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PHASE III FINAL REPORT

6 December 1974 to 21 May 1975

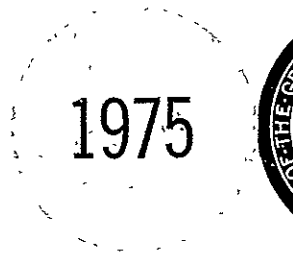
SELECTED TIME DELAY DATA

J. R. Walsh and R. D. Wetherington

Contract NAS8-30919
Control No. 1-4-40-43057(1F)
Time Delay Profiles for Teleoperator

21 May 1975

Prepared for
National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, Alabama



1975

Engineering Experiment Station
GEORGIA INSTITUTE OF TECHNOLOGY
Atlanta, Georgia

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Communications Division
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332

FOREWORD

This report was prepared by the Engineering Experiment Station of the Georgia Institute of Technology under Contract Number NAS8-30919 for the George C. Marshall Space Flight Center of the National Aeronautics and Space Administration.

The work was carried out under the direct supervision of Mr. J. R. Walsh, Project Director, and under the general supervision of Mr. D. W. Robertson, Chief of the Communications Division. The technical monitor for MSFC was Mr. C. T. Huggins. The report describes the work and results in generating time delay profiles for 11 specific earth orbits.

ABSTRACT

This report presents the results of the third phase of a study on time delays in communication systems applicable to the teleoperator program. Phase I covered the sources of time delays and their magnitude. Phase II covered estimates of the maximum time delays that will be encountered and presented time delay profiles for typical orbits.

Phase III was directed toward calculating time delay data for 11 specific orbits of interest. The delay data were delivered to MSFC in card decks. These data will be used in the MSFC teleoperator simulator to investigate the effect of time delays in the communications link on the teleoperator control functions.

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1. INTRODUCTION

The teleoperator program will provide NASA with satellite service vehicles which have remotely controlled manipulator arms. Control of the manipulator arms will be directed by a human operator from a control console, and this console may be located at a ground site, aboard a spacecraft orbiting near teleoperator, or aboard a spacecraft in an entirely different orbit. In either case, operation of the system will require a two way communication link between the human operator and teleoperator. The up-link will carry command data for effecting manipulator movements; the return link will carry monitoring data which will verify the movements with the major portion of the return data being video data. Obviously, when the human operator moves a control, the entire round-trip transmission path must be negotiated before he can observe any response. Since the transmission path may be lengthy, an appreciable time delay may be involved. It is toward specifying the time delay profiles for various control station positions and teleoperator orbits that this portion of the project was directed.

Phase I of this program, previously reported [1], consisted of a survey and evaluation of possible sources of time delay. To briefly review the major results of Phase I, it was found that the delays that occur can be subdivided into three general classes: (1) signal processing delays, (2) transmission delays, and (3) hardware delays. Each of these classes may subdivide into several subclasses. Thus, signal processing may consist of transformation of signal form, data buffering, error checking, etc. Transmission delays encompass delays over communications lines as well as propagation delays for radio links. Hardware delays are those associated with passing signals through amplifiers, filters, etc. with no basic change in the signal type and may occur at several points in the communications link. Of these three general sources of time delay, the major delays were found to be associated with signal processing and transmission time. Hardware delays are usually of the order of microseconds for each piece of equipment. The total for all hardware components in the link could well be expected to be of the order of one millisecond. Such a delay will be insignificant in comparison with processing and transmission delays.

Signal processing delays present uncertainties in two areas. First is the initial processing of the control system sensor output signals to form drive signals for the teleoperator function motors. Sensors attached to the controls activated by a human operator will produce analog output signals. The analog signals will be converted to digital form for input to a computer, and the computer will operate on these digital inputs (a form of matrix inversion) to form drive signals for eight different function motors which control the movement of a single manipulator arm. In a test set-up at MSFC, this processing time from analog-to-digital conversion of the sensor outputs to drive signal output from the digital computer is approximately 75 milliseconds. This delay time is highly dependent on the particular computer being used and the construction of the processing software. A change of computer hardware or reprogramming of the processing algorithm could change the processing time. However, it should be noted that even if hardware or software changes affect this delay time it will be a fixed quantity in an operational system.

Most of the uncertainty in time delays associated with transmission time occur in considering point-to-point links on the ground. It is presumed that when the teleoperator control station is located on the ground and remote from the TDRS tracking station communication between the two will be via the NASCOM network. In the present mode of operation most data transmitted by NASCOM is formed into standardized 1200 bit blocks with the 1200 bits including a preamble header and a check sum at the end. Buffering delays occur in accumulating the entire block before transmission or at any intermediate point at which the validity of the data is checked. It appears likely that for processing delays of this type estimates based on the present system will give a good upper bound estimate. The actual delays in the 1980 time frame may well be less since changes are being considered that will reduce the processing time. Many NASCOM personnel feel that the network will be operating in a "bent pipe" mode by 1980, and the delays due to blocking, buffering, and error checking will be eliminated.

Another source of time delay uncertainty in NASCOM transmissions arises from the lack of precise control over message facilities and routing. NASCOM traffic is generally carried over commercial common carrier links which are

obtained on a dedicated twenty-four hour per day basis. However, the commercial carrier may switch physical facilities at any time that difficulties occur on a particular configuration.

The remaining major source of delay is the propagation time associated with radio transmissions. These delays may be among the largest and most variable in the entire link, particularly when the mission geometry requires that the signal be relayed through one or more synchronous satellites. However, propagation delays can be accurately estimated for all mission geometries including the variations that will occur due to satellite motion.

Phase II of this study, also previously reported [2], deals with determining the largest time delays that are likely to occur in earth-orbit operation of teleoperator and with developing time delay profiles for three control/teleoperator configurations. Maximum time delays are considered for various communication network configurations and maximum time delay figures are given. Delay situations are considered for the cases of land line and communication satellite connection of the ground control station to the TDRSS ground station.

Three basic configurations of control station and teleoperator were considered. These were (1) ground station control to teleoperator in low earth orbit, (2) ground control to teleoperator in geosynchronous orbit, and (3) low earth orbit control to teleoperator in low earth orbit. Time delay profiles for cases (1) and (3) were generated for selected orbits. Delay figures were given for case (2) for which the delay profile is very nearly a constant with the only delay variations being those produced by "synchronous" satellite movement due to orbit inclination or eccentricity.

Phase III of this program, reported here, provides the time delay data for selected orbits to be used for operator test purposes in the teleoperator simulator at MSFC. The time delay data is provided for approximately a complete orbit for eleven orbit configurations. Also developed during this phase of the project effort are computer programs which (1) allow the time delay data to be read into the Systems Engineering Laboratories 840A computer in the MSFC teleoperator simulator, (2) provide the capability of listing the data, and (3) allow the time delay information to be retrieved for any specified time within the range of times covered by the delay data.

2. COMPUTER SIMULATION OF SELECTED TIME DELAYS

2.1 Introduction

During the program review at MSFC at the end of the Phase II effort, the decision was made that the Phase III effort output would be data sets of time delays for one orbit period for several selected orbits. These time delays will be used in the teleoperator simulator at MSFC to test the effects of time delay on human operator performance. The time delays at one minute intervals for the selected orbits should be furnished in a form suitable for use in the teleoperator simulator at MSFC, which uses a Systems Engineering Laboratories 840A computer.

2.2 Orbits for Simulated Delays

The orbits selected for which the time delays were generated are shown in Table 2-1. The orbital geometry and definition of the orbital parameters are given in Figure 2-1. For the low earth orbit, time delays were generated for two different modes of operation. These included the case where communication could be either through a TDRSS relay satellite or through a ground station in direct communication, with the ground station having the higher priority. The other case was for communication with a teleoperator always relaying through a TDRSS satellite with no handover of communications to a ground station. Thus, two sets of time delay profiles for a low earth orbit teleoperator are presented--one for the case of handover from satellite relay to a ground station (Rosman, NC was selected for computation purposes.) where large discontinuities in time delay exist. The other case is that for which communication between the ground control station and a teleoperator is by relay through a TDRSS satellite at all times. This mode of operation would not have large discontinuities in time delay if the handover from one TDRSS satellite to the other is performed on the meridians midway between the relay satellites. There will, however, be a shadow region centered around the 73° E meridian for low altitude satellites. Of course, when the teleoperator is in the shadow region, no communications with it exist.

TABLE 2-1

ORBITS FOR WHICH TIME DELAYS FOR SIMULATION PURPOSES WERE CALCULATED

Orbit No.	Perigee km	Apogee km	Inclination degrees	Ascending Node Long. East of T	Time Minutes	Ground Station Handover	Figure Number
1	300	300	30	330	91	Yes	2-2
2	300	300	103	30	91	Yes	2-3
3	3000	3000	30	330	152	Yes	2-4
4	3000	3000	103	30	152	Yes	2-5
5	815	815	90	17	102	Yes	2-6
6	185	37000	0	280	660	Yes	2-7
7	300	300	30	120	91	No	2-8
8	300	300	103	280	91	No	2-9
9	3000	3000	30	120	152	No	2-10
10	3000	3000	103	280	152	No	2-11
11	815	815	90	120	102	No	2-12

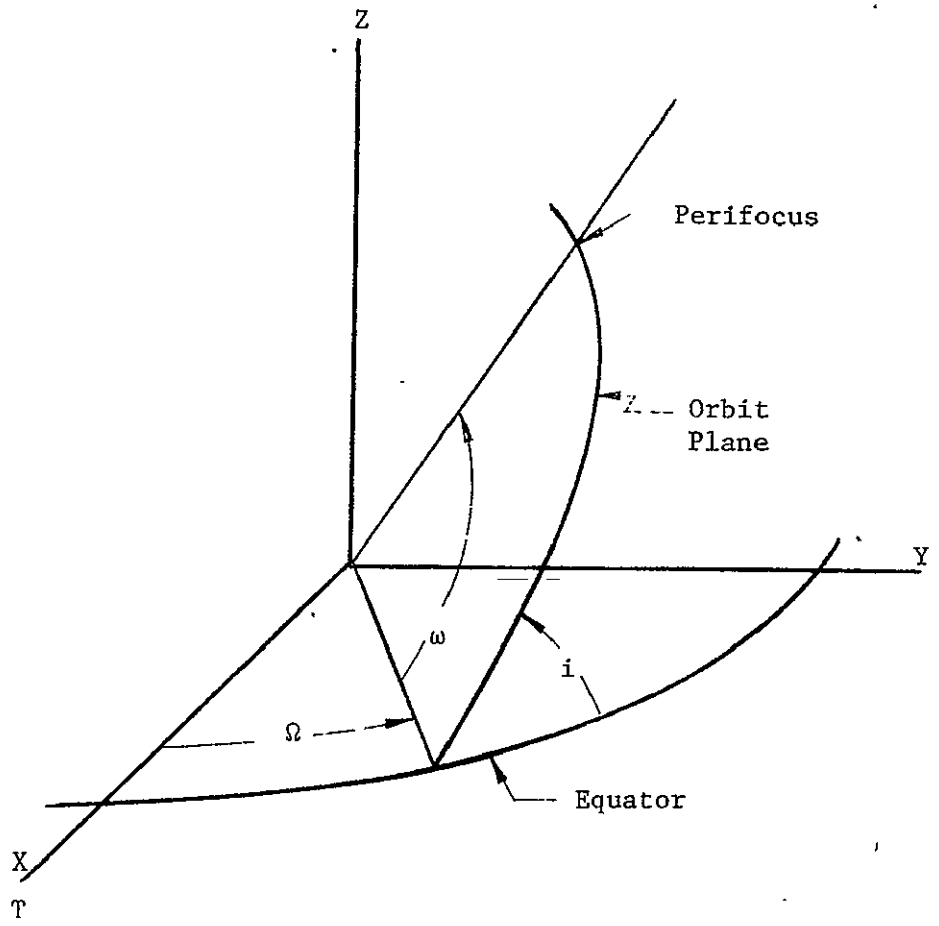

Figure 2-1. Reference Coordinate System Showing Definition of the Orientation Angles i, ω, and Ω.

2.3 Calculated Delays

The calculated delay figures represent only those delays caused by propagation from the TDRSS ground station to the TDRS satellite and to a teleoperator and return, or from the STDN station at Rosman to a teleoperator and return. To obtain the overall control system relay, delays produced by control matrix inversion, hardware, and ground communication to either the TDRSS ground station or the STDN ground station must be added to the values given. The total hardware delays expected in a communication system such as will be used with a teleoperator are expected to total no more than one millisecond. The present control matrix inversion performed on the Systems Engineering Laboratories 840A computer at MSFC involves a delay of 75 msec.

Other communications system delays are not as readily determined at this time. Their value would depend on the specific teleoperator control configuration involved. Some factors involved in ground communication system delays are (1) location of the teleoperator ground control station, (2) communication system configuration connecting the ground control station to the TDRSS ground station or STDN ground station, and (3) data handling techniques in the communication network.

These delays can be estimated, using the Phase I results [1], when the teleoperator operating configuration is defined. These additional delays should be fixed in value for a given mission.

These additional delays would have to be added to the delay figures given here to obtain control system delay.

2.4 Delay Profiles

The delay profiles for the orbits shown in Table 2-1 are presented in Figures 2-2 to 2-12. These plots are included to show graphically the variation of delay for the selected orbits. The plotting routines for all the low earth orbit data are basically the same as those used for the Phase II effort. They present 2.5 hour increments of the delay profiles. The vertical axis is broken (except for Figure 2-7) to display in more detail the delays encountered when relaying through a TDRSS satellite and when communicating through the STDN station ROS. The beginning of each trace

is marked with the mode of the communication relay (TDRS-W, TDRS-E, or ROS). Entry into the shadow region is marked with the word SHADOW.

The plot for orbit 6 (Figure 2-7) which is a highly elliptical orbit is rescaled to present the delay profile on one continuously calibrated vertical axis. The original calibration of the plot vertical axis did not allow for delays in the range produced by communication through ROS for an orbit with the eccentricity of orbit 6.

The orbit parameters for the delay profiles presented in Figures 2-2 through 2-12 are tabulated in Table 2-1. Figures 2-2 through 2-6 present the profiles for low earth orbits in which the ascending node was selected to orbit teleoperator approximately over ROS during the first orbit so that control is transferred to ROS during a portion of the orbit. Figure 2-7 presents the data for a highly elliptical orbit with a perigee of 185 km and an apogee of 37000 km (eccentricity of 0.737164). The starting position of the orbit was selected so that teleoperator is approximately on the meridian of ROS at the first apogee. This enables communication through ROS from early in the first orbit to very late in the first orbit. Handover to ROS from TDRS-W was accomplished at a teleoperator altitude of 3158 km, well below the established maximum communication altitude of 5000 km for TDRSS. Handover to TDRS-E on the return approach to perigee occurred with propagation delays approximately the same as those present during the first handover.

Figures 2-8 through 2-12 are repeats of the orbits which produced the delay profiles of Figures 2-2 through 2-6, except that the ascending node was selected so that no handover to the ground station at ROS was made. Thus, communications from the ground station to a teleoperator in these low-earth orbits is always through one of the TDRSS relay satellites. This mode of operation does not produce the large delay discontinuities which are encountered in transferring from a relay satellite to direct contact with a ground station.

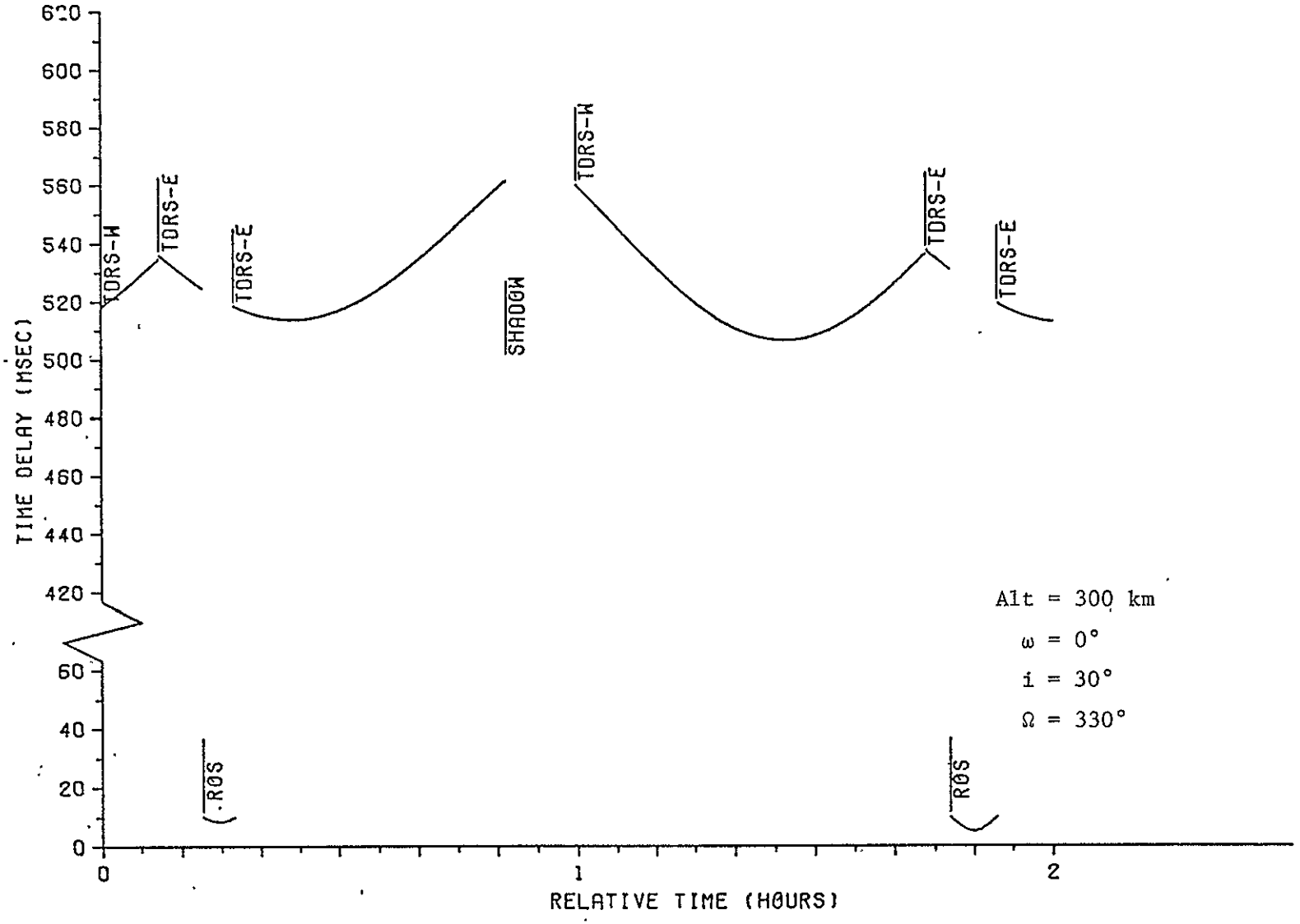

Figure 2-2. Time Delay Profile for Orbit 1.

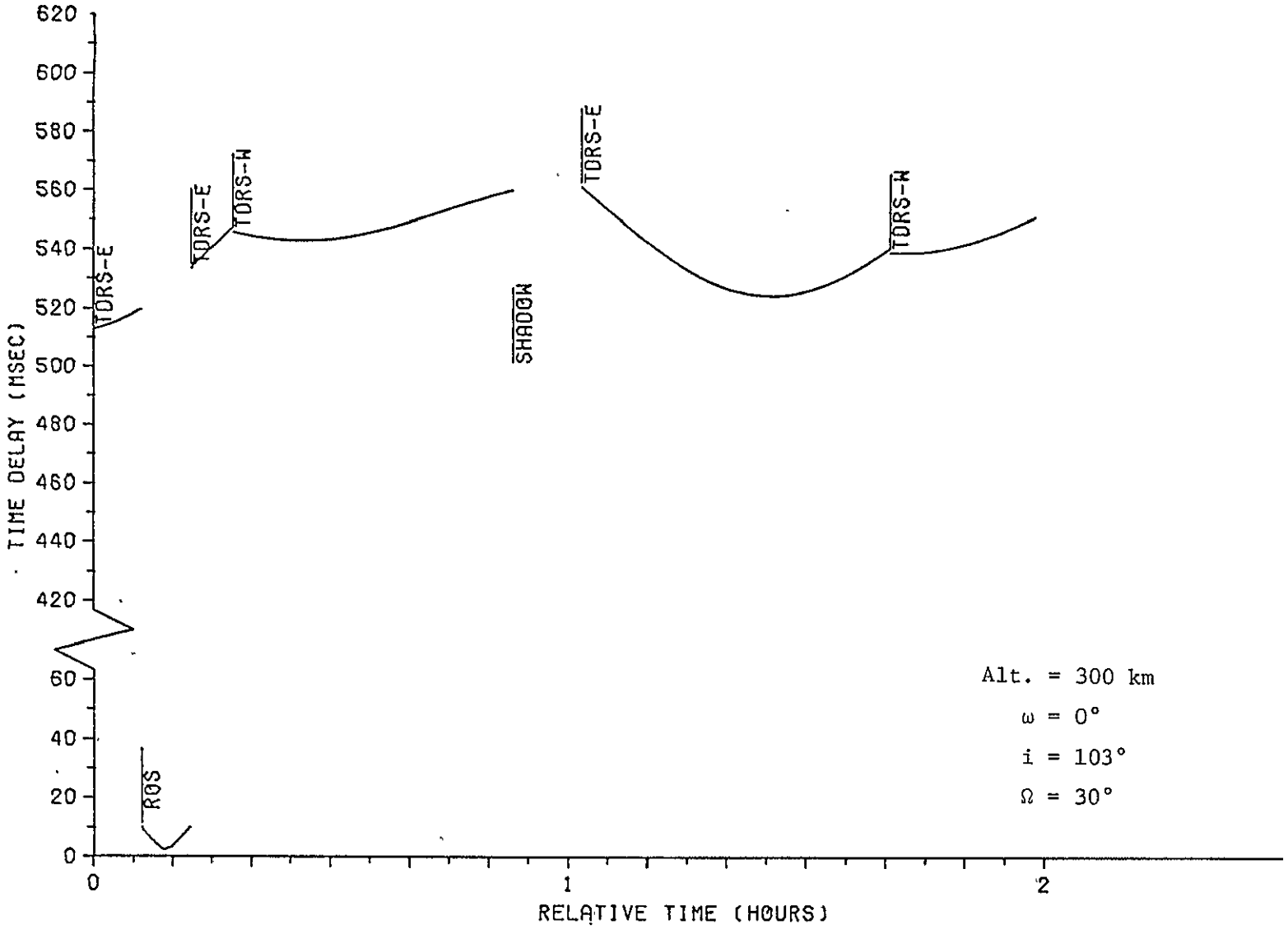

Figure 2-3. Time Delay Profile for Orbit 2.

