.12327103 03
DUT	.35000000 02	DT	.19270000 04	DR	.19546087 01	SHA	-.24142069 06	DES	-.18407278 02	DEM	-.51303539 01
DAC	.00000000 00	CCL	.27490723 03	MCL	.34282615 03	TCL	.34282615 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89798249 08	Y	.10715076 09	Z	.46454120 08	DX	-.25531885 02	DY	-.18051573 02	DZ	-.76556863 01
R	.14731937 09	LAT	.18390696 02	LON	.12996486 03	V	.32192327 02	PTH	.34318285-01	AZ	.10452455 03
XE	-.89610639 08	YE	.10778737 09	ZE	.46520957 08	DXE	-.24136621 02	DYE	-.16712127 02	DZE	-.72470632 01
XT	-.89971736 08	YT	.10771956 09	ZT	.46485208 08	DXT	-.23683370 02	DYT	-.17519373 02	DZT	-.75625824 01
LTE	.18407278 02	LOE	.12996996 03	LTT	.18381426 02	LOT	.13002753 03	RST	.14741230 09	VST	.30414192 02
EPS	.91441666 02	ESP	.93313123-01	SEP	.88464437 02	EPM	.14346658 03	EMP	.21077255 02	MEP	.15458157 02
MPS	.12124940 03	MSP	.59347024-01	SMP	.58691117 02	SEM	.10244321 03	EMS	.77405046 02	ESM	.15162881 00
RPM	.17899149 06	SPN	.89978359 02								
GCE	.85992771 02	GCT	.24891892 03	SIP	.12069305 03	CPT	.10061077 03	SIN	.10005443 03	D1	.29131249 00
REP	.24150742 06	VEP	.19748282 01	CPE	.85771658 02	CPS	.10301455 03	D2	.15264016 00	D3	.17205172-02

0 DAYS 11 HRS. 31 MIN. 54.000 SEC. 2355532732702020000000000 J.D.= 2437692.41666666 JAN. 27,1962 22 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.19260033 06	Y	-.14140273 06	Z	-.68295816 05	DX	-.13771372 01	DY	-.13259148 01	DZ	-.40190833 00
R	.24850339 06	DEC	-.15951794 02	RA	.21628526 03	V	.19534808 01	PTH	.81547482 02	AZ	.62113100 02
R	.24850339 06	LAT	-.15951794 02	LON	.11958976 03	VE	.17278478 02	PTE	.64208516 01	AZE	.27044817 03
XS	.89697511 08	YS	-.10772717 09	ZS	-.46494855 08	DXS	.24123324 02	DYS	.16728199 02	DZS	.72540224 01
XM	-.35945086 06	YM	-.17071002 06	ZM	-.36884123 05	DXM	.46147652 00	DYM	-.80334360 00	DZM	-.31467565 00
XT	-.35945086 06	YT	-.17071002 06	ZT	-.36884123 05	DXT	.46147652 00	DYT	-.80334360 00	DZT	-.31467565 00
RS	.14732645 09	VS	.30278853 02	RM	.39963392 06	VM	.97843869 00	RT	.39963392 06	VT	.97843869 00
GED	-.16054917 02	ALT	.24212682 06	LOS	.21321761 03	RAS	.30991310 03	RAM	.20540392 03	LOM	.10870843 03
DUT	.35000000 02	DT	.19270000 04	DR	.19322621 01	SHA	-.24839885 06	DES	-.18396475 02	DEM	-.52956385 01
DAC	.00000000 00	CCL	.27419565 03	MCL	.34250014 03	TCL	.34250014 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89890111 08	Y	.10778577 09	Z	.46426558 08	DX	-.25500461 02	DY	-.18054114 02	DZ	-.76559307 01
R	.14731945 09	LAT	.18359390 02	LON	.13001082 03	V	.32168895 02	PTH	.41857106-01	AZ	.10453743 03
XE	-.89697511 08	YE	.10772717 09	ZE	.46494855 08	DXE	-.24123324 02	DYE	-.16728199 02	DZE	-.72540224 01
XT	-.90056961 08	YT	.10775646 09	ZT	.46457970 08	DXT	-.23661848 02	DYT	-.17531543 02	DZT	-.75686981 01
LTE	.18396475 02	LOE	.12991310 03	LTT	.18370577 02	LOT	.13007088 03	RST	.14740992 09	VST	.30405973 02
EPS	.91565398 02	ESP	.95878464-01	SEP	.88337491 02	EPM	.14286792 03	EMP	.22047118 02	MEP	.15084958 02
MPS	.12164858 03	MSP	.55952909-01	SMP	.58294410 02	SEM	.10198113 03	EMS	.77866924 02	ESM	.15162881 00
RPM	.17229252 06	SPN	.90074704 02								
GCE	.85804343 02	GCT	.24870448 03	SIP	.12107060 03	CPT	.10086510 03	SIN	.10028712 03	D1	.30264026 00
REP	.24850339 06	VEP	.19534808 01	CPE	.85560418 02	CPS	.10300988 03	D2	.16042267 00	D3	.18860061-02

0 DAYS 12 HRS. 31 MIN. 54.000 SEC. 2355532750742020000000000 J.D.= 2437692.45833333 JAN. 27,1962 23 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.19752704 06	Y	-.14615269 06	Z	-.69731190 05	DX	-.13601035 01	DY	-.13130525 01	DZ	-.39558088 00
R	.25542118 06	DEC	-.15843143 02	RA	.21649819 03	V	.19314431 01	PTH	.81686702 02	AZ	.61988482 02
R	.25542117 06	LAT	-.15843143 02	LON	.10476163 03	VE	.17775051 02	PTE	.61722925 01	AZE	.27042522 03
XS	.89784336 08	YS	-.10716692 09	ZS	-.46468726 08	DXS	.24110015 02	DYS	.16744264 02	DZS	.72609778 01
XM	-.35777477 06	YM	-.17359493 06	ZM	-.38015401 05	DXM	.46967442 00	DYM	-.79937088 00	DZM	-.31380567 00
XT	-.35777477 06	YT	-.17359493 06	ZT	-.38015401 05	DXT	.46967442 00	DYT	-.79937088 00	DZT	-.31380567 00
RS	.14732725 09	VS	.30278800 02	RM	.39947860 06	VM	.97880634 00	RT	.39947860 06	VT	.97880634 00
GED	-.15945638 02	ALT	.24974458 06	LOS	.19821968 03	RAS	.30995624 03	RAM	.20588300 03	LOM	.94146437 02
DUT	.35000000 02	DT	.19270000 04	DR	.19111481 01	SHA	-.25529806 06	DES	-.18385663 02	DEM	-.54606755 01
DAC	.00000000 00	CCL	.27477451 03	MCL	.34212742 03	TCL	.34212742 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.89981863 08	Y	.10772077 09	Z	.46398995 08	DX	-.25470119 02	DY	-.18057317 02	DZ	-.76565586 01
R	.14731954 09	LAT	.18358083 02	LON	.13005675 03	V	.32146796 02	PTH	.49413002-01	AZ	.10455046 03
XE	-.89784336 08	YE	.10716692 09	ZE	.46468726 08	DXE	-.24110015 02	DYE	-.16744264 02	DZE	-.72609778 01
XT	-.90142110 08	YT	.10699333 09	ZT	.46430711 08	DXT	-.23640341 02	DYT	-.17543635 02	DZT	-.75747834 01
LTE	.18385663 02	LOE	.12995624 03	LTT	.18359722 02	LOT	.13011421 03	RST	.14740754 09	VST	.30397733 02
EPS	.91679709 02	ESP	.99158685-01	SEP	.88220996 02	EPM	.14224765 03	EMP	.23045629 02	MEP	.14706714 02
MPS	.12206255 03	MSP	.54176172-01	SMP	.57882880 02	SEM	.10151867 03	EMS	.78329183 02	ESM	.15211196 00
RPM	.16564511 06	SPN	.90248855 02								
GCE	.85625483 02	GCT	.24775290 03	SIP	.12146138 03	CPT	.10113738 03	SIN	.10053620 03	D1	.31478665 00
REP	.25542118 06	VEP	.19314431 01	CPE	.85360645 02	CPS	.10300520 03	D2	.16884813 00	D3	.20733569-02

0 DAYS 13 HRS. 31 MIN. 54.000 SEC. 2355532767002020000000000 J.D.= 2437692.50000000 JAN. 28,1962 00 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.20239428 06	Y	-.15085745 06	Z	-.71144418 05	DX	-.13440723 01	DY	-.13008049 01	DZ	-.38960005 00
R	.26226502 06	DEC	-.15779804 02	RA	.21669953 03	V	.19106051 01	PTH	.81819746 02	AZ	.61858080 02
R	.26226501 06	LAT	-.15779805 02	LON	.89921857 02	VE	.18266455 02	PTE	.59426051 01	AZE	.27040436 03
XS	.89871106 08	YS	-.10710661 09	ZS	-.46442575 08	DXS	.24096694 02	DYS	.16760319 02	DZS	.72679292 01
XM	-.35606923 06	YM	-.17646541 06	ZM	-.39143495 05	DXM	.47784407 00	DYM	-.79532857 00	DZM	-.31290922 00
XT	-.35606923 06	YT	-.17646541 06	ZT	-.39143495 05	DXT	.47784407 00	DYT	-.79532857 00	DZT	-.31290922 00
RS	.14732805 09	VS	.30278745 02	RM	.39932136 06	VM	.97918060 00	RT	.39932136 06	VT	.97918060 00
GED	-.15841701 02	ALT	.25598840 06	LOS	.18322170 03	RAS	.30999937 03	RAM	.20636269 03	LOM	.79585017 02
DUT	.35000000 02	DT	.19270000 04	DR	.18911654 01	SHA	-.26212274 06	DES	-.18374843 02	DEM	-.56254564 01
DAC	.00000000 00	CCL	.27454467 03	MCL	.34170363 03	TCL	.34170363 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.90073500 08	Y	.10675575 09	Z	.46371431 08	DX	-.25440766 02	DY	-.18061124 02	DZ	-.76575293 01
R	.14731964 09	LAT	.18346775 02	LON	.13010263 03	V	.32125916 02	PTH	.56985974-01	AZ	.10456361 03
XE	-.89871106 08	YE	.10710661 09	ZE	.46442575 08	DXE	-.24096694 02	DYE	-.16760319 02	DZE	-.72679292 01
XT	-.90227175 08	YT	.10693015 09	ZT	.46403432 08	DXT	-.23618849 02	DYT	-.17555647 02	DZT	-.75808384 01
LTE	.18374843 02	LOE	.12999937 03	LTT	.18348858 02	LOT	.13015752 03	RST	.14740515 09	VST	.30389470 02
EPS	.91785412 02	ESP	.10277574 00	SEP	.88112640 02	EPM	.14159932 03	EMP	.24076848 02	MEP	.14323827 02
MPS	.12249348 03	MSP	.51376029-01	SMP	.57454374 02	SEM	.10105583 03	EMS	.78791831 02	ESM	.15211196 00
RPM	.15904659 06	SPN	.90391903 02								
GCE	.85455330 02	GCT	.24715896 03	SIP	.12186736 03	CPT	.10142975 03	SIN	.10080363 03	D1	.32784804 00
REP	.26226502 06	VEP	.19176051 01	CPE	.85171310 02	CPS	.10300052 03	D2	.17800190 00	D3	.22865156-02

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CASE  2                                        SPACE TRAJECTORIES