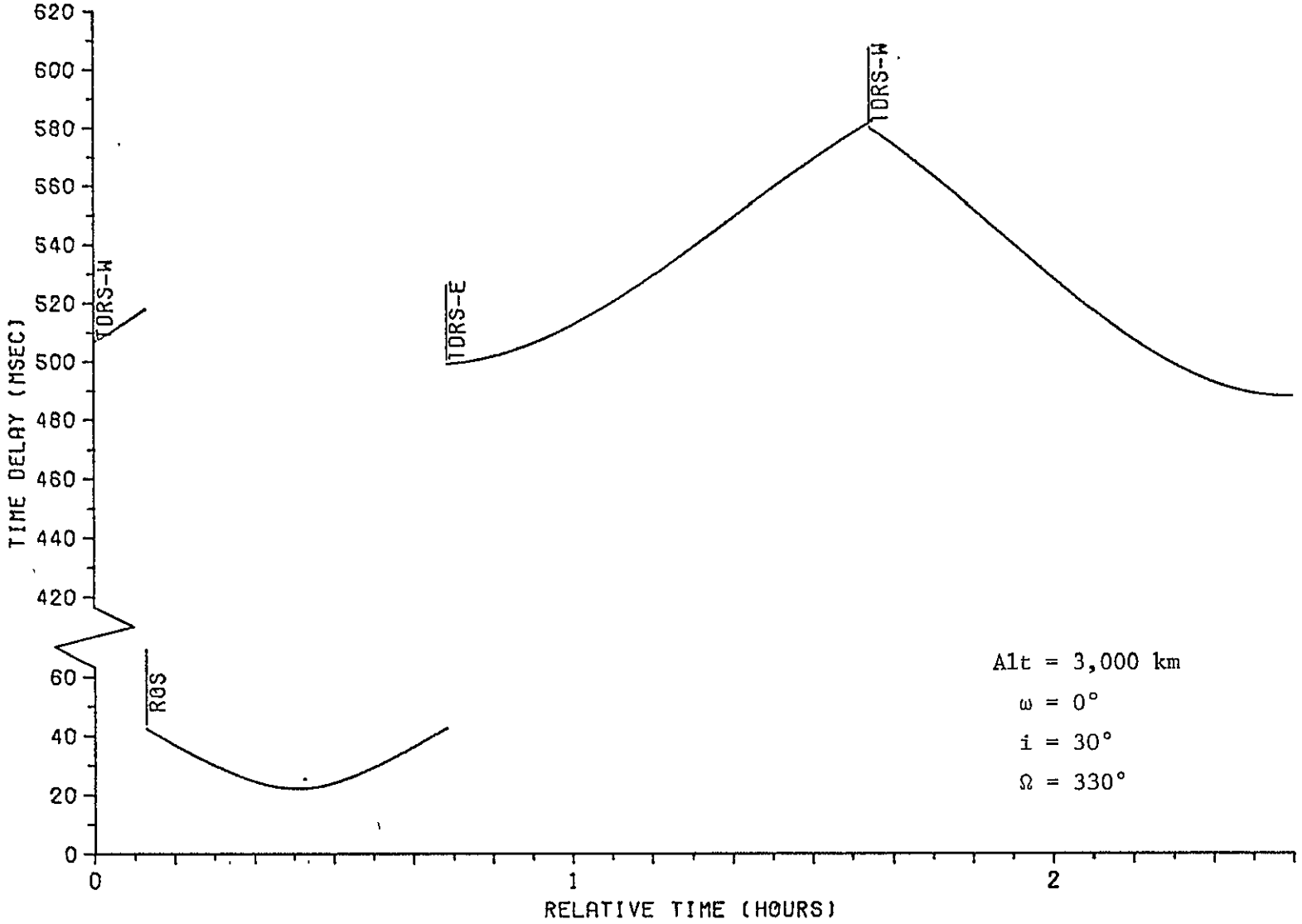

Figure 2-4. Time Delay Profile for Orbit 3.

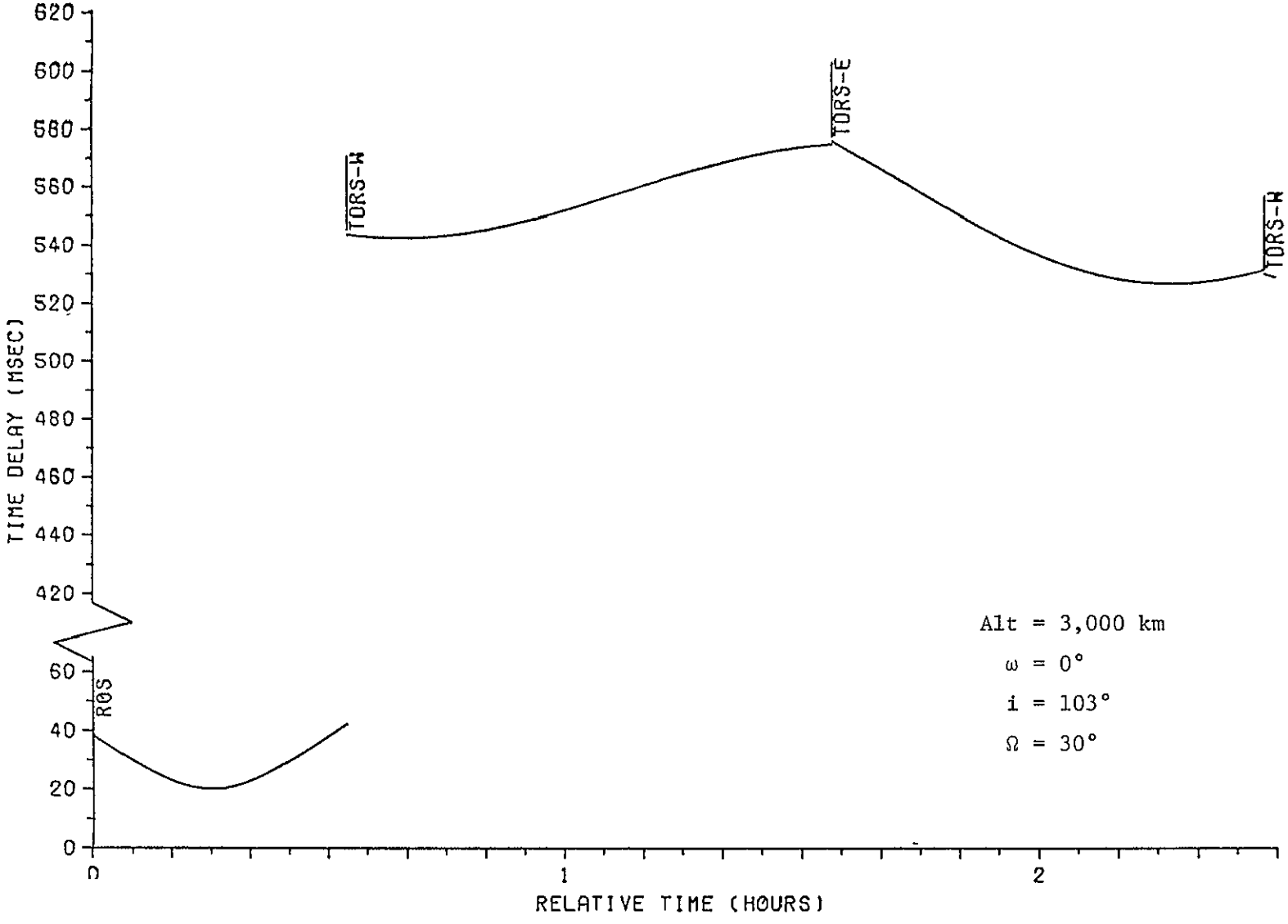

Figure 2-5. Time Delay Profile for Orbit 4

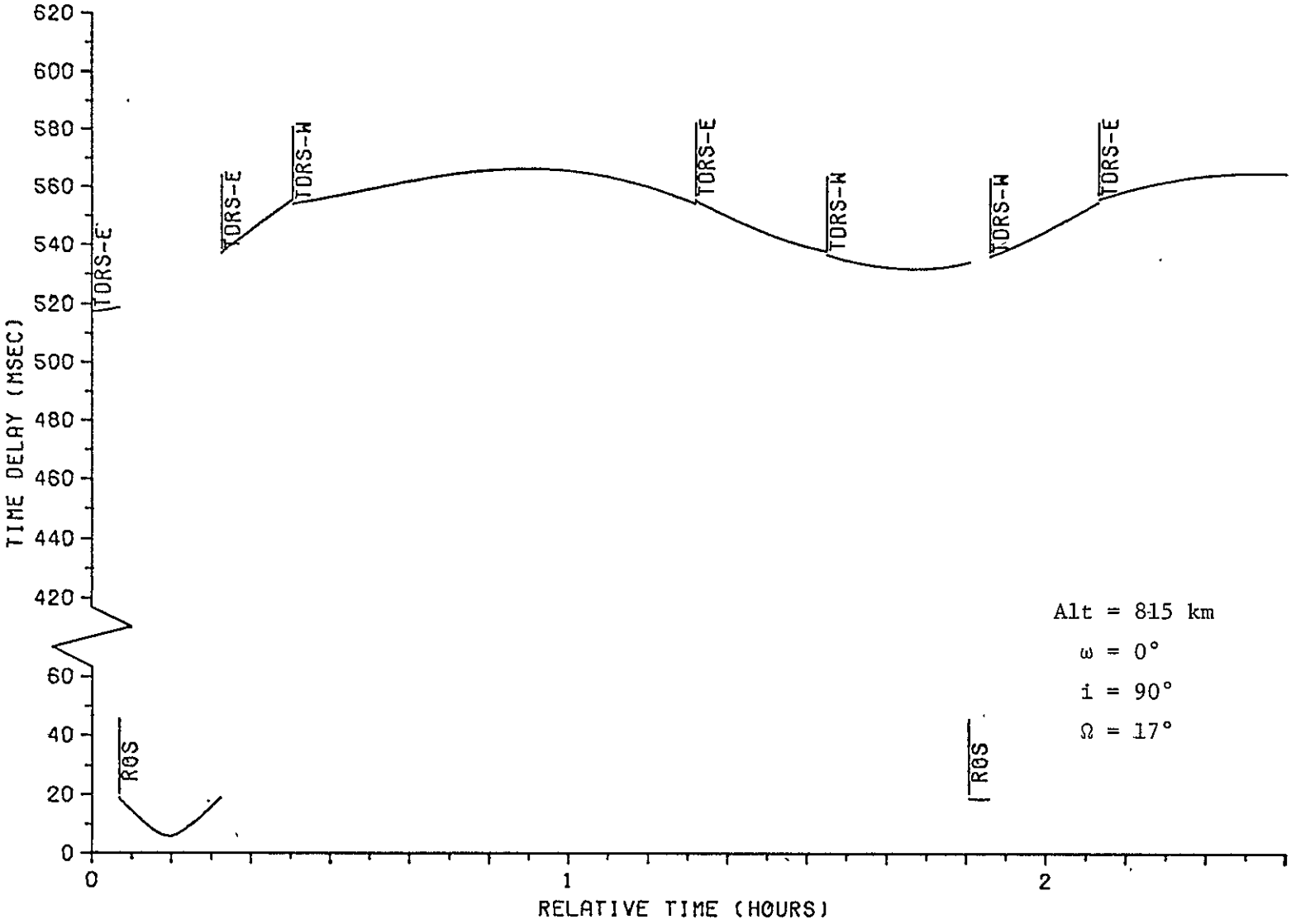

Figure 2-6. Time Delay Profile for Orbit 5.

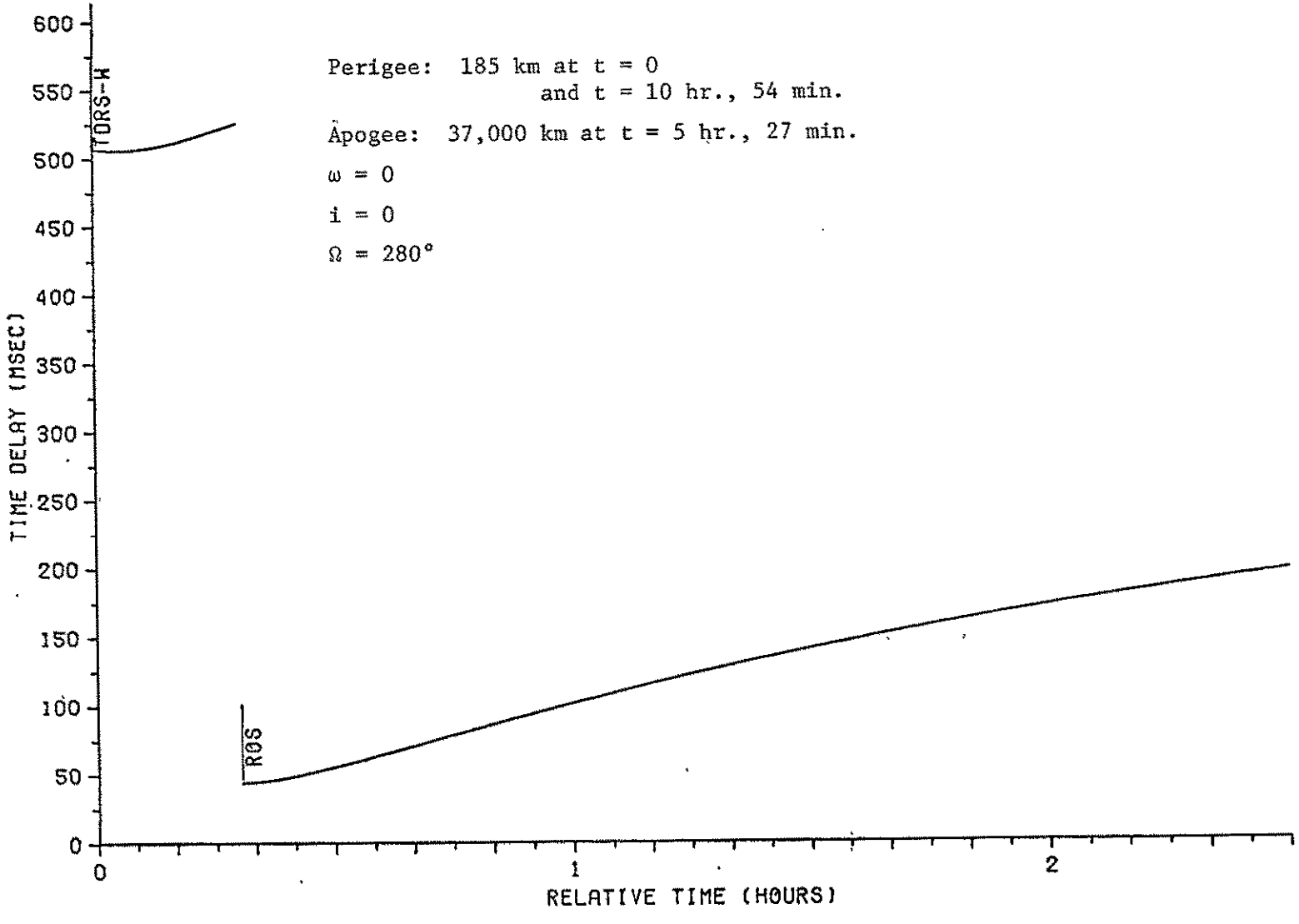

Figure 2-7. Time Delay Profile for Orbit 6.

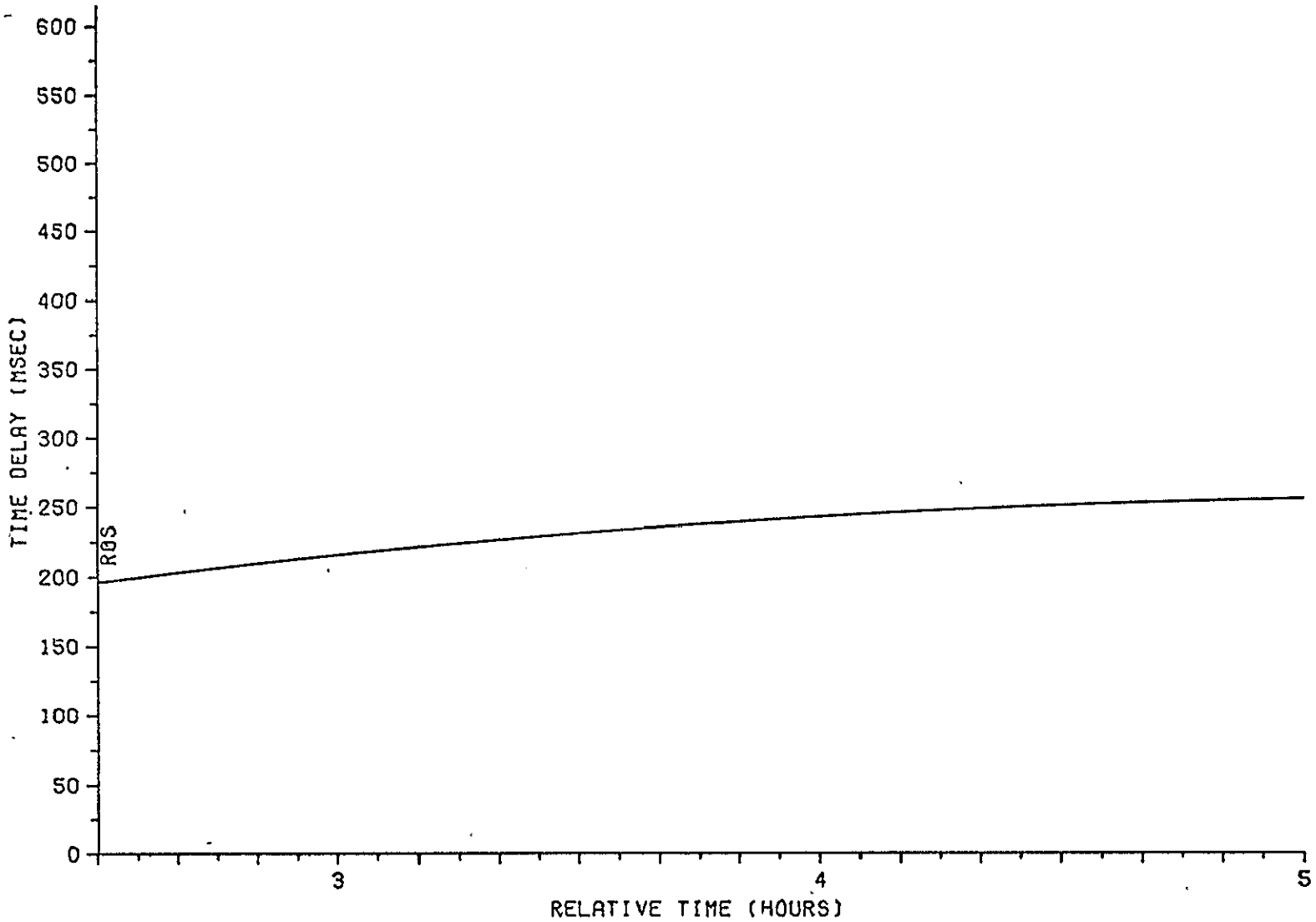

Figure 2-7. (continued)

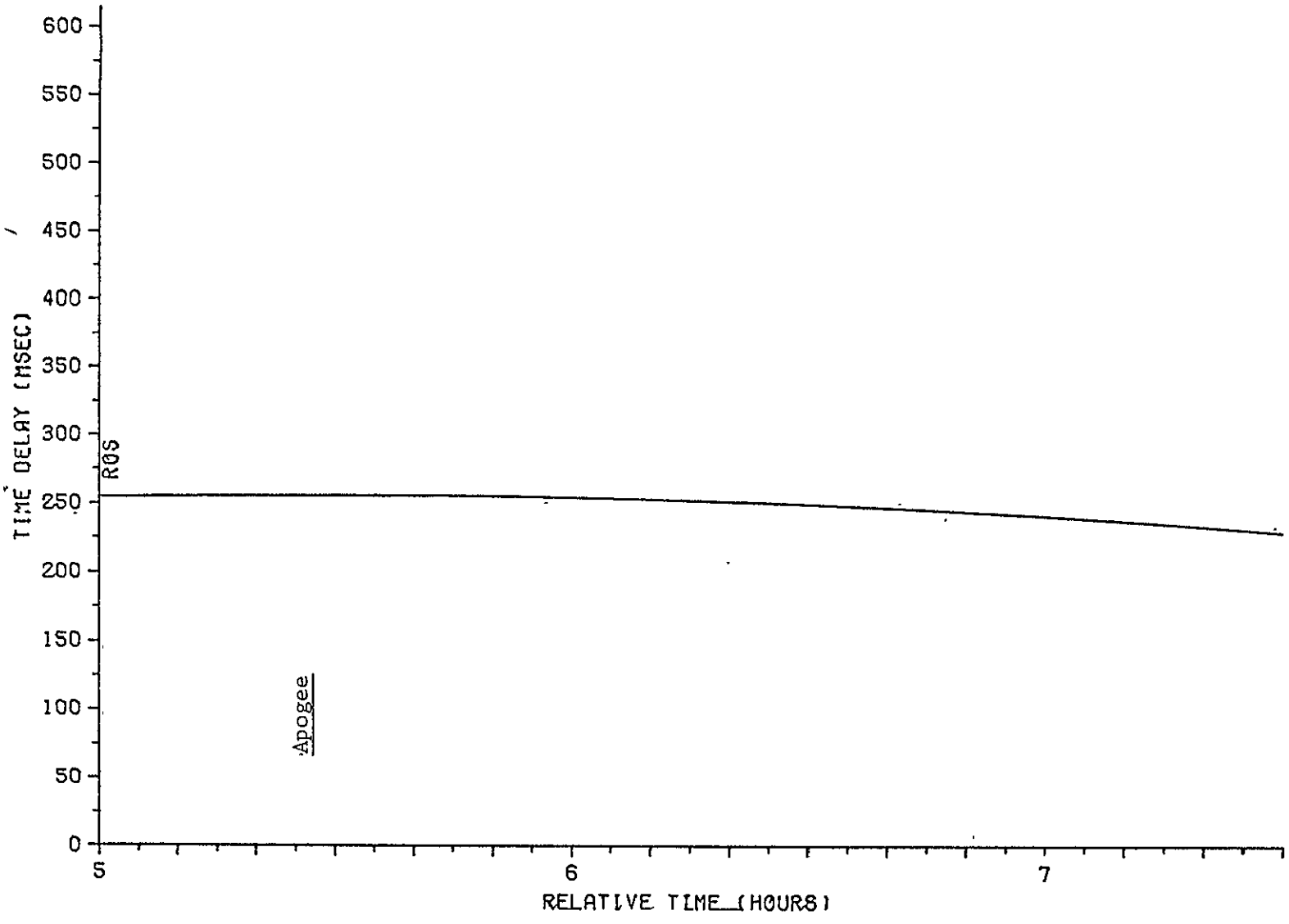

Figure 2-7. (continued)

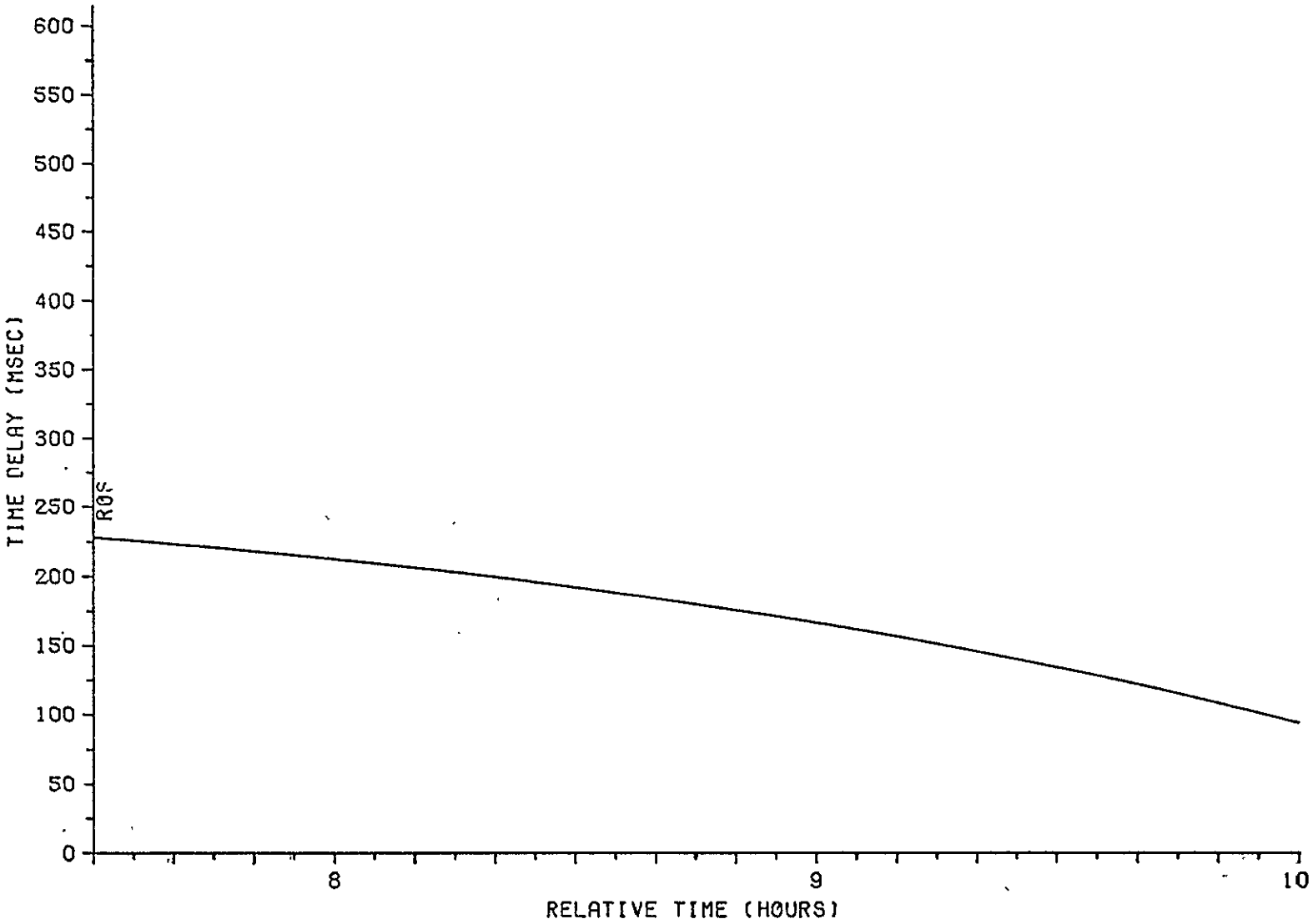

Figure 2-7. (continued)

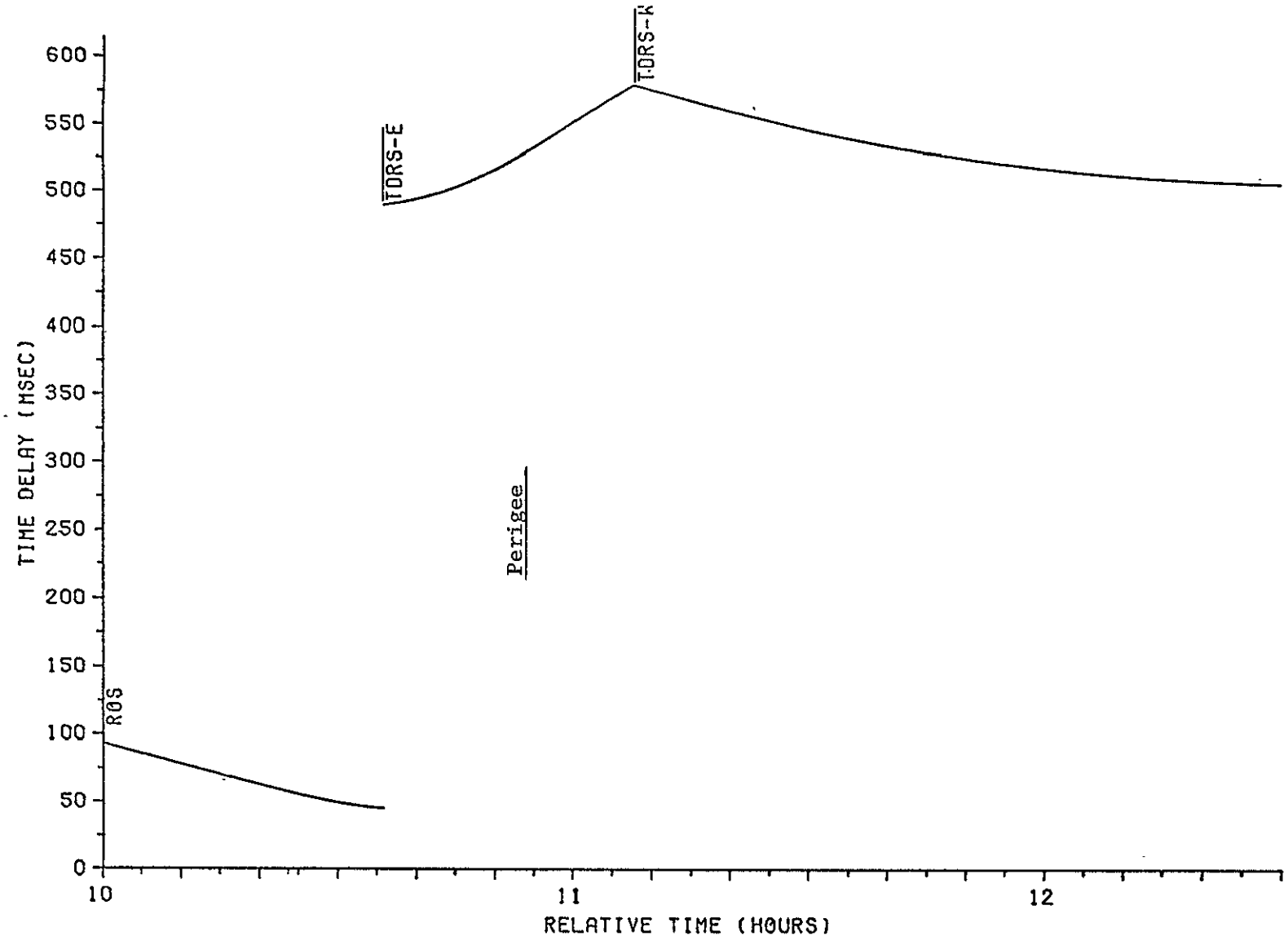

Figure 2-7. (concluded)

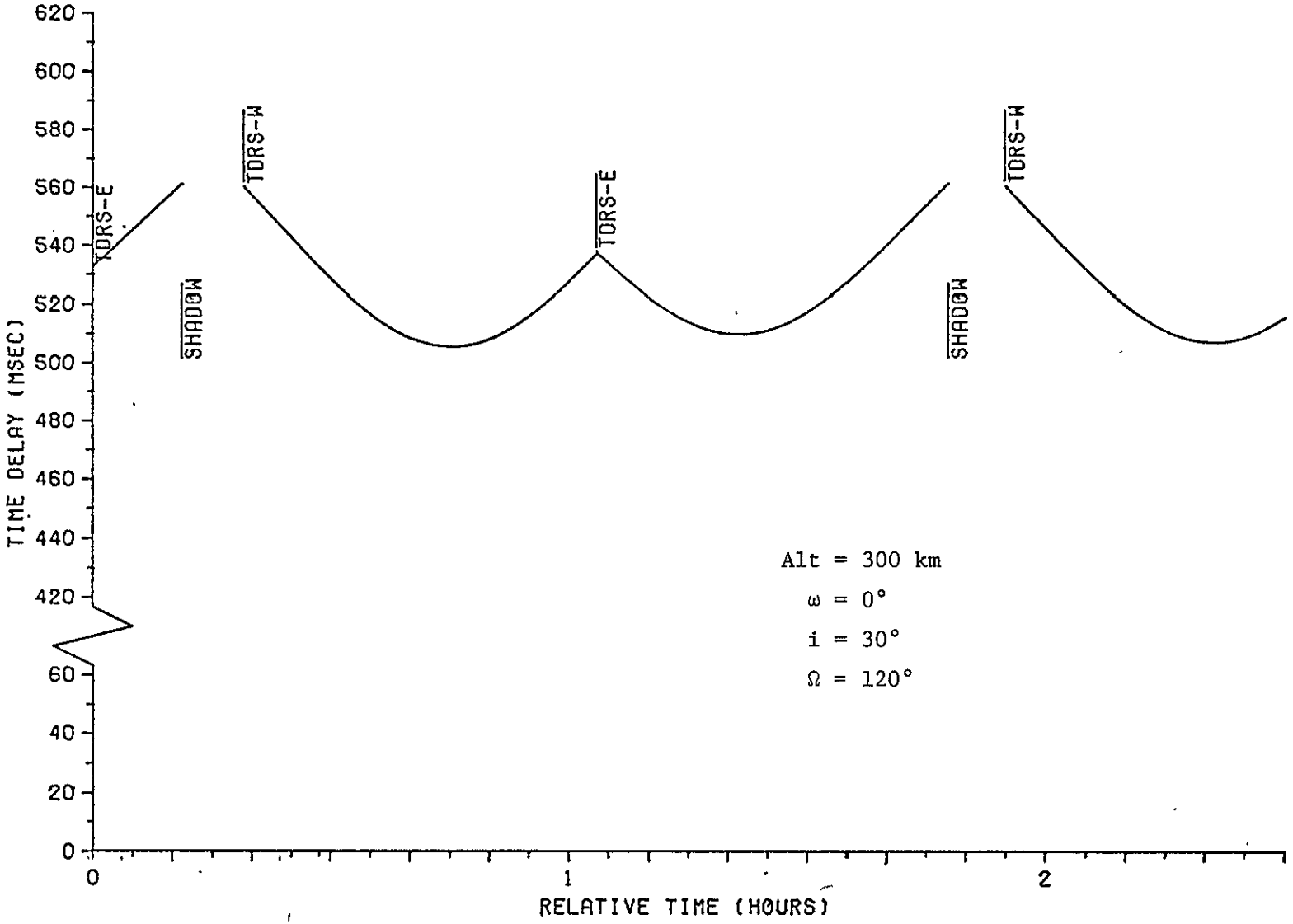

Figure 2-8. Time Delay Profile for Orbit 7.

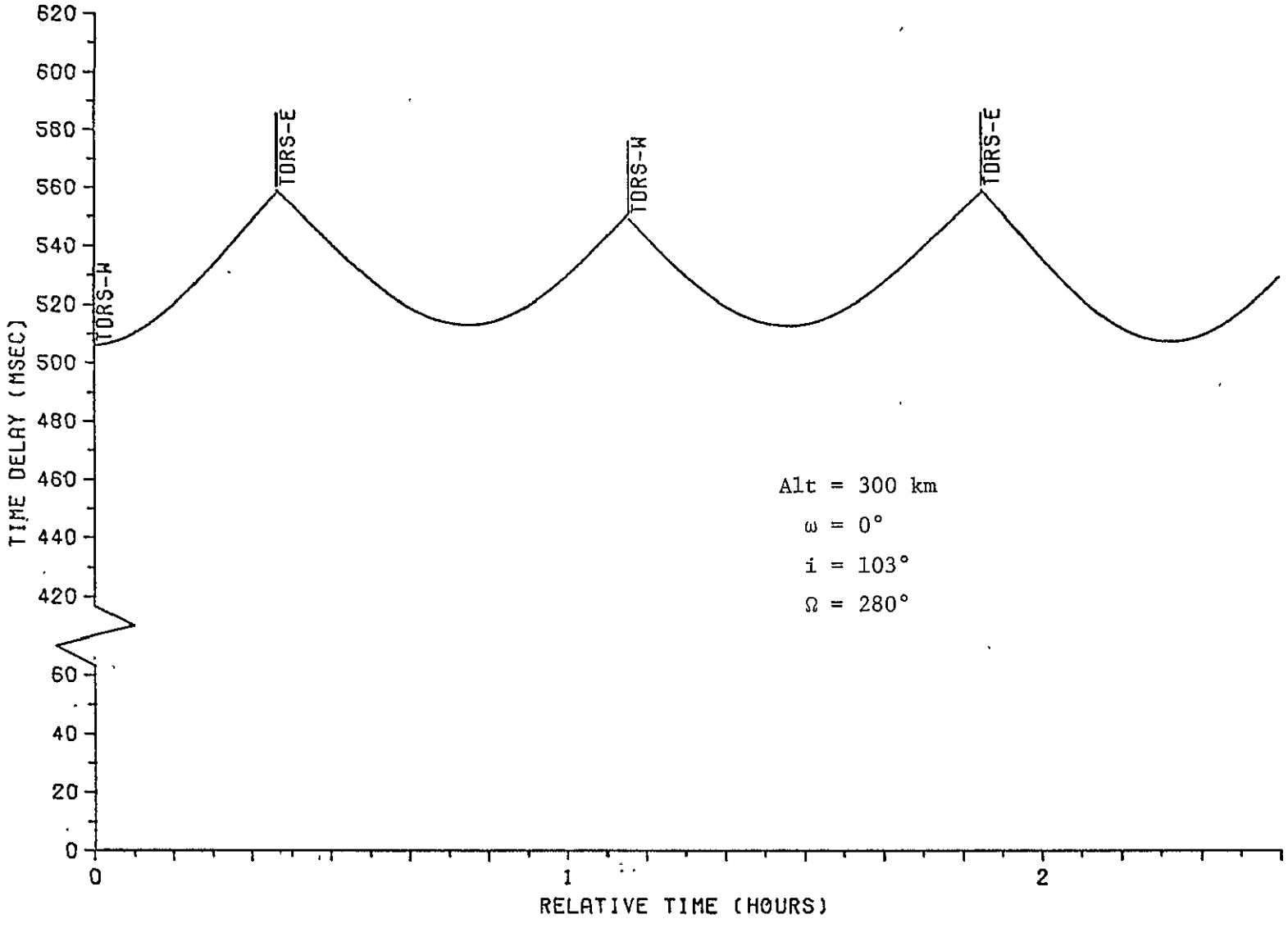

Figure 2-9. Time Delay Profile for Orbit 8.

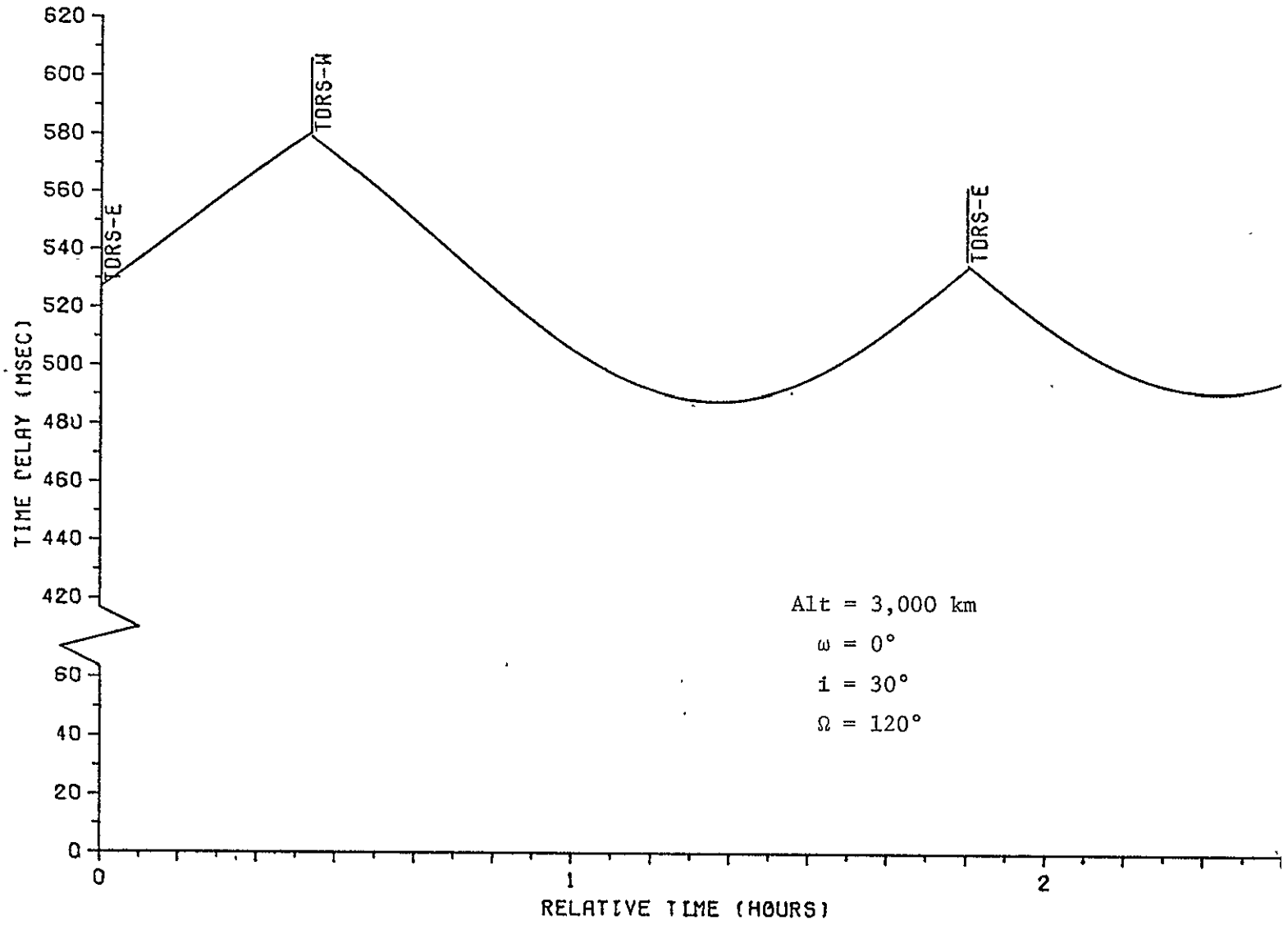

Figure 2-10. Time Delay Profile for Orbit 9.

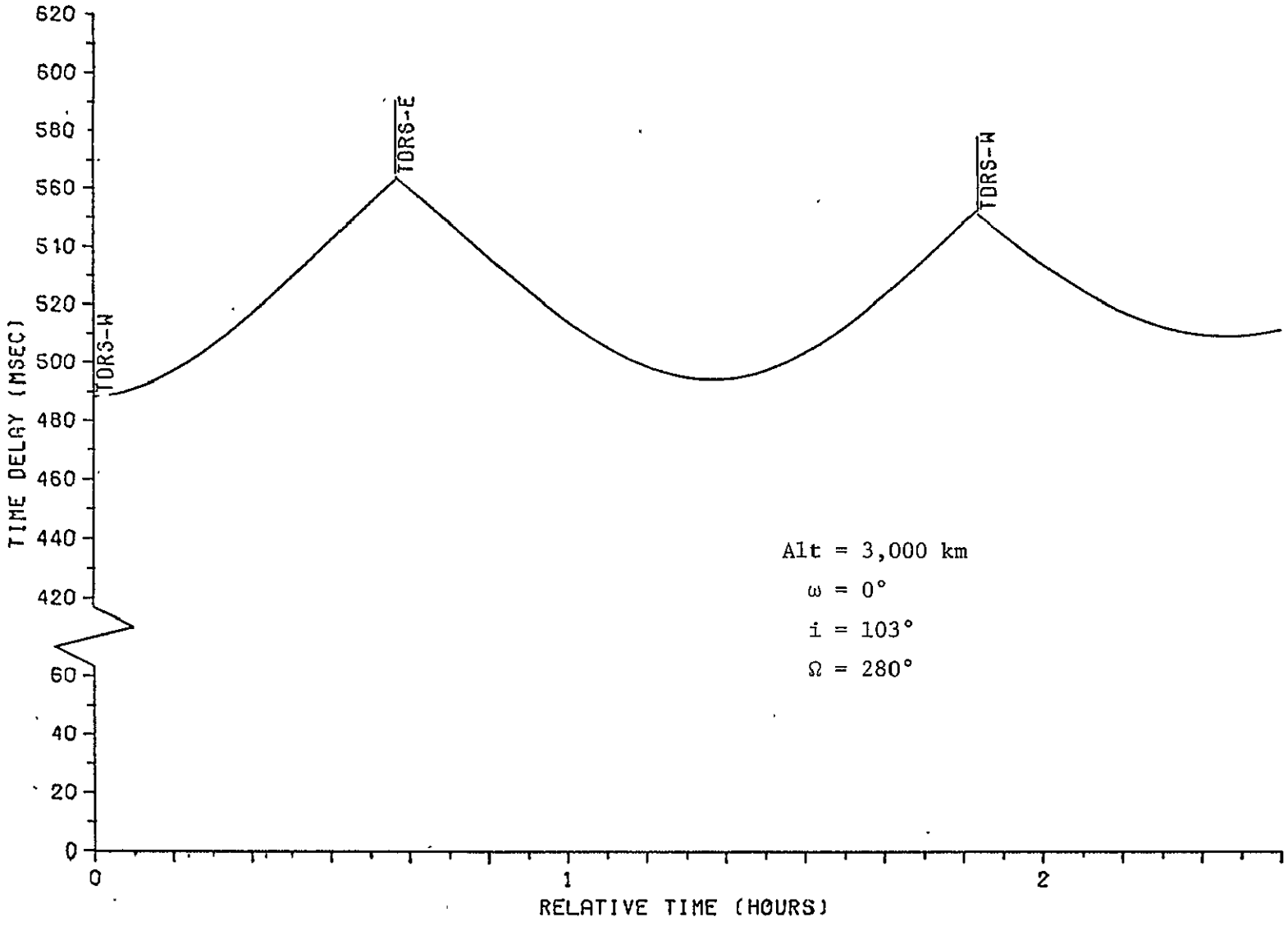

Figure 2-11. Time Delay Profile for Orbit 10.