RA-3 POST-MC

  0 DAYS 14 HRS. 31 MIN. 54.00" SEC.        2355533005042020000000000 J.D.= 2437692.54166666  JAN. 28,1962 01 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.20720547 06     Y -.15551916 06     Z -.72536682 05     DX -.13289652 01     DY -.12891244 01     DZ -.38392964 00
   R  .26903882 06   DEC -.15641309 02    RA  .21689025 03      V  .18908707 01    PTH  .81947201 02     AZ  .61720093 02
   R  .26903881 06   LAT -.15641310 02   LON  .75071519 02     VE  .18752957 02    PTE  .57297432 01    AZE  .27038535 03
  XS  .89957833 08    YS -.10774625 09    ZS -.46416397 08    DXS  .24083358 02    DYS  .16776366 02    DZS  .72748771 01
  XM -.35633432 06    YM -.17932122 06    ZM -.40268318 05    DXM  .48598462 00    DYM -.79121677 00    DZM -.31198629 00
  XT -.35633432 06    YT -.17932122 06    ZT -.40268318 05    DXT  .48598462 00    DYT -.79121677 00    DZT -.31198629 00
  RS  .14732886 09    VS  .30278691 02    RM  .39916218 06     VM  .97956136 00     RT  .39916218 06     VT  .97956136 00
 GED -.15742634 02   ALT  .26246217 06   LOS  .16822375 03    RAS  .31004249 03    RAM  .20684302 03    LOM  .65024281 02
 DUT  .35000000 02    DT  .19270000 04    DR  .18722257 01    SHA -.24887691 06    DES -.18364012 02    DEM -.57899684 01
 DAC  .00000000 00   CCL  .27470688 03   MCL  .34122344 03    TCL  .34122344 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.90165038 08     Y  .10689073 09     Z  .46343860 08     DX -.25412323 02     DY -.18065491 02     DZ -.76588067 01
   R  .14731977 09   LAT  .18375463 02   LON  .13014848 03      V  .32106159 02    PTH  .64579436-01     AZ  .10457686 03
  XE -.89957833 08    YE  .10774625 09    ZE  .46416397 08    DXE -.24083358 02    DYE -.16776366 02    DZE -.72748771 01
  XT -.90312167 08    YT  .10678692 09    ZT  .46376128 08    DXT -.23597373 02    DYT -.17567583 02    DZT -.75868633 01
 LTE  .18364012 02   LOE  .13074249 03   LTT  .18337986 02    LOT  .13020082 03    RST  .14740275 09    VST  .30381186 02
 EPS  .91883219 02   ESP  .10377499 00   SEP  .88012206 02    EPM  .14091783 03    EMP  .25145484 02    MEP  .13936678 02
 MPS  .12294378 03   MSP  .48958796-01   SMP  .57006475 02    SEM  .10059261 03    EMS  .79254877 02    ESM  .15243321 00
 RPM  .15249487 06   SPN  .90574804 02
 GCE  .85293117 02   GCT  .24651655 03   SIP  .12229076 03    CPT  .10174467 03    SIN  .10109165 03     D1  .34193534 00
 REP  .26903882 06   VEP  .18978707 01   CPE  .84991508 02    CPS  .10299583 03     D2  .18798379 00     D3  .25303269-02

  0 DAYS 15 HRS. 31 MIN. 54.00" SEC.        2355533023107020000000000 J.D.= 2437692.58333334  JAN. 28,1962 02 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.21196384 06     Y -.16013978 06     Z -.73909047 05     DX -.13147148 01     DY -.12779486 01     DZ -.37853699 00
   R  .27574620 06   DEC -.15547244 02    RA  .21707124 03      V  .18721562 01    PTH  .82069644 02     AZ  .61572496 02
   R  .27574619 06   LAT -.15547244 02   LON  .60211431 02     VE  .19234807 02    PTE  .55319528 01    AZE  .27036799 03
  XS  .90044511 08    YS -.10678582 09    ZS -.46398194 08    DXS  .24070009 02    DYS  .16792406 02    DZS  .72818214 01
  XM -.35257017 06    YM -.18216210 06    ZM -.41389771 05    DXM  .49409556 00    DYM -.78703561 00    DZM -.31103690 00
  XT -.35257017 06    YT -.18216210 06    ZT -.41389771 05    DXT  .49409556 00    DYT -.78703561 00    DZT -.31103690 00
  RS  .14732966 09    VS  .30278637 02    RM  .39900109 06     VM  .97994868 00     RT  .39900109 06     VT  .97994868 00
 GED -.15648021 02   ALT  .26976955 06   LOS  .15322580 03    RAS  .31008561 03    RAM  .20732399 03    LOM  .50464191 02
 DUT  .35000000 02    DT  .19270000 04    DR  .18542519 01    SHA -.27556435 06    DES -.18353171 02    DEM -.59542028 01
 DAC  .00000000 00   CCL  .27476182 03   MCL  .34068029 03    TCL  .34068029 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.90256474 08     Y  .10692568 09     Z  .46316285 08     DX -.25384724 02     DY -.18070374 02     DZ -.76603583 01
   R  .14731991 09   LAT  .18374146 02   LON  .13019430 03      V  .32087439 02    PTH  .72196805-01     AZ  .10459017 03
  XE -.90044511 08    YE  .10678582 09    ZE  .46390194 08    DXE -.24070009 02    DYE -.16792406 02    DZE -.72818214 01
  XT -.90397081 08    YT  .10690366 09    ZT  .46348804 08    DXT -.23575914 02    DYT -.17579441 02    DZT -.75928582 01
 LTE  .18353171 02   LOE  .13078561 03   LTT  .18327106 02    LOT  .13024410 03    RST  .14740035 09    VST  .30372882 02
 EPS  .91973756 02   ESP  .10676052 00   SEP  .87919069 02    EPM  .14019733 03    EMP  .26257043 02    MEP  .13545617 02
 MPS  .12341616 03   MSP  .46917942-01   SMP  .56536474 02    SEM  .10012999 03    EMS  .79718323 02    ESM  .15243321 00
 RPM  .14598844 06   SPN  .90648389 02
 GCE  .85138176 02   GCT  .24591846 03   SIP  .12273403 03    CPT  .10208495 03    SIN  .10140282 03     D1  .35717687 00
 REP  .27574620 06   VEP  .18771562 01   CPE  .84820437 02    CPS  .10299114 03     D2  .19891103 00     D3  .28107838-02

  0 DAYS 16 HRS. 31 MIN. 54.00" SEC.        2355533041142020000000000 J.D.= 2437692.62500000  JAN. 28,1962 03 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.21667237 06     Y -.16472112 06     Z -.75262448 05     DX -.13012636 01     DY -.12672994 01     DZ -.37339221 00
   R  .28239051 06   DEC -.15457233 02    RA  .21724323 03      V  .18543884 01    PTH  .82187551 02     AZ  .61412934 02
   R  .28239050 06   LAT -.15457233 02   LON  .45342363 02     VE  .19712242 02    PTE  .53477162 01    AZE  .27035211 03
  XS  .90131140 08    YS -.10692534 09    ZS -.46363968 08    DXS  .24056649 02    DYS  .16808436 02    DZS  .72887617 01
  XM -.35077688 06    YM -.18498780 06    ZM -.42507754 05    DXM  .50217622 00    DYM -.78278523 00    DZM -.31006104 00
  XT -.35077688 06    YT -.18498780 06    ZT -.42507754 05    DXT  .50217622 00    DYT -.78278523 00    DZT -.31006104 00
  RS  .14733047 09    VS  .30278583 02    RM  .39883808 06     VM  .98034254 00     RT  .39883808 06     VT  .98034254 00
 GED -.15557485 02   ALT  .27671383 06   LOS  .13822785 03    RAS  .31012872 03    RAM  .20780564 03    LOM  .35904768 02
 DUT  .35000000 02    DT  .19270000 04    DR  .18371766 01    SHA -.28218850 06    DES -.18342321 02    DEM -.61181470 01
 DAC  .00000000 00   CCL  .27591009 03   MCL  .34006619 03    TCL  .34006619 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.90347812 08     Y  .10676062 09     Z  .46288705 08     DX -.25357912 02     DY -.18075735 02     DZ -.76621538 01
   R  .14732006 09   LAT  .18312828 02   LON  .13024008 03      V  .32069682 02    PTH  .79849179-01     AZ  .10460354 03
  XE -.90131140 08    YE  .10692534 09    ZE  .46363968 08    DXE -.24056649 02    DYE -.16808436 02    DZE -.72887617 01
  XT -.90481916 08    YT  .10674035 09    ZT  .46321459 08    DXT -.23554473 02    DYT -.17591221 02    DZT -.75988227 01
 LTE  .18342321 02   LOE  .13012872 03   LTT  .18316218 02    LOT  .13028736 03    RST  .14739795 09    VST  .30364557 02
 EPS  .92057566 02   ESP  .10969840 00   SEP  .87832683 02    EPM  .13943104 03    EMP  .27417973 02    MEP  .13150986 02
 MPS  .12391364 03   MSP  .43678226-01   SMP  .56041345 02    SEM  .99664987 02    EMS  .80182176 02    ESM  .15291383 00
 RPM  .13952644 06   SPN  .90753389 02
 GCE  .84989904 02   GCT  .24575609 03   SIP  .12319992 03    CPT  .10245384 03    SIN  .10174012 03     D1  .37372161 00
 REP  .28239051 06   VEP  .18543884 01   CPE  .84657389 02    CPS  .10298644 03     D2  .21092186 00     D3  .31353527-02

  0 DAYS 17 HRS. 31 MIN. 54.00" SEC.        2355533057202020000000000 J.D.= 2437692.66666666  JAN. 28,1962 04 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.22133383 06     Y -.16976489 06     Z -.76597736 05     DX -.12885626 01     DY -.12570829 01     DZ -.36846751 00
   R  .28897488 06   DEC -.15370939 02    RA  .21740692 03      V  .18375035 01    PTH  .82301402 02     AZ  .61238614 02
   R  .28897488 06   LAT -.15370939 02   LON  .30464987 02     VE  .20185483 02    PTE  .51757140 01    AZE  .27033756 03
  XS  .90217722 08    YS -.10696480 09    ZS -.46337714 08    DXS  .24043274 02    DYS  .16824458 02    DZS  .72956987 01
  XM -.34895453 06    YM -.18779808 06    ZM -.43622182 05    DXM  .51022600 00    DYM -.77846572 00    DZM -.30905871 00
  XT -.34895453 06    YT -.18779808 06    ZT -.43622182 05    DXT  .51022600 00    DYT -.77846572 00    DZT -.30905871 00
  RS  .14733128 09    VS  .30278528 02    RM  .39867315 06     VM  .98074294 00     RT  .39867315 06     VT  .98074294 00
 GED -.15470687 02   ALT  .28259819 06   LOS  .12322989 03    RAS  .31017183 03    RAM  .20828796 03    LOM  .21346020 02
 DUT  .35000000 02    DT  .19270000 04    DR  .18209412 01    SHA -.28875259 06    DES -.18331461 02    DEM -.62817915 01
 DAC  .00000000 00   CCL  .27515223 03   MCL  .33937135 03    TCL  .33937135 03

     HELIOCENTRIC                                                                                  EQUATORIAL COORDINATES

   X -.90439055 08     Y  .10649553 09     Z  .46261716 08     DX -.25331836 02     DY -.18081540 02     DZ -.76641662 01
   R  .14732023 09   LAT  .18371504 02   LON  .13028584 03      V  .32052823 02    PTH  .87544239-01     AZ  .10461693 03
  XE -.90217722 08    YE  .10696480 09    ZE  .46337714 08    DXE -.24043274 02    DYE -.16824458 02    DZE -.72956987 01
  XT -.90566678 08    YT  .10657700 09    ZT  .46294092 08    DXT -.23533048 02    DYT -.17602923 02    DZT -.76047574 01
 LTE  .18331461 02   LOE  .13017183 03   LTT  .18305322 02    LOT  .13033060 03    RST  .14739555 09    VST  .30356211 02
 EPS  .92135137 02   ESP  .11170583 00   SEP  .87752559 02    EPM  .13861100 03    EMP  .28635902 02    MEP  .12753093 02
 MPS  .12443966 03   MSP  .41377734-01   SMP  .55517664 02    SEM  .99200576 02    EMS  .80646444 02    ESM  .15291383 00
 RPM  .13310864 06   SPN  .90870452 02
 GCE  .84847762 02   GCT  .24471911 03   SIP  .12369153 03    CPT  .10285513 03    SIN  .10210699 03     D1  .39174351 00
 REP  .28897488 06   VEP  .18375035 01   CPE  .84501725 02    CPS  .10298173 03     D2  .22418034 00     D3  .35134178-02
```