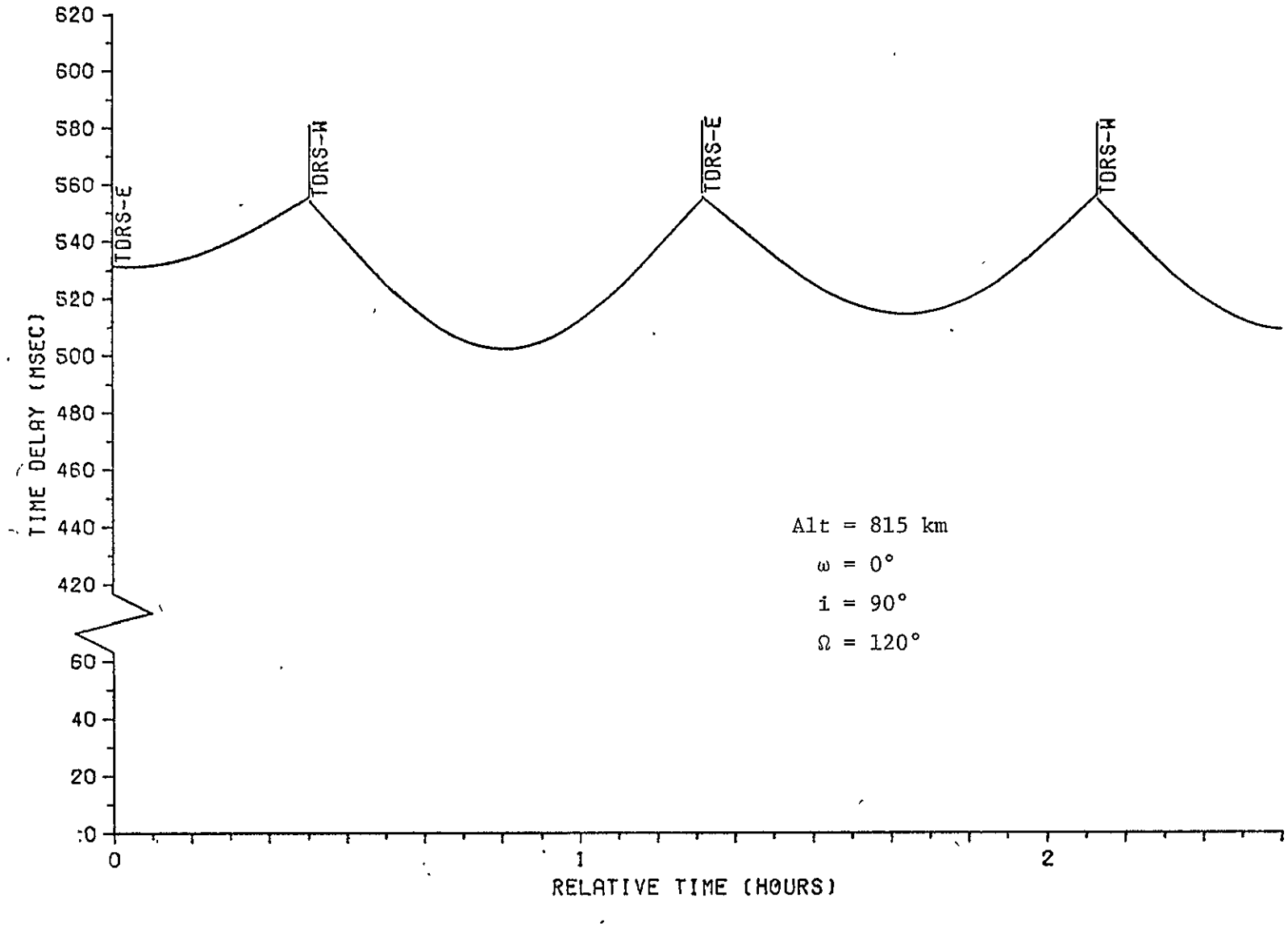

Figure 2-12. Time Delay Profile for Orbit 11.

3. DATA FORMAT

The data for the eleven orbits for which simulated time delays were calculated was formatted on punched cards for transfer to the SEL computer. Six numeric quantities are punched into each card, each item being in a fixed field. The first two items are (in order) the mission time in minutes and the time delay in milliseconds. These two columns provide the basic orbital data of interest. For the case where a communications link does not exist due to teleoperator being in the shadow region, a negative number (-1998) was inserted in the time delay column.

The four other items were added to provide both additional information and identification of the orbit. The third item is the instantaneous time rate-of-change of time delay and is in units of millisec/min. The fourth item is an integer code that identifies the tracking mode (1 = direct communication from ROS, 2 = relay through TDRS-East; 3 = teleoperator in shadow region, and 4 = relay through TDRS-West). The fifth data item is the orbital altitude at perigee in kilometers, and the last item is the orbital inclination angle in degrees. The data format is summarized in Table 3-1, and a listing of the data cards for all orbits generated is given in the Appendix.

TABLE 3-1

CARD FORMAT FOR ORBITAL DATA

Data Item	Card Cols.	Fortran Format	Description
1	2-6	F5.0	Mission Time (minutes)
2	7-15	F9.3	Time Delay (millisec)
3	16-24	F9.3	Rate of Change of Delay (millisec/min)
4	25-26	I2	Integer code for tracking mode: 1 = Direct from ROS 2 = Relay through TDRS-East 3 = Shadow Region 4 = Relay through TDRS-West
5	27-36	E10.4	Altitude (kilometers)
6	37-41	F5.1	Inclination of orbit (degrees)

4. SUPPORTING SOFTWARE

Three software routines were written in Fortran IV for the SEL computer to enable easy input/output of the orbital data and calculation of the time delays. These routines consist of a subroutine for reading in a data deck, a subroutine for listing the orbital data on a line printer, and a function for calculating the time delay in milliseconds. A common block labeled CDATA is used to make the orbital data available to all three routines. These subroutines can be incorporated in a program deck and calls used to activate them.

Subroutine RDTA reads in an orbital data deck and stores it in array DATA. The data deck must be ordered in time and start from t = 0. The deck must be prefaced with a single card giving the maximum time in minutes as an integer right justified in a four column field starting at column 11. Monitoring of the input is carried on by the subroutine to protect against certain errors in the input deck. The altitude of perigee and the inclination of the orbit is extracted from the first card; these are compared with the same items from all following cards and any disagreement will cause a program halt. Also, the time sequence of the cards is checked; any deviation from 1 minute increments will cause a program halt. A listing of RDTA is given in Figure 4-1.

Subroutine WRDTA will produce a printer listing of the orbital data showing the mission time, the time delay, the rate of change of time delay, and the mode of communication. A listing of WRDTA is given in Figure 4-2, and a sample of the output generated by WRDTA is shown in Figure 4-3.

Function DELAY(T) retrieves the stored orbital data and computes the delay at time T (minutes). The function uses the rate-of-change of delay to adjust the stored delay values for any fractional part of calling argument.

No special provision was made in DELAY for returning a flag to indicate loss of communications in the shadow region. The convention adopted of inserting a negative delay value during the data generation phase will cause DELAY to return a negative value when teleoperator is in the shadow region. Any host program should interrogate the output of DELAY, and recognize that communications do not exist when the returned value is negative.

A listing of DELAY is given in Figure 4-4.

```
      SUBROUTINE RDTA
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
C     RDTA READS IN ORBITAL DATA FROM A CARD DECK
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
      COMMON /CDATA/ MXTIM,ALTO,ANGO,DATA0(3),DATA(3,700),MSW(700)
      JIN = 4
      JOUT = 5
      READ(JIN,7015) MXTIM
      DO 40 IND = 0,MXTIM
      READ(JIN,7020) ((DATA(I,IND),I=1,3),MSW(IND),ALT,ANG)
      ITIM = DATA(1,IND)
      IF (IND .NE. ITIM) GO TO 980
      IF (IND .NE. 0) GO TO 20
      ALTO = ALT
      ANGO = ANG
   20 IF (((ALT-ALTO) .NE. 0) .OR. ((ANG-ANGO) .NE. 0)) GO TO 990
   40 CONTINUE
      GO TO 999
  980 WRITE(JOUT,7025) IND
      STOP
  990 WRITE(JOUT,7030) IND
      STOP
  999 RETURN
 7015 FORMAT(10X,I4)
 7020 FORMAT(1X,F5.0,2F9.3,I2,E10.4,F5.1)
 7025 FORMAT(- CARD OUT OF TIME SEQUENCE AT T = -,I4/)
 7030 FORMAT(- ALT OR ANG ERROR AT T = -,I4/)
      END
```

Figure 4-1. Listing of Subroutine RDTA.

```
      SUBROUTINE WRDTA
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
C     WRDTA GENERATES A PRINTER LISTING OF DATA READ IN BY RDTA
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
      DIMENSION NM1(4),NM2(4)
      COMMON /CDATA/ MXTIM,ALTO,ANGO,DATAO(3),DATA(3,700),MSW(700)
      DATA NM1(1),NM1(2),NM1(3),NM1(4)/3H  R,3HTDR,3HSHA,3HTDR/
      DATA NM2(1),NM2(2),NM2(3),NM2(4)/3HOS ,3HS-E,3HDOW,3HS-W/
      JOUT = 5
      LINE = 0
   10 IF (MOD(LINE,50) .NE. 0) GO TO 20
      WRITE(JOUT,7001) ALTO,ANGO
   20 J = MSW(LINE)
      WRITE(JOUT,7002) ((DATA(I,LINE),I=1,3),NM1(J),NM2(J))
      LINE = LINE + 1
      IF (LINE .LE. MXTIM) GO TO 10
      RETURN
 7001 FORMAT(1H1,-ALTITUDE -,F8.0,- KILOMETERS,     INCLINATION -,
     X  F6.1,//- TIME-,6X,-DELAY-,5X,-CHANGE-,5X,-MODE-/
     X  -  MIN-,8X,-MS-,6X,-MS/MIN-/)
 7002 FORMAT(1X,F5.0,2X,F9.3,4X,F7.3,3X,2A3)
      END
```

Figure 4-2. Listing of Subroutine WRDTA.

ALTITUDE 300. KILOMETERS, INCLINATION 30.0

TIME MIN	DELAY MS	CHANGE MS/MIN	MODE
0.	518.065	1.850	TDRS-W
1.	519.981	1.993	TDRS-W
2.	522.036	2.125	TDRS-W
3.	524.216	2.245	TDRS-W
4.	526.511	2.352	TDRS-W
5.	528.908	2.447	TDRS-W
6.	531.394	2.529	TDRS-W
7.	533.956	2.599	TDRS-W
8.	534.273	-2.264	TDRS-E
9.	532.042	-2.191	TDRS-E
10.	529.889	-2.106	TDRS-E
11.	527.826	-2.011	TDRS-E
12.	525.863	-1.905	TDRS-E
13.	9.538	-1.393	ROS
14.	8.483	-.605	ROS
15.	8.316	.359	ROS
16.	9.087	1.214	ROS
17.	517.906	-1.229	TDRS-E
18.	516.751	-1.068	TDRS-E
19.	515.758	-.902	TDRS-E
20.	514.936	-.729	TDRS-E
21.	514.287	-.552	TDRS-E
22.	513.818	-.371	TDRS-E
23.	513.530	-.188	TDRS-E
24.	513.427	-.004	TDRS-E
25.	513.507	.180	TDRS-E

Figure 4-3. Sample Output of WRDTA.

```
      FUNCTION DELAY(T)
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
C     FUNCTION DELAY COMPUTES AND RETURNS THE DELAY IN MILLISEC
C     USING STORED DELAY VALUES. CALLING ARGUMENT IS TIME IN MIN
C * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
      COMMON /CDATA/ MXTIM,ALT0,ANG0,DATA0(3),DATA(3,700),MSW(700)
      I = T
      TI = I
      TDEL = T - TI
      DELAY = DATA(2,I) + TDEL*DATA(3,I)
      RETURN
      END
```

Figure 4-4. Listing of Function DELAY.

5. CONCLUSIONS

Time delay data at one minute intervals have been generated for 11 specific orbits. The data on each orbit covers one orbital period. Ten of the orbits were circular and actually consist of five pairs. The two orbits in each pair have the same inclination angle and altitude, but one has a direct ground-to-teleoperator link during a portion of the orbit, while the other limits communications to relay through TDRSS satellites. The STDN, station at Rosman, N. C. (ROS), was used for computing delays on the direct ground-to-teleoperator links.

The other orbit was an eccentric orbit with a perigee of 185 km and an apogee of 37,000 km. The launch point was chosen to place apogee over the meridian of ROS, and communications was through a direct ROS-to-teleoperator link during most of the 10 hour, 54 minute orbital period.

The computed delay values were formatted into punched cards and delivered to MSFC for use in the teleoperator simulator. Listings of the card images are given in the appendix.

6. REFERENCES

1. J. R. Walsh and R. D. Wetherington, Time Delays in Communications Systems, Phase I Final Report, Contract NAS8-30919, Engineering Experiment Station, Georgia Tech, October 6, 1974.

2. R. D. Wetherington and J. R. Walsh, Typical Teleoperator Time Delay Profiles, Phase II Final Report, Contract NAS8-30919, Engineering Experiment Station, Georgia Tech, December 6, 1974.

7. APPENDIX

LISTING OF TIME DELAY DATA

The following pages list, in card image format, the delay data generated for all 11 orbits. The card format is summarized in Table 3-1.

ORBIT 1

0.	518.065	1.850	4	.3000+03	30.0
1.	519.981	1.993	4	.3000+03	30.0
2.	522.036	2.125	4	.3000+03	30.0
3.	524.216	2.245	4	.3000+03	30.0
4.	526.511	2.352	4	.3000+03	30.0
5.	528.908	2.447	4	.3000+03	30.0
6.	531.394	2.529	4	.3000+03	30.0
7.	533.956	2.599	4	.3000+03	30.0
8.	534.273	-2.264	2	.3000+03	30.0
9.	532.042	-2.191	2	.3000+03	30.0
10.	529.889	-2.106	2	.3000+03	30.0
11.	527.826	-2.011	2	.3000+03	30.0
12.	525.863	-1.905	2	.3000+03	30.0
13.	9.538	-1.393	1	.3000+03	30.0
14.	8.483	-.605	1	.3000+03	30.0
15.	8.316	.359	1	.3000+03	30.0
16.	9.087	1.214	1	.3000+03	30.0
17.	517.906	-1.229	2	.3000+03	30.0
18.	516.751	-1.068	2	.3000+03	30.0
19.	515.758	-.902	2	.3000+03	30.0
20.	514.936	-.729	2	.3000+03	30.0
21.	514.287	-.552	2	.3000+03	30.0
22.	513.818	-.371	2	.3000+03	30.0
23.	513.530	-.188	2	.3000+03	30.0
24.	513.427	-.004	2	.3000+03	30.0
25.	513.507	.180	2	.3000+03	30.0
26.	513.771	.364	2	.3000+03	30.0
27.	514.218	.545	2	.3000+03	30.0
28.	514.844	.722	2	.3000+03	30.0
29.	515.646	.895	2	.3000+03	30.0
30.	516.619	1.063	2	.3000+03	30.0
31.	517.757	1.224	2	.3000+03	30.0
32.	519.052	1.378	2	.3000+03	30.0
33.	520.498	1.524	2	.3000+03	30.0
34.	522.085	1.661	2	.3000+03	30.0
35.	523.806	1.789	2	.3000+03	30.0
36.	525.649	1.906	2	.3000+03	30.0
37.	527.606	2.014	2	.3000+03	30.0
38.	529.665	2.111	2	.3000+03	30.0
39.	531.816	2.197	2	.3000+03	30.0
40.	534.047	2.271	2	.3000+03	30.0
41.	536.349	2.335	2	.3000+03	30.0
42.	538.709	2.388	2	.3000+03	30.0
43.	541.117	2.429	2	.3000+03	30.0
44.	543.561	2.460	2	.3000+03	30.0
45.	546.031	2.480	2	.3000+03	30.0

46.	548.516	2.489	2	.3000+03	30.0
47.	551.006	2.488	2	.3000+03	30.0
48.	553.489	2.477	2	.3000+03	30.0
49.	555.957	2.456	2	.3000+03	30.0
50.	558.399	2.425	2	.3000+03	30.0
51.	560.807	2.385	2	.3000+03	30.0
52.	-1998.000	.000	3	.3000+03	30.0
53.	-1998.000	.000	3	.3000+03	30.0
54.	-1998.000	.000	3	.3000+03	30.0
55.	-1998.000	.000	3	.3000+03	30.0
56.	-1998.000	.000	3	.3000+03	30.0
57.	-1998.000	.000	3	.3000+03	30.0
58.	-1998.000	.000	3	.3000+03	30.0
59.	-1998.000	.000	3	.3000+03	30.0
60.	559.536	-2.719	4	.3000+03	30.0
61.	556.794	-2.768	4	.3000+03	30.0
62.	554.008	-2.806	4	.3000+03	30.0
63.	551.189	-2.833	4	.3000+03	30.0
64.	548.348	-2.848	4	.3000+03	30.0
65.	545.498	-2.851	4	.3000+03	30.0
66.	542.649	-2.842	4	.3000+03	30.0
67.	539.816	-2.821	4	.3000+03	30.0
68.	537.010	-2.786	4	.3000+03	30.0
69.	534.245	-2.738	4	.3000+03	30.0
70.	531.535	-2.676	4	.3000+03	30.0
71.	528.892	-2.601	4	.3000+03	30.0
72.	526.331	-2.512	4	.3000+03	30.0
73.	523.865	-2.409	4	.3000+03	30.0
74.	521.508	-2.293	4	.3000+03	30.0
75.	519.274	-2.163	4	.3000+03	30.0
76.	517.175	-2.020	4	.3000+03	30.0
77.	515.225	-1.865	4	.3000+03	30.0
78.	513.435	-1.698	4	.3000+03	30.0
79.	511.817	-1.520	4	.3000+03	30.0
80.	510.382	-1.332	4	.3000+03	30.0
81.	509.140	-1.135	4	.3000+03	30.0
82.	508.098	-.930	4	.3000+03	30.0
83.	507.265	-.718	4	.3000+03	30.0
84.	506.645	-.501	4	.3000+03	30.0
85.	506.245	-.281	4	.3000+03	30.0
86.	506.066	-.058	4	.3000+03	30.0
87.	506.111	.166	4	.3000+03	30.0
88.	506.378	.388	4	.3000+03	30.0
89.	506.868	.608	4	.3000+03	30.0
90.	507.575	.824	4	.3000+03	30.0
91.	508.495	1.034	4	.3000+03	30.0

ORBIT 2

0.	512.956	.506	2	.3000+03103.0
1.	513.563	.726	2	.3000+03103.0
2.	514.388	.940	2	.3000+03103.0
3.	515.424	1.146	2	.3000+03103.0
4.	516.661	1.343	2	.3000+03103.0
5.	518.090	1.528	2	.3000+03103.0
6.	519.699	1.702	2	.3000+03103.0
7.	7.122	-2.913	1	.3000+03103.0
8.	4.303	-2.630	1	.3000+03103.0
9.	2.256	-.723	1	.3000+03103.0
10.	3.242	2.340	1	.3000+03103.0
11.	5.895	2.859	1	.3000+03103.0
12.	8.814	2.964	1	.3000+03103.0
13.	534.885	2.526	2	.3000+03103.0
14.	537.439	2.584	2	.3000+03103.0
15.	540.044	2.627	2	.3000+03103.0
16.	542.686	2.655	2	.3000+03103.0
17.	545.349	2.669	2	.3000+03103.0
18.	545.549	-.632	4	.3000+03103.0
19.	544.946	-.568	4	.3000+03103.0
20.	544.409	-.499	4	.3000+03103.0
21.	543.942	-.428	4	.3000+03103.0
22.	543.549	-.353	4	.3000+03103.0
23.	543.230	-.277	4	.3000+03103.0
24.	542.989	-.199	4	.3000+03103.0
25.	542.827	-.120	4	.3000+03103.0
26.	542.743	-.040	4	.3000+03103.0
27.	542.739	.039	4	.3000+03103.0
28.	542.814	.117	4	.3000+03103.0
29.	542.967	.194	4	.3000+03103.0
30.	543.196	.270	4	.3000+03103.0
31.	543.499	.342	4	.3000+03103.0
32.	543.874	.412	4	.3000+03103.0
33.	544.316	.478	4	.3000+03103.0
34.	544.824	.541	4	.3000+03103.0
35.	545.392	.599	4	.3000+03103.0
36.	546.016	.652	4	.3000+03103.0
37.	546.691	.701	4	.3000+03103.0
38.	547.412	.744	4	.3000+03103.0
39.	548.173	.781	4	.3000+03103.0
40.	548.969	.813	4	.3000+03103.0
41.	549.794	.839	4	.3000+03103.0
42.	550.642	.858	4	.3000+03103.0
43.	551.507	.871	4	.3000+03103.0
44.	552.382	.879	4	.3000+03103.0
45.	553.262	.880	4	.3000+03103.0

ORBIT 2 (CONT)

46.	554.140	.875	4	.3000+03103.0
47.	555.010	.864	4	.3000+03103.0
48.	555.867	.847	4	.3000+03103.0
49.	556.703	.824	4	.3000+03103.0
50.	557.515	.796	4	.3000+03103.0
51.	558.296	.762	4	.3000+03103.0
52.	559.041	.723	4	.3000+03103.0
53.	559.744	.680	4	.3000+03103.0
54.	-1998.000	.000	3	.3000+03103.0
55.	-1998.000	.000	3	.3000+03103.0
56.	-1998.000	.000	3	.3000+03103.0
57.	-1998.000	.000	3	.3000+03103.0
58.	-1998.000	.000	3	.3000+03103.0
59.	-1998.000	.000	3	.3000+03103.0
60.	-1998.000	.000	3	.3000+03103.0
61.	-1998.000	.000	3	.3000+03103.0
62.	560.643	-2.230	2	.3000+03103.0
63.	558.400	-2.256	2	.3000+03103.0
64.	556.138	-2.269	2	.3000+03103.0
65.	553.866	-2.272	2	.3000+03103.0
66.	551.597	-2.263	2	.3000+03103.0
67.	549.344	-2.242	2	.3000+03103.0
68.	547.116	-2.208	2	.3000+03103.0
69.	544.927	-2.163	2	.3000+03103.0
70.	542.789	-2.106	2	.3000+03103.0
71.	540.713	-2.038	2	.3000+03103.0
72.	538.711	-1.957	2	.3000+03103.0
73.	536.795	-1.866	2	.3000+03103.0
74.	534.976	-1.763	2	.3000+03103.0
75.	533.263	-1.650	2	.3000+03103.0
76.	531.669	-1.527	2	.3000+03103.0
77.	530.201	-1.395	2	.3000+03103.0
78.	528.870	-1.255	2	.3000+03103.0
79.	527.682	-1.108	2	.3000+03103.0
80.	526.644	-.953	2	.3000+03103.0
81.	525.764	-.794	2	.3000+03103.0
82.	525.045	-.630	2	.3000+03103.0
83.	524.492	-.463	2	.3000+03103.0
84.	524.107	-.294	2	.3000+03103.0
85.	523.891	-.124	2	.3000+03103.0
86.	523.845	.046	2	.3000+03103.0
87.	523.968	.213	2	.3000+03103.0
88.	524.257	.378	2	.3000+03103.0
89.	524.709	.538	2	.3000+03103.0
90.	525.319	.694	2	.3000+03103.0
91.	526.082	.843	2	.3000+03103.0

ORBIT 3

0.	506.374	1.550	4	.3000+04	30.0
1.	507.956	1.619	4	.3000+04	30.0
2.	509.604	1.683	4	.3000+04	30.0
3.	511.316	1.745	4	.3000+04	30.0
4.	513.088	1.802	4	.3000+04	30.0
5.	514.915	1.857	4	.3000+04	30.0
6.	516.795	1.907	4	.3000+04	30.0
7.	41.448	-1.560	1	.3000+04	30.0
8.	39.894	-1.546	1	.3000+04	30.0
9.	38.356	-1.528	1	.3000+04	30.0
10.	36.838	-1.506	1	.3000+04	30.0
11.	35.344	-1.478	1	.3000+04	30.0
12.	33.881	-1.444	1	.3000+04	30.0
13.	32.455	-1.404	1	.3000+04	30.0
14.	31.073	-1.355	1	.3000+04	30.0
15.	29.744	-1.297	1	.3000+04	30.0
16.	28.477	-1.230	1	.3000+04	30.0
17.	27.282	-1.150	1	.3000+04	30.0
18.	26.173	-1.059	1	.3000+04	30.0
19.	25.161	-.954	1	.3000+04	30.0
20.	24.261	-.834	1	.3000+04	30.0
21.	23.486	-.701	1	.3000+04	30.0
22.	22.852	-.554	1	.3000+04	30.0
23.	22.370	-.395	1	.3000+04	30.0
24.	22.052	-.226	1	.3000+04	30.0
25.	21.905	-.052	1	.3000+04	30.0
26.	21.933	.123	1	.3000+04	30.0
27.	22.135	.295	1	.3000+04	30.0
28.	22.507	.460	1	.3000+04	30.0
29.	23.039	.615	1	.3000+04	30.0
30.	23.721	.757	1	.3000+04	30.0
31.	24.538	.885	1	.3000+04	30.0
32.	25.477	.999	1	.3000+04	30.0
33.	26.523	1.099	1	.3000+04	30.0
34.	27.663	1.186	1	.3000+04	30.0
35.	28.884	1.261	1	.3000+04	30.0
36.	30.175	1.325	1	.3000+04	30.0
37.	31.525	1.379	1	.3000+04	30.0
38.	32.926	1.425	1	.3000+04	30.0
39.	34.368	1.463	1	.3000+04	30.0
40.	35.846	1.494	1	.3000+04	30.0
41.	37.353	1.520	1	.3000+04	30.0
42.	38.883	1.541	1	.3000+04	30.0
43.	40.432	1.557	1	.3000+04	30.0
44.	41.995	1.570	1	.3000+04	30.0
45.	499.021	.240	2	.3000+04	30.0

ORBIT 3 (CONT)

46.	499.303	.329	2	.3000+04	30.0
47.	499.672	.417	2	.3000+04	30.0
48.	500.129	.504	2	.3000+04	30.0
49.	500.673	.590	2	.3000+04	30.0
50.	501.301	.674	2	.3000+04	30.0
51.	502.014	.757	2	.3000+04	30.0
52.	502.809	.839	2	.3000+04	30.0
53.	503.684	.918	2	.3000+04	30.0
54.	504.637	.995	2	.3000+04	30.0
55.	505.667	1.070	2	.3000+04	30.0
56.	506.770	1.143	2	.3000+04	30.0
57.	507.945	1.213	2	.3000+04	30.0
58.	509.189	1.280	2	.3000+04	30.0
59.	510.500	1.345	2	.3000+04	30.0
60.	511.873	1.407	2	.3000+04	30.0
61.	513.308	1.466	2	.3000+04	30.0
62.	514.800	1.523	2	.3000+04	30.0
63.	516.348	1.576	2	.3000+04	30.0
64.	517.947	1.626	2	.3000+04	30.0
65.	519.595	1.673	2	.3000+04	30.0
66.	521.289	1.718	2	.3000+04	30.0
67.	523.025	1.758	2	.3000+04	30.0
68.	524.801	1.796	2	.3000+04	30.0
69.	526.614	1.831	2	.3000+04	30.0
70.	528.460	1.863	2	.3000+04	30.0
71.	530.336	1.891	2	.3000+04	30.0
72.	532.239	1.917	2	.3000+04	30.0
73.	534.166	1.939	2	.3000+04	30.0
74.	536.114	1.958	2	.3000+04	30.0
75.	538.081	1.975	2	.3000+04	30.0
76.	540.062	1.988	2	.3000+04	30.0
77.	542.055	1.999	2	.3000+04	30.0
78.	544.058	2.007	2	.3000+04	30.0
79.	546.067	2.012	2	.3000+04	30.0
80.	548.080	2.014	2	.3000+04	30.0
81.	550.094	2.013	2	.3000+04	30.0
82.	552.106	2.010	2	.3000+04	30.0
83.	554.114	2.004	2	.3000+04	30.0
84.	556.115	1.996	2	.3000+04	30.0
85.	558.106	1.985	2	.3000+04	30.0
86.	560.086	1.972	2	.3000+04	30.0
87.	562.051	1.957	2	.3000+04	30.0
88.	563.999	1.939	2	.3000+04	30.0
89.	565.929	1.919	2	.3000+04	30.0
90.	567.837	1.896	2	.3000+04	30.0
91.	569.723	1.872	2	.3000+04	30.0

ORBIT 3 (CONT)

92.	571.583	1.845	2	.3000+04	30.0
93.	573.415	1.817	2	.3000+04	30.0
94.	575.218	1.787	2	.3000+04	30.0
95.	576.990	1.754	2	.3000+04	30.0
96.	578.729	1.720	2	.3000+04	30.0
97.	580.433	1.684	2	.3000+04	30.0
98.	577.920	-1.981	4	.3000+04	30.0
99.	575.920	-2.023	4	.3000+04	30.0
100.	573.879	-2.063	4	.3000+04	30.0
101.	571.798	-2.101	4	.3000+04	30.0
102.	569.680	-2.137	4	.3000+04	30.0
103.	567.528	-2.170	4	.3000+04	30.0
104.	565.343	-2.201	4	.3000+04	30.0
105.	563.129	-2.230	4	.3000+04	30.0
106.	560.887	-2.256	4	.3000+04	30.0
107.	558.620	-2.279	4	.3000+04	30.0
108.	556.332	-2.299	4	.3000+04	30.0
109.	554.024	-2.317	4	.3000+04	30.0
110.	551.701	-2.331	4	.3000+04	30.0
111.	549.364	-2.343	4	.3000+04	30.0
112.	547.017	-2.351	4	.3000+04	30.0
113.	544.663	-2.356	4	.3000+04	30.0
114.	542.306	-2.358	4	.3000+04	30.0
115.	539.948	-2.356	4	.3000+04	30.0
116.	537.593	-2.351	4	.3000+04	30.0
117.	535.246	-2.343	4	.3000+04	30.0
118.	532.909	-2.330	4	.3000+04	30.0
119.	530.586	-2.314	4	.3000+04	30.0
120.	528.281	-2.294	4	.3000+04	30.0
121.	525.998	-2.270	4	.3000+04	30.0
122.	523.741	-2.242	4	.3000+04	30.0
123.	521.513	-2.210	4	.3000+04	30.0
124.	519.320	-2.173	4	.3000+04	30.0
125.	517.165	-2.133	4	.3000+04	30.0
126.	515.052	-2.088	4	.3000+04	30.0
127.	512.986	-2.039	4	.3000+04	30.0
128.	510.971	-1.986	4	.3000+04	30.0
129.	509.010	-1.929	4	.3000+04	30.0
130.	507.109	-1.867	4	.3000+04	30.0
131.	505.272	-1.801	4	.3000+04	30.0
132.	503.503	-1.731	4	.3000+04	30.0
133.	501.805	-1.657	4	.3000+04	30.0
134.	500.184	-1.579	4	.3000+04	30.0
135.	498.643	-1.496	4	.3000+04	30.0
136.	497.186	-1.410	4	.3000+04	30.0
137.	495.816	-1.320	4	.3000+04	30.0

ORBIT 3 (CONT)

138.	494.539	-1.227 4	.3000+04	30.0
139.	493.356	-1.130 4	.3000+04	30.0
140.	492.271	-1.030 4	.3000+04	30.0
141.	491.288	-.927 4	.3000+04	30.0
142.	490.409	-.822 4	.3000+04	30.0
143.	489.636	-.714 4	.3000+04	30.0
144.	488.973	-.604 4	.3000+04	30.0
145.	488.420	-.492 4	.3000+04	30.0
146.	487.980	-.379 4	.3000+04	30.0
147.	487.654	-.264 4	.3000+04	30.0
148.	487.443	-.149 4	.3000+04	30.0
149.	487.347	-.033 4	.3000+04	30.0
150.	487.367	.083 4	.3000+04	30.0
151.	487.504	.199 4	.3000+04	30.0
152.	487.755	.314 4	.3000+04	30.0

ORBIT 4

0.	38.554	-1.792	1	.3000+04103.0
1.	36.771	-1.771	1	.3000+04103.0
2.	35.012	-1.743	1	.3000+04103.0
3.	33.284	-1.707	1	.3000+04103.0
4.	31.597	-1.662	1	.3000+04103.0
5.	29.960	-1.606	1	.3000+04103.0
6.	28.385	-1.536	1	.3000+04103.0
7.	26.886	-1.452	1	.3000+04103.0
8.	25.480	-1.349	1	.3000+04103.0
9.	24.185	-1.226	1	.3000+04103.0
10.	23.023	-1.081	1	.3000+04103.0
11.	22.018	-.912	1	.3000+04103.0
12.	21.193	-.719	1	.3000+04103.0
13.	20.571	-.504	1	.3000+04103.0
14.	20.173	-.271	1	.3000+04103.0
15.	20.012	-.029	1	.3000+04103.0
16.	20.094	.214	1	.3000+04103.0
17.	20.416	.448	1	.3000+04103.0
18.	20.967	.668	1	.3000+04103.0
19.	21.727	.865	1	.3000+04103.0
20.	22.674	1.040	1	.3000+04103.0
21.	23.785	1.190	1	.3000+04103.0
22.	25.034	1.317	1	.3000+04103.0
23.	26.401	1.423	1	.3000+04103.0
24.	27.866	1.511	1	.3000+04103.0
25.	29.411	1.583	1	.3000+04103.0
26.	31.021	1.641	1	.3000+04103.0
27.	32.685	1.688	1	.3000+04103.0
28.	34.391	1.725	1	.3000+04103.0
29.	36.130	1.754	1	.3000+04103.0
30.	37.895	1.776	1	.3000+04103.0
31.	39.679	1.792	1	.3000+04103.0
32.	41.476	1.803	1	.3000+04103.0
33.	543.573	-.304	4	.3000+04103.0
34.	543.290	-.258	4	.3000+04103.0
35.	543.054	-.210	4	.3000+04103.0
36.	542.866	-.162	4	.3000+04103.0
37.	542.726	-.114	4	.3000+04103.0
38.	542.635	-.065	4	.3000+04103.0
39.	542.592	-.016	4	.3000+04103.0
40.	542.599	.033	4	.3000+04103.0
41.	542.654	.082	4	.3000+04103.0
42.	542.758	.130	4	.3000+04103.0
43.	542.910	.178	4	.3000+04103.0
44.	543.110	.225	4	.3000+04103.0
45.	543.356	.272	4	.3000+04103.0

ORBIT 4 (CONT)

46.	543.649	.317	4	.3000+04103.0
47.	543.987	.362	4	.3000+04103.0
48.	544.369	.405	4	.3000+04103.0
49.	544.794	.447	4	.3000+04103.0
50.	545.260	.488	4	.3000+04103.0
51.	545.766	.527	4	.3000+04103.0
52.	546.310	.564	4	.3000+04103.0
53.	546.891	.600	4	.3000+04103.0
54.	547.506	.633	4	.3000+04103.0
55.	548.154	.665	4	.3000+04103.0
56.	548.833	.695	4	.3000+04103.0
57.	549.541	.723	4	.3000+04103.0
58.	550.275	.748	4	.3000+04103.0
59.	551.034	.771	4	.3000+04103.0
60.	551.815	.792	4	.3000+04103.0
61.	552.615	.810	4	.3000+04103.0
62.	553.433	.826	4	.3000+04103.0
63.	554.266	.840	4	.3000+04103.0
64.	555.111	.851	4	.3000+04103.0
65.	555.967	.860	4	.3000+04103.0
66.	556.830	.866	4	.3000+04103.0
67.	557.698	.870	4	.3000+04103.0
68.	558.569	.872	4	.3000+04103.0
69.	559.441	.871	4	.3000+04103.0
70.	560.310	.867	4	.3000+04103.0
71.	561.175	.861	4	.3000+04103.0
72.	562.032	.853	4	.3000+04103.0
73.	562.881	.843	4	.3000+04103.0
74.	563.718	.830	4	.3000+04103.0
75.	564.541	.815	4	.3000+04103.0
76.	565.348	.797	4	.3000+04103.0
77.	566.136	.778	4	.3000+04103.0
78.	566.904	.756	4	.3000+04103.0
79.	567.650	.732	4	.3000+04103.0
80.	568.370	.707	4	.3000+04103.0
81.	569.065	.679	4	.3000+04103.0
82.	569.730	.650	4	.3000+04103.0
83.	570.366	.618	4	.3000+04103.0
84.	570.969	.585	4	.3000+04103.0
85.	571.539	.551	4	.3000+04103.0
86.	572.073	.515	4	.3000+04103.0
87.	572.571	.477	4	.3000+04103.0
88.	573.030	.438	4	.3000+04103.0
89.	573.449	.397	4	.3000+04103.0
90.	573.827	.356	4	.3000+04103.0
91.	574.163	.313	4	.3000+04103.0

ORBIT 4 (CONT)

92.	574.456	.269	4	.3000+04103.0
93.	574.704	.224	4	.3000+04103.0
94.	574.907	.178	4	.3000+04103.0
95.	574.705	-1.525	2	.3000+04103.0
96.	573.168	-1.550	2	.3000+04103.0
97.	571.608	-1.571	2	.3000+04103.0
98.	570.028	-1.590	2	.3000+04103.0
99.	568.430	-1.605	2	.3000+04103.0
100.	566.819	-1.617	2	.3000+04103.0
101.	565.198	-1.626	2	.3000+04103.0
102.	563.568	-1.632	2	.3000+04103.0
103.	561.935	-1.635	2	.3000+04103.0
104.	560.300	-1.634	2	.3000+04103.0
105.	558.668	-1.629	2	.3000+04103.0
106.	557.042	-1.622	2	.3000+04103.0
107.	555.425	-1.611	2	.3000+04103.0
108.	553.821	-1.596	2	.3000+04103.0
109.	552.232	-1.578	2	.3000+04103.0
110.	550.663	-1.557	2	.3000+04103.0
111.	549.117	-1.533	2	.3000+04103.0
112.	547.597	-1.505	2	.3000+04103.0
113.	546.106	-1.473	2	.3000+04103.0
114.	544.649	-1.439	2	.3000+04103.0
115.	543.227	-1.401	2	.3000+04103.0
116.	541.845	-1.360	2	.3000+04103.0
117.	540.506	-1.315	2	.3000+04103.0
118.	539.212	-1.268	2	.3000+04103.0
119.	537.966	-1.218	2	.3000+04103.0
120.	536.772	-1.165	2	.3000+04103.0
121.	535.631	-1.110	2	.3000+04103.0
122.	534.548	-1.052	2	.3000+04103.0
123.	533.523	-.991	2	.3000+04103.0
124.	532.561	-.929	2	.3000+04103.0
125.	531.661	-.864	2	.3000+04103.0
126.	530.827	-.798	2	.3000+04103.0
127.	530.061	-.729	2	.3000+04103.0
128.	529.364	-.660	2	.3000+04103.0
129.	528.737	-.588	2	.3000+04103.0
130.	528.181	-.516	2	.3000+04103.0
131.	527.698	-.443	2	.3000+04103.0
132.	527.289	-.370	2	.3000+04103.0
133.	526.953	-.296	2	.3000+04103.0
134.	526.691	-.221	2	.3000+04103.0
135.	526.504	-.147	2	.3000+04103.0
136.	526.390	-.073	2	.3000+04103.0
137.	526.351	.000	2	.3000+04103.0

ORBIT 4 (CONT)

138.	526.384	.073	2	.3000+04103.0
139.	526.490	.144	2	.3000+04103.0
140.	526.667	.215	2	.3000+04103.0
141.	526.914	.284	2	.3000+04103.0
142.	527.229	.352	2	.3000+04103.0
143.	527.611	.418	2	.3000+04103.0
144.	528.059	.482	2	.3000+04103.0
145.	528.569	.544	2	.3000+04103.0
146.	529.141	.604	2	.3000+04103.0
147.	529.771	.661	2	.3000+04103.0
148.	530.457	.716	2	.3000+04103.0
149.	529.416	-.916	4	.3000+04103.0
150.	528.523	-.866	4	.3000+04103.0
151.	41.672	-1.163	1	.3000+04103.0
152.	40.536	-1.104	1	.3000+04103.0

ORBIT 5

0.	517.352	.166	2	.8150+03	90.0
1.	517.589	.322	2	.8150+03	90.0
2.	517.981	.475	2	.8150+03	90.0
3.	518.524	.623	2	.8150+03	90.0
4.	17.330	-2.610	1	.8150+03	90.0
5.	14.740	-2.562	1	.8150+03	90.0
6.	12.217	-2.466	1	.8150+03	90.0
7.	9.826	-2.277	1	.8150+03	90.0
8.	7.706	-1.882	1	.8150+03	90.0
9.	6.153	-1.065	1	.8150+03	90.0
10.	5.662	.241	1	.8150+03	90.0
11.	6.481	1.411	1	.8150+03	90.0
12.	8.224	2.052	1	.8150+03	90.0
13.	10.433	2.354	1	.8150+03	90.0
14.	12.864	2.502	1	.8150+03	90.0
15.	15.404	2.576	1	.8150+03	90.0
16.	17.999	2.613	1	.8150+03	90.0
17.	538.451	1.962	2	.8150+03	90.0
18.	540.428	1.993	2	.8150+03	90.0
19.	542.431	2.014	2	.8150+03	90.0
20.	544.451	2.027	2	.8150+03	90.0
21.	546.481	2.031	2	.8150+03	90.0
22.	548.510	2.027	2	.8150+03	90.0
23.	550.532	2.015	2	.8150+03	90.0
24.	552.538	1.995	2	.8150+03	90.0
25.	554.521	1.968	2	.8150+03	90.0
26.	554.225	.435	4	.8150+03	90.0
27.	554.670	.457	4	.8150+03	90.0
28.	555.137	.478	4	.8150+03	90.0
29.	555.623	.496	4	.8150+03	90.0
30.	556.126	.512	4	.8150+03	90.0
31.	556.644	.525	4	.8150+03	90.0
32.	557.174	.536	4	.8150+03	90.0
33.	557.714	.543	4	.8150+03	90.0
34.	558.260	.548	4	.8150+03	90.0
35.	558.809	.551	4	.8150+03	90.0
36.	559.360	.550	4	.8150+03	90.0
37.	559.908	.546	4	.8150+03	90.0
38.	560.450	.538	4	.8150+03	90.0
39.	560.984	.528	4	.8150+03	90.0
40.	561.506	.515	4	.8150+03	90.0
41.	562.013	.498	4	.8150+03	90.0
42.	562.502	.478	4	.8150+03	90.0
43.	562.970	.455	4	.8150+03	90.0
44.	563.414	.430	4	.8150+03	90.0
45.	563.831	.401	4	.8150+03	90.0

ORBIT 5 (CONT)

46.	564.218	.369	4	.8150+03	90.0
47.	564.571	.335	4	.8150+03	90.0
48.	564.890	.298	4	.8150+03	90.0
49.	565.170	.259	4	.8150+03	90.0
50.	565.410	.217	4	.8150+03	90.0
51.	565.606	.173	4	.8150+03	90.0
52.	565.758	.127	4	.8150+03	90.0
53.	565.862	.078	4	.8150+03	90.0
54.	565.918	.029	4	.8150+03	90.0
55.	565.923	-.023	4	.8150+03	90.0
56.	565.877	-.075	4	.8150+03	90.0
57.	565.777	-.129	4	.8150+03	90.0
58.	565.623	-.184	4	.8150+03	90.0
59.	565.413	-.239	4	.8150+03	90.0
60.	565.149	-.295	4	.8150+03	90.0
61.	564.828	-.351	4	.8150+03	90.0
62.	564.451	-.407	4	.8150+03	90.0
63.	564.018	-.463	4	.8150+03	90.0
64.	563.530	-.518	4	.8150+03	90.0
65.	562.986	-.573	4	.8150+03	90.0
66.	562.389	-.626	4	.8150+03	90.0
67.	561.738	-.679	4	.8150+03	90.0
68.	561.036	-.729	4	.8150+03	90.0
69.	560.284	-.778	4	.8150+03	90.0
70.	559.484	-.825	4	.8150+03	90.0
71.	558.638	-.870	4	.8150+03	90.0
72.	557.749	-.912	4	.8150+03	90.0
73.	556.819	-.951	4	.8150+03	90.0
74.	555.851	-.987	4	.8150+03	90.0
75.	554.849	-1.020	4	.8150+03	90.0
76.	554.954	-1.429	2	.8150+03	90.0
77.	553.534	-1.410	2	.8150+03	90.0
78.	552.135	-1.385	2	.8150+03	90.0
79.	550.763	-1.355	2	.8150+03	90.0
80.	549.424	-1.319	2	.8150+03	90.0
81.	548.124	-1.278	2	.8150+03	90.0
82.	546.867	-1.231	2	.8150+03	90.0
83.	545.659	-1.180	2	.8150+03	90.0
84.	544.505	-1.124	2	.8150+03	90.0
85.	543.408	-1.063	2	.8150+03	90.0
86.	542.374	-.999	2	.8150+03	90.0
87.	541.406	-.931	2	.8150+03	90.0
88.	540.508	-.859	2	.8150+03	90.0
89.	539.683	-.784	2	.8150+03	90.0
90.	538.934	-.707	2	.8150+03	90.0
91.	538.263	-.628	2	.8150+03	90.0

ORBIT 5 (CONT)

92.	537.673	-.546	2	.8150+03 90.0
93.	535.807	-.821	4	.8150+03 90.0
94.	535.013	-.760	4	.8150+03 90.0
95.	534.283	-.695	4	.8150+03 90.0
96.	533.620	-.624	4	.8150+03 90.0
97.	533.030	-.550	4	.8150+03 90.0
98.	532.516	-.471	4	.8150+03 90.0
99.	532.082	-.388	4	.8150+03 90.0
100.	531.733	-.302	4	.8150+03 90.0
101.	531.471	-.213	4	.8150+03 90.0
102.	531.299	-.122	4	.8150+03 90.0