```
CASE  2                                   SPACE TRAJECTORIES

RA-3 POST-MC

  0 DAYS 18 HRS. 31 MIN. 54.000 SEC.        2355533075242020000000000 J.D.= 2437692.70833333  JAN. 28,1962 05 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.22595087 06     Y -.17377264 06     Z -.77915653 05     DX -.12765707 01     DY -.12472883 01     DZ -.36373636 00
   R  .29550224 06   DEC -.15278054 02    RA  .21756290 03      V  .18214459 01    PTH  .82411608 02     AZ  .61046200 02
   R  .29550224 06   LAT -.15278054 02   LON  .15579899 02     VE  .20654742 02    PTE  .50148008 01    AZE  .27032425 03
  XS  .90304256 08    YS -.10670420 09    ZS -.46311436 08    DXS  .24029886 02    DYS  .16840471 02    DZS  .73026318 01
  XM -.34710328 06    YM -.19059269 06    ZM -.44732954 05    DXM  .51824427 00    DYM -.77407724 00    DZM -.30802992 00
  XT -.34710328 06    YT -.19059269 06    ZT -.44732954 05    DXT  .51824427 00    DYT -.77407724 00    DZT -.30802992 00
  RS  .14733209 09    VS  .30278474 02    RM  .39850632 06    VM  .98114989 00     RT  .39850632 06     VT  .98114989 00
 GED -.15387316 02   ALT  .28912553 06   LOS  .10823193 03   RAS  .31021493 03    RAM  .20877096 03    LOM  .67879638 01
 DUT  .35000000 02    DT  .19200000 04    DR  .18054942 01   SHA -.29525966 06    DES -.18320591 02    DEM -.64451261 01
 DAC  .00000000 00   CCL  .27578872 03   MCL  .33858375 03   TCL  .33858375 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90530206 08     Y  .10643042 09     Z  .46233520 08     DX -.25306457 02     DY -.18087760 02     DZ -.76663682 01
   R  .14732041 09   LAT  .18270177 02   LON  .13033156 03      V  .32036806 02    PTH  .95299066-01     AZ  .10463033 03
  XE -.90304256 08    YE  .10670420 09    ZE  .46311436 08    DXE -.24029886 02    DYE -.16840471 02    DZE -.73026318 01
  XT -.90651359 08    YT  .10651360 09    ZT  .46266703 08    DXT -.23511642 02    DYT -.17614549 02    DZT -.76106617 01
 LTE  .18320591 02   LOE  .13071493 03   LTT  .18294418 02    LOT  .13037383 03    RST  .14739314 09    VST  .30347846 02
 EPS  .92206887 02   ESP  .11449859 00   SEP  .87678278 02    EPM  .13772782 03    EMP  .29919905 02    MEP  .12352268 02
 MPS  .12499805 03   MSP  .39544682-01   SMP  .54961591 02    SEM  .98735755 02    EMS  .81111130 02    ESM  .15291383 00
 RPM  .12673560 06   SPN  .90970142 02
 GCE  .84711271 02   GCT  .24379502 03   SIP  .12421229 03    CPT  .10329322 03    SIN  .10250747 03     D1  .41144639 00
 REP  .29550224 06   VEP  .18214459 01   CPE  .84352879 02    CPS  .10297702 03     D2  .23888184 00     D3  .39568676-02

  0 DAYS 19 HRS. 31 MIN. 54.000 SEC.        2355533113302020000000000 J.D.= 2437692.75000000  JAN. 28,1962 06 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.23052594 06     Y -.17874583 06     Z -.79216842 05     DX -.12652545 01     DY -.12378878 01     DZ -.35917290 00
   R  .30197532 06   DEC -.15278292 02    RA  .21771169 03      V  .18061672 01    PTH  .82518563 02     AZ  .60831632 02
   R  .30197532 06   LAT -.15278292 02   LON  .68762032 00     VE  .21120221 02    PTE  .48639715 01    AZE  .27031206 03
  XS  .90390739 08    YS -.10674354 09    ZS -.46285135 08    DXS  .24016486 02    DYS  .16856476 02    DZS  .73095609 01
  XM -.34522321 06    YM -.19377137 06    ZM -.45839971 05    DXM  .52623034 00    DYM -.76961990 00    DZM -.30697468 00
  XT -.34522321 06    YT -.19377137 06    ZT -.45839971 05    DXT  .52623034 00    DYT -.76961990 00    DZT -.30697468 00
  RS  .14733290 09    VS  .30278420 02    RM  .39833760 06    VM  .98156334 00     RT  .39833760 06     VT  .98156334 00
 GED -.15307087 02   ALT  .29559860 06   LOS  .93233953 02   RAS  .31025902 03    RAM  .20925468 03    LOM  .35223061 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17907915 01   SHA -.30171251 06    DES -.18309714 02    DEM -.66081362 01
 DAC  .00000000 00   CCL  .27542000 03   MCL  .33768855 03   TCL  .33768855 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90621244 08     Y  .10656530 09     Z  .46205918 08     DX -.25281740 02     DY -.18094364 02     DZ -.76687338 01
   R  .14732061 09   LAT  .18278945 02   LON  .13037726 03      V  .32021583 02    PTH  .10312902 00     AZ  .10464371 03
  XE -.90390739 08    YE  .10674354 09    ZE  .46285135 08    DXE -.24016486 02    DYE -.16856476 02    DZE -.73095609 01
  XT -.90735962 08    YT  .10650017 09    ZT  .46239295 08    DXT -.23490255 02    DYT -.17626096 02    DZT -.76165356 01
 LTE  .18309714 02   LOE  .13075802 03   LTT  .18283507 02   LOT  .13041704 03    RST  .14739073 09    VST  .30339462 02
 EPS  .92273191 02   ESP  .11774273 00   SEP  .87609463 02   EPM  .13677036 03    EMP  .31280853 02    MEP  .11948804 02
 MPS  .12559311 03   MSP  .37654454-01   SMP  .54368825 02   SEM  .98270517 02    EMS  .81576243 02    ESM  .15323340 00
 RPM  .12040872 06   SPN  .91052960 02
 GCE  .84579990 02   GCT  .24276854 03   SIP  .12476606 03   CPT  .10377331 03    SIN  .10294627 03     D1  .43307025 00
 REP  .30197532 06   VEP  .18051672 01   CPE  .84210337 02   CPS  .10297230 03     D2  .25526009 00     D3  .44808969-02

  0 DAYS 20 HRS. 31 MIN. 54.000 SEC.        2355533131342020000000000 J.D.= 2437692.79166666  JAN. 28,1962 07 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.23506146 06     Y -.18258587 06     Z -.80501869 05     DX -.12545871 01     DY -.12288557 01     DZ -.35475106 00
   R  .30839677 06   DEC -.15171390 02    RA  .21785376 03      V  .17916259 01    PTH  .82622632 02     AZ  .60589924 02
   R  .30839677 06   LAT -.15171390 02   LON  .34578862 03     VE  .21582116 02    PTE  .47223449 01    AZE  .27030092 03
  XS  .90477180 08    YS -.10658283 09    ZS -.46258806 08    DXS  .24003072 02    DYS  .16872473 02    DZS  .73164867 01
  XM -.34331445 06    YM -.19613388 06    ZM -.46943144 05    DXM  .53418363 00    DYM -.76509386 00    DZM -.30589298 00
  XT -.34331445 06    YT -.19613388 06    ZT -.46943144 05    DXT  .53418363 00    DYT -.76509386 00    DZT -.30589298 00
  RS  .14733371 09    VS  .30278366 02    RM  .39816701 06    VM  .98198333 00     RT  .39816701 06     VT  .98198333 00
 GED -.15229733 02   ALT  .30270003 06   LOS  .78235977 02   RAS  .31030111 03    RAM  .20973911 03    LOM  .33767397 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17767948 01   SHA -.30811390 06    DES -.18298825 02    DEM -.67708143 01
 DAC  .00000000 00   CCL  .27554648 03   MCL  .33666731 03   TCL  .33666731 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90712241 08     Y  .10650014 09     Z  .46178304 08     DX -.25257658 02     DY -.18101329 02     DZ -.76712377 01
   R  .14732083 09   LAT  .18267507 02   LON  .13042293 03      V  .32007113 02    PTH  .11105973 00     AZ  .10465706 03
  XE -.90477180 08    YE  .10658283 09    ZE  .46258806 08    DXE -.24003072 02    DYE -.16872473 02    DZE -.73164867 01
  XT -.90820494 08    YT  .10648670 09    ZT  .46211863 08    DXT -.23468868 02    DYT -.17637567 02    DZT -.76223797 01
 LTE  .18298825 02   LOE  .13070111 03   LTT  .18272587 02   LOT  .13046024 03    RST  .14738831 09    VST  .30331059 02
 EPS  .92334380 02   ESP  .11992408 00   SEP  .87545788 02   EPM  .13572511 03    EMP  .32731881 02    MEP  .11543007 02
 MPS  .12622967 03   MSP  .34970568-01   SMP  .53734536 02   SEM  .97804862 02    EMS  .82041785 02    ESM  .15355230 00
 RPM  .11413039 06   SPN  .91149354 02
 GCE  .84453519 02   GCT  .24112083 03   SIP  .12535712 03   CPT  .10430148 03    SIN  .10342893 03     D1  .45689887 00
 REP  .30839677 06   VEP  .17916259 01   CPE  .84073633 02   CPS  .10296757 03     D2  .27359609 00     D3  .51051101-02

  0 DAYS 21 HRS. 31 MIN. 54.000 SEC.        2355533147402020000000000 J.D.= 2437692.83333333  JAN. 28,1962 08 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.23955972 06     Y -.18709401 06     Z -.81771190 05     DX -.12445494 01     DY -.12201685 01     DZ -.35044361 00
   R  .31476905 06   DEC -.15057099 02    RA  .21798952 03      V  .17777865 01    PTH  .82724151 02     AZ  .60314865 02
   R  .31476905 06   LAT -.15057099 02   LON  .33088332 03     VE  .22040616 02    PTE  .45891460 01    AZE  .27029078 03
  XS  .90563566 08    YS -.10662206 09    ZS -.46232454 08    DXS  .23989645 02    DYS  .16888461 02    DZS  .73234084 01
  XM -.34137713 06    YM -.19887997 06    ZM -.48042373 05    DXM  .54210343 00    DYM -.76049924 00    DZM -.30478484 00
  XT -.34137713 06    YT -.19887997 06    ZT -.48042373 05    DXT  .54210343 00    DYT -.76049924 00    DZT -.30478484 00
  RS  .14733453 09    VS  .30278311 02    RM  .39799454 06    VM  .98240980 00     RT  .39799454 06     VT  .98240980 00
 GED -.15155005 02   ALT  .30879230 06   LOS  .63237996 02   RAS  .31034419 03    RAM  .21022428 03    LOM  .32311808 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17634717 01   SHA -.31446633 06    DES -.18287926 02    DEM -.69331465 01
 DAC  .00000000 00   CCL  .27546851 03   MCL  .33549690 03   TCL  .33549690 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90803125 08     Y  .10643497 09     Z  .46150683 08     DX -.25234194 02     DY -.18108629 02     DZ -.76738521 01
   R  .14732106 09   LAT  .18256166 02   LON  .13046857 03      V  .31993359 02    PTH  .11911850 00     AZ  .10467033 03
  XE -.90563566 08    YE  .10662206 09    ZE  .46232454 08    DXE -.23989645 02    DYE -.16888461 02    DZE -.73234084 01
  XT -.90904943 08    YT  .10642318 09    ZT  .46184412 08    DXT -.23447541 02    DYT -.17648960 02    DZT -.76281933 01
 LTE  .18287926 02   LOE  .13074419 03   LTT  .18261660 02   LOT  .13050341 03    RST  .14738589 09    VST  .30322637 02
 EPS  .92390732 02   ESP  .12194656 00   SEP  .87486964 02   EPM  .13457587 03    EMP  .34288938 02    MEP  .11135187 02
 MPS  .12691302 03   MSP  .34254020-01   SMP  .53053440 02   SEM  .97338779 02    EMS  .82507766 02    ESM  .15291383 00
 RPM  .10790424 06   SPN  .91279699 02
 GCE  .84331491 02   GCT  .23982839 03   SIP  .12599012 03   CPT  .10488495 03    SIN  .10396205 03     D1  .48326891 00
 REP  .31476905 06   VEP  .17777865 01   CPE  .83942344 02   CPS  .10296284 03     D2  .29422816 00     D3  .58550127-02
```

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CASE  2                                        SPACE TRAJECTORIES

RA-3 POST-MC

  0 DAYS 22 HRS. 31 MIN. 54.000 SEC.        2355533165442020000000000 J.D.= 2437692.87500000  JAN. 28,1962 09 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.24402296 06     Y -.19147148 06     Z -.83025166 05    DX -.12351285 01    DY -.12118040 01    DZ -.34622109 00
   R  .32109455 06   DEC -.14995180 02    RA  .21811934 03     V  .17646191 01   PTH  .82823431 02    AZ  .59998628 02
   R  .32109455 06   LAT -.14995180 02   LON  .31597207 03    VE  .22495809 02   PTE  .44636865 01   AZE  .27028160 03
  XS  .90649905 08    YS -.10656123 09    ZS -.46206076 08   DXS  .23976205 02   DYS  .16904440 02   DZS  .73303266 01
  XM -.33941134 06    YM -.20140940 06    ZM -.49137566 05   DXM  .54998916 00   DYM -.75583619 00   DZM -.30365026 00
  XT -.33941134 06    YT -.20140940 06    ZT -.49137566 05   DXT  .54998916 00   DYT -.75583619 00   DZT -.30365026 00
  RS  .14733534 09    VS  .30278257 02    RM  .39782020 06    VM  .98284276 00    RT  .39782020 06    VT  .98284276 00
 GED -.15082663 02   ALT  .31471778 06   LOS  .48240005 02   RAS  .31038727 03   RAM  .21071019 03   LOM  .30856292 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17507949 01   SHA -.32077228 06   DES -.18277018 02   DEM -.70951244 01
 DAC  .00000000 00   CCL  .27578643 03   MCL  .33414811 03   TCL  .33414811 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90893927 08     Y  .10636976 09     Z  .46123051 08    DX -.25211333 02    DY -.18116244 02    DZ -.76765477 01
   R  .14732131 09   LAT  .18244819 02   LON  .13051419 03     V  .31980291 02   PTH  .12733778 00    AZ  .10468350 03
  XE -.90649905 08    YE  .10656123 09    ZE  .46206076 08   DXE -.23976205 02   DYE -.16904440 02   DZE -.73303266 01
  XT -.90989316 08    YT  .10635962 09    ZT  .46156938 08   DXT -.23426216 02   DYT -.17660276 02   DZT -.76339768 01
 LTE  .18277018 02   LOE  .13078727 03   LTT  .18250724 02   LOT  .13054657 03   RST  .14738347 09   VST  .30314197 02
 EPS  .92442495 02   ESP  .12491889 00   SEP  .87432748 02   EPM  .13330276 03   EMP  .35971594 02   MEP  .10725647 02
 MPS  .12764888 03   MSP  .31278626-01   SMP  .52319801 02   SEM  .96872262 02   EMS  .82974193 02   ESM  .15355230 00
 RPM  .10173540 06   SPN  .91374336 02
 GCE  .84213564 02   GCT  .23876167 03   SIP  .12667002 03   CPT  .10553224 03   SIN  .10455337 03    D1  .51258079 00
 REP  .32109455 06   VEP  .17646191 01   CPE  .83816078 02   CPS  .10295810 03    D2  .31756475 00    D3  .67640942-02

  0 DAYS 23 HRS. 31 MIN. 54.000 SEC.        2355533203502020000000000 J.D.= 2437692.91666666  JAN. 28,1962 10 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.24845338 06     Y -.19591937 06     Z -.84264044 05    DX -.12263198 01    DY -.12037413 01    DZ -.34205024 00
   R  .32737552 06   DEC -.14915404 02    RA  .21824353 03     V  .17520992 01   PTH  .82920747 02    AZ  .59631253 02
   R  .32737552 06   LAT -.14915404 02   LON  .30105520 03    VE  .22948179 02   PTE  .43453629 01   AZE  .27027335 03
  XS  .90736197 08    YS -.10650035 09    ZS -.46179676 08   DXS  .23962752 02   DYS  .16920411 02   DZS  .73372409 01
  XM -.33741724 06    YM -.20432191 06    ZM -.50228625 05   DXM  .55784013 00   DYM -.75110486 00   DZM -.30248926 00
  XT -.33741724 06    YT -.20432191 06    ZT -.50228625 05   DXT  .55784013 00   DYT -.75110486 00   DZT -.30248926 00
  RS  .14733616 09    VS  .30278202 02    RM  .39764400 06    VM  .98328219 00    RT  .39764400 06    VT  .98328219 00
 GED -.15012475 02   ALT  .32099875 06   LOS  .33242012 02   RAS  .31043034 03   RAM  .21119686 03   LOM  .29400852 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17387424 01   SHA -.32703407 06   DES -.18266102 02   DEM -.72567353 01
 DAC  .00000000 00   CCL  .27590058 03   MCL  .33258364 03   TCL  .33258364 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.90984650 08     Y  .10630453 09     Z  .46095411 08    DX -.25189072 02    DY -.18124152 02    DZ -.76792911 01
   R  .14732157 09   LAT  .18273466 02   LON  .13055979 03     V  .31967886 02   PTH  .13576538 00    AZ  .10469653 03
  XE -.30736197 08    YE  .10650035 09    ZE  .46179676 08   DXE -.23962752 02   DYE -.16920411 02   DZE -.73372409 01
  XT -.91073614 08    YT  .10679602 09    ZT  .46129446 08   DXT -.23406912 02   DYT -.17671516 02   DZT -.76397302 01
 LTE  .18266102 02   LOE  .13043034 03   LTT  .18239781 02   LOT  .13058971 03   RST  .14738105 09   VST  .30305739 02
 EPS  .92489875 02   ESP  .12743884 00   SEP  .87382933 02   EPM  .13188129 03   EMP  .37804001 02   MEP  .10314702 02
 MPS  .12844321 03   MSP  .28897468-01   SMP  .51527664 02   SEM  .96405306 02   EMS  .83441067 02   ESM  .15355230 00
 RPM  .95630909 05   SPN  .91373557 02
 GCE  .84099416 02   GCT  .23668305 03   SIP  .12740186 03   CPT  .10625345 03   SIN  .10521210 03    D1  .54531127 00
 REP  .32737552 06   VEP  .17590992 01   CPE  .83694476 02   CPS  .10295335 03    D2  .34409817 00    D3  .78766660-02


  1 DAYS  0 HRS. 31 MIN. 54.000 SEC.        2355533221542020000000000 J.D.= 2437692.95833333  JAN. 28,1962 11 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.25285319 06     Y -.20013876 06     Z -.85487949 05    DX -.12181258 01    DY -.11959591 01    DZ -.33789197 00
   R  .33361422 06   DEC -.14847542 02    RA  .21836237 03     V  .17402068 01   PTH  .83016304 02    AZ  .59199925 02
   R  .33361421 06   LAT -.14847543 02   LON  .28613298 03    VE  .23397614 02   PTE  .42336312 01   AZE  .27026603 03
  XS  .90822442 08    YS -.10643940 09    ZS -.46153247 08   DXS  .23949286 02   DYS  .16936374 02   DZS  .73441517 01
  XM -.33539493 06    YM -.20701728 06    ZM -.51315460 05   DXM  .56565573 00   DYM -.74630539 00   DZM -.30130184 00
  XT -.33539493 06    YT -.20701728 06    ZT -.51315460 05   DXT  .56565573 00   DYT -.74630539 00   DZT -.30130184 00
  RS  .14733697 09    VS  .30278148 02    RM  .39746596 06    VM  .98372808 00    RT  .39746596 06    VT  .98372808 00
 GED -.14944213 02   ALT  .32773743 06   LOS  .18244015 02   RAS  .31047341 03   RAM  .21168431 03   LOM  .27945491 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17272958 01   SHA -.33325404 06   DES -.18255174 02   DEM -.74179678 01
 DAC  .00000000 00   CCL  .27601125 03   MCL  .33075543 03   TCL  .33075543 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.91075295 08     Y  .10673926 09     Z  .46067759 08    DX -.25167412 02    DY -.18132333 02    DZ -.76820437 01
   R  .14732185 09   LAT  .18272108 02   LON  .13060536 03     V  .31956124 02   PTH  .14445338 00    AZ  .10470937 03
  XE -.90822442 08    YE  .10643940 09    ZE  .46153247 08   DXE -.23949286 02   DYE -.16936374 02   DZE -.73441517 01
  XT -.91157836 08    YT  .10673238 09    ZT  .46101932 08   DXT -.23383630 02   DYT -.17682679 02   DZT -.76454536 01
 LTE  .18255174 02   LOE  .13047341 03   LTT  .18228829 02   LOT  .13063284 03   RST  .14737862 09   VST  .30297264 02
 EPS  .92533042 02   ESP  .12934386 00   SEP  .87337346 02   EPM  .13028107 03   EMP  .39816220 02   MEP  .99027024 01
 MPS  .12930177 03   MSP  .27078086-01   SMP  .50671271 02   SEM  .95937907 02   EMS  .83908398 02   ESM  .15355230 00
 RPM  .89600285 05   SPN  .91437602 02
 GCE  .83988743 02   GCT  .23474417 03   SIP  .12819032 03   CPT  .10706051 03   SIN  .10594906 03    D1  .58202729 00
 REP  .33361422 06   VEP  .17401068 01   CPE  .83577198 02   CPS  .10294860 03    D2  .37441920 00    D3  .92517383-02

  1 DAYS  1 HRS. 31 MIN. 54.000 SEC.        2355533237602020000000000 J.D.= 2437693.00000000  JAN. 28,1962 12 00 00.000

      GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.25722463 06     Y -.20443060 06     Z -.86696832 05    DX -.12105577 01    DY -.11884356 01    DZ -.33369869 00
   R  .33981277 06   DEC -.14781357 02    RA  .21847610 03     V  .17289256 01   PTH  .83110218 02    AZ  .58688041 02
   R  .33981276 06   LAT -.14781358 02   LON  .27120564 03    VE  .23844404 02   PTE  .41280100 01   AZE  .27025967 03
  XS  .90908636 08    YS -.10637840 09    ZS -.46126796 08   DXS  .23935806 02   DYS  .16952327 02   DZS  .73510587 01
  XM -.33334456 06    YM -.20969524 06    ZM -.52397973 05   DXM  .57343529 00   DYM -.74143796 00   DZM -.30008802 00
  XT -.33334456 06    YT -.20969524 06    ZT -.52397973 05   DXT  .57343529 00   DYT -.74143796 00   DZT -.30008802 00
  RS  .14733779 09    VS  .30278093 02    RM  .39728608 06    VM  .98418041 00    RT  .39728608 06    VT  .98418041 00
 GED -.14877637 02   ALT  .33343597 06   LOS  .32460060 01   RAS  .31051647 03   RAM  .21217254 03   LOM  .26490207 03
 DUT  .35000000 02    DT  .19200000 04    DR  .17164407 01   SHA -.33943438 06   DES -.18244238 02   DEM -.75788102 01
 DAC  .00000000 00   CCL  .27601875 03   MCL  .32860098 03   TCL  .32860098 03

      HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.91165860 08     Y  .10617397 09     Z  .46040098 08    DX -.25146364 02    DY -.18140763 02    DZ -.76847574 01
   R  .14732215 09   LAT  .18210744 02   LON  .13065091 03     V  .31944990 02   PTH  .15347435 00    AZ  .10472195 03
  XE -.90908636 08    YE  .10637840 09    ZE  .46126796 08   DXE -.23935806 02   DYE -.16952327 02   DZE -.73510587 01
  XT -.91241980 08    YT  .10616871 09    ZT  .46074397 08   DXT -.23362371 02   DYT -.17693765 02   DZT -.76511467 01
 LTE  .18244238 02   LOE  .13051647 03   LTT  .18217870 02   LOT  .13067595 03   RST  .14737619 09   VST  .30288772 02
 EPS  .92572129 02   ESP  .13214991 00   SEP  .87295858 02   EPM  .12846410 03   EMP  .42045905 02   MEP  .94899945 01
 MPS  .13022922 03   MSP  .24278320-01   SMP  .49745942 02   SEM  .95470055 02   EMS  .84376191 02   ESM  .15355230 00
 RPM  .83656269 05   SPN  .91476672 02
 GCE  .83881246 02   GCT  .23248222 03   SIP  .12903879 03   CPT  .10796736 03   SIN  .10677693 03    D1  .62339926 00
 REP  .33981277 06   VEP  .17289256 01   CPE  .83463925 02   CPS  .10294384 03    D2  .40922851 00    D3  .10968132-01
```