ORBIT 6

0.	506.689	-.699	4	.1850+03	.0
1.	506.103	-.451	4	.1850+03	.0
2.	505.767	-.202	4	.1850+03	.0
3.	505.678	.043	4	.1850+03	.0
4.	505.831	.280	4	.1850+03	.0
5.	506.215	.505	4	.1850+03	.0
6.	506.817	.715	4	.1850+03	.0
7.	507.622	.908	4	.1850+03	.0
8.	508.612	1.084	4	.1850+03	.0
9.	509.770	1.242	4	.1850+03	.0
10.	511.077	1.381	4	.1850+03	.0
11.	512.516	1.504	4	.1850+03	.0
12.	514.069	1.610	4	.1850+03	.0
13.	515.722	1.701	4	.1850+03	.0
14.	517.460	1.778	4	.1850+03	.0
15.	519.269	1.843	4	.1850+03	.0
16.	521.138	1.897	4	.1850+03	.0
17.	523.055	1.941	4	.1850+03	.0
18.	525.013	1.976	4	.1850+03	.0
19.	44.047	.466	1	.1850+03	.0
20.	44.578	.606	1	.1850+03	.0
21.	45.244	.735	1	.1850+03	.0
22.	46.033	.852	1	.1850+03	.0
23.	46.934	.956	1	.1850+03	.0
24.	47.934	1.050	1	.1850+03	.0
25.	49.023	1.133	1	.1850+03	.0
26.	50.190	1.205	1	.1850+03	.0
27.	51.425	1.269	1	.1850+03	.0
28.	52.719	1.324	1	.1850+03	.0
29.	54.065	1.371	1	.1850+03	.0
30.	55.455	1.411	1	.1850+03	.0
31.	56.883	1.445	1	.1850+03	.0
32.	58.342	1.474	1	.1850+03	.0
33.	59.827	1.498	1	.1850+03	.0
34.	61.335	1.518	1	.1850+03	.0
35.	62.861	1.534	1	.1850+03	.0
36.	64.401	1.547	1	.1850+03	.0
37.	65.952	1.556	1	.1850+03	.0
38.	67.512	1.563	1	.1850+03	.0
39.	69.077	1.568	1	.1850+03	.0
40.	70.647	1.571	1	.1850+03	.0
41.	72.219	1.572	1	.1850+03	.0
42.	73.791	1.572	1	.1850+03	.0
43.	75.363	1.570	1	.1850+03	.0
44.	76.932	1.568	1	.1850+03	.0
45.	78.498	1.564	1	.1850+03	.0
46.	80.060	1.559	1	.1850+03	.0
47.	81.616	1.553	1	.1850+03	.0

ORBIT 6 (CONT)

48.	83.167	1.547	1	.1850+03	.0
49.	84.711	1.540	1	.1850+03	.0
50.	86.248	1.533	1	.1850+03	.0
51.	87.778	1.525	1	.1850+03	.0
52.	89.300	1.517	1	.1850+03	.0
53.	90.813	1.509	1	.1850+03	.0
54.	92.318	1.500	1	.1850+03	.0
55.	93.813	1.491	1	.1850+03	.0
56.	95.300	1.482	1	.1850+03	.0
57.	96.778	1.472	1	.1850+03	.0
58.	98.246	1.463	1	.1850+03	.0
59.	99.704	1.453	1	.1850+03	.0
60.	101.152	1.443	1	.1850+03	.0
61.	102.591	1.433	1	.1850+03	.0
62.	104.020	1.424	1	.1850+03	.0
63.	105.439	1.414	1	.1850+03	.0
64.	106.848	1.404	1	.1850+03	.0
65.	108.247	1.394	1	.1850+03	.0
66.	109.636	1.384	1	.1850+03	.0
67.	111.015	1.374	1	.1850+03	.0
68.	112.384	1.364	1	.1850+03	.0
69.	113.743	1.354	1	.1850+03	.0
70.	115.092	1.344	1	.1850+03	.0
71.	116.431	1.334	1	.1850+03	.0
72.	117.761	1.324	1	.1850+03	.0
73.	119.080	1.314	1	.1850+03	.0
74.	120.390	1.304	1	.1850+03	.0
75.	121.690	1.295	1	.1850+03	.0
76.	122.980	1.285	1	.1850+03	.0
77.	124.260	1.275	1	.1850+03	.0
78.	125.531	1.266	1	.1850+03	.0
79.	126.793	1.256	1	.1850+03	.0
80.	128.045	1.247	1	.1850+03	.0
81.	129.287	1.237	1	.1850+03	.0
82.	130.520	1.228	1	.1850+03	.0
83.	131.744	1.219	1	.1850+03	.0
84.	132.959	1.210	1	.1850+03	.0
85.	134.165	1.201	1	.1850+03	.0
86.	135.361	1.192	1	.1850+03	.0
87.	136.549	1.183	1	.1850+03	.0
88.	137.727	1.174	1	.1850+03	.0
89.	138.897	1.165	1	.1850+03	.0
90.	140.058	1.156	1	.1850+03	.0
91.	141.210	1.148	1	.1850+03	.0
92.	142.354	1.139	1	.1850+03	.0
93.	143.489	1.130	1	.1850+03	.0
94.	144.615	1.122	1	.1850+03	.0
95.	145.733	1.113	1	.1850+03	.0

ORBIT 6 (CONT)

96.	146.843	1.105	1	.1850+03	.0
97.	147.944	1.097	1	.1850+03	.0
98.	149.037	1.089	1	.1850+03	.0
99.	150.122	1.080	1	.1850+03	.0
100.	151.199	1.072	1	.1850+03	.0
101.	152.267	1.064	1	.1850+03	.0
102.	153.328	1.056	1	.1850+03	.0
103.	154.381	1.048	1	.1850+03	.0
104.	155.425	1.041	1	.1850+03	.0
105.	156.462	1.033	1	.1850+03	.0
106.	157.492	1.025	1	.1850+03	.0
107.	158.513	1.017	1	.1850+03	.0
108.	159.527	1.010	1	.1850+03	.0
109.	160.534	1.002	1	.1850+03	.0
110.	161.533	.995	1	.1850+03	.0
111.	162.524	.987	1	.1850+03	.0
112.	163.508	.980	1	.1850+03	.0
113.	164.485	.973	1	.1850+03	.0
114.	165.455	.966	1	.1850+03	.0
115.	166.417	.958	1	.1850+03	.0
116.	167.372	.951	1	.1850+03	.0
117.	168.320	.944	1	.1850+03	.0
118.	169.261	.937	1	.1850+03	.0
119.	170.195	.930	1	.1850+03	.0
120.	171.121	.923	1	.1850+03	.0
121.	172.041	.916	1	.1850+03	.0
122.	172.955	.909	1	.1850+03	.0
123.	173.861	.903	1	.1850+03	.0
124.	174.760	.896	1	.1850+03	.0
125.	175.653	.889	1	.1850+03	.0
126.	176.539	.883	1	.1850+03	.0
127.	177.419	.876	1	.1850+03	.0
128.	178.292	.869	1	.1850+03	.0
129.	179.158	.863	1	.1850+03	.0
130.	180.018	.856	1	.1850+03	.0
131.	180.872	.850	1	.1850+03	.0
132.	181.719	.844	1	.1850+03	.0
133.	182.560	.837	1	.1850+03	.0
134.	183.394	.831	1	.1850+03	.0
135.	184.222	.825	1	.1850+03	.0
136.	185.044	.819	1	.1850+03	.0
137.	185.860	.812	1	.1850+03	.0
138.	186.670	.806	1	.1850+03	.0
139.	187.473	.800	1	.1850+03	.0
140.	188.270	.794	1	.1850+03	.0
141.	189.062	.788	1	.1850+03	.0
142.	189.847	.782	1	.1850+03	.0
143.	190.627	.776	1	.1850+03	.0

144.	191.400	.770	1	.1850+03	.0
145.	192.168	.764	1	.1850+03	.0
146.	192.930	.759	1	.1850+03	.0
147.	193.686	.753	1	.1850+03	.0
148.	194.436	.747	1	.1850+03	.0
149.	195.180	.741	1	.1850+03	.0
150.	195.919	.736	1	.1850+03	.0
151.	196.652	.730	1	.1850+03	.0
152.	197.379	.724	1	.1850+03	.0
153.	198.101	.719	1	.1850+03	.0
154.	198.817	.713	1	.1850+03	.0
155.	199.528	.708	1	.1850+03	.0
156.	200.233	.702	1	.1850+03	.0
157.	200.933	.697	1	.1850+03	.0
158.	201.627	.691	1	.1850+03	.0
159.	202.316	.686	1	.1850+03	.0
160.	202.999	.681	1	.1850+03	.0
161.	203.677	.675	1	.1850+03	.0
162.	204.350	.670	1	.1850+03	.0
163.	205.018	.665	1	.1850+03	.0
164.	205.680	.659	1	.1850+03	.0
165.	206.336	.654	1	.1850+03	.0
166.	206.988	.649	1	.1850+03	.0
167.	207.635	.644	1	.1850+03	.0
168.	208.276	.638	1	.1850+03	.0
169.	208.912	.633	1	.1850+03	.0
170.	209.543	.628	1	.1850+03	.0
171.	210.169	.623	1	.1850+03	.0
172.	210.790	.618	1	.1850+03	.0
173.	211.406	.613	1	.1850+03	.0
174.	212.016	.608	1	.1850+03	.0
175.	212.622	.603	1	.1850+03	.0
176.	213.223	.598	1	.1850+03	.0
177.	213.819	.593	1	.1850+03	.0
178.	214.410	.588	1	.1850+03	.0
179.	214.996	.583	1	.1850+03	.0
180.	215.577	.579	1	.1850+03	.0
181.	216.153	.574	1	.1850+03	.0
182.	216.725	.569	1	.1850+03	.0
183.	217.291	.564	1	.1850+03	.0
184.	217.853	.559	1	.1850+03	.0
185.	218.410	.554	1	.1850+03	.0
186.	218.963	.550	1	.1850+03	.0
187.	219.510	.545	1	.1850+03	.0
188.	220.053	.540	1	.1850+03	.0
189.	220.591	.536	1	.1850+03	.0
190.	221.125	.531	1	.1850+03	.0
191.	221.654	.526	1	.1850+03	.0

ORBIT 6 (CONT)

192.	222.178	.522	1	.1850+03	.0
193.	222.698	.517	1	.1850+03	.0
194.	223.213	.513	1	.1850+03	.0
195.	223.723	.508	1	.1850+03	.0
196.	224.229	.504	1	.1850+03	.0
197.	224.731	.499	1	.1850+03	.0
198.	225.227	.494	1	.1850+03	.0
199.	225.720	.490	1	.1850+03	.0
200.	226.208	.486	1	.1850+03	.0
201.	226.691	.481	1	.1850+03	.0
202.	227.170	.477	1	.1850+03	.0
203.	227.645	.472	1	.1850+03	.0
204.	228.115	.468	1	.1850+03	.0
205.	228.581	.463	1	.1850+03	.0
206.	229.042	.459	1	.1850+03	.0
207.	229.499	.455	1	.1850+03	.0
208.	229.952	.450	1	.1850+03	.0
209.	230.400	.446	1	.1850+03	.0
210.	230.844	.442	1	.1850+03	.0
211.	231.283	.437	1	.1850+03	.0
212.	231.719	.433	1	.1850+03	.0
213.	232.150	.429	1	.1850+03	.0
214.	232.577	.425	1	.1850+03	.0
215.	232.999	.420	1	.1850+03	.0
216.	233.418	.416	1	.1850+03	.0
217.	233.832	.412	1	.1850+03	.0
218.	234.242	.408	1	.1850+03	.0
219.	234.648	.403	1	.1850+03	.0
220.	235.049	.399	1	.1850+03	.0
221.	235.446	.395	1	.1850+03	.0
222.	235.840	.391	1	.1850+03	.0
223.	236.229	.387	1	.1850+03	.0
224.	236.614	.383	1	.1850+03	.0
225.	236.995	.379	1	.1850+03	.0
226.	237.371	.375	1	.1850+03	.0
227.	237.744	.370	1	.1850+03	.0
228.	238.113	.366	1	.1850+03	.0
229.	238.477	.362	1	.1850+03	.0
230.	238.837	.358	1	.1850+03	.0
231.	239.194	.354	1	.1850+03	.0
232.	239.546	.350	1	.1850+03	.0
233.	239.895	.346	1	.1850+03	.0
234.	240.239	.342	1	.1850+03	.0
235.	240.579	.338	1	.1850+03	.0
236.	240.916	.334	1	.1850+03	.0
237.	241.248	.330	1	.1850+03	.0
238.	241.576	.326	1	.1850+03	.0
239.	241.901	.322	1	.1850+03	.0

ORBIT 6 (CONT)

240.	242.221	.318	1	.1850+03	.0
241.	242.538	.314	1	.1850+03	.0
242.	242.850	.310	1	.1850+03	.0
243.	243.159	.307	1	.1850+03	.0
244.	243.464	.303	1	.1850+03	.0
245.	243.765	.299	1	.1850+03	.0
246.	244.062	.295	1	.1850+03	.0
247.	244.355	.291	1	.1850+03	.0
248.	244.644	.287	1	.1850+03	.0
249.	244.929	.283	1	.1850+03	.0
250.	245.211	.279	1	.1850+03	.0
251.	245.489	.276	1	.1850+03	.0
252.	245.762	.272	1	.1850+03	.0
253.	246.032	.268	1	.1850+03	.0
254.	246.299	.264	1	.1850+03	.0
255.	246.561	.260	1	.1850+03	.0
256.	246.820	.256	1	.1850+03	.0
257.	247.074	.253	1	.1850+03	.0
258.	247.325	.249	1	.1850+03	.0
259.	247.572	.245	1	.1850+03	.0
260.	247.816	.241	1	.1850+03	.0
261.	248.055	.238	1	.1850+03	.0
262.	248.291	.234	1	.1850+03	.0
263.	248.523	.230	1	.1850+03	.0
264.	248.752	.226	1	.1850+03	.0
265.	248.976	.223	1	.1850+03	.0
266.	249.197	.219	1	.1850+03	.0
267.	249.414	.215	1	.1850+03	.0
268.	249.628	.211	1	.1850+03	.0
269.	249.838	.208	1	.1850+03	.0
270.	250.044	.204	1	.1850+03	.0
271.	250.246	.200	1	.1850+03	.0
272.	250.444	.197	1	.1850+03	.0
273.	250.639	.193	1	.1850+03	.0
274.	250.831	.189	1	.1850+03	.0
275.	251.018	.186	1	.1850+03	.0
276.	251.202	.182	1	.1850+03	.0
277.	251.382	.178	1	.1850+03	.0
278.	251.559	.175	1	.1850+03	.0
279.	251.732	.171	1	.1850+03	.0
280.	251.901	.167	1	.1850+03	.0
281.	252.066	.164	1	.1850+03	.0
282.	252.228	.160	1	.1850+03	.0
283.	252.386	.156	1	.1850+03	.0
284.	252.541	.153	1	.1850+03	.0
285.	252.692	.149	1	.1850+03	.0
286.	252.839	.145	1	.1850+03	.0
287.	252.983	.142	1	.1850+03	.0

288.	253.123	.138	1	.1850+03	.0
289.	253.260	.135	1	.1850+03	.0
290.	253.393	.131	1	.1850+03	.0
291.	253.522	.127	1	.1850+03	.0
292.	253.648	.124	1	.1850+03	.0
293.	253.770	.120	1	.1850+03	.0
294.	253.888	.116	1	.1850+03	.0
295.	254.003	.113	1	.1850+03	.0
296.	254.114	.109	1	.1850+03	.0
297.	254.222	.106	1	.1850+03	.0
298.	254.326	.102	1	.1850+03	.0
299.	254.427	.099	1	.1850+03	.0
300.	254.524	.095	1	.1850+03	.0
301.	254.617	.091	1	.1850+03	.0
302.	254.707	.088	1	.1850+03	.0
303.	254.793	.084	1	.1850+03	.0
304.	254.876	.081	1	.1850+03	.0
305.	254.955	.077	1	.1850+03	.0
306.	255.031	.074	1	.1850+03	.0
307.	255.103	.070	1	.1850+03	.0
308.	255.171	.067	1	.1850+03	.0
309.	255.236	.063	1	.1850+03	.0
310.	255.297	.059	1	.1850+03	.0
311.	255.355	.056	1	.1850+03	.0
312.	255.409	.052	1	.1850+03	.0
313.	255.460	.049	1	.1850+03	.0
314.	255.507	.045	1	.1850+03	.0
315.	255.551	.042	1	.1850+03	.0
316.	255.591	.038	1	.1850+03	.0
317.	255.627	.035	1	.1850+03	.0
318.	255.660	.031	1	.1850+03	.0
319.	255.690	.027	1	.1850+03	.0
320.	255.715	.024	1	.1850+03	.0
321.	255.738	.020	1	.1850+03	.0
322.	255.757	.017	1	.1850+03	.0
323.	255.772	.013	1	.1850+03	.0
324.	255.783	.010	1	.1850+03	.0
325.	255.792	.006	1	.1850+03	.0
326.	255.796	.003	1	.1850+03	.0
327.	255.797	-.001	1	.1850+03	.0
328.	255.795	-.004	1	.1850+03	.0
329.	255.789	-.008	1	.1850+03	.0
330.	255.779	-.011	1	.1850+03	.0
331.	255.766	-.015	1	.1850+03	.0
332.	255.750	-.019	1	.1850+03	.0
333.	255.729	-.022	1	.1850+03	.0
334.	255.706	-.026	1	.1850+03	.0
335.	255.679	-.029	1	.1850+03	.0

336.	255.648	-.033	1	.1850+03	.0
337.	255.613	-.036	1	.1850+03	.0
338.	255.576	-.040	1	.1850+03	.0
339.	255.534	-.043	1	.1850+03	.0
340.	255.489	-.047	1	.1850+03	.0
341.	255.441	-.050	1	.1850+03	.0
342.	255.389	-.054	1	.1850+03	.0
343.	255.333	-.058	1	.1850+03	.0
344.	255.274	-.061	1	.1850+03	.0
345.	255.211	-.065	1	.1850+03	.0
346.	255.145	-.068	1	.1850+03	.0
347.	255.075	-.072	1	.1850+03	.0
348.	255.002	-.075	1	.1850+03	.0
349.	254.925	-.079	1	.1850+03	.0
350.	254.845	-.082	1	.1850+03	.0
351.	254.761	-.086	1	.1850+03	.0
352.	254.673	-.090	1	.1850+03	.0
353.	254.582	-.093	1	.1850+03	.0
354.	254.487	-.097	1	.1850+03	.0
355.	254.389	-.100	1	.1850+03	.0
356.	254.287	-.104	1	.1850+03	.0
357.	254.181	-.107	1	.1850+03	.0
358.	254.072	-.111	1	.1850+03	.0
359.	253.960	-.115	1	.1850+03	.0
360.	253.844	-.118	1	.1850+03	.0
361.	253.724	-.122	1	.1850+03	.0
362.	253.600	-.125	1	.1850+03	.0
363.	253.473	-.129	1	.1850+03	.0
364.	253.343	-.132	1	.1850+03	.0
365.	253.209	-.136	1	.1850+03	.0
366.	253.071	-.140	1	.1850+03	.0
367.	252.930	-.143	1	.1850+03	.0
368.	252.785	-.147	1	.1850+03	.0
369.	252.636	-.151	1	.1850+03	.0
370.	252.484	-.154	1	.1850+03	.0
371.	252.328	-.158	1	.1850+03	.0
372.	252.168	-.162	1	.1850+03	.0
373.	252.005	-.165	1	.1850+03	.0
374.	251.838	-.169	1	.1850+03	.0
375.	251.668	-.172	1	.1850+03	.0
376.	251.494	-.176	1	.1850+03	.0
377.	251.316	-.180	1	.1850+03	.0
378.	251.135	-.183	1	.1850+03	.0
379.	250.950	-.187	1	.1850+03	.0
380.	250.761	-.191	1	.1850+03	.0
381.	250.568	-.194	1	.1850+03	.0
382.	250.372	-.198	1	.1850+03	.0
383.	250.173	-.202	1	.1850+03	.0

ORBIT 6 (CONT)

384.	249.969	-.205	1	.1850+03	.0
385.	249.762	-.209	1	.1850+03	.0
386.	249.551	-.213	1	.1850+03	.0
387.	249.337	-.217	1	.1850+03	.0
388.	249.118	-.220	1	.1850+03	.0
389.	248.896	-.224	1	.1850+03	.0
390.	248.671	-.228	1	.1850+03	.0
391.	248.441	-.231	1	.1850+03	.0
392.	248.208	-.235	1	.1850+03	.0
393.	247.971	-.239	1	.1850+03	.0
394.	247.730	-.243	1	.1850+03	.0
395.	247.486	-.246	1	.1850+03	.0
396.	247.238	-.250	1	.1850+03	.0
397.	246.986	-.254	1	.1850+03	.0
398.	246.730	-.258	1	.1850+03	.0
399.	246.470	-.262	1	.1850+03	.0
400.	246.207	-.265	1	.1850+03	.0
401.	245.940	-.269	1	.1850+03	.0
402.	245.669	-.273	1	.1850+03	.0
403.	245.394	-.277	1	.1850+03	.0
404.	245.115	-.281	1	.1850+03	.0
405.	244.833	-.285	1	.1850+03	.0
406.	244.547	-.288	1	.1850+03	.0
407.	244.256	-.292	1	.1850+03	.0
408.	243.962	-.296	1	.1850+03	.0
409.	243.664	-.300	1	.1850+03	.0
410.	243.363	-.304	1	.1850+03	.0
411.	243.057	-.308	1	.1850+03	.0
412.	242.747	-.312	1	.1850+03	.0
413.	242.434	-.316	1	.1850+03	.0
414.	242.117	-.319	1	.1850+03	.0
415.	241.795	-.324	1	.1850+03	.0
416.	241.470	-.327	1	.1850+03	.0
417.	241.141	-.331	1	.1850+03	.0
418.	240.808	-.335	1	.1850+03	.0
419.	240.470	-.339	1	.1850+03	.0
420.	240.129	-.343	1	.1850+03	.0
421.	239.784	-.347	1	.1850+03	.0
422.	239.435	-.351	1	.1850+03	.0
423.	239.082	-.355	1	.1850+03	.0
424.	238.725	-.359	1	.1850+03	.0
425.	238.364	-.363	1	.1850+03	.0
426.	237.999	-.367	1	.1850+03	.0
427.	237.629	-.371	1	.1850+03	.0
428.	237.256	-.376	1	.1850+03	.0
429.	236.879	-.380	1	.1850+03	.0
430.	236.497	-.384	1	.1850+03	.0
431.	236.112	-.388	1	.1850+03	.0