CASE 2 SPACE TRAJECTORIES

RA-3 POST-MC

1 DAYS 2 HRS. 31 MIN. 54.000 SEC. 2355533255642020000000 J.D.= 2437693.04166666 JAN. 28,1962 13 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.26156997 06	Y	-.20889578 06	Z	-.87890467 05	DX	-.12036350 01	DY	-.11811469 01	DZ	-.32941037 00
R	.34597328 06	DEC	-.14716606 02	RA	.21858491 03	V	.17182422 01	PTH	.83202466 02	AZ	.58073875 02
R	.34597328 06	LAT	-.14716606 02	LON	.25627337 03	VE	.24288746 02	PTE	.40280613 01	AZE	.27025433 03
XS	.90994784 08	YS	-.10671734 09	ZS	-.46100319 08	DXS	.23922314 02	DYS	.16968273 02	DZS	.73579620 01
XM	-.33126624 06	YM	-.21235556 06	ZM	-.53476067 05	DXM	.58117814 00	DYM	-.73650271 00	DZM	-.29884781 00
XT	-.33126624 06	YT	-.21235556 06	ZT	-.53476067 05	DXT	.58117814 00	DYT	-.73650271 00	DZT	-.29884781 00
RS	.14733861 09	VS	.30238039 02	RM	.39710439 06	VM	.98463916 00	RT	.39710439 06	VT	.98463916 00
GED	-.14812501 02	ALT	.33959646 06	LOS	.34824799 03	RAS	.31055953 03	RAM	.21266157 03	LOM	.25035004 03
DUT	.35000000 02	DT	.19200000 04	DR	.17061661 01	SHA	-.34557727 06	DES	-.18233292 02	DEM	-.77392505 01
DAC	.00000000 00	CCL	.27672337 03	MCL	.32603825 03	TCL	.32603825 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.91256353 08	Y	.10610865 09	Z	.46012428 08	DX	-.25125949 02	DY	-.18149420 02	DZ	-.76873723 01
R	.14732247 09	LAT	.18179375 02	LON	.13069643 03	V	.31934471 02	PTH	.16291879 00	AZ	.10473421 03
XE	-.90994784 08	YE	.10671734 09	ZE	.46100319 08	DXE	-.23922314 02	DYE	-.16968273 02	DZE	-.73579620 01
XT	-.91326050 08	YT	.10610498 09	ZT	.46046843 08	DXT	-.23341136 02	DYT	-.17704776 02	DZT	-.76568098 01
LTE	.18233292 02	LOE	.13055952 03	LTT	.18206903 02	LOT	.13071904 03	RST	.14737377 09	VST	.30280264 02
EPS	.92607227 02	ESP	.13471617 00	SEP	.87258371 02	EPM	.12638249 03	EMP	.44540539 02	MEP	.90769657 01
MPS	.13122755 03	MSP	.22117329-01	SMP	.48749694 02	SEM	.95001747 02	EMS	.84844454 02	ESM	.15371151 00
RPM	.77815901 05	SPN	.91550922 02								
GCE	.83776629 02	GCT	.22981488 03	SIP	.12994775 03	CPT	.10899009 03	SIN	.10771029 03	D1	.67021018 00
REP	.34597328 06	VEP	.17192422 01	CPE	.83354346 02	CPS	.10293907 03	D2	.44933806 00	D3	.13130867-01

1 DAYS 3 HRS. 31 MIN. 54.000 SEC. 2355533273702020000000 J.D.= 2437693.08333333 JAN. 28,1962 14 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.26589160 06	Y	-.21293512 06	Z	-.89068382 05	DX	-.11973863 01	DY	-.11740648 01	DZ	-.32494936 00
R	.35209783 06	DEC	-.14653027 02	RA	.21868894 03	V	.17081435 01	PTH	.83292706 02	AZ	.57328931 02
R	.35209782 06	LAT	-.14653027 02	LON	.24133635 03	VE	.24730846 02	PTE	.39333855 01	AZE	.27025009 03
XS	.91080882 08	YS	-.10675622 09	ZS	-.46073817 08	DXS	.23908808 02	DYS	.16984210 02	DZS	.73648614 01
XM	-.32916011 06	YM	-.21479799 06	ZM	-.54549649 05	DXM	.58888365 00	DYM	-.73149984 00	DZM	-.29758124 00
XT	-.32916011 06	YT	-.21479799 06	ZT	-.54549649 05	DXT	.58888365 00	DYT	-.73149984 00	DZT	-.29758124 00
RS	.14733943 09	VS	.30237984 02	RM	.39692087 06	VM	.98510432 00	RT	.39692087 06	VT	.98510432 00
GED	-.14748544 02	ALT	.34572100 06	LOS	.33324998 03	RAS	.31060258 03	RAM	.21315142 03	LOM	.23579882 03
DUT	.35000000 02	DT	.19200000 04	DR	.16964526 01	SHA	-.35168489 06	DES	-.18222338 02	DEM	-.78992784 01
DAC	.00000000 00	CCL	.27632540 03	MCL	.32295907 03	TCL	.32295907 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.91346773 08	Y	.10694329 09	Z	.45984748 08	DX	-.25106195 02	DY	-.18158274 02	DZ	-.76898107 01
R	.14732280 09	LAT	.18198001 02	LON	.13074194 03	V	.31924553 02	PTH	.17290026 00	AZ	.10474601 03
XE	-.91080882 08	YE	.10675622 09	ZE	.46073817 08	DXE	-.23908808 02	DYE	-.16984210 02	DZE	-.73648614 01
XT	-.91410042 08	YT	.10684123 09	ZT	.46019267 08	DXT	-.23319924 02	DYT	-.17715709 02	DZT	-.76624426 01
LTE	.18222338 02	LOE	.13040257 03	LTT	.18195928 02	LOT	.13076212 03	RST	.14737133 09	VST	.30271740 02
EPS	.92638385 02	ESP	.13649873 00	SEP	.87224838 02	EPM	.12397573 03	EMP	.47360220 02	MEP	.86640409 01
MPS	.13229294 03	MSP	.20972341-01	SMP	.47686321 02	SEM	.94532976 02	EMS	.85313186 02	ESM	.15402942 00
RPM	.72102035 05	SPN	.91604057 02								
GCE	.83674593 02	GCT	.22653366 03	SIP	.13091170 03	CPT	.11014654 03	SIN	.10876531 03	D1	.72335204 00
REP	.35209783 06	VEP	.17081435 01	CPE	.83248156 02	CPS	.10293429 03	D2	.49564596 00	D3	.15877950-01

1 DAYS 4 HRS. 31 MIN. 54.000 SEC. 2355533311742020000000 J.D.= 2437693.12500000 JAN. 28,1962 15 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.27019199 06	Y	-.21714927 06	Z	-.90229778 05	DX	-.11918470 01	DY	-.11671534 01	DZ	-.32021300 00
R	.35818840 06	DEC	-.14590322 02	RA	.21878832 03	V	.16986120 01	PTH	.83380207 02	AZ	.56415901 02
R	.35818839 06	LAT	-.14590323 02	LON	.22639465 03	VE	.25170920 02	PTE	.38436010 01	AZE	.27024711 03
XS	.91166932 08	YS	-.10619505 09	ZS	-.46047290 08	DXS	.23895290 02	DYS	.17000138 02	DZS	.73717573 01
XM	-.32702631 06	YM	-.21742229 06	ZM	-.55618624 05	DXM	.59655113 00	DYM	-.72642946 00	DZM	-.29628831 00
XT	-.32702631 06	YT	-.21742229 06	ZT	-.55618624 05	DXT	.59655113 00	DYT	-.72642946 00	DZT	-.29628831 00
RS	.14734025 09	VS	.30297930 02	RM	.39673555 06	VM	.98557585 00	RT	.39673555 06	VT	.98557585 00
GED	-.14685468 02	ALT	.35191156 06	LOS	.31825195 03	RAS	.31064562 03	RAM	.21364209 03	LOM	.22124843 03
DUT	.35000000 02	DT	.19200000 04	DR	.16872874 01	SHA	-.35775932 06	DES	-.18211372 02	DEM	-.80588812 01
DAC	.00000000 00	CCL	.27642517 03	MCL	.31922091 03	TCL	.31922091 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.91437123 08	Y	.10597790 09	Z	.45957059 08	DX	-.25087136 02	DY	-.18167292 02	DZ	-.76919702 01
R	.14732316 09	LAT	.18176620 02	LON	.13078743 03	V	.31915221 02	PTH	.18356475 00	AZ	.10475724 03
XE	-.91166932 08	YE	.10619505 09	ZE	.46047290 08	DXE	-.23895290 02	DYE	-.17000138 02	DZE	-.73717573 01
XT	-.91493958 08	YT	.10597743 09	ZT	.45991671 08	DXT	-.23298739 02	DYT	-.17726568 02	DZT	-.76680456 01
LTE	.18211372 02	LOE	.13044562 03	LTT	.18184946 02	LOT	.13080517 03	RST	.14736890 09	VST	.30263201 02
EPS	.92665605 02	ESP	.13918114 00	SEP	.87195255 02	EPM	.12116726 03	EMP	.50581041 02	MEP	.82516944 01
MPS	.13341024 03	MSP	.15679313-01	SMP	.46570957 02	SEM	.94063734 02	EMS	.85782403 02	ESM	.15355230 00
RPM	.66545434 05	SPN	.91645325 02								
GCE	.83574823 02	GCT	.22279574 03	SIP	.13191365 03	CPT	.11145526 03	SIN	.10995867 03	D1	.78379221 00
REP	.35818840 06	VEP	.16986120 01	CPE	.83145041 02	CPS	.10292951 03	D2	.54905262 00	D3	.19384445-01