ORBIT 6 (CONT)

432.	235.722	-.392	1	.1850+03	.0
433.	235.328	-.396	1	.1850+03	.0
434.	234.930	-.400	1	.1850+03	.0
435.	234.528	-.404	1	.1850+03	.0
436.	234.122	-.408	1	.1850+03	.0
437.	233.712	-.413	1	.1850+03	.0
438.	233.297	-.417	1	.1850+03	.0
439.	232.878	-.421	1	.1850+03	.0
440.	232.455	-.425	1	.1850+03	.0
441.	232.028	-.430	1	.1850+03	.0
442.	231.596	-.434	1	.1850+03	.0
443.	231.161	-.438	1	.1850+03	.0
444.	230.721	-.442	1	.1850+03	.0
445.	230.276	-.447	1	.1850+03	.0
446.	229.828	-.451	1	.1850+03	.0
447.	229.375	-.455	1	.1850+03	.0
448.	228.917	-.460	1	.1850+03	.0
449.	228.456	-.464	1	.1850+03	.0
450.	227.990	-.468	1	.1850+03	.0
451.	227.519	-.473	1	.1850+03	.0
452.	227.045	-.477	1	.1850+03	.0
453.	226.565	-.482	1	.1850+03	.0
454.	226.082	-.486	1	.1850+03	.0
455.	225.594	-.490	1	.1850+03	.0
456.	225.101	-.495	1	.1850+03	.0
457.	224.604	-.499	1	.1850+03	.0
458.	224.103	-.504	1	.1850+03	.0
459.	223.597	-.508	1	.1850+03	.0
460.	223.086	-.513	1	.1850+03	.0
461.	222.571	-.518	1	.1850+03	.0
462.	222.052	-.522	1	.1850+03	.0
463.	221.527	-.527	1	.1850+03	.0
464.	220.999	-.531	1	.1850+03	.0
465.	220.465	-.536	1	.1850+03	.0
466.	219.927	-.541	1	.1850+03	.0
467.	219.384	-.545	1	.1850+03	.0
468.	218.837	-.550	1	.1850+03	.0
469.	218.285	-.555	1	.1850+03	.0
470.	217.728	-.559	1	.1850+03	.0
471.	217.166	-.564	1	.1850+03	.0
472.	216.600	-.569	1	.1850+03	.0
473.	216.029	-.574	1	.1850+03	.0
474.	215.453	-.579	1	.1850+03	.0
475.	214.872	-.583	1	.1850+03	.0
476.	214.286	-.588	1	.1850+03	.0
477.	213.696	-.593	1	.1850+03	.0
478.	213.100	-.598	1	.1850+03	.0
479.	212.500	-.603	1	.1850+03	.0

ORBIT 6 (CONT)

480.	211.895	-.608	1	.1850+03	.0
481.	211.284	-.613	1	.1850+03	.0
482.	210.669	-.618	1	.1850+03	.0
483.	210.049	-.623	1	.1850+03	.0
484.	209.424	-.628	1	.1850+03	.0
485.	208.793	-.633	1	.1850+03	.0
486.	208.158	-.638	1	.1850+03	.0
487.	207.517	-.643	1	.1850+03	.0
488.	206.872	-.648	1	.1850+03	.0
489.	206.221	-.654	1	.1850+03	.0
490.	205.565	-.659	1	.1850+03	.0
491.	204.904	-.664	1	.1850+03	.0
492.	204.237	-.669	1	.1850+03	.0
493.	203.565	-.675	1	.1850+03	.0
494.	202.888	-.680	1	.1850+03	.0
495.	202.206	-.685	1	.1850+03	.0
496.	201.518	-.691	1	.1850+03	.0
497.	200.825	-.696	1	.1850+03	.0
498.	200.127	-.702	1	.1850+03	.0
499.	199.423	-.707	1	.1850+03	.0
500.	198.713	-.712	1	.1850+03	.0
501.	197.998	-.718	1	.1850+03	.0
502.	197.278	-.724	1	.1850+03	.0
503.	196.552	-.729	1	.1850+03	.0
504.	195.820	-.735	1	.1850+03	.0
505.	195.083	-.740	1	.1850+03	.0
506.	194.340	-.746	1	.1850+03	.0
507.	193.591	-.752	1	.1850+03	.0
508.	192.837	-.758	1	.1850+03	.0
509.	192.076	-.763	1	.1850+03	.0
510.	191.310	-.769	1	.1850+03	.0
511.	190.539	-.775	1	.1850+03	.0
512.	189.761	-.781	1	.1850+03	.0
513.	188.977	-.787	1	.1850+03	.0
514.	188.188	-.793	1	.1850+03	.0
515.	187.392	-.799	1	.1850+03	.0
516.	186.591	-.805	1	.1850+03	.0
517.	185.783	-.811	1	.1850+03	.0
518.	184.970	-.817	1	.1850+03	.0
519.	184.150	-.823	1	.1850+03	.0
520.	183.324	-.829	1	.1850+03	.0
521.	182.492	-.836	1	.1850+03	.0
522.	181.653	-.842	1	.1850+03	.0
523.	180.808	-.848	1	.1850+03	.0
524.	179.957	-.855	1	.1850+03	.0
525.	179.100	-.861	1	.1850+03	.0
526.	178.236	-.867	1	.1850+03	.0
527.	177.365	-.874	1	.1850+03	.0

ORBIT 6 (CONT)

528.	176.489	-.880	1	.1850+03	.0
529.	175.605	-.887	1	.1850+03	.0
530.	174.715	-.894	1	.1850+03	.0
531.	173.818	-.900	1	.1850+03	.0
532.	172.915	-.907	1	.1850+03	.0
533.	172.005	-.914	1	.1850+03	.0
534.	171.088	-.921	1	.1850+03	.0
535.	170.164	-.927	1	.1850+03	.0
536.	169.234	-.934	1	.1850+03	.0
537.	168.296	-.941	1	.1850+03	.0
538.	167.351	-.948	1	.1850+03	.0
539.	166.400	-.955	1	.1850+03	.0
540.	165.441	-.963	1	.1850+03	.0
541.	164.475	-.970	1	.1850+03	.0
542.	163.502	-.977	1	.1850+03	.0
543.	162.522	-.984	1	.1850+03	.0
544.	161.534	-.992	1	.1850+03	.0
545.	160.539	-.999	1	.1850+03	.0
546.	159.537	-1.006	1	.1850+03	.0
547.	158.527	-1.014	1	.1850+03	.0
548.	157.510	-1.021	1	.1850+03	.0
549.	156.485	-1.029	1	.1850+03	.0
550.	155.452	-1.037	1	.1850+03	.0
551.	154.412	-1.045	1	.1850+03	.0
552.	153.364	-1.052	1	.1850+03	.0
553.	152.308	-1.060	1	.1850+03	.0
554.	151.244	-1.068	1	.1850+03	.0
555.	150.173	-1.076	1	.1850+03	.0
556.	149.093	-1.084	1	.1850+03	.0
557.	148.005	-1.092	1	.1850+03	.0
558.	146.909	-1.100	1	.1850+03	.0
559.	145.805	-1.109	1	.1850+03	.0
560.	144.693	-1.117	1	.1850+03	.0
561.	143.572	-1.125	1	.1850+03	.0
562.	142.443	-1.134	1	.1850+03	.0
563.	141.305	-1.142	1	.1850+03	.0
564.	140.159	-1.151	1	.1850+03	.0
565.	139.005	-1.159	1	.1850+03	.0
566.	137.841	-1.168	1	.1850+03	.0
567.	136.669	-1.177	1	.1850+03	.0
568.	135.488	-1.186	1	.1850+03	.0
569.	134.299	-1.194	1	.1850+03	.0
570.	133.100	-1.203	1	.1850+03	.0
571.	131.893	-1.212	1	.1850+03	.0
572.	130.676	-1.221	1	.1850+03	.0
573.	129.451	-1.231	1	.1850+03	.0
574.	128.216	-1.240	1	.1850+03	.0
575.	126.972	-1.249	1	.1850+03	.0

ORBIT 6 (CONT)

576.	125.719	-1.258	1	.1850+03	.0
577.	124.456	-1.268	1	.1850+03	.0
578.	123.184	-1.277	1	.1850+03	.0
579.	121.903	-1.287	1	.1850+03	.0
580.	120.612	-1.296	1	.1850+03	.0
581.	119.312	-1.306	1	.1850+03	.0
582.	118.002	-1.315	1	.1850+03	.0
583.	116.682	-1.325	1	.1850+03	.0
584.	115.353	-1.334	1	.1850+03	.0
585.	114.014	-1.344	1	.1850+03	.0
586.	112.665	-1.354	1	.1850+03	.0
587.	111.307	-1.364	1	.1850+03	.0
588.	109.939	-1.373	1	.1850+03	.0
589.	108.561	-1.383	1	.1850+03	.0
590.	107.174	-1.393	1	.1850+03	.0
591.	105.777	-1.402	1	.1850+03	.0
592.	104.370	-1.412	1	.1850+03	.0
593.	102.954	-1.422	1	.1850+03	.0
594.	101.528	-1.431	1	.1850+03	.0
595.	100.093	-1.440	1	.1850+03	.0
596.	98.648	-1.450	1	.1850+03	.0
597.	97.194	-1.459	1	.1850+03	.0
598.	95.731	-1.468	1	.1850+03	.0
599.	94.259	-1.477	1	.1850+03	.0
600.	92.778	-1.485	1	.1850+03	.0
601.	91.289	-1.494	1	.1850+03	.0
602.	89.792	-1.502	1	.1850+03	.0
603.	88.287	-1.509	1	.1850+03	.0
604.	86.774	-1.517	1	.1850+03	.0
605.	85.254	-1.523	1	.1850+03	.0
606.	83.728	-1.530	1	.1850+03	.0
607.	82.196	-1.535	1	.1850+03	.0
608.	80.658	-1.540	1	.1850+03	.0
609.	79.116	-1.545	1	.1850+03	.0
610.	77.569	-1.548	1	.1850+03	.0
611.	76.020	-1.550	1	.1850+03	.0
612.	74.470	-1.551	1	.1850+03	.0
613.	72.919	-1.551	1	.1850+03	.0
614.	71.368	-1.549	1	.1850+03	.0
615.	69.821	-1.546	1	.1850+03	.0
616.	68.277	-1.540	1	.1850+03	.0
617.	66.740	-1.533	1	.1850+03	.0
618.	65.212	-1.522	1	.1850+03	.0
619.	63.696	-1.509	1	.1850+03	.0
620.	62.193	-1.493	1	.1850+03	.0
621.	60.709	-1.473	1	.1850+03	.0
622.	59.246	-1.449	1	.1850+03	.0
623.	57.810	-1.420	1	.1850+03	.0

ORBIT 6 (CONT)

624.	56.405	-1.387	1	.1850+03	.0
625.	55.036	-1.347	1	.1850+03	.0
626.	53.710	-1.300	1	.1850+03	.0
627.	52.433	-1.247	1	.1850+03	.0
628.	51.214	-1.185	1	.1850+03	.0
629.	50.061	-1.115	1	.1850+03	.0
630.	48.982	-1.035	1	.1850+03	.0
631.	47.987	-.945	1	.1850+03	.0
632.	47.088	-.844	1	.1850+03	.0
633.	46.294	-.732	1	.1850+03	.0
634.	45.618	-.609	1	.1850+03	.0
635.	45.070	-.475	1	.1850+03	.0
636.	489.234	.850	2	.1850+03	.0
637.	490.136	.965	2	.1850+03	.0
638.	491.157	1.087	2	.1850+03	.0
639.	492.302	1.217	2	.1850+03	.0
640.	493.581	1.354	2	.1850+03	.0
641.	495.001	1.499	2	.1850+03	.0
642.	496.569	1.650	2	.1850+03	.0
643.	498.291	1.809	2	.1850+03	.0
644.	500.175	1.973	2	.1850+03	.0
645.	502.225	2.142	2	.1850+03	.0
646.	504.445	2.314	2	.1850+03	.0
647.	506.838	2.487	2	.1850+03	.0
648.	509.405	2.660	2	.1850+03	.0
649.	512.143	2.829	2	.1850+03	.0
650.	515.046	2.991	2	.1850+03	.0
651.	518.109	3.144	2	.1850+03	.0
652.	521.318	3.285	2	.1850+03	.0
653.	524.662	3.410	2	.1850+03	.0
654.	528.122	3.517	2	.1850+03	.0
655.	531.681	3.605	2	.1850+03	.0
656.	535.318	3.672	2	.1850+03	.0
657.	539.013	3.719	2	.1850+03	.0
658.	542.746	3.745	2	.1850+03	.0
659.	546.495	3.752	2	.1850+03	.0
660.	550.245	3.743	2	.1850+03	.0

ORBIT 7

0.	532.486	2.333	2	.3000+03	30.0
1.	534.853	2.405	2	.3000+03	30.0
2.	537.286	2.465	2	.3000+03	30.0
3.	539.775	2.514	2	.3000+03	30.0
4.	542.306	2.551	2	.3000+03	30.0
5.	544.870	2.576	2	.3000+03	30.0
6.	547.454	2.591	2	.3000+03	30.0
7.	550.047	2.594	2	.3000+03	30.0
8.	552.639	2.587	2	.3000+03	30.0
9.	555.218	2.569	2	.3000+03	30.0
10.	557.774	2.540	2	.3000+03	30.0
11.	560.298	2.503	2	.3000+03	30.0
12.	-1998.000	.000	3	.3000+03	30.0
13.	-1998.000	.000	3	.3000+03	30.0
14.	-1998.000	.000	3	.3000+03	30.0
15.	-1998.000	.000	3	.3000+03	30.0
16.	-1998.000	.000	3	.3000+03	30.0
17.	-1998.000	.000	3	.3000+03	30.0
18.	-1998.000	.000	3	.3000+03	30.0
19.	-1998.000	.000	3	.3000+03	30.0
20.	557.256	-2.834	4	.3000+03	30.0
21.	554.402	-2.873	4	.3000+03	30.0
22.	551.515	-2.901	4	.3000+03	30.0
23.	548.606	-2.917	4	.3000+03	30.0
24.	545.686	-2.921	4	.3000+03	30.0
25.	542.769	-2.911	4	.3000+03	30.0
26.	539.867	-2.889	4	.3000+03	30.0
27.	536.992	-2.854	4	.3000+03	30.0
28.	534.160	-2.804	4	.3000+03	30.0
29.	531.384	-2.741	4	.3000+03	30.0
30.	528.677	-2.664	4	.3000+03	30.0
31.	526.054	-2.572	4	.3000+03	30.0
32.	523.529	-2.467	4	.3000+03	30.0
33.	521.115	-2.348	4	.3000+03	30.0
34.	518.828	-2.215	4	.3000+03	30.0
35.	516.679	-2.068	4	.3000+03	30.0
36.	514.683	-1.909	4	.3000+03	30.0
37.	512.851	-1.738	4	.3000+03	30.0
38.	511.196	-1.555	4	.3000+03	30.0
39.	509.729	-1.362	4	.3000+03	30.0
40.	508.458	-1.160	4	.3000+03	30.0
41.	507.394	-.950	4	.3000+03	30.0
42.	506.542	-.733	4	.3000+03	30.0
43.	505.910	-.511	4	.3000+03	30.0
44.	505.502	-.286	4	.3000+03	30.0
45.	505.320	-.058	4	.3000+03	30.0

ORBIT 7 (CONT)

46.	505.367	.170	4	.3000+03	30.0
47.	505.641	.397	4	.3000+03	30.0
48.	506.140	.621	4	.3000+03	30.0
49.	506.862	.840	4	.3000+03	30.0
50.	507.801	1.054	4	.3000+03	30.0
51.	508.950	1.260	4	.3000+03	30.0
52.	510.302	1.458	4	.3000+03	30.0
53.	511.847	1.646	4	.3000+03	30.0
54.	513.575	1.823	4	.3000+03	30.0
55.	515.475	1.988	4	.3000+03	30.0
56.	517.535	2.141	4	.3000+03	30.0
57.	519.741	2.281	4	.3000+03	30.0
58.	522.081	2.408	4	.3000+03	30.0
59.	524.542	2.520	4	.3000+03	30.0
60.	527.108	2.619	4	.3000+03	30.0
61.	529.767	2.703	4	.3000+03	30.0
62.	532.503	2.773	4	.3000+03	30.0
63.	535.304	2.830	4	.3000+03	30.0
64.	536.204	-2.592	2	.3000+03	30.0
65.	533.638	-2.533	2	.3000+03	30.0
66.	531.137	-2.462	2	.3000+03	30.0
67.	528.713	-2.378	2	.3000+03	30.0
68.	526.378	-2.281	2	.3000+03	30.0
69.	524.146	-2.172	2	.3000+03	30.0
70.	522.029	-2.050	2	.3000+03	30.0
71.	520.040	-1.916	2	.3000+03	30.0
72.	518.189	-1.771	2	.3000+03	30.0
73.	516.489	-1.614	2	.3000+03	30.0
74.	514.950	-1.448	2	.3000+03	30.0
75.	513.582	-1.272	2	.3000+03	30.0
76.	512.394	-1.087	2	.3000+03	30.0
77.	511.395	-.895	2	.3000+03	30.0
78.	510.590	-.697	2	.3000+03	30.0
79.	509.985	-.494	2	.3000+03	30.0
80.	509.586	-.287	2	.3000+03	30.0
81.	509.395	-.078	2	.3000+03	30.0
82.	509.413	.132	2	.3000+03	30.0
83.	509.641	.342	2	.3000+03	30.0
84.	510.078	.549	2	.3000+03	30.0
85.	510.721	.753	2	.3000+03	30.0
86.	511.565	.952	2	.3000+03	30.0
87.	512.606	1.145	2	.3000+03	30.0
88.	513.837	1.331	2	.3000+03	30.0
89.	515.250	1.508	2	.3000+03	30.0
90.	516.836	1.676	2	.3000+03	30.0
91.	518.585	1.834	2	.3000+03	30.0

ORBIT 8

0.	505.934	.173	4	.3000+03103.0
1.	506.225	.431	4	.3000+03103.0
2.	506.773	.685	4	.3000+03103.0
3.	507.572	.933	4	.3000+03103.0
4.	508.616	1.174	4	.3000+03103.0
5.	509.896	1.404	4	.3000+03103.0
6.	511.402	1.624	4	.3000+03103.0
7.	513.122	1.831	4	.3000+03103.0
8.	515.042	2.023	4	.3000+03103.0
9.	517.148	2.201	4	.3000+03103.0
10.	519.425	2.363	4	.3000+03103.0
11.	521.856	2.508	4	.3000+03103.0
12.	524.425	2.637	4	.3000+03103.0
13.	527.114	2.749	4	.3000+03103.0
14.	529.907	2.843	4	.3000+03103.0
15.	532.787	2.920	4	.3000+03103.0
16.	535.735	2.979	4	.3000+03103.0
17.	538.735	3.022	4	.3000+03103.0
18.	541.771	3.049	4	.3000+03103.0
19.	544.826	3.059	4	.3000+03103.0
20.	547.884	3.054	4	.3000+03103.0
21.	550.931	3.034	4	.3000+03103.0
22.	553.951	3.000	4	.3000+03103.0
23.	556.930	2.952	4	.3000+03103.0
24.	556.801	-2.551	2	.3000+03103.0
25.	554.230	-2.592	2	.3000+03103.0
26.	551.623	-2.622	2	.3000+03103.0
27.	548.992	-2.639	2	.3000+03103.0
28.	546.350	-2.643	2	.3000+03103.0
29.	543.711	-2.633	2	.3000+03103.0
30.	541.087	-2.609	2	.3000+03103.0
31.	538.495	-2.570	2	.3000+03103.0
32.	535.948	-2.517	2	.3000+03103.0
33.	533.461	-2.449	2	.3000+03103.0
36.	526.510	-2.154	2	.3000+03103.0
37.	524.413	-2.026	2	.3000+03103.0
34.	531.049	-2.366	2	.3000+03103.0
35.	528.727	-2.267	2	.3000+03103.0
38.	522.451	-1.884	2	.3000+03103.0
39.	520.637	-1.729	2	.3000+03103.0
40.	518.984	-1.560	2	.3000+03103.0
41.	517.506	-1.379	2	.3000+03103.0
42.	516.213	-1.188	2	.3000+03103.0
43.	515.117	-.986	2	.3000+03103.0
44.	514.226	-.777	2	.3000+03103.0
45.	513.548	-.560	2	.3000+03103.0

ORBIT 8 (CONT)

46.	513.090	-.338	2	.3000+03103.0
47.	512.855	-.112	2	.3000+03103.0
48.	512.848	.116	2	.3000+03103.0
49.	513.068	.343	2	.3000+03103.0
50.	513.514	.569	2	.3000+03103.0
51.	514.186	.791	2	.3000+03103.0
52.	515.077	1.009	2	.3000+03103.0
53.	516.183	1.219	2	.3000+03103.0
54.	517.495	1.421	2	.3000+03103.0
55.	519.005	1.613	2	.3000+03103.0
56.	520.702	1.794	2	.3000+03103.0
57.	522.575	1.964	2	.3000+03103.0
58.	524.611	2.120	2	.3000+03103.0
59.	526.798	2.262	2	.3000+03103.0
60.	529.120	2.390	2	.3000+03103.0
61.	531.563	2.503	2	.3000+03103.0
62.	534.112	2.601	2	.3000+03103.0
63.	536.752	2.684	2	.3000+03103.0
64.	539.468	2.751	2	.3000+03103.0
65.	542.244	2.803	2	.3000+03103.0
66.	545.064	2.839	2	.3000+03103.0
67.	547.915	2.861	2	.3000+03103.0
68.	548.713	-2.831	4	.3000+03103.0
69.	545.888	-2.817	4	.3000+03103.0
70.	543.083	-2.788	4	.3000+03103.0
71.	540.314	-2.745	4	.3000+03103.0
72.	537.595	-2.686	4	.3000+03103.0
73.	534.941	-2.612	4	.3000+03103.0
74.	532.368	-2.523	4	.3000+03103.0
75.	529.891	-2.419	4	.3000+03103.0
76.	527.525	-2.301	4	.3000+03103.0
77.	525.285	-2.168	4	.3000+03103.0
78.	523.183	-2.020	4	.3000+03103.0
79.	521.235	-1.860	4	.3000+03103.0
80.	519.453	-1.688	4	.3000+03103.0
81.	517.849	-1.504	4	.3000+03103.0
82.	516.433	-1.310	4	.3000+03103.0
83.	515.216	-1.107	4	.3000+03103.0
84.	514.205	-.896	4	.3000+03103.0
85.	513.407	-.680	4	.3000+03103.0
86.	512.828	-.459	4	.3000+03103.0
87.	512.471	-.236	4	.3000+03103.0
88.	512.337	-.012	4	.3000+03103.0
89.	512.427	.211	4	.3000+03103.0
90.	512.739	.431	4	.3000+03103.0
91.	513.270	.647	4	.3000+03103.0