1 DAYS 5 HRS. 31 MIN. 54.000 SEC. 2355533330002020000000 J.D.= 2437693.16666666 JAN. 28,1962 16 00 00.000

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.27447378 06	Y	-.22173878 06	Z	-.91373429 05	DX	-.11870550 01	DY	-.11603649 01	DZ	-.31506402 00
R	.36424691 06	DEC	-.14578155 02	RA	.21888310 03	V	.16896187 01	PTH	.83463417 02	AZ	.55286451 02
R	.36424691 06	LAT	-.14578155 02	LON	.21144836 03	VE	.25609194 02	PTE	.37583261 01	AZE	.27024559 03
XS	.91252933 08	YS	-.10613382 09	ZS	-.46020739 08	DXS	.23881758 02	DYS	.17016058 02	DZS	.73786493 01
XM	-.32486498 06	YM	-.22072822 06	ZM	-.56682899 05	DXM	.60417995 00	DYM	-.72129183 00	DZM	-.29496904 00
XT	-.32486498 06	YT	-.22072822 06	ZT	-.56682899 05	DXT	.60417995 00	DYT	-.72129183 00	DZT	-.29496904 00
RS	.14734108 09	VS	.30277874 02	RM	.39654844 06	VM	.98605376 00	RT	.39654844 06	VT	.98605376 00
GED	-.14622931 02	ALT	.35777006 06	LOS	.30325392 03	RAS	.31068866 03	RAM	.21413361 03	LOM	.20669888 03
DUT	.35000000 02	DT	.19200000 04	DR	.16786352 01	SHA	-.36380258 06	DES	-.18200398 02	DEM	-.82180476 01
DAC	.00000000 00	CCL	.27652302 03	MCL	.31463854 03	TCL	.31463854 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.91527406 08	Y	.10571248 09	Z	.45929366 08	DX	-.25068812 02	DY	-.18176423 02	DZ	-.76937133 01
R	.14732354 09	LAT	.18145235 02	LON	.13083290 03	V	.31906440 02	PTH	.19509923 00	AZ	.10476768 03
XE	-.91252933 08	YE	.10613382 09	ZE	.46020739 08	DXE	-.23881758 02	DYE	-.17016058 02	DZE	-.73786493 01
XT	-.91577797 08	YT	.10571359 09	ZT	.45964056 08	DXT	-.23277578 02	DYT	-.17737350 02	DZT	-.76736183 01
LTE	.18200398 02	LOE	.13048865 03	LTT	.18173956 02	LOT	.13084821 03	RST	.14736647 09	VST	.30254646 02
EPS	.92688835 02	ESP	.14144723 00	SEP	.87169676 02	EPM	.11786073 03	EMP	.54298806 02	MEP	.78404567 01
MPS	.13454314 03	MSP	.15679313-01	SMP	.45439898 02	SEM	.93594018 02	EMS	.86252104 02	ESM	.15355230 00
RPM	.61187729 05	SPN	.91695529 02								
GCE	.83476970 02	GCT	.21871551 03	SIP	.13291547 03	CPT	.11293257 03	SIN	.11130490 03	D1	.85247559 00
REP	.36424691 06	VEP	.16896187 01	CPE	.83044678 02	CPS	.10292471 03	D2	.61025485 00	D3	.23854683-01

```
CASE  2                                        SPACE TRAJECTORIES

RA-3 POST-MC

  1 DAYS  6 HRS. 31 MIN. 54.000 SEC.        2355533346042020000000000 J.D.= 2437693.20833333  JAN. 28,1962 17 00 00.000

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

  X -.27873971 06     Y -.22500397 06     Z -.92497529 05     DX -.11830396 01    DY -.11536320 01    DZ -.30931912 00
  R  .37027511 06   DEC -.14456125 02    RA  .21897330 03     V  .16811091 01   PTH  .83539502 02    AZ  .53879926 02
  R  .37027510 06   LAT -.14456125 02   LON  .19649750 03    VE  .26045900 02   PTE  .36771433 01   AZE  .27024579 03
 XS  .91338883 08    YS -.10677253 09    ZS -.45994163 08   DXS  .23868213 02   DYS  .17031969 02   DZS  .73855374 01
 XM -.32267626 06    YM -.22281552 06    ZM -.57742375 05   DXM  .61176945 00   DYM -.71608704 00   DZM -.29362347 00
 XT -.32267626 06    YT -.22281552 06    ZT -.57742375 05   DXT  .61176945 00   DYT -.71608704 00   DZT -.29362347 00
 RS  .14734130 09    VS  .30237819 02    RM  .39635956 06    VM  .98653800 00    RT  .39635956 06    VT  .98653800 00
GED -.14560532 02   ALT  .36389825 06   LOS  .28825589 03   RAS  .31073169 03   RAM  .21462598 03   LOM  .19215018 03
DUT  .35000000 02    DT  .19200000 04    DR  .16704335 01   SHA -.36981655 06   DES -.18189413 02   DEM -.83767641 01
DAC  .00000000 00   CCL  .27651934 03   MCL  .30898030 03   TCL  .30898030 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

  X -.91617622 08     Y  .10594703 09     Z  .45901665 08     DX -.25051253 02    DY -.18185601 02    DZ -.76948565 01
  R  .14732394 09   LAT  .18153847 02   LON  .13087836 03     V  .31898152 02   PTH  .20772825 00    AZ  .10477709 03
 XE -.91338883 08    YE  .10677253 09    ZE  .45994163 08   DXE -.23868213 02   DYE -.17031969 02   DZE -.73855374 01
 XT -.91661559 08    YT  .10594972 09    ZT  .45936420 08   DXT -.23256444 02   DYT -.17748056 02   DZT -.76791608 01
LTE  .18189413 02   LOE  .13073169 03   LTT  .18162957 02   LOT  .13089123 03   RST  .14736403 09   VST  .30246077 02
EPS  .92707958 02   ESP  .14373671 00   SEP  .87148213 02   EPM  .11393699 03   EMP  .58632068 02   MEP  .74309301 01
MPS  .13561744 03   MSP  .98911702-02   SMP  .44367306 02   SEM  .93123822 02   EMS  .86722297 02   ESM  .15355230 00
RPM  .56085368 05   SPN  .91770987 02
GCE  .83380650 02   GCT  .21276095 03   SIP  .13384164 03   CPT  .11458633 03   SIN  .11281053 03   D1  .93010092 00
REP  .37027511 06   VEP  .16891091 01   CPE  .82946712 02   CPS  .10291991 03   D2  .67930333 00   D3  .29480249-01

  1 DAYS  7 HRS. 31 MIN. 54.000 SEC.        2355533364102020000000000 J.D.= 2437693.25000000  JAN. 28,1962 18 00 00.000

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

  X -.28299259 06     Y -.22954490 06     Z -.93599528 05     DX -.11797991 01    DY -.11468590 01    DZ -.30273856 00
  R  .37627444 06   DEC -.14403754 02    RA  .21905889 03     V  .16729800 01   PTH  .83603564 02    AZ  .52125107 02
  R  .37627444 06   LAT -.14403754 02   LON  .18154203 03    VE  .26481259 02   PTE  .35995515 01   AZE  .27024806 03
 XS  .91424787 08    YS -.10691119 09    ZS -.45967561 08   DXS  .23854655 02   DYS  .17047872 02   DZS  .73924219 01
 XM -.32046028 06    YM -.22578397 06    ZM -.58796960 05   DXM  .61931894 00   DYM -.71081533 00   DZM -.29225159 00
 XT -.32046028 06    YT -.22578397 06    ZT -.58796960 05   DXT  .61931894 00   DYT -.71081533 00   DZT -.29225159 00
 RS  .14734273 09    VS  .30237764 02    RM  .39616891 06    VM  .98702855 00    RT  .39616891 06    VT  .98702855 00
GED -.14497789 02   ALT  .36989757 06   LOS  .27325785 03   RAS  .31077471 03   RAM  .21511923 03   LOM  .17760236 03
DUT  .35000000 02    DT  .19200000 04    DR  .16625655 01   SHA -.37580283 06   DES -.18178420 02   DEM -.85350196 01
DAC  .00000000 00   CCL  .27671459 03   MCL  .30198228 03   TCL  .30198228 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

  X -.91707779 08     Y  .10578154 09     Z  .45873962 08     DX -.25034454 02    DY -.18194731 02    DZ -.76951604 01
  R  .14732438 09   LAT  .18142454 02   LON  .13092380 03     V  .31890243 02   PTH  .22171050 00    AZ  .10478514 03
 XE -.91424787 08    YE  .10691119 09    ZE  .45967561 08   DXE -.23854655 02   DYE -.17047872 02   DZE -.73924219 01
 XT -.91745247 08    YT  .10578580 09    ZT  .45908764 08   DXT -.23235537 02   DYT -.17758687 02   DZT -.76846734 01
LTE  .18178420 02   LOE  .13077471 03   LTT  .18151951 02   LOT  .13093424 03   RST  .14736160 09   VST  .30237493 02
EPS  .92722796 02   ESP  .14670880 00   SEP  .87131049 02   EPM  .10925399 03   EMP  .63722160 02   MEP  .70238467 01
MPS  .13649528 03   MSP  .13998227-01   SMP  .43490985 02   SEM  .92653137 02   EMS  .87192992 02   ESM  .15371151 00
RPM  .51314735 05   SPN  .91751564 02
GCE  .83285407 02   GCT  .20576769 03   SIP  .13455433 03   CPT  .11640329 03   SIN  .11446234 03   D1  .10166657 01
REP  .37627444 06   VEP  .16799800 01   CPE  .82850742 02   CPS  .10291509 03   D2  .75474348 00   D3  .36318002-01

  1 DAYS  8 HRS. 31 MIN. 54.000 SEC.        2355533402142020000000000 J.D.= 2437693.29166666  JAN. 28,1962 19 00 00.000

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

  X -.28723511 06     Y -.23376116 06     Z -.94675894 05     DX -.11772586 01    DY -.11399112 01    DZ -.29502579 00
  R  .38224574 06   DEC -.14340464 02    RA  .21913980 03     V  .16650452 01   PTH  .83647643 02    AZ  .49950277 02
  R  .38224574 06   LAT -.14340464 02   LON  .16658187 03    VE  .26915439 02   PTE  .35248967 01   AZE  .27025282 03
 XS  .91510642 08    YS -.10574978 09    ZS -.45940936 08   DXS  .23841084 02   DYS  .17063765 02   DZS  .73993025 01
 XM -.31821720 06    YM -.22773332 06    ZM -.59846559 05   DXM  .62682777 00   DYM -.70547687 00   DZM -.29085344 00
 XT -.31821720 06    YT -.22773332 06    ZT -.59846559 05   DXT  .62682777 00   DYT -.70547687 00   DZT -.29085344 00
 RS  .14734356 09    VS  .30237709 02    RM  .39597651 06    VM  .98752538 00    RT  .39597651 06    VT  .98752538 00
GED -.14434122 02   ALT  .37596886 06   LOS  .25825980 03   RAS  .31081774 03   RAM  .21561335 03   LOM  .16305541 03
DUT  .35000000 02    DT  .19200000 04    DR  .16548223 01   SHA -.38176242 06   DES -.18167417 02   DEM -.86928030 01
DAC  .00000000 00   CCL  .27690928 03   MCL  .29340765 03   TCL  .29340765 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

  X -.91797877 08     Y  .10571602 09     Z  .45846260 08     DX -.25018343 02    DY -.18203677 02    DZ -.76943283 01
  R  .14732483 09   LAT  .18171058 02   LON  .13096922 03     V  .31882503 02   PTH  .23730724 00    AZ  .10479143 03
 XE -.91510642 08    YE  .10574978 09    ZE  .45940936 08   DXE -.23841084 02   DYE -.17063765 02   DZE -.73993025 01
 XT -.91828859 08    YT  .10572185 09    ZT  .45881088 08   DXT -.23214256 02   DYT -.17769242 02   DZT -.76901560 01
LTE  .18167417 02   LOE  .13071773 03   LTT  .18140938 02   LOT  .13097723 03   RST  .14735916 09   VST  .30228896 02
EPS  .92733097 02   ESP  .14849693 00   SEP  .87118430 02   EPM  .10365529 03   EMP  .69724644 02   MEP  .66200578 01
MPS  .13694246 03   MSP  .98911702-02   SMP  .43045061 02   SEM  .92181960 02   EMS  .87664186 02   ESM  .15371151 00
RPM  .46978038 05   SPN  .91777039 02
GCE  .83190718 02   GCT  .19659836 03   SIP  .13482226 03   CPT  .11832644 03   SIN  .11620624 03   D1  .11106406 01
REP  .38224574 06   VEP  .16650452 01   CPE  .82756302 02   CPS  .10291026 03   D2  .83213294 00   D3  .44023569-01

  1 DAYS  9 HRS. 31 MIN. 54.000 SEC.        2355533420202020000000000 J.D.= 2437693.33333333  JAN. 28,1962 20 00 00.000

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

  X -.29146943 06     Y -.23775184 06     Z -.95721968 05     DX -.11752032 01    DY -.11326103 01    DZ -.28585749 00
  R  .38818889 06   DEC -.14275584 02    RA  .21921595 03     V  .16569922 01   PTH  .83660004 02    AZ  .47309661 02
  R  .38818889 06   LAT -.14275584 02   LON  .15161696 03    VE  .27348497 02   PTE  .34522969 01   AZE  .27026039 03
 XS  .91596448 08    YS -.10598832 09    ZS -.45914285 08   DXS  .23827500 02   DYS  .17079651 02   DZS  .74061793 01
 XM -.31594716 06    YM -.23046334 06    ZM -.60891078 05   DXM  .63429529 00   DYM -.70007186 00   DZM -.28942905 00
 XT -.31594716 06    YT -.23046334 06    ZT -.60891078 05   DXT  .63429529 00   DYT -.70007186 00   DZT -.28942905 00
 RS  .14734439 09    VS  .30237654 02    RM  .39578236 06    VM  .98802848 00    RT  .39578236 06    VT  .98802848 00
GED -.14368854 02   ALT  .38191200 06   LOS  .24326175 03   RAS  .31086075 03   RAM  .21610837 03   LOM  .14850937 03