ORBIT 9

0.	526.802	1.906	2	.3000+04	30.0
1.	528.723	1.938	2	.3000+04	30.0
2.	530.673	1.966	2	.3000+04	30.0
3.	532.651	1.991	2	.3000+04	30.0
4.	534.653	2.013	2	.3000+04	30.0
5.	536.675	2.032	2	.3000+04	30.0
6.	538.715	2.048	2	.3000+04	30.0
7.	540.769	2.061	2	.3000+04	30.0
8.	542.835	2.070	2	.3000+04	30.0
9.	544.909	2.077	2	.3000+04	30.0
10.	546.988	2.081	2	.3000+04	30.0
11.	549.069	2.082	2	.3000+04	30.0
12.	551.151	2.080	2	.3000+04	30.0
13.	553.229	2.075	2	.3000+04	30.0
14.	555.301	2.068	2	.3000+04	30.0
15.	557.365	2.058	2	.3000+04	30.0
16.	559.417	2.045	2	.3000+04	30.0
17.	561.456	2.030	2	.3000+04	30.0
18.	563.478	2.013	2	.3000+04	30.0
19.	565.482	1.993	2	.3000+04	30.0
20.	567.465	1.971	2	.3000+04	30.0
21.	569.425	1.946	2	.3000+04	30.0
22.	571.359	1.919	2	.3000+04	30.0
23.	573.265	1.891	2	.3000+04	30.0
24.	575.142	1.860	2	.3000+04	30.0
25.	576.987	1.827	2	.3000+04	30.0
26.	578.798	1.792	2	.3000+04	30.0
27.	578.432	-2.000	4	.3000+04	30.0
28.	576.412	-2.042	4	.3000+04	30.0
29.	574.351	-2.083	4	.3000+04	30.0
30.	572.251	-2.121	4	.3000+04	30.0
31.	570.114	-2.156	4	.3000+04	30.0
32.	567.942	-2.189	4	.3000+04	30.0
33.	565.738	-2.220	4	.3000+04	30.0
34.	563.505	-2.249	4	.3000+04	30.0
35.	561.244	-2.274	4	.3000+04	30.0
36.	558.959	-2.297	4	.3000+04	30.0
37.	556.653	-2.317	4	.3000+04	30.0
38.	554.328	-2.334	4	.3000+04	30.0
39.	551.987	-2.348	4	.3000+04	30.0
40.	549.634	-2.359	4	.3000+04	30.0
41.	547.271	-2.367	4	.3000+04	30.0
42.	544.902	-2.371	4	.3000+04	30.0
43.	542.529	-2.373	4	.3000+04	30.0
44.	540.158	-2.370	4	.3000+04	30.0
45.	537.790	-2.364	4	.3000+04	30.0

46.	535.430	-2.355	4	.3000+04	30.0
47.	533.081	-2.342	4	.3000+04	30.0
48.	530.746	-2.325	4	.3000+04	30.0
49.	528.431	-2.304	4	.3000+04	30.0
50.	526.139	-2.279	4	.3000+04	30.0
51.	523.873	-2.250	4	.3000+04	30.0
52.	521.638	-2.217	4	.3000+04	30.0
53.	519.438	-2.180	4	.3000+04	30.0
54.	517.277	-2.138	4	.3000+04	30.0
55.	515.159	-2.093	4	.3000+04	30.0
56.	513.088	-2.043	4	.3000+04	30.0
57.	511.070	-1.989	4	.3000+04	30.0
58.	509.107	-1.931	4	.3000+04	30.0
59.	507.205	-1.868	4	.3000+04	30.0
60.	505.367	-1.801	4	.3000+04	30.0
61.	503.597	-1.731	4	.3000+04	30.0
62.	501.901	-1.655	4	.3000+04	30.0
63.	500.281	-1.576	4	.3000+04	30.0
64.	498.742	-1.493	4	.3000+04	30.0
65.	497.288	-1.407	4	.3000+04	30.0
66.	495.923	-1.316	4	.3000+04	30.0
67.	494.649	-1.222	4	.3000+04	30.0
68.	493.471	-1.125	4	.3000+04	30.0
69.	492.392	-1.025	4	.3000+04	30.0
70.	491.414	-.922	4	.3000+04	30.0
71.	490.541	-.816	4	.3000+04	30.0
72.	489.774	-.708	4	.3000+04	30.0
73.	489.117	-.598	4	.3000+04	30.0
74.	488.570	-.486	4	.3000+04	30.0
75.	488.136	-.373	4	.3000+04	30.0
76.	487.816	-.258	4	.3000+04	30.0
77.	487.610	-.143	4	.3000+04	30.0
78.	487.520	-.028	4	.3000+04	30.0
79.	487.545	.088	4	.3000+04	30.0
80.	487.685	.203	4	.3000+04	30.0
81.	487.941	.317	4	.3000+04	30.0
82.	488.310	.431	4	.3000+04	30.0
83.	488.793	.543	4	.3000+04	30.0
84.	489.386	.653	4	.3000+04	30.0
85.	490.090	.762	4	.3000+04	30.0
86.	490.901	.868	4	.3000+04	30.0
87.	491.817	.972	4	.3000+04	30.0
88.	492.835	1.073	4	.3000+04	30.0
89.	493.953	1.171	4	.3000+04	30.0
90.	495.168	1.265	4	.3000+04	30.0
91.	496.475	1.357	4	.3000+04	30.0

ORBIT 9 (CONT)

92.	497.872	1.444	4	.3000+04	30.0
93.	499.355	1.528	4	.3000+04	30.0
94.	500.920	1.608	4	.3000+04	30.0
95.	502.563	1.684	4	.3000+04	30.0
96.	504.280	1.755	4	.3000+04	30.0
97.	506.067	1.823	4	.3000+04	30.0
98.	507.919	1.887	4	.3000+04	30.0
99.	509.834	1.946	4	.3000+04	30.0
100.	511.805	2.001	4	.3000+04	30.0
101.	513.829	2.052	4	.3000+04	30.0
102.	515.903	2.098	4	.3000+04	30.0
103.	518.021	2.140	4	.3000+04	30.0
104.	520.179	2.178	4	.3000+04	30.0
105.	522.373	2.212	4	.3000+04	30.0
106.	524.600	2.242	4	.3000+04	30.0
107.	526.854	2.268	4	.3000+04	30.0
108.	529.133	2.290	4	.3000+04	30.0
109.	531.432	2.308	4	.3000+04	30.0
110.	534.194	-2.230	2	.3000+04	30.0
111.	531.971	-2.214	2	.3000+04	30.0
112.	529.765	-2.195	2	.3000+04	30.0
113.	527.580	-2.172	2	.3000+04	30.0
114.	525.420	-2.146	2	.3000+04	30.0
115.	523.288	-2.115	2	.3000+04	30.0
116.	521.188	-2.081	2	.3000+04	30.0
117.	519.125	-2.042	2	.3000+04	30.0
118.	517.102	-2.000	2	.3000+04	30.0
119.	515.123	-1.953	2	.3000+04	30.0
120.	513.192	-1.903	2	.3000+04	30.0
121.	511.314	-1.848	2	.3000+04	30.0
122.	509.492	-1.790	2	.3000+04	30.0
123.	507.730	-1.728	2	.3000+04	30.0
124.	506.033	-1.661	2	.3000+04	30.0
125.	504.404	-1.591	2	.3000+04	30.0
126.	502.847	-1.516	2	.3000+04	30.0
127.	501.366	-1.438	2	.3000+04	30.0
128.	499.965	-1.357	2	.3000+04	30.0
129.	498.648	-1.271	2	.3000+04	30.0
130.	497.417	-1.183	2	.3000+04	30.0
131.	496.276	-1.091	2	.3000+04	30.0
132.	495.228	-.996	2	.3000+04	30.0
133.	494.277	-.898	2	.3000+04	30.0
134.	493.425	-.798	2	.3000+04	30.0
135.	492.674	-.695	2	.3000+04	30.0
136.	492.026	-.590	2	.3000+04	30.0
137.	491.485	-.484	2	.3000+04	30.0

ORBIT 9 (CONT)

138.	491.050	-.376	2	.3000+04	30.0
139.	490.725	-.266	2	.3000+04	30.0
140.	490.509	-.156	2	.3000+04	30.0
141.	490.404	-.045	2	.3000+04	30.0
142.	490.410	.066	2	.3000+04	30.0
143.	490.527	.177	2	.3000+04	30.0
144.	490.755	.288	2	.3000+04	30.0
145.	491.093	.398	2	.3000+04	30.0
146.	491.541	.507	2	.3000+04	30.0
147.	492.097	.614	2	.3000+04	30.0
148.	492.760	.720	2	.3000+04	30.0
149.	493.529	.824	2	.3000+04	30.0
150.	494.400	.926	2	.3000+04	30.0
151.	495.372	1.026	2	.3000+04	30.0
152.	496.442	1.122	2	.3000+04	30.0

ORBIT 10

0.	488.246	.175	4	.3000+04103.0
1.	488.487	.320	4	.3000+04103.0
2.	488.873	.464	4	.3000+04103.0
3.	489.402	.605	4	.3000+04103.0
4.	490.071	.745	4	.3000+04103.0
5.	490.879	.881	4	.3000+04103.0
6.	491.821	1.014	4	.3000+04103.0
7.	492.894	1.143	4	.3000+04103.0
8.	494.094	1.267	4	.3000+04103.0
9.	495.417	1.387	4	.3000+04103.0
10.	496.857	1.502	4	.3000+04103.0
11.	498.411	1.612	4	.3000+04103.0
12.	500.071	1.717	4	.3000+04103.0
13.	501.834	1.815	4	.3000+04103.0
14.	503.692	1.908	4	.3000+04103.0
15.	505.641	1.995	4	.3000+04103.0
16.	507.674	2.076	4	.3000+04103.0
17.	509.785	2.151	4	.3000+04103.0
18.	511.968	2.220	4	.3000+04103.0
19.	514.216	2.282	4	.3000+04103.0
20.	516.525	2.339	4	.3000+04103.0
21.	518.887	2.389	4	.3000+04103.0
22.	521.297	2.433	4	.3000+04103.0
23.	523.749	2.472	4	.3000+04103.0
24.	526.236	2.505	4	.3000+04103.0
25.	528.754	2.532	4	.3000+04103.0
26.	531.295	2.553	4	.3000+04103.0
27.	533.856	2.569	4	.3000+04103.0
28.	536.430	2.580	4	.3000+04103.0
29.	539.013	2.585	4	.3000+04103.0
30.	541.599	2.586	4	.3000+04103.0
31.	544.183	2.581	4	.3000+04103.0
32.	546.760	2.572	4	.3000+04103.0
33.	549.326	2.558	4	.3000+04103.0
34.	551.876	2.540	4	.3000+04103.0
35.	554.406	2.518	4	.3000+04103.0
36.	556.912	2.491	4	.3000+04103.0
37.	559.390	2.461	4	.3000+04103.0
38.	561.835	2.427	4	.3000+04103.0
39.	562.122	-2.215	2	.3000+04103.0
40.	559.891	-2.249	2	.3000+04103.0
41.	557.628	-2.279	2	.3000+04103.0
42.	555.337	-2.305	2	.3000+04103.0
43.	553.021	-2.328	2	.3000+04103.0
44.	550.685	-2.346	2	.3000+04103.0
45.	548.332	-2.360	2	.3000+04103.0

46.	545.967	-2.370	2	.3000+04103.0
47.	543.593	-2.376	2	.3000+04103.0
48.	541.216	-2.377	2	.3000+04103.0
49.	538.840	-2.374	2	.3000+04103.0
50.	536.469	-2.366	2	.3000+04103.0
51.	534.109	-2.352	2	.3000+04103.0
52.	531.765	-2.334	2	.3000+04103.0
53.	529.441	-2.311	2	.3000+04103.0
54.	527.143	-2.282	2	.3000+04103.0
55.	524.876	-2.248	2	.3000+04103.0
56.	522.646	-2.208	2	.3000+04103.0
57.	520.459	-2.163	2	.3000+04103.0
58.	518.319	-2.112	2	.3000+04103.0
59.	516.232	-2.055	2	.3000+04103.0
60.	514.205	-1.993	2	.3000+04103.0
61.	512.243	-1.925	2	.3000+04103.0
62.	510.351	-1.852	2	.3000+04103.0
63.	508.535	-1.773	2	.3000+04103.0
64.	506.800	-1.688	2	.3000+04103.0
65.	505.153	-1.598	2	.3000+04103.0
66.	503.599	-1.502	2	.3000+04103.0
67.	502.142	-1.402	2	.3000+04103.0
68.	500.788	-1.296	2	.3000+04103.0
69.	499.542	-1.186	2	.3000+04103.0
70.	498.408	-1.072	2	.3000+04103.0
71.	497.390	-.953	2	.3000+04103.0
72.	496.493	-.831	2	.3000+04103.0
73.	495.719	-.706	2	.3000+04103.0
74.	495.072	-.577	2	.3000+04103.0
75.	494.555	-.446	2	.3000+04103.0
76.	494.170	-.313	2	.3000+04103.0
77.	493.919	-.178	2	.3000+04103.0
78.	493.803	-.043	2	.3000+04103.0
79.	493.822	.094	2	.3000+04103.0
80.	493.979	.230	2	.3000+04103.0
81.	494.271	.366	2	.3000+04103.0
82.	494.699	.501	2	.3000+04103.0
83.	495.261	.634	2	.3000+04103.0
84.	495.955	.766	2	.3000+04103.0
85.	496.780	.895	2	.3000+04103.0
86.	497.733	1.021	2	.3000+04103.0
87.	498.810	1.144	2	.3000+04103.0
88.	500.009	1.263	2	.3000+04103.0
89.	501.325	1.378	2	.3000+04103.0
90.	502.755	1.489	2	.3000+04103.0
91.	504.293	1.596	2	.3000+04103.0

ORBIT 10 (CONT)

92.	505.936	1.697	2	.3000+04103.0
93.	507.678	1.794	2	.3000+04103.0
94.	509.514	1.885	2	.3000+04103.0
95.	511.438	1.971	2	.3000+04103.0
96.	513.446	2.051	2	.3000+04103.0
97.	515.532	2.126	2	.3000+04103.0
98.	517.689	2.195	2	.3000+04103.0
99.	519.914	2.258	2	.3000+04103.0
100.	522.198	2.315	2	.3000+04103.0
101.	524.538	2.367	2	.3000+04103.0
102.	526.927	2.414	2	.3000+04103.0
103.	529.360	2.454	2	.3000+04103.0
104.	531.830	2.489	2	.3000+04103.0
105.	534.333	2.519	2	.3000+04103.0
106.	536.863	2.543	2	.3000+04103.0
107.	539.415	2.561	2	.3000+04103.0
108.	541.983	2.575	2	.3000+04103.0
109.	544.562	2.583	2	.3000+04103.0
110.	547.148	2.587	2	.3000+04103.0
111.	549.734	2.585	2	.3000+04103.0
112.	550.423	-2.151	4	.3000+04103.0
113.	548.277	-2.140	4	.3000+04103.0
114.	546.143	-2.125	4	.3000+04103.0
115.	544.026	-2.106	4	.3000+04103.0
116.	541.930	-2.083	4	.3000+04103.0
117.	539.860	-2.054	4	.3000+04103.0
118.	537.820	-2.022	4	.3000+04103.0
119.	535.815	-1.985	4	.3000+04103.0
120.	533.849	-1.943	4	.3000+04103.0
121.	531.926	-1.897	4	.3000+04103.0
122.	530.051	-1.847	4	.3000+04103.0
123.	528.229	-1.793	4	.3000+04103.0
124.	526.463	-1.734	4	.3000+04103.0
125.	524.758	-1.670	4	.3000+04103.0
126.	523.118	-1.603	4	.3000+04103.0
127.	521.548	-1.532	4	.3000+04103.0
128.	520.050	-1.457	4	.3000+04103.0
129.	518.629	-1.378	4	.3000+04103.0
130.	517.289	-1.295	4	.3000+04103.0
131.	516.032	-1.210	4	.3000+04103.0
132.	514.863	-1.121	4	.3000+04103.0
133.	513.784	-1.030	4	.3000+04103.0
134.	512.797	-.935	4	.3000+04103.0
135.	511.906	-.839	4	.3000+04103.0
136.	511.112	-.740	4	.3000+04103.0
137.	510.418	-.640	4	.3000+04103.0

ORBIT 10 (CONT)

138.	509.825	-.538 4	.3000+04103.0
139.	509.334	-.435 4	.3000+04103.0
140.	508.946	-.332 4	.3000+04103.0
141.	508.662	-.228 4	.3000+04103.0
142.	508.482	-.124 4	.3000+04103.0
143.	508.406	-.020 4	.3000+04103.0
144.	508.433	.083 4	.3000+04103.0
145.	508.563	.185 4	.3000+04103.0
146.	508.795	.286 4	.3000+04103.0
147.	509.127	.386 4	.3000+04103.0
148.	509.557	.483 4	.3000+04103.0
149.	510.084	.578 4	.3000+04103.0
150.	510.705	.671 4	.3000+04103.0
151.	511.417	.761 4	.3000+04103.0
152.	512.218	.848 4	.3000+04103.0

ORBIT 11

0.	531.316	-.194	2	.8150+03	90.0
1.	531.166	-.096	2	.8150+03	90.0
2.	531.115	.003	2	.8150+03	90.0
3.	531.165	.104	2	.8150+03	90.0
4.	531.315	.206	2	.8150+03	90.0
5.	531.568	.308	2	.8150+03	90.0
6.	531.924	.411	2	.8150+03	90.0
7.	532.381	.512	2	.8150+03	90.0
8.	532.939	.612	2	.8150+03	90.0
9.	533.596	.711	2	.8150+03	90.0
10.	534.351	.807	2	.8150+03	90.0
11.	535.201	.900	2	.8150+03	90.0
12.	536.143	.990	2	.8150+03	90.0
13.	537.173	1.076	2	.8150+03	90.0
14.	538.287	1.158	2	.8150+03	90.0
15.	539.481	1.236	2	.8150+03	90.0
16.	540.750	1.308	2	.8150+03	90.0
17.	542.089	1.375	2	.8150+03	90.0
18.	543.492	1.436	2	[illegible]	
19.	544.954	1.491	2	.8150+03	90.0
20.	546.468	1.540	2	.8150+03	90.0
21.	548.029	1.583	2	.8150+03	90.0
22.	549.629	1.619	2	.8150+03	90.0
23.	551.263	1.649	2	.8150+03	90.0
24.	552.923	1.672	2	.8150+03	90.0
25.	554.603	1.688	2	.8150+03	90.0
26.	551.864	-2.948	4	.8150+03	90.0
27.	548.907	-2.967	4	.8150+03	90.0
28.	545.936	-2.974	4	.8150+03	90.0
29.	542.962	-2.970	4	.8150+03	90.0
30.	539.999	-2.954	4	.8150+03	90.0
31.	537.056	-2.926	4	.8150+03	90.0
32.	534.148	-2.885	4	.8150+03	90.0
33.	531.286	-2.832	4	.8150+03	90.0
34.	528.484	-2.765	4	.8150+03	90.0
35.	525.755	-2.685	4	.8150+03	90.0
36.	523.112	-2.592	4	.8150+03	90.0
37.	520.568	-2.485	4	.8150+03	90.0
38.	518.137	-2.366	4	.8150+03	90.0
39.	515.831	-2.233	4	.8150+03	90.0
40.	513.663	-2.088	4	.8150+03	90.0
41.	511.646	-1.931	4	.8150+03	90.0
42.	509.791	-1.763	4	.8150+03	90.0
43.	508.109	-1.584	4	.8150+03	90.0
44.	506.611	-1.395	4	.8150+03	90.0
45.	505.307	-1.197	4	.8150+03	90.0

ORBIT 11 (CONT)

46.	504.204	-.991	4	.8150+03	90.0
47.	503.309	-.779	4	.8150+03	90.0
48.	502.629	-.562	4	.8150+03	90.0
49.	502.169	-.341	4	.8150+03	90.0
50.	501.930	-.118	4	.8150+03	90.0
51.	501.915	.106	4	.8150+03	90.0
52.	502.124	.330	4	.8150+03	90.0
53.	502.555	.551	4	.8150+03	90.0
54.	503.206	.768	4	.8150+03	90.0
55.	504.071	.980	4	.8150+03	90.0
56.	505.146	1.185	4	.8150+03	90.0
57.	506.423	1.383	4	.8150+03	90.0
58.	507.893	1.572	4	.8150+03	90.0
59.	509.548	1.751	4	.8150+03	90.0
60.	511.377	1.919	4	.8150+03	90.0
61.	513.369	2.076	4	.8150+03	90.0
62.	515.512	2.221	4	.8150+03	90.0
63.	517.795	2.353	4	.8150+03	90.0
64.	520.203	2.472	4	.8150+03	90.0
65.	522.726	2.579	4	.8150+03	90.0
66.	525.348	2.672	4	.8150+03	90.0
67.	528.057	2.752	4	.8150+03	90.0
68.	530.840	2.818	4	.8150+03	90.0
69.	533.684	2.872	4	.8150+03	90.0
70.	536.576	2.913	4	.8150+03	90.0
71.	539.502	2.941	4	.8150+03	90.0
72.	542.451	2.957	4	.8150+03	90.0
73.	545.410	2.961	4	.8150+03	90.0
74.	548.368	2.953	4	.8150+03	90.0
75.	551.314	2.934	4	.8150+03	90.0
76.	554.875	-2.182	2	.8150+03	90.0
77.	552.679	-2.211	2	.8150+03	90.0
78.	550.458	-2.232	2	.8150+03	90.0
79.	548.220	-2.244	2	.8150+03	90.0
80.	545.974	-2.247	2	.8150+03	90.0
81.	543.729	-2.241	2	.8150+03	90.0
82.	541.494	-2.226	2	.8150+03	90.0
83.	539.278	-2.201	2	.8150+03	90.0
84.	537.092	-2.167	2	.8150+03	90.0
85.	534.944	-2.122	2	.8150+03	90.0
86.	532.846	-2.068	2	.8150+03	90.0
87.	530.807	-2.003	2	.8150+03	90.0
88.	528.838	-1.928	2	.8150+03	90.0
89.	526.947	-1.843	2	.8150+03	90.0
90.	525.147	-1.748	2	.8150+03	90.0
91.	523.446	-1.644	2	.8150+03	90.0

ORBIT 11 (CONT)

92.	521.853	-1.530	2	.8150+03	90.0
93.	520.379	-1.407	2	.8150+03	90.0
94.	519.032	-1.275	2	.8150+03	90.0
95.	517.821	-1.135	2	.8150+03	90.0
96.	516.753	-.988	2	.8150+03	90.0
97.	515.835	-.834	2	.8150+03	90.0
98.	515.074	-.674	2	.8150+03	90.0
99.	514.475	-.509	2	.8150+03	90.0
100.	514.044	-.340	2	.8150+03	90.0
101.	513.782	-.168	2	.8150+03	90.0
102.	513.694	.007	2	.8150+03	90.0