DUT  .35000000 02    DT  .19200000 04    DR  .16668583 01   SHA -.38769541 06   DES -.18156405 02   DEM -.88501013 01
DAC  .00000000 00   CCL  .27690404 03   MCL  .28318551 03   TCL  .28318551 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

  X -.91887917 08     Y  .10555047 09     Z  .45818562 08     DX -.25002703 02    DY -.18212261 02    DZ -.76920368 01
  R  .14732533 09   LAT  .18119662 02   LON  .13101462 03     V  .31874583 02   PTH  .25469178 00    AZ  .10479556 03
 XE -.91596448 08    YE  .10598832 09    ZE  .45914285 08   DXE -.23827500 02   DYE -.17079651 02   DZE -.74061793 01
 XT -.91912395 08    YT  .10545786 09    ZT  .45853393 08   DXT -.23193205 02   DYT -.17779722 02   DZT -.76956084 01
LTE  .18156405 02   LOE  .13096075 03   LTT  .18129916 02   LOT  .13102020 03   RST  .14735673 09   VST  .30220285 02
EPS  .92738575 02   ESP  .15045786 00   SEP  .87110646 02   EPM  .96996410 02   EMP  .76782893 02   MEP  .62206960 01
MPS  .13660771 03   MSP  .98911702-02   SMP  .43380747 02   SEM  .91710284 02   EMS  .88135894 02   ESM  .15371151 00
RPM  .43208100 05   SPN  .91777154 02
GCE  .83095958 02   GCT  .18678147 03   SIP  .13430242 03   CPT  .12021993 03   SIN  .11791464 03   D1  .12076956 01
REP  .38818889 06   VEP  .16549922 01   CPE  .82662851 02   CPS  .10290542 03   D2  .90196861 00   D3  .51446311-01
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CASE  2                                          SPACE TRAJECTORIES

RA-3 POST-MC

  1 DAYS 10 HRS. 31 MIN. 54.000 SEC.        2355533436242020000000000 J.D.= 2437693.37500000  JAN. 28,1962 21 00 00.000

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.29569663 06     Y -.24191530 06     Z -.96732009 05     DX -.11732011 01     DY -.11247518 01     DZ -.27497742 00
   R  .39410226 06   DEC -.14278369 02    RA  .21928728 03      V  .16483568 01    PTH  .83625966 02     AZ  .44232761 02
   R  .39410226 06   LAT -.14278369 02   LON  .13664722 03     VE  .27780265 02    PTE  .33806209 01    AZE  .27027090 03
  XS  .91682204 08    YS -.10592681 09    ZS -.45887609 08    DXS  .23813902 02    DYS  .17095528 02    DZS  .74130525 01
  XM -.31365031 06    YM -.23277377 06    ZM -.61930422 05    DXM  .64172082 00    DYM -.69460047 00    DZM -.28797843 00
  XT -.31365031 06    YT -.23277377 06    ZT -.61930422 05    DXT  .64172082 00    DYT -.69460047 00    DZT -.28797843 00
  RS  .14734522 09    VS  .30277598 02    RM  .39558649 06     VM  .98853780 00     RT  .39558649 06     VT  .98853780 00
 GED -.14301237 02   ALT  .38772535 06   LOS  .22826369 03    RAS  .31090376 03    RAM  .21660429 03    LOM  .13396423 03
 DUT  .35000000 02    DT  .19270000 04    DR  .16381672 01    SHA -.39360032 06    DES -.18145383 02    DEM -.90069021 01
 DAC  .00000000 00   CCL  .27679956 03   MCL  .27161514 03    TCL  .27161514 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.91977900 08     Y  .10558489 09     Z  .45790876 08     DX -.24987103 02     DY -.18220280 02     DZ -.76880299 01
   R  .14732586 09   LAT  .18187265 02   LON  .13104002 03      V  .31865965 02    PTH  .27378813 00     AZ  .10479724 03
  XE -.91682204 08    YE  .10592681 09    ZE  .45887609 08    DXE -.23813902 02    DYE -.17095528 02    DZE -.74130525 01
  XT -.91995854 08    YT  .10579384 09    ZT  .45825678 08    DXT -.23172181 02    DYT -.17790128 02    DZT -.77010310 01
 LTE  .18145383 02   LOE  .13070376 03   LTT  .18118887 02    LOT  .13106315 03    RST  .14735429 09    VST  .30211662 02
 EPS  .92738942 02   ESP  .15275379 00   SEP  .87107983 02    EPM  .89201253 02    EMP  .84971494 02    MEP  .58272432 01
 MPS  .13506250 03   MSP  .98911702-02   SMP  .44926462 02    SEM  .91238101 02    EMS  .88608116 02    ESM  .15355230 00
 RPM  .40167596 05   SPN  .91811648 02
 GCE  .83000439 02   GCT  .17441558 03   SIP  .13258261 03    CPT  .12183181 03    SIN  .11935193 03     D1  .12992781 01
 REP  .39410226 06   VEP  .16473568 01   CPE  .82569777 02    CPS  .10290057 03     D2  .94801301 00     D3  .56415414-01

  1 DAYS 10 HRS. 35 MIN. 47.257 SEC.        2355533437162022407000005 J.D.= 2437693.37769973  JAN. 28,1962 21 03 53.257
  CHANGE OF PHASE OCCURS AT THIS POINT    MOON     IS THE CENTRAL BODY FOR INTEGRATION     ENCKE  EQUATIONS OF MOTION

  1 DAYS 10 HRS. 35 MIN. 47.257 SEC.        2355533437162022407000005 J.D.= 2437693.37769973  JAN. 28,1962 21 03 53.257

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.29597028 06     Y -.24217759 06     Z -.96796060 05     DX -.11730583 01     DY -.11242189 01     DZ -.27421105 00
   R  .39448430 06   DEC -.14273916 02    RA  .21929173 03      V  .16477638 01    PTH  .83621817 02     AZ  .44021332 02
   R  .39448430 06   LAT -.14273917 02   LON  .13567711 03     VE  .27808186 02    PTE  .33759780 01    AZE  .27027168 03
  XS  .91687759 08    YS -.10592282 09    ZS -.45885879 08    DXS  .23813021 02    DYS  .17096556 02    DZS  .74134976 01
  XM -.31350057 06    YM -.23313575 06    ZM -.61997583 05    DXM  .64220047 00    DYM -.69424368 00    DZM -.28788353 00
  XT -.31350057 06    YT -.23313575 06    ZT -.61997583 05    DXT  .64220047 00    DYT -.69424368 00    DZT -.28788353 00
  RS  .14734527 09    VS  .30277594 02    RM  .39557374 06     VM  .98857102 00     RT  .39557374 06     VT  .98857102 00
 GED -.14296758 02   ALT  .38870739 06   LOS  .22729192 03    RAS  .31090654 03    RAM  .21663666 03    LOM  .13302183 03
 DUT  .35000000 02    DT  .24070000 03    DR  .16375646 01    SHA -.39398189 06    DES -.18144669 02    DEM -.90170449 01
 DAC  .00000000 00   CCL  .27770579 03   MCL  .27083503 03    TCL  .27083503 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.91983729 08     Y  .10558064 09     Z  .45789083 08     DX -.24986079 02     DY -.18220775 02     DZ -.76877087 01
   R  .14732589 09   LAT  .18177528 02   LON  .13106296 03      V  .31865367 02    PTH  .27507562 00     AZ  .10479726 03
  XE -.91687759 08    YE  .10592282 09    ZE  .45885879 08    DXE -.23813021 02    DYE -.17096556 02    DZE -.74134976 01
  XT -.92001260 08    YT  .10558968 09    ZT  .45823881 08    DXT -.23170821 02    DYT -.17790800 02    DZT -.77013812 01
 LTE  .18144669 02   LOE  .13070654 03   LTT  .18118173 02    LOT  .13106594 03    RST  .14735413 09    VST  .30211103 02
 EPS  .92738783 02   ESP  .15271383 00   SEP  .87107993 02    EPM  .88657686 02    EMP  .85540307 02    MEP  .58020034 01
 MPS  .13491110 03   MSP  .27453512-18   SMP  .45077883 02    SEM  .91207491 02    EMS  .88638730 02    ESM  .15323340 00
 RPM  .39999998 05   SPN  .91812387 02
 GCE  .82994207 02   GCT  .17392925 03   SIP  .13242081 03    CPT  .12191825 03    SIN  .11942797 03     D1  .13047322 01
 REP  .39448430 06   VEP  .16477638 01   CPE  .82563744 02    CPS  .10290025 03     D2  .94967727 00     D3  .56590148-01

  1 DAYS 11 HRS. 35 MIN. 47.257 SEC.        2355533455222022407000005 J.D.= 2437693.41936640  JAN. 28,1962 22 03 53.257

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.30018876 06     Y -.24670947 06     Z -.97760827 05     DX -.11703643 01     DY -.11155836 01     DZ -.26150855 00
   R  .40036180 06   DEC -.14173450 02    RA  .21935799 03      V  .16378846 01    PTH  .83524378 02     AZ  .40662645 02
   R  .40036180 06   LAT -.14173450 02   LON  .12070230 03     VE  .28238022 02    PTE  .33039435 01    AZE  .27028478 03
  XS  .91773462 08    YS -.10576124 09    ZS -.45859179 08    DXS  .23799410 02    DYS  .17112423 02    DZS  .74203669 01
  XM -.31117535 06    YM -.23552508 06    ZM -.63031313 05    DXM  .64958054 00    DYM -.68870185 00    DZM -.28640502 00
  XT -.31117535 06    YT -.23552508 06    ZT -.63031313 05    DXT  .64958054 00    DYT -.68870185 00    DZT -.28640502 00
  RS  .14734610 09    VS  .30277539 02    RM  .39537605 06     VM  .98908692 00     RT  .39537605 06     VT  .98908692 00
 GED -.14225869 02   ALT  .39378488 06   LOS  .21229385 03    RAS  .31094955 03    RAM  .21713337 03    LOM  .11847768 03
 DUT  .35000000 02    DT  .48070000 03    DR  .16274348 01    SHA -.39985294 06    DES -.18133636 02    DEM -.91733017 01
 DAC  .00000000 00   CCL  .27710287 03   MCL  .25868956 03    TCL  .25868956 03

     HELIOCENTRIC                                                                                 EQUATORIAL COORDINATES

   X -.92073651 08     Y  .10551503 09     Z  .45761418 08     DX -.24969775 02     DY -.18228007 02     DZ -.76818754 01
   R  .14732646 09   LAT  .18076135 02   LON  .13110833 03      V  .31855315 02    PTH  .29539714 00     AZ  .10479644 03
  XE -.91773462 08    YE  .10576124 09    ZE  .45859179 08    DXE -.23799410 02    DYE -.17112423 02    DZE -.74203669 01
  XT -.92086638 08    YT  .10552562 09    ZT  .45796147 08    DXT -.23149830 02    DYT -.17801125 02    DZT -.77067719 01
 LTE  .18133636 02   LOE  .13074955 03   LTT  .18107136 02    LOT  .13110887 03    RST  .14735170 09    VST  .30202467 02
 EPS  .92733528 02   ESP  .15513699 00   SEP  .87110966 02    EPM  .79747180 02    EMP  .94835554 02    MEP  .54172549 01
 MPS  .13170064 03   MSP  .27453512-18   SMP  .48288341 02    SEM  .90734763 02    EMS  .89111509 02    ESM  .15355230 00
 RPM  .37932489 05   SPN  .91870733 02
 GCE  .82897125 02   GCT  .16158669 03   SIP  .12907453 03    CPT  .12282509 03    SIN  .12019898 03     D1  .13759924 01
 REP  .40036180 06   VEP  .16378846 01   CPE  .82470375 02    CPS  .10289538 03     D2  .94698972 00     D3  .56253635-01

  1 DAYS 12 HRS. 35 MIN. 47.257 SEC.        2355533473262022407000005 J.D.= 2437693.46103306  JAN. 28,1962 23 03 53.257

     GEOCENTRIC                                                                                   EQUATORIAL COORDINATES

   X -.30439513 06     Y -.25070890 06     Z -.98677430 05     DX -.11662089 01     DY -.11062042 01     DZ -.24757700 00
   R  .40619961 06   DEC -.14059442 02    RA  .21941976 03      V  .16263533 01    PTH  .83365902 02     AZ  .37361648 02
   R  .40619960 06   LAT -.14059443 02   LON  .10572301 03     VE  .28665162 02    PTE  .32306914 01    AZE  .27029897 03
  XS  .91859117 08    YS -.10559961 09    ZS -.45832451 08    DXS  .23785786 02    DYS  .17128282 02    DZS  .74272321 01
  XM -.30882363 06    YM -.23879434 06    ZM -.64059672 05    DXM  .65691721 00    DYM -.68309408 00    DZM -.28490034 00
  XT -.30882363 06    YT -.23879434 06    ZT -.64059672 05    DXT  .65691721 00    DYT -.68309408 00    DZT -.28490034 00
  RS  .14734693 09    VS  .30277483 02    RM  .39517665 06     VM  .98960898 00     RT  .39517665 06     VT  .98960898 00
 GED -.14151418 02   ALT  .39992267 06   LOS  .19729578 03    RAS  .31099254 03    RAM  .21763121 03    LOM  .10393445 03
 DUT  .35000000 02    DT  .95999999 03    DR  .16154636 01    SHA -.40568624 06    DES -.18122596 02    DEM -.93290351 01
 DAC  .00000000 00   CCL  .27770197 03   MCL  .24706134 03    TCL  .24706134 03
```

CASE 2 SPACE TRAJECTORIES

RA-3 POST-MC

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.92163512 08	Y	.10544940 09	Z	.45733774 08	DX	-.24951995 02	DY	-.18234486 02	DZ	-.76748091 01
R	.14732707 09	LAT	.180*4748 02	LON	.13115368 03	V	.31843385 02	PTH	.31570585 00	AZ	.10479409 03
XE	-.91859117 08	YE	.105*9961 09	ZE	.45832451 08	DXE	-.23785786 02	DYE	-.17128282 02	DZE	-.74272321 01
XT	-.92167941 08	YT	.10546151 09	ZT	.45768392 08	DXT	-.23128868 02	DYT	-.17811376 02	DZT	-.77121325 01
LTE	.18122596 02	LOE	.13079254 03	LTT	.18096092 02	LOT	.13115179 03	RST	.14734926 09	VST	.30193818 02
EPS	.92723095 02	ESP	.1574*3936 00	SEP	.87119131 02	EPM	.70135022 02	EMP	.10482094 03	MEP	.50440304 01
MPS	.12691233 03	MSP	.98911702-02	SMP	.53076177 02	SEM	.90261522 02	EMS	.89584816 02	ESM	.15323340 00
RPM	.36942704 05	SPN	.91873420 02								
GCE	.82798027 02	GCT	.14985937 03	SIP	.12421581 03	CPT	.12268643 03	SIN	.11998991 03	D1	.14129393 01
REP	.40619961 06	VEP	.162*3533 01	CPE	.82376169 02	CPS	.10289049 03	D2	.88102248 00	D3	.50007864-01

1 DAYS 12 HRS. 56 MIN. 46.72* SEC. 235553350021202134332544 J.D.= 2437693.47561020 JAN. 28,1962 23 24 52.722

GEOCENTRIC — EQUATORIAL COORDINATES

X	-.30586275 06	Y	-.2515*9998 06	Z	-.98986099 05	DX	-.11642946 01	DY	-.11027825 01	DZ	-.24258010 00
R	.40823133 06	DEC	-.1407*2692 02	RA	.21944041 03	V	.16218990 01	PTH	.83298703 02	AZ	.36288196 02
R	.40823132 06	LAT	-.1407*2693 02	LON	.10048152 03	VE	.28813775 02	PTE	.32047589 01	AZE	.27030383 03
XS	.91889074 08	YS	-.10547803 09	ZS	-.45823095 08	DXS	.23781016 02	DYS	.17133828 02	DZS	.74296331 01
XM	-.30799466 06	YM	-.2387*5343 06	ZM	-.64418159 05	DXM	.65947361 00	DYM	-.68111667 00	DZM	-.28436775 00
XT	-.30799466 06	YT	-.2387*5343 06	ZT	-.64418159 05	DXT	.65947361 00	DYT	-.68111667 00	DZT	-.28436775 00
RS	.14734722 09	VS	.30277464 02	RM	.39510650 06	VM	.98979308 00	RT	.39510650 06	VT	.98979308 00
GED	-.14124507 02	ALT	.401*5439 06	LOS	.19204869 03	RAS	.31100759 03	RAM	.21780560 03	LOM	.98846710 02
DUT	.35000000 02	DT	.95999999 03	DR	.16108182 01	SHA	-.40771683 06	DES	-.18118731 02	DEM	-.93833932 01
DAC	.00000000 00	CCL	.2777*3717 03	MCL	.24327631 03	TCL	.24327631 03				

HELIOCENTRIC — EQUATORIAL COORDINATES

X	-.92194937 08	Y	.10542643 09	Z	.45724110 08	DX	-.24945311 02	DY	-.18236610 02	DZ	-.76722132 01
R	.14732730 09	LAT	.180*0766 02	LON	.13116955 03	V	.31838739 02	PTH	.32253775 00	AZ	.10479315 03
XE	-.91889074 08	YE	.10547803 09	ZE	.45823095 08	DXE	-.23781016 02	DYE	-.17133828 02	DZE	-.74296331 01
XT	-.92197069 08	YT	.10543908 09	ZT	.45758678 08	DXT	-.23121543 02	DYT	-.17814945 02	DZT	-.77140009 01
LTE	.18118731 02	LOE	.131*0758 03	LTT	.18092226 02	LOT	.13116680 03	RST	.14734841 09	VST	.30190790 02
EPS	.92718299 02	ESP	.1587*5878 00	SEP	.87123136 02	EPM	.66708532 02	EMP	.10837446 03	MEP	.49169974 01
MPS	.12493239 03	MSP	.2745*3512-18	SMP	.55055848 02	SEM	.90095834 02	EMS	.89750530 02	ESM	.15323340 00
RPM	.36870350 05	SPN	.91873103 02								
GCE	.82762833 02	GCT	.14673914 03	SIP	.12223058 03	CPT	.12235229 03	SIN	.11965047 03	D1	.14157182 01
REP	.40823133 06	VEP	.16218990 01	CPE	.82342950 02	CPS	.10288877 03	D2	.84254608 00	D3	.46682901-01

SELENOCENTRIC — EQUATORIAL COORDINATES

X	.21319082 04	Y	-.17646551 05	Z	-.34567940 05	DX	-.18237682 01	DY	-.42166586 00	DZ	.41787646-01
R	.36870350 05	DEC	-.69644737 02	RA	.27956874 03	V	.18723458 01	PTH	-.14249732-06	AZ	.27367877 03
R	.36870349 05	LAT	-.4524*4480 02	LON	.22851968 03	VP	.19401971 01	PTP	-.49505037-06	AZP	.28037549 03
LTS	.26779122 00	LNS	.2638*8264 03	LTE	-.67487749 01	LNE	.35329974 03				
ALT	.35132350 05	SHA	-.3027*3021 05	ALP	.13291472 03	DR	-.49661982-08	DP	.29095874-02	ASD	.27018162 01
HGE	.26728169 03	SVL	-.4707*6085 02	HNG	.21277493 03	SIA	.64006715 02				

SELENOCENTRIC CONIC

EPOCH OF PERICENTER PASSAGE 235553350021202134335450 J.D.= 2437693.47561020 JAN. 28,1962 23 24 52.722

SMA	-.15125942 04	ECC	.2537*5572 02	B	.38353128 05	SLR	.97247659 06	APO	.00000000 00	RCA	.36870350 05
VH	.17999586 01	C3	.32398510 01	C1	.69034044 05	TFP	-.43994448-04	TF	.36946311 02	LTF	.36191447 02
TA	-.68301891-05	MTA	.9228*8494 02	EA	-.85377364-06	MA	-.29995809-05	C3J	.31289378 00	TFI	.36946311 02
ZAE	.15463414 03	ZAP	.1158*1528 03	ZAC	.94186296 02	DEF	.45170224 01	IR	.28772246 04	GP	.33310235 00
OP1	-.27182999 01	DY	-.5285*6264 02	OPZ	.61291466 02						

ALL VECTORS REFERENCED TO EARTH EQUATOR PLANE

X	.21319082 04	Y	-.12646551 05	Z	-.34567940 05	DX	-.18237682 01	DY	-.42166586 00	DZ	.41787646-01
INC	.11031146 03	LAN	.19349179 03	APF	.27136365 03	MX	-.97405523 00	MY	-.22520726 00	MZ	.22318336-01
WX	-.21879914 00	WY	.91193876 00	WZ	-.34712338 00	PX	.57821746-01	PY	-.34300058 00	PZ	-.93755388 00
QX	-.97405522 00	QY	-.22570726 00	QZ	.22318337-01	RX	.14223183-01	RY	.34941918-02	RZ	-.99989272 00
BX	.96162378-01	BY	-.3339*5917 00	BZ	-.93770510 00	TX	-.23857487 00	TY	.97112411 00	TZ	.00000000 00
SXI	-.97101993 00	SYI	-.238*4928 00	SZI	-.14646102-01	DAI	-.83918948 00	RAI	.19380244 03		
SXO	-.97557721 00	SYO	-.211*1536 00	SZO	.59248102-01	DAO	.33966539 01	RAO	.19223299 03		
ETE	.15952936 03	ETS	.33942364 03	ETC	.23298777 03						
BTQ	-.13314696 05	BRQ	.35947781 05	B	.38353128 05	THA	.11031374 03				

ALL VECTORS REFERENCED TO ORBIT PLANE OF TARGET

X	-.11622495 05	Y	-.20742421 05	Z	-.28179643 05	DX	-.16698724 01	DY	.84419854 00	DZ	.67330971-01
INC	.13008093 03	LAN	.1548*1649 03	APF	.27269383 03	MX	-.87055022 00	MY	.26688517 00	MZ	-.15132837 00
WX	.32437049 00	WY	.69297642 00	WZ	-.64386915 00	PX	-.31522606 00	PY	-.56257728 00	PZ	-.76429009 00
QX	-.89186114 00	QY	.450*7748 00	QZ	.35960758-01	RX	-.52532884-02	RY	.24903796-02	RZ	-.99998306 00
BX	-.27983475 00	BY	-.5790*0845 00	BZ	-.76511353 00	TX	.42836446 00	TY	.90360605 00	TZ	.00000000 00
SXI	-.90359075 00	SYI	.42875720 00	SZI	.58136933-02	DAI	.33310235 00	RAI	.15463619 03		
SXO	-.87874591 00	SYO	.47249727 00	SZO	.66051953-01	DAO	.37872553 01	RAO	.15172319 03		
ETE	.17929738 03	ETS	.35919165 03	ETC	.25275578 03						
BTO	-.24694812 05	BRO	.29344991 05	B	.38353126 05	THA	.13008176 03				

ALL VECTORS REFERENCED TO TRUE LUNAR EQU. PLANE

X	-.17188742 05	Y	-.19441795 05	Z	-.26191343 05	DX	-.15424972 01	DY	.10324214 01	DZ	.24593859 00
INC	.13374656 03	LAN	.15349116 03	APF	.28047621 03	MX	-.84326163 00	MY	.26231856 00	MZ	-.14797473 00
WX	.32243539 00	WY	.64645579 00	WZ	-.69146970 00	PX	-.46619418 00	PY	-.52730163 00	PZ	-.71036329 00
QX	-.82383154 00	QY	.55140540 00	QZ	.13135321 00	RX	-.87364452-01	RY	.55040875-01	RZ	-.99465467 00
BX	-.43336648 00	BY	-.5485*2180 00	BZ	-.71498784 00	TX	.53304647 00	TY	.84608597 00	TZ	.00000000 00
SXI	-.84156336 00	SYI	.53019716 00	SZI	.10325718 00	DAI	.59267651 01	RAI	.14778847 03		
SXO	-.80481980 00	SYO	.57175695 00	SZO	.15924517 00	DAO	.91630871 01	RAO	.14460940 03		
ETE	.20316498 02	ETS	.23032717 02	ETC	.28268605 03						
BTT	-.26662545 05	BRT	.27559386 05	B	.38353127 05	THA	.13404201 03				

621774150403	621500324555	620601616334	601663167730	601612351536	600411670045
	620102710		2806000		000000000000

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